

WARDEN'S COURT

MR F W WINDRIDGE, Warden and Coroner
MR R J PARKIN, General Manager, Capricorn Coal Pty Ltd
MR P J NIELSEN, District Secretary, United Mine Workers' Union
MR C ELLICOTT, Training and Development Officer, Department of
Mineral Resources, New South Wales
PROF F F ROXBOROUGH, Professor of Mining Engineering, School
of Mines, University of New South Wales

IN THE MATTER OF A CORONIAL INQUIRY IN CONJUNCTION WITH
AN INQUIRY (PURSUANT TO SECTION 74 OF THE COAL MINING
ACT 1925) INTO THE NATURE AND CAUSE OF AN ACCIDENT AT
MOURA UNDERGROUND MINE NO 2. ON SUNDAY-MONDAY, 7-8 AUGUST
1994

GLADSTONE

..DATE 18/10/94

..DAY 1

MR F CLAIR (instructed by Mr R Boiston of Crown Solicitor's Office, Brisbane) assisting the Inquiry

MR A J MacSPORRAN (instructed by Mr R Abraham of Crown Solicitor's Office, Brisbane) for the Queensland Department of Mines and Energy

MR W A MARTIN (instructed by Messrs R H Brittain & Associates) for the next of kin of the deceased, the Communications and Electrical Plumbing Union and the United Mineworkers Union

MR H P MORRISON QC, with him MR P RONEY (instructed by Messrs Feez Ruthning) for BHP Mitsui Pty Ltd, BHP Australia Coal Pty Ltd, George Mason, Albert Schaus, Joseph Barraclough and Jacques Abrahamse

MR B A HARRISON (instructed by Messrs John Taylor & Co) for the Australian Collieries Staff Association

WARDEN: The purpose of these proceedings is to conduct an inquiry pursuant to section 74 of the Coal Mining Act 1925 in relation to an explosion underground on 7 August 1994 at the Moura No 2 underground mine. Subsequent to that explosion 11 men failed to return to the surface. I am assisted at this Inquiry by four persons having experience in the industry. I introduce those persons. They are, on my far right Mr Ray Parkin, on my immediate right Mr Peter Nielsen, on my immediate left Professor Frank Roxborough, on my far left Mr Chris Ellicott. Could I have the appearances from the Bar table, please?

MR CLAIR: May it please Your Worship, my name is Clair, C-L-A-I-R, initials F J. I appear to assist the Inquiry. I am instructed by Mr Bob Boiston, B-O-I-S-T-O-N of the Crown Law Office.

MR MacSPORRAN: May it please Your Worship, my name is MacSporran, that is M-A-C-S-P-O-R-R-A-N, initial A. I appear on behalf of the Department of Mines and Energy, instructed by Mr Richard Abraham.

MR MARTIN: May it please Your Worship, my name is Martin W A. I am instructed by Mr Brittain of R H Brittain & Associates, solicitors. I seek leave to appear on behalf of the several next of kin as well as on behalf of two unions of employees specifically the CEPU, which is the Communications and Electric Plumbing Union as well as the United Mineworkers Union.

WARDEN: Thanks, leave granted.

MR MORRISON: My name is Morrison, initials H P, together with Mr Roney of counsel. I appear on behalf of the following entities - I am not seeking leave because I understand Your Worship has granted that earlier - BHP Mitsui Coal Pty Ltd, the owner of the mine, BHP Australia Coal Pty Ltd, the operator of the mine, and the following named individuals:

George Mason, Albert Schaus, Joe Barraclough and Jacques Abrahamse. Their designations, perhaps for the record, are Albert Schaus was the manager of the particular mine, Mason was under-manager-in-charge, Joseph Barraclough, safety and training officer, Jacques Abrahamse, a mining engineer.

WARDEN: Yes, thank you.

MR HARRISON: My name is Harrison, initials B A. I am instructed by Messrs John Taylor & Company. I seek leave to appear on behalf of the members of the Australian Collieries Staff Association with the exception of the three members that Mr Morrison has already announced an appearance for, Messrs Mason, Barraclough and Abrahamse.

WARDEN: Yes, thank you, Mr Harrison. Any other appearances? I would indicate to you gentlemen that the evidence in this inquiry will also be evidence for coronial purposes. I anticipate that at the appropriate stage I will be able to hand down my findings as coroner. I will give you adequate notice before that is to occur. You will be aware that the findings of a Coroner are limited by the provisions of section 24 of the Coroners Act of 1958, and, therefore, the coroner's inquiry could be finalised notwithstanding that the inquiry under the Coal Mining Act is still running its course. Mr Clair, do you have any matters?

MR CLAIR: Your Worship, there are some preliminary matters that I would like to outline before we proceed to evidence, but if there are no matters that my learned friends wish to raise at this stage I can proceed with that?

WARDEN: Are there any other applications?

MR MORRISON: Well, not an application as such. May I just announce one matter consistent with the practice of such inquiries? Present in Court for the purpose of giving me instructions from day to day will be Mr Regan, R-E-G-A-N. He was the Mine General Manager for Moura mines. He will also be a witness, but later in the piece. I announce that he will be in Court for the purpose of giving me instructions and if any party has difficulties at any particular stage I invite them to raise them with me and we will deal with it then.

MR MARTIN: I have a similar matter. Mr Donald Mitchell, whose curriculum vitae I tendered at the last hearing, is a renowned expert. He is here. I ask leave for him to sit in Court. He will be a witness.

WARDEN: Thank you. No problem with that?

MR MacSPORRAN: I have a similar matter. There are several departmental officers who will, if possible, remain in Court throughout the proceedings; that is, Mr McMaster, Mr Bankcroft Mr Walker and, of course, the chief inspector, Mr Lyne. I seek leave to have those gentlemen throughout the proceedings just in case, unless there is any difficulty?

WARDEN: Thank you, Mr Clair?

MR CLAIR: Thank you, Your Worship.

MR MARTIN: Your Worship, just one matter. It is awfully cramped here and I need access to a couple of people frequently. All I am asking really is is there an alternative?

WARDEN: I appreciate that the accommodation is not perfect, this is not the purpose it was built for. We have an alternative in mind, if you so desire?

MR MARTIN: I personally would desire.

WARDEN: It is a bit cramped, I can see that. The alternative will take several hours to prepare. It is only on stand-by at the moment. We did anticipate we may have to use it subject to the gallery being over-crowded, but if the parties can put up with some inconvenience during the transfer arrangements?

MR MARTIN: Yes. That is very kind of you.

WARDEN: That can be arranged at fairly short notice.

MR MARTIN: I would like it. I don't know about the others.

WARDEN: There is a complication with it in that Thursday and Monday are not available at that venue and we may have to revert back to here for Thursday and Monday. Otherwise we will lose too many days, as you will understand.

MR MARTIN: I would urge you to do that.

WARDEN: Well, I will hear any other parties if they have got any problem with it.

MR MacSPORRAN: No. I would like to join Mr Martin in supporting his application. It is just a matter of space at the Bar table, to look at plans and have access to documents. There is really not enough room.

WARDEN: Well, can we put that in motion and I will advise you later, in a couple of hours? There are a couple of other matters I might mention too. An on site inspection is still programmed for Friday at this stage. It will depend a lot on how we are progressing. It is still programmed for Friday at this stage and the fourth week, which I briefly intimated could possibly be heard in Brisbane if the stage of going through the witnesses is not advanced properly, we are looking at alternative accommodation in Rockhampton for that fourth week on the view that we don't want to drag witnesses to Brisbane at that stage. So, just bear that in mind. We will know by the end of next week how we are running with that.

MR MARTIN: Thank you, very much.

WARDEN: Thank you Mr Clair?

MR CLAIR: I am just discussing with Mr Boiston the problems

of the cramped conditions at the Bar table and the option that Your Worship mentions, of moving down the road to another location. That may allow some more space at the Bar table. The difficulty, of course, with that is that that is not available on Thursday. On Friday, at this stage, it is planned we have an inspection and then that venue is not available on Monday. So, that, in fact, the alleviation of the space difficulties that is produced by moving to the other venue really only applies then for today and for tomorrow, at least in the immediate future, and there are, of course, some advantages with this venue that don't exist in the other venue and some disadvantages, of course, with the other venue in terms of the way in which it might be set up. I just wonder whether it is possible to somehow expand the situation at the Bar table here and alleviate the cramped conditions of the Bar table. One of the reasons, Your Worship, that the inquiry looked to create the option of an alternative venue was because there may be some considerable pressure in the public gallery, but I think we can handle the pressure in the public gallery, it is really a case of addressing the Bar table space which may be able to be achieved with some re-arrangement of the Bar table. The reason I am raising it at this stage is that if we are to use an alternative venue today, then that instruction would have to be given straight away so that the arrangements can go into place there. So, I thought it best to address this point now.

WARDEN: Yes.

MR CLAIR: I wonder if, perhaps, a ten minute adjournment at this stage to look at how we can alleviate the Bar table situation here because that is really what the problem is that both my learned friends are facing, as I understand it.

MR MARTIN: Yes. Just two things about that and I will be very short. I am instructed that tomorrow there are a number of people arriving or expecting to arrive which will cause congestion, but moreover, I wonder whether the visit to Moura couldn't be, say, for Thursday. I will leave that with you.

WARDEN: Yes, I thank you. I don't think there is much scope for alleviation down in the body of the Court at the moment, constrained by whatever the furniture is that is there now. Anyhow, if we go to Moura on Thursday that then may affect people's travel arrangements for Friday which have already been pre-determined and cause a fair bit of confusion there.

MR MARTIN: I only raised it.

WARDEN: I appreciate that. Can I suggest this: we will have a ten minute adjournment while you explore those possibilities, but even then we may still take up the alternative accommodation, but we can use the expanded facility for today while we put those other things in motion.

MR CLAIR: Yes, Your Worship. I might just say one of the possibilities I would like to explore is creating a third area for a further Bar table because that may be a possibility.

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WARDEN: If we get too far away they will be shouting at the witnesses to be heard.

MR CLAIR: Yes.

WARDEN: The second Bar table is far back enough now. We will take the adjournment while we look at that. I indicate I am still actively looking at the option of shifting.

THE COURT ADJOURNED AT 11.16 P.M.

THE COURT RESUMED AT 11.38 A.M.

WARDEN: Thank you, gentlemen. In the short adjournment we have instituted some action to alleviate your overcrowding problem, bearing in mind that we will be together not for two days but for a number of weeks, and if the gallery expands tomorrow as Mr Martin indicates, we may well need that. We will probably resume after some proceedings this morning at about 2.30 so that those things can be finalised as much as possible.

The inspection has now been re-programmed for Monday. As that alternative accommodation is not available to us, we can utilise that day for inspection purposes.

28 October was set aside as a non-hearing day. I will advise you later on, but it's possible now we may be able to bring that into the hearing to try and facilitate the progress of witnesses. In the interim until the lunch adjournment I would like to continue with any other matters so we can claim some sort of progress. Thank you, Mr Clair?

MR CLAIR: Thank you, Your Worship. I think there are some matters that I can continue with that shouldn't cause any difficulties in spite of the cramped conditions at the Bar table, and at least we can use as much of the morning as possible.

I did indicate earlier, Your Worship, that I wished to make some preliminary observations about the nature of the Inquiry and about the likely course of evidence before the Inquiry. I don't propose to open the evidence in the accepted sense of the word, that is, deal with any substance of the evidence, because steps have been taken to provide the parties at as early a stage as possible with copies of the statements of the witnesses respectively on the list at this stage, but there are some things that are properly to be placed on the record at this point.

First of all, in so far as the nature of the Inquiry is concerned, Your Worship has already outlined that it's an Inquiry established under the provisions of section 74 of the Coal Mining Act and I will refer to subsection (1) of that section initially, Your Worship, and it provides in these terms:

"Unless otherwise determined by the Minister" -

that being the Minister for Mines and Energy -

"in every case of accident causing death or serious bodily injury, an inquiry into the nature and cause of such accident shall be held before the warden and four persons having practical knowledge and skill in the mining industry selected by the warden and having no connection with the coal mine where the accident occurred."

The two points that come out of that subsection, Your Worship, are that, first of all, the purpose of the Inquiry is an Inquiry into the nature and cause of the accident, and the second aspect of the terms of that subsection is that it's an Inquiry that follows automatically from the fact that an accident occurred. It's an Inquiry that must be held under the terms of the Act unless otherwise determined by the Minister. So, it's really that basic provision that leads to the Inquiry being constituted and here today in order to take evidence.

The subsection, of course, defines the limits of the Inquiry, that is, that it's an Inquiry into the nature and cause of the accident. In that connection I should refer also to subsection (3) of section 74 which provides in these terms:

"The warden shall forward to the Attorney-General the notes of evidence taken at such inquiry and the opinion of the persons having practical knowledge and skill in the mining industry (who shall record their finding as to the nature and cause of the accident, and make such recommendations as appear to them necessary for the prevention of similar accidents), and his report as to the nature and cause of such accident, and shall forward a copy of the same to the Minister."

So, there is this other aspect in a sense to the Inquiry's function. It not only is to determine the nature and cause of the relevant accident, but the experts who constitute the Inquiry shall also look to making such recommendations as appear to them necessary for the prevention of similar accidents. So, that adds, as it were, that further dimension.

Of course, this Inquiry cannot ignore the fact that it is charged with examining the fourth large scale disaster of this kind in Queensland; three of those being in the central Queensland area in the last 20 years, and the most recent of those being at Moura itself in the No 4 Mine only eight years ago. The observation should be made that this background will no doubt encourage the Inquiry to make as thorough and as exhaustive an examination as possible of the available evidence in order to determine the nature and cause of the accident and in order to enable the expert panel to make a wide ranging set of recommendations designed to eliminate or at least minimise the risk of any similar event in the future.

However, it will be very important to remember in the course of evidence and in the course of the Inquiry's deliberations that the event which is being investigated here is the accident which occurred at Moura No 2 Mine on 7 August of this year. Any examination of past events will only be relevant in so far as it bears on the issues which arise for this Inquiry's determination, namely, the nature and cause of this accident and the making of recommendations to avoid such accidents in the future.

That's all I wish to say about the nature and purpose of the

Inquiry.

Can I just make these comments about the course of the Inquiry, Your Worship? Only 10 weeks have passed since the tragic events of 7 August. A good deal of information has been amassed since that time. It's fair to say that all the relevant investigations, particularly the investigations of a technical and a scientific nature, are not yet complete. At the same time, a large number of witnesses have been interviewed and a lot of basic scientific information has been assembled.

Ordinarily, the public hearings of an inquiry such as this may

well have been delayed until all the investigations had been completed and all of the evidence could then be placed before the Inquiry in the one public session. However, there are in the present matter good reasons why it is appropriate to embark on a hearing of the evidence at this stage. One of those reasons is that many of the witnesses who will speak to the events leading up to and surrounding the accident, witnesses whom I might refer to as the factual witnesses, are in a better position to give their recollections of the events at an earlier stage rather than to have their evidence delayed until some later stage, whether later this year or sometime next year. In other words, it is always desirable in these matters to obtain the earliest possible recollections. Secondly, and perhaps more importantly, it is a simple fact that in a matter such as this many of the witnesses will be speaking of events which surrounded the tragic death of their workmates and their friends and, no doubt, the giving of evidence for them will be a painful experience. It is certainly desirable that that kind of painful experience be confronted and be endured sooner rather than later. Again, in other words, if the taking of evidence had been delayed until next year, it would be necessary to revive in the minds of the witnesses painful recollections for the purpose of giving their evidence at that stage.

Your Worship, as I understand it, four weeks of the Inquiry time have been set aside at this point. There are almost 50 witnesses available to be called. They will be mainly witnesses who could be referred to as factual witnesses and, if possible, we may be able to embark on some evidence of a more technical nature. However, it is highly unlikely that the technical evidence could all be completed during this stage of the Inquiry. One of the reasons for that is that investigations are still ongoing and, further, even putting aside the question of what time is available at this point, it may be that the Inquiry itself, after hearing the evidence that is available, may discern areas in which further investigation of some scientific nature is desirable and ask then that such further investigations be carried out. In any event, at this stage it would appear that the course of evidence before the Inquiry will be that we will spend this four weeks taking evidence from the factual witnesses and possibly some evidence of a technical nature, if time permits, and at some later stage there will be a second phase, as it were, of the Inquiry hearings at which evidence of a more technical nature can be placed before the Inquiry.

At a Directions Hearing before the Inquiry, which took place in Brisbane on 6 October, a list of witnesses was provided to the other parties. That list of witnesses has been updated. It was distributed not only to advise the parties of what witnesses were intended to be called but also to enable any suggestions to be made as to other witnesses who may be considered as persons able to give evidence that should properly be placed before the Inquiry. That updated list of witnesses is, of course, made available with the same purpose. Suffice it to say this, Your Worship, if there is any further material in addition to the evidence that would come from

witnesses on that list and from technical witnesses whose evidence may be taken at a later time, if there is some further material which someone feels should be placed before this Inquiry, then that further material should be brought to my attention or to the attention of my instructing solicitor, Mr Boiston. Of course, before any material can be placed as evidence before the Inquiry, it must, of course, be material which bears at least some relevance to the issues which arise for the Inquiry's determination. I have mentioned those issues earlier; that is, the nature and cause of this accident and the making of recommendations to avoid such accidents in the future.

As to the order in which I propose to call the witnesses who are available, basically, Your Worship, the witnesses called first will be those miners who were underground during the shift prior to the shift on which the accident occurred and then there will be evidence from those men who were underground at the time of the explosion on 7 August. Then evidence from the undermanagers and that strata of management within the mine and then evidence from the mine management. That's laid out, as it were, so that matters can follow some broad chronological course. Of course, with any list of witnesses there are always exceptions that have to be made at points along the way for one reason or another. From this end of the Bar table, the intention is to try to advise at the end of each day or as earlier time as possible the names of witnesses on the list for the next day and that will enable the parties to be prepared for what's to come each day.

Your Worship has mentioned inspection of the site, which will now take place on Monday next and that, hopefully, won't interfere with the flow of witnesses presently being organised. That is all I wish to say at this stage, Your Worship subject to this: that the first witness that I intend to call is the Chief Inspector of Coal Mines, Mr Brian John Lyne. Before I call him, I will indicate the basis on which he is called at this point. He has, of course, been in control of the investigation which has been taking place and he has assembled quite a mass of material together with the assistance of his fellow inspectors in the course of that investigation. It's desirable that that material be tendered so that the statements and documents which form part of the collected material are before the Court prior to the factual witnesses being called. The best way to have that material tendered is to call Mr Lyne to have him identify his report briefly, to identify the material which has been collected and to tender that material. What I would propose to do then is to stand Mr Lyne down; that is, not going into the substance of his evidence in any way, and have him available then to be recalled at a later point in the Inquiry. I might mention that the report which he has prepared at this stage is, of course, an interim report and is subject to the results of further investigations which are ongoing and prior to his taking the witness stand to give his evidence in substance at a later stage, he will produce a final report. May it please the Court, I call Brian John Lyne.

BRIAN JOHN LYNE, SWORN AND EXAMINED:

MR CLAIR: Sorry, Your Worship, before I proceed with the witness, Mr Martin reminds me that - or at least raises the question as to whether the usual admonition to witnesses has been made. I know there was some applications for certain potential witnesses to remain in Court but it might be appropriate for Your Worship to give the normal admonition to persons other than those who are excused.

MR MacSPORRAN: Before you make that declaration, there were some parties I forget to mention that I would be seeking leave to present during the course of the Inquiry and those are parties employed by the Safety Mines Assessment Research Station and they are specifically; Mr Golledge, Mr David Humphreys, Mr David Cliff, Mr Don Reinhart and Mr Colin Hester. They are all personnel from SIMTARS.

MR MORRISON: While things are being organised down there, can I mention, so the panel is in no doubt as to what I intend, having announced the appearances for Mr Mason, Mr Schaus and Mr Abrahamse and Mr Barraclough, they are in a sense parties in their own right. Two of those persons are not present but Mr Mason and Mr Schaus are - and Mr Abrahamse is as well, sorry. I am mindful of the sort of criticisms that might be levelled at people who stay in to hear other witnesses. I wish people to be aware that I bear that in mind about their presence in Court, but I do need them in Court for the purpose of instructions and, again, invite people to say something if they think the bounds have been reached where their presence is a difficulty. I don't envisage it happening but I wish my position to be known.

MR MARTIN: Might I say this, Your Worship, there is a limitation. Mr Schaus, I accept, as being an expert engineer. I can understand him being present giving instructions but I do take exception to Mr Mason being present, and they are not parties in their own right. They are not parties.

MR MORRISON: With respect, they are parties in their own right. I have announced their appearances for them in their own right. I appear for them in their own right. They have been given leave to appear in their own right. I need both of them for instructions and, with respect, I should be given the liberty to have those instructions. I remind my learned friend that he wasn't present and therefore may not know that at the last Inquiry of this type precisely the same point was made by me of Mr Allison being present, an intending actual witness, although not an expert, and the panel took the view that he should be left in Court for the purpose of doing exactly what I want Mr Mason to do, to give me instructions.

MR MARTIN: My learned friend is quite right. I know the difficulties in obtaining instructions for the Inquiry, and I

XN: MR CLAIR

WIT: LYNE B J

take his view.

WARDEN: Apart from those persons who are represented by counsel at the Bar table, all other witnesses are to depart from the courtroom and remind outside of the hearing of the Court until such time as they are formally called. I accept that persons named by counsel should have the right to remain in Court.

MR CLAIR: Thank you, Your Worship.

Your full name is Brian John Lyne; is that correct?-- That's correct.

That's L-Y-N-E?-- That's correct.

And, Mr Lyne, you are the Chief Inspector of coal mines?-- That's correct.

In Queensland?-- That's correct.

In that capacity have you exercised control over the gathering of evidence and, ultimately, have you prepared what might be described as an interim report?-- I have.

And fully described on its face is, "A Report on the Initial Investigation into an Incident at Moura No 2 Mine on 7 August 1994"?-- That's correct.

Would you have a look at this document here. Is that a copy of that report?-- That's a copy of that report.

Just hold on to that for the moment. The report is divided into various sections; is that right?-- Yes.

It's preceded by a Report Profile, in effect, an index; is that so?-- That's correct.

As part of the report you have set out certain matters which you have described in Part 7 as matters for consideration?-- That's correct.

And matters which you have raised in a preliminary manner for the consideration of the Inquiry?-- That's correct.

And then on the final page of your Report Profile you refer to certain annexures; is that so?-- That's correct.

Before I deal with those annexures can I, first of all, Your Worship, tender Mr Lyne's report.

WARDEN: Thank you. Admitted and marked Exhibit 1.

ADMITTED AND MARKED "EXHIBIT 1"

MR CLAIR: You can keep that there for the moment and, perhaps, it can be marked a little later, Mr Lyne. In the annexures section you refer, first of all, to a report being a report by a Senior Inspector Walker?-- That's correct.

Is that so? Now, was Senior Inspector Walker the inspector based in Rockhampton at the time of the accident we are dealing with here?-- That is correct.

And as such was he the inspector with jurisdiction over the Moura Mine?-- That is true.

Now, have a look at this document here, if you would, Mr Lyne? Is that the original of Mr Walker's report?-- That's the original document, yes.

And that has certain annexures with it all in the one folder there; is that so?-- Yes, that is true.

I tender that report, Your Worship, that is Inspector Walker's report.

WARDEN: I shall mark that Exhibit No 2.

ADMITTED AND MARKED "EXHIBIT 2"

MR CLAIR: Also in your list of annexures you referred to a report of Electrical Inspector McMaster, that is Inspector Allan McMaster; is that so?-- That's right, yes.

Would you have a look at that document that has just been handed to you?-- A copy of his report to me.

Okay. Just before I tender that document, for the sake of the record, can I make reference to these document numbers? Mr Walker's report is referred to as document 178 and this report of Mr McMaster is referred to in the list of annexures as document 176; is that so?-- That's correct.

Are they numbers that were ascribed to the documents as part of an exercise that was carried out under Mr Walker's jurisdiction; that is a compilation of all of the documents that were assembled in the course of the investigation; is that so?-- Yes, it was initiated under that circumstance. That was a numbering system started then.

We will come to the further significance of the numbering system shortly. Inspector McMaster's report then, document 176, I tender that.

WARDEN: Admitted and marked Exhibit number 3.

ADMITTED AND MARKED "EXHIBIT 3"

XN: MR CLAIR

WIT: LYNE B J

MR CLAIR: A report is mentioned there of Principal Mechanical Inspector Bell. Would you have a look at this document? Document 177, is that so?-- This one isn't marked.

Referred to in your list of annexures as document 177?-- That's the document, yes.

I tender that also, Your Worship.

WARDEN: Admitted and marked Exhibit number 4.

ADMITTED AND MARKED "EXHIBIT 4"

MR CLAIR: Your list of annexures refers then to a report from SIMTARS, document 179. Is that a reference to a report done by the Safety in Mines Testing and Research Station?-- That's correct. That is it here.

That consists of three volumes; is that so?-- Yes. I do note that one is - that one is part of the draft.

I tender that set of three volumes of the SIMTARS report, Your Worship.

WARDEN: SIMTARS report marked Exhibit 5.

ADMITTED AND MARKED "EXHIBIT 5"

MR CLAIR: Your list of annexures then refers to the report from MSHA, that is a report from the Mines Safety and Health Administration of the United States Department of Labour; is that right?-- That's correct.

That is document 180 or, at least, described as that in your list of annexures; is that so?-- That's right, yes.

I tender that report also, Your Worship.

WARDEN: Admitted and marked Exhibit number 6.

ADMITTED AND MARKED "EXHIBIT 6"

MR CLAIR: Now, in respect of the SIMTARS report and the MSHA report, Your Worship, I might mention that they only, in

XN: MR CLAIR

WIT: LYNE B J

effect, this morning became available.

WITNESS: That's right.

MR CLAIR: The other parties have not yet received copies of those or if they have they have not had an opportunity to peruse them. Can I simply say I tender them, but to the extent that there may need to be some opportunity for objection or debate when the parties had have an opportunity to look at them. That tendering is provisional subject to any debate about the admissibility of the reports. I tender them at this stage so that they can be kept in their context as annexures to Mr Lyne's report.

WARDEN: On that basis then.

MR CLAIR: The next annexure you refer to, Mr Lyne, is a document described as a Fault Tree Analysis, document number 171?-- Yes.

That's a document that was compiled under your supervision; is that right?-- That's correct.

And with your participation?-- That's correct, yes.

I tender that, Your Worship.

WARDEN: Admitted and marked Exhibit number 7.

ADMITTED AND MARKED "EXHIBIT 7"

MR CLAIR: Have you also had prepared a comprehensive set of mine plans in respect of Moura No 2 Mine?-- Yes, there have been.

Are they all contained in the one folder there?-- That's them, yes.

Okay. I tender that folder of mine plans, Your Worship.

WARDEN: Admitted and marked Exhibit number 8.

ADMITTED AND MARKED "EXHIBIT 8"

MR CLAIR: Mr Lyne, those documents, or at least some of those documents that have been tendered, were collected as part of a much larger bulk of documents, if I might call it that, in the course of the investigation; is that right?-- That's true, yes.

And that bulk of documents in - that is, the original of that

XN: MR CLAIR

WIT: LYNE B J

bulky lot of documents is contained in eight boxes; is that so?-- That's about right, yes.

I might just mention, Your Worship, that those eight boxes are in a room outside the Court. The cramped conditions didn't really make it convenient for them to be brought in here and placed near the witness box at that stage, but copies of those original documents have been made and have been made available for the parties. What I would propose to do is to tender those eight boxes of documents, that is the balance of the documents, the ones that have not been tendered individually, at this point as being the original documents collected in the course of investigation. That is probably the best description for them, Your Worship.

WARDEN: Yes, thank you. They will be admitted and marked Exhibit number 9.

ADMITTED AND MARKED "EXHIBIT 9"

MR CLAIR: Now, amongst - well, first of all, Mr Lyne, that document inventory that was referred to earlier as being the one prepared, as I understand it, essentially under Mr Walker's supervision; is that right?-- That's correct, yes.

Okay. That document inventory sets out in various columns a description of the - of each of those original documents contained in the last exhibit; is that right?-- Mmm, that's true.

And it ascribes a number to each of those documents?-- Yes, it does.

And in some cases a set of sub-numbers, as it were?-- Yes.

Now, one of the numbered documents there, for example, consists of the statements of a group of witnesses?-- Yes.

For instance, group - document 62 consists of a series of statements being five statements of witnesses to the second explosion?-- Yes.

Describing the nature of it and so on. So, there are other groups of documents grouped under one number, but with sub-numbers; is that so?-- That's true.

Copies of those statements then are contained in those greater bulk of documents which make up the last exhibit?-- That's true.

Again, Your Worship, pausing there, a copy of those statements - of each of those statements has been made available to the parties so I wouldn't propose at this stage to extract the statements from the larger bulk of documents

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and tender them individually, and I might also indicate, Your Worship, because there is such a large bulk of these original documents, that it is my intention as we proceed and have particular witnesses in the witness box, to have available, where a witness needs to refer to a particular document and it's a document of significance that might need some attention individually, that is apart from being in the greater bulk of documents, a photocopy of the original that will be extracted and when it is examined by the witness a copy will be made available to the parties and to each member of the Inquiry.
So -----

WARDEN: Yes, thank you.

MR CLAIR: But a copy will be in front of the parties when the witness is giving evidence. Finally, Your Worship, I tender that document inventory to which I have recently referred.

WARDEN: That is basically a list of all the other documents so we know where to go and find things?

MR CLAIR: Yes.

WARDEN: That will be admitted and marked Exhibit 10.

ADMITTED AND MARKED "EXHIBIT 10"

MR CLAIR: That's all I need to take from Mr Lyne at this stage. It might be appropriate for him to stand down at this point and he will be recalled at a later time to give his evidence in substance. That is at a later stage of the Inquiry, Your Worship.

WARDEN: Thank you. Do you have any problem with that?

MR MARTIN: No.

MR MacSPORRAN: No.

MR MORRISON: No.

WARDEN: Thank you. You are stood down. You will be required further in due course.

WITNESS STOOD DOWN

MR CLAIR: It might be an appropriate time to adjourn with a view to the practical steps being put into effect, to move the Inquiry down to the alternative venue.

WARDEN: Thank you. How many witnesses can we process this

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afternoon?

MR CLAIR: We have three witnesses available this afternoon. I think that that will certainly fill out the afternoon.

WARDEN: Thank you, then. We will take the luncheon adjournment. Can we resume at 2.30 at the upstairs convention room at the Country Plaza International Motel? Hopefully there will be sufficient seating and room to accommodate you in more comfort for the next two or three weeks.

MR MARTIN: We are very grateful.

THE COURT ADJOURNED AT 12.17 P.M. TILL 2.30 P.M. AT THE COUNTRY PLAZA INTERNATIONAL MOTEL

THE COURT RESUMED AT 2.36 P.M.

WARDEN: Thank you for your patience and tolerance during the short, but hopefully successful shift we just initiated, and I trust - I gather from the space between the shoulders you are much more comfortable. Thank you, Mr Clair?

MR CLAIR: Thank you, Your Worship. I call Michael Robert Caddell.

MICHAEL ROBERT CADDELL, SWORN AND EXAMINED:

MR CLAIR: Your full name is Michael Robert Caddell; is that correct?-- Yes.

Mr Caddell, you are a mine deputy at Moura No 2 Mine; is that right?-- Yes.

You have been interviewed in relation to the accident at Moura No 2 in August of this year?-- Yes.

And on 24 August this year did you make a statement in relation to the matter?-- Yes.

And you signed that statement; is that right?-- Yes.

Your Worship, that document is one of the documents that was tendered this morning and it is document 70/13 in that Exhibit 9.

Mr Caddell, I don't propose to take you through every word of your statement here in your evidence but there are a number of matters that I would ask that you address. You were appointed as a deputy at No 4 Mine initially in 1981; is that correct?-- Yes.

And then in 1986 you were transferred to No 2 Mine?-- Yes.

And you have worked there ever since; is that right?-- Yes.

And over the past two years you have been what might be called a spare deputy, working in all the panels and doing other duties?-- Yes.

Within No 2 Mine?-- Yes, that's correct.

Now, in the course of your employment have you had occasion to look at a document which is a position description in respect of the position of deputy? I just ask you to have a look at this, if you would? I will show you this document. If you can just keep your finger in that spot, look where it is open now, but look at the front page, Mr Caddell? It is a document which is headed "Underground Position Descriptions"?-- Yep.

"BHP Australia Coal Limited Moura Mine" -----

Before we go to that point I have isolated, Your Worship, I will tender a copy of this bundle of documents which is headed "Underground Position Descriptions" and there are copies available for the members of the panel and my learned friends.

The position at which that document was opened when I handed it to you is the page which refers to the position description for underground mine deputy; is that right?-- Yes.

And that sets out various items including the responsibilities of deputies - underground mine deputies and then attached to

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that in turn there is an acknowledgement form, is that correct, which has various names and signatures on?-- Yes.

Including at one point your name and signature; is that right?-- Yes.

It is fair to say then that document sets out, amongst other things, the various responsibilities of deputies?-- Yes.

Okay. Now, if I can ask you some questions about 5 South section within the No 2 Mine, and -----

Pardon me a moment. Yes, if the witness could be shown the plan - in fact, if - it might be best if the folder is handed over to my instructing solicitor and he can isolate the relevant plan. That's the folder of plans which is Exhibit 8. The plan that I will isolate for the witness is the first plan in that folder which is plan 45/3. Well, perhaps in that same sleeve I will take the witness to the plan which is described as UG2-5000-45-4. That plan shows the status of the mine at the time of the explosion. I will have that just put up on the board there, Your Worship, so that everyone can see it. If that can be brought over closer to the witness?

Now, Mr Caddell, 5 South section, can you just indicate that on the plan so everyone can see?-- There.

The witness has the assistance of a laser pointer now which may make it easier as we progress.

Now, you were familiar with the workings in 5 South section, Mr Caddell?-- Yes.

And there was a methane drainage programme that had been carried out in relation to 5 South section?-- Yes.

Did that have some effect on the panel?-- Yeah, it was very dusty after that drain.

What can you say about ventilation in that panel of 5 South?-- Ventilation was good, mainly stagnant in the supply road at times, but particularly showed up when you were stone dusting. Stone dust wouldn't get carried away, it would sort of come back.

I see. What about the position with the methane or accumulation of methane gases in that section? Any particular problems in there?-- No, not to me - not to my knowledge. There was no methane layering in that section due to that fact, due to that ventilation being that way.

Can I draw your attention then to the 512 Panel? Can you indicate that first of all on the plan?-- Right there.

So that we understand the terms and locations there - since you are the first one into the witness box we will have to get your description of these - the section which you have referred to as 5 South section runs beyond the intersection there of 5 South and then the section which runs at right

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angles to that?-- That one there, 510, yeah.

510 section runs in a north westerly direction; is that right?-- Yeah.

And then 512 Panel runs at right angles to that in a south westerly direction; is that right?-- Yes.

And then beyond 512 Panel as you proceed along 510 there is a panel which also leads off in a south westerly direction?-- Yes.

That is 511 Panel; is that right?-- Yes.

Now, you worked in 512 Panel on many occasions; is that right?-- Yes.

And what kind of observations can you make about the layout of 512 Panel?-- With regard to?

Well, first of all, the number of headings that were there?-- Yeah, well, I never agreed with the number of headings that were in the panel because we had had trouble before in another section in the mine with ventilation, not being able to maintain positive ventilation. I always had a concern with that.

Was that in 4 South section?-- Yes.

And how many headings were there in 4 South?-- Six, if I remember correctly.

In 512 Panel how many headings there?-- There were six.

Now, you say that created some difficulty with ventilation in 512?-- Yes.

Did you, as part of your duties, make measurements of the gasses within 512 Panel?-- Yes.

Do you recall what kinds of ratings you would obtain in 512?-- Yeah, I detected 1.2 per cent of methane on one occasion at the pillar corner at the goaf edge. It wasn't an occasion, it was in the early stage of the panel, in the extraction of the panel, and I found that the bleeder return was completely open from being used in the main return, therefore there was no ventilation going over the - no, not no ventilation, but very slight ventilation going over the goaf area.

Just pause a moment if you would. I want you to look at another of the plans from Exhibit 8, drawing 45/18, and I will have that put up on the board also. It's a more detailed plan of the 512 Panel. Mr Caddell, perhaps you can just indicate the areas that you are speaking of in 512 when you say that you found on one occasion this methane level of 1.2 per cent?-- I can't remember right where it was, but it was in the early stage of the panel, probably around, I don't know, around that area there, I would say, 8, 9 or 10. I just can't -----

Was that during the development or during the retreat phase?-- Yes.

During the retreat face?-- Yes.

And the workings at that stage were down in the area where you have indicated?-- Yeah.

Now, I think you said that what it indicated to you at that time was that there was some short circuit of air across the working area and the air wasn't being taken in over the goaf; is that right?-- Yes.

Now, you say in your statement that there was not a regulator as such in the bleeder return. Can you explain what you mean by that?-- Well, there wasn't any regulator there because, to my understanding, when we started the panel off, we always had meetings about starting an extraction panel off before we start extraction, and, to my understanding, this return here was supposed to be used as a main return and that one there was only a bleeder return.

Just for the sake of the record, you are indicating the bottom one on the plan which is in fact generally referred to as the top return; is that right?-- Yeah.

And the top one on the plan which you have indicated is the bleeder return?-- Yeah. Now, what was supposed to be done when you brought the panel back, put stoppings up across there to regulate that. If you were there, just keep moving the stopping back. So, all the air is going over the goaf and just a fraction of it going up the bleeder return. That wasn't happening.

The stopping is across the bleeder return?-- Yes.

Now, when you refer to a regulator, that's an area of the -----?-- Yes, it's a piece of brattice placed across the roadway.

Now, did the practice change as the workings retreated?-- Yes, after we had that problem, yes, that did change.

In what way?-- Well, they ended up regulating it off where the seal is, there.

You are indicating back between 0 and 1 in 512 Panel?-- Yeah.

In the bleeder return?-- Bleeder return, yeah.

Okay. There was a preparation seal there, or prep seal there?-- Prep seal, that's correct.

And you say that was used as a regulator?-- Yes.

At what point was that, when the workings are moved back closer to -----?-- Yeah, a fair way back before that was used.

Well, what was the effect of that when that bleeder return was regulated then?-- Well, it forced more goaf over this area, over all that - not goaf, sorry - more air over the goaf to get it to come back around up this return.

You are indicating there the goaf generally. Now, just pausing a moment. The method of extraction that was used on the retreat from 512, was that a method of extraction which you had used in other panels or which had been used in other panels that you had been associated with?-- Similar but not exactly the same, no.

Well, what was the general - how could you generally describe that method?-- Well, the method of ramping in the bottom, you know, as far as I was concerned anyway, was too steep, but we had to do that because we didn't want to leave any overhanging pieces for shuttle car operators to get in danger from overhanging pieces any higher than 3 metres. So, that's why we ramped, so the shuttle car drivers were not exposed to high ribs.

Now, there were two aspects of the extraction on retreat out of the panel, were there not, being, first of all, that the method of extraction was that there would be - one whole pillar from the outward development would be left, is that

right, and then in the next - between the next cross-cuts a substantial part of the pillars was extracted; is that right?-- Yes, that's correct.

Sort of take one, skip one type method?-- Yes.

And does that diagram there indicate the areas in which larger sections of the pillars were extracted; is that right?-- Yes.

And the other aspect of extraction was that the bottoms would be taken out; is that right?-- Yes.

And that's the ramping that you speak of?-- Yes.

What was the height of the goaf in the areas where the bottom was taken out?-- Approximately 5 metres.

Well, coming back then to what you were saying about the flow of air through the goaf area after the regulator had - using the prep seal - had been put in place and the bleeder return, what would you say generally about the flow of air through the goaf area at that time?-- There was a good flow but it wasn't covering the whole goaf, in my opinion. There was a section in here that wouldn't have got a good flow of ventilation over it because the simple fact is it was going to that wall and then back around and up here.

We can see where you are pointing, but I would like to get this on the record. You say in the area that you felt didn't have a good flow of area was between 7 cross-cut and 13 cross-cut?-- Yes, around there. Halfway down the panel to the end of the panel, yes.

And between the top return and number -----?-- About No 3 or 4 heading.

No 4 roadway?-- No 4 roadway.

And then increasing up towards the bleeder return?-- Yeah.

When you get right down to No 13 cross-cut?-- Yeah.

You had concerns about the extent of ventilation there in that area. What about the effect of ramping the bottoms and extracting the coal in that way? What kind of effect did that produce so far as loose coal was concerned?-- Well, it resulted in more loose coal being left behind than previously the way we used to take bottoms. That's what I was referring to.

Was it that that loose coal couldn't properly be cleared up?-- That's right.

What's the effect of having loose coal about in a goaf area?-- Piles of coal in a goaf area, leaving just loose coal around is - you get a fall or anything, you can create coal dust or you can get spontaneous combustion with the roof falling in on it or whatever.

Now, I want to direct your attention, Mr Caddell, to the Friday afternoon shift of 5 August. You worked that shift?-- Yes.

And you worked it in 512 Panel; is that right?-- Yes.

At the beginning of that shift did you have some conversation with the under-manager, Mr Michael Squires?-- Yes, that's correct.

What was that conversation?-- He told me that there had been a slight rise in the carbon monoxide reading from 8 ppm to 10 ppm during the previous two shifts. He informed me that Steve Byron, who was the acting ventilation officer at the time, was doing the CO make calculations, and I saw Steve after that, shortly after that, and the CO make, I think he said, was around about 14.8 litres per minute which wasn't a significant increase from the previous readings.

Well, that reading of 10 ppm, what sort of comment would you make about that at that time?-- When I was on the surface or -----

No, I mean what comment would you make now about a reading of 10 ppm at that stage of the retreat?-- That's normal in that stage of the retreat. We have had similar conditions there in that same mine and in No 4 Mine in that area - in the same sort of situation.

Okay. Now, did you have some further conversation with Mr Squires about inspection of the panel?-- Yes, I asked him had anybody been to the back of the panel, down the top return, as I call it, the main return, and he replied not to his knowledge, so I told him I would go to the section and get an experienced miner to accompany me on inspection of that return.

Did you do that then?-- Yeah, I went down to the section and got Mr Craig O'Brien who was an experienced miner. I made an inspection of the section first, which is the way to go, and then I got Mr O'Brien and we made an inspection of the top return.

About what time would that have been?-- Oh, around 4 o'clock, 4 p.m.

Now, can you tell the Court what readings you took in the course of that inspection, where you went? If you can indicate that on the plan. If I might ask you this, Mr Caddell: we can see where you are pointing but unfortunately there is a record being made. If you can say you went down to such and such a point. Point to it at the same time most certainly?-- Went through this door here in No 1 heading into the top return - sorry, this door here. Through that door there into the top return and through the prep seal and the monitoring point which is there. I done readings there of CO, CH₄ and O₂. O₂ was okay, it was normal. CO was 8 ppm and CH₄ was 0.3 per cent.

That was in the top headings at No 1 cross-cut?-- Yes.

Go on?-- We then travelled inbye which is in this way, down this road here, inspecting all stoppings as we went. There was some small holes in a few of them but nothing big and we got to 10 cross-cut and I noticed a strong tar smell.

Just pause there a moment. You were still in the top return at that stage?-- Yes.

Just going back to where you took the readings back at No 1 cross-cut?-- Just here.

Were the bottoms out at that point?-- No.

There wouldn't be any bottoms taken from that -----?-- There was a few bottoms taken out in here but not that many. It was walkable, no problem to walk.

At what height would those readings ordinarily be taken?--
At what height?

Yes. These were readings that you took with the Draegar tube?-- Probably about - standing up about there. Same height as the Unor sampling point.

Same height as the Unor sampling point?-- Yes.

How high would the roof be at that point?-- Oh, a bit over 2 metres, I suppose.

You said you went down the top return to 10 cross-cut?-- Yes.

At 10 cross-cut would the bottoms be out there?-- No, not at that time, 10 cross-cut. Not in that section, no.

The top return?-- No, not in the top return.

You say you noticed this strong tar smell there. Was it a smell that you had smelt on other occasions?-- Something similar to what I'd smelled after the explosion at No 4. That's the only other time I had really come across a smell like that.

What was the condition of that stopping at No 10 cross-cut?-- Had a hole 1 square metre in the middle of it and I was going to go through the stopping to take the readings but the bottoms were taken out behind it; so I took the readings right at the hole in the stopping, CO reading was 10 ppm CO, and .3 per cent of CH4.

And then what height was that you would have taken those readings - at the same height?-- About in the middle of the section, yeah, probably 5 foot off the ground I'd say.

Where did you go then?-- Went inbye the 13 cross-cut, which is the back of the panel, inbye to there, and took readings there. Those readings were the same as what was at the Unor point out at No 1 which were 7 ppm, .3 of CH4 and the ventilation was adequate.

Did you notice any smell at 13 cross-cut?-- No.

What did you do then?-- We travelled outbye back out along the same return, out to here, went to the crib table, which was there, and rang up Michael Squires, the undermanager, and that was approximately 5 p.m. and gave him the results of my inspection. I also told him that in my opinion the section should be sealed as soon as possible and because I was - had a concern about the place and I understood that the sealing was planned to be completed on Sunday day shift, but I thought it should be brought forward. He told me over the phone that he would talk to George Mason, the undermanager-in-charge.

What were the concerns that led you to the view that the section should be sealed as soon as possible?-- Well, there was a concern there could have been something going on in the goaf.

Of what kind? When you say "something going on in the goaf"-----?-- I just had a concern. We had similar situations at that mine where we have had high readings of CO and that sort of stuff, and it was no different, but that was my observation, that I just had a concern that there could have been something going on in the goaf; so I wanted him to get it sealed up as soon as possible.

There were readings taken at the Unor point again at 9.30 p.m. that night?-- Yes.

And they showed no change?-- No change from the previous readings.

What time did you finish your shift?-- About 10.30 - sorry, I didn't finish my shift until the next Saturday morning because I did a double.

You worked a double shift?-- Yeah.

There was another deputy that came on at the end of your first shift?-- Yes.

That was Bob Newton; is that right?-- Bob Newton, yep.

Did you speak to him about the situation?-- I spoke to him. He is the deputy at - normal production deputy. He said he would go down and look after the boys down there and I would go to other sections in the mine. I expressed my concerns to Bob and he said he would go straight down and go to the Unor point and take readings and his own observations. I talked to him again at 6 o'clock in the morning. I asked him how the readings were going and he said there was no change.

Mr Caddell, you did produce or fill out a Production Deputy's Report; is that right?-- Yes.

And I don't need to take you to it. You have seen that report; is that so?-- Yes.

I might just mention, Your Worship, that that is document 24 in the documents in Exhibit 9. I won't pull it out at this stage and show it to the witness but it's there and accessible if anybody wants to look at it.

Mr Caddell, in that report, you made this observation, did you not, that, "An inspection in company with Craig O'Brien was made of the top return to 13 cross-cut. A strong tar smell was evident at 10 cross-cut with the above readings taken.", and you recorded the readings that you have referred to in your evidence; is that right?-- That's correct.

What happens with that report after you have completed it? What do you do with that report?-- I hand it to the undermanager and he reads it and signs it and posts it on the report board outside the bathroom for everyone's perusal.

You finished your shift at 6 a.m. or 6.30?-- 6.30, 7 o'clock, yeah.

You referred in your evidence to suggesting that the sealing of 512 be brought forward?-- Yes.

From, as you understood, the Sunday when it was to be done as soon as possible?-- Yes.

And that seal that was to be erected there, the prep seal was in place; is that right?-- Yes.

Prep seals were in place across each of the headings for 512

section; would that be so?-- Yes.

And what kind of method was going to be used to seal the panel?-- Normally use bricks but new Tecrete seals where you pump them full of sort of slurry and put up buckets and pump the buckets full of slurry and it just sets.

Had you been involved with the use of Tecrete seal previously?-- Only for ventilation stoppings, that's all, never for sealing.

What was your view of these Tecrete seals?-- I didn't like them.

Why was that?-- Only had three hours to finish a seal and these things were going to take more than three hours to seal and they were - they weren't - just the method of doing it, it was very cumbersome.

You say it took longer than three hours?-- Yeah. I said to - asked one of the blokes on the Friday night or Saturday morning in the shower when they come out, one of the Tecrete blokes, he said it would be at least nine to ten hours to do that, to finish them off - a bit more than three hours.

You referred to having three hours to build the seal, why do you say three hours?-- Well, three hours - supposed to have - you're supposed to be able to finish a seal in three hours.

And why is it important to build the seals quickly?-- Well, to finish them so if you get any problems in the panel get them sealed quickly. Far better off sealing it quickly than spending time sealing it.

If sealed quickly, what actual effect does that have inside the panel?-- It builds up the gasses inside the panel to make the atmosphere inert.

After a panel is sealed the amount of gas inside the panel is obvious - or the amount of gasses inside the panel obviously increases; is that right?-- Yes.

Does the mixture of gasses pass through an explosive range in the course of that increase?-- Yes.

If it passes through the explosive range it becomes inert?-- Yeah.

Am I stating that correctly?-- Yes.

Did you work on the following day, 7 August?-- On the Sunday, yes, on the day shift.

On that day did you, together with another miner named Brian Kelly, do some tests of the Unor Monitoring System?-- Yes.

Can you explain?-- When we use the Unor Monitor System we take a gas bottle with us that's got a known concentration of carbon monoxide. There are sampling points around the mine -

got different sampling points for each return - and put a sample through them for five minutes and they pick it up on the surface and they take that sample.

You say a sample goes through for five minutes in the case of each of the sampling points?-- Yeah, we - yeah, it doesn't take five minutes to get to the surface. It's five minutes.

How long does the process take then altogether?-- Well, it's all different times throughout the whole mine. There's different times, all depends how much tube bundle line you've got.

I appreciate that it is different times for the gas to come to the surface from the various points but in terms of actually carrying out the testing process how long does that take?-- It would take a full shift.

On this occasion when you did the testing what did you find?-- All points were okay except - to my knowledge anyway - No 8 first North West return was reading low. Would have done a recheck on that the following day. We ran out of time on the day shift.

Otherwise, the system appeared to be working as it should; is that right?-- Yes.

There was a report of those tests that was filled out; is that right?-- Yes, times and the readings.

Have a look at this document, if you would, Mr Caddell.

I might just mention, Your Worship, that's document 100 in the larger exhibit, Exhibit 9.

It describes, does it not, the mine monitor systems sampling points span gas test; is that right?-- Yes.

Does that document show a record of span gas testing results from that occasion?-- Yes.

I will tender this document, Your Worship. Copies are available for members of the panel and for my learned friends.

ADMITTED AND MARKED "EXHIBIT 11"

MR CLAIR: In particular was there any problem in 510 section with Unor sampling points at that time, Mr Caddell?-- I don't think so. I could see here there is one that's had a problem but I didn't - on that day I didn't realise that he had a problem with that one.

That's?-- No 18.

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That shows from the report, does it?-- Yeah, No 18.

On the first page of the report?-- Yes.

And there is no reading actually recorded for 18?-- Yes.

Was 18 located in 510?-- I think - I wouldn't be sure but I think it was on that bottom - top side of this return over here. I think it was on the top side of 510 return. I wouldn't be sure about the number; pretty sure it was.

If you just lift that plan up you will see the other plan of 510 - the other plan which shows 510?-- Yep, around this area here.

Which roadway is that?-- Top return, 510.

Thank you. Mr Caddell, whilst you have been working as a deputy at the mine what sort of training have you had in relation to matters concerning spontaneous combustion? Is there any specific training programme that relates to that, the significance of readings or the difficulties in ventilation of the goaf?-- No, there is not a thing on spontaneous combustion. You always do spontaneous combustion when you are at deputy's school.

You have been involved with quite a number of sealings and examples in the Moura Mines, that's No 1, No 4, and No 2; is that right?-- Yes.

Was there anything about this sealing, the sealing of 512 here, which made it different or unusual?-- No.

Compared to the sealings of other areas?-- No, only at No 4. We had a policy initiated by the workforce after we'd sealed a section, we stayed out of the place until it went through the explosive range. That was because of a sealing of a section which was a suspected heating which turned out to be nothing.

That was a panel in 4 mine?-- Yes.

Was it just the once in No 4 where you were involved that men were withdrawn after a section had been sealed?-- No, quite a - two or three times.

Two or three times?-- Yes.

What about at No 2 mine was the same sort of policy adopted or not?-- No, not to my knowledge. We sealed 5 North West and there was a raising of CO or suspected heating, blokes were kept out of the pit there a couple of days while it went through the explosive range. Those indications in the CO rises, as I recall, were a lot more positive and clearer. There might be a problem than what was evident in 512.

Sorry, there might be a problem?-- I'm saying there were a lot more positive clearing in 5 North through the readings of CO than what was evident in 512.

XN: MR CLAIR

WIT: CADDELL M R

You don't remember particularly the kinds of readings involved with the sealing of 5 North West?-- No. It was over 10; it was up to 15, I think. I wouldn't be sure.

Tell me: in 5 North West Panel what method of extraction on retreat was there; do you remember?-- No, I can't recall that. Well, I can but I - there is that many different extraction methods we had, I just can't remember the ones in 5 North West.

Apart from 5 North West were there other occasions when the men were withdrawn from the mine after a sealing in No 2 Mine that you can recall?-- Not to my knowledge anyway.

Do you recall whether there was any use of a gas chromatograph in analysing the gas samples taken from 512 during that period of test prior to the sealing?-- No, to my knowledge there was no gas chromatograph used.

What is the practice in relation to the gas chromatograph as far as you were aware in No 2 Mine?-- I was never ever trained on it. I don't really know anything about it really. I wasn't trained on the chromatograph.

Are you yourself aware of the purpose in using a gas chromatograph?-- Yes.

What is that?-- It's to find out what other gasses you got there besides - there was the normal gas - but what other gasses you got there besides the inherent which was CH₄ and CO and oxygen and whatever.

Tell me: with that Unor Span Gas Testing that you did on the Sunday does that have any effect on the sampling process? Does it take the process of gas sampling out of action for any length of time?-- Yeah, we can only put four points up on a computer at any one time. We can't have the whole lot of them going through, take too long for them all to go through; so we only put four samples up on computer at one time. We go and do those four sample points and I ring him as we go and he puts a couple extra up and deletes two when the reading comes through.

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And that would be so throughout the whole process?-- Yes.

Of the span gas testing?-- Yes.

It could go for a number of hours or possibly a whole shift?--
Yes, up to five hours you can be down for.

Finally, was there any suggestion to you while you were on
shift, that is any statement made to you by anybody else, that
there was a suspected heating in 512?-- No.

Did anybody say words to that effect to you -----?-- No.

At any time? Okay. You say you think you left around 7.30 or
thereabouts on the Saturday morning?-- 7 o'clock on a
Saturday morning.

7 o'clock. When did you next come back to the mine?--
7 o'clock the Sunday morning.

Your Worship, I might just tender that document that I first
produced, that is the position descriptions which is still
there with the witness.

WARDEN: Admitted and marked Exhibit 12.

ADMITTED AND MARKED "EXHIBIT 12"

MR CLAIR: Thank you, Your Worship. I have no further
questions of Mr Caddell.

MR MORRISON: Your Worship, I think the position description
is already number 11. The one that hasn't been tendered is
the span test.

WARDEN: He did produce it, he didn't tender it.

MR CLAIR: The span gas test hasn't been tendered. I tender
also the span gas testing results which is document - I
thought that was 11.

WARDEN: I had that down as 11.

MR CLAIR: Yes, that was my -----

WARDEN: You produced the position description, you didn't
formally tender it.

MR CLAIR: Yes, it was the fact that Your Worship made that
11 that made me think I hadn't tendered the earlier one. At
this stage 11 is the span gas testing and 12 is the position
descriptions?

WARDEN: That is what I have got.

XN: MR CLAIR

WIT: CADDELL M R

MR CLAIR: Thank you, Your Worship.

WARDEN: Yes, thank you Mr MacSporran?

CROSS-EXAMINATION:

MR MacSPORRAN: Mr Caddell, I appear for the Department of Minerals and Energy so you know who I am representing. Can I ask you just in relation to your most recent evidence about the previous sealings? You mentioned, I think, two by name. One was the 5 North and one was 5 North West. Do you remember those two separate sealings?-- No, not really, no.

Do you remember one being back in 1986 when there was a problem with either heating or a fire?-- Yes.

And that was sealed in consultation with the inspector at the time, ~John Brady?-- Yes.

That was April or so 1986?-- Yes.

Did you have any involvement yourself in that ceiling?-- No, no.

But you were employed at that time as a deputy at the mine?-- At No 4 Mine I was, when that was -----

Then there was the other sealing at 5 North West which was about September or so 1991?-- Yes. I wouldn't be real sure.

Did you have any involvement at all in that one yourself, that you recall?-- Well, yes, I suppose - I just - I can't remember where that was sealed off in the 5 North West, you know? I mean, there were a couple of places sealed in 5 North West. I don't know whether there was the 1991 one or -----

All right. Just so that there is no confusion, are you able to point out on one of those plans what you say was the sealing in 1986 of either 5 North or 5 North West?-- That one there.

And you are indicating that one as being which one, sorry?-- This one here.

As 5 North or 5 North West?-- Well, to my knowledge - I wasn't working at the mine at the time and it was 5 North to me, the whole place was 5 North; I mean, both sections of it.

All right?-- 5 North West or - in terminology I -----

All right. So, you are not able to help us any further about which was which or which came first of the two of them?-- Not really, no.

All right. Anyway, you say there was a policy where you were

XXN: MR MacSPORRAN

WIT: CADDELL M R

at No 4 Mine or a workforce policy of withdrawing the men?-- Yes.

During the course or after a sealing whilst the panel went through the explosive range?-- Yes.

Was that discussed with management at the time?-- At No 4?

Yes?-- Yes.

And what, to your recollection now, was management's position with respect to your wanting to withdraw the men for that period when it went through the explosive range?-- They had no problem with it whatsoever.

And that happened, I think you said, three or four times at No 4 Mine?-- Yes.

Was that every time the panel was sealed or only every time there was some perceived problem?-- Every time the panel was sealed.

Every time?-- Yes.

So, that was up until what, 1986?-- Yes.

Then you started to work at number 2?-- Yes.

Was that policy ever sought to be invoked at number 2, that is, to withdraw the men after a panel had been sealed?-- Not to my knowledge, no.

Was it ever discussed amongst the deputies and/or the men, that that policy should be invoked as it had been in No 4?-- Yes, at times I would say it was mentioned, yeah.

Was it ever raised with management to your knowledge?-- Yes, probably a couple of times with regards to 5 North or 5 North West, with regards to that it was raised, but it was never ever raised at any other time. It was just a similar situation to what we had gone through at that mine.

With either 5 North or 5 North West, was there any resistance by management to the men not wishing to be underground whilst the panel remained in the explosive range?-- No, I couldn't - I can't recall whether there was or there wasn't.

Anyway, as far as you recall, the men didn't usually withdraw for those periods?-- No.

Can you tell us any reason why that was? Why you didn't pursue the same policy that you had in place in No 4?-- Well, at No 4 at the time when we initiated the policy it was just initiated by the blokes, we just walked out of the pit and went straight up and saw the management. That was the way it was. We never had any argument at all about it. We sealed sections at a certain time of the week. We sealed them on a Friday so that we could stay out of the pit on the Saturday and Sunday - no-one was at the mine - to save any production

losses or anything like that, and that is just the way it was and it was never ever said anything more about it at No 2, sort of thing, because it was just - everything was quite similar at No 2 when you sealed a section.

Except you didn't withdraw from the pit?-- We didn't withdraw, no.

Again there was nothing else you can tell us about the reasons for that?-- No.

No reason why the men didn't pursue that policy that they had in place in No 4?-- Oh, there is a possibility - a lot of different people worked at No 4 and two different mines. It is just that we never ever initiated it because there was - all sealings at No 2 were virtually similar to one another. We always had similar readings and that sort of stuff when we come out of panels so we never ever initiated it.

Was there a set procedure to be followed when a panel was sealed?-- Oh, yes, there was, but -----

This is No 2 I am talking about now?-- It is not a written procedure. There was always a procedure adhered to. Like, I mean, we used to have a talk about it, about the way it was supposed to be done, whatever. Not to my knowledge there wasn't any written procedure.

So, the sealings that you took part in in No 2, you had learnt over the years by being involved in similar sealings?-- Yes.

But there was no manual, no written documents?-- Not to my knowledge, no. Well, I hadn't seen one.

Were there any instructions given to the men about how the sealing should progress?-- There was always verbal instructions passed around between under-manager, deputy, the workers.

Now, on the Friday afternoon shift on 5 August in 512 you took some readings and you have told us about that?-- Yes.

That was because there was some concern expressed to you about rises in the CO reading in the previous two shifts; is that right?-- Yes.

And as at 5 August how long had the panel, that is 512, been in production, approximately, in second workings? Was it nearing completion?-- Yeah, it was completed.

Virtually completed?-- It was completed.

And the sealing process was in progress?-- Yes.

So, the reason you were taking these samples was to monitor the increase in CO?-- Yes.

And you told us that the way you did that was to take samples at about the same height as the Unor fixed points?-- Yes.

And that was about - did you say about two metres off the ground?-- Oh, wouldn't be - yeah, between one and a half and two metres, I suppose. About there when I am sitting up.

You used the Draegar instrument to take these CO samples?-- Yes, that's correct.

Was that a standard procedure, to take those samples at the same height as the Unor fixed monitoring point?-- No, well, I just used that as a - that's where the Unor sample point was, that was the sampling of the return, so that's where I took the reading.

The sample you were taking would have been the same sort of sample the Unor itself was taking?-- Picking up, yes.

So, if the mixture was different elsewhere your sample would not necessarily have picked it up - if the concentration was different elsewhere in the panel?-- In the panel or where I was standing?

Where you were standing, higher or lower?-- There is a possibility of that, yes, I suppose.

How high was the roof in that area where you were sampling, approximately?-- Two or three metres - between two or three metres.

It was, at least, probably a metre above you?-- Yes.

Where you had been sampling?-- I sampled the CH4 there always.

With the Minder?-- Yes.

But not the CO?-- No.

Is that the procedure you followed throughout that sampling procedure? You always sampled at that same height, the CO?-- When I was sampling in that return you are talking about?

Yes?-- Yes, at 10 cross-cut where I got the slight rise in the CO, that was the only place you could sample, was where the hole was in the stopping. That was about 4 foot off the ground, 5 foot off the ground.

Your reading there was about 10 ppm, you said?-- That's right.

You had smelt that similar smell after the incident at No 4 in 1986?-- Well, they asked me had I smelt any similar smell and I said, yes, or something similar at No 4 after the explosion.

And your concern, no doubt, was because you thought there may have been some heating in that panel?-- Well, not really. I just thought there might - there was something going on. It was starting to go towards that - towards that phase where it starts to heat up in the early stages.

You didn't know what the tarry smell represented, but you had smelt it before after the No 4 Mine incident?-- Yes.

And you hadn't smelt it before in the 512 Panel?-- No.

Had you heard any discussion at all by anyone prior to 5 August when you took this reading that they had smelt something similar to that?-- No.

No talk about it at all?-- No.

Anyway, when you smelt that and got the reading of 10 ppm you did have some concern?-- Yes.

Enough concern to ring Michael Squires?-- Yes.

And tell him your results?-- Yes.

And express the opinion that the panel should be sealed straight away?-- Yes.

And by sealing straight away you meant to convey sealing ahead of schedule?-- Yes.

This was the Friday afternoon, was it?-- Yes.

And the scheduled sealing was on?-- Sunday at the time.

Sunday. Now, that's the day you worked the double shift?-- Yes.

And Bob Newton was the on-coming deputy?-- Yes.

Was there any particular reason why you didn't remain with 512 and continue your monitoring of the situation?-- Bob was the normal section deputy in there. When he come in that night I told him about it. I said, "I'll go back if you like?" He said, "No, I know the place." He knew what was going on and everything so he just went in there because it was his normal section.

You told him about the concerns you had?-- Yes.

And the reasons for those concerns being the tarry smell and the reading of 10?-- Yes.

Did he indicate to you he had some concerns about the panel?-- No.

Did he say he had any concerns earlier from that shift about the panel?-- No.

Did he in any way disagree with your assessment that it should be sealed as soon as possible?-- No, he agreed with me, if that was the case, you know? If we got a cause for concern you go down and check on it and he said, "Yeah, not a problem." There was no reason for him to disagree.

So, as you understood it the panel would be simply completely sealed and work would continue?-- Yes.

As normal?-- Yes.

You didn't have concerns about the work continuing underground whilst the mixture went through the explosive range?-- No, not at the time.

In spite of the smell you detected at about the 10 cross-cut?-- No, I didn't have a concern.

Were you - did you have the practice of looking at the plotted graph of the gas trends before going underground?-- Did I?

Yes?-- Yes, well, if I had a concern about something I went and had a look at them after a sealing or something like that, yes.

They were always displayed, were they, above ground for sighting before you went underground?-- Yes.

I just ask you, in terms of your method of sampling for gases, that was a fairly regular occurrence, that you would sample in the panel, isn't it? A regular part of your job is sampling for gases?-- Yes.

Was there any procedure that was laid down anywhere that you should follow to do that? Any document that said what you should do and how you should do it?-- No.

Were you trained by anybody as to how that should be undertaken?-- It is part of your job as a deputy. You do your deputy's course and that is the way it is.

Getting back to what I was saying before about the height you sampled for various gases, there was no instruction given to you about whether you should sample at the same point or lower or higher or whereabouts in the mine?-- Only with regards to CH₄. I didn't normally have a worry with CO.

You didn't see it ever as a potential problem, that CO might be a high concentration higher in the mine?-- No.

Now, you actually redirected the air flow at one point, you were saying, to achieve a better airflow in the goaf area; is that so?-- Yes.

That was achieved by, I think you said, changing a brattice sheet to redirect the airflow?-- Yes.

Was there a procedure laid down for how that should be carried out?-- Yes, you were supposed to inform the under-manager when you changed the regulator. There wasn't a regulator as such anywhere in that return, anyway, at that time.

Do you know what the reason was for the requirement to seek the under-manager's permission?-- Well, because of the - you are mucking around - not mucking around - you are changing the

ventilation of the whole mine by putting up regulators or taking down regulator or changing the flow in every panel, if you would like to put it that way, or changing the flow in the immediate panel.

It is obviously an important step?-- Yes.

So, it needs approval. So, that is written somewhere? There is a document saying you should seek the under-manager's approval?-- Yes, I think so.

On this occasion did you seek his approval to alter the flow in that respect?-- I went and had a look first and there was nothing there so I then rung him and asked him where was the supposed regulator in this section.

Right?-- I then erected one with what gear that I had.

And who was it that you spoke to on that occasion, do you

recall?-- It would normally be Michael Squires because he was normally my under-manager.

You can't remember on this occasion if it was him, but normally it would be?-- Yes.

So he was aware - whoever you rang was aware that you were erecting this structure and changing the air flow?-- Yes.

Would there ordinarily be any follow-up on that action, that is, to check that it was working afterwards?-- Yes, well, I went and checked it and it was okay. It cleared the gas that I was concerned with.

Was it checked by the under-manager, to your knowledge?-- No.

You have been shown, I think, the span gas testing results. That schedule has been tendered. You were asked about point 18 which didn't deliver to the surface?-- Yes, well, that only come to light after the disaster actually. I didn't even realise it hadn't got to the surface.

So you were simply to introduce the sampling to the line and it would be reached at the surface and then the checks would be done by someone else?-- Yes, normally an electrician.

So there was no reason why you should have found out whether or not the sampling produced went to the surface at all; it wasn't part of your job?-- Yes, it was.

Was it?-- I didn't go in because - I didn't go in at the time to look at the samples because we already had a problem with No 8, so I was going to go back down to do it. It was later in the shift. That's all he said to me, was that No 8 was the only one that didn't show.

In any event, it is now apparent there was a problem with No 18 that day, from those results at least anyway?-- Yes. From those results, yes.

You are not convinced that it was a problem?-- No. Well, he got a high reading of CH4 on that very same one during that day, so -----

Just perhaps an obvious matter: do you consider yourself able to accurately detect the smell of heating underground? In other words, there is nothing that interferes, as far as you know, with your sense of smell?-- No.

And you have smelt this tarry smell. You pick that up quite readily?-- Picked it up quite readily in there?

Yes?-- Yes.

Thank you.

WARDEN: Mr Martin?

XXN: MR MacSPORRAN

WIT: CADDELL M R

EXAMINATION:

MR MARTIN: Just a few more questions, if you wouldn't mind, Mr Caddell, about your background. Would you just tell the Inquiry, please, at what age you left school approximately?-- 15. I left in junior.

Did you complete junior?-- Yes.

Did you do any science subjects as such, formal science subjects?-- Only the normal science subjects.

After that what did you do when you left school?-- I done four years in carpentry, or three years in carpentry.

And then into the mining industry?-- Into the mines.

How long were you a miner before you became a deputy?-- Six years.

How long was your deputy's course?-- How long was the deputy's course? 20 weeks.

Was that instruction or examination, or what was it?-- It was 20 weeks with two three hour lessons a week.

I suppose to that time what you learnt was more passed on by your colleagues, your other miners; the system of learning was hands-on from others as a miner?-- Yes.

After 20 weeks of instruction you become an underground deputy. I think you mentioned some book on spon com?-- Yes, you get given - I think it was two books you got given on spontaneous combustion to read while you were doing your deputy's course.

Do you remember their colours?-- Blue and red.

Just look at these and say if these are the documents you personally received with the documents generally you talk about?-- Yes, that's them.

So you received those in 1981?-- Yes.

Do you still have them?-- Yes, I think so, in my deputy's - I still got all my deputy's gear, I done my deputy's ticket, and it would still be in there.

When did you last look at them?-- Could have been 10 years ago.

Please understand I am not attempting to embarrass you. Are the two documents the same or is one -----?-- No, one is thicker than the other.

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It could be thicker type, I suppose?-- One has got more information in it than the other one actually.

Yes, it has, hasn't it? All right. Do you know whether any of your fellow deputies actually received those documents?-- Well, I would say every one of them would have got them.

But you don't know that?-- I don't know that, no. I am only surmising that.

Well, your knowledge of spontaneous combustion then, what, comes from folk law, what's been passed on from others?-- Yes, and reading those books, I suppose you could say that, yes.

Well, you would know it's a peculiar creature then and no one circumstance would necessarily lead to a spontaneous combustion on another occasion; that is, spontaneous combustion could occur once in a particular set of circumstances but not subsequently with the same circumstances?-- That's correct.

And vice versa?-- Yes.

Just talking about my learned friend's question to you about your sense of smell. As I understand you, one important determining factor, to you at least, is the smell of tar or some burning smell like that?-- Yes.

I suppose that's generally true of all deputies, and indeed all men, all miners?-- Yes, I would say so.

But what of a deputy with a respiratory problem? He wouldn't be much help, would he, on a tarry smell?-- Probably not.

I understand that there is a deal of snuff taken underground because one can't smoke there?-- I have only ever seen one person use snuff at Moura undergrounds and that was an ex-bloke from New South Wales. I have never seen anybody else use it.

What about chewing tobacco?-- Same bloke used to chew tobacco.

Were you trained on the Unor system or the Maihak computer?-- Yes.

Such that you could do what with it?-- I could bring up the Ellicott graph or the Coward triangle or whatever. Bring up all the graphs on it.

Graham's ratio?-- Yes.

But not on the gas chromatograph?-- No.

And, of course, there was a gas chromatograph at Moura No 2?-- Yes.

18/10/94 D.1 Turn 8 mkg (Warden's Crt)

And where was that located, in the Unor system room?-- Yes.

But not used?-- Not used?

But never used?-- It was always sampled daily. It always had samples put through it daily, but I didn't check if it was working.

But not to test the atmosphere in the mine?-- Not to my knowledge, no.

Just to test that it's still functioning?-- Yes.

But you taught yourself on the computer, didn't you?-- Yes, following other people.

It wasn't a matter of training by your employer that you learned the operation of the computer?-- No, that's correct.

It was your anxiety to do the best you could in your job?-- Yes.

For how many years has a gas chromatograph been at No 2 Mine, to your knowledge?-- Since approximately 1988 after No 4.

You mentioned to one of my learned friends about the tecreté, or is it tecreté?-- Tecreté.

I will continue to mispronounce it. Do you know whether that was the very first occasion that seal, or that type of seal was used as a final seal in No 2 or indeed - No 2?-- It was used as a final seal in - not as a final seal - as a seal in 2 North.

A final seal?-- Yes.

Do you know whether it was approved by then, by that time? When was that final seal?-- I don't know.

Just do best you can?-- I can't recall.

All right. The seals completed in No 2, Panel 512, were at about 1.10, 1.15 a.m. on Sunday, 7 August, was it?-- Yes.

And there was an explosion at about 11.30 the following night, some 22 hours later?-- Yes.

What do you say about a curing period of 22 hours?-- If they stop it?

Yes?-- Well, they wouldn't have cured.

In fact, you could knock them over with a hammer, couldn't you?-- I wouldn't know because I have never, ever -----

Tried to knock one over with a hammer?-- Well, I haven't tried to knock one over with a hammer because we have never used that type before.

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WIT: CADDELL M R

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But far from cured?-- I don't know how quick they did cure, so I couldn't answer that.

I should be asking these questions really of somebody else, you say?-- Possibly, yes.

You, of course, know that there was a spontaneous combustion at Box Flat in the early 70's?-- Yes.

And Kiangra down the road in, what is it, 1975?-- Yes.

And various instances of spontaneous combustion in the Moura coal seam?-- Yes.

And there was a history, wasn't there, of spontaneous combustion or fear of spontaneous combustion at least in No 2 Panel?-- No 2 underground?

I am sorry, yes?-- A fear of it?

Well, yes?-- Yes.

Could I just ask you this, please: what is it, the monitor after - the probe is it, or can you describe it for me, after the seal, the final seal, is effected or was effected in 512, do you know where that was placed?-- In the belt road.

In the belt road?-- Yes.

I don't know that you have explained that yet. If you would?-- It was right where it is there.

I am a bit far away, Your Worship, to be able to -----?-- It's No 1 cross-cut in No 3 road.

And that is really inbye the seal, that's at the edge of the first panel?-- Of the first - of the goaf?

Of the goaf?-- Yes.

Appears at the goaf?-- Yes.

Do you know - you may not - who authorised the seal to be - the probe to be put there, to be placed there?-- Yes. Well, that was the under-manager on shift. I asked him where he wanted it put because the electricians come down to shift it. They were shifting the Unor line and they said, "Well, we are going to put it down here." I said, "Why is it going there? Why can't it go directly here?", in the position I wanted, in a similar position to that, because we couldn't get it any further than that.

Where did you want to put it?-- In here somewhere.

Can you just describe it, please?-- In that area there somewhere.

That's where you wanted to put it?-- That's where I would have put it. It was just - because it was the, well, the

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normal place to take the monitor point from where it was into there. They had that extra monitor gear and that stuff on it to get it to there and he wanted to put it in the middle of the panel to try and get a representative reading across the whole thing.

Why isn't the probe left further inbye the final seal?--
Well, there is a possibility that you wouldn't get a proper reading because the roof could fall in. We could have left a probe down this roadway here, but whether you get a proper reading out of that either.

All that would prevent it being further inbye the seal than where you have indicated would be the leaving of some more coal; in other words, not to take the goaf so far outbye?--
Yes, that's correct.

Do I understand correctly that the coal was excavated really right to a point very close to the seal and that coincided with the end of the pillar?-- Yes.

In other words - and I don't want to be seen to be exaggerating - as much coal as possible was taken from that panel before sealing it?-- Yes.

Your Worship indicated the other day that you would sit till 4. If that's convenient time, that's all I am asking. It would be convenient for me. I will go on if you wish.

WARDEN: I think you can go on.

There is another thing I wanted to ask you, if you can help

me. Am I right when I say this: that once the sealing is affected, because of what is happening within the goaf, that there is an inrush of air through the sealings further towards the bottom?-- That's a possibility, yeah.

Well, just depends on the atmosphere within or the pressure within and without, doesn't it?-- Yes.

And there is no such thing, is there, as a perfect seal?-- No, that's correct.

In fact, far from perfect seals?-- I wouldn't go to that extent of saying far from perfect.

But it breathes?-- Yes.

It breathes out and it breathes in?-- Yes.

I do remember seeing some report, which I will be able to identify later perhaps, that after the seal is 3 per cent methane coming out of a belt road - do you know about that?-- No.

Belt road seal; you don't know that?-- I understand the seal you are talking about. I haven't seen the report, no.

The Moura coal seams are known to be gassy seams, aren't they?-- Yes.

And I think you have agreed - well, I will put it another way - the Moura coal seams are known to be capable of spontaneous combustion?-- Yes.

Have you had the opportunity, you may not have, of looking back over the deputies' reports - sorry, the production deputies' reports from about, say, towards the end of July?-- Might have read a couple of them if I was working in the section, but, no, I haven't had the opportunity to look over them, no.

Well, if I suggested to you that such an exercise would show ppm on the various shifts from about 25 July forwards in time varying between something like 6, 5, and 5, and 6, and so forth, and then, first of all, just up to about 7 and drops again a little bit; then 4 August, 6, 7, and then an experience of a tar smell on 5 August and if I suggested following that 7 to 8 ppm carbon monoxide and then on the 6th a haze and then on the 6th again CO make of 9 to 10 ppm and the 6th again ppm 7 to 10; does that tell you anything?-- Yes, I suppose it does. There is something going on in the panel, yes.

It's heated?-- It's a possibility, yes.

And Mr Graham - just help me with this if you would - Mr Graham, did you hand over to him or was that Newton or whatnot as deputy?-- When on the Saturday?

On the 6th or 7th?-- I handed over-----

To Newton?-- No, no - yes, that's - yeah, working on Saturday I handed over to Newton and then I went home, yeah, that's right.

You would have recalled what I asked you to accept about the ppm - just bear in mind what I have asked you to assume - and then I would ask you to assume also that Mr Graham during the course of his shift on the 6th reset the alarms several times such that it was 50 ppm - 50 to 60 ppm at the end of the night shift; is that telling you anything with the previous outline of your evidence?-- What's that, on the Sunday morning after it was sealed?

Yes, 50 to 60?-- It normally went up before - like anything else it normally goes up and it is a similar situation. I didn't - it was going through a similar situation, to me might have been a little bit more than normal but.

Can I suggest to you that it is an indication that it is heating?-- I said that's a possibility.

What if I asked you to add to the things that I have told you findings that during the morning whilst an electrician was taking the span gas tests - Mr Pearse - at 7 a.m. he has about, I think, 49 ppm; at 11.42 he has 80 ppm and at 3 p.m. he has 102 ppm?-- Yes.

What does that tell you, with the history I have given you - getting most significant rises?-- Yes, that's right.

Then later on that day, of course - I was going to withdraw "of course" - later on that day, added to the outline I have given you, a finding that is registering 150 ppm, what does that tell you, say, at about 9.30 on Sunday night in the last 24 hours it's gone really - or 36 hours perhaps - outside it has gone really from something in the order of 7 to 10 to 150?-- That's because it was sealed off. It will always rise when it is sealed.

Does it suggest to you the possibility - with a haze having been seen before - or a tarry smell and a haze - that it is coming to a very hot situation?-- Yes, if I had all those things available I suppose it would be.

Are you able to help the Inquiry with your knowledge of at what temperatures different gasses are given off from coal and what types of gasses? I'm not conducting an examination, just asking if you know?-- What do you mean what types of gasses, carbon?

Yes, carbon dioxide, carbon monoxide, ethylene, propylene and at what temperatures?-- I wouldn't have a clue.

That's all I'm asking?-- I wouldn't have a clue.

You have talked about a fine or rib support, haven't you?-- Yep.

That simply means, for the layman, the side of the panel, the side of the return or the bleeder - the pillar, I should say, breaking out and falling on to the roadway?-- Yes.

And, of course, you have the passage of vehicles and heavy vehicles such as shuttle cars over the spalled coal further breaking up?-- Yes.

And could you just tell the Inquiry more, if you would, about the ramping, why was it necessary to ramp? Ramp really means just to take bottoms at an angle?-- Yes.

Why is it necessary to do that?-- Well, to get the bottom coal is the main thing. For the short ramps and steep ramps that they had was to stop the shuttle car driver from getting into any high area, being exposed for more than 3 metres of rib.

The end result of that effectively was that the miner couldn't get all the coal out of the bottom of the ramp?-- That's correct.

All very difficult for me as a lawyer to imagine your work place underground. It just seems to me that what you would have is a short ramp - steep ramp down to what literally then became another rib or a coal face?-- Yes.

Containing loose coal?-- Yes.

Fines?-- Yes.

The thing that spontaneous combustion likes best to breed in?-- That's correct.

And you have through here at least once a day an undermanager to see this for himself?-- Yes.

And a managerial person above him, a shift underground superintendent?-- Yes.

Who else - manager?-- We've got an undermanager-in-charge and registered manager, yes.

You have told us about the underground management but the others, his superiors, how frequent?-- Once a week either the registered manager, the same manager, registered manager superintendent.

Those people would have seen it for weeks or months, they would have seen the loose fines for the life of the extraction?-- Yes.

About three or four months?-- Yes.

I think you said in your evidence-in-chief that there were roof falls - obviously, there were roof falls?-- Yes.

Roof fall of what, granite?-- Sandstone.

Sandstone?-- Yes.

Falls on to loose coal?-- Yes.

Covers it. So, visibly, one would not see any spontaneous combustion occurring there, would you?-- No.

Indeed, do I understand it properly that loose coal covered with sealing debris or rock has air force through it or over it?-- Yes, a possibility of that, yes.

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A bit like a forge?-- Yes.

The very thing that excites spontaneous combustion?-- Yes.

And every sealing - I am sorry, every final sealing inevitably leads to inbye, the seal developing into an explosive atmosphere until it becomes inert?-- That's right.

So, if there is any source of ignition with oxygen and methane, there was an explosive risk?-- That's right.

There was a 5 per cent to 15 per cent most explosive -----?-- Yes.

For methane; is that right?-- Yes.

But less than 5 per cent if it has some other material or combustible material with it, perhaps coal dust or, perhaps, some other gases like hydrogen?-- Yes.

So, all it needs is sufficient heat to explode the atmosphere within the sealed area?-- Yes.

I will try to remember your evidence-in-chief. The ventilation you weren't particularly keen on?-- That's correct.

Because it led, as you have told us, to pockets of dead air?-- Yes.

Stagnant air, which had been ventilated and then wasn't - not ventilated properly?-- That's right.

And recirculation?-- Yes.

And, indeed, short circuiting of the ventilation?-- Yes.

Three ingredients, or three more ingredients that spon com thrives on?-- Yes.

If a deputy - not you - wrote into his certificate - production certificate, "Very warm in parts of section", would you attribute any significance to that?-- No. It all depends if there is a large goaf area wherever they were actually saying it was hot. It is always warm in a goaf area.

Why is that, because it is not ventilated as well?-- That's correct, yes.

And because it is heated?-- A big area to ventilate.

And as well as heating?-- I beg your pardon?

And as well it is heating and that's the reason it is warm?-- Oh, yes, of course, if that's -----

Right. You know a Mr Reece Robertson?-- Yes.

I suggest to you that he experienced a strong benzene smell in

XN: MR MARTIN

WIT: CADDELL M R

the panel as far back as 24 June 1994. If he was correct in that, that's a very early indication of fairly substantial heating, is it not?-- Yes, I should imagine, yes.

And you yourself on 5 August experienced what you described as a strong tar smell?-- Yes.

Which you communicated to your superior as you should?-- Yes.

The reason the goaf or the panel was sealed somewhat prematurely, not by much, but not as planned, was because of the worry of spontaneous combustion -----

MR MORRISON: I object to that. This man didn't make the decision to seal the panel. He can only speak for what he was told.

MR MARTIN: What do you say - I will rephrase that. To you - you made a recommendation that it be sealed prematurely?-- Yes.

You did, didn't you?-- Yes.

Because you were concerned that it was heating up sufficiently to be a worry?-- I never actually said it was heating up, I said there was a cause for concern because it was going towards that tract.

All right. Really when did production cease in that panel? If you don't know somebody else can tell us?-- Probably Friday - Thursday - Friday morning.

Tell me this: I won't trouble with you with it now, I will deal with it tomorrow. Do you know of a device called a probeye?-- Yes.

Explain what that is, if you would?-- Infra-red. It can test for heating in coal and whatever.

In fact, do you know much about the instrument?-- No, I don't know anything at all about the instrument, only that there was one available at Moura.

Yes. Where was that kept?-- I think it was - I wouldn't be sure, but at the Mines Rescue Building, I think. I wouldn't be sure.

It is a fairly small, fairly light aluminium cased piece of scientific equipment which detects heating through the infra-red system, isn't it?-- Yes.

So far as you understand it?-- Yes.

Do you know that it can detect heating, say, concealed in a wheelbearing on a motor vehicle?-- Possibly. I don't know.

Do you know that the probeye has been used, or not, for detection of heatings underground out here at Moura?-- It has been used once at Moura, in the 5 North, I think it was.

Successfully?-- I don't know if it was successful or it wasn't. I don't know when they actually used it, whether it was for the heating or not.

Well, if this instrument can do the things that I have - well, if it can detect coal heating, significant coal heating, what in panel 512 would have prevented it being used, carried by a trained person?-- Nothing.

Except the impossibility to go into parts of the mine because of the ramping?-- Yes, you probably wouldn't be able to get in there, that's exactly right.

And, indeed, once again I am having trouble envisaging your work scenario, but do I understand you correctly when you took the sample at 10 cross-cut -----?-- Yes.

You don't get beyond that to sample because there was nothing behind the door except -----?-- A ledge, that's right.

And then a significant fall?-- Yes.

So, if around the corner - that is putting it too loose to put it to you like that. If there was a heating around the edge of part of the pillar or stook, or whatever you call it -----?-- Yes.

Inside the door it would be impossible to get to it to see it?-- That's right.

Do the - to your knowledge that is - rules under the Cool Mining Act provide for a three hour sealing?-- I think so, I wouldn't be sure. I wouldn't be sure, but that's the way I understand it as - over the past few years.

And do you know under the rules the - a requirement for the strength of the seal? Please accept that I am -----?-- Yes.

Not levelling any criticism at you?-- Yes.

What is it?-- I don't know off-hand, but -----

Would 345 kilopascals mean anything to you?-- Oh, probably not.

No. Were you out here at the time of Kianga?-- I just started at the mine. I had been there about 12 months.

I will just try to avoid reputation, excuse me a moment, Your Worship.

I think you said in your evidence-in-chief that you found, was it, 14.8 litres per minute which was not significant in comparison with the previous reading. Did you say that?-- I didn't find that. I was told that by the preceding deputy.

All right then. Did Mr Squires give you an explanation as to why he hadn't conducted an inspection of the top panel - top

return?-- He was the under-manager on my shift. He would have only turned up at work at 2 o'clock.

All right. Did Mr Squires tell you that he had to speak to Mr Mason before he could seal or authorise sealing?-- Yes, he was going to talk to George about what I told him.

You were speaking earlier about a sealing having taken place, was it, back in 1986?-- Yeah, oh, well, I can't remember - 5 North West. It wasn't in '86. It was 5 North West after I got over there, yes, if that's the one you are talking about, after I left.

I am not sure, it is what you were talking about. Do I understand you correctly, that over in No 4 the men themselves had to organise their own evacuation; that is, "We won't remain here while it goes through the explosive range."?-- That's correct.

And was there some management policy, until the men took action in their own safety interests, to require men to go underground while it went through the explosive range?-- There was no management requirement for it, no, to stop you - to keep us out for a couple of days, no, there wasn't.

So, you had to organise that for yourself?-- Yes.

And the same thing applied in respect to No 2, didn't it? There was no such thing as management saying, "Hey, listen fellows, it is going to go through the explosion range. We had better withdraw until it is safe."?-- That's correct.

What, was it left to deputies and then generally to make such a fuss and complaint about it before management would accede to them not going under?-- Well, yes, I suppose, in certain aspects of it, yeah.

There is something I don't quite understand, a portion of your evidence, and I hope you can help me. Do I understand the span gas check on the Sunday morning to have been conducted at a time when this panel was going through its evolution process of explosive range?-- Going towards the explosive range, yes, it was.

Can you tell me whether the monitoring system or the Maihak or the Unor, whatever one calls it, was out of commission and inoperative?-- It would have been.

For what period?-- Oh, well, anything up - well, it can be anything up to five hours, but that day on those two monitoring points, probably two and a half hours. At a time that is. That is, two and a half hours the first time and another two and a half hours after that again.

All right. And I think you have told us that if there was a written sealing procedure you had never seen it?-- No.

Do you know whether there are any other mines owned or operated by BHP Australia Coal which now uses a gas

chromatograph and didn't before 7 August 1994?-- I wouldn't have a clue.

I should ask somebody else that?-- Yes.

You were at one time, at least, a relief ventilation officer for Mr Morieson?-- Yes, at one time when he went on holidays.

You might not remember, do your best, but when he handed over to you did he give you any figures or assessments of what the gas - I am sorry, the CO make would be -----?-- Did he give -----

Or had been or what it ought to be if things proceeded as he expected - CO make for the life of the panel, I mean?-- Did he indicate that to me?

Yes, do you remember?-- No, well, I don't recall him saying that, no.

Have you ever heard of a man called MacKenzie Woods?-- Yes.

Have you heard of his co-authorship of a book with a Mr Strang?-- No.

Have you ever seen that volume, the first edition 1985, that volume, edition 1990?-- I have seen that one, I haven't seen that one.

Where did you see the one with the pretty cover?-- I was probably shown it on my deputy's course, something like that. I don't - I can't really remember.

But over here at Moura Mine, at Moura Mine?-- Did I ever see it at the mine?

Yeah?-- No. I don't think so anyway. I can't recall.

Do you know what existed at the premises of BHP at Moura on the subject of methane gas detection, spontaneous combustion?-- I can't get the question, sorry?

Can you help us with what documents or material, written material, existed at the BHP premises at Moura on the subjects of methane, spontaneous combustion?-- Oh.

And gas detection?-- They would have had - they have got material there.

Don't guess if you don't know?-- They have got material there, but I wouldn't know.

You don't know what it is?-- I never had a look at what it is.

Is that far enough, Your Worship, or do you want me to keep going?

WARDEN: How much longer are you going to be?

XN: MR MARTIN

WIT: CADDELL M R

MR MARTIN: I see. Probably half an hour.

WARDEN: We may not get much further past that because there is a lag time with transcripts. So, any further cross may have to be delayed till tomorrow morning. I will keep you to that half an hour then.

MR MARTIN: I hope not to be that long.

Do you know of the set-up with the gas chromatograph in terms of being linked to Safety in Mine Training Rescue Station Redbank?-- Yes, I know it is linked to there.

By Telecom modem?-- I wouldn't know that, but I know it is linked up to there.

You don't - your knowledge doesn't extend to whether or not you can punch a computer out at Moura and have it go straight through to the computer at Redbank?-- I know it can do that, but I wouldn't be able to do that.

I am not suggesting that. So, I will ask somebody else. Tell us about safety meetings or on site discussions involving spontaneous combustion? Any you remember?-- No.

And what about risk analysis? Do miners and deputies get involved in that or is that for management?-- No, they have had other blokes involved in it.

Deputies?-- And miners, in risk analysis.

Have you ever been involved in it personally?-- No, only -----

Do you know of the seminars conducted at SIMTARS in relation to such things as spontaneous combustion and explosions of methane, for instance?-- No, not really, no.

Have you ever seen - you have never been invited to go to such convention or seminar?-- No.

Do you know whether the management goes?-- I wouldn't know.

Have you ever seen a magazine like that?-- No.

Do you know of men being suspended for not wanting to work underground when there was a risk such as going through the explosive range?-- Not that I can recall anyway.

What about deputies complaining about it -----?-- Complaining about it or getting suspended?

To management and being disciplined?-- No, not that I can recall, no.

I have decided to finish now, thank you, Your Worship.

WARDEN: Oh, okay.

XN: MR MARTIN

WIT: CADDELL M R

MR MARTIN: I was going to put a lengthy document which, in view of his answers to several questions, is not necessary.

WARDEN: Okay then.

MR MARTIN: He wouldn't be able to respond.

WARDEN: You will be some time tomorrow, I take it? No sense commencing now?

MR MORRISON: No. I was going to say if you prefer me to I can use up the rest of that half hour. I will be much longer than that, I suspect.

WARDEN: It might be a convenient time to adjourn. We will resume here at 9.30 a.m. tomorrow morning. The witness is just to stay there for a moment. I want to explain some things to him.

THE COURT ADJOURNED AT 4.45 P.M. TILL 9.30 A.M. THE FOLLOWING DAY

WARDEN'S COURT

MR F W WINDRIDGE, Warden and Coroner
MR R J PARKIN, General Manager, Capricorn Coal Pty Ltd
MR P J NIELSEN, District Secretary, United Mine Workers' Union
MR C ELLICOTT, Training and Development Officer, Department of
Mineral Resources, New South Wales
PROF F F ROXBOROUGH, Professor of Mining Engineering, School
of Mines, University of New South Wales

IN THE MATTER OF A CORONIAL INQUIRY IN CONJUNCTION WITH
AN INQUIRY (PURSUANT TO SECTION 74 OF THE COAL MINING
ACT 1925) INTO THE NATURE AND CAUSE OF AN ACCIDENT AT
MOURA UNDERGROUND MINE NO 2. ON SUNDAY-MONDAY, 7-8 AUGUST
1994

GLADSTONE

..DATE 19/10/94

..DAY 2

THE COURT RESUMED AT 9.49 A.M.

MICHAEL ROBERT CADDELL, CONTINUING:

WARDEN: Yes, thank you. Witness, would you re-take the stand? You are on the former oath which you swore to yesterday?-----

MR MORRISON: Your Worship, I think Mr Harrison has a point to raise.

MR HARRISON: Could I just raise two preliminary matters with you this morning? The first of those is an application along the lines of what you heard yesterday in terms of leave to have a witness available for instruction purposes. That involves Mr Michael Squires, the Under-manager who was on duty that particular weekend. He will be here from time to time throughout the Inquiry, and I would make an application along the lines of what was made yesterday with the other people. I would merely mention that he appears to be someone who obviously is very much a party to these proceedings in view of the position that he held at the relevant time. I don't know, perhaps if anyone has any concerns about that, then they could express them now.

MR MORRISON: No, Your Worship.

MR MARTIN: I don't either.

MR MacSPORRAN: No, Your Worship.

MR CLAIR: No.

WARDEN: He will be granted leave to stay in Court.

MR HARRISON: The other matter I have concerns some reports of yesterday's proceedings. I don't know whether the members of the Tribunal have read the press from yesterday, this morning's press, in terms of the reports of yesterday, but in doing so myself this morning I noticed there are some glaring inaccuracies in terms of what the witness, Mr Caddell - as I understand he pronounces his name - said yesterday, and they are very serious, particularly one that appears on page 2 of this morning's Courier-Mail. I do have some copies of that article available. I have got three here I can hand up, Your Worship, just to illustrate the point.

The major problem with it relates to the third paragraph of that extract that I handed up in terms of a comment to the effect that the evidence yesterday from Mr Caddell was that he had wanted the section sealed and the miners removed while that area went through the explosive range, and, of course, that's not his evidence at all, and gives, in my submission, a very bad impression to the members of the public outside in terms of what happened in the lead-up to this event.

WIT: CADDELL M R

I accept that it won't in any way affect the deliberations of your Tribunal because you will confine yourselves to what's being said, but I do make the point that the real worry with inaccuracies like this is it can affect the public perception of what happened in the events leading up to it, and really what I am asking you to consider doing this morning, Your Worship, is perhaps just advising those members of the press that are here that perhaps care should be given in terms of what is reported of the evidence so that it is reported accurately, because it has certainly been my experience with newspapers and the public generally that people tend to give them a God-like status, they tend to treat what's in the papers as the gospel truth, when in actual fact, as you can see, we have a glaring, very serious inaccuracy in that article.

There is a similar problem in relation to an article which appeared on the front page of the Gladstone Observer this morning. If I could hand up again three copies of that. If you read just the first few paragraphs of that you will see the point I am alluding to. In effect, it's to deal with some questioning Mr Martin did of the witnesses yesterday, or did of a witness yesterday, in terms of the build-up of carbon monoxide. The questioning was relative to readings on Sunday, but the report suggested those high readings were in fact obtained on the Friday which is two days before and, of course, which is before the sealing of the section, and again, in my submission, that's a very serious inaccuracy.

I understand that what was reported in the Courier-Mail was also covered in a nationwide item on Channel 9 this morning, one of their nationwide programs, reporting a comment to the same effect as appears on page 2 of the Courier-Mail.

Now, I accept yesterday that acoustics here were atrocious, through no fault of anyone because we came here at short notice and everyone was trying to do the best they could, and it may well be that those acoustic problems will hopefully be eliminated today with the amplification of the voices, but I ask Your Worship to counsel the press at this stage to try and be as accurate as they can because they are very serious proceedings, they are very emotive proceedings in terms of what happened, and it is important that the public perception be of what is actually going on in here, not misreporting of what's going on and people's perceptions of what's going on, and for that reason I will ask you to consider taking this course.

WARDEN: Do you wish to clarify those matters with the witness in due course?

MR HARRISON: I don't think that needs to be done. I think I put on record what the problem is. I trust that with the improved facilities we have got here today, it won't re-occur, but I merely ask Your Worship to consider perhaps just saying something generally to those members of the press present to try and ensure that this type of thing doesn't happen again.

WIT: CADDELL M R

WARDEN: Thank you.

MR CLAIR: Your Worship, might I, first of all, just say that I have got no query at all with Mr Harrison's interpretation of the evidence, and it does appear that the reports to which he has referred are inaccurate in the way that he says, and can I support what he says in respect of the necessity for accurate reports to be made in a matter like this.

In that connection, Your Worship - and, of course, the Inquiry has been very much aware from the outset of the need for accuracy and the need to take all steps to ensure that the media has access to accurate reports. With that in mind, the media protocols that Your Worship established at the outset of the Inquiry, and which have been delivered to the media, indicate that there will be a copy of the transcript made available for the media inspection, but, of course, the transcript is generally not available at the end of the day, it's available at the beginning of the next day, and that may be too late in some cases for that kind of assistance to bring about any more accuracy in reports.

WIT: CADDELL M R

Your Worship also established as part of the protocols the

fact that there will be somebody available to the media at the end of each day to deal with the meaning of technical terms and I believe that that has already been put into effect. From this end of the Bar table can I say that myself and/or Mr Boiston are certainly prepared at the end of each day, if any members of the media have any queries about precisely what was said in evidence by a witness or any queries about technical terms, then we will do our best to ensure that those queries will be answered at that time.

WARDEN: Thank you, Mr Clair.

MR CLAIR: Mr Boiston instructs me that the transcript is available on a small table outside the front door. There is a copy there. It is a copy that has been placed there on the basis that it is thereby available for perusal by members of the media. Copies of exhibits, to the extent that the exhibits are manageable ones, will be also made available as the Inquiry progresses. Thank you, Your Worship.

WARDEN: I am aware that yesterday the media representatives had some trouble hearing because the witness was speaking away from them. We hope that that's been rectified today. As indicated by Mr Clair, copies of the transcript are available outside the transcription room for inspection. I understand yesterday they were late because the witness was the last witness. I would ask the media to carefully check any details with the transcript if they feel the need to do so. I might raise that question of the exhibit. The statement that goes in as an exhibit could that be made available also to the media for the purposes of accuracy only, once cross-examination is completed, at the same location? Is it possible to put a copy of the statement there?

MR CLAIR: Your Worship, as far as the statement is concerned, there is no difficulty in making a copy of the witness' statement available as each witness has given his or her evidence, but if that's to be done, then it should be done with the admonition that, of course, the evidence of the witness is the evidence that's been given here in Court and that the statements should be approached with that caution, that the evidence is what's been said in Court rather than what's contained in the statement.

WARDEN: I agree with that and subject to the cross-examination, if they can bear that in mind, we can make the statement available to them at the same time for the purposes of accuracy.

MR CLAIR: Yes, thank you.

WARDEN: I thank you then.

CROSS-EXAMINATION:

MR MORRISON: Mr Caddell, you were a deputy at the mine?--
Yes.

And I don't think you need to lean into the microphone. I am told you have to. Do it your way, Mr Caddell. I am going to do it mine too. You were made a deputy quite sometime ago; isn't that right?-- That's correct.

1981?-- Yes.

And that was in respect of No 4 Mine?-- Yes.

Number 4 and No 2 are adjacent in general terms?-- Yes.

But are quite separate mines?-- Yes.

And unless one worker is transferred from 4 to 2, he wouldn't necessarily know what was going on in No 2 unless he heard it from someone or a source of documents or something?-- That's correct.

So that, as an extension of that the procedures in number 4 were somewhat different to those in No 2?-- Yes.

And one might say also that the, what might be called the culture of the miners, was different too. I don't mean to say ones were more refined than the other lot, just that one mine did things differently and had a different attitude to things?-- That's a possibility, yes.

In your experience you would have found that, indeed, different teams of miners approached things differently. The fellows who are always on night shift might do some things differently to the fellows on the day shift?-- Yeah.

That simply is a team of men get to work together, they get to know each other and they work out the best system for themselves?-- Yes.

And that's certainly your experience as deputy governing shifts?-- Yes.

And also as a deputy having to work with undermanagers?--
Yes.

So that, for instance, in No 2 you would often get an undermanager who would have what might be called his shift; that is to say, a number of men with whom he worked regularly on some particular shift?-- Yeah, that's correct.

For instance, Michael Squires was mostly doing, I think it was a day shift?-- Day and afternoon shift.

But not that many night shifts?-- That's correct.

And there was a person who mostly did night shifts as undermanager?-- Yes, that's right.

As a deputy no doubt you and the other deputies were very safety conscious persons?-- Yes.

That's a comment that can be applied to all of the people at the mine, isn't it?-- Yes.

All of the people at the mine have had for a long time an overriding theme of safety?-- Oh, well, I wouldn't put it in the text of overriding. They are their own safety officer, they are their own.

It is an old saying in mines that all miners are their own safety officer?-- That's right.

But, in fact, at this mine, and as at other mines, there was a hierarchy for safety issues to be dealt with?-- Yes.

There were a number of safety committees?-- Yes, that's right.

Who met regularly?-- Yes.

At which miners would regularly raise safety issues?-- Yes.

And those committees would then find ways of dealing with those safety issues and it would come back down the line to the men?-- Yes.

There were regular meetings that might be called tool box lectures or tool box meetings where men were gathered together to discuss some particular topic?-- Yes.

That happened very frequently, in fact, didn't it?-- Once a month.

There was no inhibition on any miners at those meetings, they would speak up if they wanted to say something about some topic?-- Yes.

In fact, it is a feature of No 2, probably in common with other mines - I'm not saying 2 is special in this regard - but the miners at No 2 weren't backward about speaking up, were they?-- That's correct.

And, likewise, the deputies didn't inhibit the miners from speaking up, they encouraged it?-- That's right.

And I think it's true to say, is it not, that the undermanagers were the same, they liaised well with the deputies and the men?-- Yes, that's their job.

And certainly encouraged the men to speak up?-- I don't know about encouraging them.

You didn't ever experience them inhibiting the men from speaking up, did you - preventing it?-- No.

I accept that there might be some men who might prefer not to talk to an undermanager, they'd rather talk to their deputy?-- That's correct.

Or the check inspector?-- Yes.

But there is no inhibition?-- No.

And, in fact, there were check inspectors at this mine?-- Yes.

Is it the case that there was one for every shift?-- No.

On which shifts were they routinely?-- One was dog watch and the other one was day and afternoon shift.

Day and afternoon and dog watch?-- Night shift.

And the check inspectors are what? Just explain for me what they are?-- They're placed there by the union to look after our own safety parts. If we got problems with safety, they're the blocks that you approach and they liaise with everybody else and they're the sort of people to make decisions on the miners.

Are the check inspectors routinely deputies?-- No.

It can be ordinary miners?-- Yes.

Are there deputies who are check inspectors?-- Yes.

So that, at the ordinary level - this is miner level as well as deputy level, there are persons who are appointed by the union as check inspectors?-- Yes.

Their main role, if I understand you correctly, is that they are to look after the men's safety too?-- That's correct, if it's brought up to them, yes.

Well, they don't stand around waiting for men to mention things, do they?-- No.

They initiate inspections themselves, don't they?-- Yes, they can do that.

And they have and have had for sometime, whether formally or otherwise, it doesn't matter for these purposes, the power and the ability to take men off the job if there is some safety issue that they are concerned about?-- That's correct.

And that has happened in the past?-- Yes.

If miner drivers are being exposed to too high ribs or unsupported roof or something like that check inspectors will stop a section?-- Yes.

And go up and get stuck into the management about it?-- Yes.

And there has never been inhibitions on them doing that?-- No, not to my knowledge.

And the No 2 check inspectors weren't slow at doing that either, quite happy to raise those things with management?-- That's correct.

And whenever things like that were raised with management at No 2 isn't it true to say that the management were quite responsive?-- Yes, to my knowledge, yes.

Routinely if someone raised a safety issue you would ensure then it was the discussion with the various interested parties, inspectors, miners' departments, undermanager, whatever, and the issue would be discussed and some solution found?-- Yes.

As a deputy you also had, like other deputies had, and have, the power to stop men working?-- Yes.

If in your decision, which you make in your own way, if in your decision there is some danger to them?-- Yes.

In fact, it's part of your job description - you recall that, don't you?-- Yes.

You, in fact, have the responsibility to do that, not just the power to stop work if you anticipate there is a danger to the men?-- Yes.

And you would have no hesitation in doing that?-- No.

And you would see that, as no doubt everyone else in the mine would, a very sensible thing, if one perceives some danger to the men, work is stopped?-- That's correct.

And would you expect that from everybody?-- Yes.

And certainly - I might just check the terms of it, in Exhibit 12 - I may not need to give it to - it's your position description as deputy which you, in fact, signed, .3 says that your responsibility is that you shall suspend any operation that is likely to cause danger to any person until you have got special instructions from the manager; so it is a mandatory thing; do you agree?-- Yes.

If you formed the view that there was a situation likely to cause danger, you had a mandatory obligation to stop the work, suspend the operations until you had been able to go to the manager and get special instructions about it?-- Yes.

And in your experience that has happened?-- Yes.

Not just at No 2, it would no doubt happen from time to time at number 4?-- Yes.

You didn't at any time in relation to 512 suspend the work,

did you?-- No.

Can I take it from that then, bearing in mind your mandatory responsibility, that you at no stage formed the view that there was any danger to the men?-- I had a concern. Like I said yesterday, I don't put it in the text of danger, no.

You didn't at any stage think there was a danger to the men, did you?-- Not on that shift, no.

Not at any stage of 512, did you?-- Not on the Friday night and Saturday, no.

Nor at any occasion of being in the 512 panel on the occasions you were?-- No.

You are agreeing with me, you didn't form that view - sorry, not making myself clear?-- I never formed that view, no.

Your occasions in 512 weren't as frequent as other people's, were they?-- That's correct.

You weren't, in fact, an appointed 512 deputy, if I can call it that?-- That's correct.

You were on other duties?-- Yes.

How would we describe them, like a spare deputy?-- Yes.

Mainly involved in what, outbye roadways?-- Outbye roadways and whenever anybody had a day off or went on any leave I take their place in that section.

And no doubt if there were staff shortages and people needed overtime worked in order to fill up a complement of men, you were available for that as well?-- Yes.

On those occasions, that is to say when you are called on overtime to fill in if someone else hadn't turned up, it is the case that you might have worked as a miner rather than deputy on some particular shift?-- Not on overtime but, yeah, I have worked as a miner, not actually on overtime.

All right. In all of the deputies' reports that you made for 512 you used the same form for each one?-- Yes.

It's a standard form, isn't it?-- Yes.

And on the standard form you have to put in things like what district you are in, that's 512, what shift you are on, the day or afternoon or night shift, and so forth?-- Yes.

You have to insert the time your inspection started, when it finished and the same thing with the second inspection?-- Yes.

And on those occasions when you were a deputy in 512 no doubt you made those inspections there?-- Yes.

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In relation to ventilation can you recall if you ever put on a deputy's report for 512 any words other than that the ventilation was adequate? Would you like to see them?-- Yes.

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Now, what I might invite you to do, Mr Caddell, is just to flick through those to ensure you are satisfied that they bear your signature in each case - I am pretty sure they do - and that they are production deputy's reports for 512 -----

Your Worship, I will be able to identify these by document number in relation to the exhibit as I go.

MR CLAIR: Document 42, in fact, is in Exhibit 9, the bulky exhibit.

MR MORRISON: I might be able to be even more specific than that.

Are you satisfied they all have your signature and are your production deputy reports for 512?-- Yes.

On the way through have you noticed if you have written anything other than the ventilation was adequate?-- Yes, I haven't written anything else. I have written "adequate" on every one.

On every occasion of inspection on 512 that you made that was the subject of a report -----?-- Yes.

I am only dealing with reports, when it came time - at the time of the inspection, not now, ages later, but at the time of the inspection, when it came time to write down what you thought of the ventilation you wrote "adequate"?-- Yes.

And is it the case - perhaps you don't need to check, maybe you do - that under the heading "source of danger" in every case you either put "nothing" or I think on one or two occasions you wrote "none apparent"?-- I may have done, "none apparent", yes, that's correct.

So, at the time of the inspection, not now, months later, but at the time when it came time to write down what, in your opinion, might have been a source of danger, you never recorded anything as a source of danger?-- That's correct.

Now, bearing in mind your responsibilities as a deputy, if you had perceived a source of danger there is no doubt you would have said so; isn't that right?-- Yes.

There is no doubt you would have gone to either a undermanager or check inspector and said, "Listen, there's this problem, you know, stop the men, we have got to sort this out."?-- That's correct.

And you would expect that quite rightly from every other deputy in the whole mine?-- Yes.

And you would be fully confident that that is what would happen with every other deputy too, wouldn't you?-- Yes.

Now, can I just ask you - if you go to that last one -----

Perhaps I should - if I can pause I will just try and identify

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those documents. Perhaps for the record I should identify those a little more precisely so they may be found later.

Can you, Mr Caddell, pull me up if I get a date wrong?-- Yes.

As we go through these?-- Yes.

Report 1770?-- Yes.

1 April '94?-- Yes.

Is document 174. Report 1800 for 11 April '94, is also document 174. Likewise report 3017 - can you just check I am reading the numbers as well as the date right so I don't muck it up?-- Yes.

3017 of 17 April 1994, that's also document 174. Likewise report 3056?-- Hang on, I haven't got the other one, 3017.

Sorry, 3017, 17 April '94?-- That's correct.

Next 3056, 30 April?-- Yes.

Document 174 as well. Then 3063, 2 May?-- Yes.

That's document 174 as well, as is 3069 of 4 May?-- Yes.

Also document 174 is report number 3075 for 6 May?-- Yes.

Likewise report 3091 of 11 May?-- Yes.

Likewise report 3094 of 12 May?-- Yes.

Likewise report 3902 of 15 May?-- Yes.

And 3905 of 16 May?-- Yes.

And 3908 of 17 May?-- Yes.

3917 of 20 May?-- Yes.

3982 of - I think that's 1 June; is that right?-- Yes, I think so. It is a bit hard to see.

It may be 1, it may be 11, I am not sure?-- Yes.

That's document 45, number 3982. Also document 45 is the next report, 3446 of 2 July?-- That's right.

3459 of 6 July?-- Yes.

That one that I have just referred to, 6 July, was a split report between you and Mr Robertson?-- That's correct.

Is that - why exactly do you get a split report?-- He may have been having a meeting with the management and I done his first part of his first inspection - I done the first part of the shift.

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Nothing more significant than arrangements between deputies?--
No, I don't -----

Okay. The next one, also document 45, is the next report
3762, I think that's 1 August?-- Yes.

Then 3774 is the number of the next report on 5 August?--
That's right.

And that's document 24 for the record. Now, the one on
5 August is the first one where you report the tar smell;
isn't that right?-- Yes, that's correct.

In fact, it is the only one?-- Yes.

I notice in that report that on the second inspection you did
not report a tar smell?-- That's correct.

Do I assume correctly from that you say that it means on the
second inspection you didn't smell the tar smell?-- On the
first inspection I smelt the tar smell at 10 cross-cut and I
never travelled to 10 cross-cut on my second inspection.

I see. Any particular reason for that?-- No, well, I only
went - I did an inspection of the top return in the first
instance, I gave my findings on that and I just didn't go down
to the back of the section.

Do I assume from what you tell me that you didn't think that
the - what you had seen or smelt was enough of a concern to
bother going back? It wasn't that serious?-- It was a cause
for concern, but there wasn't that much - there wasn't that
much difference in the CO ppm.

So, you did some thinking about it when you smelt that smell,
you actually did some thinking about what it meant?-- Of
course.

And what you thought was - I am not criticising, I am just
exploring it - there was no appreciable difference in the
CO?-- That's correct, only 2 ppm.

That, to you, was not a significant difference at all?-- Not
really, no.

In fact, for 512 there had been gradually increasing
CO levels?-- That's correct.

Talking in - I am not talking CO make, I am talking CO
levels ppm?-- That's correct.

And that is what you expected because extraction was
proceeding?-- That's correct.

It is routine, is it not, in this mine, and perhaps in others,
in your experience that when extraction is proceeding, as more
raw coal is exposed CO goes up?-- That's correct.

That is because more raw coal is being exposed to air and,

therefore, starts to oxidise?-- That's right.

So, the fact that the CO was going up was not unusual at all?-- That's right.

And in your experience it is a question of just by how much it goes up?-- That's correct.

Over a period of time?-- That's correct.

You would take the view, I gather, I think I am right in saying, that one spot reading of a CO ppm doesn't really tell you very much beyond that reading at that point in time?-- That's correct.

Much more significant than that is longer term trends?-- That's correct.

And that is what you were thinking about on this occasion, and subsequently, you were looking to see just how fast it was going up, not the fact that it was going up?-- That's correct.

And that led you to the conclusion when you smelt the smell that there hadn't been any appreciable rise or significant rise in CO and that was, as it were, a discounting factor against the smell, in other words?-- That's correct, yes.

So, if it had worried you more than you are telling us you obviously would have gone back down to see if the smell was there on the second inspection?-- That's correct.

It wasn't serious enough to do that, obviously?-- No, because it was the end of the section that was going to be sealed anyway. I mean, it was trending towards that, towards a suspected heating or whatever. I never said that, but, I mean, that is what it was trending towards so that's why I would have done that, yes.

But you didn't form that view, did you?-- No.

No, not at all. In fact, you didn't tell anyone that your view was there was a heating?-- I didn't tell them in that sense - in that words - in those words, no.

That reflected your state of mine; you didn't think there was one?-- No.

Now, Craig O'Brien was with you on that inspection. Can you just tell me again did he accompany you down the return?-- Yes.

So, he also would have been at 10 cross-cut?-- Yes.

And at the opening in the stopping?-- Yes.

When you went to the back of the panel did you walk across 13 cross-cut?-- No, no.

Any particular reason why not?-- No, because of rib spall.

Rib spall?-- Yes.

That was the only reason?-- Yes, rib, and the state of the roof and that, you couldn't get across there.

All right. So, you went to the back of the panel, took some readings at the intersection of the most inbye point of the top return and 13 cross-cut?-- That's correct.

And O'Brien was with you there?-- Yes.

Did he take any readings?-- No.

Only deputies take readings?-- Yes.

Or persons above deputies?-- Yes.

You took yours with a Draegar tube?-- That's correct.

Did you have a Minder with you as well?-- Yes.

Did you use the Minder?-- Yes.

Now, your experience with the Draegar tube system would be that different people can get different results at the same point; isn't that right? Perhaps I should explain myself more clearly. What you read as 8 parts I might read as 9 or 7?-- That's correct.

There is a margin - inbuilt margin of error in those tubes because one is reading effectively from a stain that is going down some crystals?-- Yes.

So, one man might say, "That level of stain is 8.", and another man might look at exactly the same level of stain and say, "No, that's 9."?-- Yes.

Or 7?-- That's correct.

Once again that, in your experience, would suggest that spot readings like that are to be treated with caution?-- Yes.

It is the trend one looks for?-- Yes.

That, no doubt, was in your mind when you read 8 parts and you think, "Well, 8 parts is simply 8 parts. We have got to look at what it is actually doing over time."?-- Yes.

All right. Now, can I just ask you this: a number of times you have expressed the view that you had, namely that you had a concern. I am not quite sure what you mean by that. It wasn't serious enough to make you go back down to 10 cross-cut, it wasn't serious enough to actually say to someone, "The section should be stopped.", or, "No-one should go down there." Can you just explain to me what you mean by "concern". Is it just a thought in the back of your mind that you don't express publicly, you just note something?-- I

talked to people about it. I said that yesterday. I talked to the undermanager.

Who did you talk to?-- I talked to the undermanager. I also talked to the crew.

To the crew?-- Yes.

Which crew?-- The crew of blokes that was working in there.

Were they working in there at this time?-- Yes.

What did you tell them, what you had seen?-- Yes, and what I found.

I am sorry, I meant what you smelt, not what you had seen?-- Yeah, I told them before I rang Michael. They were standing there when I rang Michael and spoke to him on the phone. They heard anyway.

Is that the normal 512 production crew, afternoon shift on the Friday?-- Yes and no. There was some of the blokes who are normally in 512 and some who are not normally in there, but they weren't producing.

They weren't producing? They had finished that morning?-- That's right.

What were they doing, moving equipment?-- Pulling equipment out from behind the seal - behind the prep seal.

What were they pulling the machines out with?-- Just tramming them out on their own power.

Was there - were they using a MPV?-- Yes, there was an MPV there.

An MPV operates by diesel motor?-- That's correct.

Can emit diesel fumes?-- That's correct.

Which can contribute to your CO?-- Yes.

Has to be taken into account when you take the readings?-- Yes.

And that machine was in use when you were there?-- I couldn't say whether it was in use when I was actually taking those readings, no. It wasn't in use all the time.

But the only work that was being carried on was, in fact, removal of equipment?-- And work on the prep seal in the belt road.

Prep seal in the belt road. So, work on the prep seal had started?-- Yes, because it had to be done from the inside of the panel. It had to be finished from the inside because you couldn't get it from the outside to finish it off.

So, 5 and 4 roadways had already been sealed; isn't that right?-- That's correct.

And that was a usual procedure?-- Yes.

Then the belt road, which is number 3 heading, was the next to be sealed?-- Yes.

And that was the usual procedure too?-- Yes, we always leave - we always seal the last two up together.

That is what I was coming to. You know, and knew then, very well what the procedure for sealing was?-- Yes.

Namely, that you sealed down to the stage where you have two, one an intake and one a return, and they have to be sealed simultaneously?-- Yes.

And the reason for that is?-- Well, so you just don't get differences of pressure and that sort of stuff in the goaf.

And you don't want men standing in only return air?-- That's correct.

And that is what happened on this sealing process?-- Yes, to my knowledge, yes. It would have done, Yes.

I was just going to ask you about that. You weren't, in fact, on the sealing crew, were you?-- That's quite correct.

Your knowledge of what took place during the actual sealing process you have derived from talking to other people and from hearing about it?-- That's correct.

So, your work ceased on the shift before that?-- Yes.

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All right. Now, you were there, were you, when they moved the monitor point?-- Yes.

And that was monitor point 16?-- Yes, I think that's the monitor - monitor point 16?

Or was it 5?-- 5 was the one we put in there.

5 was moved from the bottom return area?-- Yes.

Up into?-- The belt road.

At the intersection of the belt road and what, No 1 cross-cut?-- No 1 cross-cut, that's correct.

And suspended from the ceiling?-- Yes.

Not in the middle of the intersection?-- Pretty well in the middle, yeah.

And several feet down from the roof?-- That's correct.

Can you tell me, from your best recollection, about when in terms of time did that happen?-- Friday night. Around about 9 o'clock, I think. I wouldn't be sure.

You can't be really sure about it?-- It might have happened Saturday morning. No, it was Friday night.

Well, I am interested to know if you can remember simply because I think you told us yesterday that you actually specifically went to take a reading beside that point?-- Not beside that point, no.

No, beside 16?-- Yeah, beside 16 where it was in through the prep seal in the top heading, yeah.

So you took a reading beside 16 specifically to take a reading beside a monitor point?-- Yes.

So we should be able to backtrack point 16 and see whether you got the reading right, shouldn't we?-- That's correct.

Now, you can probably hand those production reports back. I won't tender them separately, Your Worship. You were telling the Inquiry yesterday about the 5 South panel and how there had been methane drainage in that panel?-- Yes.

Prior to the miners going in?-- Yes, that's correct.

And that was the same with most of these panels, including 512?-- Yeah.

All of the southern panels were the subject, or a large number of the southern panels were the subject of pre-drainage?-- That's correct.

And that was successful, wasn't it, to reduce the methane levels?-- Yes.

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Quite substantially?-- Yes.

And there was an active program underway where boreholes had been drilled to collect that gas and pipe it through a pipe called a methane range?-- Yes.

And up a borehole to the surface?-- Yes.

So there was an active concerted program to ensure that no methane from drainage holes just floated around in the mine, it was actually conducted out?-- That's correct.

Now, the product of the methane drainage was that there was lower methane when you came to actually work; is that right?-- Yes.

But the trade-off - if you can put it that way - was that the panel was a bit dustier than it might have been?-- Not a bit dustier, it was very dusty.

That was the trade-off, in a sense, from a mining point of view?-- Yes.

You either have higher methane and lower dust or you get rid of the methane and the byproduct of that was to produce some higher dust than otherwise would be the case?-- Yes.

So you were sort of opting - not you personally, but the mine was opting to control one of two things?-- Yes.

Now, the ventilation you described in 5 South as being generally good with the point that you made that there were some stagnant parts on occasions?-- Yes.

Now, those problems should show up in your deputy's reports for 5 South, shouldn't they?-- Well, yes and no.

Why would they not?-- Well, it all depends where you are working in the section. If I am doing inspections of the section of the face area and I put down on my report that the ventilation is adequate, that's where it's adequate, where the actual mining is taking place, not further up the road that I have indicated in here. That's what I meant in here, further outbye the working section, where the air was stagnant.

Further outbye the working section?-- Yes.

So in an area that hadn't yet been extracted?-- We weren't extracting in 5 South.

But that's what I am saying, it was in an area that had not been extracted?-- That's correct, because there was no extraction there, that's right.

Is that the same with the point you made about 512, that it was outbye the area where they were extracting?-- No, not the same point at all.

All right. Now, would you accept that in any 5 South deputy's report that you have made you have never highlighted at all a ventilation problem in 5 South?-- Probably not, no.

And, likewise, never put in anything under the source of danger?-- No, that's correct.

Now, you mentioned the number of headings in 512. You said you had a concern with the number of headings because of ventilation problems which were similar to 4 South?-- Yes.

In fact, the mine had extracted quite successfully a much wider panel than that, hadn't they?-- Yes.

In 401/402?-- Yes.

On the map, that's the panel immediately to the south-east of 4 South level?-- Yes.

And that's a much wider panel by a long mark than 512?-- Yes, on the plan, yes.

I think - I can't see it accurately from here, but I suspect there are nine headings?-- It's possible - yeah, yes, that's correct, in 401/402, that's correct.

And that had been extracted quite successfully?-- Yes.

And there were in fact other examples of wider panels, for instance, 4 South A? If you have a look at the map?-- Yes.

You know where 4 South A is?-- Yes.

4 South A was a much wider panel?-- Yes.

And 7 North-west was a panel of equivalent number of drives as 512, isn't that right?-- 7 North-west?

Yes?-- First North-west.

1 North-west, I am sorry?-- Yeah.

I wrote down a 1 that looks like a 7. It could be I am not doing a deputy's reports. 1 North-west was of a similar number of drives?-- Yes.

Now, you mentioned in your statement and yesterday that on one occasion you found 1.2 per cent methane in the No 2 heading?-- That's correct.

You can't remember a date when you found that?-- No.

No doubt that was at a time you were doing a deputy's inspection?-- That's correct.

Because you were taking readings?-- That's correct.

Do you recall if you made it the subject of any comment in any report?-- No, I didn't.

Why was that?-- I cleared the gas.

You didn't think it was worthy of comment?-- No.

A temporary problem solved?-- Yes.

Thank you. Now, you couldn't remember a date, I don't think, but you put it at somewhere between 8, 9 or 10 cross-cut, in that vicinity?-- Somewhere around the middle of the panel. Somewhere around there. Somewhere there.

Now, at that point the panel obviously was in extraction?-- Yes.

And had been for perhaps a month or so?-- Yeah - yes.

Did you go down to the bleeder return, did you?-- Yes.

Right up to the front of the bleeder return between 510 Panel and the first cross-cut in 512; is that correct?-- That's right.

And there was not even a prep seal there at that point; is that what you say?-- There was a prep seal there, yeah.

There had been a prep seal put there, hadn't there?-- Yes.

And was there not some brattice as well?-- There was not any brattice on that prep seal.

Was there not?-- No.

Did you put it in yourself?-- No, I never put it at the prep seal. I put it further outbye.

Outbye the prep seal?-- Yes, because that was the only piece of brattice that was available and I wasn't going to put it 100 yards down the hill on my own.

Was there just some brattice lying around, was there?-- Yes.

Might it have come from the prep seal, do you think?-- No.

Could it have been blown out by a fall?-- No.

Well, you are sure there was none there at that time; that is to say, when extraction had reached somewhere between 8, 9 or 10 cross-cut?-- That's correct.

Thank you. Now, you referred to the method of ramping in this panel, and the occasions on which you were there for production, actual production, were very few, isn't that right?-- That's correct.

Two or three times?-- Possibly. Might have been more.

You have no active memory of just how many times?-- Oh, no.

We can tell from the production reports which I read out?--
Yes, that's correct.

We can tell from them because there was no production on weekends, was there?-- No. Oh, sometimes but very little.

Well, routinely there was no production on weekend shifts?--
That's correct.

And sometimes once a month there was no production on the Monday shift either?-- That's correct.

And that happened on monthly falls?-- Yes.

So we can surely tell by your reports whether you were there during an actual production shift?-- Should be able to, yes.

Thank you. Now, the method of ramping you said you thought was too steep?-- Yes.

Your view was whilst that was so in your opinion, nonetheless it had to be done because you didn't want the shuttle car driver exposed to high ribs?-- That's correct.

In fact, the entire method of taking the bottoms by this ramping method was predicated on ensuring that neither the miner driver nor the shuttle car driver would be exposed to danger, isn't that right?-- That's correct.

So that the miner was driven remotely?-- That's correct.

With the driver standing back with a set of controls in his hand?-- That's correct.

Well back and in secured roof?-- Yes.

And, likewise, it was a fact of this extraction purpose that the shuttle car driver was not to go and did not go beyond the last line of roof support?-- That's correct.

And the panel has an incline, if one is looking outbye from 13 cross-cut?-- Yes.

So, sometimes the machine was ramping, as it were, downhill?-- Yes.

And the product of the method of ramping was that there was some more loose coal than would have been the case otherwise?-- Yes.

Because normally even with rib spall, isn't it cleaned up?-- Yes, most of the time.

If you can get to it without going into exposed areas?-- Yes.

You go and clean it up?-- Yes.

So that if one were not taking bottoms, for instance, on a

roadway but simply lifting fenders off a pillar?-- Yes.

You would clean up any rib spall, provided you didn't go beyond your roof support?-- That's correct.

Now, with these ramps, they are produced by the continuous miner?-- Yes.

The continuous miner itself might have been past roof supported areas but not the driver?-- That's correct.

So that if any loose coal was left on a ramp, you wouldn't suggest anyone go out there to get it back, would you?-- That's correct.

Because it's exposed roof?-- That's correct.

And not only is it exposed roof but there are higher ribs because you have added the depth of the ramp to the 2.8 metre normal drive height, isn't that right?-- Yes.

So that the height eventually was close to the 5 metres, I think you mentioned yesterday?-- Yes, possibly, yes.

The ramps were about 1.7 metres deep, weren't they?-- Yes, something like that, yes.

And the ramps varied in height depending upon the precise condition, isn't that right?-- Yes.

Sometimes the ramp couldn't be fully completed because of some local condition?-- That's correct.

Such as rib spall?-- That's correct.

On other occasions the ramps were perfectly proper and clean, the machine got down and got most of the coal out?-- Yes, in some instances, yes.

In fact, this was a very efficient method of extraction, wasn't it?-- Used to get a fair bit of coal, yes, but I wouldn't call it efficient.

Isn't it the fact that there was as much production obtained out of this panel for its size by taking a pillar and leaving a pillar as there would have been on other methods of extraction?-- That's correct.

In fact, the method was take one, leave one; in other words, take the strips off two sides of the pillar, then leave the next row of pillars, then strip the next row of pillars?-- That's correct.

In fact, that was the first time that this particular method - that is to say, two sides stripping, take one, leave one, and bottoms - was done?-- Yes.

There had been two side stripping, take one, leave one, before, hadn't there?-- Not that I can recall.

You don't recall offhand?-- Could have been in 4 South level. I just can't -----

Can't recall offhand?-- Can't recall now straight off.

You think it might have happened in 401/402, the very panel which I talked about before?-- Yes, it did happen there.

A slightly different design for two side stripping, but, nonetheless, two side stripping, take one, leave one?-- Yes, I think so.

Wasn't that panel - that is to say 401/402 - wasn't that done under the control or under the eye of ACIRL?-- Yes.

They were actively monitoring and giving advice about that panel?-- That's correct.

And, to your knowledge, they were doing the same with 512, weren't they?-- That's correct.

They had Extensionometers in 512?-- That's right.

And, in fact, to your knowledge, ACIRL had designed the 512 Panel?-- Yes, probably, yes.

All right. Now, you don't hold yourself forward as an expert in spontaneous combustion, do you?-- That's correct.

And you wouldn't expect - to be a deputy you don't need to be an expert in spon com?-- That's correct.

All those questions that you were being asked yesterday about what spon com thrives in and what it loves to feed off, all you are going by is what you have read in the past and you have got by discussion with others?-- Not exactly. You come into talking about spontaneous combustion when you do your deputy's course.

So you have in fact done a course in spon com?-- I haven't done a course on spon com, but it's been discussed in deputy's reports and that - deputy's training.

Deputy's course I think you said?-- Course, yeah.

That's the 20 week course that you told us about yesterday?-- Yes.

You have in fact done other training, haven't you, since that time, refresher training - not in spon com, I am not suggesting that - in other areas?-- No.

Well, let me run through, if I may, the entry for Mr Caddell on the training records and you tell me if you disagree with the dates and the topics. 7 April 1993 refresher training in first-aid. Ring a bell?-- That's correct.

13 September 1990, refresher training in emergency

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procedures?-- That would be correct, yes.

17 June 1994, refresher training in mine methods?-- I don't - well, maybe something different to that, but I can't remember mine methods. I can't remember doing that one. I mean, I probably did but it was under a different heading or something.

You understood it by a different name perhaps?-- Yeah.

All right, I understand that. 7 May 1993 training in accident hazard reports?-- Yes.

17 June 1994 significant incident reports?-- Yes.

16 June 1994 - I will get the name right - potential hazards of spontaneous combustion, mine gasses, dusts and other ignition sources?-- I don't remember that one.

16 June 1994?-- I don't remember that.

Might it have been a course not necessarily confined or concentrating on spontaneous combustion but certainly on ignition sources?-- I don't remember it.

7 May 1993 refresher training in defect reports?-- Yes.

7 May 1993 refresher training in the self-rescuer, one particular type, the MSAW65?-- That's correct.

6 May 1993 self-rescuers again, the 30/100?-- Yes.

It's apparent from that list, isn't it, that you have in fact been to quite a number of refresher training seminars, courses, call them what you will, over a period of years?-- Yes.

And that's true of most of the miners, if not all of the miners at No 2, isn't it?-- Yes.

In fact, you would expect, from your experience, to find that most of the miners had been to just about all of the ones that I listed out for you?-- Yes.

And over the same or a greater time span?-- That's right.

It's true, isn't it, that at No 2 - and it's maybe the case elsewhere but let me concentrate on No 2 - that there was in fact an active training program?-- Yes.

Supervised or at least actually controlled in more recent years by Mr Joe Barraclough?-- That's correct.

He was in fact the Safety and Training Under-manager?-- That's correct.

He had been taken off production in order to concentrate on just those things?-- Yes.

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And he designed courses?-- Yes.

And he got miners along to participate in them?-- Yes.

He got deputies and other experienced persons to teach in them?-- Yes, there's probably occasions.

Mr Bryon, for instance?-- Yes.

Mr Morieson, for instance?-- Yes.

Mr Kerr from Mines Rescue?-- Yes.

And miners were required to and did participate in that training program?-- Yes.

And, likewise, again with Mr Barraclough in control, the mine had a very active safety program?-- Yes.

There were safety lectures or seminars, call them what you will, safety meetings?-- Yes.

Mass safety meetings once a month?-- Yes.

At which all the men were required to attend?-- Yes, on each shift, yes.

That's right, and did attend?-- Yes.

At those meetings a whole range of safety issues would be up for grabs?-- Yes.

And men were encouraged to speak out if they had the slightest concern about some safety aspect, isn't that right?-- I wouldn't say they were encouraged to speak out. They were asked if they had any problems to speak up. I mean, to - they weren't ever encouraged, no.

No-one held their hand trying to cajole it out of them, but they certainly said, "If you have any problems, speak up."; that certainly happened?-- Yes.

People like you - as a deputy I mean - and people like the check inspectors, they are not reticent about speaking up. If there was a problem, they just spoke up?-- That's correct.

And there was in fact a network of safety committees to govern the safety issues?-- Yes.

There was a safety management committee like a mine safety management committee?-- Yes.

A safety training committee?-- Yes.

There may have been another one?-- Yes.

There was a whole network of them?-- Quite a few.

On all of those committees were ordinary miners, deputies, undermanagers, check inspectors, even some Mines Rescue people, perhaps?-- That's correct.

The mine was a safety conscious mine; isn't that right?-- I'd say so, yes.

When it comes to sealing, you have been involved in quite a number of occasions of sealing, haven't you?-- Yes.

Both at No 2 and at No 4?-- Yes.

In fact, there were very few sealings in 4 overall?-- Well-----

I think I am right in saying six in the life of the mine?-- Yes, be correct.

Compared to 28 in the life of this mine?-- Yes.

Many, many more sealings in this mine than at No 4; isn't that right?-- That's correct.

Indeed, in the time that you spent at No 2 there were many more sealings in only that time than there were at No 4?-- That's correct.

Did you participate in many of them?-- I'd say nearly every one of them, yeah.

By my recollection I think it must be upwards of ten occasions when you were potentially involved in a sealing of a panel?-- Yes.

For instance, 2 South?-- Yes.

There were five sealings put on 2 South?-- Yes.

They were different from these ones, they were bricks and mortar?-- That's correct.

When we talk about bricks and mortar, the bricks we are talking about are solid, not like a besser block?-- Solid, that's right.

Solid bricks?-- Yes.

Miners are required to build the seal like brickies do?-- Yes.

It is true, isn't it, that that has some problems in terms of men injuring their hands and fingers just in the mere process of doing the brick work?-- That's correct.

That's one of the reasons they went to Tecretre, isn't it?-- Yes.

You are not aware?-- Maybe one of the reasons but I never heard of it.

You are not aware of it?-- That's right.

2 North West was another sealing you were involved in?-- Yes.

Four sealings, again, bricks and mortar?-- Yes.

Feel free to look at the map if you need to. Would you like it closer to you?-- Yeah.

I was talking about 2 North West, do you think you can use the laser pointer?-- Down around that there you mean? Is that where you are talking about?

2 North West?-- Yep.

Four seals there, bricks and mortar?-- One was a Tecrete dry bond. One, I think. I'm not sure which one you are talking about. There is one down there had a dry bond on Tecrete sealing.

Two sealings in 2 North West, weren't there, or you can't remember back?-- No, it's a long way back.

So many sealings?-- Yes.

I won't list them all through. But there were a significant number of sealings in which you were involved yourself?-- That's correct.

As a deputy for part of the time?-- Beg your pardon?

As a deputy for some of it?-- Yes.

As a miner for others, perhaps?-- Yes.

Is it always the case that a deputy must be there when a sealing is in progress?-- Yes.

That's a requirement that you are well aware of?-- Yes.

In other words, you don't just leave miners down there by themselves, deputies are there?-- Yes.

Normally deputies don't do the physical work, they supervise it; isn't that right?-- Some do and some don't.

In theory, but some will get in and muck around?-- Yes, that's right.

Depends on which men we are talking about. It would in your experience never be contemplated that sealings would take place other than governed by a deputy or better, deputy or undermanager?-- In my opinion, yes.

That's certainly the experience at No 2 in all of the sealings you have been involved, upwards of nine and ten. The basic method has always been the same, seal off some of the roadways, get one intake and one return, and they are done

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simultaneously?-- That's correct.

That practice hasn't changed?-- No.

This sequence is really well known?-- Yes.

The men had worked at No 2 at the time of this sealing; that is, the sealing of 512, most of them had worked at No 2 for quite sometime?-- Yes, I assume that because I wasn't there on the shift to know who the blokes were.

The method is basically the same with bricks and mortar, that method doesn't change?-- That's correct.

The sequence hasn't changed?-- No.

And it was a method and a sequence that was common knowledge, no-one needed to be told what it was?-- That's correct.

All knew it?-- That's correct.

And after all of those sealings that you were involved in, including 512 - well, you weren't involved in 512 - but all of those ones you were involved in on each occasion, with the exception of 512 North West, men stayed down the pit after sealing?-- That's correct.

There is no doubt, is there, that had any deputy or check inspector ever formed the view that there was a danger in that practice, that that deputy or check inspector would have spoken up and stopped it, no doubt about that, is there?-- That's correct.

Just as it may have happened at other mines someone would have put up their hands and said, "Stop, we are not putting up with this, out of the pit."?-- That's correct.

And there is just no inhibition at all on that happening, if deputies and check inspectors, even individual miners, form the view that there is some problem, is there?-- That's right.

With 5 North West were you involved in that one?-- Yes - of the sealing of, yes.

I don't think you were involved in the first one, I think it might have been when you were at No 4?-- The first one in 5 North West I wasn't.

April '86 and you were at No 4?-- I was still at No 4, yes.

And that was the one, so far as you were aware, that was the one when there was a heating?-- Yes.

A known heating?-- Yes.

Identified and being coped with?-- Yes.

And that was the only occasion up to that point that men did

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not stay down the pit after the sealing that you know about, up to that point?-- At No 2?

Yes. That's true, isn't it?-- Yes.

And the reason they didn't may have been because it was a known heating active?-- That's correct.

Then 5 North or 5 North West, call it what you will, was sealed a second time?-- Yes.

Further outbye?-- Yes.

And you were present, and you may have even worked on that second one, it was in 1991?-- Yes.

And that was because of rising CO?-- Yes.

It was perceived that the CO was increasing?-- Yes.

But the real problem was that the roof was working inbye, wasn't it?-- It was always roof working but to my understanding that section was sealed off because of the rising CO.

Let me proceed with the steps and see if it jogs your memory, Mr Caddell. There was arising CO but the problem was because of the unstable roof no-one would go in and inspect to find out what was going on; isn't that true?-- That's correct.

No-one could get in or was willing to get in for the very reason, the good reason, that the roof was unstable?-- That's correct.

The decision was made that since no-one could go in and inspect and find out just what this was all about, it was better to seal off; isn't that right?-- Not in my opinion. I just said that - I said it was sealed off, in my opinion, because of the rising CO.

Did you participate in the discussions that lead to it being sealed?-- Probably not, in passing maybe, yes, with the manager or undermanager, whatever, but not a proper meeting, no.

You have no accurate memory of having done so by the sounds of it?-- That's correct.

It may have happened, it may not, you are not sure? You have to respond verbally so the lady can hear you?-- Yes.

Is it not the case - tell me if you have any memory of this - that when it was sealed because people couldn't go in to inspect, because of roof conditions, when it was sealed, the reason that men stayed out of the pit was because one of the deputies raised the question of rock on rock ignition; isn't that right?-- Yeah, that could have happened. I don't - not aware of that.

Because the management couldn't exclude the possibility of rock on rock ignition in their view that's why the men stayed out on that one, solo occasion?-- That's correct.

And subsequent to that time in all sealings men have stayed down?-- Yes.

This is a mine where there is a reasonable degree of interchange of miners between No 2 and No 4; isn't that true?-- That was correct, yes.

You yourself were an example?-- Yes.

Deputies have been at both mines?-- Yes.

Miners have been at both mines?-- Yes.

Undermanagers have been at both mines?-- Yes.

George Mason is a good example?-- Yes.

So, what miners know about No 4 and the procedures there the miners at No 2 know, they bring this knowledge with them, don't they?-- In this case I would say no because No 4 was closed in 1987; so a lot of people working on night shift wouldn't have even known some of the blokes, where they worked, and probably wouldn't have discussed No 4 with them.

I accept your point. I'm making a slightly different point and that is to say, when you came across from No 4 to No 2, you didn't just drop a curtain over your knowledge and stop thinking about what you knew from No 4?-- That's correct.

You brought all that experience with you?-- Yes.

And put it to good use in No 2?-- Yes.

Including, from what you tell us, this decision of No 4 to stay out of the pit after sealing?-- Yes.

You didn't stop thinking about that or knowing about that but you obviously, may I suggest to you, you obviously never thought it was necessary at No 2?-- That's correct.

And I think, am I right in saying, from what you said yesterday, that was simply because all of the sealings were pretty much routine, one like another?-- Yes.

No apparent danger, no apparent problem, therefore, no reason to stay out?-- That's correct.

That must have been a view that was shared by quite a number of your miners?-- Yes.

A feature about 512, I think you will agree with me, it's speed of extraction - it was very fast, wasn't it?-- Yes.

A shade under three months or maybe a shade over?-- Yes.

And, in fact, that was one of the fastest panels extracted?-- Yes.

And that had some significance for you?-- In what way?

Do you hold the view, as some do, that there is an incubation period for this mine?-- That's correct.

For this coal I should say?-- Yes.

What do you think or what did you think back then that it was?-- The incubation period?

What was the commonly held view about the incubation period?-- 6 months, I think. I wouldn't be real sure.

Different people might have different figures in mind?-- Yes.

No-one was saying a year?-- No.

And no-one was saying one month?-- No.

Commonly people would refer to this coal as having an incubation period of about six months?-- Yes.

Extracting in three meant you were inside the perceived wisdom about incubation period?-- That's correct.

Was that factor in your mind about this panel, you were inside the incubation period; that's another reason not to worry about it?-- That's correct.

That also I gather is a commonly held view by the miners, that's a feature of this panel, extracted inside the perceived incubation period?-- There's a possibility they think along those lines, yeah.

I'm not asking you whether it is true, in fact, that it has an incubation period or whether it is this or that time. I'm really exploring just what all the miners at No 2 believed. They believed there was an incubation period of about six months for this coal?-- Not all of the miners would believe that.

No, but so far as you are aware that was a commonly held view?-- Yes, amongst a minority, not the majority I wouldn't say.

Well, what did the majority think, that there wasn't an incubation?-- The incubation period was - I haven't heard that discussed myself for probably a couple of years but, I mean, there would have been a lot of people there who probably haven't heard it discussed either.

Because they have arrived at the mine more recently than the last time it was a topic?-- That's correct.

I can well understand you don't sit around over Crib discussing these things, you talk about other things?-- Yes.

512 was one of the fastest panels extracted, wasn't it?--
Yes.

Can I ask you to come to 5 August, that Friday afternoon shift, the last time you worked on 512 - well, last time - sorry, Friday afternoon shift. You came in at the start of that shift, that's about 2.15?-- Yeah, 3 o'clock.

Does it normally kick off at 3?-- Normally do. I'm an eight hour deputy, the others start at quarter past 2.

There are two types of deputies, for reasons which we probably don't need to explore?-- That's correct.

Some people are eight hour deputies and some eight and three quarters?-- That's correct.

You are an eight hour deputy so you start later?-- That's correct.

You say that Michael Squires told you that there was a slight rise in the CO reading?-- That's correct.

It was given to you in those terms, slight rise?-- Slight rise.

Nothing in what he said indicated any problem?-- No, he just told me that Steve Byron was doing a CO make at the moment. He would have it available for me in five or ten minutes.

It was from Byron that you got that - Brian, sorry?-- Yes.

Brian, isn't it?-- Byron or Brian.

Byron or whatever?-- Whatever. Commonly referred to as mouse.

What was your nickname or is it not repeatable?-- No, I haven't got one.

I'm not telling you mine either. There is a slight rise and he asked you to keep an eye on the section?-- Yes, well, I actual initiated it. I said to him, "I will go down the inspection of the return totake those readings."

The reason for asking had anyone else done an inspection was simply that you were there, you hadn't caught up yet with what had happened on the previous shift, he mentioned this rise; so you said basically, "That's what I'll do, I'll go down."?--
Yes.

Waste inspection means you effectively at that point go down top return?-- Yes.

And inspect either at or through the stoppings?-- Yes.

Not all of them had holes in them, some of them?-- Yes.

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That's routine?-- Yes.

You don't go into the waste at all for obvious reasons?--
You can if you can walk in but, I mean, there was no - yeah,
you can't get in that way that was mined out anyway.

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But at some stoppings on the way down the top return you can see in?-- That's correct.

You wouldn't actually get in through them because in most cases bottoms have been taken and there was a 1.7 or 2 metre drop?-- That's correct.

Nothing unusual about that, that was in accordance with the mining method that had been laid down?-- That's correct.

Now, you went by yourself on this - no, you went with Mr O'Brien?-- That's correct.

What was Mr O'Brien doing before you asked him to come along?-- He was one of the blokes working in the crew bringing the machinery out of the section.

At 512?-- Yes.

And it is routine, is it not, for a deputy to ask some experienced miner to come with him to do an inspection?-- Yes, that's correct, do an inspection in that area, yes, waste area.

Now, the method of taking your readings was the Draegar tube?-- Yes.

O'Brien didn't take any readings himself?-- That's correct.

Did you make a note of your readings as you took them?-- Yes.

On a notebook?-- Yes.

No doubt you still have it?-- Probably not.

Do you transfer those readings from your notebook to the deputy's report?-- That's correct.

And you do that when you are back on the surface?-- Yes.

Or at the crib room down in 512?-- I done it at the crib room, I think. I can't recall that. The deputy's report is either there or in the deputy's cabin on top.

The deputy's cabin up on surface?-- Yes.

Given the panel had been finished in terms of extraction, more than likely it was on the surface?-- That's correct.

And that would be at the end of your inspection, if not at the end of your shift?-- No, it would be at the end of my inspection I would do it.

So, you would come up from the first inspection to have crib?-- Yes.

And then go back down for the second?-- That's correct.

When you came up from the first inspection to have crib Boney

was there, wasn't he? Rod Helander?-- Yes.

In the deputy's cabin?-- Yes.

You were sitting with him talking to him in the deputy's cabin?-- Yes.

It was there that Michael Squires dropped in?-- Yes, I think so.

Isn't that - I think if you remember carefully that was when you actually first mentioned to Michael Squires the readings you had found, not, in fact, from phoning up from the crib room. I think you were talking to Boney Helander in the deputy's cabin and Squires came in?-- No, I told him the readings on the phone from the section.

Well, I would like you to think carefully about it. I suggest to you what happened was you were talking to Helander in the deputy's cabin?-- Yes.

You had your feet up, eating an orange, and Squires came in while you were talking to Helander. You were telling Helander what you found?-- Yes, I probably told Boney that, yes.

And while you were telling Helander that Squires came in and said, "Hang on, what are you talking about?", something to that effect, and you told him?-- When I ring an undermanager and tell him over the phone what the results of my inspection are I am sure I am going to tell him what the CO readings are. That's exactly what I did.

You have a firm memory of ringing from the crib room when you rang?-- Yes.

Was O'Brien there when you rang?-- Yes. So were three or four other blokes.

Who was there?-- Having smoko.

Who was there?-- Greg Edelman and Don McPherson.

Now, you describe it as a strong smell of tar?-- Yes.

What do you mean by "strong"? It wasn't obviously overpowering?-- No.

You simply meant not so slight as to be just there, something a bit stronger than that?-- Yes. It wasn't normal. It wasn't a normal smell that you would normally smell down an underground coal mine or whatever.

You are not suggesting the smell was overpowering, it was simply it was not normal?-- That's correct.

That is what you meant by "strong"?-- That's correct.

And "tar" you picked as being your best description of what it smelt like?-- That's right.

And would you have described it in those terms to Helander?--
Yes, I think so.

And Squires?-- Yes.

All right. Now, when you spoke to Squires you said to him that, "It is a tar smell, you know, a bit of a smell like No 4 was."?-- Yes.

And this was prior to your second inspection?-- Yes.

Squires asked to you keep an eye on the section?-- Yes.

As a result of what you told him?-- Yes.

Now, in mining parlance when an undermanager says to a deputy, "I want you to keep an eye on this or that or this section.", you understand that to mean, as most deputies would understand that to mean, that you weren't just to sort of wander around past the inspection, you are actually going to monitor things, take readings, check it out?-- That's correct.

When someone - when an undermanager says, "Look, I want you to keep an eye on that.", it is not something casual, it is understood as something more important?-- That's correct.

You knew at the time that was his way of saying to you, "I want you to go back down and keep an eye on or check out what you have just told me."?-- Yes.

Now, you did go back down?-- Yes.

But you didn't go back down to 10 cross-cut, did you?--
That's correct.

All right. Now, when you went down the second time did you take a miner with you or not? Probably not because you only did the reading at the top of the return?-- No, I didn't take a miner down.

Did you only take the reading at the top return?-- Yeah.

At the air station?-- At the monitor point, yes.

The monitor point is where, at the ventilation station?--
Yes.

So, it is just outbye the end of the top return?-- Just inbye of the seal, if I remember correctly.

Inbye the seal in the top return?-- The top return.

It is - at that stage it is still a prep seal?-- Yes.

Okay. That was - was that monitor point moved?-- Was that monitor point moved?

Yes?-- Yes.

Were you there when that was done?-- I can't remember. No, I don't think so, no.

You don't know to which position it was moved?-- Yes, I put a sample through it the next day.

Where was it then, out at the ventilation station?-- Just about there.

So, it is in the number 1 roadway for 510 just outbye the prep seal in the top return?-- That's correct.

In the middle of that intersection or somewhere in that vicinity?-- Yes, somewhere in that vicinity.

Where is the ventilation station that was set up? That's further outbye on that number 1 roadway, isn't it?-- I think it is in here, somewhere. I couldn't be sure.

You are not sure?-- I think it was in here.

I see. All right. Now, going back to your first inspection, you got to 10 cross-cut, got the smell, took a reading. Did you take the reading through the stopping or simply standing in the top return next to the stopping?-- I took it right in the opening of the stopping, right in the hole. So, I went in as far as I could by just standing there outside the stopping.

So, your arm is extended and you are pumping the Draegar tube?-- Yes.

It is an instrument which will produce a false reading or an inaccurate reading if you don't operate it correctly?-- That's right.

You have got to do so many pumps depending on what scale you are going to use or what gas you are testing?-- That's correct.

If you don't do the requisite number of pumps you get an inaccurate reading?-- That's correct.

If you do the pumping incorrectly you get an inaccurate reading?-- That's correct.

And if you don't - no, it is all right, that will do. Now, from there you went down to 13 cross-cut?-- Yes.

No smell at 13?-- No.

No smell on the way to 13?-- No.

No smell between the Unor point and 10, was there?-- I got the smell probably around about walking down there, a slight smell. I asked Craig could he smell it and he said no. When I got to 10 cross-cut where the air was coming out through the stopping I could smell it a lot there.

Just let me understand this correctly because I haven't heard this before. You asked O'Brien could he smell it too?-- Yes.

He couldn't or said he couldn't?-- He said - yeah, well, "I can't." - he said no, but then we got to 10 cross-cut and he said, "Yeah, I can smell it there."

It was only at 10? He couldn't smell it on the way down?-- No, no.

I see. At 13 it wasn't there. Then you went back. Did you stop at 10 again?-- Yes.

Take more readings again?-- No.

Any reason for that?-- Well, it was only five minutes or ten minutes when I walked from there - when I did the previous reading.

Did you take readings at intermediate stopping holes like at 12 or 11 or 9, 8 and 7?-- No.

Any particular reason for that?-- No - oh, no.

All right. Now, you were doing a double shift, weren't you?-- That's correct.

Is it a back-to-back doubler?-- Yes.

And Squires at the start of your night shift when he was going off again said he wanted you to keep an eye on the 512 section? I think that's what you said yesterday, asked you to keep an eye on 512?-- That was - I was referring to Bob Newton, I think, yesterday, when I talked to Bob.

Are you sure it wasn't that Squires asked to you keep an eye on 512?-- He may have said that to me, but I also would have told him that Bob is the normal deputy in there and he would go down there.

Yeah, well, Newton may have been the regular deputy for 512, but what I am suggesting to you is that Squires asked you to keep an eye on 512?-- Yes, he could have said that, but I would have told him what I am saying.

If we can stick with what you actually remember, I mean, and then we will get on to what might or would have been the case, if you don't mind?-- Yes.

In fact, you didn't go down to 512?-- That's correct.

Newton did that?-- Yes.

Now, can I also ask you this: at the end of that shift, that's the night shift, you spoke to Newton again?-- That's correct.

Now, this is the deputy who is the regular deputy for 512?-- Yes.

He is the man to whom you described the smell?-- Yes.

And the readings?-- Yes.

And where you found them?-- Yes.

Now, when you spoke to him at the end of that night shift he didn't say anything to you about any of those topics, did he?-- I asked him was there any and he just said, "No, there is no change in the reading.", that's all -----

No change in the reading?-- That's all he said to me.

He didn't say anything about smells or position of smells at all?-- No, nothing.

All he said was the readings hadn't changed and you understood that to mean the CO readings?-- That's correct.

Perhaps methane, if methane was taken?-- Yes.

There wasn't any question of methane being high at this point, was there?-- No.

Methane was what?-- .3.

.3. I mean, that's pretty low methane, isn't it?-- Yes.

Obviously nil would be best, but .3 is pretty small?-- Yes.

It is significantly under the level where the automatic monitoring systems on miners trip out the cutting heads?-- That's correct.

That's at about 1.25?-- That's correct.

It is significantly under the level at which men are required to stop work, for instance; that's up around the 2, isn't it?-- Yes.

.3 is quite low?-- Yes.

That was a fact that you, and no doubt other people who took the readings, well recognised that methane was not a problem?-- That's correct.

And the readings of CO that you had taken were in that general rise for the panel?-- Yes.

They were not extreme in your view?-- No.

They were not rising exponentially?-- No.

They were gradual and steady?-- Yes.

Now, could I also ask you this or suggest to you this: when you spoke to Squires about what you had seen and done you didn't actually say to him that you thought that the section

should be sealed as soon as possible, you didn't actually say that to him?-- I said that to him on the phone. I said I - actually the words were I said the sealing should be brought forward.

That's all?-- Yes.

The sealing should be brought forward. Not, as we see in your statement, that the section should be sealed as soon as possible? That is not actually what you said, page 3, about three lines down from the first paragraph? The words we see there are not actually the words you used?-- Probably not, no.

No. And from what you have just said to me, I understand you correctly to indicate that more likely, if not your actual memory is, that you probably said you thought the sealing should be brought forward?-- That's correct.

Now, at that point your understanding was the sealing was due for Sunday?-- That's right.

And there was prep work that had to be done before that happened?-- Yes.

For instance, the materials had to be brought to the seal sites?-- Yeah, the pumps and that sort of stuff, yes.

Now, that included Tecrete pumps, that included other materials in order to construct the seals such as roof bolts?-- Yes. I think all the gear was there. I wouldn't be really sure.

You think some of it was there, all right, or all of it?-- All of it I am pretty sure was.

Okay. Now, I don't see a comment that Mr Squires made other than that he would talk to Mr Mason about it?-- That's correct.

That was his comment?-- Yes.

You were quite content with that position?-- Yes.

You didn't see any need to hammer the point home any further than that; you had expressed your view?-- Yes.

Now it was something that was to be done?-- Yes.

Now, you went back down after that conversation, but got the same readings, didn't you?-- Yes.

So, nothing had changed in between the first inspection and the second?-- No.

On that night shift where were you in the mine?-- Night shift?

Mmm?-- If I remember I was looking after the 4 South - the

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old 4 South section where they were building Tecrete prep seals.

You actually saw the system they used?-- Yes.

You stop me if I describe the system wrongly. When they built the Tecrete seals or prep seals what that involved was - not necessarily in this sequence but these elements - a channel was cut into the coal in the floor, up the ribs and across the roof?-- Yeah. It is not cut into the roof, no. It is in the floor and the ribs, but not the roof.

And into that are put roof bolts?-- That's correct.

And in the floor as well and the ribs and they are drilled up into the roof?-- Yes.

And these are how thick, 25 mil?-- Yes.

And how long, 6 foot?-- Yes.

Sorry to mix my metric with the other one?-- Yes.

They are drilled into the roof, into the sides and into the floor?-- Yes.

And on those roof bolts are put steel wire cages?-- Yes.

Which form reinforcing inside the Tecrete seal?-- That's correct.

They sit in the channel that has been cut into the coal?-- Yes.

And then Tecrete is poured into those steel wire baskets and around the roof bolts?-- Yes.

So that the seal is a roof bolt reinforced Tecrete seal?-- That's correct.

Now, you left in the morning after finishing night shift, that's on Saturday morning?-- Yes.

You didn't work on the sealing procedures?-- No.

When were you next back at the mine?-- Sunday morning.

And on what shift?-- Day shift.

Day shift? Doing what?-- Unor sampling.

Right. Now, you did that in conjunction with Mr -----?-- Brian Kelly.

Brian Kelly?-- Yes.

Now, did I understand you correctly yesterday to indicate that he stayed on the surface and you were down in the mine?-- No, me and Brian go down the mine and the electrician stays on the

XXN: MR MORRISON

WIT: CADDELL M R

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surface.

Who was the electrician?-- Ian Pearse.

He stays on the monitor system?-- Yes.

And you and Brian are down the mine putting samples in?--
Yes.

You don't actually know then what is going on or what went on
on that shift up at the Unor screen, do you?-- I would have
done. We come up for smoko after the first three or four
samples.

You come up for smoko?-- Yes.

Did you go in and look at the screen?-- Yes.

What was it showing?-- We only still had our own four points
up on it.

Did you look at the screen in that fashion more than once
during that shift; that is to say, you came out of the pit and
looked at the screen?-- Yes.

Isn't it the case that number 5 monitor point was kept on the
screen? The four you were testing was on the screen?-- Yes.

So was 5?-- I wouldn't be able - I wouldn't - I don't know.

You don't think so?-- I wouldn't recall, I don't know.

Do you know if it is possible to do that?-- To leave it on
the screen or -----

Yes?-- You could put four up on the screen and leave them
there as long as they will stay there, that's it.

So far as you are aware on the Unor screen you can put up effectively any combination of points you want and leave them there if you want?-- Yes.

So it's quite possible to have the four up that are being tested and 5 up as well, so far as you are aware?-- I think so, yes. I wouldn't be really sure.

Now, you gave the impression yesterday that when this testing is going on, that is the samples are being put into the tube, that the system is not operating. You don't mean that, do you, that the Unor system is not operating? You don't mean that?-- The Unor system is only operating on the four points that are on the screen.

Do you think it's not sampling the others at that point?-- It doesn't - well, to my knowledge it doesn't, no.

I see. You don't think the pump keeps going drawing air through all tubes?-- The pumps will keep going but you are only monitoring those four that are on the screen.

Yes, you only have four on the screen, but is not the machine, nonetheless, sampling the gas in all the other tubes on rotation as it should?-- I wouldn't know about that because the only four that come up are the four that sample and it just swaps them four all the time. Now, I don't know whether it does it on the others or not.

All right. Now, you can't recall on the visits up to look at the Unor screen whether point 5 was up or not?-- No.

But you are of the view that that could be done?-- Yes.

So, what you are really telling us is that you can monitor any points other than the four you are testing if you put them on the screen and watch them?-- No, I am not saying that at all.

Well, what are you saying, that the system stops sampling the gas in the other tubes?-- To my knowledge, yes.

Can I suggest to you what truthfully happens is this: you put samples into four tubes, those four are kept on the screen because the results of the samples are needed to be seen?-- Yes.

The system, nonetheless, sucks gas through and looks at the gas in all the other tubes, it just doesn't show on the screen, and if you want to put up point 5 or point 8 or any other point you want to do, you can put them on the screen too even though they are not the four you are testing; isn't that the case?-- If you put them up on the screen, therefore we would have too many going around and we wouldn't sample the four just in the time-lapse.

Did you check with Mr Pearse as to what he was doing on the screen? Did you ask him?-- It's normally what we do.

And what did he tell you, that he was only keeping the four up and not No 5?-- Yes, that's what he told me.

I see?-- That was under the impression that I -----

Well, he didn't actually tell you that?-- No, he didn't actually tell me that, no.

Let me be careful about this, Mr Caddell. Really we do have to be careful that people said things or saw things when they really didn't. Pearse didn't tell you that, he really didn't, did he?-- No.

You might have formed some impression from something you saw, but he certainly didn't tell you that?-- That's correct.

Would it surprise you to know that point 5 was being monitored the entire time?-- It probably would, yes.

And that in fact it was being monitored much more frequently because once it's up on the screen with the four, it comes back to it more frequently than normal. Instead of 13 minutes turn-around from point 5 to point 5, it got down to four minutes, three minutes or five minutes for all that time you were span testing. Would you be surprised to know that?-- Yes.

Now, I don't want you to think I am being unfair to you, Mr Caddell, talking about this Unor system. I accept, as I think correctly, you don't sort of - you are not an expert on the Unor system?-- That's correct.

So, I am not really - as Mr Martin said yesterday, I don't want to put you through an exam on it, but I need to get some idea of what you understood about the system. Now, you said yesterday when you spoke to Squires and gave him the reading that the CO reading was normal at that stage of retreat; is that right?-- That's correct.

That was your view at the time?-- Yes.

Now, when you said yesterday that you spoke to Mr Squires, you described it in these terms: you said, as you told us before, that you told him that you thought it should be sealed as soon as possible because you had a concern about the place, the section; you had a concern about it?-- Yes.

You didn't think there was a heating, did you?-- No.

And you didn't say there was a heating?-- No.

And you didn't think that there was necessarily spontaneous combustion going on, did you?-- No.

And you didn't say it to Squires either?-- No.

All it was really was, "This might be the start of something, I don't know."?-- Yes.

In other words, it calls for, in your experience, the need to monitor a little more closely. That would be the reaction, wouldn't it?-- Yes.

In other words, based on your information, what you would expect to happen was that people would monitor it?-- Yes.

Now, can I just ask you this: when you were at No 4 Mine, you have told us that there was a policy there to stay out after sealing; can you recall that?-- Yes.

Did I understand you correctly to say in one answer that in fact sealing took place routinely on a Friday then?-- Well, we normally - we normally did, yes. As I recall, yes.

And that led to the inevitable consequence that because there was no production on weekends in No 4, that the production teams would be out of the pit, isn't that right?-- That's correct.

So it was in fact, from the production crew's point of view, very sensible to seal on the Friday because there wouldn't be any production for the next two days and they wouldn't be in the pit?-- That's correct.

Can I suggest to you there wasn't any policy to stay out of No 4?-- There wasn't any policy, no. It was initiated by the men. There wasn't any written procedure on it.

Can I suggest to you that men routinely did not stay out of the pit at No 4; they stayed down?-- A couple of times they stayed out.

A couple of times they stayed out?-- To my knowledge, yes.

While you were there?-- Yes, I am sure they did.

Which panels?-- I wouldn't be able to recall, but I am pretty sure they did.

But not on other occasions?-- I don't actually recall. That's too far back to remember really.

Well, no doubt mine records will tell us whether or not men stayed out. It should be something noted in there?-- Well, actually, that's what I said yesterday. The men weren't actually - when we sealed it off - to my knowledge, when we sealed it off we always done it on the Friday and then there was no production on the Saturday, so it didn't interfere with production, and so no-one was called in to work. There was only deputies to work on the Saturday and Sunday.

No 4 was a mine where there was no production on the weekends?-- That's correct.

And that was an arrangement - in terms of work practices, that was an arrangement that had been negotiated with the Unions. The Unions didn't want production on the weekends?-- That's correct.

All right. Now, in so far as you have referred to this practice or policy at No 4, there is absolutely no reason - given the crossover of men and the crossover of deputies and the crossover of under-managers, there is absolutely no reason why, if the men at No 2 had thought it necessary, it couldn't happen, that is, staying out?-- I beg your pardon?

Sorry, I will make it clearer. I am not doing this well, am I? There is absolutely no reason why, if the men in No 2 wanted to stay out, that they could have done that. No reason why they couldn't, from what you say. They did at that time in No 4?-- That's correct, they could have stayed out.

And at No 4, just tell me this - I just want to catch this point of something you said before. Sealed on Friday usually, no production weekends, therefore production crews not down but deputies went down. That's what you said, isn't it?-- Yes, I think so, yes.

So, in fact at No 4 people were going down the mine and staying down the mine after a sealing. Deputies did?-- They weren't staying down the mine. They went and inspected the seals that were put up and took readings.

Well, they were obviously down the pit for some period of time, enough to do an inspection?-- That's correct.

Inspections take a couple of hours each time?-- That's correct.

So, it's not the case that everybody was out of the pit, is it?-- That's correct.

Now, I just want to ask a couple of things about your evidence yesterday. I think you were cut-off on one - two times you wanted to say something, or at least you perhaps didn't get it out. You were asked yesterday about whether there had been a history or fear of spontaneous combustion at No 2 and you didn't really answer in any way except saying - agreeing that there was some fear of spontaneous combustion. Now, you don't mean that every day people were going around with knitted brows thinking, "This might happen, this might happen."?-- That's correct. There was a concern for -----

It was known that this was a seam that could do it?-- That's right, and that was the way I answered the question yesterday, that's what I thought.

It was known this seam could do it; that's why it was something you had in your mind?-- Yes.

That's the extent of it?-- Yes.

You were asked yesterday about - you mentioned that the goaf was warm and you were asked whether that could be because there was a heating or it was heating, and you answered that that's why it was warm. I mean, I take you to mean you can't have a warm goaf unless it is heating up, but you don't mean a

heating in the coal necessarily, do you?-- That's for sure.

You don't mean a heating in the sense that we have been discussing earlier?-- The way I answered was the way I normally see it is a goaf will always be hot just under the circumstances that it's - of the ventilation and the size of the goaf.

And that answer certainly wasn't intended to reflect that you thought there was an actual heating in the coal down there. The goaf gets warm because the goaf gets warm?-- That's correct.

Now, you also were asked a question about whether you had been involved in risk analysis and you started to say sort of not really and then were going on to say something and didn't really finish it?-- Well, risk analysis, I think I put it in my - if you call that risk analysis, I don't know. I have put it in my report. On one occasion I took part in an incident investigation of a cable flash. I mean, if that's what we call risk analysis, well okay.

Depends what you are talking about. You may not have been involved in a big formal production of risk analysis of the mine, but you were involved in investigations that might be described as risk analysis?-- Yes.

I understand that. Would Your Worship just excuse me a moment while I catch up?

I just want you to look at one document just to clear up this point we were discussing quite some time ago. I asked you about 16 June on, I think, mining methods and you couldn't recall it. I just want you to look at this document and identify for me, if you would, your signature. See your signature?-- Yes.

That's the roster for the training course for those days?-- Yes.

No doubt you attended, is there?-- Yes, I signed it, yes.

Okay, you can hand that back. I won't tender it. Now, one last thing, if I may, Mr Caddell. You mentioned yesterday that you had some - you didn't like the position of monitor 5; that is to say, its post-seal position. Do you remember saying that?-- I just thought it should be in a different road.

It makes no real difference, does it?-- No, not to me anyway, no.

It's just a matter of you might put it in a different roadway, someone else would have put it where it was?-- That's correct.

And those monitors when they are moved like that post-seal, they are done by electricians, or under the control of electricians?-- Most of the time, yes.

I have nothing further, thank you.

HIS HONOUR: Yes, Mr Harrison?

MR HARRISON: Thank you, Your Worship.

CROSS-EXAMINATION:

MR HARRISON: Mr Caddell, if it's any consolation, after that I will be fairly brief?-- Thank you.

You mentioned earlier that you were involved in investigation of a cable flash problem?-- Yes.

That's referred to in your statement?-- Yes.

At the bottom of the first page?-- Yes.

And that was about six to eight weeks before you made your statement?-- Yeah. Yes, that's what I put on it. I couldn't recall the exact date but -----

Now, was that a reported case of cable flash?-- Yes.

Whereabouts did that occur?-- In 5 South section.

Now, to your knowledge, had there been five reported cases of cable flash at the No 2 Mine in 1994?-- Yes.

Prior to this incident?-- Yes, that's correct.

There was this one that was in 5 South. Were there any others in 5 South?-- I wouldn't be able to remember. I think there was but I can't - I wouldn't be able to remember whether - what sections they were actually in.

On each occasion, to your knowledge, was there an extensive investigation about what happened?-- Yes.

And you took part in that investigation in the one you have referred to?-- Yes.

Prepared reports?-- I didn't prepare any reports. I just went down and done some measuring up for the under-manager. He prepared the report. He couldn't get down into the section, so I done some measuring up for him, just for his report.

If I could just turn to something else. The span gas monitoring that you did on the Sunday morning on 7 August?-- Yes.

That's something you had done before?-- Yes.

With the exhibit that was tendered yesterday you gave us particulars, and I am only interested in monitors 5 and 16?-- Yes.

Of the time span it took for your sample gas to get through to the - what I might call the monitoring point?-- Yes.

The document shows that in the case of monitoring point 5 it was from 11.26 to 12.10, a total of 44 minutes?-- Yes.

It shows in relation to 16 that it was from 11.15 to 12.28. I think the document says 85 minutes but it would seem that might be an error. It should be 73 minutes?-- Yes.

Now, from your experience, is that normal, the normal time span?-- Yeah. I wouldn't be sure, but there was a long time. What do you mean, the difference between the 44 and a 73?

More so - well, I will get to that, but, say, in relation to 5. Now, bearing in mind that the points are not always in exactly the same place, but roughly would you expect a delay of some 44 minutes in relation to monitor point 5, from your experience?-- I would, yes.

And, similarly, in relation to monitor point 16, would you have expected a delay of some 73 minutes, from your experience?-- I wouldn't have expected that much delay, in that one anyway.

See, on the face of it, 16 appears to be closer to where the gas is going than 5; is that the case?-- Well, I don't actually know where the Unor lines run to that point, but they could be longer. I don't really know.

Is it the case that one, for some reason, may have been - to use a phrase - to run via the cape as opposed to a relatively straight course?-- That's correct. They can do that, yeah.

If I can just turn to something else. The procedures with sealing of panels, to your knowledge, as at 5 August when you first had those concerns you have told us about, was there in place an emergency sealing procedure?-- I wouldn't be able to - I don't know.

What is sometimes referred to as rapid sealing?-- No, that wasn't in place.

Were you aware, for instance, that Tecrete sheets were kept at the mine so that if it became necessary for an emergency sealing of a panel, they could be used in those circumstances?-- They could have been used but I don't know whether there is a procedure set down for it.

I probably should take my question back a bit further. Were you aware that the sheets were there?-- Yes.

You are familiar with what I'm talking about?-- Yes, if they are the same sheets as the ordinary ones, they are there. If they are any different, I wouldn't be able to.

You weren't aware of any procedures relative to their being used if necessary should it become imperative to seal quickly as opposed to going through the normal procedures?-- They could have been used, but, I mean, I wasn't in any understanding there was any procedure followed.

In any event, at no stage did you indicate to Michael Squires that it was an emergency in terms of sealing, you merely indicated to them that you felt the sealing should be brought forward?-- That's correct.

Yesterday afternoon you spoke of becoming aware of a CO make of 14.8 litres per second and as I understood what you said then, you said something about the fact that that wasn't a significant increase; do you recall that?-- Yeah, from the previous readings.

Have you ever had much regard to the CO make yourself?-- I've always put one on the wall in the deputies' cabin, yeah.

The figure of 14.8 litres per minute CO make?-- Yes.

Does that of itself have any significance to you?-- Yes, it does. It's up, yeah.

Perhaps should I say if we go back to just before the time of the explosion did that of itself have any significance to you?-- What time are you talking about?

Well, when you found out, for instance, about that reading of 14.8 that you told us about yesterday?-- Only put down - I think it was 14.8 litres. I wouldn't be real sure about that. I am only going on what - I think that's what Steve said.

That's certainly your recollection of what it was?-- Yes.

At that stage did that of itself have any significance to you?-- No.

Again, was your understanding of the situation - and again I'm not getting into the rights or wrongs of it, I'm just going to your understanding at the time - was your understanding that unless you had a substantial increase in CO make as opposed to gradual increase, it wasn't necessarily a problem?-- No, no.

You used in that context yesterday the words "not a substantial increase". What did you mean by that?-- Significant increase from the previous readings but that should have read "readings". Well, it just wasn't going along with the Draegar readings, it didn't seem significant to me.

If I can take you back to the Draegar readings. You were questioned about these at some length by Mr Morrison this morning?-- Yes.

You clearly had regard to the fact that there did not appear to be any increase in the CO readings from the second inspection - sorry, from the first inspection to the second inspection on the afternoon shift on Friday, 5 August?-- There was no increase, no.

And that appears to be relevant to you?-- I beg your pardon?

That appeared to be relevant to you the fact that there wasn't an increase?-- That's correct.

That same relevance was that reading forced by the conversation you had with Bob Newton at 6 o'clock the following morning when he told you again that the readings were about the same?-- Stayed the same, that's correct.

In fact, did he tell you that they were about 7 to 8 ppm, was that your recollection of it?-- No, I don't think so. I think he just told me there was no change.

Rather than ask you specifically what he said would it be fair to say that you came away from that conversation believing that there had been no increase at all?-- That's correct.

You had some dealings with the workings in 5 South?-- Yes.

Were you aware that as at 7 August those mining 5 South were approaching a drainage hole?-- Was I aware of it?

Yes?-- That's - I was aware - I didn't know - it wouldn't have been no reason to cross-cut, all depends where they are mining.

You didn't have any particular knowledge of the state of play in terms of how far 5 South was going as at the 7th?-- No.

Again, if I can turn to something else, you were questioned this morning by Mr Morrison about local check inspectors?-- Yes.

Are they the people who are also referred to as miners' officers?-- Yes, that's it.

As at the time of the first explosion here was Len Graham one of the miners' officers?-- No.

Who were the miners' officers?-- Steve Byron or Brian and Terry Vivian.

From your experience would miners from time to time go to them if they had any concerns relative to safety within the mine?-- Correct.

Did you find both of them quite safety conscious in relation to any problems or potential problems within the mine?-- Yes.

Would you say that Terry himself was invariably quite vigilant about matters of safety?-- My word.

Again, turning to something else, you are quite familiar with the form of the production deputies' reports, aren't you?-- Yes.

There is a section up in the top left-hand corner of the form which includes a barometer reading - are you aware of that?-- Yes.

Directly under the heading of "District" we have got "barometer" and after that we have a reading?-- Yes.

I'm looking at number 3774 at the moment and that's the one that you completed on the Friday afternoon shift?-- Yes.

And it's got reading 1022 it looks like to me?-- Yeah.

Where did you get that reading from?-- From the barometer out the front. We used to have a graph barometer in the deputies' cabin. We used the one out the front because the other one is-----

Is that always done to the set time?-- Yes, at the start of the shift.

In that case 3 p.m.?-- Yes.

That's one of the first things you do?-- Yeah.

Has it ever been explained to you the significance or otherwise of that barometer reading relative to any testing you might do?-- Yes.

What's your understanding of the position?-- Well, if the barometer drops, normally with the seals they'll start either blowing or sucking. With seals the CO probably go up, as I understand, I think.

We are talking about a low or a high here?-- Probably would rise slightly if the barometer was low. I just can't remember.

Your understanding was one might cause a leaking effect on the seals or a sucking effect?-- Yes.

And the other might cause the opposite?-- Yes.

Is that something that's always taken as a matter of course, that reading?-- Yes.

At the start of every shift?-- Yes.

Is that the only time it's taken?-- Yes.

Is any attempt ever made to try and take them in terms of one would normally expect the highs and lows in the course of a day?-- No, because normally you wouldn't have access to it anyway, it would be down the pit.

It fits in very much with your overall routine in terms of your other duties on the shift, to do it there and then at the outset?-- Yes.

Thank you, I have nothing further.

WARDEN: Mr Clair, anything out of that?

RE-EXAMINATION:

MR CLAIR: Just a few questions, Mr Caddell. You were asked some questions about whether you at any time considered that there was a danger to the men and you initially said "not on Friday night or Saturday morning" and then you said you didn't ever form that view. Looking at the participation that you had in the events from the time that you commenced work on the Friday, you finished your first shift and then you commenced a second shift and you fulfilled that shift in another area of the mine; is that right?-- Yes.

You said that you spoke with Newton the next morning?-- Yes.

At the end of that shift. He told you that there had been no change in the reading or no change in the situation, no change in the readings as you took it?-- That's correct.

You left the mine, you came back again on the Sunday?-- Yes.

And on the Sunday you had the role of carrying out these span gas tests; is that so?-- That's correct.

Did you have any discussion with anybody about the situation in 512 when you were there on the Sunday?-- Not that I can recall.

Was there any mention to you at any time of any haze being seen on the Saturday or any discussion of a haze?-- There could have been. There was something about the haze mentioned but I can't recall who mentioned it.

Did you have any further discussions with anybody about the situation in 512 after that?-- Not that I recall.

You were asked also some questions about your notation on the series of deputies' reports in respect of 512 that ventilation

was adequate?-- Yes.

I would just like you to clear this up for me. In relation to 512 - and I'm asking you about your notations on 512 - when you refer to ventilation being adequate were you speaking there of ventilation throughout the whole of 512; that is, the goaf area, the area that had been worked, or was that by way of reference to ventilation in the working area?-- More so the ventilation in the working area and the return coming off the goaf. Not in the actually goaf itself. When I say "adequate", I mean, it's adequate. There's no build up of gas or anything like that; so it's clearing it adequately.

Just one further question: you were asked about your statement yesterday that you were not happy with the number of drives in 512 panel?-- That's correct.

Your attention to the fact that there were the same number of drives, I think, in 1 North West?-- Yes.

And you were asked whether there were any problems then in 1 North West. At the time of the incident in August what was the position with 1 North West, was that still being developed?-- Yeah, we had only just - oh, well, only just pumping it out, actually had gone back in there to start again. We'd just pumped it out.

It wasn't at the point of retreating?-- No, no.

These problems that you did yesterday refer to with the number of drives at what point in the extraction process would they occur, when a heading is being developed or when - I should say a panel is being developed - or during retreat or throughout?-- Just during retreat, that's all I had concerns with, just during the extraction process.

I have no further questions, Your Worship.

WARDEN: Mr MacSporran?

MR MacSPORRAN: I have nothing further.

WARDEN: Anything out of that, Mr Martin?

MR MARTIN: Not out of that, no.

WARDEN: Thank you, witness. You may stand down.

WITNESS STOOD DOWN

MR CLAIR: Your Worship, I call Cole Cameron Klease.

RXN: MR CLAIR

WIT: CADDELL M R

WARDEN: Could we just recall the last witness.

MR CLAIR: Yes, I will have the last witness recalled. I took it there that Your Worship had said the panel had indicated they had no questions.

MICHAEL ROBERT CADDELL, RECALLED AND EXAMINED:

WARDEN: Sorry, witness, the panel have a couple of questions for you.

MR PARKIN: Mr Caddell, I have just got a few questions for the purposes of clarification. You mentioned or you stated that all - did all the miners share your views regarding the problems with working six headings in terms of ventilation?-- Did all the miners share my views, no.

Was that just a personal view?-- That's a personal view, yeah.

If you have views like these I guess you discuss those with management or the check inspectors?-- Somewhere along the track I would have, yes.

You also stated that the method of ramping the bottoms resulted in loose coal being left; also, that there was a high and potentially - this potential to have some unstable ribs. Were these problems discussed with management?-- I beg your pardon?

Were these problems discussed with management? In other words, are there any rules at the mine for supporting these unstable ribs?-- We've always discussed - we have always - have our - when we do the extraction sequence, we have - before we start extracting always discuss it, and those views are aired there and aired with the undermanagers and managers as the extraction goes on.

So, are you happy with that process?-- Yes.

Just again for clarification when you told Michael Squires that the sealing of 512 should be brought forward did you believe at that time that there was a heating?-- No, I just - was tending that way that there was a possibility that it was warming up a bit so I thought if we get it brought forward we stop that.

You didn't think there was any heating?-- No.

At that stage?-- No.

And the final point: you mentioned comment about the Tecreté seals and that brick stoppings had briefly been used and I

XN: PANEL

WIT: CADDELL M R

guess the question again is did you communicate these concerns to your management or, indeed, the workers' inspector?-- With the management, yes, I expressed my concerns to the manager - with them.

Thank you.

WARDEN: Thank you.

EXAMINATION:

PROFESSOR ROXBOROUGH: Just a couple of points of clarification, if I may. In the top return, I think you said that the height of the return was 2.8 metres; am I right?-- Yes, 3 metres I think I might have said.

Of that order. What about its width, what was the width of the return?-- Probably around 8 metres.

And it was driven at that width or did that include the spalling from the ribs?-- It would have been driven at that width.

And that was the standard width of all of the headings, was it, on first working?-- 7 to 8 metres, yes.

And what was the system of support used?-- Just 6 foot roof bolts and above in the roof bolt.

Straps or-----?-- Just with the butterfly plates.

There were no straps?-- No, only when you had - we had straps available to use in different sections of the mine if you had different roof conditions.

Was it different support at the intersections?-- No.

Can I take you to the seals on the return. You mentioned that a number of them had holes in of about 1 metre square, that was presumably to assist ventilation of the goaf?-- These down here?

Yes, in the various-----?-- Number 110 had had a hole - that one there had a hole in it of about one square metre, the rest of them didn't. They were only smaller holes.

Those were put in deliberately?-- Yeah, there was holes in there when ribbed in and the bottoms - taken the bottoms out of this, put hole in the stop and normally put a piece of brattice over it when they are finished. Some of them had slightly smaller holes.

When you examined the hole in number 10 stopping was the air current through the hole quite strong?-- Well, I was going to fix it up, actually, if it went - when I - that's why I went by 13, but there was quite adequate ventilation flow to 13 so I left the hole open for the -----

There was a strong wind coming through the hole?-- Oh, there was - yeah, the ventilation was about the same at 10 as what it was at 13.

WARDEN: Mr Ellicott?

EXAMINATION:

MR ELLICOTT: I have just one question. There was some mention of 401/402 panel?-- Yes.

That being cited as an example of a wide panel that had been successfully extracted?-- Yes.

I am wondering if you can recall whether the bottoms were taken in that panel?-- 401/402? No, the coal was no good, I don't think. No, I don't think so, so.

What would have been the average working height in that particular section?-- About the same height, 2.8 metres, probably, around that height.

Thank you.

WARDEN: Thank you, witness. You may stand down.

WITNESS STOOD DOWN

MR CLAIR: I call Cole Cameron Klease, Your Worship.

WARDEN: That's document 70/16.

MR CLAIR: 70/16, Your Worship, is the number of that statement.

COLE CAMERON KLEASE, SWORN AND EXAMINED:

MR CLAIR: Your full name is Cole Cameron Klease; is that right?-- That's correct.

Mr Klease, you are a mine deputy at Moura No 4 mine; is that right?-- No 2.

At No 2?-- No 2 underground.

Okay. You commenced work at Moura No 2 on 24 September 1979?-- That's correct.

Is that right? Mr Klease, you have been interviewed in relation to the accident at Moura No 2 in August of this year and you have made a statement in relation to it; is that so?-- That's true, yes.

The statement was made on 25 August of this year? It has got a date on the front of it there?-- Yes, that's correct, yes.

You were appointed a deputy in April of 1983?-- That's correct.

In fact, in 1981 you joined the Mines Rescue and you have been a member of that Mines Rescue ever since; is that so?-- That's correct, yes.

Now, there are documents which are prepared which are called "Position Description Documents". Do you recall seeing one of those in relation to your position as an underground mine deputy?-- Yes, yes, I recall seeing them, yes.

Perhaps if the witness could see Exhibit 12, please, Your Worship?

If you go towards the back of that, perhaps about the seventh or eighth last page there? The seventh last page. There is a page there which is headed "Position Description Underground Mine Deputy"?-- Mmm.

And that sets out the description of the position including the responsibilities of the position as a deputy and then annexed to that document is an acknowledgement form; is that right?-- Yep.

And your name and signature appears there?-- Yes, it does, yes.

Thank you, Mr Klease, if you could hand that back? Now, during the past year your main areas of responsibility have been in various panels of No 2 Mine; is that so?-- That's correct, yes.

401, 402?-- Mmm.

4 South Level extraction?-- Yes.

XN: MR CLAIR

WIT: KLEASE C C

And then 4 South Level and 5 South Sub-panel?-- That's correct, yes.

Now, has your history with the mine always been with production and the extraction?-- Yes, it has, yes.

Now, how many occasions did you work as deputy in 512?-- Only on probably about three or four occasions.

Now, did you in the course of that become familiar with the layout of the panel?-- I knew the layout of the panel, yes.

In fact, if you turn to your right there you will see those two plans that are up there on the whiteboard. The one on the left shows the whole of No 2 -----?-- Mmm.

Underground mine and the one on the right there is, you will see, a plan that shows the 512 Panel?-- Yep.

Now, what was your assessment of the 512 Panel in terms of the, first of all, ventilation of the panel? Did you form any views about that?-- I just noticed that the times that I was in there as deputy we had a slight recirculation problem in the man and supply road and the belt road.

And were they problems that you had noticed elsewhere?-- When I was deputy in the 4 South Level panel we had a similar problem there.

And what happened in 4 South in so far as those problems were concerned?-- As we got out further the problem - it just went for no reason that I can explain.

And in respect of 512 on the occasions that you worked there, did you notice whether or not the problem was present on each of those occasions or was it there sometimes and not on others?-- Yes, the times that I worked in there, yeah, it was present all those times. That's the three or four times I worked in there, the dust used to carry up the man and supply road and up the belt road.

The dust used to carry back up, did you say?-- Mmm.

Now, was there any particular cross-cut or series of cross-cuts where the problem seemed more apparent than others?-- I couldn't recall from memory which areas were in at the time, but or even at what stage the extraction was. I could not recall.

The occasions on which you worked in 512, were they spread over the period of extraction and retreat or just during the retreat period?-- From memory it was probably once on development and probably three times on extraction.

And at what stage, early in the extraction period?-- Early in the - no, the extraction had probably been going for probably around about a month, maybe a month and half. So, I suppose you could say that was probably the early part of the

extraction. They were probably only back a couple of pillars.

I see. Then the other occasions?-- Oh, that was at various other stages, probably half-way along the panel on the extraction.

Now, in the weeks before the incident you had involvement in underground operations during your weekend overtime you mention in your statement; is that so?-- Yes, that's correct, yes.

Was that an involvement with 512 Panel?-- Not that I can recall, no.

Now, I want to draw your attention to the Saturday dayshift, 6 August?-- Mmm.

Do you remember what time you commenced on that day?-- I started shift at 7 o'clock.

7 o'clock?-- From the deputy's cabin and I proceeded underground - probably would have been around about 7.30.

Okay. Now, prior to going underground did you have some discussions about what duties you would carry out that day?-- Yes, all us deputies used to work out who was going to go where and we would let the undermanager know.

The undermanager that morning was?-- Michael Squires.

And you were assigned to look after which areas?-- The 512 Panel and the 5 South Sub-panel area.

Now, after you left and went underground at about 7.30 where did you go?-- I went straight into the 512 Panel because there was men in there working.

Had you read the deputies' reports from the previous shifts?-- yes, yes.

Anything particular in those reports which you can recall?-- No, not that I can recall, no.

Okay. When you got to 512 did you meet some of the men there?-- Yes, I met two men. One was driving the Eimco and another man was working behind him.

And who were they?-- From memory I think one was Phil Shorten, from memory. I just can't remember who the other bloke was.

All right?-- I think it might have been Norm Cross, I'm not sure.

What discussion did you have with them?-- I just asked if everything was going all right and Phil Shorten made a comment. I can't remember exactly what it was, but it was either, "You can smell it.", or, "Can you feel the heat? ", something like that it was, and I had been to the goaf edge

and you could feel the heat, but I couldn't smell anything where they were working in that area.

There was the goaf edge in 512?-- In 512.

Now, by reference to that plan there, the one closest to you, where was the goaf edge, as you would put it, at that stage?-- Where are we? Right here.

At the first cross-cut; is that right?-- First cross-cut, yes, just inbye the first sealing.

Right. Well, you say you inspected the goaf edge yourself?-- Mmm.

Well, what did you - what were your observations?-- I could feel heat coming out from the return - out from the goaf edge.

Whereabouts were you, which roadway, at this stage?-- I was standing right there.

No 2?-- No 2 heading, yeah, right on the edge of the goaf. Right on the edge where they took the bottoms.

So, you could feel some heat. Anything else?-- I did a Minder reading and I got, I think it was, .7 per cent CH4 at roof level and .5 in the general body.

Along No 1 cross-cut?-- At that point - at that point, and as I walked down between No 2 and No 3 heading, which is the man and supply road and the belt road, I picked up, I think it was, .4 or .5 in the general body.

I see. Well, I will just ask you to look at a document, it is document 24, the deputies' reports. I will just get you to have a look at a copy of that in a moment. Just have a look at that, if you would. That's the deputy's report number 3776; is that right?-- That's correct, yes.

In respect of your shift on that day?-- Mmm.

And did you record these observations that you made and the readings that you took in that deputy's report?-- Yes, they are here, yes.

Okay. Now, the first inspection you have recorded there is about 7 a.m.; is that right?-- No, that's when I started shift.

The time inspection commenced?-- That would have been around about probably 7.45 by this time.

Yes, right. So, the actual times - the time of these readings is, in fact, 7.40?-- Be around 7.40, 7.45, yeah.

There you say that you found .7 at the goaf edge and .4, in fact, across No 1 cross-cut?-- That's right, yes.

Now, the other comments that you make there are in respect to

the rest of your inspection and if you like you can just refresh your memory from that report as you proceed, but can you describe what occurred then after that, after you -----?-- After that -----

Made the readings at the - across No 1 cross-cut? Then you say you walked down the top heading; is that right?-- No, I - from the goaf edge there at No 2 heading I went down to No 3 heading, which is the belt road, and I proceeded to walk down into the bottoms and I noticed the roof was flaky and the ribs were under load and it was a little bit dangerous to be walking down there by myself. So, I backtracked back out, you couldn't go very far anyway, and then I went from there and proceeded up to the top return.

Righto. Just indicate on the plan how far you went?-- I went to about there, about half-way down the pillar, and I come out and I went probably about five metres down there and the conditions looked heavy again. I came back out. I had a quick look around the belt road seal and then I proceeded back up through the door and into the top return.

Into the top return, okay. Now, just pausing - going back to the point at which you inspected the goaf edge, you said you could feel the heat coming off the goaf, this is, at the first point of inspection?-- That's correct, yes.

Could you see anything at that stage looking into the goaf?-- Not really. There was a sort of - bit hard to see, but - because there was only one light, but there was possibly a shimmy there. I wasn't 100 per cent sure on that first inspection, but it looked like a shimmy down around the fall area, a heat shimmy.

How far in again would you be able to indicate that on the plan?-- I think before - I think the fall was down this area through here.

You are indicating in the second cross-cut between No 2 and No 3?-- It was either 2 or 3, I couldn't quite make - I can't recall how far down it was, but you could just make it out on the end of - as your light started to fade out you could just noticed fall.

When you said either 2 or 3 there, you are saying either 2 or 3 cross-cut - you pointed to 2 or 3 cross-cut?-- I noticed that fall went through on the belt road too. You could notice it down in that area there as well.

Okay. Now, you said a moment ago that you then went out through the seal and around to the top heading?-- Mmm.

And what did you do then?-- Well, I proceeded into the return - oh, before I went through the door I went to grab the Draegar tubes and the anemometer and the whirling hygrometer to do the readings and I noticed there was no CO tubes left. So, I went into the return just to do an inspection and that's when I noticed the smell and possible haze.

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Whereabouts were you at that point?-- Right there.

Okay. You are indicating in No 1 -----?-- No 1 heading.

That's at 0 cross-cut?-- 0 cross-cut, yes.

Where were you looking when you noticed what appeared to be a haze?-- Looking down the return when I noticed it.

And the smell, what sort of smell was it?-- Benzeney/tarry type smell.

Right. Well, now, what did you do then?-- I was pretty worried because there was nothing - no-one said anything to me about any smell in the return when I came on shift that morning so it was a bit of a shock. So, I walked up to the prep seal and I had a look down the return and I thought, well, I had better go get some Draegar tubes. I done the CH4 reading. I think I got .5 in the general body and -----

Just pausing a moment there, you did that reading whereabouts?-- Right at the prep seal.

At the prep seal in the No 1 heading?-- At the prep seal.

How high would you have taken that reading? Up near the roof, down near the floor?-- Just above head height.

All right. Well, what did you do then?-- I then proceeded out because there was people working on the continuous miner and I had only had a brief chat with them on the way in to make sure they were right, and I checked them and they asked a few questions about what was going on and everything.

They were working on what area?-- I think the continuous miner was - where are we - the continuous miner was here.

In fact it was outside of the 512 Panel?-- Yes, yes. It had broken down electrically, so they were working on it, and I made sure they were all okay, and then by that time it was probably - I am not sure of the time now offhand, but it was getting close to 9 o'clock by this time, and I inspected a few things on the way out.

You went to the surface. The purpose of you going up there?-- To get the Draegar tubes.

Did you come back down again?-- Yes.

To 512?-- Back down to 512, yes.

About what time would you have arrived back there?-- Oh, from memory, I think it was probably around about 9.40, 9.45. I would have to go back through my statement to have a look.

Well, before I go on to ask you what you did at that point, that haze that you noticed in your earlier inspection, you subsequently made a note of that in your deputy's report?-- Yes.

Okay. Well, after you arrived back there in 512 what did you do?-- I immediately went straight into the return to the vent station and did a CO2 reading, Draegar - the anemometer reading and CH4 reading.

What results did you get on that occasion?-- Going from my report, CO was 9 to 10 ppm, CO2 was 0.2 per cent, CH4 was 0.5 per cent in the general body, the wet reading was 20.5, the dry reading was 25 degrees, and the velocity reading was 1.6 metres per second.

Now, the smell and haze that you mentioned earlier, was that still evident there?-- The smell was there and the haze.

What view did you form about the presence of that smell and haze at that stage?-- Well, the haze - the diesels were working - just outside there was two diesels operating, in the intake air in No 1 heading, and an MPV was operating as well, and I initially thought that that might have been diesel smoke, as has happened before in the returns, as the intake air takes it up the return.

How far outbye where you were were the machines working?--
They were working right here in this area. They were picking
up gear from here and bringing it around and putting it
outside the seals, so they were working in this area here.

Between No 1 cross-cut and No 2 heading back to 0 cross-cut?--
Yeah.

Okay. Well, what did you decide to do at that point?--
Well, I made a mental note that that could have been diesel
smoke and not a haze, and I knew the diesels would be finished
operating within the next hour or so, they will have all the
gear out, so I made a mental note to come back down after they
had finished to see whether that was still there or not.

Okay. What did you do after that?-- I had other places to
inspect, so I went over and checked them and then I went back
to the surface to see if Michael was upstairs and -----

That's Michael Squires?-- Michael Squires, yes, and they
said he was down the pit, so I was probably up top. I had a
quick bite to eat and I said, "Well, I'm going back down to
the 512 to check the top return.", and I met Michael Squires
halfway down the dip.

Did you have a conversation with him?-- Yes, yes. He pulled
me up, asked where I was going, and I told him what I was
doing, I just wanted to check that top return to see if it was
a haze or diesel smoke, and he informed me that the smell was
stronger and that there was a haze evident.

All right. What else did he say to you?-- That he had been
to see one of the Union members, George Ziebell, and he was a
bit concerned about it and he was going to try and organise
extra labour to seal it and he had to get in touch with the
under-manager in charge, George Mason, about sealing it.

Okay. What did you do after that?-- I proceeded straight to
the 512 Panel specifically just to go into that top return to
see if there was a haze or whether it was the diesel smoke,
and there was definitely a haze there but it was nowhere near
as thick as it was before, so I knew that there was some
diesel fumes mixed in with it, but there was definitely a haze
there.

What did you do then?-- I went out to No 1 - sorry, No 2
heading, back to the goaf edge and I did a Draegar test there.

At the goaf edge there, what sort of height was the heading
there? What height -----?-- I could touch the roof from
where I was standing.

And the bottoms?-- I was standing right on the edge of the
bottoms, right on the edge of them. There was a lump of coal
that had fallen off the rib. I was sort of half standing on
it.

You took a further reading there?-- I took a Draegar reading
there and that's when I definitely noticed a shimmy in and

around the fall area, heat shimmy.

In that area you indicated before?-- At that area I indicated earlier, yeah.

Okay. What about as far as the smell goes? Was there any smell?-- Yes, I could detect a smell there and I had never detected it there on previous inspections.

What sort of smell?-- Very similar to the smell in the top return but not as strong.

What did you do then?-- I immediately went to the phone and rang Michael up, Michael Squires, and told him I had found - I think it was 7 ppm on the goaf edge.

Did you make a note of that in your deputy's report?-- No, I never. I never put that in my report, no. I told Michael what I had found and he said he had been in touch with George and they were going to start preparations to seal, and I said to him, "Well, I'm coming straight up top.", so I went up top.

What did you do after that?-- I had a quick bite to eat again and Michael asked me if I would go straight back down and inspect the top return in the 5 South - bottom return that was - so they could take the machines in through the machine door to drop Tecrete and the mixer off at the top return.

For the sealing of 512?-- For the sealing of 512, so I virtually - I went back down probably about 20 minutes after I got up top, maybe 30 minutes after I got up top.

Now, did you make a further test for methane back there at the vent station?-- Yes.

That was about 1.15 p.m.; is that right?-- That would have been about that time, yes.

What was the reading at that stage?-- From memory, I can't remember. I would have to go back through the statement. I think it was around about 0.5 again in the general body, but I am not 100 per cent sure.

You had taken some Draegar tube tests, is that right, about 12 noon? Do you mention that on your deputy's report there?-- No, I didn't take any then. Sorry, I think it was about quarter to 12 I took the Draegar tests at the No 2 heading on the goaf edge.

The results of that are shown in your deputy's report, 0.7 methane, is that right, and then at the man and supply road at the goaf edge?-- Yeah, that's the methane reading, yes, but I never recorded the CO reading.

I see. You didn't make any record of the CO reading at that time?-- Not at that time, no. I just reported it to the shift under-manager.

Okay. Now, when did you finish your shift, that first shift

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on that day?-- At 3 p.m.

What was the position at that stage in terms of what was happening with 512?-- A tray of Tecrete and a batcher had been set up at the top return prep seal. There was Tecrete and baskets outside the No 2 seal and there was sufficient gear inside the belt road seal to seal it.

XN: MR CLAIR

WIT: KLEASE C C

What arrangements were made for your next shift?-- We had to

try and arrange for deputies to cover the sealing and I was the next deputy on for Sunday so I said I'll come back in that night at 11 and I had to ring around and try and get another deputy to do afternoon shift, Saturday afternoon shift, and I got on to Neil Tuffs, he come around and did the Saturday afternoon shift.

Did you come back then for the 11 p.m. shift?-- Yes.

What happened when you arrived there?-- I asked the undermanager-in-charge, George Mason, what was the state of the sealing and he said the belt road seal had been completed and they were working on 1 and 2 heading seals.

Did he give you any instructions?-- Yes, he told me that as the seals were nearing completion to slowly reduce the regulator.

Which in turn would?-- Decrease the pressure across the seals.

You went down to 512 section?-- Yes.

You got there at about 20 past 11 that night; is that right?-- That's correct.

You spoke with the deputy who was there, Len Graham?-- Len Graham, yes.

What conversation did you have with him?-- Lenny asked me what was the panic because he couldn't detect any smell or any haze and I said well, the shift undermanager on day shift and myself both detected a haze and the smell and I just couldn't explain why it wasn't there when he come in and done his inspection and I left him and went to the top return.

You had some conversations with Robert Parker; is that right?-- That's correct, yes.

Who was doing the Tecrete seals?-- Uh-huh.

And that's set out in your statement. You had some discussions with him about the No 2 seal; is that right?-- That's correct, yes.

And solved some problems in relation to that?-- That's correct, yeah.

You say number 1 seal was completed at about 1 a.m.; No 2 was completed at about 1.10 a.m.?-- About 1.10, yep.

Did you ring George Mason then and have a conversation with him?-- Yes, as soon as it was sealed and I rang George and told him it was sealed at 1.10.

Then you left sometime later. You inspected the seals at about 3.30; is that right?-- By the time I'd finished my inspection across the face of the seals, it would have been

around about 3.30, 3.40, around about that area, at that time.

Did you do a bit of patch up work yourself on number 1 seals?-- I noticed a bit of Tecrete had come away on the top of the seal, up on the top left-hand corner, and there was a shovel there and I just pushed it back up and just packed it back in. Whether that had gone all the way through, I'm not sure. It was a bit high to sort of tell.

Then you returned to the surface?-- Yes.

That was the end of that shift, was it?-- Yeah.

I want to ask you some questions about your training in the course of your time as a deputy. Had you received any training in respect of fire and spontaneous combustion detection at all during the time that you were working as a deputy at the mine?-- No formal training at all, no.

Were you aware of there being a gas chromatograph at the mine?-- Yes.

Did you receive any training at all on how to use the gas chromatograph?-- No, none whatsoever.

Do you have any knowledge yourself of the gas chromatograph being used to analyse gas samples?-- Yes.

Either as matter of course or during times when there is concern about heating?-- I believe it was tested every day by the bathroom attendant, Kenny Self. He used to run a test through it.

Were you involved in any other of the sealings that had taken place in No 2?-- Just general sealing of a panel, yes.

How many would you have been involved in?-- Off hand I just - I couldn't tell you, but a few, yes.

What would you say in relation to the sealing of this 512 panel compared with the other sealings that took place?-- That's the first one I have ever been involved where we have Tecrete baskets. Normally it's always been besser bricks.

And generally in relation to the circumstances of the sealing were they much the same as other sealings apart from the fact that it was the Tecrete?-- Yeah, only from what I have - a few questions I asked whether it would be stronger than the bricks and they reckon it would be. I was talking to Rob Parker but that was probably a week earlier, a few days earlier.

I want to go forward in time then to events during that week. You were aware, of course, of the explosion that took place very late on the Sunday?-- Yes, I found out about 5 to 12 on the Sunday night.

You were involved in some work then at No 2 Mine during that week?-- Yes.

And were you present at the time of the second explosion which took place at the mine during the course of the week?-- Yeah.

I just want to ask you some questions about that and in that connection you also made a statement - a brief statement - about your observations at that time; is that right?-- That's correct.

That's document 62/5, Your Worship.

This was on - on which day of the week, 9 August?-- Tuesday, yes.

Tuesday the 9th?-- Uh-huh.

That the second explosion took place. Whereabouts were you at the time?-- I was in a tray-back four-wheel drive driving towards the fan house, probably about 150 to 200 metres from the fan house.

Who were you with?-- Peter Coleman, another fellow, Mines Rescue worker.

What can you remember occurring at that time?-- As we were driving towards the fan all of a sudden there was just this very large plume of blackish, greyish smoke just shooting skywards.

Out of the fan shaft?-- Out of the fan shaft.

How far were you from the fan house at that stage?-- Probably around about 150 to 200 metres.

What did you see going up with the plume of smoke, some other items there too?-- Yeah, couldn't make it out at first but there was - well, I could remember seeing a rectangular plate of some description but later on when everything had settled down, it is possibly a man door off the No 2 fan. There was an electrical cable. It was up fairly high and it was just spiralling around.

What colour was the smoke when you first noticed it?-- At first it was pitch black and then with a bit of grey sort of tinged at stages in it; then it just went pure white as if somebody turned off a tap. It just stopped.

First phase the black smoke went on for some 30 to 40 seconds you mentioned in your statement; is that right?-- Yes, it poured out, yeah.

Then the white smoke about 20 to 25 seconds; is that correct?-- Yep.

And then grey for some time after that, for a minute or so?-- Yeah.

And then virtually nothing after that?-- Yeah. It was just like someone turned off a tap. It just stopped.

Now, did you notice a plume of smoke coming from the portals at some stage?-- From where I was I couldn't see the portals, but as I drove around the fan house and come around the corner I noticed a rather dark cloud also coming from the underground area from around the buildings.

And was that well out from the portals at that stage?-- Yeah. I was surprised at how advanced it was compared to what had happened at the fan shaft.

I see. Okay. I have no further question of Mr Klease, Your Worship.

WARDEN: Yes, thank you. Mr MacSporran?

CROSS-EXAMINATION:

WARDEN: I will cut you off at 1 o'clock, I think.

MR MacSPORRAN: Mr Klease, can I take it it was the usual thing when you came on the shift to speak to the undermanager?-- Oh, yes, yes.

And that was for the purpose, or at least one of the purposes was, to ascertain what had happened before you came on shift?-- Yeah, mainly from our previous deputies' reports we get a good idea what happened in the previous shifts. The undermanager used to confer with us and let us know where the men were working down the pit.

You would read the reports every time you came on shifts?-- Yes.

You would also talk to the undermanager?-- Mmm.

On this occasion you are fairly certain, it seems, that no-one had written anything about any problems in the panel on the previous shifts?-- From memory I can't recall anything being written.

And certainly no-one, as far as you can now recall, told you of any problem in the panel?-- No, no.

And you are reasonably sure that was the case because when you saw what you thought may have been a problem underground you were shocked?-- Mmm, yeah.

XXN: MR MacSPORRAN

WIT: KLEASE C C

Because you had no warning of any such problem existing?--
That's correct.

So, the first thing that was brought to your attention was some sort of heat, what you termed a shimmy. Now, correct me if I am wrong, but you seem to indicate that was in an area where there was a fall underground?-- That's correct, yes.

Can you tell us the size, approximately, of that fall? In height, I mean?-- I don't think it was a real big fall. Probably only about a metre and a half, maybe two metres of rubble sitting on the ground. So, the actual fall would probably be half that depth.

Did that have some significance to you, that is, that the heat shimmy seemed to be coming from that area where there apparently had been a roof fall?-- Not really. If the heat was building up it will, say - if it was down the back of the panel and it was building up it would work its way out, but having not been in that panel for quite some time and at first, you know, I could see what I thought was a shimmy, but I wasn't sure, but you could definitely see it on the third inspection when I was down there about 11.45. You could see heat shimmy around the fall area and probably a little bit closer to where I was standing too.

Again at that stage when you confirmed there was a heat shimmy did the fact there had been a fall in that area have any significance to you?-- Well, I didn't know when that fall occurred either so I had no idea how long that fall had been there and whether it happened one shift before or a week before or -----

Were you aware of the possibility of there being a heating in fallen coal that was lying on the floor of the seam?-- I had no idea there was a heating at all.

Were you aware of the possibility that when there is a fall -----?-- Oh, yes.

You can have loose coal and heating?-- That's right.

Was that why you saw some significance in the shimmy coming from an area where there had been a fall?-- Yes, you could say that, yes.

You connected - at least at time you connected mentally those two features, the heat shimmy and the roof or wall fall?-- I made note of the roof fall. That sort of didn't - that sort of didn't come into my calculations, and what I was thinking at the time, I honestly thought if there was something wrong it would be a bit further down because I couldn't see, sort of, there. I could - you know, from what I could smell in the return and what I could see, you know, I thought if you were looking down there you would see smoke coming up, but I couldn't see anything except for a bit of a shimmy.

In any event, you couldn't smell anything initially?-- Not

initially at that - on the intake.

But the two others there with you, Phil Shorten and Norm Cross, could both smell something, apparently?-- As I stated, I can't remember exactly what they said to me, whether it was you could feel the heat or you could smell something, because they were yelling out over the top of the machine that was operating so -----

Have you had any difficulty with your sense of smell in the past?-- Never.

So, if someone with you could smell something you would expect yourself to be able to smell it in ordinary circumstances?-- That's correct, too.

Are you a smoker yourself?-- No, don't smoke.

Now, you then took some samples, one at the roof level giving .7 per cent methane?-- Mmm.

And the general body being a lower concentration of methane?-- Mmm.

Did that have some significance to you, the differences in the readings at roof and the general body level?-- Not really, no. Always expect a higher reading at roof level because methane is lighter than air.

So, you would have methane layering to some extent in the roof?-- Yes, yes.

Was it always your practice to, where you could, measure that level at the roof?-- Where you could, yes.

Were there some areas where there was difficulty doing that because of the fact that coal had been taken from the bottoms?-- Oh, yeah, it would be virtually impossible to take it out of the bottoms.

To take a sample from the roof?-- To take that sample from the roof.

Where bottoms had been taken?-- Yeah.

Was there any way to check the level of the roof in those circumstances?-- Not unless you got a ladder or something or stood on a machine or something and then had a probe.

Was it accepted there would be, to some extent, roof layering of methane which may not be able to be tested?-- That is a possibility, yes.

You would expect to have a higher concentration of that level than generally where the gases were being sampled through the mine monitoring system?-- Yes.

So, the level of methane being monitored by the automatic system wouldn't necessarily give you the true concentration of

methane in the panel?-- That's only measuring what is actually going up the return.

The monitoring points, were they at a standard height throughout the panel in terms of height from the floor?-- I believe so, yes. They used to always set them at a set height.

Roughly what height was that?-- Usually hang them probably around about two to three feet - probably about a metre from the roof, maybe a little bit further.

Now, when you noticed the smell for the first time and you saw a haze associated with that did you take any CO readings at that time?-- When I first went into the return?

When you first noticed the smell?-- No, because there was no CO tubes left in the canvas bag that we have there with all the testing gear in it.

When you did take the sample, the reading, I think you said, was 9 to 10 ppm?-- That's correct, yes.

Did that have significance to you in terms of a smell and a haze?-- Yeah, and - it also - when I done the velocity reading the - my velocity reading was down on what the previous deputies had recorded, it was down slightly. They were recording, I think, 1.7 metre per second, 1.8, and I recorded 1.6. So, I thought then that, okay, velocity is down a little bit so the CO reading will be probably up a little bit, but I also took into account the smell and - the strength of the smell and I worked on that.

So, you were still - is it correct to say you were still concerned about the possibility of there being something wrong in the panel?-- Yeah, I was concerned, yes.

And did it occur to you at that stage that these signs may have related to a form of heating in the panel?-- There is a possibility, yes.

Did that occur to you at the time when you smelt -----?-- I thought there was something wrong in there and we weren't getting true readings out from the waste workings.

Is that a convenient time?

WARDEN: Are you going to be a while longer yet?

MR MacSPORRAN: I will be a while longer.

WARDEN: Thank you gentlemen. We will resume at 2.15.

THE COURT ADJOURNED AT 12.58 P.M. TILL 2.15 P.M.

THE COURT RESUMED AT 2.19 P.M.

COLE CAMERON KLEASE, CONTINUING:

MR MacSPORRAN: Mr Klease, you were telling us before lunch that you had detected a higher concentration of methane in the roof area inside the mine as opposed to the general body concentration?-- Yes.

You said, I think, that was quite to be expected, you had that before?-- In various other parts of the mine, yes, that's quite normal.

Had you ever tested in the roof area for the concentration of carbon monoxide, CO?-- No. CO is heavier than air - sorry, is around the same density as air, so it would be in just your general body.

So you would say there was no point testing in the roof for CO because it ordinarily wouldn't be there?-- No, it would be in your general body because it's the same density as air, very close to the same density.

What about if there was in fact a heating in the panel? Would you expect to have CO at the roof level?-- It would be all over. It would be in the general body. It would be right through.

Anyway, it was never a concern of yours to take samples of CO at that level, the roof?-- No.

And, as far as you know, it was never done?-- No.

Now, at some stage you moved a regulator to enter the panel with some machinery and to prepare for sealing?-- Yes.

What sort of regulator was that?-- It was the ventilating regulator for the top return and for that panel.

What was that made of?-- It had louvred doors, metal doors, and Tecrete outer.

Was that a standard form of regulator used in the No 2 Mine?-- Generally, yes.

Having removed the regulator, how long were you inside the area before you returned out?-- I couldn't give an exact time but it would be over half an hour.

What's the purpose of a regulator? What does that do?-- It adjusts the amount of intake air into the panel so you can - if you open it up, you increase the air in. If you close it down, you decrease the air that flows through the panel.

Is there a set procedure you are supposed to go through when

you change or alter a regulator?-- You can only alter it under the direction of the shift under-manager or under-manager in charge.

Was that done on this occasion?-- Yes, Michael Squires had given me permission to dismantle the left-hand side.

Was there any arrangement made for what you should do after you dismantled that regulator, any alternative arrangements made?-- No, no.

When you left the section with the machinery was the regulator replaced?-- No, it was left open because they had to bring more supplies in, I believe.

So how long would that regulator have remained open after you dismantled it?-- I couldn't give an accurate answer to that because there was deputies coming on afternoon shift.

It would have been, I take it from your answer, some hours anyway?-- That's possible, yes.

Was the plan to ultimately replace the regulator?-- I couldn't answer that. I don't know.

Would you have expected it to be replaced given the circumstances?-- Yes. When I came in that night the regulator had been patched up, it had brattice put over it where the hole was, where we brought the machinery through.

So at some stage someone had apparently repaired the hole you made?-- That's right, yes.

But you don't know when?-- No, I have no idea.

It was certainly after you left the shift?-- Yes.

Which was how many hours after you had removed the regulator, approximately?-- Sorry, could you repeat that again, please?

Yes. When you left shift, how long after you had taken down the regulator was that?-- I went into the return, I think, at between 1.15 and 1.30, I think it was, so by the time the machinery got in there, probably wouldn't have knocked the hole through it - probably around about 2 o'clock, I suppose it would have been.

And you came off shift when?-- At 3.

So for about an hour or so that we know of it was open?-- Yes.

At some time on the next shift it was repaired with brattice and materials?-- Yes, but I don't know exactly when.

Now, at some stage when you spoke to Mr Squires, when you met him on level 15 cross-cut, that's the main entry?-- On the main dip, around about 15 cross-cut. I was near the dip two drivehead, opposite the head on the main dip.

And you were on your way back in?-- Yes.

Did he say something about the smell had become stronger?--
Yes. He said it was stronger than what they detected on
afternoon shift.

And this was the smell you had reported to him earlier
anyway?-- Yes.

And you have told us about after that having seen the haze
that was still there and you smelt a slightly different smell
on this occasion?-- Sorry?

You smelt a slightly different smell on this occasion than you
had smelt earlier?-- This is after I had seen him?

Yes?-- Not as strong a smell in No 2 heading. Same sort of
smell but not as strong. Very, very weak.

Well, what was your assessment of the situation at that stage?
Did you think about what all that meant?-- I had things
going through my mind, yes.

What did those signs mean to you?-- That there was something
wrong further inbye that we could - that we were getting a
picture of, but what it was I wasn't 100 per cent sure of.

Did you have access further inbye?-- You could go down the
top return, yes, with a bit of negotiating through some
bottoms and that, yes.

In fact, the top return was open right to the back of the
panel, wasn't it?-- Yes, I believe so, yes.

So you go down the top return right to the bottom and you
would have visual access across the cross-cuts?-- I couldn't
answer that because I had never, ever been down there. I
don't know what the state of the stoppings were, whether they
had been knocked out by falls or whatever.

But certainly you get down that one side anyway?-- Yes, I
believe the deputy before me made an inspection down there.

And if you needed to, or wanted to, you could put monitoring
equipment as far back as the back of the panel on that road?--
Yes, that would be possible.

And would it be possible to place monitoring equipment across
some of those cross-cuts further in across those roads?--
Oh, I think that would be unlikely because of the extent of
the bottom coal that had been taken out.

So you don't think you could have gotten in that far?-- No,
I don't think you could have.

But there was certainly the access to place further monitoring
points further inbye than 20 metres or so beyond the seals?--
Yes.

Now, you saw the seals. I think you inspected them finally at about 3.30 on the Sunday morning?-- That's correct.

And they were complete at that stage?-- They were completed, yes.

You did some patch work on one of them which was No 1, I think?-- That's correct, yes.

Was that the only one that showed any sign of damage or not being completed?-- Just a bit of the mud, as we call it, had come away in the top left-hand corner, but I don't think it went all the way through. I just pushed it back up with a shovel and packed it in.

Were there pipes in some of these seals?-- There were sampling pipes, yes.

When you say "sampling pipes", what do you mean by that?-- For taking samples in behind the seals.

In how many of the seals were those pipes?-- There was one at the top seal. I can't recall any at the other seals.

Were there other pipes in some of these seals containing water, U tubes containing water?-- Yes, there was a U tube there. We filled it up with the hose that we had for mixing up the Tecrete.

Did you know what that pipe was for?-- Yes, because I filled up the top one.

What was it for? What was the pipe for?-- For build-up of water against the seals so it has a way of getting through so you don't have pressure on the seals from the excess water.

So if there is pressure or an event inside the seals, the seal doesn't come down and flows the water out of the pipe?-- No, it's - the U tube is mainly there in case water from outbye the seals builds up against the seals, and then once it gets to a certain level the pressure of the water outside will naturally just blow through the U tube.

So it's to enable access through the water, pushing the water out or in?-- Yeah, you won't - the dip of the panel - it would take a lot of water to build up in there before it come back out.

Do you know how many of those pipes there were? Was there one per seal or only in some seals or -----?-- I can't recall one in the belt road. I know there was one in the top road and there was - I'm pretty sure there was one in No 2, I think, as well.

And, as far as you know, were all of those filled with water?-- Yes, yes, I checked them.

Now, you said initially that you were involved in methane

drainage procedures?-- Mmm.

Was there a set procedure to be followed in relation to methane drainage?-- As for doing our inspections and draining the pipes?

Yes?-- I never saw any laid out procedure for actually draining it.

Did you learn that from experience?-- Just from experience, yes.

And you did never see any written instructions or -----?-- I can't remember seeing any written instructions, no.

Did you ever receive any formal training in that procedure?-- No, no.

So the contact you had with that process was simply doing it on site at the time of doing the work?-- I think I can recall the first time I ever done it, which was some years back, I was with a deputy that was working on the gas drainage and he showed me how they go about draining it.

But other than that there was no separate training exercise to show you how to do it?-- No, no.

Do you know when you did it how much methane was released on average from the process? Did you have a set procedure you would adopt when you bled the pipe range?-- I had my minder either in my hand or in my top pocket. If it alarmed while I was draining the pipes I would immediately shut the valve off until it cleared and then I would crack it slowly again and start draining the water again.

There were a number of valves, were there, to be drained, a number of valves on the range?-- Yeah, you could have up to eight, nine holes across the face of the panel.

Would you always do one valve at a time?-- Definitely, yeah.

After the incident on 7 August you have said you were a member of the mines rescue team?-- Yes.

Did you have a role to play in that capacity after the incident?-- Only for the gas monitoring of the holes after -----

That's the boreholes?-- That's the boreholes, yes.

Was there a set procedure to be followed in relation to taking those samples?-- I don't recall seeing any written set procedure, but from the '86 incident we sort of knew what we had to do anyway, so experience again.

When you say from the '86 incident, were you involved as a mines rescue member in '86?-- Yes.

In taking samples from boreholes?-- Yes.

Was that the first time you had done that?-- Yes.

Again, did you receive the expertise to carry that out as part of doing it on the job?-- I never received any formal training.

No, no separate training?-- On taking samples out, no.

You received no formal training as part of the mines rescue training separate to doing the job?-- No, no formal training.

Was there any difficulty experienced in taking those samples with leakage?-- How do you mean? Leakage while we were actually taking the sample on the line?

Yes?-- I believe some of the holes did cause some problems.

How was that addressed, do you remember?-- The tube bundle was checked to make sure it was down the right depth, make sure it hadn't been broken. It was a case of pulling it all back up again or just cutting it off and running new line down. Any holes that we thought suspect, we would re-do them.

Thank you, Your Worship.

HIS HONOUR: Mr Martin, thank you?

EXAMINATION:

MR MARTIN: Mr Klease, some of your background, if you would. You went to school to what, part of grade 11?-- Part of grade 11, that's correct.

But left about a quarter of the way through?-- That's correct.

At about 15 or 16 years of age?-- Yes.

Can you hear me?-- Yes, yes.

Did you do any of the sciences or commercial subjects at school?-- I did commercial.

You moved to Biloela when - that's your family?-- First in 1966.

And then did you have 6 years in the Navy?-- That's correct, in 1973.

I think you have told the Inquiry that your knowledge of spontaneous combustion was very, very sparse?-- Only from what I had learnt through Mines Rescue.

You have spoken about an incubation period. Do you know much about that?-- Only from what I have learnt over the years from listening to people and the like.

You know at least about it that it was at least extremely variable as to when it could or might occur?-- That's right, different areas and different coals had different incubation periods.

Were you ever trained to produce things like Ellicott's diagram on the Maihak Computer?-- Never, no.

What about any other things such as Howard's Triangle?-- Never shown how to bring it up.

Did you know the system of gas chromatograph linkage to SIMTARS in Brisbane?-- I knew of it, yes.

Since 7 August have you learnt that?-- I knew that had a link through to SIMTARS before 7 August.

But you have no idea at all how to operate that machine?-- None whatsoever.

Did I mishear you this morning when you said the person trained to use it was a bathroom attendant?-- It was a lamp attendant, yes.

Is that the same thing, lamp attendant?-- We call the bathroom attendant the lamp attendant.

You mean the cap lamp?-- Cap lamp attendant, yes.

Were you surprised to learn that the mine blew up?-- Yeah, I was, yes.

What one needs for an explosion in a mine is oxygen; is that right?-- That's correct.

An explosive atmosphere; is that right? You will have to answer because it is being reported?-- Yes.

And something to light it?-- That's correct.

And that obviously happened in No 4 - No 2?-- Yes.

Had to?-- Yes.

Were you surprised to learn that there were men down there?--
Yes, I was.

Why?-- Because after we had the incident in '86, I recall Mike Brady at the time making some sort of ruling that after sealing off there will be a 48 hour period that no men would be allowed down the pit and I thought that would apply to this.

And Mike Brady was he then inspector of mines?-- Yes. Sorry, John Brady, John Brady.

You said in your evidence-in-chief that you couldn't believe or were you shocked at what you saw when you went underground on the 6th?-- Yes, I was quite surprised to say the least.

When you were talking earlier today about sealing do you know whether Mr Mason had an attitude to sealing?-- Could you?

I don't mean generally, I mean on that weekend?-- I don't know exactly the conversation he and Michael Squires had but-----

Did Mr Squires communicate it to you?-- I can't recall the exact day or words he told me, no.

Was it one of reluctance?-- I think the undermanager in charge had questioned Michael to make sure that we weren't panicking and then the decision was made.

How long do you understand seals - I won't use that word because they are not seals, are they - they are not perfect. The covering across the roads, how long do they take to cure?-- I was told around about 21 days.

Who told you that?-- Rob Parker's assistant and Rob Parker had also told me the same thing.

Did you have an attitude about the curing time on these coverings over the load?-- When they first told me 21 days, a fair while for it to cure.

Are you talking about Tecrete?-- Talking about the Tecrete, yeah.

Did I understand you this morning to say that on the very few occasions you went into the panel 512 on extraction that there was something wrong with the ventilation?-- Yes, that's correct.

Do you know of a device called a probeye?-- Probeye, yes.

Was there one at Moura No 2?-- Yes, there was.

Where was it?-- In the instrument room.

When you say the instrument room you mean the one that contains the Unor system and gas chromatograph?-- Yes, Unor Monitoring System and the gas chromatograph, yes.

XN: MR MARTIN

WIT: KLEASE C C

Did you know its function?-- Mobile-----

Or its purpose?-- Detecting heating.

Were you ever trained on it?-- No, never.

Roof falls you have discussed with my learned friends this morning, roof falls vary, of course, with what's beneath. Was there loose coal in quantity within the panel?-- Yes, there was.

Inevitably, loose coal must have been covered with sandstone and other debris from the roof?-- Yes.

That blocks ventilation?-- Yes, it wouldn't let the ventilation to it, yes.

And harbours the loose coal underneath - covers the loose coal?-- Yes.

I just want to talk to you for a moment about ramping. I understood another witness to say that really ramping was brought in for the safety of the men?-- For the car driver, I believe, and the cable attendant, miner driver.

Did that follow an incident when one of the men was killed by a rib spall?-- I can't comment on that.

CO2 is very dense in terms of specific gravity, it has to air?-- Yes.

It lies on the floor - would lie at the very bottom of the ramped area?-- That's possible, yes.

It would, wouldn't it?-- Yes.

No amount of detecting would produce a CO reading unless one went down to the foot of the ramped area?-- CO or CO2?

Sorry, CO2?-- Yes, to get a true reading, yes.

Can you help the Inquiry with the person who authorised the location of the seal monitors?-- No, I can't. I have no idea who actually makes the decision where actually to put them.

It was not the deputy?-- No, it's not the deputy.

I think you have agreed with me that no matter how one tries one can't seal those roads - finally seal them - because the mine breathes, doesn't it?-- If there's cracks in the strata, yes.

Through the coal either side?-- If there are cracks in the coal, yes, it will.

Coal does have cracks in it, doesn't it?-- I don't think I'm qualified to answer.

I'm not trying to make you seem foolish. We have heard on a number of occasions about the .3, .5 and the .7 per cent methane readings over a period of time. That's quite small, isn't it?-- Yes, it is.

And that's the course of the ventilation sweeping much larger quantities away?-- If they are there. It will dilute the - if the ventilation is adequate enough it will dilute.

When you find .3 per cent some higher figure has been swept away by the ventilation system - don't you know that?-- No, I couldn't comment on that, no. It's been diluted but - the moment it comes out of the coal it dilutes.

Tell me this: there was a system of extruding methane to the surface, wasn't there?-- Yes.

Through a pipe?-- Uh-huh.

You know the quantities of methane that you extruded into the atmosphere above the mine from Moura No 2?-- No, I could not comment.

Would 50 million litres per day surprise you?-----

MR MORRISON: Your Worship, really and truly, if the man doesn't know what's the point of asking him does a figure surprise him? You might as well ask him if a pig flies past the window.

WARDEN: I think he can say he doesn't know if he doesn't know?-- No, I don't.

MR MARTIN: I will ask somebody else.

WARDEN: I think you will find somebody with more expertise.

MR MARTIN: 5 South we have heard a little about this morning. Was that stone dusted?-- Yes, it was stone dusted, yes.

I take it you had knowledge of 5 South?-- Yes.

Would you say stone dusted with abundance?-- It passed the combustible test.

Cable flashes, for instance, on prior occasions what caused those? You are probably not expert to say?-- Some have been human errors, some have been a mechanical error - mechanical failure I should say.

Mechanical failure on the machine?-- Yes.

What training - sorry, you had your deputy's training, 20 weeks?-- I can't recall how long.

Would that be about it?-- 21 weeks, something like that, yes.

How many hours a day for how many days per week?-- From memory, I think it was two, three-hour session was the Mines Rescue Superintendent and the rest of it was study on our own time.

That's per day?-- Sorry, per day? Whatever you can fit in between work and home life.

It's not a course of 20 or 21 weeks, is it?-- Not straight out, no.

How many hours in total do you estimate over the 20 to 21 weeks of instruction you received, just as an estimate?-- As formal instruction from somebody?

Yes?-- Two, three-hour sessions a week.

Two, three-hour sessions a week?-- So six hours multiplied by 21 weeks.

Since you got your deputy's ticket what training, or retraining, have you been given by your employer?-- For?

For anything?-- Management has held different things over the years with new equipment, the minders when we got the anemometer, the minders - that's about all I can recall at the moment.

Just the one you recall, what length of time were you instructed on the minders, for instance?-- I can't recall how long the session went. I know we were in the training room one morning. It could have been half a day, I'm not sure.

Is that especially for you as a deputy or not?-- That was for the deputies, yes.

I suppose the same applies to miners or not - I mean general miners?-- Miners weren't trained in using minders only the deputies.

Do you know apart from the initial induction underground whether there has been any course of training or retraining of a general body of miners as opposed to deputies?-- Sorry, could you repeat that?

Yes. Apart from an initial induction course underground, before a man goes underground for the first time, apart from that, and apart from the deputies, do you know of any system of training or instruction of that type of - since they first go underground?-- Not that I can recall from memory, no.

Do you know of a publication called a red book or a blue book?-- Never heard of it.

Have you ever seen-----?-- Oh, yes.

Seen those before?-- I've seen those, yes.

When?-- The red one spon com, is it?

I think they both are?-- I've seen the red one. I've never seen the blue one.

So, the blue one wasn't given to you by your employer?-- I can't recall. I may have received the red one during my Mine Rescues course, I'm not sure.

Just if you would have a quick look at these and say whether you have ever seen them before?-- Yes, I have got Mines Rescue-----

What did you say about that?-- I have this. I've got that Mines Rescue.

WARDEN: Could you read the title, please?-- Mines Rescue and Safety and Gas Detection. Authors: J Strange and P MacKenzie Wood.

MR MARTIN: That's the one with the cover with the miner on it?-- Yes, with the Mines Rescue member on it.

Seen the next one?-- Never seen this manual before.

Could you read the title?-- Manual on Mines Rescue Safety and Gas Detection.

Does it have a----?-- Probably the same book only a different-----

Edition. What about the next one?-- Never seen this one. Not that with the particular cover. I have seen this one laying around.

Where is it laying around?-- I think in the training office.

At Moura No 2?-- At Moura No 2 or over at the-----

What is it identified as?-- It's a publication put out by SIMTARS.

It's a magazine type of publication?-- Yes.

And the next one is just another magazine?-- Another one put out by SIMTARS, yes.

Have you ever seen the next volume?-- I think I may have seen this publication, "Mining and Ventilation Practice in Coal Mines Liable to Spontaneous Combustion".

Where might you have seen that?-- The cover looks familiar. I can't say where I have seen it.

What about the last?-- No, never seen this publication and it is, "Training of Officials for Underground Coal Mining Industry, Volume 1".

Published by SIMTARS?-- Yes, developed by SIMTARS, yes.

Where were you when the tragedy in 1986 occurred? All I want to know -----?-- I believe I was at home.

Yes. Do you know anything about a gas chromatograph being brought from Brisbane at that time?-- They had trouble getting one up, I believe.

Did anybody ever assess your capacity after any retraining programme that you might have had? In other words, say, well, if you got a 90 per cent or 100 per cent pass?-- In sort of -----

In this course you had? Your one course? The one course you had that you can remember?-- I can't recall any written -----

Assessment?-- Assessment, no.

Is it a custom - was it a custom at Moura No 2 for men to work double shifts; that is, 16 hours approximately straight?-- Through the Friday night, yes.

Did you ever do that?-- I have done it on many occasions, yes.

I suppose that must be very tiring?-- You are active most of the time.

No, but tiring? How do you feel at the end - getting towards the end of a double shift?-- Oh, sometimes you would be very tired, yes.

Because your job by and large, whilst it might not be as hands on as the miner beneath you, is still one of activity all of the time?-- I used to always get in and help.

And help physically?-- Yes.

Above you in the hierarchy of a mine - of No 2 was who? Above you?-- Immediately above me?

Yeah?-- Shift undermanager.

Above him?-- Undermanager in charge.

Above him?-- The mine manager.

Did you design the working systems or did the deputies design

the working systems of the mine?-- How do you mean? The development - the panel development and that?

Put it another way: what systems of work did the deputies devise, if any?-- Management usually drew up development and extraction plans and they would put it to the men and if there was any problems it was brought out at meetings.

If you perceived a problem, I suggest?-- Yes.

Could you help the Inquiry with this: when you were last down in 512 what was the position of any sealings or - that is not the word - any type of covering of any of the roads, whether in No 1, 512 or outside 512?-- Materials for sealings?

Whether the headings or the cut-throughs were boxed off, in other words? Can you say?-- They had been prepped.

Only prepped?-- Only prepped, yes.

That was the last occasion you were there, the last occasion?-- On that - sorry, on the Sunday morning after I left? It was sealed then.

So, does that mean that No 1 heading - outside No 1 heading was part of a sealed area? It was all sealed outside No 1? In fact, the roadways were sealed off?-- All access roadways into the 512 Panel were sealed.

Do you know whether there was a sampling point for the Unor system within that sealed box area?-- I believe there was, but I don't know where it was.

Well, I have a plan, but I don't think it is large enough -----

Your Worship, could Mr Klease look at the model which I understand is part of the evidence, being part of the report that is in evidence?

MR CLAIR: Your Worship, perhaps we should deal with these models. I understand they were prepared by SIMTARS. The SIMTARS report has been tendered. It might be appropriate to, in fact, tender each of these models with an independent exhibit number. There are two of them. There is one closest to me which is a model for which - which deals with the whole of Moura No 2 Mine and I will tender that as one exhibit, Your Worship.

WARDEN: I think it is number 13. I will stand corrected.

ADMITTED AND MARKED "EXHIBIT 13"

MR CLAIR: 13, I am told, Your Worship. Then there is one to the left of that which Your Worship may not be able to see

XN: MR MARTIN

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clearly at the moment, it is behind the whiteboard, which is a model of 512 Panel and 5 South. I will tender that.

WARDEN: We will mark that Exhibit 14.

ADMITTED AND MARKED "EXHIBIT 14"

WARDEN: Mr Martin, do you need somebody to lift it and bring it around so we can all see it?

MR MARTIN: If it is convenient. It is probably for the best.

WARDEN: The one right behind the witness.

MR MARTIN: I am sorry, no, it is the black representation of coal extraction. I am happy to help, I asked for it.

WARDEN: Is that satisfactory? Can you see that? Mr Martin?

MR MARTIN: Mr Klease, can you see the junction of 1 Entry and 510 with the junction of 1 Entry and 512? Can you see that?-- -----

MR BRITTAIN: We are talking about this area around here.

MR MARTIN: Do you see that, Mr Klease?-- Yes.

That is really an area which is totally sealed if that representation is correct?-- Yes.

Do you recall whether that was - what it was like when you were last underground?-- Yes.

And you are not sure - perhaps you are quite unsure - about a monitoring point within that area?-- I am not 100 per cent sure where it was in behind the seals, no.

All right. We will take that up with somebody else. That's the way it was when you last were underground on what -----?-- We put a ventilation stopping across here.

Another one?-- There was a ventilation double bag stopping across there. That's how it was when I left it.

Now, that confuses me, you see, because of the extending 1 Heading right through. Was that seal there?-- Sorry?

The extension of 1?-- No 1 Heading?

Yes?-- Yes.

Both of those seals were present?-- Yes, those - all those seals were present, yes.

XN: MR MARTIN

WIT: KLEASE C C

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Just stay on No 1 stoppings that was present?-- Yes.

The next - no, sorry, further outbye that was present?-- That was present?

The road - 510 road immediate outbye the sealed area -----

MR NEILSEN: Where those other two stoppings are there.

MR MARTIN: 510 bottom return?-- 510?

Top return I am told. You call that the top. Go to the bottom of 510; right? Just run towards the top of the board?-- Up here?

Was that there?-- Yes, the door was left open.

When you left?-- When I left.

Do you know whether it was intended to seal that? Do you know whether it was intended to seal that?-- You don't seal that otherwise you don't get your flow of ventilation across the face of your seals. That was to come out.

And the one further up the road?-- That's the regulator.

That was there?-- Yes.

That was present?-- That was present, yes, when I left.

What was the seal - the covering immediately beneath that made of?-- Beneath this?

Immediately beneath that? Come down the board?-- This one here?

Yes.?-- That was Tecrete.

And the one above?-- That was Tecrete and metal lever doors and brattice.

Thank you very much. At the mine there were miners' officers? Miners' officers?-- Check inspectors yes.

They are not really check inspectors are they, or are they?-- I believe they are, yes.

They are statutory people under the Act, the miners' officers?-- The position?

Mmm?-- Yes.

And was Mr Vivian a miners' officer?-- I believe he was, yes.

And Mr Brian another?-- I believe he was, yes.

Mr Vivian was not a deputy?-- No.

But Mr Brian was?-- Yes.

XN: MR MARTIN

WIT: KLEASE C C

And they are not appointed by any trade union, are they? They are not appointed by a trade union? They are not appointed by the miners' union?-- It is a voted position. They nominate -----

Yes, but it is voted on by the men?-- Voted on by the men, yes.

Just bear with me for a moment, Your Worship.

Do you have any idea of the cost of Tecrete?-- Sorry?

Do you have any idea of the cost of Tecrete in comparison with -----?-- I have no idea, no.

With the former seals?-- No. I believe the new seals were considerably dearer, but I have no idea of the cost.

You have got no idea at all who it is that authorises the placement or the particular place where a monitor point should be?-- A monitoring point?

Yes?-- It would be a discussion with management, I should imagine.

But you don't really know?-- I would have a fair idea it would be management, but I am not 100 per cent sure.

One thing I wanted to know for the Inquiry, when you - after the first explosion you took various samples of bore holes?-- Yes.

What happened to them?-- They were taken over to the gas chromatograph into the - I believe that was set up in the instrument room.

That was in use by Monday morning?-- Yes, I believe so, yes.

Did you take or intend to take any samples from the exhaust fan from the mine after the first explosion?-- No, I wasn't involved in that.

In response to Mr MacSporran I think you spoke about the ventilation regulator for the top return being removed, perhaps, for some time, at least exceeding half an hour, or half an hour or more?-- Mmm, yes.

It could have been much more, but you don't know?-- No, couldn't be sure.

But whilst the ventilating regulator is down the interior of panel 512 is not ventilated?-- Yes, it was ventilated.

But not as well as it was?-- It would have more air going through, if anything.

More air going through?-- It would have more air going through, if anything.

XN: MR MARTIN

WIT: KLEASE C C

Yes, thank you, Your Worship.

CROSS-EXAMINATION:

MR MORRISON: Mr Klease, can we just return - if you may, you can turn around and look at the plan, I suspect. Can you see the number on the bottom right of that plan and tell me what it is? Drawing No 45/something?-- 45/18.

45/18, thanks. Now, you were telling Mr Martin that in the No 1 Road of 510 Panel, which passes at right angles to the roadways going into 512, there was a door between roadway 1 and 2. Is that shown on that plan?-- On here?

Is the door shown?-- I would say where the "D" there is, yes.

And further outbye on that same roadway between the 512 Panel and the 5 South panel there is a regulator shown; is that right?-- In here, yes.

Now, they are the two features that you demonstrated that are marked in white on the SIMTARS model? You have to respond verbally for these ladies?-- Yes, yes.

And when you left the door was open?-- Yes, the door was open.

And going to remain so?-- I believe so, yes.

That would be taken down?-- I believe that that stopping was going to be pulled down, yes.

In order to ensure a full air flow down the No 1 heading of 510?-- No, after the seals were erected that stopping was to come down to create a ventilation flow across the face of the seals.

That's right, along the No 1 heading of 510. Not along the heading of 512, the No 1 heading of 510, am I right?-- That's correct, yes.

Which would in fact be, in the scheme of 510, a return airway, that's the No 1 heading. Look to the plan on the left. Do you see the circulation of ventilation for 510? Blue indicating intakes, red indicating returns. The drive that we are talking about is the No 1 for 510 which would be in that plan a return airway?-- I believe that ventilation work was carried out here to ventilate the bottom seal across this way. I don't know whether that work was carried out or not. I am not 100 per cent sure.

I understand that, but that was certainly what you would have anticipated as the normal course of events?-- Sorry?

That was certainly what you would have anticipated as the normal course of events?-- Yes.

That that stopping would be taken down and left open?-- That's correct.

Likewise, the regulator was open?-- Yes, the regulator was open.

And would have stayed so?-- Yes.

And, in fact, a fair section of one side of the regulator had been removed in order to get the machinery in?-- That's correct.

And had not been replaced either?-- No, because it was demolished, but when I came in that night, on the Saturday night, there had been brattice put over it.

Brattice put back over the section removed?-- Yes.

The louvres still there?-- Yes. Well, one of the louvres was pushed out and I pulled it out of the road so the machine wouldn't damage it.

Okay. So the design, as you understood it, was to ensure there was in fact an air flow down along those seals?-- That's correct.

And no suggestion that the door or the regulator is a seal as we have been hearing about it?-- No, no.

And never intended to be?-- Never intended to be, no.

Now, you say in your statement that in recent months, that is the recent months before the statement, you had been largely tied up with the work model development on permanent day shift?-- That's correct.

Tell me: what is the Moura work model? What is it? Give me your description rather than a technically perfect one, okay?-- Mainly for people coming into the industry as greenskins, as we used to call them, or fresh starters, and training up from base up to a level.

To a particular level or any level?-- Miners were to go to a level 4 eventually through training and deputies to a level 6.

Okay. You were involved pretty heavily with that work model development, weren't you?-- That's correct.

Was it only you or you and others?-- No, there was others.

And, in fact, your involvement would have been more over the last 12 months than the last few months?-- Last couple of years.

And this was a system whereby the workforce were going to go from a system where they were paid simply by - to a system where they were paid by classification. From that to one where they would be paid in accordance with their skills and their abilities?-- That's correct.

And you were working on that with management?-- With management, yes.

And that was a Moura advance?-- Yes.

New to Moura. Do you know if it exists anywhere else?-- Yes, other mines have the work model in place and other mines are working on it.

And it's, I would suggest to you, quite a worthwhile reform?-- Sorry?

It's quite a worthwhile reform?-- Oh, yes, yes.

Are you a little hard hearing?-- No, no, just a bit of paperwork going on.

Background noise, I am sorry. Now, you yourself were fairly highly trained, weren't you?-- As?

As a deputy, as a miner?-- Yes.

In fact, one could describe you as having been trained to a standard where you could train the trainers?-- That's correct.

And that's pretty high?-- Oh -----

No need to be modest, Mr Klease. It's a high standard of training, isn't it?-- Yes.

Now, may I read to you some dates and names from the refresher training records and you tell me if you disagree with the dates and the courses that you have participated in. I will do them one by one, not necessarily in date order. 1 March '92 refresher course in first-aid. Tell me if you think I am wrong?-- I think that's probably when I re-did my first-aid ticket, yes.

4 July 1989 emergency procedures?-- Yes, possibly. I can't recall it, no.

10 April 1990 firefighting?-- I can't recall it, sorry.

23 March 1994 traffic rules?-- Yes.

This is for -----?-- I remember doing traffic rules over a period of time, yes.

Traffic rules on the surface as well as underground?-- Recently we have done traffic rules, yes, for the open-cut and - yes, recently for the open-cut we done traffic rules, just recently.

17 June 1994 the mine methods for 512?-- Sorry, what was the date?

17 June 1994 Mr Schaus giving a presentation, as it were, on the mine method to be adopted in 512?-- The extraction method?

Yes?-- Yes.

13 June 1993 environmental hazards?-- I don't recall that, sorry.

20 June 1993 isolation procedures?-- Electrical isolation procedures?

Yes?-- I don't recall it, sorry.

7 May 1993 accident hazard reports?-- Yes.

17 June 1994 significant incident reports?-- Yes.

16 June 1994 under the heading of potential hazards of spontaneous combustion, mine gasses, dusts and other ignition sources?-- I don't recall that.

Might it have been to do just generally with ignition

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sources?-- Sorry, I don't recall that.

7 May 1993 defect reports?-- Yes.

23 March 1994 self-rescuer, one particular type, the MSA?-- Yes.

And 6 May 1993, self-rescuers, the 30/100?-- Yes.

You couldn't remember some of those. Do you doubt that you attended some of the courses?-- A lot of those things were brought up at information sessions. They are just ongoing sessions with management, communication meetings. They are not actual courses.

I accept that. Let me go on with this theme. The mine has a safety and training officer, doesn't it?-- Yes.

Mr Barraclough, the under-manager?-- Yes.

That's his job?-- That's correct.

He has been in that position for some time?-- Mmm.

He conducts courses?-- Yes.

Do you train in any of them?-- Sorry, do I train -----

Are you a trainer in any of those courses?-- I have taken people through induction. That's all I can recall.

Is it the case, as you know it, that Mr Bryon is the trainer in mine gasses, Barry Hickson in traffic rules, Allan Morieson in fires and firefighting - stopping when you think I am wrong - Dave Kerr in the rescuer and mine gasses?-- That's correct, yes.

Dennis Evans in electrical hazards, and Phil Draheim in basic geology?-- I believe Andy List was doing electrical hazards, but yes.

Well, with the exception of the identity?-- Yes.

In all areas where there is a selected person who in fact is selected to train others and does so?-- Yes, mainly for induction.

Well, there are various levels of induction, aren't there? There is a level of induction for lawyers when they go out like a visitors induction, then there is a level of induction for non-permanent employees, and then there is a level of induction for ordinary miners and so on?-- That's correct.

And the level of induction, what you are told and what you are taught, increases depending on what you are going to do. If you are going to go underground, you have to go through a lot more than if you are not going underground?-- I believe so, yes.

XXN: MR MORRISON

WIT: KLEASE C C

Is it fair to say that your involvement with developing the work model took you away from the training side of things?-- Yes, yes.

But training was ongoing and seriously treated by the mine?-- Oh, definitely, yes.

And seriously treated by the men. I don't mean to say that it is management versus the men. Everybody treated this subject as serious and got on with it?-- Yes.

Likewise, safety concerns? Could you respond verbally for those people who are looking down?-- Yes.

As with training, so with safety, both management and men were very safety conscious and would actively pursue safety issues?-- Yes.

So much so that there were, as it were, a network of safety procedures. Not only was there a safety officer, Barraclough, but there were various safety committees?-- Yes, that's correct.

Were you on any of those safety committees?-- I can't recall at the moment.

And the committees would include, as it were, the Mine Safety Management Committee, then the Safety Training Committee and then there was another committee as well?-- I think so, yes. I can't recall.

Well, you didn't keep up with all the details of the network of safety procedures?-- There was -----

I don't mean that critically. I just want to know as a fact?-- I know if a new machine was brought on, people were selected to do a risk analysis on that machine, or if we were going to change the way we were going to do a belt move, a risk analysis was done, so I guess you could say yes, there was different safety committees.

And safety issues were identified by both management and men?-- Yes.

The men were not backward in coming forward with anything that concerned them?-- No, no.

And that applies as a general rule across the workforce?-- Yes.

Certainly deputies and check inspectors or miners' officers, they are not backward in coming forward?-- No, no.

There were routine and regular mass safety meetings?-- Yes.

At which quite a large attendance was obtained of the men?-- Yes.

Anything upwards of 80 or 90 per cent?-- Yes.

And safety issues would be discussed regularly there?-- Yes.

In the presence of both men and management?-- That's correct.

Apart from on-the-spot training, there were things that we might call tool box seminars or tool box lectures?-- Yes, that is correct.

Which would be topic specific. "Today we are going to talk about X."?-- Yes, that's correct.

X would then be the topic for that lecture, seminar, whatever you want to call it?-- That's correct.

That went on regularly?-- Yes.

And with new equipment, certainly not only was a risk analysis done, but those who had to train on the new equipment would be trained by a person who knew the equipment and could operate it?-- That's correct.

And an assessment would be done if not in writing like an exam, the person was not allowed to operate the new machinery until the trainer had certified that the person was good enough?-- That's correct.

Especially with things like - well, let's take miners or even shuttle cars. The process would be gradual. The trainee would not be allowed just to go off with the continuous miner and start hacking into coal?-- That's correct.

They would have to take a gradual procedure through under trained guidance until they were certified as being able to be let loose, if I can put it that way?-- That's correct.

And that was a very systematic thing?-- Yes.

Now, it's the case, I think, would you agree with me, that No 2 Mine had improved significantly in its safety record over the last couple of years?-- I believe so, yes.

And in terms of its other aspects of operation such as availability of machinery and so forth, it had a very high availability of machinery to the operation, somewhere between 85 and 95 per cent?-- I couldn't comment on that.

Training logs were kept by the training officer; you know that?-- That's correct, yes.

I have just read to you from one. And individual files were kept on all the miners in accordance with what they are trained on, who had certified them, who had assessed them and so forth?-- I believe so, yes.

Like a personal training file for every miner?-- That's correct, yes.

We have talked about the inductions. The mass safety meetings would be held, what, every four to eight weeks?-- Yes, be about that.

And followed by a staff safety meeting?-- I could not comment on that. Whether the staff met before or after, I couldn't comment.

The committees that I mentioned to you before, Training Committee, Work Model Management Committee and Consultative Safety Committee?-- Yes.

You know of those three?-- Yes.

Miners are represented on all of them?-- Yes.

And so are deputies and staff and upper management?-- Yes.

Okay. Now, you have worked all your mining life effectively at No 2?-- That's correct.

So from 1979 through to the present you have been there, through most of the sealings over that time?-- That's correct.

Were you actively involved in working on the sealings from time to time; that is to say, building seals as opposed to just working at the mine when it was being done by others?-- Probably maybe four to six seals I actually worked on.

The sequence for sealing on this occasion was the same as before?-- Yes. I couldn't see anything different with it.

Anything unusual?-- No, not that I could see.

Apart from using Tecrete, the method of sealing was the same as before?-- Yes.

Tecrete was new?-- Yes.

One of the problems with the previous method, that is, bricks and mortar, was simply by the size and weight of the bricks. Them being solid, people would injure their hands quite easily when building the seals?-- Are you saying the reason why we changed to Tecrete?

Well, that was maybe a factor in it, reduced the injuries to hands?-- I remember that being brought up in a conversation at one stage, yes.

And that was one of the features - no doubt there were others, but that was certainly one of them, that there would be a reduction in injuries to miners if they went to the system where the material was pumped in to reinforcement rather than men having to lift very heavy bricks to particular heights?-- That's correct, yes.

An additional feature of the Tecrete also was that it would eliminate the presence of mortar between the bricks as a

potential avenue for gas leak?-- That's correct, yes.

You would have a homogenous seal?-- That's correct.

And they were built by drilling roof bolts into the sides, floor and ceiling of the seal area?-- Yes.

Steel wire baskets would then be built up around those roof bolts?-- Yes.

And the Tecrete pumped in so you had a reinforcement inside?-- That's correct.

And the steel bolts that came out from the walls on each side were in fact linked one to the other with additional roof bolts bound with cable ties?-- I believe so, yes.

And the same vertically?-- Same vertically, yes.

So there was, as it were, a full network of steel roof bolts within the Tecrete itself?-- Yes.

That's a feature you don't get with bricks and mortar obviously?-- No, no.

And in the sealing process a - I have got to think of the right word now - a trench, as it were, a cut, is made in the floor and up the walls?-- Yes.

And it's of some depth so that the baskets fit into it and the Tecrete is pumped into it?-- That's correct, yes.

You don't get that with bricks and mortar, or do you?-- On occasions bricks have - the floor has been dug out.

Only on occasions?-- Sorry, I will rephrase that. Always the floor was dug out and the ribs were dug out to put the bricks in.

One of the problems with doing bricks and mortar, of course, is if you have an uneven floor, it makes it hard to build the thing?-- Yes, you have got to get it level, yes.

And miners being miners aren't necessarily brickies, that was always a bit of a problem?-- Has proved that way, yes.

You could see yourself advantages to Tecrete?-- Yes, yes.

The curing time that you got told by Mr Parker or his assistant did you understand that to be until it was fully cured?-- That's what I understood, it was 21 days before it was fully cured.

That's complete cure, no further curing process?-- No.

You didn't find any information from them for curing times over shorter periods?-- No, no.

They didn't proffer them?-- No.

Parker and his assistant were specifically Tecrete people, weren't they?-- I believe so, yes.

There in order to assistant and direct in the construction of Tecrete prep seals and Tecrete seals?-- I believe so.

To the Tecrete stoppings?-- Yeah.

Was it your understanding that Tecrete would, in fact, cure harder than normal cement?-- I could not comment on that.

I don't need a technical comment. I want to know what your understanding was?-- Believe - yes, it would be stronger.

I'm not asking you to tell me as a matter of science whether that's so. I'm exploring your own understanding of it?-- I believe so.

Your understanding was it would be stronger, significantly stronger?-- Yes.

Were you aware at any stage of the documents dealing with panel sealing using Tecrete?-- How do you mean, like a laid out procedure?

A written procedure, panel sealing with Tecrete?-- I can't recall ever seeing one.

Perhaps you could look at this document, it is document 130. I don't want you to read out a loud from it. I want to you flick through it and tell me if you have seen that document before. You will note at least this much that it deals with panel sealing and as you proceed through it, it not only deals with that, but with Tecrete and sealing 512?-- I have never seen this document.

Thank you. You can hand it back. Can I ask you about the sequence of some of the sealings in the No 2 Mine and you were there for just about all of them one way or the other, and I'm not at this stage interested with the north side of the mine, interested in more recent years on the South. In essence, 4 South A can you point that out with the laser. Is that the

diamond shaped panel off 4 South?-- 4 South is over there.

That was driven off 4 South when it was developed?-- Yes.

It was first driven in that south-easterly direction towards the right-hand bottom corner of the plan and then south-west for the extension of those panels?-- Yes.

It was extracted in about eight months; is that your memory of it?-- I can't recall. I never ever worked in there.

Not even doing inspections?-- At the early stages I - that far back, I can't remember, sorry.

And sealed in about 1990?-- I would have to check the plan if the plan has got the sealing date on it. I can't recall the sealing date.

I won't bother you with sealing dates then. Then for South B - perhaps you could point out 4 South B to us?-- That's that one there.

And that was the next in sequence of extraction and sealing after 4 South A was finished. You went down the end of 4 South, not quite to 4 South level, drove off to the south-east into 4 South B; is that right?-- That's correct, yes.

4 South B used a two sides strip extraction method?-- Yes.

It was a straight drive of four headings then a drive two pillars west. That plan is aligned North, South, East, West upright?-- Yes.

No particular problems with that panel, and sealing not a problem either?-- No, no problem, not that I can recall.

Then next was 4 South level. Perhaps you can point out 4 South level for us?-- There.

That's the most south westerly portion of the long 4 South drive?-- Yes.

And called at the mine 4 South level rather than - to distinguish it from 4 South which was the middle section of that drive?-- That's correct.

4 South level was a very quick extraction panel?-- Yes.

Something just under three months?-- Yes.

No problems in sealing?-- None that I can recall, no.

In fact, it was a one side strip extraction method in 4 South level? You can go closer to the plan if you wish, I think it does show it?-- I'm just trying - I think it was, yes, I can't quite recall.

If you have a look at the plan you might actually be able to detect. I think it's got green markings on it?-- Yes, one

side strip.

One side strip, in fact, that panel was in such a condition you could just about walk the whole panel?-- There are a couple of areas there where we started taking a second side off up towards the top of the panel.

Next in time was 511. Show us where 511 is if you wouldn't mind. It's the panel immediately north west of 512, isn't it?-- Yes.

And, essentially, similar in size to 512, four drives in a south westerly direction, then two pillars in a north-west direction?-- Yes.

The north-west two pillar drive was extracted then full extraction out through 510?-- Yes.

Two side strip method of extraction?-- I believe so, yes.

Relatively fast, just over four months?-- I can't comment on the time. I'm not sure.

No problems with the panel, no problems sealing?-- I can't recall any problems, no.

Next in time 403. Can you show us 403. It's the small panel sandwiched between 4 South B and 401/402?-- That's correct.

A relatively small panel and fast two side strip extraction in less than three months?-- Yeah, I can't comment on the time again but there was a quick extraction, yes.

And no problems, no problems with sealing?-- None that I can recall.

Next was the large panel 401/402?-- Yes.

Point that out with the laser. This was originally going to be driven as two separate panels and it was joined, wasn't it?-- Yes.

With the result that you had almost a nine heading panel?-- Yes.

That was a longer extraction, 11 months something?-- Yes.

And ACIRL was involved in governing the method in that panel, wasn't it?-- I believe so.

There were varying styles of extraction, the two side strip, then single strip, then take one, leave one?-- I believe so, yes.

You can see it on the plan I think. Does that accord with your memory?-- Sorry?

You can go over to it. Any time you need to go to the plan please do so. You don't have to ask me. No 401/402 we are

discussing?-- That's correct.

That was a successful panel with quite high production?-- I believe so, yes.

There was good control by using take one, leave one method, that is to take one panel, leave one panel?-- One pillar.

Sorry, pillar. Sorry, I said panel. You can take one panel and leave one panel if you want to but take one pillar and leave one pillar?-- I believe so, yes.

No particular problems and sealing was okay?-- I can't recall any problems.

And next in time was 512 which we have been discussing?-- Yes.

ACIRL had a very heavy hand in designing 512, to your knowledge?-- I don't believe so. I believe the Extensionometer.

That big word, Extensionometer. That is some sort of device for measuring what?-- Load on the pillars.

And stress on the barrier pillars between one panel and the other?-- I believe so, yes.

In fact, 512 was a panel very intensively monitored by ACIRL?-- Yes.

A fast panel again, just over three months?-- I can't comment on the time of extraction.

By then you were off mostly detailed on permanent day shift on the work model?-- On the work model, yes.

In all of those sealings that you were involved in was there any occasion when men stayed out of the pit after the sealing?-- Not that I can recall.

It just wasn't the practice at No 2, was it?-- No, not that I can recall.

There is no doubt in your mind, is there, that if any one thought there was a problem in going down one, they would have spoken up?-- I believe so, yes.

Two, management would have listened?-- Yes.

Three, if it couldn't be resolved one way or the other by discussion, the men would have stayed out?-- That's a possibility, yes.

But there is no question of anyone being forced down the mine if they don't want to go, is there?-- No, I have never heard of anyone getting forced to go down if they didn't want to.

You would certainly not expect it of this management team,

would you?-- I don't believe they would, no.

Are you one of those persons who has in mind that there is an incubation period for D seam coal?-- I believe there is a - coal does have an incubation period but.

I don't need a technical answer as to whether it does or doesn't, whether it is x years, months, days or whatever, but you are of the view that there is an incubation period for D seam coal?-- I believe there is.

What's your understanding of it?-- I don't know what time period. All I know is that in general coal has an incubation period and that's when you - hopefully, when you start extracting the coal that you will be finished before that incubation period is through.

Was there some generally held view at No 2 Mine as to what the incubation period was?-- Haven't heard anything about the incubation periods for years. I heard it my first time 12 months to 18 months in the industry.

And then not after that?-- I can't recall it.

The method in 512 - sorry, you really weren't involved in the mining method in 512, were you?-- Not strictly, no.

But you certainly inspected it?-- Yes.

And the method was different from previous panels in the sense that had taken one pillar, leave one pillar?-- Yes.

But bottoms as well?-- And taking the bottoms, yes.

And bottoms were to be by ramping?-- Yes.

And that's how it was done by remote controlled continuous miner ramping down?-- That's correct.

And working backwards as it ramped?-- Yes.

It's always a feature that the shuttle car driver was not to go beyond the last line of support?-- He was not to go beyond the 3 metre mark.

That is the 3 metre high rib mark?-- From the roof to the floor wasn't to go past the 3 metre mark.

That would certainly be the case if bottoms were taken or the ramps was commenced, the shuttle car was not to go into the ramp?-- Yes, you could probably say that, yes.

Certainly not behind the 3 metre high rib line?-- Yes.

There was a very detailed sequence of mining developed for that panel, wasn't there?-- Sorry?

Very detailed sequence of mining in terms of the ramping, the sequence with which the ramps had to be done?-- Yes.

It was laid out chapter and verse?-- I can't comment on that, sorry. I know that management were pretty strict on the ruling that you weren't to go past the 3 metre mark.

Very strict on that, very strict on taking bottoms where you weren't supposed to?-- Yes.

Very tight control over the development of it?-- I believe so, yes.

It's fair to say, isn't it, that the management team at that mine were very safety conscious?-- I think everybody who worked at the mine was very safety conscious.

I don't mean to single others as being not, don't get me that way. I'm saying the management team were very safety conscious, obviously so were the deputies and so were the men?-- Yes.

They were receptive to questions from the mining staff - staff is the wrong word - from the miners about safety issues, about the method of mining?-- Yes.

And very co-operative in the sense of being willing to listen and to discuss and resolve things?-- When it came to safety, yes.

Proactive mine management team, if you want to use these modern terms, proactive rather than reactive?-- Yes, everyone was thinking always safety, yes.

And very approachable too, particularly people like Michael Squires?-- Yes.

Can I ask you a couple of things: you mentioned stone dusting in 5 South as having passed all the relevant tests. It is not just 5 South, it is generally, isn't it?-- How do you mean, the whole mine?

Well, all the panels you were involved in were well stone dusted?-- Yes.

And generally speaking ventilation was good?-- Yes.

You mentioned to several of my learned friends over here that on the occasions you were in 512 you noticed some ventilation difficulty?-- Recirculation of the ventilation, yes.

Recirculation, not lower ventilation, just recirculation?-- Yes.

You were only in there on very few occasions, weren't you?-- That's correct.

You wouldn't like to suggest on the basis of that that it had that problem at other times or generally?-- I can't comment whether that problem was there all the time. I just know that a couple of times that I went there there was a recirculation

problem.

You were asked about your - just pause, I will get the name of the thing right. Your position statement as a deputy?-- Yes.

I think you were shown it, weren't you?-- Yes.

You signed that off acknowledging that you knew what the conditions were?-- That's correct.

Number 3 is that, "There is a positive responsibility on a deputy that he shall suspend any operation that is likely to cause danger to any person until he has received special instructions from the manager." You are aware of that?-- I'm aware of it, yes.

You have always been aware that you had the power and the responsibility to stop operations if there was anything dangerous?-- That's correct.

You didn't stop any operations in relation to 512?-- No.

Can we take it this - bearing in mind the awareness of your responsibility - that you did not consider that there was such a dangerous situation that it should be stopped?-- At the time, no, I don't think it was that serious a problem. There was - I never detected any gas come back in recirculation just dust from the machines travelling along the road when they poured the coal in the feeder that would travel back up the roadways.

No gas in the recirculation only some dust?-- That's correct.

Difficult to tell whether it is coal dust as opposed to fumes from diesels or anything like that?-- What, to determine between the two?

Yes?-- You could determine whether it was smoke or dust.

You call fumes from a diesel smoke?-- Yes.

And does it come with a smell? It does on the surface, I assume it does down below?-- Yes.

In fact, if one detected a haze associated with a smell that may very well be diesel fumes?-- Yes, it could be, yes.

You didn't want to rule it out the day you saw to the panel?-- No, that's correct.

You had actively in mind that that was probably the source of it?-- That's correct.

Both the smell and the haze?-- No, no, the smell was different.

Well, if it was diesel fumes it comes with a smell, I think we have established that, haven't we?-- That's correct, but the

smell I was smelling was not diesel.

When you were inspecting the panel from time to time you made reports, did you not?-- That's correct.

Deputies' reports which you are required to make detailing your inspections?-- That's correct.

They are important because they tell the on-coming deputy after you what the conditions were like when he wasn't there?-- That's correct.

And deputies are required to and should read the previous reports?-- That's correct.

And mostly they do?-- Yes.

And they are posted?-- They are posted, yes.

After they have been taken up and the undermanager has read them?-- That's correct.

So that when they are posted, they are posted in at a particular point, the starting point?-- The starting point, yes. There is a special cover there for them.

It is a glass covered notice board?-- Perspex door on it, sliding doors.

The people who gather at the starting point are all miners when they go down there, those miners who are going-----?-- Miners, electricians, fitters, yes.

So, in fact, deputies' reports are posted so that is in place expressly so that others can read them?-- That's correct.

And there is a copy left in the deputy's record book?-- Yes, a carbon copy, yes.

When there is production going on, as often as not that book is down at the crib table?-- Yes, when there is people working in the panel, yes.

The book remains there on changeovers from shift to shift?-- That's correct.

And the originals are brought out and the carbons are left down?-- That's correct, yes.

On a hot seat change the deputies will often meet at the crib table and the report is brought up from there?-- Yes, the original copy is brought to the surface with the deputy.

It is not required, or in practice not done necessarily, that all exchanges of information between deputies occur on the surface by reading previous reports?-- No, if there is production going on, it is a hot seat change, it is done down there.

Now, with the importance of those reports you have to write into those reports various things that you inspect. One of them is ventilation, there is an entry for apparent sources of danger?-- That's correct.

You filled out those reports in relation to 512 on the occasions of your inspections, did you not?-- That's correct.

Could you look at these documents, please? Now, perhaps you might flick through them and I want you to look at several features as you do: firstly, I want you to tell me if your signature is on them and as you go through them I want you to look at the date, the ventilation wording and the source of danger wording put in by you. Have you done that?-- Yes.

All of those bear your signature?-- Yep.

They are copies of your deputy's reports?-- That's correct.

On all of them when it came to making the comment about ventilation you wrote the word "adequate"?-- That's correct.

And on all of them when it came to writing a comment about other sources of danger you wrote "none apparent"?-- That's correct.

Perhaps I should read into the record the numbers and their location. You can check me as I go to make sure I have got them right, if you would. The first is 3091 of 11 May '94; that's document 174. Is that correct?-- That's correct.

Next document 45 - that is not a number for you, Mr Klease - 3975 of 8 June. Likewise, 3445 of 2 July?-- That's correct.

Likewise, 3734 of 23 July?-- Yes.

Then in document 24, 3776 of 6 August and 3778 of 7 August?-- That's correct.

You can keep those with you for the moment, if you like. Now, it is the case having looked at those and bearing in mind the responsibility of a deputy in making out his report - it is true then that on every occasion you were in 512 and made a report about it the two things you said to the on-coming deputy and the undermanager who would read this report, and in some cases they have co-signed it, is, one, that the ventilation was adequate and, two, there were no apparent sources of danger?-- That's correct.

Now, would you just excuse me a moment, Your Worship, I wish to catch up with where I am supposed to be.

Can I bring you then, if I may, to the dayshift on Saturday, 6 August?-- Yes.

You read the previous deputies' reports; is that so?-- Yes.

You spoke to the other deputies who were Rod Helander?-- Yes.

And Peter Rose?-- That's correct.

Okay. Also to Michael Squires?-- Yes.

Basically deputies would sort out between themselves which sections they took?-- That's correct.

And that was normal?-- That's normal, yes.

And the undermanager would inform the deputies of which men had been deployed where for which tasks?-- That's correct.

You met Shorten and, you think, Norm Cross?-- Yes, I think it was Norm, I'm not sure. Not 100 per cent sure.

At the goaf edge. Now, you can't remember, in fact, specifically what it was they said, but they said something?-- That's correct.

About the panel or the goaf?-- That's correct.

And as a result you went down to the goaf edge?-- That's correct.

Now, please, by roadway and cross-cut, walk us through that again. Where did you meet Shorten and Cross?-- I met them here on the corner, just as they were coming around the corner with the machine.

So, you are indicating?-- No 2 Heading -----

1 cross-cut?-- 1 cross-cut.

Is that where Shorten and Cross were?-- That's correct.

They were working with vehicles?-- With the Eimco.

XXN: MR MORRISON

WIT: KLEASE C C

And the Eimco is like a front-end loader?-- That's correct.

Was there a MPV?-- Yes, I believe it was parked out here at the time - sorry, here at the time.

You are indicating No 2 Roadway in the No 1 Heading of 510?-- That's correct.

And the Eimco is a diesel driven vehicle?-- That's correct.

And so is the MPV?-- Yes.

You walked in from them at No 2 Heading 1 cross-cut to where?-- To this point - this point here.

So, is the - what, the inbye rib at that same intersection?-- Yes, I stood right on the corner there.

And from there you looked directly inbye down No 2?-- Down No 2 Heading, yes.

And saw what? Nothing?-- I noticed there had been a fall down there. When that had happened I could not - could not comment. I never visually detected anything unusual at that stage.

The fall that you saw there you would place approximately where?-- I am not sure whether it was in - whether it was across here or whether it was across here.

So, you are indicating the intersections of No 2 Roadway at either 2 or 3 cross-cuts?-- That's correct.

You can't now recall whether the fall was at one or the other?-- No, I can't recall.

Having looked down there did you take a reading there?-- I took a CH4 reading, yes.

And got? You can check your statement?-- I believe it was .7 at the goaf edge, and that was at roof level, and .4 in the general body.

Is it fair to say that all the testing you did on this occasion and the subsequent occasion you did in roadways where bottoms were not taken? In other words, the point of testing was in a roadway, not in bottoms?-- On the edge of bottoms I took them.

So, you could reach pretty much near the roof?-- That's correct, yes.

And did so?-- Yes.

Now, .7 CH4. You didn't take a CO reading there?-- Not then, no.

You didn't have the Draegar tubes?-- No, I didn't know that

then either.

I understand you didn't know it. You physically didn't have them with you anyway?-- No, no.

And if we can put a distance on it, from where you were standing at the inbye rib on 2 cross-cut - or is it 1 cross-cut?-- 1 cross-cut.

1 cross-cut you are looking down, how far away then is the fall if it is at 2 cross-cut? Is it 40 metres?-- I can't comment. I don't know whether it was at 2 or 3. I just can't recall now.

I am interested in the distance from you to 2, if it was there. What, 40 metres?-- Possibly, yes, possibly. I can't recall the distance. Possibly more.

Whatever that is, roughly double it if it was at 3?-- Yes.

All right. Now, you then moved from there along 1 cross-cut?-- Yes.

Towards the belt road?-- Towards the belt road, yes.

Towards No 3 Heading?-- Towards No 3 Heading.

Could you just indicate where that is with the laser?-- From here down to here.

And at that point did you stop before walking down into the bottoms?-- Yes, I stopped and had a good look around.

Did you take a reading at that point before you went down in the bottoms?-- Yes.

A CO reading? Only a methane level?-- I never had Draegars, only methane.

And you looked directly inbye on 3 Heading?-- I looked down 3 Heading and I also looked down this way.

When you looked along 1 cross-cut you saw nothing of any note?-- No, no.

When you looked down 3 Heading what did you see?-- I just noticed there was rubble on the ground from a fall.

And where was that?-- Either 2 or 3, possibly 3. I'm not 100 per cent sure.

You are not confusing which roadway the fall was in? You have nominated a fall in each of the roadways now. On each occasion you are not sure whether it is 2 or 3. You are not confusing the roadways? There was only one occasion you saw the fall?-- Sorry?

I am sorry, I am not making this very clear, I know. Are you sure that you saw falls down two roadways and not just one?--

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I am not 100 per cent sure, but I think - I think there was also - I saw a fall down 3 as well - down 3 Heading as well.

You are not sure obviously?-- But I am not 100 per cent sure, no. It was definitely down No 2 Heading. I could definitely see a fall down there.

At that point you take the CH4 reading which is?-- .4 or .5 - .4 I think it might have been.

And you then do what? You went down into the bottoms?-- I started walking down.

That's inbye on No 3 Roadway?-- That's correct. I started walking down here and I noticed the ribs were probably under a bit of weight because they were - there was lumps hanging out and the roof looked a little bit baggy.

You decided it wasn't a real smart idea to be down there?-- That's correct, I backed out.

At that stage you were really walking out into the waste, aren't you?-- That's correct.

Which is not a smart thing to do?-- That's correct.

So, you then moved outbye to the intersection?-- I moved outbye back past the diesel machine that was -----

Go slowly. Outbye the intersection at 3 Roadway, 1 cross-cut?-- I started walking back out this way.

Along 1 cross-cut towards 2?-- Along 1 cross-cut, yes.

And then where, left into -----?-- I talked to the men on the machine, I think, as I went past them. I think I said, "I am going into the top return now."

You were basically just letting them know what was happening next?-- Yes.

It is good policy down there to let people know where you are going?-- Where you are going, yes.

You did that. You went to the top return?-- I walked over to the stretcher, that's where the tubes were. The crib table was sitting -----

You are now indicating the intersection of 2 Roadway and No 1 Heading in 510; is that right?-- That's correct.

That's where the crib table was?-- That's where the crib table was and the stretcher and the canvas bag with all the testing gear was sitting there.

You took the bag or the contents?-- I opened the bag up to have a look to see what tubes were there and I was going to proceed into the return and I noticed there was no CO tubes.

XXN: MR MORRISON

WIT: KLEASE C C

You went, nonetheless, into the return?-- Sorry?

Nonetheless you went to the return?-- I went into the return then.

And that is at the point of -----?-- Come in through the door and I walked up to the intersection here.

That's in the intersection of the top return and No 1 Heading in 510?-- That's correct.

And did what there?-- Had a look around. That's when I noticed the smell, when I got to the middle of that intersection.

When you got to the middle of it?-- As soon as I come past the edge of the pillar here - sorry, here, you could detect it.

You hadn't detected that smell coming along No 1 Heading of 510?-- No, I hadn't detected it at all.

And the smell at the time you smelt it struck you as what? How would you describe it?-- A benzeney smell.

Have you ever smelt benzene?-- I have smelt - yes, I come to work every morning from Biloela and the old No 1 Underground - we used to virtually drive over it coming in and in the mornings the coal down there, you can smell it, gob stink, and it was a very similar smell to this.

Similar to gob stink?-- Yes.

You used the term "benzene" to indicate that?-- That's correct. It was very similar to the smell what you could smell coming through the lease entrance around the No 1 Underground.

It was that sort of smell?-- That sort of smell.

How strong?-- Strong enough to -----

Make you notice it?-- Yeah, to make the hair stand up on the back of your head.

So, you are describing it then as much more than faint?-- Yes, it was a strong smell.

Strong smell. Not overwhelmingly?-- Not overwhelmingly, no.

Just definitely there?-- Yes, you could definitely notice it.

Like smelling salts where it hurts the back of your nose?-- Never had smelling salts, I couldn't comment.

No, maybe not. Never played hard enough in the rugby?-- I played hard.

Never got hid hard enough. Did you walk inbye then?-- I

walked to the - I walked down to the prep seal and had a look down there.

Hang on a second. You are now indicating No 2 Roadway?-- Sorry, here. Walked down to the prep seal and I had a look down the return and I was there for probably about a minute to maybe a minute and a half and I proceeded around here to the vent station.

Now, the vent station is in the No 1 Roadway of 510 just outbye the top return?-- That's correct.

And on 512?-- That's correct, yes.

And the vent station has always been sited there?-- I believe so, yes.

Where was the monitor point in the top return?-- I noticed the monitor was probably half-way between the regulator and the top side of the rib here.

Top side of the rib of the top return?-- Top side of the intersection.

The monitor point was between there and the regulator?-- Yes, half-way between, because when you stood at the vent station you could see the sensor head for the monitor.

Was it always sited there?-- I couldn't comment on that.

Did you take any readings next to the monitor?-- No, I took readings - the vent station virtually sits close to half-way between the monitor and the prep seal - sorry -----

The regulator?-- The regulator, and I took my readings at the vent station.

At the vent station, all right. And where then?-- I went back outbye down to where the men were working up by the door.

So, you are back in the vicinity of the crib table?-- Yes, and I checked the state of the ribs and the roof around there because they were unloading gear. I went down to where they have taken the bottoms out here under the belt, checked the condition of the roof and ribs there.

That's the intersection of the belt road and No 2 Heading 510?-- That's correct. I checked the condition of that there. I went down that here. I checked the condition of this seal here.

That's the seal on No 4 Roadway?-- No 4 Heading. I checked this area here because the men were going to be working on the Holywell stopping to reconstruct it.

To build it in the same place it was?-- Yes. It had only been - only a few panels had been taken off to get a machine through.

And then you went where?-- The men were up here working on the continuous miner and I walked up to there and made sure they were okay and I had a chat with them for about 10, 15 minutes to see how long the miner was going to be before they got it going.

It was unserviceable at that point?-- That's right, it was down electrically.

Did you leave 512 area then and go to the surface?-- I went - from the 512 I went over to check the two pump sites at the 5 South Sub-panel which took around about a minute and a half, two minutes, just to check them.

5 South Sub-panel, I think, is down at the stub end of 5 South?-- It is this area here, I think.

5 South somewhere?-- Sorry, yes, 5 South Sub - sorry, this area in here. There was no development. It had been developed. The machines had been pulled out. There are two sumps in there with flight pumps in I just wanted to check.

You checked on the pumps?-- I just checked to make sure the sumps had been pumped.

Then outbye?-- Went straight up the fault road and to the surface.

And didn't find Squires?-- Yes, when I got up top Michael was - that was around about smoko, I believe, and he was talking to the men who were sitting down having smoko just outside the lamp room.

What did you go up and say to him?-- I said to Michael - I can't remember my exact words, but I mentioned to him about the smell in the top return and he told me, yes - he said Mick Caddell had detected that on afternoon shift - Friday afternoon shift.

So, you met Squires after the first inspection?-- That's correct.

On the surface and he was talking to which men?-- The men that were on shift.

And you told Squires in the presence of those men what you had found?-- Yes, I just - I told him about the smell. That's all I mentioned, was about the smell.

Were others present when you did that?-- Yes, but I can't recall who.

There were a number of miners?-- Yes.

Then you, having got the Draegar tubes, you went down again?-- Yes, I had a quick bite to eat and I talked to Michael for probably 10 minutes.

What did he say to you when you told him this news?-- He just told me that the afternoon shift deputy had detected the smell too and he had been down and investigated on afternoon shifts.

He, Michael Squires, had been down?-- Yes.

Did he ask you to go back down?-- No, I told him that -----

You were going to do that anyway?-- I was going to do that anyway because I never had any Draegar tubes.

Did you take high range and low range tubes?-- No, just the - up to 100 ppm.

Up to 100?-- The 5 c's, I think it is, or - I can't recall.

The high range tubes?-- Yes.

Went back down to 512 direct?-- Yes.

And went where?-- Straight into the top return, straight into here, up to the vent station.

You there took a reading?-- Took all the readings, wet and dry, hygrometer readings, anemometer, CO, CO2, CH4.

And you got the 9 to 10 ppm on that occasion?-- Yes, but I had also made a mental note then that the diesels were still - they had just stopped working out there and that higher reading may have been because of diesels working outbye.

That was the first thing that occurred to you, wasn't it?-- Yes, well, when I saw the haze, yes, my first impression was it was diesel smoke.

It bore that appearance in your cap lamp light; it looked like that, didn't it?-- Yes.

The bluish tinge that diesel haze has?-- That's correct, yes.

So you having got those readings, there was nothing exceptional about them taking into account that the diesels had only just stopped operating?-- Stopped working, yes.

You thought, "What I will do, I will come back later to check it again."?-- That's correct.

"To see if there is any change."?-- That's correct.

You then went where?-- From there?

From there. That's the top return. You have just taken readings in the top return?-- I went back out and went straight over the 5 South sub-panel and done a thorough inspection of the 5 South sub-panel.

Just pause there. Part of your inspection process would have been to do 5 South sub anyway?-- That's correct.

And you had simply not been able to do it previously?-- I could have but there was no men working in there. As I say, there was no requirement -----

No pressing need to do it?-- No, and there wasn't going to be any men working in there either.

You then did a proper inspection of 5 South sub?-- Yes.

Then to where?-- And then I drove down to the end of the 4 South level down around and just checked - just a drive around inspection down there and then I went back to the surface.

From when you left 512 having taken the Draegar readings at 9 to 10 ppm?-- Yes.

How long would it have taken you to do the inspection of 5 South sub back in through 4 South level and back out again? Now, you are obviously walking during those inspections?-- Yes.

What are you talking about, an hour?-- I think I got back onto the surface at around about quarter past 11, 20 past 11, but I'm not 100 - I'm not sure, I'm not sure, so by the time I would have left -----

Well, you got back down to do your readings at 9,45, according to your statement?-- That's correct. I probability would have left there 20 minutes later, so probably about 5 past 10 I would have left the 512.

So something over an hour?-- Yes.

Back up to the surface?-- Yes.

You spoke to who?-- Just general conversation with one of the deputies, I can't remember which one it was, and I asked -----

Did you tell that deputy about the reading you just got?-- I can't recall. I can't recall.

Got a quick bite to eat again, snatched a bite to eat?--

Yes, and I asked where Michael was and he said he was down the pit, and I made comment to someone, "Well, the diesel's probably finished well by now and I will go back down and just check that top return again now."

And off you went, and you met Squires halfway down the main dip?-- Yes.

About 15 cross-cut?-- About 15 cross-cut, yeah.

And there had a conversation?-- Yes.

Excuse me a moment while I just pick up when I am supposed to be. Having spoken to Squires, you went into 512. No doubt you told him where you were going and why?-- That's correct, yes.

And he gave you information about having spoken to Mr Ziebell?-- That's correct.

You went to 512 and went where again?-- I went back into the top return to see if the haze was still evident and it was still there, but it wasn't anywhere near as thick as what it was.

It had dispersed?-- It had dispersed, yes, but there was still a very slight haze evident.

Now, are you talking about immediately around you or inbye down the return?-- Just in the general body of the air.

Around you?-- Yes.

Okay. So it had dispersed quite significantly, there was just a very slight haze left?-- That's correct.

What did you do there?-- I went and grabbed the Draegar tubes again and I went to this point here.

That's in 1 cross-cut No 2 heading?-- No 2 heading 1 cross-cut on the goaf edge, and I don't know why I took a Draegar in there.

You don't know why?-- I don't know why. Just something I just did, and I got, I think it was, 7 ppm.

Now, this is the one you didn't make a note of?-- That's correct.

Not in your report anyway?-- No.

I presume that you were noting these things in your notebook?-- In the head.

Were any of these readings noted in your notebook, or did you not have one with you?-- I very rarely carry a notebook. Just years of training, I just - you learn to remember readings.

All right. So none of these observations and none of these readings were physically noted at the time?-- The 7 ppm wasn't noted.

Nor the 9 to 10?-- 9 to 10 is noted. It's in my report.

But not in any notebook at the time?-- No.

You kept that in your head also. You kept that in your head also until you put it in your report?-- No, the 9 to 10 was filled out mid-shift. That's the first part of my shift inspection.

Okay. So you got 7 parts there. Did you do methane?-- Yes. Same methane readings.

You then went?-- I went straight to the phone.

Let me take you back, sorry. Did you look down No 2 heading?-- Yes.

Like you did before?-- That's correct.

You could see the fall?-- Yes.

And that was at the furthest extent of your light?-- Yes, that would be a fair assumption, yes.

And hard to see, wasn't it?-- You didn't have to strain your eyes but, yes, you could see it.

You then went to the crib table?-- I noticed a very, very slight smell at that point, much the same smell that was in the top return, but very, very faint.

Much the same. You sound as though - are you meaning to tell us there was some slight difference?-- Because it wasn't as strong it was hard to - you couldn't be 100 per cent sure whether it was the same, but you could notice it. You could just notice it.

It was a noticeable smell, but you can't say for certain it was the same smell, can you?-- Not directly, no.

Very, very faint but noticeable?-- That's correct.

And you detected that. You then went to the crib table?-- That's right.

And rang Squires?-- Rang Michael up, yes.

Squires was on the phone to Mason, wasn't he?-- I believe he just got off the phone. He could have been on the phone. I can't recall.

You told him not 7 ppm. You didn't tell him 7 ppm, did you?-- I believe I told him that I could see a heat shimmy down the road.

Well, you sure you told him you saw a heat shimmy?-- No, I can't be 100 per cent sure, no.

The reason I ask is in this very precise walk through that we have just done from start to finish again, you didn't mention the heat shimmy as being something you saw. Now, Mr Klease, let's be careful about this. Are you sure that you saw that?-- I saw a heat shimmy, yes. I know what I saw.

In which heading?-- No 2 heading.

And was that near the fall?-- It was in the general area of the fall area, yes.

At the furthest extent of the light from your cap lamp?-- Yes.

Very hard to see at the furthest extent of your cap lamp, isn't it?-- I have seen heat shimmies before. I know what I saw.

Between 40 to 80 metres down the return - down No 2 heading?--

That's possible. When the light hits it, it shows up in the light.

Just discernible?-- Sorry?

Just discernible?-- Yes.

You think but you are not sure you told Michael Squires?--
I'm not sure if I told Michael about the heat shimmy.

If I suggested you didn't would you deny-----?-- I can't be 100 per cent sure. You got to understand at that stage I was probably a little bit worried and a bit excited as well but I am sure I told him I got 7 ppm there at that point. I'm positive I told him that.

Sure you didn't tell him you got 8 to 9?-- I'm pretty sure I got 7 parts.

You would certainly not be willing to adopt you told him 8 to 9? In other words are you prepared to deny or you feel certain that it is 7?-- I'm not absolutely certain it was 7 but I'm pretty sure that I got 7 parts there.

No, we are talking about what you actually told Squires on the phone?-- I can't recall.

You can't recall the words of what you told him but your memory is that you imparted-----?-- I told him a part per million and I was pretty sure that it was 7 parts that I told him.

You confused me, you told him 8 parts?-- I never told him 8. I never said 8.

You said 8 - oh, "a" part?-- I never said 8.

Maybe you said "a" part, sorry. We will look at the transcript later to see what it says. You are sure you told him 7 because that's what you got?-- I think it was, I'm not sure.

He indicated to you that he was on the phone to Mason as you rang?-- I can't be 100 per cent sure. He is either on the phone to George or he just got off the phone from George.

The conversation ended with Squires either being in conversation with Mason or having spoken to Mason?-- That's correct.

That's you down in the crib table. Where did you go then?-- I told Michael I was coming straight back to the surface.

And you did so?-- Yes.

You went back down again?-- Yes. Michael asked me if I would go back down and inspect the 5 South return through the machine door to take the machines in that return.

And the next day you were there to assist on the sealing procedure?-- That night, yes.

As a deputy?-- That's correct.

You had reversed a shift and somebody got somebody to cover you on the Sunday, I think?-- No.

Hadn't you?-- No, no, I wasn't rostered on for Sunday.

You came in on this night shift to help with the sealing?-- That's correct.

You had a disagreement with someone during that process, didn't you, about the seals?-- I wouldn't say it was a disagreement, just a discussion.

Between you and Len Graham?-- Yes.

Wasn't it Len Graham who couldn't see why the sealing had been brought forward because he couldn't smell what you had referred to; isn't that right?-- That's correct.

And nor could he see the haze that you have referred to?-- He pointed that out to me, yes.

He thought that you were a bit panicking or got off a bit half cocked?-- He had mentioned that, yes.

I have got no doubt stronger words than that were used?-- No, it wasn't heated or anything.

Are you sure?-- I'm positive.

There was a disagreement, however gentlemanly, between you and Len Graham with him effectively saying there is just no point to this, you know, premature?-- I can't remember the exact words.

I am not pretending I know his exact words either, that was the theme of what he was saying. "This is unwarranted, this sealing in haste, or whatever, because I can't smell what you smell. The haze isn't there.", and you simply said, "Well, look, you know I saw what I saw."?-- That's correct.

Did you speak to McCrohon that night - he was another deputy on the sealing?-- Spoke to George but I don't know that I spoke to him about it or-----

Did George McCrohon voice the opinion to you that those signs were not evident too?-- No, no.

Notwithstanding, sorry, I withdraw that.

WARDEN: An indication, please, Mr Morrison, how much longer you are going to be.

MR MORRISON: I beg your pardon?

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WARDEN: You are very close but I don't wish to put any constraints upon you.

MR MORRISON: Thank you, Your Worship.

WARDEN: Would you like to resume tomorrow?

MR MORRISON: No, not particularly. I am content to keep going because I could finish in about ten minutes. We still have Mr Harrison. I am entirely in Your Worship's hands.

WARDEN: I don't think we will get Mr Harrison in this afternoon.

MR MORRISON: In which case if it is convenient to the panel - not that I need to stop - but I'm happy to stop.

WARDEN: Thank you then. We will continue on.

MR MORRISON: Thank you.

When you saw the haze that's when you went back down at about 9.45 you got back down there to do the reading and you got 9 to 10 in the top return?-- Yes.

You saw the haze, the haze was no different then or at that stage that's when it had dispersed?-- No, it was still about the same level of density I suppose you could see as when I first walked in there.

You still considered then that diesels were likely as a source of that?-- I had made a mental note that it was possible diesel smoke.

The haze was in the general body floor to sealing?-- Yes.

Any particularate matter in it?-- Sorry, any?

Particularate matter, in other words, pieces of matter?-- I never detected any.

Not like dust?-- No, no.

Was it the haze migrating up the roadway?-- It was coming out with the ventilating air, yes.

With the return air?-- With the return air, yes.

There was at that stage no smell associated with the haze or there was a smell associated?-- There was smell in the return, yes.

It could have been a smell generated by the haze, could have been a smell generated by the haze?-- It could have been that's a possibility, yes. Are you indicating that it might have been a smell from the diesel smoke?

Yes?-- No, there wasn't. It did not smell like diesels.

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WIT: KLEASE C C

Were you present on the night of the sealing when the number 5 monitor point was moved or did you see the position to which it had been moved?-- No, there were no monitor points moved when I was there or no-one - you couldn't get in there anyway the seals were up too high.

Too high?-- Yes.

The point that you made to Squires when you spoke to him was merely to relate what you had found not to express an opinion about what should happen?-- Which meeting? The one around smoko or when I met him down to the depth?

Both. On neither occasion did you put forward an opinion about what should happen, all you were doing on each occasion was relating, "I found this. I found this. I found this."?-- That's correct.

You didn't wish to proffer an opinion at that point?-- I wasn't sure what was actually happening, no - what was going on down there.

You certainly didn't think there was any danger evident, did you?-- No, because the ppm was very, very low.

We can see in the report that was done by the end of the shift that you wrote at "other sources of danger", "none apparent", as well, you wouldn't have written that had that not been the true view?-- Are we talking about Saturday's report?

Yes?-- None apparent. There was no danger apparent other than that haze and the smell.

But you didn't think that was so worrisome as to cut short all of your inspections otherwise and go straight up and see Squires. You still went and did other things for over an hour before you went and got him about that?-- Well, I had statutory duties to perform. I had to do them.

I understand that?-- Yes.

Now, this was in reality in your mind a precautionary sealing?-- Yes, yes.

That's all?-- Yes.

Not a sealing under duress?-- No, I don't believe it was, no.

And the sealing procedure in itself went quite well?-- I believe so, yes.

And in accordance with well established procedures? I don't mean to say written procedures, I mean the sequence of the seals being done?-- Yes.

Leaving one intake, one return, doing them simultaneously?-- Yes.

Was well established at the mine?-- Yes.

And you stayed on after the seals were finally finished that night?-- That's correct.

Until the end of that shift and you saw Squires in the morning at the undermanager's office?-- Yes.

And you didn't tell him that you saw any problem? In fact, you told him the reverse, that sealing had gone ahead and there was no problem?-- That's correct, I didn't see any problems.

And that was your view at the time?-- That's correct.

Held on the basis of all your experience in all of the sealings in this mine, your opinion at that time was that there was no problem?-- That's correct.

Just a couple of other things. Now, you told Mr Martin that you had never seen a document dealing with the procedures in relation to methane drainage and methane drainage ranges; is that right?-- Sorry, a document for?

In relation to methane drainage?-- Well, we had our methane drainage publication that we drew up for working with the Boyles drill and that.

In fact, there was quite a detailed written procedure and set of work instructions in relation to methane drainage, wasn't there?-- I would have to -----

Would you like to look at it?-- Yes, thank you.

Tell me when you get it - if you have not seen this document before then fine, but tell me if you are familiar with it?-- I don't recall ever seeing this document.

Perhaps you would like to look at the next document headed, "Gas Drainage Procedure", document 81. That you will probably recognise as part of the underground procedures and work instructions for Moura Mine?-- I haven't seen this document

either.

Thank you, you can hand both of those back. Now, can you just tell me this: in No 2 - no, in the belt road, when you went down into the bottoms how far into the heading did you go inbye the front of the pillar before you got to the bottoms?-- Probably about 15 metres.

15 metres?-- Mmm.

Okay. Thank you. I have nothing further, thank you, Your Worship.

WARDEN: Thank you. Mr Harrison, we may leave yours till tomorrow morning?

MR HARRISON: Thank you, Your Honour.

WARDEN: Would you just stand down and wait out in the precincts of the Court. We will see you shortly.

WITNESS STOOD DOWN

MR CLAIR: Your Worship, there is a matter that I would like to have the Court deal with before we adjourn this afternoon. Over recent weeks there have been discussions between a number of the parties represented at the Bar table about a programme of drilling and inspection at the Moura No 2 Mine and those parties have agreed upon a protocol - it has been described as a borehole protocol - setting out the conditions under which that drilling programme and inspection programme should proceed. The terms of that protocol have been passed onto the Inquiry and it has reached a point where the terms of that protocol is suitable and acceptable to all of the parties. However, there are two matters of considerable concern. That is that the terms of that protocol which deal with the need to keep confidential any of the material, documentary or photographic record, produced as a result of that drilling inspection is one which should be reinforced with the authority of the Court, and, secondly, there is also the need in the view of the parties for the Court to make an order as to non-publication, at least until some further order at some later stage, but an order as to non-publication of any of the material resulting from the inspection programme other than the publication, if it might be called that, necessary amongst the parties themselves and the Inquiry, being publication for the purposes of the Inquiry. Against that background, there with discussions between the parties and Your Worship in chambers, a draft order has been produced which would be an appropriate order to be made by Your Worship exercising the powers of the Warden's Court which Your Worship is empowered to do under the terms of the Act and I have a copy of that draft order here which I will pass up to Your Worship. That draft order provides for the annexure of a copy of the protocols to which I have referred. I have copies of that

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WIT: KLEASE C C

final draft order for the parties and for the members of the panel.

WARDEN: Would you just wait a moment while counsel check the terms of the order and the panel would like to verify it too. I think we are right, thank you.

MR CLAIR: It should, perhaps, Your Worship, be emphasised in Court that the effect of the order in the terms of the draft order would be to prohibit any publication of material produced as a result of the inspection programme other than the publication necessary for the purposes of this Inquiry.

WARDEN: Yes, thank you. I will read the terms of the order into the record, I think that might be appropriate.

MR CLAIR: Okay.

WARDEN: In the circumstances, and with the consent of the Panel, the Court does order:

(1) that drilling and inspection at the Moura No 2 Underground Mine proceed in accordance with the terms of the protocol produced to the Court today, a copy of which is annexed to this order;

(2) that any document, including any photographic record, produced as a result of the drilling and inspection, or the contents of any such document, be kept confidential in terms of the agreement contained in the protocol;

(3) that, until further order, there be no publication of any part of any such document, including any photographic record, or the contents of any such document, other than for the purposes of this Inquiry."

Thank you.

MR CLAIR: Thank you, Your Worship, I have nothing further.

WARDEN: Thank you. Gentlemen, we will adjourn until -----

MR MORRISON: Your Worship, I indicated to the Panel earlier that I would try and provide some technical information. What I may do, rather than detain anyone now, is provide that to Mr Clair and he can deal with it appropriately.

WARDEN: Yes, thank you, and there is another small housekeeping matter. The bookings which we previously made for accommodation and courtrooms in Rockhampton have been cancelled. I feel that since we are set up here now and operating with the full computer set-up, there is no purpose in shifting the Inquiry to any other centre, so we will probably be here for the four weeks.

MR CLAIR: That's four weeks, Your Worship, as from the beginning of this week?

WARDEN: As from the date we commenced, and that's in view of people who may have to make alterations to their flights to and from town. Thank you, that's all we have. 9.30 tomorrow.

THE COURT ADJOURNED AT 4.46 P.M. TILL 9.30 A.M. THE FOLLOWING DAY

WARDEN'S COURT

MR F W WINDRIDGE, Warden and Coroner
MR R J PARKIN, General Manager, Capricorn Coal Pty Ltd
MR P J NEILSON, District Secretary, United Mine Workers' Union
MR C ELLICOTT, Training and Development Officer, Department of
Mineral Resources, New South Wales
PROF F F ROXBOROUGH, Professor of Mining Engineering, School
of Mines, University of New South Wales

IN THE MATTER OF A CORONIAL INQUIRY IN CONJUNCTION WITH
AN INQUIRY (PURSUANT TO SECTION 74 OF THE COAL MINING
ACT 1925) INTO THE NATURE AND CAUSE OF AN ACCIDENT AT
MOURA UNDERGROUND MINE NO 2. ON SUNDAY-MONDAY, 7-8 AUGUST
1994

GLADSTONE

..DATE 20/10/94

..DAY 3

THE COURT RESUMED AT 9.35 A.M.

COLE CAMERON KLEASE, CONTINUING:

MR MORRISON: Without wishing to put fear and trepidation into anyone, I thought of a few more questions.

WARDEN: We will resume from yesterday and you are on your former oath.

MR MARTIN: Mr Klease, yesterday Mr Martin asked you a number of questions about some books and showed them to you and you identified some and couldn't identify others; do you recall that?-- I recall that, yes.

I might ask you to have a look at them again. You identified one which you will now find, I am sure, Mines Rescue and Safety and Gas Detection. See that?-- Yes.

You said you had a copy of that book?-- That's correct.

In your personal possession or have you seen it at the mine as well?-- I can't recall seeing it at the mine. I have got my own copy I have got doing Mines Rescue.

You got it when you were doing Mines Rescue?-- Yes.

I tender that book.

ADMITTED AND MARKED "EXHIBIT 15"

WARDEN: If you require it back for any reason, Mr Martin.

MR MARTIN: I don't expect to need it for a while.

MR MORRISON: You were asked to look at a manual, a manual on Mines Rescue Safety and Gas Detection; is that the blue book in your hand now?-- That one?

Is that the one?-- I was asked to look at it, yes.

And you couldn't identify it?-- No.

We can put that to one side. Actually, no, what I will do is I will tender that for identification so we can identify what it was he was shown.

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WIT: KLEASE C C

MARKED "A" FOR IDENTIFICATION

MR MORRISON: Then you were asked about the transcript. It simply says, "What about the next one?" I think it might be the next one being a SIMTARS magazine because you have said, "I have seen this one laying around." Is that the magazine you have seen before?-- I remember seeing a picture of the long haul, yes.

I tender that document.

ADMITTED AND MARKED "EXHIBIT 16"

MR MORRISON: I think you identified that as being in the training office?-- Possibly, yes.

Your Worship, I don't have a date or a number that would identify that from anything else. All I know is it is a SIMTARS publication.

WARDEN: The publication is marked February/March 1994.

MR MORRISON: Thank you.

You then looked at another SIMTARS magazine, perhaps two of them, and I think you identified those as well?-- No, I don't recall I identified them at all.

Keep those two together and I will tender those for identification. That's two SIMTARS magazines. Could you read out the dates on them for me, please. Mr Klease, perhaps you could do that?-- One is November/December '93 and one is May/June '94.

MARKED "B" FOR IDENTIFICATION

MR MORRISON: The next document you were asked to identify was which? Mining and Ventilation Practice. You identified that document or did you not?-- I can't be sure whether I had seen it before.

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WIT: KLEASE C C

But you think you may have?-- May have, yes. I can't be 100 per cent sure.

I tender that document. Could you read its title for us, please?-- "Mining and Ventilation Practice in Coal Mines Liable to Spontaneous Combustion".

Not the sort of thing you would have in your own private library at home?-- No.

ADMITTED AND MARKED "EXHIBIT 17"

MR MORRISON: The final one I want to ask you about is the folder which you were given and I think you said you hadn't seen that document before?-- No, I have not.

I tender that for identification. Will you read the title, please, a folder entitled?-- "Training of Officials for the Underground Coal Mining Industry".

MARKED "C" FOR IDENTIFICATION

MR MORRISON: I don't need to bother you with the red book and blue book for the moment. Yesterday I was asking you questions about at one stage the 5 South Panel and I asked you about stone dusting. You told us your view about stone dusting; do you recall that?-- Sorry, my what?

I had asked you some questions about stone dusting yesterday; do you recall that?-- Yes.

It was the fact, wasn't it, that in this mine there was a particular additive put in with the water that was used in wheeling roads and so forth in order to suppress dust?-- That's correct.

Called Endo dust?-- I think that was the original solution we used but I'm not sure what the new solution they've got. I think it was under a different name.

There was a dust suppression solution added to the water that was used in the mine?-- That's correct.

Yesterday you also said that you were surprised to hear that men were down the mine when it exploded?-- That's correct.

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WIT: KLEASE C C

I take it from what you said yesterday that that surprise is really based on the perception you had that John Brady had made a ruling?-- That's correct.

Not based on any perception about safety or danger or the practice at No 2, is it?-- No.

In fact, the practice at No 2 was quite the contrary to that, wasn't it, in all the sealings we discussed yesterday from 4 South 4, South 4A, South 4B, all the way through - I took you through them - and the practice is quite contrary to-----?-- In my opinion if there was no problem in the panel when it was sealed, yes, the men kept on working down there.

In fact, you yourself stayed down, didn't you, after the seals were finished?-- That's correct.

Another two and a half maybe close to three hours after it was finally sealed, you were still down near the seals?-- That's correct.

You returned to the surface about 3.40 in the morning?-- Left the section about 3.40.

Did you go to another section to inspect?-- No, I left that section about 3.40 in the morning.

And went to the surface?-- And went to the surface.

You remained on shift to about 6.30 in the morning?-- That's correct.

All during that time there were miners down the mine working on removing equipment around 512?-- No, when I left everyone went up with me.

Went up to have an early shower for the end of the shift?-- No, because they hadn't had any smoko or anything so they went up to crib.

At 6.30 in the morning or thereabouts there was a change over for the day shift?-- That's correct.

On-coming deputies included Bob Newton?-- I am not sure who was on the day shift. I would have to have a look.

Did you speak to on-coming deputies?-- No.

You knew there was a shift coming on?-- Yes.

You were changing over?-- Yes.

You would expect the on-coming deputies to read your report?-- Yes.

Routinely, whether you could remember this precise change, routinely on-coming deputies would speak to out-going deputies?-- If there was a hot seat change over at the coal face, yes.

Even on the surface?-- On the surface, yes, at times.

You certainly spoke to the on-coming manager, Mr Squires?--
That's correct.

And you knew that men were being deployed to go underground?--
Yes.

The shift was proceeding as normal?-- Yes.

I think the on-coming deputies might have been Bob Newton,
Mick Caddell, and Lex Henderson; does that ring a bell with
you?-- I'm not sure who was on.

You are not sure?-- No.

Thank you, Your Worship.

CROSS-EXAMINATION:

MR HARRISON: Could I just ask you a few questions about your
practices generally. When you start a shift as undermanager,
what normally do you read?-- Sorry, I am a deputy not an
undermanager.

As a deputy, sorry, yes. What do you normally read?-- As in
terms of publications?

As you start a shift, say, if we can take you to a situation
like this, where you are doing a couple of shifts on the
weekend, you come in of a morning, you obviously read the
production deputy's report from the previous shift; is that
right?-- That's correct.

Do you normally as a matter of course also read the production
deputy's report for the shift before that for the panel that
you are assigned to?-- Sometimes, yes.

It's not something you do all the time?-- Not all the time,
no.

Yesterday in your evidence you said at one stage how you were
shocked after detecting a haze and this was when Mr Clair was
taking you through about what you observed at number 1 heading
at North cross-cut; do you recall that?-- Yes, that's
correct.

You said something to this effect, "I was pretty worried
because there was nothing. No-one said anything to me about
any smell in the return when I came on shift that morning so
it was a bit of a shock."?-- That's correct.

Mr MacSporran was the next gentleman who questioned you and

took up that same point with you and he asked you whether or not you had seen anything in writing about any problems in the panel on previous shifts; do you recall that?-- Not really, no.

The record shows that what you have said yesterday was, "From memory, I can't recall anything being written."?-- From the previous shift report?

Yes, well, your answer was in terms of - perhaps if I read the whole question and answer to you so I am not confusing anyone. The question, as it appears in the record, is this, "On this occasion you were fairly certain, it seems, that no-one had written anything about any problems in the panel on the previous shifts." The word being plural. Answer: "From memory, I can't recall anything being written." Do you recall that evidence yesterday?-- I was referring to the previous shift.

You were referring only to the production deputy's report from the previous shift?-- That's correct.

Did you at any stage consult the production deputy's report from the shift immediately prior to that?-- No, I didn't.

Have you since become aware of what was contained in the production deputy's report for what's referred to as the Friday afternoon shift completed by Mick Caddell?-- I have not read the report, no. Only from what I have been told.

You have been told since the incident, since the explosion, what was contained in there?-- Not wholly but parts of it, yes.

I have been provided with a copy which suggests that there were some reference in there to a strong tar smell being evident at 10 cross-cut in the top return in 512; is that what you now understand is contained in there?-- That's what I have been told, yes.

Is it the case that you never read that deputy's report when you commenced on the Saturday morning or could it have been that you read it-----?-- No, I never read it.

-----and didn't recall it?-- I read the previous shift deputy's report and signed it.

Yet on some occasions you will actually read the ones ahead as well as the one immediately before your shift, in other words, you will read the one two ahead?-- On occasions, yes.

Did you see Bob Newton at all on the Saturday morning?-- No, I can't recall.

Were you aware that he had done what's the called Saturday night shift which starts Friday night and finishes Saturday morning?-- Yes, I signed his report.

But he had gone, had he, by the time you had got there?--

Yes.

Did you see Mick Caddell at all on the Saturday?-- No, I can't recall seeing him.

The first you became aware of any problem was when you commenced your own shift on the Saturday?-- That's correct.

When you were told that the area was going to be sealed did you consider that that was a sensible course to take, in other words, sealed earlier than what had been originally planned?-- Yes, I probably thought that was probably the best thing to do at the time.

You may recall being questioned by the local mining inspector at the time your statement was being prepared; do you recall that?-- I recall sitting down with the Mines Inspector, yes.

You also recall that various questions and answers were included in the statement which was eventually signed by you?-- Yes.

The very last question and answer that appears on the final page of the statement reads as follows, "In your experience what were the conditions in 512 compared to other sealings at the time of sealing?-- Because of the smell I had a gut feeling that the situation may have been a bit more serious than what our readings were telling us and I was relieved once it was sealed."?-- That's correct.

When you say then "what our readings were telling us" were you referring there in particular to the CO ppm reading?-- That's correct.

And you were careful to take those throughout your shift on the Saturday, weren't you?-- Yes.

Even though they don't appear in your report relative to the second inspection, you nonetheless took CO ppm readings in the second inspection?-- That's correct, that was the third inspection I took a reading, yes.

The third that you did but the one that you referred to is the second in your production report?-- That's correct, yes.

And on that occasion you had satisfied yourself that there hadn't been any apparent rise in CO ppm?-- No, not a significant rise, no.

From your experience and your training, bearing in mind what you had observed or what you had smelled, you were really looking for any sharp increase in CO ppm in terms of indicating whether or not we could have a heating or a potential heating?-- That's correct.

There was nothing in those signs, from what you could see, that detected any such sharp increase?-- That's right.

And did that allay your fears to some extent, or allay your concerns to some extent?-- Yes, but I was - the haze was the thing that sort of threw me.

And you were concerned when you saw the haze?-- That's correct.

And in fairness to you that led you to believe, as you say in that very answer I referred you to, that the situation may have been a bit more serious than what the readings indicated?-- That's correct.

Certainly not so serious as to constitute a source of danger to the men, you thought?-- No, I didn't think it was that bad.

But enough to justify you to think the decision had been made to bring forward the sealing?-- Yes.

Now, to you - in terms of any potential source of danger was concerned, did you mean in that answer that I have referred you to in so far as any danger was concerned you had no worries once the sealing was completed?-- Oh, there's always a danger when it starts going through the explosive range, after a panel has been sealed. That's always a concern.

Your relief at the time the sealing was completed, what was that relief? What were you relieved about?-- Well, there would be no more air going in there to feed - if there was anything in there, there would be no more air going in to feed it.

You left about 6.30 on the Sunday morning; is that right?-- That's correct.

George Ziebell worked that same night shift, didn't he?-- I can't recall.

You can't recall?-- No.

You know him as - is he the secretary of the local branch of the union?-- He is the treasurer.

The treasurer. Were you aware there was a union meeting to be held at 7 a.m. on the Sunday morning?-- No, I can't recall. I know there - I know there was one held after the event, but I can't recall whether I remember them having one or not.

I am talking about the Sunday morning before the explosion?-- I can't recall whether there was going to be a union meeting or not. I know there was one after the event. I heard people talking about having a union meeting, yes, monthly meeting.

Now, you spoke before of the explosive range. It has been your experience, has it not, that other sealed off sections at No 2 have gone through the explosive range at different

times?-- That's correct.

Particularly in one area where you had some familiarity, in the 4 South Level?-- Yes.

401/402?-- That's correct.

And 4 South B?-- That's correct.

And have you had any particular experience with any other sealed areas that have gone through the explosive range type of sealing?-- Sorry, would you repeat that?

Have you had any particular experience with other areas of the No 2 Mine where that has happened?-- Over the north side of the mine.

But going back to the ones I mentioned where you had particular experience, the men still worked underground at the time those particular sealed off sections went through the explosive range?-- That's correct.

And certainly - I am probably rehashing what has already been done, you certainly weren't aware of any policy to the effect they shouldn't?-- If there was no cause for concern in behind the sealed areas as in, say, a heating, for instance, no, there was - we stayed down the mine and kept working.

Now, as of when the sealing was completed, did you have any concern at all as to whether or not the men should be down in the mine when 512 went through the explosive range?-- Sorry, could you repeat that again, please?

Perhaps I will take you back one step further. Did you expect 512, from what you knew of that area of the mine, to go through the explosive range at some time after it was sealed?-- Yes, I expected it to, yes.

Did you have any concerns at all for the safety of the men in terms of any men being underground at such time as 512 went through the explosive range?-- It was my view that as it got closer to the explosive range they would have brought the men out.

Did you express that view to anyone, either before or after the sealing?-- No, I did not.

You thought that that is what would happen?-- That's correct.

Based on what you had told us yesterday about what you felt had happened with Mr Brady at No 4?-- That's correct. No, not with No 4, with what had previously happened in 1986 down the 5 North West.

You see, were you familiar with what happened in 1986 down at 5 North West?-- I can vividly recall it, yes.

Were there concerns there with very high CO ppm readings before the sealing?-- I can't remember the readings, but I

know it jumped more than - I know the readings jumped and did cause concern, yes.

Now, on that occasion were the CO ppm readings substantially higher than what was detected here before the sealing?-- Yes, they were.

Are we talking about well in excess of 10 ppm?-- Yes, I can't recall the readings, but yes.

Are we talking about 30, 40, 50?-- I remember seeing some figures like that, yes.

Did that to you, comparing the two now, perhaps, is a better way of putting it - does that to you appear to be a far more serious situation than what appeared to be the case here?-- That's correct.

You certainly didn't think that you were faced with a situation here which on the face of it was equivalent in seriousness to what appeared to be the problem at 5 North West in 1986?-- That's correct, yes.

You assumed, did you, that someone would do something about the men not being underground when 512 went through the explosive range?-- Did I assume someone else would take responsibility?

Did you assume someone else would make a decision they shouldn't be underground?-- Yes.

And you said before you based that on what happened in 5 North West?-- Basically, yes.

Yet the signs, you would agree, did not appear to be anywhere near as serious as what they appeared to be with 5 North West?-- That would be correct, yes.

Were you concerned at any time on that Sunday morning, either before or even after you finished work, that men would be underground when 512 went through the explosive range and that there would be some source of danger to those men?-- After I had left work?

Either before or after? Certainly after the sealing, but before you left work or after you left work?-- After it was sealed I honestly thought that would be the end of it.

Because if you had any such concern at all you would have told someone, wouldn't you?-- That is correct.

You would have conveyed that message either in writing or personally to on-coming deputies?-- Yes, I would have.

You saw Michael Squires on the Sunday morning, didn't you?-- That's correct.

You saw him at about 6.30; would that be right?-- Yeah, probably around about that time, yes.

Now, you never expressed to Michael any belief that no-one should be underground when 512 went through the explosive range?-- I don't recall saying anything to him, no.

You thought at the time that the sealing would be effective in the sense that there would be no more supply of oxygen and even if there is something unusual there you felt that the seeing would be sufficient to resolve the problem?-- That's correct.

Certainly you never even had the slightest suspicion, did you, by the time you finished on Sunday morning that there would be any source of danger to any other men working in the mine later in 512?-- No, I thought that would be the end of it, yes.

Thank you, I have nothing further.

RE-EXAMINATION:

MR CLAIR: Just a few questions. Mr Klease, you mentioned in the course of your evidence that when you looked down one and possibly two of the headings on your initial inspection that you saw an area where there had been a fall?-- That's correct.

Are you able to say anything about the apparent size of the fall that you observed?-- I didn't think it was a very big fall, but I can't be sure.

This was in an area where bottoms had been taken out?-- I believe so, yes.

Now, when there is a fall - what you refer to as a fall, that would be in an area where it would seem there has been a fall of sandstone from the roof of the mine; is that correct?-- That's correct.

That would naturally lead to a higher roof in that area?-- Yes.

Does there develop when you have a fall such as that an increasing cavernous effect within those areas of the mine in the goaf area?-- There would be a cavity up there, yes.

You have referred also in your evidence to feeling heat coming off the goaf -----?-- That's correct.

To some extent. Now, if, in fact, there was a heating of some kind with warm air being produced, is it the case that the warm air would gravitate towards the top of the mine?-- Yes.

Towards the top of the goaf area?-- Yes.

So that initially the heat would gather in that area and then when that area fills with warm air you would then have some of the warm air moving into the roadways and into the lower roof sections; is that so?-- That would be right, yes.

Okay. So that there could be an accumulation of quite a bit of warm air - depending on the size of the roof in the goaf air, quite a bit of warm air before that warmth comes down into those sections where the roof is lower?-- That's possible, yes.

And that would depend to some extent on the areas of extraction and the height of the roof, as to how much warm air can accumulate up in the cavity areas with the higher roofs than the roadways?-- Yes.

Now, you were asked some questions about earlier deputies' reports and it was mentioned to you by Mr Harrison that, in fact, there was a report which Mr Caddell had completed on the Friday afternoon shift in which he noted these words, "A strong tar smell at 10 cross-cut." Now, it would seem that was from the shift not immediately prior to yours on the Saturday morning, but prior to that?-- That's correct, yes.

You didn't ever see that report of Mr Caddell?-- No.

Did anybody mention to you that any concern had been expressed by Mr Caddell on the Friday afternoon?-- No, not when I came on shift.

Are you able to say from your knowledge of the systems for communications between deputies whether there was any system in place to make a deputy in the situation you are in, that is a shift on the Saturday morning, aware of the fact that concern had been expressed by a deputy the previous afternoon about a strong tar smell or concern about any other particular safety aspect of the section?-- Yes, I believe that if there was some sort of problem it would be channelled down through the system.

Yes, but listen to my question: are you able to say whether there was any system in place to ensure that a deputy, for instance, on a Saturday morning shift was aware of concern expressed by a deputy on a Friday afternoon shift?-- I can't -----

Is there any system in place for that?-- No, I can't recall any system.

Did it just depend on good fortune as to whether you became aware of that?-- I wouldn't say "good fortune", I would - depends on the deputy that follows him.

Right. Now, in this case the deputy that followed him is Mr Newton and, as I understand it, you read Mr Newton's report on the Saturday morning?-- Correct.

As you must as the oncoming deputy. I think you signed that?-- Yes.

But you didn't actually speak to Mr Newton?-- No.

Now, would it normally be the case that you would speak with an outgoing deputy?-- On weekends not very often, no, you wouldn't.

Why is that?-- Because the undermanager used to come to work around about 25 past 6, half past 6, and take the reports from the deputies and receive the information from them and then usually let them go, and I used to get to work probably around about 10 to 7 and they would be gone.

They would be gone. Well, would you speak to the undermanager when you arrived?-- Yes.

Was the system then in some way dependent on what that deputy might mention - this is on the weekends, at least?-- Yes.

What that deputy might mention to the undermanager and what the undermanager might mention to you?-- That's correct.

So, if there was something of importance that wasn't included in the deputy's written report which you must see and sign, then to the extent that it depended on what he might mention to the deputy - to the undermanager and what the undermanager might mention to you, at least on weekends, there was some element of chance about the extent of communication between the outgoing deputy and the oncoming deputy; is that right?-- That's correct, yes.

Okay. Well, now, you mentioned again in the course of your evidence that the reason that you felt some relief at the fact that the section was sealed, against the background that you had felt the heat and seen the shimmy and smelt the strong tar smell, was that once the section was sealed then that would, I think you way the put it, cut off the flow of air which was feeding the heating; is that right?-- Well, possible heating. I wasn't 100 per cent sure what was going on in there either.

I am sorry, to be accurate I should say the "possible heating". At least, the thing that you were concerned about as a result of those features I mentioned, that is the heat shimmy, the tarry smell, the benzene smell, and the warmth that you had felt coming off the goaf?-- That's correct, yes.

Whatever that was, whether it was a possible heating or a heating, and that would be a matter of degree, no doubt, your feeling was that once the air flow was cut off then that would cut off the - what you might call the fuel?-- The fuel, yes.

For that heating?-- That's correct.

Or suspected heating?-- Suspected heating, yes.

Let's assume then for a moment that there was something which might be described as a heating, whatever degree that that requires. Then once the seals are in place and the air flow is cut off would there be a period of time over which that

heating died down because there is no more fuel; is that so?--
That's correct, yes.

I mean, it wouldn't - it wouldn't die out immediately the
seals go into place, would it?-- No.

Because there is still a certain amount of oxygen -----?--
That's correct, yes.

Or other fuel which would feed the heeding?-- Yes.

So, there is a period of time then over which the heating is
being extinguished?-- Being starved of oxygen, yes.

Being starved of oxygen. It would be very difficult, of
course, to put any kind of time limit on that; is that so?--
I believe so, yes.

Okay. Now, also after the sealing is complete there is a
period of time during which the gases within the section - a
combination of gases within the section moves into the
explosive range?-- That's correct.

Is that so? It is, perhaps, depending on the size of the
panel, an item that can be predicted to some extent, at least,
is that right, in terms of the amount of time that it might
take -----?-- Yes, and how much -----

To move into the explosive range?-- And how much has been
produced and the size, yes.

But anyway, there is a period of time, nevertheless, whatever it might be, during which the gases move into the explosive range?-- That's correct, yes.

So that you have got two processes going on at the same time. One is the extinguishing of the heating, if we, for the moment, assume there was a heating?-- Mmm.

And the other is the build-up of gases to the explosive range?-- That's correct.

Now, is it the case that if the second process in terms of time beats the first, that is, that the gases move into the explosive range before the heating is extinguished, then you have got what you need for an explosion; is that right?-----

MR MORRISON: I really object to this line of questioning. I appreciate Mr Clair is here as counsel assisting the Inquiry and I know that he has got a job to do to assist the Inquiry, but this line of questioning is appropriate for an expert in spontaneous combustion and goafs and sealed ventilation and all the rest of it, not really for a deputy who has been someone who has been at pains during this cross-examination process to demonstrate he is not an expert. I am content if the questioning is based simply on this man's understanding but not as though this is the truth scientifically. He is not an expert.

WARDEN: Thank you, Mr Clair?

MR CLAIR: Your Worship, many questions have been asked of this witness as to his concerns, perception of danger. All of these things are relevant to that, and the questions are asked on the basis that it's his view of what occurred. I don't propose to be relying on this as what might be called expert evidence beyond the fact that it's evidence given by a man who has been asked quite a number of questions along these lines by other counsel and has been asked quite a number of questions about his understanding. In my submission, they are questions that are no different to many of the other questions that have been asked of him and he ought to be entitled to answer.

WARDEN: Yes, I will allow the questions on that basis then, that he is not an expert.

MR CLAIR: Thank you, Your Worship.

So that the position then - just to come back to what you were saying, Mr Klease, the position then is if the second process, as it were, wins the race, that is, that the gases move into the explosive range before the heating is extinguished, you have the two items that are required in order to create an explosion, that is, explosive gas mixture plus a source of ignition; is that right?-- If all the three points of the triangle are there, yes, that's possible.

Thank you. Now, you did say at one point in your evidence - and correct me if this is not correct - but you did say at one

point that it was your view that as it got close to the explosive range, that is, the gases within the panel, as it got close to the explosive range they would bring the men out, and you said that was based on what happened with 5 North-west in 1986?-- That's correct, yes.

And that was your view at the time, that is, during this weekend, when you finished your shift, for instance, early on the Sunday morning?-- No, that thought never sort of entered my mind, but after I received the phone call that Sunday night, I recalled it then.

I see. That explains then why you never expressed to Mr Squires any belief, as you have told us, that no-one should be underground when the section went through the explosive range?-- That would be right, yes.

I have no further questions myself, Your Worship.

WARDEN: Thank you. Do you have anything arising out of that, or would you rather wait for the panel?

MR MORRISON: Yes, I will defer it. I do have one question in mind but it might be covered by the panel, so I will wait, if that's possible.

WARDEN: Mr Parkin?

EXAMINATION:

MR PARKIN: Mr Klease, just two small questions basically for some clarification. Are you satisfied with the manager's support rules with regard to coal ribs, especially where ramping occurs?-- Yes, I believe management had a good support system there, yes.

So there is no problems in terms of rib support at all, no concerns at all?-- No, management had taken steps so that if there was a rib fall, that no-one would get hurt, and that's where they brought in the ramping rule, and no-one would go past the three metre mark.

I guess as a mines rescue member, have mines rescue teams been involved with stoppings at Moura No 2?-- Sorry, sir, the microphone was -----

Sorry, as a mines rescue member, have mines rescue teams been involved in erecting stoppings at Moura No 2 Mine?-- Yes, they have.

What, for training purposes?-- For training purposes and during the '86 heating.

Thank you.

EXAMINATION:

MR NEILSON: Just a few questions, Mr Klease. No 2 Mine, would it have been classified as a gassy mine?-- Yes, I believe so.

And the seam there was a seam liable to spontaneous combustion?-- Yes, from our previous heating, yes.

There have been quite extensive programs of gas drainage in No 2 Mine; is that correct?-- That's correct.

And one of the factors that arise from areas where gas drainage have taken place is that you end up with a more dusty situation; is that correct?-- That's correct, yes.

Yesterday during Mr Morrison's examination of you he referred you to a number of training programs that have been taking place at the mine?-- Yes.

And he asked you if you took part in a training program on 16 June 1994 under the heading of potential hazards, spontaneous combustion, mine gases, dusts and other ignition sources. You responded to that by saying that you don't recall?-- I can't recall it, no.

Don't you think that given the content of such a training course and given the hazards associated with No 2 Mine, that if you had attended that course you would remember?-- That's possible, yes, but I can't recall it.

Well, I think it's fairly important that you give it some consideration to enable us to establish whether in fact you, as a deputy, and in Mr Morrison's view a highly trained deputy, in fact took part in such an important training program?-- I would have to see the content of the course to refresh my memory.

Is that available to us?

MR MORRISON: I will take steps to find out about that. If I can just make one point that may assist you in your questioning? I have the training logs, the training records, and the technical data that supported the course. I will make steps to find that now. I don't know how long that will take, though. It may be it is out at the mine.

MR NEILSON: Thank you, Mr Klease.

EXAMINATION:

PROF ROXBOROUGH: Mr Klease, could I ask you to look at the mine plan on the left of the whiteboard? I don't know if you can see it clearly from there. Can I draw your attention to a number of radiating red lines which seem to start - where are we - at about the No 1 heading in 512 panel and the No 1 heading of 510 panel? Do you see the lines?-- Those lines there?

Yes?-- Yes.

Could you tell us what they depict, what they are intended to represent?-- I would say the gas drainage lines.

The gas drainage lines. And they intersect panel 512 to quite a deep extent?-- Yes.

Do you know anything about those holes, what diameter they are, for example?-- Offhand, no, I couldn't.

Do you know if there are any measures made after those holes have been used for presumably pre-draining of the area?-- Sorry, could you repeat that again?

Sorry. The holes are drilled into that area to pre-drain gas from the area?-- That's correct, yes.

And the holes, when they have completed that task, are they sealed?-- After the gas is drained?

Yes?-- I believe the holes were sealed off up here when they started the extraction sequence.

Thank you.

EXAMINATION:

MR ELLICOTT: There have been a lot of areas of coal developed and extracted at No 2 Mine, haven't there?-- That's correct, yes.

And a fairly wide variety of extraction sequences and methods have been used in those areas; is that so?-- That's correct, yes.

So, you could say that the development of an area, the extraction of the coal and the sealing of that area was a very commonplace activity in the mine, it was a routine activity?-- Yes.

Okay. Apart from 512 Panel can you recall any other instance where a panel sealing was brought forward from schedule

XN: PANEL

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because of some concern?-- No, not offhand, no, I can't recall that.

Thank you.

WARDEN: Yes, Mr Morrison, do you have anything else?

MR MORRISON: Yes, there are a couple of things. I didn't quite hear the questions asked by Professor Roxborough, but I think they were directed to whether the methane drainage holes had been plugged.

PROF ROXBOROUGH: Yes.

FURTHER CROSS-EXAMINATION:

MR MORRISON: Mr Klease, is it the case that methane drainage holes which extended - and if we can take the section through 5 South into where 512 was to be developed, and from the junction of 510 and 5 South into where 512 was to be developed - those holes were eventually plugged by pushing in a section of cloth into them and then pumping in several feet of concrete?-- I'm not sure how they were plugged.

You didn't take part in it?-- I never took part in it, no.

All right. Now, I will just show you this document, please, and I am just going to circle a name for you to have a look at. I am afraid the photocopy is not really good but you may be, nonetheless, able to identify your signature on the attendance record for the training on 16 and 17 June 1994 conducted by Mr Barraclough?-- Yes, it's my signature.

That says you attended, doesn't it?-- That's correct.

And although I gave you the heading of the course as - I think I read out the full name - spontaneous combustion down to other ignition sources, perhaps you might remember it if I tell you that Mr Barraclough was concentrating on cable flashes?-- Yes, I remember the cable flashes. I don't remember anything about spontaneous combustion.

On those days?-- I can't be sure if it was those days, but if my signature is there, I must have been there, yes.

Thank you, hand that back. Mr Klease, just to finalise the point about the training so you don't think I am putting you under any unfair situation. I am not suggesting spontaneous combustion was the subject of that particular course?-- That's the way it come across to me.

I don't think I suggested that to you because when I asked you the question under the heading and you said you couldn't remember attending, I asked you if it could have been to deal with ignition sources generally or other ignition sources

rather than spontaneous combustion. You still couldn't remember it at that stage. So, I am not suggesting it was mentioned at that meeting, but that was the heading in the log which I read to you. Now, do you wish to make any comment about that? You do recall now going to that meeting?-- I recall going to meetings talking about cable flashes and potential hazards associated with it but not spontaneous combustion.

And the dates you now accept as a result of seeing your signature on the attendance sheet?-- That's correct.

For the panel's information, document 64A in the Inspector's document are the minutes dealing with those meetings.

WARDEN: Yes, thank you.

MR NEILSON: Mr Morrison, for the purpose of the record, can we now have a proper description from you of that particular course on the 16th, I think it was?

MR MORRISON: It's contained in document 64A in the minutes. I don't know whether you would call it a seminar. It's a safety meeting, mass safety meeting, held in relation to cable damage and cable flashes, I think is the correct terminology for the content of the particular courses.

MR NEILSON: For the purpose of the record then, what we are saying, there was no such course dealing with spontaneous combustion, mine gases, dusts?

MR MORRISON: No, it dealt with cable flashes and other ignition sources. The heading in the training log is the one I read out yesterday, which is why I asked Mr Klease the first question and then about other ignition sources.

MR NEILSON: That's clarified that.

WARDEN: Mr Martin?

MR MARTIN: I have something, Your Worship.

RE-EXAMINATION:

MR MARTIN: Might the meeting you acknowledge you were at on 16 or 17 June have been no more than a safety meeting?-- Yes.

And what period of time was involved in a safety meeting of the kind Mr Morrison has described on one of those days?-- They varied in length.

Well, what's the shortest period you remember?-- Probably an hour, hour and a quarter.

RXN: MR MARTIN

WIT: KLEASE C C

The longest?-- Up to three hours.

Just look at this document, would you, please, and see whether it triggers your memory in any respect?-- Yes, I can recall this, mainly from that diagram there.

Well, now you recall having been at a meeting on the 16th or the 17th, one of the days or both of the days?-- It would have only been one of the days, I would say.

Do you have any better recollection now of the period of time it took?-- No, I couldn't be sure how long that meeting took.

Could I have that document back? That is part of the exhibit record, Your Worship.

WARDEN: Thank you. No need to tender it.

MR MARTIN: As Mr Morrison said, 64A.

WARDEN: Back to the panel again. Mr Neilson, thank you?

EXAMINATION:

MR NEILSON: Yes, thank you.

Mr Klease, now that we have clarified that other matter, have you at any time been given any formal training in relation to spontaneous combustion, for example?-- No formal training. Only what I have learnt through mines rescue.

But no formal training at the mine?-- No formal training. Not that I can recall, no.

What in your view in a mine with the characteristics of No 2

Mine would be the most potentially dangerous circumstance that you could come across?-- Probably a high accumulation of CH₄.

And under what circumstances would that then be dangerous?-- Well, if it's displaced oxygen and you walk into it or if it's in an explosive mixture.

But you would need an ignition source?-- That is correct.

What would be the most likely ignition source that you would experience in or could experience in a mine with the characteristics that were described in No 2 Mine?-- Whether a machine could ignite the gas, I couldn't be 100 per cent sure, but that's about the only thing I could think of.

But spontaneous combustion could be another source?-- Yes, it could be, yes.

Given that number of heatings sealed in No 2 Mine it is certainly not out of the question?-- No.

Back to my original question then: talking about what would be the most dangerous set of circumstances, it could be a combination of those factors resulting from spontaneous combustion?-- Yes, it's possible.

Mr Morrison related to the training that takes place in a mine and I think you agreed that there was a high concentration on training in regard to safety at the mine?-- Yes, the company made that commitment, yes.

He referred then to courses such as first aid, emergency procedures and you agreed that you did a first aid course. You said that you couldn't recall the course on emergency procedures have you had any further thoughts on that, whether you may have or not?-- I know we never had an actual - a proper emergency plan drawn up. The training officer had drawn a plan up and that was brought up at the safety meeting as a topic. I'm not sure whether it was a special meeting called specifically to handle that topic or whether it was brought up in relation with other topics.

These safety meetings that you referred to how are they conducted? Are they an information-type meeting or are they just a general discussion tool box type meeting or how are they conducted?-- Information with interaction between the staff and the miners and electricians and fitters.

I'm just trying to get to what they really are. They would be more of what we refer to as a tool box talk than a constructed seminar to highlight certain areas of safety and be more informative?-- That's correct.

They are more of a tool box sort of thing, are they?-- Yes.

He then mentioned on 10 April 1990 a fire fighting course which you said that you could not recall attending?-- I do recall doing a practical and theory on fire fighting with the

fire officer at the time, yes.

23 March, a course on traffic rules which you agreed you attended?-- Yes.

On 17 June 1994 a course on the mine methods to be adopted for 512 panel?-- Yes.

On 17 June 1994 a course on the extraction method to be adopted in 512, I think that he was relating to the same one. On 13 June 1993 a course on environmental hazards. You did not recall that?-- I can't recall that, no.

On 20 June 1993, isolation procedures, and they were electrical isolation procedures and you did not recall that?-- I can't recall that, no, not off-hand.

And there were a number of others and I won't go right through the whole list, but what I want to ask you is that if safety is considered as highly as you have agreed that it is, why is it not then that the company would really concentrate on developing safety information sessions on probably the most hazard circumstance that could arise at that mine and that is related to spontaneous combustion?-- I couldn't comment.

Even though they have a high intensity in safety training, they have omitted to go to the very core or the very heart of what potentially could be the most dangerous situation?-- Yes.

Thank you.

FURTHER CROSS-EXAMINATION:

MR MORRISON: I want to ask a question arising out of that.

Mr Klease, you never adopted the statement that spon com was the most hazardous situation in the mine, did you? When Mr Nielson asked you that question, you identified mechanical problems with the machinery as the most that you could think of, didn't you?-- Sorry, just now?

Yes, when Mr Nielson asked what you could identify as the most hazard situation in the high methane, you didn't identify spon com, did you?-- No.

No. So, you are not adopting that as being the most hazardous situation in the mine, are you?-- Not in general, no.

No. Thank you?-- But the mechanical machinery I was talking about is if a machine drove into an explosive range of gas, not mechanical apparatus as such.

WARDEN: Thank you.

MR CLAIR: Could the witness be stood down, please, Your Worship.

WARDEN: Thank you, you may stand down. You are excused.

WITNESS EXCUSED

MR CLAIR: I call Douglas Shane Stampa.

WARDEN: Just for a reference have you got a document number reference for his statement?

MR CLAIR: His statement hasn't been tendered but we will provide copies of that to members of the panel, Your Worship. I might indicate that a draft was taken and had been provided to the other parties and to the panel but that draft of his statement is document 38, but I will distribute at this stage the final signed copy, Your Worship. Together with that statement is other material that Mr Stampa will refer to in the course of his evidence, Your Worship.

DOUGLAS SHANE STAMPA, SWORN AND EXAMINED:

MR CLAIR: Your full name is Douglas Shane Stampa; is that correct?-- Yes.

Mr Stampa, you are employed by Tecrete Industries; is that so?-- Yes.

You commenced employment with Tecrete in 1992?-- Yes.

You, in fact, did some work at Moura this year initially in April and then in August; is that right?-- Yes.

You have made a statement in relation to the work that you did at Moura No 2 Mine?-- Yes.

Have a look at this, Mr Stampa, the document that's on the top of that bundle of documents that I have handed to you and that's a copy of your statement; is that right?-- Yes.

First four pages, in fact; is that right?-- Yes.

You in your role with Tecrete Industries are involved in the construction of ventilation systems in mines and the training of others in the construction of those ventilation systems; is that so?-- Yes.

You have been working in underground mines for about two years with Tecrete?-- Yep.

And your first work at Moura No 2 Mine was in April of this year; is that so?-- Yes.

When you came to the mine in April this year did you work on erecting some prep seals at the 4 South Level?-- In April?

In April of this year?-- 512.

And at 512?-- No, just the prep seals.

Just 512?-- Yep.

Okay. So, that was the extent of your involvement in April?-- Yes.

And we will come back to that in due course. Then you came back to Moura No 2 on 2 August of 1994; is that so?-- Yes.

When you arrived on 2 August where did you commence to do your work?-- Prep seals at 4 South.

Did you subsequently do some work at the 512 Panel?-- On Saturday, the 6th, yeah.

Before we come to Saturday, 6 August, the person who came with

XN: MR CLAIR

WIT: STAMPA D S

you to Moura on that occasion, being another Tecrete employee, was Robert Parker; is that right?-- Yes.

Was he working with you at the No 2 Mine at Moura during that same week?-- Yes.

During the time that you were doing the prep seals at 4 South from the 2nd through until Saturday, 6 August, was Mr Parker working there at 4 South with you the whole time or was he doing some other work within the mine?-- 4 South, yes.

Was he working with you at 4 South the whole of the time or did you alternate or shifts?-- Well, yeah, he done dog watch; I done day work.

You say that you started your work at 5.12 on Saturday, 6 August. What time did you commence work on that day?-- 7 a.m., 6 a.m.

Where did you first do your work on that day?-- 4 South Level.

Whilst you were working at 4 South Level that day did something occur about midday?-- Yep.

What was that?-- We had to go to 512 and seal it off.

What led you to go going to 512 to seal it off? What lead to that? Did you just go there of your own accord or did you have some conversations with somebody?-- Had some conversations.

Who was that with?-- Michael Squires.

What was the first conversation that you had with him; do you remember that?-- Yeah, I had to work back to seal 512.

Where were you when you had that conversation with him?-- 4 South.

Was that the conversation about midday?-- Yep.

What happened after that?-----

MR MORRISON: Your Worship, could I ask Mr Clair if he wouldn't mind taking the witness through without reading from his statement. He can have some genuine memory first and then he can refresh his memory if he needs to. All he is doing is reading his statement.

MR CLAIR: Mr Stampa, if you can give what you can about what occurred on that day from your recollection of events. It is important that you do so. I see that you have your statement there, just put that to one side. You may at some subsequent time seek to refresh your memory from your statement, but if you can exhaust your memory first of all. You have mentioned a conversation with Mr Squires at 12 midday. You were at 4 South. Can you tell the Court what happened after that?-- I was told about 1 o'clock.

From whom?-- Yep.

Mr Squires?-- Yep.

You were still at 4 South Level?-- That's right.

What happened at that stage?-- I had to go straight over 512, get me gear over there.

What caused you to go over to 512?-- Heating.

Sorry?-- Heating.

You see, if you could just tell us what occurred, if there was some conversation you tell us about the conversation, you see. I just would like you to give as much detail as you can from your own memory?-- Just had to get me gear over there straight away to start sealing up, that's it.

Is that the conversation you are referring to, Mr Stampa?-----

MR HARRISON: Sorry, Your Worship. I didn't hear the last part of that answer. I understand he said some words after "get your gear straight over here", but I didn't understand what.

WARDEN: We will try and adjust that microphone so the people at the other end can get some more amplification and hear you, Mr Stampa.

MR CLAIR: Mr Stampa, if you could just relax and just apply your mind to what occurred on that day?-----

MR MORRISON: Sorry, Mr Clair, I don't mean to - I'm not objecting. I understand that what Mr Harrison wants to know is what he said. Can we hear from the stenographer and see if he agrees with what he actually said in that answer before we have another go at it. I would like to know what the actual answer was because we were having a disagreement across the table as to what he said. Let's hear what the stenographer picked up.

RELEVANT PASSAGE OF SHORTHAND NOTES READ

MR CLAIR: Just can we come back to what I was asking you, Mr Stampa, if you could just recount what occurred, what were the conversations you had and then what you did. You mentioned that Mr Squires came to where you were at 4 South and you subsequently went to 512; that's what you have told us so far. Can you tell us what conversations occurred, what it was that led you going to 512, just take your time?--

Well, there was a problem in 512 so I had to seal it off, that's it.

How did you learn that?-- I was told.

Who told you?-- Mike Squires.

Can you remember what words he used as best you can?-- Just heating up, that's it.

Are they words you are attributing to him?-- Yep, that is what was said to me.

Well, if you can attempt to give the conversation in the sense that he said -----?-- Well, there wasn't much conversation. It was just, "Get over there."

I appreciate that, Mr Stampa. If you can attempt to give it in what might be called the first person; that is, "He said such and such.", "i said such and such.", as best you can recall?-- Well, I said, "Yes."

What did he say to you before that?-- "I would like you to get your gear over to 512 and start sealing it off."

All right. Was there any further conversation then?-- No.

Now, where was Mr Parker at this stage? Was he there with you?-- He was at the barracks.

Was there any conversation in relation to Mr Parker?-- Not with me.

Now, at what stage were you with the 4 South prep seals at that stage?-- Yes.

But at what stage were you? How much had you done and how much remained to be done of the 4 South seals - prep seals?-- Well, it was one batch I finished and a seal at 5 South level.

All right. And was there any conversation about that?-- No, I just had to stop what I was doing there.

All right. Okay. Now, did Mr Squires have any conversation with you about Mr Parker at that point?-- Yes, he said he was going to get Robert in.

And did you have anything to say about where Robert was?-- Yeah, I said, "Better hurry up, he's going to have a game of bowls."

And any other conversation that you remember?-- No.

Now, did you go then to 512 section?-- Yes.

What was the time, do you recall?-- I went over there about 1 o'clock, set me gear up.

And whereabouts did you go at 512?-- No 1 seal.

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No 1 seal was at what end of the panel, the top end of the panel or the bottom end?-- Bottom.

Just have a look at the plan there. Are you able to - perhaps if you want to go and have a look at the other plan that is up on the whiteboard. Are you able to indicate to us which roadway you went to at 512? Get up and move over there if you like or use that pointer. It may be a bit hard for you to see from where you are sitting?-- Where are we?

Well -----

WARDEN: Don't - perhaps Mr Bancroft could help.

MR CLAIR: Mr Stampa is probably more familiar with things by looking at the model than the plan, Your Worship, and while it might -----

WARDEN: Perhaps the model might help.

MR CLAIR: It might be difficult to just pick that model up. Your Worship, if the model can be tipped, up that's all I was asking him. Can the screen be put back and the model tipped up? The witness can have a look at the model. For the record, Your Worship, it is Exhibit 14 that the witness is looking at.

Now, Mr Stampa, you see the model there? That's the model you looked at previously; is that right?-- Yep.

And you see that it is a three dimensional model. You see the top end of the panel is, in fact, towards the top of the model, that is 512 - 512 panel is the one at the bottom?-- So, where is No 1 seal?

Yes, that's right?-- Well, I would have gone down to here.

MR MORRISON: I can't see through him. Can you tell me where he is pointing?

MR BANCROFT: He is pointing at the bottom heading.

MR CLAIR: You say you went to -----?-- Here.

That's at the bottom of the panel?-- Yep.

And what did you see there?-- Just a haze and smelled something.

Before you go onto that, was that seal already in place in that roadway?-- It was prep sealed, yep.

It was prep sealed?-- Yes.

But not already sealed?-- No.

Before you go on, Mr Stampa, because we don't want to be at cross-purposes, you see, in your evidence you referred to

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No 1 Heading; is that right?-- Yes.

That's where you went?-- Yes.

And was that No 1 Heading identified also on a plan that you had seen previously when you had come up and done the prep seals in 512 Panel?-- Yes.

Righto. Well, perhaps if you come back to your chair. I don't want to proceed if we are going to be at cross-purposes through your evidence, you see? Get back to your chair and have a look behind your statement in that bundle of documents and you will see a plan. Do you see that plan there?-- Yes.

Now, that has got roadways numbered from 1 through to 5 -----

I might mention that document is behind the statement in the bundle of documents that was handed out this morning, Your Worship.

That has got roadways numbered 1 to 5; is that right?-- Yes.

And the roadway you went to is the one that was numbered 1 on that plan; is that right?-- That's right.

When you went over to the 512 section on this day; is that so?-- Yes.

Okay. Now, you say there was a prep seal in place?-- Yes.

And was there anybody with you at that stage?-- A deputy and two mine workers.

Do you remember the deputy's name?-- Cole Klease.

Now, I did interrupt you when you began to give your answer before. What else did you notice or observe when you went to that No 1 return?-- I thought it was very hot and there was a smell there that I have never smelt underground before.

And what else?-- And there was a haze in the light - haze in the air.

Right. Now, did you have any conversation with the deputy at that point?-- He just said, "Can you smell it?" I said, "Yes, I can."

Now, I notice you are looking down - you are actually looking at the plan that was referred to; is that right?-- Yes.

Okay. Right. Did you have any further conversation with the deputy then?-- No.

Was there any discussion about the sealing?-- No.

Did you know what you were to do?-- Yes.

And was there an arrangement that you were to meet Mr Parker?-- Yes.

Okay. Well, did you go to the surface and meet Mr Parker?-- Yes.

And did you then return to the 512 Panel?-- Yes.

What time was it that you met Mr Parker at the surface, do you recall that?-- 3 o'clock.

Now, before you went back down to 512 with Mr Parker was there some further activity up on the surface?-- Yes.

And what was that?-- Well, we all sat down and Michael Squires talked to us all.

What was said?-- Just we have got to seal 512 before we can go home and that's all I remember about that one.

Okay. Now, are you able to remember who was present on that occasion?-- No.

Well, there was yourself, Robert Parker was with you?-- Yes.

Any miners at all?-- Yes.

There was Mr Squires?-- Yes, and George Mason.

And George Mason. Mmm. Now, you and Mr Parker and the miners went down to 512 section. What time did you arrive there?-- Probably 3.30.

And did you start work there on putting in the final seals?-- Yes.

And did that work continue through until the early hours of the next morning?-- Yes.

Do you remember just when you finished your work there?-- Yeah.

What time was that?-- Probably about - around midnight.

Okay. Now, can you tell the Court just what it was that you did during that shift?-- Well, I sealed No 3 and No 2. Well, just the finishing touches, Robert Parker had to finish off on No 2.

So, you left the finishing touches for Robert Parker on No 2?-- Yes.

And you did the whole of No 3; is that right?-- That's right.

Now, the processes involved, Mr Stampa, in doing that final seal, the prep seal was already in place; is that so?-- That's right.

What would you do then as a first step for filling in - to do the final seal?-- Put your mesh blocks in.

201094 D.3 Turn 5 gc (Warden's Crt)

Mmm?-- And then pump it full of grout.

After it was pumped full of grout what was done then?-- Spray it with cement.

You were assisted in that task by a number of the mine workers; is that right?-- That's right.

Was there a deputy there during -----?-- Yes.

The sealing process? What was he doing?-- Just monitoring - monitoring.

Monitoring the gases, was he?-- Yes.

The Tecrete process involved what kind of machinery?-- Just a cement mixer and a pump, that's all.

And that machinery was necessary at each of the seals that was being completed; is that so?-- Yes.

Now, did you have two sets of the machinery there?-- Yep.

At 512 on that night?-- Yes.

One of those sets of machinery had been brought across from 4 South where you had been working earlier in the day; is that right?-- That's right.

The other set of machinery, where was that when you first saw it that day?-- It was already there.

At 512?-- Yes.

And how long had that been there, to your knowledge?-- I wouldn't know.

Okay. Was that the set of machinery that Robert Parker had been using?-- Yes.

Okay. Well, now, you say that you finished, you think, about midnight. You left. Robert Parker remained underground -----?-- That's right.

To do those finishing touches on the No 2 seal. Was he also working on No 1?-- Yes.

So, you had completed three. So, between the two of you you did those headways 1, 2 and 3 -----?-- That's right.

On that plan that is there annexed to your statement. When did you see Robert Parker next after you left 512?-- Breakfast.

When was that?-- Probably 8 o'clock.

Was that back at the barracks?-- Yes.

Any conversation about the seals then?-- Just asked him if it

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was sealed up. He said yep.

All right. Now, the task that you had been given back in April of that year was, you told us earlier, to construct the prep seals in 512. You and Robert Parker were there at that time or just yourself?-- Both of us.

Both of you. Do you normally work or did you normally work as a team?-- Yes.

Now, at the time that you went there in April to construct the prep seals you were provided with a plan, a design plan, showing you what was to happen in respect to each of the prep seals; is that right?-- Yes.

And a copy of that plan is that document just behind your statement in that bundle of documents. If you just have a look in the other bundle there; is that right?-- Yes.

And that has a series of diagrams there; is that so?-- Yes.

In the middle of the page, and in the middle of the page the section is headed, "View of the Seals from the Goaf Side", and immediately under that the arrow showing the dip direction and then under that beside the plan on the left is No 1 and No 5; is that right?-- Yes.

And beside the plan on the right is No 2 and No 4?-- Yes.

There is a plan there, and then on the left-hand side of the road below that is a plan with "No 3" beside it?-- Yes.

Is that referring to what was to be done for those roadways 1, 2, 3, 4 and 5 in 512 Panel back in April?-- Yes.

There is also another plan there which on the bottom right-hand side seems to refer to 5 South bottom return; is that so?-- Yep.

Okay. Now, was it Robert Parker's - just before I go on, during your activities there in April in 512 what do you recall occurring in respect of the bottom return, that's the No 5 return? Was there just a prep seal done there?-- Yes.

Just a prep seal was there?-- Yes.

Okay. Now, was it Robert Parker's practice to keep a diary noting what shifts you did and who was doing what?-- Yes.

Have you had an opportunity to view his diary for that period Monday, 1 August '94 through to 8 August '94?-- Yes.

If you just have a look again in that bundle of documents for the next four pages, the pages of his diary for that period?-- Yes.

On Tuesday, which is Tuesday 2 August, on the first page of that there is an indication there that you and two persons referred to as Bull and Steve set up and that you did the belt road prep seal. That was ready to pump. That was in 4 South; is that right?-- Yes.

There is no notation there as to what Robert Parker did that day except that there is a notation that he did work one shift; is that right?-- That's right.

Do you remember where he was working that day?-- 4 South.

At 4 South?-- Yep.

The following day, Wednesday, there is a reference to Doug and Steve, that's yourself and another person named Steve, pumping one ton into the travel road prep seal. That was a reference to your activities at 4 South; is that right?-- Yes.

And then under that a notation, "Rob, Laurie and Greg finished off travel road seal and moved gear to belt road site, everything on site for good start." Is that a reference to what Robert Parker was doing that day?-- Yes.

Was he working with you that day or was he working elsewhere?-- Who's that?

Robert Parker?-- He was doing another shift.

He was doing another shift, okay. That reference to the travel road seal, what would you interpret that as being, which section and which roadway? Travel road in which panel?-- 4 South.

4 South?-- Yes.

Was there any full seal done in 4 South?-- Pardon?

Was there any full seal done in 4 South or were there any prep seals done in 4 South?-- There was one full seal done in 4 South.

Okay. Now, to Thursday, there are a series of entries there referring to what was done on that day; is that right?-- Yes.

Friday, again a series of entries there, and then you come to Saturday the 6th; you see that there?-- Yes.

And that entry which commences "Doug day shift"; do you see that?-- Yes.

And an insertion "finish 4 South stopping". Then there is an entry there which commences "George Mason"; is that right? Do you see that one?-- Yes.

"George Mason requested 1 p.m. that I go in because of concern over heating."; do you see that?-- Yes.

Okay. That's in Robert Parker's - that's an entry made by Robert Parker; is that right?-- That's right.

Then it's got a notation that Robert worked the arvo shift, eight hours, and the dog-watch eight hours, and beside that "sealed 512 belt travel and top return"; is that so?-- Yes.

That's a reference to your activities and Robert's activities in the 512 Panel; is that so?-- Yep.

Okay. Then there is an entry for Sunday the 7th and an entry for Monday the 8th. Did you make any of those entries at all yourself?-- No.

Were all those entries made by Robert Parker in that diary?-- Yes.

Now, Mr Stampa, did you bring with you from Tecrete a number of documents, and again if you go beyond that series of diary pages in the bundle of documents there, there is a list setting out various items. Item one is a reference to your statement, two is a reference to Robert Parker's diary, those four pages, and then the third item refers to induction certificates, 1631 and 1679. What are those documents, can you tell me?-- Induction certificates?

Yes?-- They are just proof that we were inducted to go underground at Moura.

And 1679 refers to you?-- I don't know what those numbers are.

If you just go over to the document itself, you will see up in the top right-hand corner "1679"?-- Yep.

Okay. That document refers to your induction at the Moura Mine; is that right?-- That's right.

And ticks a number of areas in which you were instructed for the purposes of induction; is that so?-- Yes.

Okay. The next is a similar document in relation to Robert Parker; is that so?-- Yes.

Now, the next item on your list, item 3 - it's numbered on the list - there is a second 3 there - is referred to as an approval for Tecrete Plaster in Queensland?-- Yes.

That's a letter from the Department of Mines dated 27 September 1983; is that right?-- Yes.

And behind that a letter from the Department of Resource Industries dated 11 May 1990; is that right?-- Yes.

In respect of the Graco pumps, and that's listed as document 4

on your list; is that right?-- Yes.

And then the next series of documents in that bundle are what are called Safety Data Sheets?-- Yes.

For Tecrete Industries Pty Ltd. They set out the safety details in relation to a whole series of materials used in the Tecrete process; is that right?-- Yes.

Okay. Now, there are some six of those, I think, and then the next item is a description of the meshblock which is used in the Tecrete system; is that right?-- Yes.

The next page is a page relating to meshblock installation, comments in respect of that; is that so?-- Yep.

And the page behind that is specification for the meshblock; is that right? That's a diagram showing -----?-- Yep.

----- where the bolts - distances in relation to the insertion of the bolts for the construction of the meshblock sealing or seal; is that so?-- Yes.

The next page, document 9, is a report on compressive strength of grout cubes; is that so?-- Yes.

Two pages. Finally is there a photograph just showing the pouring of a Tecrete seal?-- Yes.

Your Worship, I will tender that whole bundle of documents as one exhibit. It consists of Mr Stampa's statement and then the diary extracts - the plan and the diary extracts and then those various other documents that have been described.

MR MORRISON: I will object to the statement going in. Mr Clair, I am sorry, you weren't listening. Your Worship, I will object to the statement going in because we have heard his evidence and he has identified the documents. I have no objection to the documents, but we have heard his evidence. There is no basis for the statement to go in.

MR CLAIR: Your Worship, I might say I tendered it on the basis that statements have been tendered because they have been provided in advance in respect of each of the witnesses, but I might say that in the case of this witness and in light of Mr Morrison's objection that I am not seeking to press that the statement go in, and what I will do is tender the balance of those documents.

MR MARTIN: I tender the statement, Your Worship.

MR CLAIR: Can I say, Your Worship, that the appropriate course may be to wait until Mr Stampa has completed his evidence, that is, after cross-examination, and then review the matter of whether or not the statement ought, in all the circumstances, be tendered. The reason I suggest that is that the course has been taken in this matter, and other matters like this very frequently, that the statements are put in and so there is a reason. It's not like a normal Court trial, as

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it were, where strict rules of evidence apply. There are reasons why the statements go in, but they must be seen against the background of the evidence. However, perhaps at this stage the appropriate course, as I say, is to at least reserve the question of the statement going in as evidence before the Inquiry to the end of Mr Stampa's evidence. It might be different considerations will apply at that time.

WARDEN: You have got no objection that I reserve that question until we have finished the cross-examination?

MR MARTIN: No, Your Worship.

MR CLAIR: So, Your Worship, the exhibit that's actually being tendered at the moment is the balance of the documents.

WARDEN: The balance of the document, the other material can go in as Exhibit number 18.

ADMITTED AND MARKED "EXHIBIT 18"

MR CLAIR: I have no further questions of Mr Stampa, Your Worship.

WARDEN: Thank you. Mr MacSporran?

CROSS-EXAMINATION:

MR MacSPORRAN: Mr Stampa, you commenced work at the No 2 Mine at about 6 o'clock on Saturday morning; is that so?-- That's what time I was picked up from the barracks, yep.

And for how long prior to that day, that's the Saturday, had you been organised to come in on shift that day?-- It had been organised, yep, about three days before.

About three days?-- I was just coming in to work at 4 South, yep.

So you had been organised to come in to 4 South and complete that one seal, had you?-- Yeah, prep seal. Oh, no, I was completing the full seal, yep.

And how long did you anticipate that would take you on that Saturday?-- A shift.

Your shift was, what, 7 till 3 or -----?-- Oh, I wouldn't know. 7 to - yeah, 2, 3.

So you thought it would take you most of the shift to complete that seal?-- Yep.

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And who were you supposed to be working with at 4 South on that Saturday?-- Two Federation guys.

Two miners?-- Yeah.

Now, you say that at some stage you were approached by Michael Squires and told you would have to work back?-- Yes.

Now, what did you understand he meant by "work back"?-- Well, work back and seal 512; can't go home until it's sealed.

At about what time did he tell you that?-- About midday.

So how far had you gone in completing the seal at the other panel?-- 4 South?

Yes, how far had you gone?-- Well, it was one batch off being sealed.

Remaining?-- Yes.

And how long would that have taken you?-- Oh, probably half an hour.

All right. Well, having been told that you would have to stay back and go to 512, did you carry on finishing at 4 South?-- No, I moved me gear.

I am sorry?-- I moved me gear over to 512.

When did you move your gear, when you were first approached or when you were later approached?-- Later approached.

So when you were -----?-- When I was first approached that seal was only three quarters of the way up.

How much time would it have taken you in your first approach to complete 4 South?-- Probably two to three hours.

What, you carried on, did you?-- Yes.

To work there?-- Yes.

And how long did you continue to work there before you were approached again?-- Probably an hour and a half.

So how close were you to finishing 4 South when you were approached on the second occasion?-- Very close, one batch.

Half an hour?-- Yep.

Well, now you say it was Michael Squires that approached you?-- Yes.

And you knew him from working at the mine?-- Yes.

Did you understand it to be his job to tell you where to go?-- Yes.

What exactly did he say was the reason you had to go to 512?--
Concern over heating.

Do you remember the words he used?-- No.

He mentioned concern over heating?-- Yes.

Did you understand what that meant?-- No.

Had you ever heard the term used in relation to underground
coal mines before, heating?-- No.

Did you ask Michael Squires what he meant when he said he was
concerned about heating?-- No.

Did you simply pack up and move your equipment to 512?--
Yes.

How long did it take you to get to 512 with your equipment?--
Oh, probably an hour.

Did you suggest at all to Mr Squires that you remain at
4 South and simply finish that work in half an hour?-- No.

Well, when you arrived at 512 what did you see and do?--
Well, we had to knock down a regulator door to get my gear
into the return, and just seen the haze and smelt that smell,
and it was hot.

So what time would you have arrived at 512, what part of your
shift?-- About 2 o'clock, half past 1.

You said you had to knock down a regulator. What was that
made of, what materials?-- I wouldn't know.

You don't remember that?-- No.

In any event, you smelt something?-- Yes.

That you say you had never smelt before?-- Yes.

Had you been underground on many occasions before this day?--
Yes.

In No 2, firstly, No 2 Mine here at Moura?-- Well, only in
April.

And you had been underground elsewhere in other mines, had
you?-- Yes.

Had you ever been underground when there was a problem?--
No.

In a panel?-- No.

You hadn't?-- No.

Can you liken the smell to anything you had ever smelt

before?-- No.

Nothing you had ever encountered was like that smell?-- No.

What did you see?-- Just haze.

Now, what do you mean by "haze"?-- Well, you could see your beam from your light pretty clear, so there was a haze there.

Whereabouts were you looking when you saw this haze?-- Well, I was at the seal site. I was looking.

And there were several seal sites, weren't there, at 512?-- Yes.

Do you know which one in particular you went to first to see this haze?-- No 1.

And that was the top return, was it?-- Yep.

So at that top return you saw this haze?-- Yes.

Whereabouts in relation to the seal site did you see that haze?-- I was right there.

But how close to you was this haze you saw?-- It was all round me.

You were at the seal site?-- Yes.

Was it inbye inside 512 panel or behind you?-- Just everywhere yeah, behind me, in front of me.

When you say in front of you, you mean inside the panel itself?-- Yes.

That's inbye of the seal site?-- Yep.

Could you see how far that haze, as you describe it, extended?-- No.

Did the haze have any discernible colour?-- No.

Had you ever seen anything like that before?-- When you got a lot of dust down there.

Was this a dust haze or something different to a dust haze?-- No, it wasn't a dust haze.

It was not a dust haze?-- No.

Can you liken what you saw to anything you had seen before in appearance?-- No.

You saw it as soon as you arrived at 512?-- Yes.

Did it remain as you worked on the seals, that haze?-- Well, it was only in number 1 because I done No 2 and No 3 and it wasn't there.

How long were you at No 1 working on the seal?-- I didn't work on that seal, I just dropped me gear off there and then I left.

So, you saw it when you first dropped your gear?-- Yes.

And when you returned to work on the seals in the other headings did you see that same haze at No 1, any haze?-- No haze, no smell.

Did you observe any haze or smell at any of these other headings when you worked on them?-- No.

When you arrived at the panel and saw the haze and noticed the smell, who else was present?-- Cole Klease and two mine workers.

Were there discussions among the group about this smell and haze?-- No, we just dropped our gear off and headed to the surface.

Did anyone say anything about the smell or the haze that you saw?-- No.

Did you ask anyone about what it was that you could smell and see?-- No.

Were you curious about what it was?-- No.

Did anyone mention there was a potential problem in the panel at that time?-- No.

Did any deputy ever mention to you the reason why this was being sealed, this panel?-- No.

Was there any talk about why you were taken over there so quickly to seal off this panel?-- No.

Did you ever talk to Robert Parker at the site of those seals in 512?-- No, I talked to him at the surface.

That was after the - as you were going home, was it, or was he coming on?-- As he was coming on.

That was about 3 o'clock?-- Yes.

What did you tell him about what you had been doing and why you had been doing it?-- Nothing. We were happy because we wanted to seal 512.

Why was that?-- Get us home quicker.

You had started at about sometime after 6 that morning on the Saturday?-- Yes.

You didn't get home until, what, about 1 o'clock on the Sunday morning?-- Yes.

So, you worked a very long time sealing 4 South and then 512?-- Yes.

At any stage during the course of that, other than when you first arrived at the No 1 Heading 512, did you see any haze or smell anything unusual?-- Where was that?

At 512?-- Only in No 1, yep.

At any other time than when you first had arrived at No 1?-- No.

You said there was a deputy taking samples at some stage?-- Yes.

Do you recall when that was?-- Pardon?

When was that in relation to when you first arrived at 512?-- No, I wouldn't know. He was doing it all the way through, so.

It was being done all the way through?-- Yep.

Whereabouts was it being done, an area where you were sealing?-- Yes.

Right there or-----?-- Yep.

-----inside the inbye there or where?-- Where we were.

Were you told at any stage the results of any of those

tests?-- No.

Did you ask?-- No.

Did you know what those tests were for?-- Gases, I suppose.

Do you know what sort of gases?-- Methane, CO.

Did you have any concerns at all about the gases that might have been present during the course of the time you spent sealing 512 panel?-- No.

No-one told you anything about it?-- No.

The situation with respect to gases at the time you were sealing?-- No.

As part of the seal that you put in place there is a water trap; is that so?-- Yes.

Is that a standard design feature of these seals?-- No.

How did it come to be in these seals, some of these seals?-- They wanted them in there.

Sorry?-- They wanted them in there.

Who told you they wanted them? Did you speak to anyone about that?-- Yeah.

Do you remember who it was?-- Jacques.

And what were you told about the requirement to have water traps in some of these seals?-- Nothing, I just put them in. They wanted them; I done it.

At what stage did you put them in?-- When we - in April when we first put the prep seals in.

They were in as part of the prep seals, were they?-- Yes.

So, they were there when you came back to seal this panel on this Saturday?-- Yes.

When you say they were there were they completed at that stage?-- What?

Filled with water?-- No.

Did you have any involvement in filling them with water?-- No.

Would you ordinarily have done that, filled them with water?-- No.

Who was that left up to?-- Well, I was just told to put them there, that's all I do. I don't know what they're there for.

You don't do anything further with them?-- No.

When you left the section at about - what time was it that Sunday morning?-- Probably midnight, around there.

When you left about midnight had those seals been filled with water that you know - the water traps, I am sorry?-- No.

You say they hadn't been filled?-- Well, I don't know.

You didn't see?-- No.

You saw your work mate Robert Parker at breakfast the next morning?-- Yes.

Did you discuss with him any observations he had made during the course of his work sealing after you had left?-- No.

Was there any mention by him of any problems in the panel?-- No, just said it was sealed.

Did he indicate to you at any stage what he thought about why it had been sealed?-- No.

There was no talk with him about a heating?-- No.

Thank you.

WARDEN: Mr Martin.

EXAMINATION:

MR MARTIN: Mr Stampa, I suppose you will never forget your visit to Moura in August of 1994?-- No.

When you were left by yourself to seal does that mean that you were the only person doing the sealing there?-- What are you talking about?

At the time you saw the haze and smelled the smell and found it to be very hot, there was a deputy there as well?-- Yes.

And a couple of other mine workers. But I understood you to say that you were left by yourself later in the day after that occasion?-- I was never by myself.

Sorry?-- I was never by myself.

All right. I just misunderstood you. I will just ask you this: do you know who cut the channels into the floor and the ribs for the sealing?-- No, it was already done.

Were the bars - reinforcing bars - in place?-- We put them in.

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Can you tell the Inquiry how deep the channels were and how wide, on the floor that is?-- Well, probably a foot and a half wide.

How deep?-- Probably went into the ribs.

I'm just talking about the floor at the moment?-- How deep?

Yes?-- About a foot.

Did they go into the ribs - as a floor channel reached the rib was it taken into the rib?-- Yes.

What about the channel in the rib can you just say how deep?-- Some spots in it went in 2 foot and some spots in it went in a foot.

And how wide?-- Probably a foot.

Was there a channel in the roof?-- No.

Just roof bolts extending out?-- Yes.

And how thick can you tell me were the seals when completed?-- 150 or 100 mils.

When you smelled the smell that you hadn't experienced previously was it a strong smell?-- Well, I could smell it.

Did it look like smoke to you, that is, the haze?-- Well, I didn't know what it looked like. It's just there.

Could you be a little more accurate on the width of the final seal, 100 mils. or 150?-- 100.

During the course of the sealing of that seal or any of those seals did Mr Mason work with you or was he there working?-- No.

Was he there at all?-- I seen him.

Sorry?-- I've seen him underground, yeah.

During the course of the sealing, final sealing, of 512?-- Yes.

When you say you saw him does that mean that he was in the immediate vicinity?-- He was there, yes.

At the sealing area?-- Yep.

After you arrived to undertake this sealing of 512 did Mr Squires come along at any time whilst you were working?-- I can't remember.

When did you last see Mr Squires on that day?-- Last time I remember seeing him was probably on the surface.

What, about 3 o'clock?-- Yes.

And the time before that you last saw him was when he came and said, "Don't spend the extra half hour sealing on..." - what was it - "...4 South, get straight up there to 512." That is the last time you saw him; is that right?-- Yes.

Could you just tell me this: how long was the induction period before they took you underground at Moura No 2?-- It was a long time ago, I can't remember. It would have been at least a couple of hours.

Couple of hours?-- Yep.

Thank you, Your Worship.

WARDEN: Mr Morrison.

CROSS-EXAMINATION:

MR MORRISON: Mr Stampa, between you and Mr Parker it was Mr Parker who was the person with technical expertise; isn't that right?-- Yes.

You were the person who did physical work?-- Yes.

You are not in fact qualified as a technician in Tecrete or concrete or anything else?-- No.

You can't tell us about its physical properties from any training you have had?-- No.

Nor how fast it hardens?-- Got a rough idea.

From your experience with putting it up and watching it?-- That's all, I just put them up.

You haven't had any course of training in the properties of Tecrete?-- No.

You were doing a full seal in one of the headings in 4 South?-- Yes.

Which heading?-- I can't remember.

Is it the first full seal that you had done in 4 South?-- Yes.

The others had all been prep seals?-- Well, the others hadn't been done yet.

No prep seals?-- Probably one or two was done, still had three to do.

XXN: MR MORRISON

WIT: STAMPA D S

Three prep seals?-- Three or two to do, I can't remember.

But this particular drive that you were working on was the first one to be fully sealed in 4 South?-- Yeah, well, that's what I done; so I don't know about Robert Parker. He wouldn't have done one up.

You don't think he would have done one?-- No.

There was no extraction going on in 4 South, was there?-- Not that I know of.

You would have been aware of it, surely, if there was a continuous miner down there working with you?-- No.

You were working on that seal with someone when Mr Squires came along?-- Yes.

Who was that other person?-- Well, I had two Federation mine workers.

Was one of them George Ziebell?-- Yes.

When Mr Squires came along he spoke with Mr Ziebell first, didn't he?-- What visit are you talking about, the first one or the second one?

The first time he arrived did he speak to George Ziebell first?-- I wouldn't know.

You and Ziebell were working on opposite sides of the seal, were you?-- No, same side.

All workers on the same side?-- Yep.

When he first came up for what you call the first visit, did Squires actually speak to you or did he speak to someone else there?-- On what visit was that, sorry?

The first occasion he came over you described there being?-- We all talked.

Sorry?-- We were there so.

Yes. Did he speak to you? Did he say, "Excuse me, Mr Stampa, I want to tell you this.", or anything else, or did he speak to George Ziebell?-- He just said he wanted 512 sealed and then he talked to George about getting some guys, I think, I don't know.

You heard him say this to Mr Ziebell?-- No. Well, I'm not saying - no.

Sorry, I'm not sure what you are not saying?-- I don't know so I'm not going to say it. I don't know. I didn't hear nothing.

Squires went away?-- Yes.

You and the other workers stayed working?-- Yes.

The seal was nearly finished?-- That's right.

Did the other miners leave you by yourself at any time?--
No.

I doubt that you have ever been alone down that mine?-- No.

Always have miners with you, don't you?-- That's right.

Squires came back?-- Yes.

You say something like an hour and a half to two hours
later?-- Probably an hour and a half, yep.

This is your best guess, I take it, on the time?-- Yes, I
don't wear a watch underneath the mine.

So, you are not going to tell us you are accurate about this, it is just your best guess?-- Yes.

Okay. Work on the seal had then progressed in his absence? Whilst Squires was away you continued working?-- Yes.

You had pretty much finished that seal?-- Yes.

There was nothing much left to do?-- No.

Had you, in fact, pumped up to the ceiling?-- Yes.

And what was left was finishing off type work?-- That's right.

Okay. I think we understand now. And he came back and said something about moving over to 512, to take your gear over there?-- Well, I was on the opposite side of the seal when I seen him.

When he come back the second time?-- Because I had a blowout and I had to go around the back and fix it.

Sorry?-- Well, yeah, I was on the opposite side.

When he came back the second time?-- Yes.

You were on the opposite side of the seal to him?-- Yes.

We are talking about a 4 inch thick plus Tcrete seal, aren't we?-- Yes.

Ziebell was on the opposite side to you?-- Yes.

Squires probably spoke to Ziebell for all you know?-- Probably.

Then did Squires come around to see you?-- Well, he seen me first.

He saw you first?-- Yep.

Told you to take your gear over to 512?-- Yep.

Okay. At that point in time had you finished - pretty much finished that 4 South seal?-- Yeah. It was only the one corner, I had a bit of a problem with that.

What problem, getting the grouting -----?-- Yeah, had a blowout, that is a hole, so the grout was going nowhere. So, I had to go around and fix it.

Is that what you were doing?-- Yes.

You, in fact, had moved around in order to put the grout back in this one corner and that was all that was left?-- Yes.

Okay. So, having done that you then gathered your gear up?-- And went to 512.

And went over to 512, left your gear at 512 and went to the surface?-- Yes.

Okay. You must have been told to come up to the surface or did you just decide, "Nothing do at 512 yet, I will go up."?-- Well, I had to wait for Robert Parker to get there so I couldn't start by meself. Like, when you are sealing you have got to bring two seals up together.

So, you needed Parker really to do a full sealing?-- Yeah, he had to do one and I had to do the other one.

And in all of those efforts you would have the assistance of miners to -----?-- Yes.

Work with you?-- Yes.

And Parker really directing?-- Yep.

I don't think Parker was actually doing the navvy work on those 512 seals, was he? It was more directing miners what to do, controlling it?-- Yep.

When you spoke to Squires about where Parker was I think you said that you would have - Squires would have to go and get him quickly otherwise he would be off to the club?-- Yeah, have a game of bowls.

Yeah, all right. On the surface - when you were on the surface before all the shift arrived to do the seals - or were they already there?-- Probably ten minutes.

Before they arrived?-- Yeah.

Okay. Then Squires gathered all the men around?-- Yes.

And spoke to them about the - what was going to happen?-- Yes.

And everybody was there?-- Yes.

I think you and Parker might have wandered off a bit part of the way during that to have a private discussion?-- Yeah.

And then the men went down to do the sealing?-- Yes.

The sealing proceeded very routinely?-- Yes.

When it was done you went home?-- That's right.

Were you there till the end?-- No, I wasn't.

What time did you go home?-- Probably just after midnight.

Okay. And Parker remained to complete things?-- Yes.

All right. Now, you mentioned you could see this haze, but you really can't tell us, can you, or you are not sure enough

to tell us that it looked like any particular thing
or -----?-- That's right.

It was moving in any particular direction or anything else?
It was just a haze about?-- That's right.

How did you move the gear over to 512, did you take it on a
vehicle?-- Yes.

You didn't walk it over, obviously?-- No, you can't walk it
over.

No. It was an MPV that took you over there?-- And an Eimco.

That's a diesel vehicle?-- Yes.

Then the MPV was staying in the area, moving gear about?--
No, he just dumped the gear and left.

Did it? Okay. And you smelt a smell which you again, I
assume from what you are saying, can't tell us what the smell
was like?-- No.

You have got no ready way of identifying it with anything in
your experience before?-- No.

Okay, except it is not a smell you had encountered underground
before?-- That's right.

Okay. You had only been down in 512 to do prep seals before,
you hadn't been down there while 512 was being extracted, had
you?-- No.

So, you had never been in the return of 512 during an
extraction sequence or while they were extracting, had you?--
No.

In fact, you probably mostly would never be in a return at all
unless you were sealing it?-- That's right.

You are not supposed to go into returns, are you?-- No.

All right. Now, when you did the prep seals you did them
according to what Jacques Abrahamse had worked out with you?--
Yes.

You, in fact, liaised pretty much daily with Jacques
Abrahamse, didn't you?-- Yes.

And you did things in accordance with what he directed?--
Yes.

So, the cutting of channels - you didn't actually do the
cutting of channels yourself?-- No, it was already done.

And insertion of roof bolts, you wouldn't do that yourself,
would you?-- Yeah.

You did? Right, okay. The width of the seal is

pre-determined, isn't it, by the wire mesh?-- Yes. Well, you get different size baskets, so -----

Whatever these wire mesh baskets were the seal was obviously that wide and a bit more because it would have the skin over the outside?-- Yep.

Now, in the Tecrete stuff which you have produced there is a description of these wire baskets. Did Tecrete supply them?-- Yes.

Can you remember the assembled width?-- Would be 100, I guess.

Do you know for a fact what it is or are you just giving us an assessment?-- Well, I am very sure it was 100 mil. It was.

Now, when a Tecrete seal is built, and as they were built in this mine routinely, what happens is that there is a channel cut?-- Yes.

Roof bolts are inserted in the floor, the ribs and the ceiling?-- Yes.

Those roof bolts have mesh baskets put over them?-- Well, you put your bolts in as you are building your wall, so -----

And extra roof bolts are put in so they connect the one sticking out of the roof with the one on the floor and likewise wall to wall?-- Yes, they all meet.

They are all tied together?-- Yes.

All of those roof bolts as tied together sit inside mesh baskets in the end?-- Yes.

And grout is then pumped into the mesh basket?-- Into them, yes.

Squeezes out through the mesh?-- Yes.

Then it is filled up to the ceiling?-- Then we spray it.

Then it is sprayed with what sort of thing?-- Just a spray gun.

Just a grout spray?-- Yeah.

And is there any finishing done to that?-- Well, that is the finishing.

Sprayed on the outside, each side?-- Just around the ribs and on the roof.

So, where it joins in the ribs and the roof there, is extra Tecrete grout sprayed in there?-- Yep.

Yes, all right. I have nothing further, Your Worship.

WARDEN: Mr Harrison?

CROSS-EXAMINATION:

MR HARRISON: Mr Stampa, I am interested in the conversations you had with Michael Squires when he came down to where you were working on the Saturday. You say the first one was at about midday?-- Yes.

Could it have been earlier at about 11?-- It could have been.

When he first came down there?-- It could have been. I didn't have a watch.

Now, if we can turn to the second occasion that he came down there, who else was down there where you were working?-- Just me and two mine workers.

And was one of those George Ziebell?-- Yes.

Did you know or did you understand at the time that George was involved with the local union?-- Yes.

Did you hear Michael talking to George at all?-- Well, not really because I was doing something else.

Well, do you know, firstly, whether or not they spoke to each other, not what was said?-- I knew they were talking.

All right. You could hear them talking?-- Well, I could see them talking.

But you couldn't hear what was being said?-- No.

All right. He spoke to you on that occasion?-- On the second visit, yep.

All right. Now, you can't recall what was said?-- With?

With Michael and you, the conversation? You can't sit there now and tell us what was said?-- Yeah, well, I was - there was heating.

You say there was a heating?-- Yeah.

What did he say? Just tell me what he said?-- Well, "Get your gear over there, it is heating up."

"Get over there, it is heating up."?-- Yeah, "Start sealing".

Did he tell you about the signs of any heating up?-- No.

Did he tell you about any haze?-- Yes.

He told you about a haze then, did he?-- No.

XXN: MR HARRISON

WIT: STAMPA D S

Did he tell you about any unusual smells that had been detected over there?-- No.

Did he tell you anything about CO readings?-- No.

In 512?-- No.

How long did he talk to you for?-- I don't know, probably a couple of minutes.

George Ziebell was there?-- He was on the other side of the stopping.

Where was Michael? What side of the stopping was he?-- With me. That was probably the outbye side.

Where was George?-- In the inbye side.

What were you doing at that stage?-- Fixing a leak in the seal.

Did - what was George doing, could you see?-- He was mixing the grout for me.

What was left in the seal at that stage to be done?-- Just a bit pumped in the corner and sprayed.

You were present at 3 o'clock that afternoon?-- Yes.

On the surface, weren't you?-- Yes.

Michael spoke to the men in a group, didn't he -----?-- Yes.

On that occasion? Did he explain to the men why 512 was being sealed when you were there?-- Well, alls that I remember him saying was, "We are going to seal 512 and no-one can go home until it is done.", and then I didn't pay attention, like, I was talking to Rob.

You didn't hear him explain to them what had been -----?-- No, that's all I recall of the conversation. Like, I can't remember nothing else.

Did you hear him give any reasons at all?-- No.

As to why 512 -----?-- No.

Was being sealed? Where were you when he was talking to the men on the surface?-- Talking to Rob.

Talking to Rob Parker?-- Yes.

Nearby?-- Yeah.

Now, all you can recall of the conversation is that no-one - he said it would have to be sealed and no-one could leave until it was sealed?-- Yep.

You never heard him on that occasion say anything at all about CO readings?-- No.

About any haze that may have been detected?-- No.

About any unusual smell?-- No.

Nothing at all?-- No.

You now have some understanding of what a heating is in a mine?-- Now I do.

Is it something that has been discussed with you since this incident at No 2?-- What was that?

Is it something that has been discussed with you, you know, by people generally, about a heating?-- Well, you have lost me. What did you say?

I will try and explain it a bit better for you. Is it something that has been discussed with you since the explosion? That is, have people spoken to you about possible heatings in 512 since the explosion?-- Yes.

Are you aware now that it is possible that it could have been a heating in 512 and that that may have been a reason for the explosion after the section was sealed off?-- It could have been, yeah.

You have heard the phrase "heating" being used quite a few times?-- Yeah.

Since the incident?-- Yes.

I have no doubt that numerous people have discussed the incident with you?-- Yes.

And it is something that has obviously had a great effect on you, having been involved?-- Yep.

Getting back to the conversation the second time Michael came down on the Saturday, how long was that after the first one?-- Probably an hour.

And roughly what time was that?-- I don't know, 1, might have been a bit earlier.

Are you sure Michael gave you a reason as to why there had to be a move to 512?-- Yeah.

You see, you have used - at different times today you have made reference to a heating, him saying something about a heating; do you recall that?-- Yeah.

When you were first asked by Mr Clair, do you agree, you were unable to tell us of the conversation?-- No.

You don't agree with that?-- Well, I just said what I knew and that's it. Like, you know what I said.

You see, was it the case that something about a heating was said or was it the case that you interpreted something that was said as meaning -----?-- I just had to get my stuff over there, it was heating up.

It was heating up. Just tell me the whole conversation on that second occasion?-- "Get your gear over there, it is heating up,", like, and I said, "Yeah."

That's it?-- Yeah.

He just walked up to you, "Get your gear over there, it is heating up."?-- Yeah, and just, like, "The guys will get the vehicles and get your gear over and just organise getting it over there."

What else was said?-- Nothing.

Did Robert Parker ever tell you that anyone had said anything to him about a heating?-- Robert Parker - did he what?

Did he ever say to you that someone else may have said something to him about a heating that day?-- No, he didn't say anything to me.

He didn't say anything at all?-- No.

Either before or after the sealing?-- No.

All right. You are inside the stopping. What, Michael walks straight up to you and says that, does he?-- Yes.

"Get your gear over there, it is heating up."?-- Yeah.

I suggest to you that what Michael said to you was that he told you that there had been a haze detected in 512; told you on that occasion -----?-- I don't remember.

You don't remember?-- No.

But he told you there had been some reference to a smell in 512?-- Well, then I would have known when I took me gear over.

I am suggesting that he told that to you - that he said that to you at the time; what do you say?-- He didn't say it to me. I don't remember him saying it, so -----

Well, you don't remember or he didn't?-- He didn't.

You categorically say he didn't?-- Well, I don't remember him saying it so he must not have.

If you can't remember it you say he wouldn't have or must not have?-- No.

All right. He said something to you about some CO readings?-- No.

No? He didn't mention them?-- No.

I suggest to you that at no stage did he use the word "heating" in that conversation?-- Well, no, he said it to me.

You think he did?-- Yeah.

You can't be sure about it, can you?-- Well, it is written down, ain't it?

It is written down in the statement?-- Yeah.

So that makes you sure of it, does it?-- Well, I said it.

You said it in a statement, therefore, it is right?-- Yes.

Could it be you were mistaken when you included that in the statement?-- Could have been.

You see -----?-- It was a long time ago.

You are not sure about it now, are you?-- Well, I told you what I knew, that's it.

You are not sure about it now, are you?--- That's what you say.

MR MARTIN: How many times are we going to hear that. I do object to the badgering of a person like that.

MR HARRISON: Badgering?

WARDEN: I don't consider he got the answer he was seeking.

MR MARTIN: Well, it is certainly badgering.

WARDEN: I am sure Mr Harrison -----

MR HARRISON: I will take it back one step further.

You weren't sure about it when you made the statement, were you?-- Well, I said - it was said to me.

It was said to you?-- Yeah.

You see, were you originally interviewed by the mines inspectors about the matter?-- Yes.

Did anyone raise with you whether or not anything had been said about a heating?-- Well, I told them exactly what I told you.

Was it raised with you first?-- No, I told them.

Could it be that what you were told on the second visit on the Saturday led you -----?-- Well, I told you what was said on the second visit.

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Led you to believe - you are sure about what was said on the second visit now?-- Yeah, yeah.

Right. The whole conversation?-- It wasn't a very big one. Yeah, that's it.

Could it be that what you were told on that second occasion was in relation to the smell, the haze, the readings and that you interpreted that to mean the heating?-- No, no.

Thank you.

MR MORRISON: Your Worship, I forgot to ask one question. There is now a differing recollection here and I just want to clear one thing up.

WARDEN: By leave then.

MR MARTIN: Nobody else gets the right, as I understand it, to come back up the Bar table with re-examinations as though they were in chief. I haven't had that opportunity for the last two witnesses; I don't see why Mr Morrison should.

MR MORRISON: I don't know if that's an objection or a statement or a headline grabbing exercise.

MR MARTIN: It's an objection.

WARDEN: I will allow the question.

FURTHER CROSS-EXAMINATION:

MR MORRISON: Mr Stampa, it is just to clear up something I was asking you because there is a differing recollection down here about whether you said something or I said something, that's all. You were finishing the 4 South seal, you had that corner to go, but there was a bit of a blowout when you were putting some grout in. That's what I want to talk to you about?-- Yes.

That's when Squires came down, that's the stage you were at?-- Yeah.

You finished that off, then took your stuff up to 512?-- No, I didn't finish it.

Just that corner?-- I just left it.

That's only that small corner at the top?-- To spray it.

Thank you.

EXAMINATION:

PROF ROXBOROUGH: Mr Stampa, you are aware, are you, that this is the first occasion on which the Tecrete seals have been used at Moura?-- Yes.

Have you erected seals at other mines?-- Yes.

Would you have any idea approximately how many?-- A few.

A few?-- Yeah, a lot.

When the seal is completed and you have finished your task, is it normal practice for the seal to be examined by someone before they let you go?-- I would say they examined it, and if there is something wrong with it, we go back.

So it is usually examined after you finish your work, usually by a mine official?-- The seal plays a pretty big part, so they check it out and if there is anything wrong, they get back to us.

And that occurred at Moura after you completed the seals?-- Well, we were just going back to finish them. They had only been prep sealed.

I see, okay?-----

WARDEN: Mr Ellicott, any questions?

EXAMINATION:

MR ELLICOTT: You indicated that you had built a lot of seals underground?-- Yes.

Would that be 100, 200, more?-- Oh, 100.

So it's a considerable number?-- Yeah.

Would a considerable number of those have been built in returns to seal those returns?-- No. Like, some of them are in returns and some aren't. Like, I just build them where they got to go.

So you are not unfamiliar with going in returns?-- No.

And the sort of smells that you may normally get in returns?-- Well, we do a fair bit of work in a return. Like, we just don't do seals, we do overcasts.

Okay, that's all.

WARDEN: Thank you. Anything arising out of that?

XN: PANEL

WIT: STAMPA D S

MR CLAIR: I have no questions, Your Worship.

MR MARTIN: No.

MR MORRISON: No, thank you, Your Worship.

MR HARRISON: No, Your Worship.

WARDEN: Thank you, witness, you may stand down.

WITNESS STOOD DOWN

MR CLAIR: Thank you, Your Worship. I call Peter McGregor, Your Worship.

WARDEN: And after this witness we will take the lunch adjournment, thank you. Sorry, while we are there, we have the unresolved question of the statement, Mr Stampa's statement.

MR MORRISON: It wasn't tendered.

MR CLAIR: I am not seeking to tender it.

MR MARTIN: I am sorry, Your Worship, can Mr Stampa be brought back? No, it's all right. I want to tender his statement, Mr Stampa's statement. You haven't ruled.

WARDEN: No. Any other grounds?

MR MARTIN: The grounds? Well, apart from anything else, there were 48 statements in evidence before you, that's the first thing. None had exception taken to them. Just in fairness and in accordance with the routine that's been adopted here it should be received into evidence. There is no reason why it should be excluded out of it. Everybody else has so far been cross-examined on their statements. The rest of the people will be. Why should this particular statement be any different?

WARDEN: Mr Morrison?

MR MORRISON: I don't wish to address on it, Your Worship.

WARDEN: Thank you. I will admit the statement as Exhibit 19.

ADMITTED AND MARKED "EXHIBIT 19"

WARDEN: You recall the other material attached to it was Exhibit 18, so therefore they are separated.

XN: PANEL

WIT: STAMPA D S

PETER ROBERT MCGREGOR, SWORN AND EXAMINED:

MR CLAIR: Witness, could you state your full name?-- Peter Robert McGregor.

And you are a Sergeant of Police; is that correct?-- Yes.

Attached to the Moura Police Station?-- Yes, the officer in charge of Moura.

And you were stationed at Moura in August of this year?-- I was.

Now, at about 12.40 a.m. on Monday, 8 August this year did you receive a telephone call from a Mr George Mason, the Senior Under-manager of the No 2 Underground Mine at Moura?-- I did.

You had a conversation with him; is that right?-- I did.

You then travelled yourself to No 2 Mine?-- I did.

Did you there speak with the Shift Under-manager, Mr Michael Squires?-- I did.

All right. You had made a statement or a report in respect of this contact that you had and other contacts and interviews that you carried out; is that so?-- I did, yes.

Okay. Your Worship, I will pass up the copies of that report for the panel and I will pass up another copy which I tender as an exhibit.

Just have a look at this, Sergeant, if you would, whilst that is being distributed. That's a copy of that report?-- It is.

It's directed in fact to the Coroner at the Courthouse at Biloela?-- That's correct.

And that was the basis you did your report, it was really a report for the Coroner in relation to the deaths of the men which occurred as a result of this incident back on 7 August?-- That's correct, yes.

Okay. Well now, you had the conversation with Squires. He gave you some information. You have recorded in your report there the names of the men who were assigned to work underground on the night of 7 August; is that right?-- That's correct.

You also mentioned in your report on page 2 towards the bottom that Squires outlined to you what had occurred in the course of the evening?-- That's correct.

XN: MR CLAIR

WIT: MCGREGOR P R

Prior to your conversation with him?-- That's correct.

And through until you were speaking with him?-- Yes.

He also contacted a Mr Robert Davidson who was the Lamp Attendant at the mine; is that right?-- That's correct.

And he asked Mr Davidson to record the names of the men who were returning from the underground?-- That's correct.

And you set out in the report the names of the men who returned from the underground; is that right?-- I have, yes.

Have you also set out in your report there on page 3 the names of those men who failed to return and who were unaccounted for at the end of this episode?-- I did, yes.

You took a statement at some stage from Mr Squires; is that so?-- I did, yes.

You also interviewed then Mr Davidson, the Lamp Room Attendant, and you took a statement from him?-- I did.

You later, as you mention on page 4 of your statement, obtained a statement from Mr Robert Regan, the Mine Manager?-- I did.

And attached to your report is a copy of the statements that you have referred to, Mr Squires' statement, which you took from him?-- Yes.

And Mr Regan's statement?-- Yes.

And Mr Davidson's statement; is that so?-- That's so, yes, that's correct.

The principal purpose of your investigations and the taking of those statements was to identify those men who were unaccounted for at the end of the episode; is that so?-- That's correct, yes.

And that was for the purposes of your report to the Coroner?-- That is correct.

Just for the record, Your Worship, the document which I tendered as the Sergeant's report does have a copy of each of those statements annexed to it.

WARDEN: Yes, thank you.

MR CLAIR: I have no further questions of Sergeant McGregor.

WARDEN: Before counsel start, in the copy of the statements there is some obstruction on the right-hand side due to line marking. If you have a problem with it, I have another copy which can be made and handed to you. Thank you.

MR MacSPORRAN: I have no questions.

XN: MR CLAIR

WIT: MCGREGOR P R

MR MARTIN: I have no questions.

MR MORRISON: No questions.

MR HARRISON: Nor I.

WARDEN: Thank you, Sergeant, you may depart. You are excused.

WITNESS EXCUSED

WARDEN: I will officially mark that Exhibit number 20.

ADMITTED AND MARKED "EXHIBIT 20"

MR CLAIR: Thank you, Your Worship.

WARDEN: Do you have another short witness before lunch?

MR CLAIR: He won't be a short witness, Your Worship, but there is no reason why we can't embark on his evidence. It depends when Your Worship wishes to take lunch. I will just check. How do you feel about that?

MR MORRISON: I am in your hands.

MR CLAIR: The next witness is Mr Morieson. Not this Mr Morrison, Mr Allan Morieson.

WARDEN: Will you make any significant advance into his evidence or will you have to break yours?

MR CLAIR: I doubt that I would finish his evidence-in-chief before lunch.

WARDEN: Can we take the lunch adjournment now and resume bit earlier?

MR CLAIR: Yes.

WARDEN: Can we resume at 1.45?

MR CLAIR: Yes.

THE COURT ADJOURNED AT 12.23 P.M. TILL 1.45 P.M.

THE COURT RESUMED AT 1.45 P.M.

MR CLAIR: May it please, Your Worship, I call Allan Geoffrey Morieson.

ALLAN GEOFFREY MORIESON, SWORN AND EXAMINED:

MR CLAIR: Your full name is Allan Geoffrey Morieson; is that correct?-- Yes.

Mr Morieson, you started your mining career at Moura No 2 Mine on 24 September 1979; is that right?-- Yes, that's correct.

You started as a miner?-- Yes.

You joined the Mines Rescue in the same year; is that so?-- Yes.

Then you started your deputy's course in 1981?-- Yes.

You passed the course in 1981 but you had to wait until you completed three years' underground experience before being appointed as a deputy?-- Yes, that's true.

You were, in fact, appointed as a spare deputy on 13 April 1983 at the No 2 Mine?-- Yes.

At some later stage in July of 1990, in fact, did you take the decision to come off rostered deputy's duties and accept the position as Fire Ventilation and Stone Dust Officer on permanent day shift at No 2 Mine?-- Yes, that's right.

You had worked as a deputy, I take it, from 1983 until that time?-- Yes, off and on.

Was that at No 2 Mine?-- I had worked some shifts at 2 and 4 underground just on relief basis when they were short. Most of the time I was in 2 all of my time.

What shifts at No 4, what periods, were they at the end of that period of 1990 or spread through the period?-- I can't recall.

On your appointment as the Fire Ventilation and Stone Dust Officer were you sent to the University of New South Wales for a week's course on mine ventilation?-- Yes.

That was 8th to the 12th of April, '91?-- Yes.

About 11 months later were you sent on a week's Fire Officer's Course at the Mine Rescue Station at New Castle?-- Yes,

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that's correct.

Have you seen also in the course of your duties a document which gives position descriptions for various positions and in particular for the position you were in?-- Yes.

Could the witness see Exhibit 12, please, Your Worship.

If you could turn to the third last page there, Mr Morieson, in that bundle of documents, Exhibit 12, and you will see a position description headed, "Fire and Ventilation Officer" - sorry the third last page; is that right?-- Yep, page 1 of two.

That's correct. Fire and Ventilation Officer and that document then sets out the purpose of the position and some other details and then the responsibilities attached to that position and continues over to the second page; is that right?-- That's correct.

And then the third page is, in fact, the page on which you signed to acknowledge that you had read and understood the contents of your position description?-- Yes, that's correct.

You can give that back again, Mr Morieson. You have made a statement in relation to this matter; is that so?-- Yes.

In fact, on 17 August of this year?-- That's correct.

Mr Morieson, you as ventilation officer had the task of doing monthly surveys of the mine's air qualities and recording the results of those surveys?-- Yes.

How were those results generated?-- I took readings underground and then by putting them through the computer and made a printout of a sheet. It was a special number for it but that's-----

What would you do with the document that was printed out?-- That document then I would present one copy to Albert Schaus to put into the record book and another copy I posted in the QA filing system.

The QA filing system?-- Yes.

Where was that?-- That was in the end office.

In the undermanager's office?-- The last office where I was in with Jacques Abrahamse there was a QA file.

And what else?-- That was where all the files were kept.

Would there be anything posted on the cabin notice board, that is, the deputy's cabin notice board?-- Yes, as I say, posted there on the deputy's cabin too.

Was that done as a matter of course?-- It didn't have to be done there but I used to put an "information only" copy there.

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When you say usually was that invariably the practice?--
Yes. As I say, I would always put one up there; that was from
when we went to the QA system when that was introduced.

When you went to the QA system?-- Originally, it would only
be posted in the mine manager's record book.

During the period leading up to August of this year, including
August of this year, the practice was what you previously
described?-- Yes, that's correct.

When did you go to the QA system that you mentioned?-- I can
not recall. That last document that was presented was when we
went into it or when we started into the QA system.

Sorry, the last document?-- That was just put in front of me
before the update on that underground.

You are talking of the position description?-- Yes.

And your signature appears to have been put there in December
'93?-- Yeah, that would be correct.

Does that accord with your memory?-- Yes, that would be
correct.

As part of doing your monthly ventilation survey did you also
take steps to check the integrity of the mine monitoring
system?-- Yes, well, I would go to the Unor room and
printout a screen. As I went to each point, I would compare
my hand-held readings that I was taking with the readings that
were on the piece of paper that the Maihak printed to see if
they were close, if there was any variation.

At the time that you carried out this exercise you had already
taken your hand-held readings; is that what you said?-- No,
I would take a printout at the start of the shift and then
take that with me so I knew what I was walking into.

When you physically went to each of the monitoring points, you
would check your hand-held reading against the printout that
you had with you?-- Yes, that's correct.

The hand-held instruments that you used were what?-- 21 and
31 Draegar pump and MSA Minder.

The Draegar was designed to measure which gases?-- CO,
taking a CO sample.

And the Minder?-- Oxygen and CH4.

There were various monitoring points throughout the mine; is
that so?-- Yes.

I just want you to look at a plan if you would.

Could the witness see plan number 45/24 out of the folder of
plans, Exhibit 8, please, Your Worship. I would ask that

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while this witness is there if that plan could be put up on the white board, please, Your Worship, and that board could be brought over near Mr Morieson.

Mr Morieson, while that is being done, I will ask you to look at it in just a moment. There were various monitoring points throughout the mine as part of the Unor tube bundle system; is that so?-- That's correct.

If you would just have a look at that plan there. See if you can see precisely what it is. Is that a plan that sets out, as is noted down on the bottom right-hand corner, the ventilation stations' monitor points?-- Yes, that's correct.

Of course, those monitoring points were active all the time; is that right?-- Yeah, well, the readout would come out on the computer every 20 minute cycles but it was monitoring everything.

Your ventilation survey involved - that's the monthly ventilation survey - involved you going to each of those monitoring points that's on that plan; is that right?-- Yes, that's correct.

And doing your hand-held survey?-- Doing my hand-held.

Was one of your responsibilities - did you have to monitor the carbon monoxide make of extraction panels?-- Yes.

How did you go about that?-- I failed to mention there before another instrument I had was the anemometer. When I was doing my monthly survey and when I did these CM makes, I would use the anemometer and Draegar 21/31 to do the CO make and then calculate how - on the computer we had a programme which calculated a cross-sectional area to that heat station where I took the reading and then I used to produce the CO make in litres per minute.

How often would you take those measurements in order to calculate the CO make?-- I would take an average every Friday unless something, you know, else was - it was on a weekly basis and there were occasions where I might take an extra reading.

What would be the reason for that, something unusual about the reading?-- Yeah, if one particular reading was high, I took a second reading on the same day.

Of course, 512 was one of the panels where extraction was taking place?-- Yes, that's correct.

And you did your CO make calculations in respect of 512 panel?-- Yes.

As a matter of your usual procedure?-- Yeah, that's my usual weekly procedure.

You established a level of carbon monoxide make at 512 at a point prior to the commencement of the second working at the

retreat; is that so?-- Yes, that's correct.

Do you recall what that was?-- I think around 1.6 metres per minute.

I would perhaps ask you to have a look at a document which you may find of assistance in the course of your evidence?-----

This is, in fact, Your Worship, a bundle of documents and I will provide copies to the panel and copies to my learned friends.

Just while that's being distributed, Mr Morieson, you mentioned - for the sake of the record, Your Worship, that bundle of documents is, in fact, document 121(a) in the bulky exhibit, Exhibit 9. I have extracted these documents so they are a little bit more easily accessed and also so that the members of the panel have copies in front of them.

Mr Morieson, as you heard me say, that is a bundle of documents, it is not it seems in any particular chronological order but there is a table in there, is that right, which sets out the CO make in respect of 512 panel over the life of the panel - or started extraction over the retreat process; is that right?-- Yes, two readings where I got the average of litres before they started extraction and then there was the actual from the - you could say the extraction started on the 9th of the 5th, or thereabouts.

Just pause for a moment so that everybody knows which document you are looking at, it's the sixth from the back; is that so, back of bundle?-- CO make, page 1.

You say you take that at the commencement of the second working at what date?-- Well, the ones I used to set the base level were the first three readings.

In which column?-- In the far right-hand column total CO litres per minute.

And you worked from that basis as a starting point?-- As the starting point. That was the normal make before second working.

Thank you. Now, by reference to that document are you able to say anything about the rate of CO make increase during the period covered by that second working? What sort of increase on average per week was there?-- It varied. There is - just looking at it, 2 - a 2 litre increase one week, another week there is a decrease - there is a bit of fluctuation - and then you have got an increase of around 5 litres there around the 10th of the 6th.

Yes?-- You have jumped from 6.91 to 11.43 and then you have got another jump from 10.4 to 12.2 on the 1st of the 7th and then you have got another 2 litre jump in the following - next between the 8th of the 7th to the 15th where you have got 14.59 litres.

Sorry, that's from the 8th of the 7th?-- From the 8th of the 7th to the 15th of the 7th.

To the 15th, that's an increase from 12.52 to 14.59?-- Yeah.

That you are speaking about. So, that was an increase of about 2 litres?-- About 2 litres, yes.

Okay. Then going over to page 2?-- Page 2 there is - the first one, 18.98 litres, which, when you read it, is a mistake in reading. It was rechecked and found to be only 13.7.

Both of those readings were the same date?-- Yes, both of those are on the 22nd, one is a.m., one is p.m.

And following that?-- Following that we have got down to 13.57 on the Friday and then the second reading on - sorry - yeah, the second reading on the Friday was 14.72.

27?-- 27, and on Saturday you have got a reading of 16.66.

Now, this table doesn't actually indicate the time though that the readings were taken other than in some cases a.m. and p.m.?-- This last - page 2 I was not at the mine, I was on annual leave. These readings were done by other people.

That was by Mr Tuffs, was it, or -----?-- One reading looks like by Mr Tuffs, the other readings would have been by Steve Byron.

He relieved you while you were on holidays?-- He relieved me while I was on holidays.

Do you remember when you commenced your leave?-- On the 15th of the 7th, '94.

Right. That was the last of your readings. Okay. Now, going back then to the first page and during the period that you were there, that increase between 3 June and 10 June of 5 litres per minute over the course of a week, can you make

any observation about that?-- On what date?

That's between 3 June and 10 June, 5 litres per minute, I think, or not quite; 4 and a half litres per minute to be precise?-- 4 and a half litres, yes. The observation of that increase?

Yes, do you have any observations about that - what might have been the cause of that increase at that time?-- If I can refer to a deputy's report, 3983?

Yes?-- I think it is item 45. I have got it here just on a piece of paper in front of me.

Would that assist you?-- It would assist me in what happened that particular day.

Yes. If you can - you can refer to that if that assists you, Mr Morieson?-- The day shift deputy reported there was 1.1 and up to 1.8 coming up from 8 cross-cut, air coming back along the supply road. The action taken was to put up a diagonal bag at 9 cross-cut and there was an opening in the stopping and the CH₄ was bleeding into the return. The deputy's second inspection showed that the methane reduced down to .7 per cent and the CO reduced down to 5 ppm.

Right. Now, that - you have been informed at some stage - you have become aware of the fact there was some abnormality which was recorded that day? When I say "abnormality", some event that day that the deputy was involved in?-- Yes, I was called in.

You were called in that day?-- Yeah, to that section.

That is what I was interested in. What was the procedure when there was some abnormality that appeared in terms of getting you involved? What systems were in place for that?-- Well, depending what duties I had that day, whether it was stone dust sampling or doing whatever of my other duties that I was involved in, they would contact me or the undermanager would send word to me to go to that particular section of where the trouble was.

Okay. And this was one of those occasions; is that right?-- This was one of those occasions, yes.

Now, I want to come to that in a little bit more detail and you can refer on one of the plans there to just where you went and what you did, but before I do that, and looking back at the make over the whole of the period, the first thing that I wanted to ask you about is that the measurements for the purpose of calculating the make seems to come from, on each occasion, two particular stations that you used; is that so?-- That's correct, yes.

Ventilation station 46 and ventilation station 59?-- Yes, that's right.

Now, I wonder if you could, by reference to that plan there -

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and there is a pointer available - indicate where they were and describe it for me at the same time, if you will?-- This is VS46 that was monitoring on that return here and the other - on the bottom return was VS59.

Just pausing a moment, VS46, where you are indicating there, that was in No 1 Heading of 510 Panel; is that right?-- No, that was - yes, No 1 Heading.

Of 510 Panel?-- Of 510 Panel.

Between 5 South and 512 Panel?-- That is correct.

And was that a position at the outbye end of the 512 top return, that is, just outbye of the 510 top return?-- Yes.

Okay. Now, the other one that you are indicating, VS59, that was in No 5 Heading of 512 Panel?-- Yes.

Is that right, between 0 and No 1 cross-cut?-- That's correct.

That's over there. In fact, I might ask Your Worship if that plan there could be just tipped over the back for the moment so that the witness can see the more detailed plan of 512 section?

Now, I am not sure that that detailed plan of 512 section has the ventilation stations marked on, but you will be able to indicate more clearly there just where they are; is that right?-- There where it says "monitor point 16".

Yes?-- And the other one in the top return just there.

Just outbye where -----?-- Just outbye of where that prep seal is - sealed area.

And just for the record, the first point that you mentioned - the first point you indicated there is in that -----?-- In between the 5 South and the 512 Panel.

Just - it is actually - it is not into that No 1 Heading at 512, is it?-- No.

It is actually short of that?-- Yes, just short of that.

Just a bit outbye of that?-- Just a bit outbye.

Okay. Now, can I ask you this: what choices do you have when you look to measuring the CO make in terms of which ventilation stations are available? Would there be a placement of those ventilation stations specifically for the purpose of enabling the CO make to be measured or is it that they are in place and that you just select those points as the appropriate points?-- No, originally a point here was measured up for the ventilation station, but when the prep seals were put up the turbulence caused by the prep seal made that point unable to read, any accurate measurements, so we had to go to where there was no turbulence to get an accurate

reading, and the other one was deliberately put in where it was for the monitoring.

Well, the one, for the record - you see, the transcript has to show what we are talking about, but for the record the one you say was initially put in was just by the prep seal in No 1 Roadway of 512 Panel, is that right?-- Yes, the surveyors initially put one just in there, just inbye - just outbye of 1 cross-cut on No 1 Heading and because of ventilation that had to be moved.

Because of turbulence?-- Because of turbulence.

I see. Then the other one, you say, was specifically put in, the one in No 5 Roadway?-- The other one was specifically put in No 5 there.

Now, in order to direct the flow from 512 that you were seeking to measure towards the position where that ventilation station was there would have to be some other seal, is that right, in that No 1 Roadway? Is that what we see there?-- There is a seal there.

Outbye?-- And a seal there. So, the air had to go around.

Yes, okay. During the retreat phase in 512 Panel then were those seals that you just indicated - that's in No 1 Roadway?-- No 1 Roadway, 510.

Of - actually, it is in one of the cross-cuts in 510 Panel?-- Yes, that's correct.

Okay. But it is the cross-cut that is the extension of the No 1 Roadway and 512, if you look at it; is that right? I am just trying to get this on the record?-- Yes, if you are looking at it that way.

Okay. And the other seal - that seal was permanently sealed?-- That was a permanent Tecrete seal.

Do you remember when that went in?-- That would have gone in when they advanced the 510 section.

Before the retreat phase of 512?-- Oh, well before, yes.

And the other one that you indicated which was a permanent seal is in the -----?-- That was a seal with a door in it for access and that was also made of Tecrete.

That's in the No 1 Roadway for 510 Panel, is that right, between No 1 and No 2 Roadways in 512 Panel?-- Yes, between No 1 and No 2.

Now, if I can come to the events on 17 June of this year and this was an occasion when you were contacted by a deputy, Mr Reece Robertson; is that right?-- Yes, that's correct.

He was the 512 Panel deputy?-- Yes.

Well, what did he have to tell you? Just pausing a moment, is this the occasion when you were brought in that you referred to earlier?-- Yes, this is one of the occasions.

Okay. Well, what did he have to tell you, Mr Morieson?-- He told me that he had layering coming up No 2 Heading for CH4 and that it was recirculation inbye, that the air was no longer coming in on the intake, that it was actually coming above - coming back out.

Yes, I see. So that where it - which roadway was that in, No 2 inbye - perhaps you can just indicate there? No 2 and -----?-- The methane was coming back along this road here.

And at what stage was the retreat at that point? Where were the workings?-- I would have to see a sequence plan of that. According to his deputy's report he was on sequence 17. Without knowing what sequence 17 was I couldn't tell you where he was, from memory.

When you went down there do you remember just where the crib table was at that time?-- Not off-hand. It was in the cross-cut not far - I believe it was somewhere around there. I am not 100 per cent certain on that point.

You are indicating No 8 cross-cut?-- No 8 cross-cut.

Okay. Well, what did you do? Did you go to the panel?-- Yes, I went to the panel.

And what did you find there?-- I went and investigated the integrity of the stoppings along here, but everything was right.

They are the stoppings in the various cross-cuttings between No 1 and No 2 Roadways?-- Between No 1 and No 2 Roads, yes.

Right. Any problems with those?-- No, they were all intact.

Now, what about in the returns? Perhaps I should ask you, what did you do next?-- We checked these other stoppings on the - to the bleeder return. These stoppings had holes in them to allow air to go through to ventilate this corner around here.

Okay. The stoppings you are indicating there are the ones between Nos 12 and 13 cross-cuts in Roadways 2, 3, 4 and 5; is that right?-- That's correct.

And was that designed that they should have holes in them to allow the air through?-- Yes, their design was that they had holes in them.

Okay. And what did you do then?-- I believe I contacted Mark McCamley about putting a two metre hole in this 12 cross-cut stopping there.

Yes?-- Which then allowed the air to short circuit, not have

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to go right the way through there, which would create more pressure at this point here which would pull that air back this way.

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Out of No 2 roadway?-- Out of No 2 roadway.

And back out through the stopping between Nos 1 and 2 in 12 cross-cut?-- Yes, that's correct.

Rather than, I think you indicated, going out through the holes in the stoppings at -----?-- The normal air intake would be going down across there. Some would be filtered but most of the air would be going around and that's the main return.

Up No 1 road?-- Up No 1 road.

Across the very back of the goaf and up -----?-- Across the very back and up the front.

What about in terms of the gas measurements which you took on that day?-- This is on the 17th?

Yes, on the 17th. Did you take some measurements of CO and methane on that occasion?-- Yes, we took measurements. I believe Reece had taken the measurements and he had found 10 ppm and 1.5 per cent methane between 5 and 7 cross-cut, which is between here and there.

Yes, I see, and that had been done before you went there that day; is that right?-- Those readings, yeah, were taken while I was there.

Okay. What about readings you took for the returns? Have you set those out in your statement at page 2? Have you got a copy of your statement there?-- Yes, I found I had 0.2 carbon dioxide, normally 0.1; methane 0.4 compared to what normally I would have in the return there was around 0.6.

These were measurements that you took when you were in the top return?-- That 0.4 reading was along here.

That's between 6 and 8 cross-cut?-- Yes.

And you weren't - prior to taking this corrective action that you have spoken of, you went into the supply road. What did you find as far as the air velocity was concerned in No 2?-- The air velocity was coming back up the road and not going inbye.

Now, you took some other readings that day, and this is in No 2 heading, you mention in your statement at the section transformer. Do you remember where that was at that time?-- It would have been further back outbye on that No 2 heading.

Around cross-cut 5 you are indicating there?-- I am just not sure, from memory, where about. If you wanted to be accurate, you would need to look at that sequencing plan.

And see where the workings were at that time?-- And see where they were at that time.

In broad terms that's about where it was?-- Yes, it was

about there and it was layering - that was in the general body. I can't see it in the statement here.

If you go back to page 2 you will see that recorded. The third paragraph from the bottom you mention the section transformers?-- Yeah, we had 0.5 methane in the general body and 100 mil thick layer to about 1.2.

And further inbye at the goaf edge?-- Around 2 per cent.

That's the roof layer you are talking about?-- That's the roof layer. There was two distinct air streams. Again, there was one - by throwing stone dust up into the air you could find there was a heat layer of methane coming back against the ventilation. The bottom layer of air was going in and the top layer was coming out, and there was up to 2 per cent in the top layer, but down in the general body reading at the goaf edge it was around 1.4.

Where you were taking your general body reading, is that part of it where the air was coming out again?-- It was mixing the air in and out. It was being taken about that high, which is probably about 1.5 metres.

I am sorry, perhaps where it was going in, I should say?-- Yes, partly where it was going in.

Now, this upper layer, what could you say about the warmth of that?-- Yeah, it was warm. Perhaps, you know, 5 degrees warmer than the bottom cool air coming in.

The way that the ventilation was structured at that time, in what direction should the air have been going?-- The air should more be going inbye.

So this upper layer moving out, the warm upper layer moving outbye was in fact the irregularity that you were concerned about?-- That was what we were having trouble with. That's what I was concerned about, yes.

Did you go to the goaf edge in that No 2 heading?-- Yes.

What did you sense there in terms of temperature?-- Yes, it was slightly warmer.

Did you make any estimate of the difference?-- Oh, something like 5 degrees warmer.

Now, beyond where you were at the goaf edge in No 2, I don't know that you can say precisely where the goaf edge was at that stage, but can you give some general indication where it was along No 2 heading there?-- The goaf edge was somewhere around here, between 5 and 7.

5 and 7 cross-cut, okay. Beyond where you were then at the goaf edge was an area where the bottoms had been taken?-- Yes.

The ribs had been stripped?-- Yes, that's correct.

And what would have been the height of the roof at the goaf edge?-- About 4.5 metres.

And how wide an area would you have been -----?-- Around 16 metres wide.

Across whereabouts? Across that area between 5 and 7 cross-cut. Was there any evidence of falls in that area that you could see at that time?-- Not along that No 2 heading.

Well now, at this stage - perhaps I should ask you this: do you remember what time of day it was on 17 June that you observed these things and took these measurements?-- At this stage I can't recall exactly what time it was.

You mentioned Mark McCamley. Was he with you at the time?-- Yes, he was with me.

And Reece Robertson, the deputy who called you in, was he with you?-- At stages, yes. We split up there at one stage. While I checked the return, Mark McCamley and Reece went around and checked where there was a bit of a fall. It wasn't blocking off the airway at all but there was a fall around here.

That's in No 3 heading?-- In No 3 heading.

Between 11 and 12?-- Between 11 and 12.

Cross-cuts. Now, you have already mentioned that when you did that investigation you found that there was no ventilation getting down into that corner that you indicated before?-- Yes.

Did you take any steps to measure the methane there, or to assess what was happening in relation to the build-up of methane there?-- Yes, we took some readings. I just can't recall what they were. There was a build-up of methane against this stopping here.

In No 12 cross-cut?-- In No 12 cross-cut between 2 and 1.

And then I think you said that you took those steps which -----?-- Which I mentioned earlier.

Whereby you arranged to put a hole in that -----?-- Put a hole -----

Mr McCamley put a hole in that -----?-- I put a hole in the stopping while Mark McCamley took a CO reading around the fall area.

And then did you go out along the top return again?-- Yeah, I went out along the top return.

And what about at 8 cross-cut, was there a door in that return, that top return at 8 cross-cut? In the stopping in No 8 cross-cut just adjacent to the top return perhaps. It's

one of those ones you indicated before?-- Yeah.

Was there a door in that?-- From memory - it's just pretty rough how this was extracted.

The plan is different to what the layout was at the time?-- What it was at the time. There was a flap that had been cut about one metre high by about three metres long and that was allowed to be laid down and that would short circuit the air and a bag was placed from the corner across almost to the other rib.

In No 2?-- In No 2 heading which allowed the air to be - the hot air layer to clear quickly into the return.

Did you at any time see any particular item that might have indicated a source of the warm air?-- No. It was -----

Simply that the ventilation wasn't as extensive as it should have been?-- It was simply because of that, and also a stopping back at here, this was regulated down. We also found that bag was down more than what it should have been and that was placed up.

Now, what you are indicating there, was that stopping in No 5 heading just outbye the No 1 cross-cut in 512; is that right, what you were indicating just then?-- Yeah. Well, really there is 1, 2, 3, 4 - there is no No 5 heading between 1 and zero, so it's referred to normally just as the bottom return.

The bottom return anyway?-- Yeah, the bottom return.

Whether it's 5 or not, it's the bottom return?-- Yeah, bottom return.

Now, you say that door was down further than it should have been?-- Yeah, there was bag across the cross-cut to reduce the air flow down that, and by having the air go around that way it reduced the - the air would come in and short circuit back that way rather than all go down to this corner.

Right. Had you been aware prior to seeing that that that bag was down?-- No, I hadn't been aware.

Did you ever discover how the bag came to be down at all?-- I believe it was because they had reported they had had minor falls in the goaf and it caused the fall - the bag to come down.

Now, you took your leave from 17 July through to 5 August; is that so? They are the dates you mention in your statement?-- Yes, that's correct.

Did you check the records prior to making your statement?-- Yes.

And Mr Byron was assigned to your duties for that period?-- That's right.

Your last CO make calculation before you went was that one at 14.59; is that right?-- Yes, that's correct.

Registered at the bottom of the first page in the CO make for 512 document?-- Yes, that's correct.

Okay. That was an increase of about two litres per minute over the previous reading on 8 July '94; is that right?-- Yes, that's correct.

So did you take steps to ascertain a reason for that increase of two litres per minute in the course of a week?-- On that - the 15th I did my last check of the regulators. I checked the regulators along this last road that they hadn't been altered by anyone or hadn't been damaged through minor falls, and this regulator here. I checked this stopping here, that that was intact.

That stopping being the one in the bottom return?-- The bottom return, yes.

Just outbye No 1 cross-cut?-- Yeah.

Yes?-- And I found that fall was in the goaf and that the air quantity was plenty of air and no shortage of air, so everything appeared okay at that stage.

Now, that event that involved that increase of two litres per minute, did you pass those results on? Was that a feature significant enough to warrant some special mention to anybody else within the system?-- Well, my job was to each week give that information to the manager so as that was - this is the 15th. Before I went on holidays I gave those to Joe Barraclough.

Who was acting manager at the time?-- He was acting manager at the time.

Okay. You came back off leave on 5 August to do an afternoon shift as deputy?-- Yes, that's correct.

And that was just to fill the absence of someone else; is that right?-- Yes.

When you returned did you speak with Jacques Abrahamse?-- Yes, he told me there had been a scare from a high reading make and it turned out to be a misreading of the anemometer, and he had done a second inspection with Dave Kerr and they found everything was to be of no concern.

Was that that same event that you referred to earlier being the mistake on 22 July or some other more recent event?-- No, that's correct, 22 July.

And had there been some involvement of Mr Kerr, the rescue superintendent, on that occasion?-- Yes, he had done an inspection with, I think it was Jacques Abrahamse and someone else. I am not aware who the people were involved.

Now, Mr Morieson, have you been involved with any other sealing operations at No 2 Mine?-- Yes, I was involved in '91 with the sealing of the 5 North - sorry, that was in '86.

'86, 5 North-west?-- 5 North-west, yes.

What was the situation there at 5 North-west Panel?-- Rod Stafford had come in on the day shift for Saturday morning and had found 13 ppm in the return. This reading was higher than most of our readings. He had gone back later to find 20 ppm and there was evidence of a smoke haze in there, so it was decided upon to seal that section and machinery was sealed off inside with the prep seals.

When the panel was later re-entered?-- Quickly recovered later.

Later were you involved with the sealing of 5 North section?-- Yes, I was there when 5 North section was sealed.

What was the situation then as far as the ventilation aspect was concerned?-- We had 12 litres CO make at that stage. That was an increase on the previous reading. We were worried about frictional ignition and, you know - sorry, we seal the panel off because of the possibility that we couldn't inspect the back of the panel where we were getting the CO from and we sealed it as a precautionary measure.

You mentioned that the CO was coming from the back of the panel?-- Yeah.

Was there some concern about there being a heating of some kind in the back?-- Yes, there was a faulted area and roof conditions were extremely poor and it was beyond anyone's means of safely assessing the situation.

Simply couldn't get down there to have a look?-- No.

You mentioned something about frictional ignition was that a consideration or not?-- And that was a consideration after we sealed it.

After you sealed?-- After we sealed and realised that the - what's its name - it was going to go through, you know, explosive range and so with the possibility of frictional ignition, it was decided that no-one would be there underground except for deputies to do, you know, take gas samples.

The consideration of frictional ignition was the thing that led to the men being withdrawn; is that what you are saying?-- Yeah, the possible ignition point.

If there was a heating in the section, say, in that 5 North Panel and the panel was sealed, what would be the effect of sealing the panel on the heating?-- Which panel are we talking about?

You were talking about in 5 North there was concern about there being a heating in the panel?-- Yes, there was a difficulty in heating. By the time we had almost completed seal, we were up to 150 parts CO. In those days we were still talking parts, we didn't calculate in litres. It wasn't until Phil Reed, the manager then, had done a course in '89 that we converted to working out CO make in litres per minute.

In any event, the reading in parts per million was certainly high enough by the time you sealed and indicated that there was a heating?-- Yes, there was grave concern.

What I'm asking you is, assuming there was a heating then in 5 North there, and you say that it was sealed, what would be the effect of that sealing off of the panel on the heating?-- It

would cut off the oxygen supply to the heating and once the oxygen had gone, then it would subdue it.

Is there any way of making any estimate as to how long it would take for the deprivation of oxygen to extinguish that in those circumstances?-- I'm not aware exactly. It was worked out by Phil Reed to be in a certain time. I think the mine inspector then set 48 hours that no-one was to go down the mine when we completed that sealing.

Are you able to make any comparison between the situation that existed in 5 North and the situation in 512 panel when the sealing of 512 took place from the ventilation point of view?-- Well, the ventilation point of view, once you have sealed it, you have got no ventilation so as far as similarities - it's a matter of monitoring the increase in the CO and the methane and it's worked out by the Maihak computer. You can call up a Howard's Triangle.

Also, I want to bring you back to 512 panel and the situation then - I mean, you were aware of the sealing of 512 panel, did you have any part to play in the decision to seal or the actual process of sealing yourself?-- No, I was not involved at all.

From the ventilation point of view did you have any input on where the Unor tube bundle was to be placed inside the section with a view to the section being sealed?-- No, as far as my knowledge we were leaving one sensor in the top return No 1 Heading and there was another one to be placed through the belt bracket.

Can you just indicate what you say. First of all, there was a sensor in No 1 Heading?-- There was one sensor going to be left in here and the other sensor, I believe, was left in this area.

That's the one that's marked on the plan; is that right?-- That's correct.

And that's?-- Monitor .5.

You have been involved in other sealings in the mine; is that so?-- Yes.

And 4 South A?-- Yes, I monitored some in 4 South A.

4 South Level?-- Yes, I did readings in 4 South Level.

4 South B?-- Yes, I took some readings there too.

403?-- Yes.

401/2?-- Yes.

And 511; is that right?-- Yes, that's correct.

Have you seen a graph that's been prepared showing comparisons of the CO make in litres per minute over weekly intervals in

respect of a number of those points?-- Yes, I have seen it.

Just have a look at this document if you would?-----

I will have copies of that document passed up to the panel. I will indicate for the record, Your Worship, that that's document 123. I will make further copies available to my learned friends.

That graph, Mr Morieson, just assumes it started week 1 in terms of the retreat phase in each case; is that so?-- I believe so, yes.

512 panel is the one that - if you look at the middle of the graph - is second from the top, probably the best way - at the top, is that right, looking at just the middle of the graph, top one is 5 North; is that right?-- Yes, that's correct and the main part of the seal, yes, second one down is 512.

For the significant part of the period. Are there any comments that you can make on comparisons between those various CO makes in respect of the sealed panels?-- The CO make in litres is not as high on the 512 as it was in the 5 North. It's trended upward which you would expect. As you are coming back, you are going to produce more CO because you have got a larger surface area available.

You say that's within the normal expected trend?-- That would be in the normal except it's higher than the other 402, 403 and the 511. So, it is trended more in a shorter time.

Are you able to say where the measurements recorded on this graph cut out, that is, the last point on the graph of 512 what would that be in terms of time?-- I didn't draw up this graph.

Does that record a reading-----?-- That would-----

-----on the second page of that CO make for 512?-- I would imagine that has incorporated that point at 16.66.

And that would be on 6 August '94?-- On 6 August.

The Saturday. So that there was something of a sharp upward trend between 14.27, it would seem, on the Friday, up to 16.66 on the Saturday?-- Yes.

Are there any observations that you would make about that upward trend?-- Obviously, it's an area of concern. Going by the Mines Rescue Manual, once, you know, go over the 10 litres and start into your 20 litres, you've got, you know, extreme danger, greater than 20 litres, so, it hasn't reached the 20 litre point but it's certainly heading for it; so, you know, that would be one of the reasons why they sealed, I imagine.

If you go back to the first page of that bundle of documents that I gave you, there is a document there headed "CO make 512; 5/8/'94 to 7/8/'94"; do you see that?-- Yes.

Which shows the times at which these readings were taken over the course of that period, 1.30 p.m. on 5 August would have been the first reading through to 8.30 p.m. on 6 August being the last reading or the last reading according to that?-- Yes.

Did you have anything to do with the readings that are registered on that graph there?-- No.

You wouldn't have done because you at that stage weren't acting as ventilation officer?-- No, I wasn't there or I wasn't on shift or aware of any of this.

It's those readings that appear to be reflected then on the graph that you have just been looking at; is that so?-- Yes.

You say that the final part of that graph does indicate a sharp upward trend heading towards that danger area of 20 litres per minute?-- Yes.

Tell me, Mr Morieson, were you as the ventilation officer trained in the use of the gas chromatograph?-- No.

Did you know from your operations as ventilation officer that there was a gas chromatograph available to analyse samples?-- Yes.

Do you know if that was used as a matter of course?-- I don't know if it was used on these occasions.

But as a matter of practice was there a system whereby it would be used if there was a concern for instance about a heating?-- Couldn't say if there was a written procedure where it was used for the concern but you would, if you were concerned, use it. It's another instrument. It's another instrument.

You were the ventilation officer, in effect, the man who had the responsibility of looking after this area of activity in the mine concerned with levels of gas readings, is that right, and the possibility of sharp rises in CO make; is that so?-- I was there to advise and present the thing. It wasn't part of my job to actually interpret the readings. I would present the readings to the manager. If you look at my job description, you will see that it wasn't my - I could suggest and as such my statutory position - I wasn't highly qualified enough to make changes to ventilation without higher management decisions.

Was there ever any suggestion that you should be trained in the use of a gas chromatograph at all?-- At some stage, you know, that was going to happen. We were in the middle of a lot of work models and things where we were short of personnel and therefore going away on training courses was very hard without affecting the management running of the mine.

But that simply hadn't happened as at then?-- At that time, no.

XN: MR CLAIR

WIT: MORIESON A G

5 August or 6 August. Just a few quick points, Mr Morieson. Those points that were selected for the measurement of the CO make in 512 Panel, would they give you a reading of the relevant CO levels throughout the whole of the panel?-- I believe so, yes.

That would be to some extent dependent on how effective the ventilation through the panel was; is that right?-- That's correct.

If there were any difficulties with the ventilation in the panel you simply wouldn't be getting an accurate reading as to the CO make, by measuring up at the points that you indicated before, VS46 and 59; is that so?-- I don't quite understand.

I suppose, to put it simply, the accuracy of the measurements from your monitor stations that you relied on for the CO make would depend on just how well ventilated the panel was; that is, whether the air coming out of the panel had passed through any areas within the panel where there might be some activity which is making carbon monoxide?-- Yes.

So, to that extent it is dependent on how well the panel is ventilated?-- How well, yes.

Now, with the bottoms taken and, perhaps, even the effect of falls in the roof, you get something of a cave-in effect so there may well be areas within the goaf that would be higher; that is, where the roof would be higher than even 4.5 metres?-- Yes.

Is that so? And depending on the size of any fall it could be considerably higher; is that right?-- Yes, I -----

Your methane would tend to gather up in that area because it is lighter than air; is that right?-- Yes.

Carbon monoxide, what is the position with that? Mixes with the air?-- Yes, it mixes and can layer too.

Can layer? Under what circumstances would that carbon monoxide tend to layer?-- We found it in 5 North in the resealing operation, that we actually had carbon monoxide layering behind the seals so what we were reading from at the monitoring points through just inbye the seals wasn't an accurate reading. We went in with Mines Rescue and took readings further inbye. We found there was actually, sort of, layering of carbon monoxide.

So too, if you can have layering with the carbon monoxide, where you have the high roofs in the goaf you could even have more layering of carbon monoxide?-- Not so much, I believe, inbye like that, but after you seal I believe you can - you know, there can be where your monitoring points are.

Okay. Where there is this layering, you have got ventilation underneath it, and the air passing underneath it as part of the ventilation just does catch a little bit of whatever gases are layering above it; is that right?-- Yes.

XN: MR CLAIR

WIT: MORIESON A G

Something called a venturi effect?-- Venturi effect, yes.

But, of course, if you are only gathering some parts of those gases above the ventilating air then by the time that gets out to a monitoring point, out where you have indicated they were, the concentration of those gases in amongst the ventilation air would be far less than the real concentrations in the layers of gases above the ventilating air in the goaf; is that right?-- That could be the case.

Okay. Now, you mentioned that one of the steps taken to improve the ventilation on the occasion that you were there with the deputy and others was that there was a two metre hole put in the stopping adjacent to the top return. I think it was No 8 - No 8 cross-cut that you referred to?-- Yes.

So that the air would be pulled out; is that right?-- Yes, that was only for four to eight hours and then that was placed back up after that problem had cleared.

Was there also a hole then put in that stopping adjacent to the top return further back in the goaf? That is, further inbye was there a more permanent hole put down in that other corner at any time?-- This hole remained there from there on in.

Was that the two metre hole?-- That's the two metre hole, yes. That stayed there from then on.

Okay. Now, obviously making a hole in that stopping could have an effect not just in the immediate area there, but in other areas of the goaf; is that right?-- Yes.

It wouldn't just have the effect of clearing that corner, but it would also reduce the amount of air which would be travelling through other areas of the goaf; is that so?-- Yeah, that's correct.

Can you just give some indication as to what you would envisage to be the effect of putting that two metre hole in there?-- Well, that two metre hole there, that made this area flush better.

What about coming back up to 7 and 8, and even 5 and 6?-- 7 and 8, that air would be reduced slightly. The trouble was that the air that was coming in was going out this bottom return which was closed down. So, therefore, that air was not doing anything, it was just going straight back to the fan. So, this air - even though those holes were put in there at that stage, with that hole the air increased in this part of - this part here was cooled more by the increase in the air.

Cooled more by the increase in the air, by putting the stopping?-- By closing off the bottom return.

The bottom return?-- The air wasn't then wasted, it was being used.

Now, at the time that those steps were taken the workings were, I think you indicated, around 5 or 6 cross-cut or just outbye of that; is that right?-- I can't recall off-hand.

I think earlier in your evidence you mentioned going down No 2 to somewhere just outbye of - was it No 7 cross-cut - 5 to 7 cross-cut you said was the area of working at that time?-- That - when I said around 5 to 7 cross-cut, I believe when we had this problem with this recirculation they were actually working over on this side of the mine.

Okay. Well, at least the retreat was at that stage only about half completed?-- Yes.

Half-way completed. Well, now, as the retreat continued and the goaf area became larger do you know yourself what happened with that two metre hole down in the stopping in 12 cross-cut? Did that remain open?-- It remained open, yes. It remained open all the time up to when I was on annual leave. On the final day before I went on annual leave I checked those stoppings and it was open. I had - the stopping outbye had a one metre hole as well.

That was another hole that was there, the stopping outbye?-- This stopping there. The rib was very poor and the bag wouldn't - you couldn't get a good seal because of the fretting on the rib. So, there was about a one metre opening on that as well.

Not an intended opening, one that just resulted from the uneven rib?-- It was intended on - not originally on the original submission from me, no, but it was doing not a lot of harm and as we were concerned with this recirculation it was helping clear -----

Helping clear that immediate area?-- That immediate area.

In 11 and 12 cross-cuts?-- In 11 and 12, that were low quantity.

If those openings remained then, and coming back to the question a little while ago?-- Yeah.

Of course, that has an effect then in other areas of the goaf, as the goaf is increased and the workings - as the workings retreat and as the goaf is increased?-- Yes, it reduces.

Unless there is greater pressure with the ventilation coming in then the fact that there are holes in 11 and 12 cross-cut stoppings would mean that more air is going out that way - more air is going out that way and, therefore, there is less pressure to drive air through other areas of the goaf; for instance, at cross-cuts 5, 6 and 7; would that be so?-- It would affect this far side, not this side, because the air was short-circuited, it pulled in this way. The air over here would be less.

You are indicating at that point, when you say that, towards the bottom return in cross-cuts 5, 6, 7 and 8 there, I

think?-- Yeah, around this bottom.

Okay. Thanks, very much. Your Worship, I am not sure whether I have tendered the documents which I have shown to Mr Morieson, but I will tender, first of all, the bundle of documents which Mr Morieson has looked at which are best called documents relating to the CO make in various panels.

WARDEN: That one group, Exhibit 21.

ADMITTED AND MARKED "EXHIBIT 21"

MR CLAIR: I will tender also the graph which is a comparison of the CO make in respect of various sealed panels.

WARDEN: Both pages?

MR CLAIR: Yes, two pages. It should be a two page document, that second one.

WARDEN: Yes, that's Exhibit 22.

ADMITTED AND MARKED "EXHIBIT 22"

MR CLAIR: No further questions.

WARDEN: Thank you. Mr MacSporran?

CROSS-EXAMINATION:

MR MacSPORRAN: I will ask you some questions about training, firstly. You started at the mine in 1979; is that so?-- Yes.

And you commenced the deputy's course in 1981?-- Yes, that's correct.

And I think you passed that course the same year?-- Yes, I received the certificate on the 13th of the 8th, '81.

At that stage you hadn't done the - or hadn't completed one requirement of having three years underground experience?-- That's correct.

You actually commenced duty as a deputy some time in 1983?-- Yes, 7 March.

And the deputy's course, or the certificate, is issued by a

XXN: MR MacSPORRAN

WIT: MORIESON A G

Board of Examiners; is that so?-- Yes.

Before you can undertake the examination with that board there are certain things you have to - certain requirements you have to fulfil first?-- Yes.

And one of those is study of a course at a TAFE college?-- Yes.

And what does that course consist of?-- It is a course on all mining aspirations or techniques and goes through, you know -----

Do you attend lectures?-- I attended lectures at the high school with Dave Kerr.

That was at Moura, was it?-- At Moura, yes.

And at the end of that course of study did you sit for a written examination?-- I had to sit for a written examination.

In addition to that requirement, that is the course through the TAFE college, you had to have certain other certificates before you could undertake the oral examination through the Board of Examiners?-- Yes, I had to have a first aid certificate.

And a gas testing certificate?-- I had to do a gas test. I never received a certificate. That was part of it.

Who did you do the gas test with?-- Dave Kerr.

Was that at Mines Rescue?-- That was at Mines Rescue Station, yes.

You mentioned the three years practical experience requirement. That was something you fulfilled between '81 and '83?-- '83, that's correct.

That requirement itself was divided into various sections. You had to have certain experience at the face?-- Yes.

And what proportion of the three year period was that by the requirement, do you remember?-- Six months I think you had to have at the face. I had well in excess of that. Most of my time was at the - in the face crew.

The requirements seem to be directed towards making sure you had practical experience underground and in production at the face underground?-- Yes.

Then you would sit for your oral examination with the board?-- I did an oral exam with John Brady at the Mines Rescue Station, yes, not with the board.

Was John Brady at that stage some sort of delegate?-- He was the mines inspector for the area.

Delegated that task, perhaps, for the purpose of this deputy's examination?-- That would be correct, yes.

What sort of areas were covered in the oral examination that Brady gave you; do you remember off-hand?-- Yes. The one he asked me was the CO make - not CO make, CO O2 deficiency ratio. He asked me general safety rules about cables and -----

Did he ask you about the requirements of the then current legislation?-- Yes.

Relating to the statutory duty to report, things like that?-- Yes.

Generally about production systems?-- He just had a Mines Act in his hand and just flicked through it at random and just asked me questions out of that book for an hour. So, that covered a wide range.

You say it covered a wide range. I am not expecting you to remember the details of that. Did they cover most aspects of -----?-- They covered belt roads, Belt Rules, those special rules.

Mine gases?-- Mine gases.

Transport systems?-- Yeah, conveyor belts and what have you.

Risks - risk assessments for underground mining?-- No, there was - I don't remember.

Requirements for inspections to be carried out underground?-- Yes, he asked me about pre-shift inspection.

Again the oral examination conducted with you in 1981 was designed to -----?-- No, I didn't do an oral in '81.

Sorry, whenever it was before you got your certificate, it was designed to test your knowledge of the practical aspects of underground mining?-- Yes.

And to adapt the theory that you had become aware of to the practical application at the coal face?-- Yes, it was asked - to do with second working and fendering.

Now, you weren't able to obviously work as a deputy as such until you had this certification?-- No, not until I received the certificate.

Are you aware that certification in Queensland is very similar to the one given in New South Wales?-- I believe you have to do a different exam.

But do you get accreditation for the certificate you achieve in Queensland in New South Wales to some extent?-- I don't know.

You don't know. Now, you have done that training, obviously,

and obtained your certificate and then you worked as a deputy; is that so?-- Yes.

Then for reasons that aren't, perhaps, relevant here you have elected to work in a different capacity at the mine?-- Yes, I was allergic to night shift.

Allergic to night shift, fair enough reason. Now, what training, if any, did you receive after you obtained your deputy's certification?-- Once I had received my deputy's certificate and I took on this job as fire officer I did this course at the - what's a name - University of New South Wales and that was a week course and then I went on and did a fire officer's course at Newcastle Mines Rescue Station where I had to sit an exam and received a certificate for proficiency.

So, you actually sat an exam, did you?-- Yes.

And that was the training you received prior to becoming the actual ventilation officer at Moura No 2 in July '90?-- Not prior, after.

Shortly after?-- Shortly after. I was appointed on the 2nd of the 7th, '90 as the what's a name, fire officer - ventilation officer.

Now, that training, did that equip you to understand the operation of the monitoring system within Moura No 2?-- Not completely.

Did it familiarise you with the equipment used to analyse the samples; that is, the Unor system?-- The set-up that I was given with the Unor was only just being shown by the then manager Phil Reed. He just showed me how to withdraw information from the Unor system.

That is how to get a read-out of what the -----?-- How to go back through the computer and get a read-out of the weekly average, hourly average, actual readings. I got to present information in several forms.

Now, that was the main system used at No 2 for continuous monitoring of gases within the mine, wasn't it?-- Yes.

The back-up system, if you like, was the gas chromatograph, or the second system that could be used to check the composition of various gases from the mine was the chromatograph?-- Yes.

But I take it from what you have told us already you had no training in the operation or understanding of that instrument?-- No, that was more of a specialist field, and management had said we needed experts to, you know, use it which is what had happened in the past. SIMTARS had come up and operated it for us during an incident or concern.

I think you told us that there was a proposal to actually train in the operation of the gas chromatograph but because of staff shortages and lack of time generally that hadn't happened?-- Not at that point, yeah.

Was there anyone at that stage on site at Moura No 2 who had been trained in the use of the gas chromatograph, to your knowledge?-- There was two or three people that I knew of at that stage that had been trained to use it.

And was there a system, to your knowledge, of having at least one of those persons on shift at any given time?-- Not to my knowledge, no.

I want to ask you something about the system of monitoring throughout the mine. The 1 North-west panel, did you have any involvement with that particular panel?-- I had stone dust sampled it, yes.

It was the case, wasn't it, that that panel itself was re-ventilated and production was recommenced earlier this year?-- Yeah.

Did you have any involvement in that other than the stone dusting involvement?-- Prior to the extraction of the 512 we commissioned new overcasts at 6 South area.

Now, is the ventilation plan still on the board there in front of you?-- Yeah, to the side, that blue one there.

You see that the map on the left, as you look at the series of maps, shows the ventilation pattern for the mine generally, the intake and return airways?-- This one up here you are talking about?

Yes?-- Yes.

And the one closer to you on the right shows the monitor points for sampling purposes?-- Yes, that's correct.

The idea of having monitor points in various locations is to get a representative sample from various parts of the mine; is that so?-- Yes.

And they are strategically placed throughout the various panels and roadways, those monitoring points?-- They are placed at the main split.

Now, to your knowledge, who is the person responsible for deciding where a monitor point should be placed for sampling purposes?-- We have all sort of had input on it, the under-manager in charge, the superintendent, myself.

Is that an ongoing process or is it decided at the site of the development of the panel and then left for the remainder of the process?-- They are located at, you know, one point. In this case if a panel is extracting, depending what is going on, you can use that one point right through.

I take it from what you say it is subject to adjustment if it is discovered a particular point is not adequate?-- If you have a point where you are not getting a true reading or you have problems with - not velocity - turbulence affecting your readings, then they will be moved from where you originally put them.

Now, if you look at the map on your right, which is the map that contains the monitor points, can you locate on there for us point No 8 which is, I think it's in the 1 North-west section?-- Yeah, that one there.

Perhaps just for the record can you describe for us the location of that point?-- That's 27 cross-cut on the return.

And is it in about the middle of the roadways coming out of 5 South, approximately?-- Yes, approximately.

So it's in the intersection between 1 North-west and 5 South, in that general area?-- Yes.

As you say, about the middle of that intersection. Now, that's the only monitoring point in relation to 1 North-west, is it not?-- Yes, that's correct.

Would that point, in your opinion, give a fair representation of the air coming out of 1 North-west?-- It was giving a fair representation, yes.

Would there be a possibility, given its location, of contamination from the air coming out of 5 South and indeed other panels?-- No. It's below a regulator. There was a regulator there and the pressure difference would cause -----

You rely on the pressure difference created by the regulator to prevent contamination from the 1 North-west point?-- Yes. It was an area of bad roof along there. That's why you couldn't place -----

It further inbye?-- ----- it further inbye. This is an old

part of the mine and some of the roof was very poor and dangerous to be there.

I take it, from what you say, ideally the monitor point for 1 North-west would have been further inbye past the intersection with 5 South?-- Yes.

Because then you would be sure, without having to regulate the air flow, of obtaining samples from 1 North-west as opposed to some other panel? I mean, your monitor point further inbye would be picking up only air coming out of 1 North-west?-- And so that monitor point was only picking up air from 1 North-west as it was.

If you look again at the plan on your left which is the ventilation plan. Can you just - if you need to walk over and look closely, just to see where the return airways went in relation to point 8?-- Yeah, point 8 there.

All right. Have you located those areas?-- Yes.

Are you still satisfied that there is no potential for contamination at point 8 from air coming out of 5 South and other panels?-- Yeah - no, I have made a mistake there.

Can you just explain then what the position is with monitor point No 8 in 1 North-west?-- Monitor point 8 is actually taking the readings from both the 5 South as well as the 1 North-west.

So you don't have a point, any monitor point, that will tell you what is coming out of 1 North-west only?-- No.

Any sample you get coming out of point 8 will be a mixture of air from 1 North-west and 5 South and perhaps elsewhere?-- Yes.

Is that a desirable outcome for mine monitoring points?-- No. What happened, we had only so many tube bundle points available to us at that stage, and originally when the other overcasts were commissioned the tube bundle had to be extended further and hadn't been done.

So as at the stage we are talking about monitor point 8 simply wasn't obtaining a representative sample from 1 North-west only?-- No.

That was due to lack of sufficient equipment, being tube bundle system and the installation of overcasts?-- Oh, well, due to the point not being moved inbye.

Now, you mentioned, I think, in part of your evidence quality assurance documents?-- Yes.

I think you mentioned those in terms of your work in recording data taken from the mine monitoring system?-- Yes.

We weren't sure of the date. I think you weren't sure of the date when the mine became quality assured?-- Yeah.

But I think you said it happened recently?-- Yeah, within the last 18 months.

Was it ever explained to you by anyone what that meant, that the mine had become quality assured?-- Phil Reed had told me about the system in place and of how you couldn't just produce a document without having it registered, and that was the sort of system, procedure, forms and documents. You know, it was explained to me how -----

One of the things was providing you with a numbered form on which to record your data?-- Yeah.

That was one of these quality assurance forms?-- I would do the form and then get it registered as a document.

So you say Phil Reed explained that to you?-- Yeah.

Was that in some sort of training session or was it just in passing?-- There was a continuous improvement workshop which explained some of it, and he gave us an information session on it, and then I spent days with him actually making the quality documents, doing the job description, doing the different procedures, setting out work instructions for my job, so when I was away someone could just step in and find anything and know where everything was.

When speaking of your job, you mean the job of a ventilation officer?-- Ventilation, fire officer, stone dusting.

So somewhere there would be documents that speak of all of the duties and responsibilities of the ventilation, fire and stone dusting officer?-- Yes, that's correct.

And you actually worked on that with the then manager?-- Well, at that stage he was moved from manager of No 2 to superintendent of quality control - of quality assurance, and his job is just dealing with the quality assurance documents and paperwork.

Now, does that paperwork - you refer to it that way just generally - does that paperwork stipulate how gas samples are to be taken underground?-- I believe so. If you look, you know, at the quality documents here, they will tell you.

Perhaps we can come back to that. We will deal with that later, but your recollection is certainly there are procedures laid down for the method of taking such samples underground?-- Yes.

And does that deal with particular locations underground as to where you are supposed to take these samples?-- It refers to locations, yes, I believe.

And what about height within the roadway? Is there a stipulated height where these samples are to be taken or is that left to the discretion of the person taking the sample?-- Well, general body readings.

And by "general body readings" do you mean - perhaps you should tell us what you mean by "general body readings"?-- Well, I usually stand in the middle of the roadway, middle of the height, and just what's in the general body, not taking - holding your minder or whatever directly on the roof and just getting a spot reading.

So the documentation, you think, referred to the taking of samples as general body samples in the roadway?-- I believe so.

Does it spell out any requirement for taking, on occasions, roof or floor samples of gases?-- I cannot recall.

Does the documentation set out in particular officers that are, or workers that are responsible for certain roles? Take, for instance, the ventilation quantity in each section, quantity of air, who would be responsible for that?-- Yes, I would be, as ventilation officer, to measure that.

Is that set out in the quality assurance documents, as far as you know?-- I just can't recall, but I think.

The person responsible for the gas monitoring points, their location, who would that be nominated to be?-- Yeah, I just can't recall the document. If, you know, we have a look at the document, I -----

But you think there is someone designated to be responsible for that sort of duty?-- Yes.

The maintenance of the system itself, the test bundle - tube bundle system?-- I think there is a calibration officer assigned and I think that's Dennis Evans.

And as far as you can recall - I am not criticising your memory at all - but as far as you can recall, all of these things are detailed in documents; they are set out with this sort of particularity?-- We are in the process of doing that. Not all the documents - all the modules have yet been developed on the work instructions but the principle, and I believe Phil has done work on those, yes. Some of the documents were still in just draft form and that meant that they weren't distributed and used as yet.

So they were still in the process of being developed?-- Yes.

Had you yourself trained other employees?-- I had gone around with other people, yes.

When you say you had gone around with them, do you mean you would take them around on some of your shifts to tell them how the job was done?-- I had been with other people to show them how to do the vent survey, show the points so they knew where to go and what have you, yes.

Would you call that a process of training those employees in your job?-- It was part of it. I would have different

people assigned to me at times to help me doing the vent survey, so it wasn't always - usually it was a cadet or person and I would be showing him what I was doing, yes.

Had you undertaken any course yourself to train others?-- I had done the train-the-trainer course, yes.

Was that documented somewhere, that you were certified yourself as a trainer?-- Yes, that was - I received a certificate, I believe, on 30/10/92.

And those that you trained, was that documented, the fact that you trained them, do you know?-- Yes, I had my fire teams as fire officer and that was documented that I had trained them. I would put a form in and say on that form what we did, whether it was dealing with foam or whatever, what operation we were doing as far as what activity.

On those sessions you trained others was there an assessment by you to satisfy yourself they understood what they had been told by you?-- Yes, at stages I would give them a written assessment to see how they would go.

And then again that was documented, no doubt?-- Yes, I believe so. Actually, the document - not so much documented. When I gave them an assessment, it was just a shock for them to, you know, remembering stuff a bit better.

One of the functions of the monitoring system obviously was to keep an eye on the CO make in particular in this panel 512?-- Yes.

That was your job until you went on leave between 17 or so of July and 5 August?-- Yes.

On 17 June you noticed an unusual occurrence in the panel; is that a fair way of putting it?-- Yes, it was a recirculation. I had been called in there because of a recirculation problem of this.

You took some readings in the No 2 man and supply roadway?-- Yes.

And the readings you obtained indicated an increase in the carbon dioxide level?-- Yes at .1, yes.

Increase of .1 but it was a doubling of the level, was it not? The normal level in that panel there at that time was about .1 and it was up to .2?-- .2, yes.

And there was a slight lowering of the methane reading at the same time, the same time you tested?-- Yes.

Did the increase in the carbon dioxide have some significance for you?-- It meant to look further. There was obviously a change of what was going on.

It can be a sign consistent with a heating activity, can't it?-- Yes.

When you see a CO2 rise you look further to see what the source of it is?-- Yes.

And on this occasion you did investigate further?-- Yes.

You walked down that same heading or roadway to where the transformer then was?-- Yes.

We are not sure exactly because we haven't got it here now, the extraction progress plan, but I think it was around about the fifth cut through, cross-cut?-- That's where the transformer is.

Yes?-- That .1 seal 2 reading that was taken in the return, not in at No 2 Heading.

You got the reading and you went inbye to try and find out where it was coming from?-- Yeah.

You took some readings around about the area of the transformer?-- Yeah.

And that's where you got this difference in the methane readings from the general body to the roof?-- No, that was further inbye.

Further inbye?-- Yeah.

But you found further inbye a layering effect?-- Yes.

You had a higher concentration of methane in the roof than the general body?-- Yes.

And associated with that was this odd two currents of air; is that so?-- Yes.

You had the warm air coming out from the goaf area?-- Yes.

And the cooler, fresh air going in?-- Yeah.

What did that tell you in particular?-- Well, it told me that there wasn't enough air getting down sweeping that bottom corner. I discussed with Mark McCamley the possibility that we had a heating of - or something of an emergency in that corner. When we made the decision to cut the 2 square metre hole in the return, I made the comment that if there was a heating this would - it would accelerate it or it could cool it. It would either control it or - and after doing that, when we did it, it seemed to control it and the CO and the methane cleared.

When you say the CO and methane cleared, you hadn't, in fact, taken a CO sample in the roof layering level, had you?-- I hadn't taken - not roof layering, no.

I think you told Mr Clair earlier that if you have a heating, you can have CO rising mixing with the heavier concentration of methane on the roof?-- No - well, when I was saying that - I said that, yes, but that was when we were in the sealed area and that layering had occurred where there was no ventilation, not where there was ventilation. That was taken in the 5 North. When we went in there we had an area that was sealed, we had an airlock, went in and took measurements in irrespirable atmosphere and that's when we discovered we had layering.

That's in 5 North?-- That was in 5 North not in-----

No, I'm not suggesting you found it in 512. I am simply suggesting it may have been there and you didn't test for it, you didn't do any CO reading where this methane layering was?-- No.

You don't know whether there was CO in that layer or not?-- No.

But you do know that you had an increased level of carbon dioxide?-- Yes.

You do know that you had a methane layering in the roof?-- Yes.

And you do know that layer was warmer in temperature?-- Yes.

And was coming out of the goaf as the fresh air was going in below it?-- Yes.

All of those features are consistent with early heating?-- Yes.

Work was done to alleviate that problem by putting a hole in the brattice, I think you said?-- Yes.

As far as you were concerned on that occasion that cleared the atmosphere?-- Yes, and we made further tests around this fall area. Mike McCamley went and he took more CO readings around there.

Of course, when you opened the brattice to allow more air in, you would ultimately dilute the atmosphere behind that brattice; is that so? When I say dilute, you would let more air in to circulate in this problem area?-- Yes, yes.

So what you are trying to achieve is dilute the mixture that you have seen building up in that area, clear it?-- Yeah, That's correct. The mixture that was built by the lack of ventilation, yes.

So if there was high CO in that area letting more air in you would hope would flush it out?-- Yes.

And, ideally, if there was a heating, extinguish it?-- Yes.

But another possibility, as I think you told us before, was that it could ultimately make a heating in its early stages become worse?-- That's correct, yes.

And the only way you would know would be to keep a close watch on the area by way of monitoring through the mine system itself and also by hand-held instruments in that same area?-- Yes, that's why I went down on the 19th.

The day we are talking about here was 17 June this year?-- Yes.

And between then and when you went on holidays, at about roughly the same date in July, was there a close watch kept on this same area?-- Yes, it was monitored, yes.

Was there a process of going into this - right into the same area and taking hand samples throughout this period?-- It became too dangerous to go into that waste. We had been warned by an ACIRL geologist of not to go into waste areas once they have been stripped because of the unpredictable roof

conditions; so we relied on our monitoring of the general body back at the monitoring point.

So your readings from any time after you were unable to get in and look for yourself was based on the monitoring points taken and the general body atmosphere only?-- I believe that was the case.

You would have no roof samples?-- No.

Or for that matter no floor samples?-- No.

You had signs - some signs perhaps - of a heating as early as 17 June this year?-- Yes.

And then an inability of yourself to physically monitor the situation in that area because of the method of extraction?-- Yes.

You were forced then to rely upon the mine monitoring system or Unor System to tell you everything about the conditions inbye of the stage of extraction?-- Yes.

You have told us, I think, and without wishing to be repetitive, you mentioned the suspicions that you and Robertson and McCamley had about the source of this possible heating and I think you said the suspicion you all had was that that was the area where the roof fall occurred?-- Yes.

And this again was one of the problems of this method of extraction in the sense that you would take one pillar, leave one pillar and you expected to have falls and loose coal; is that so?-- Yes.

And there was always a possibility that you would have spontaneous combustion developing in that loose coal that had fallen?-- Yes.

Coupled with that you had the inability to get in there and look at and monitor that situation?-- Yes, but we had the experience of the 5 North of where the litres had to get up, you know, over the 20 mark that we had the concern. So it was a short panel and you should have been in and out before anything became-----

Became serious?-- -----serious.

And, of course, your determination that the CO make was less than 20 litres per minute was again based solely upon the Unor System?-- Plus the back-up check of hand-held.

Hand-held where you could measure?-- Yeah.

Just on that point, the measurements that were taken at ventilation stations - and there were two of them that were relevant to 512, that's the 46 and 59 in the bottom and top returns - were those samples always taken at the same height?-- Yes, I believe so.

Again, there was no variation in the cross-sectional ventilation station taking. Are those samples always taken at roughly the same height?-- Same height, yeah.

Again, if you have layering coming out across that cross-section at roof level you wouldn't necessarily pick up that difference in concentration if there was one?-- Yes, because the reason why the ventilation station was where it was the turbulence inbye caused the mixture; so you had an area where air was being mixed through a prep seal and then coming around the corner so you had a good representative sample because any gas that was present was being mixed in that area before it came to where you had that stable area to measure your air.

You believed that those ventilation stations, that these samples were taken at, you would have a good mix of whatever gases were present?-- Yes.

And that's based upon the reasons you have just told us?-- Yes, by that turbulence beforehand.

The last reading you took of CO make before you went on leave was a figure of 14.59 litres per minute?-- Yes.

And you explained, I think, that that wasn't significant in your eyes because it was only just above the last reading that had been taken and not a rapid rise?-- It was concern that we were midway between 10 and 20; so, yes, there was concern but the rate of raise hadn't indicated that it was about to take off.

You do concede though that the fact that it was over 10 litres per minute was cause for concern?-- Yes.

In the sense that between 10 and 20 litres per minute the make was capable of rising rapidly?-- Yes.

And over 20 you would have a very dangerous situation?-- Yes.

Between 10 and 20 there was even more reason to keep a very close watch on the CO make?-- Yes, that's correct.

With 5 North or 5 North West, whichever one it was, in 1991 that had been sealed when the CO make was about 12 or so litres per minute, wasn't it?-- Yes, but the one further inbye in '86 it was up to 20 litres, and it had run at 20 litres.

The one in '86 was extremely dangerous?-- Different heating. extremely dangerous situation, wasn't it, in '86?-- Yes, it was.

It developed over about a day, the CO make went up very quickly?-- That's correct.

And it was sealed as a matter of urgency?-- Yes.

And the men were kept out of the mine immediately after it was sealed?-- Yes.

The one in 1991 was sealed at a level when the CO make was 12 or so litres per minute?-- Yes.

Were there any other factors that indicated the 5 North West sealing in 1991 was necessary at that 12 litres per minute?-- There was a factor-----

Sorry?-- Could you repeat the question?

Was there any reason apparent to you as to why 5 North West or North, the 1991 seal I'm talking about, why it had to be sealed when the CO make was 12 litres per minute?-- This area of - we did not leave a lot of coal behind. It was a lot cleaner area because 512 - the method of extraction - we were leaving a lot more coal on the floor. We had a greater surface area of coal exposed to produce CO, plus there had been gas drain, it had been dewatered so, therefore, you knew that the CO make was going to be higher in this panel than the ones previously.

That's CO make in 512 you knew would be higher?-- Would be higher than any other panel that we had previously done because of this mining method.

Was that a reason perhaps to seal it sooner?-- It was a reason why the panel wasn't as big as the 5 North. The 5 North was a lot more extensive than the 512.

One of the important features of the CO make is the actual trend - how it trends, isn't it?-- Yeah.

What do you recall the trend in 5 North in 1991 or 5 North West, whichever one it was, what that trend was like?-- It was low and then it went up rapidly with 5 North because we had crushing, we had a lot of roof movement and-----

That's the 1991?-- This is the '91, and we were aware that we had a problem where we couldn't get it in the back. It was more of a case of a small area producing CO quickly, whereas, this in 512 was a large area with a lot of coal, fine coal, because of the ramping method which gave you surface area; so we produced naturally a higher - now these figures of 12 litres and 20 litres - sorry, 10 litres and 20 litres by Mines Rescue mainly, which was one of the guides we had to go on, and that they were taken on a different coal to our figures of what our seal was.

You couldn't 100 per cent - it is not an exact thing, saying that this coal here, the litre make - it was different from one section to another.

It meant you would have to assess each panel as you went?-- You had to assess each panel as you went.

One of the problems with 512 was the greater surface area of coal and loose coal on the floor rendering it more liable to spontaneous combustion?-- Yes.

The same surface area and amount of coal on the floor resulted in a greater carbon monoxide make through simple oxidation?-- Yes.

But one of the difficulties, I suppose, in monitoring 512 was to know whether it was simply the coal oxidising or whether it was, in fact, actually heating?-- Yeah, this was the problem.

The problem. And that required very close monitoring; is that so?-- Yes, that's so.

In relation to the trend in the 512 CO make, that was plotted by yourself from time to time on these graphs, was it not?-- Yes.

And there was a form provided under the Quality Insurance documents for the purposes of plotting such a graph?-- Yes.

And one such graph, I think it is part of the exhibit most recently tendered, 21, I think -----

Could the witness see Exhibit 21, Your Worship?

Mr Morieson, you see as part of that there is a graph which is described as the CO make for 512 between 29 April 1994 and when it was sealed on 7 August 1994. Do you have the one? Yes. Now, the - I think your evidence was that the CO make trend for 512 over this period was a gradual rise?-- Yes.

Not a rapid rise that would give you cause for greater alarm as to what the situation was in 512?-- Yes.

That's one of the reasons this graph is plotted, so you can get an idea of the trend of the CO make?-- Yes.

Whether it is steep, whether it falls, whether it is gradual; all of those things come into play in this graph, don't they?-- Yes.

Now, the way the graph is plotted is that you have on the vertical or left-hand axis the carbon monoxide by litres per minute; is that so?-- Yes.

And you have on the horizontal axis the points which are an equal distance apart to reflect when samples have been taken to plot on the graph?-- Yes.

It is by an intersection of the sample point with the reading

that you get a point on the graph to show a trend?-- Yes.

You join all the points together and you have the appearance of the CO make from date 1 to date whatever?-- Yes.

Now, do you see with this graph - was this one plotted by yourself?-- Yes, some of it. Like, a bit of the area here where I was away - I was away one Friday, I could tell you, and missed a point, someone else did it, but, yes, the majority of it, yes, was plotted by me up to the 15th.

Is this the sort of graph of the make that is displayed for people to look at before they go underground?-- It is posted in the deputy's cabin, undermanager's what's a name, one in the record book.

So, it is available for inspection prior to any shift going underground?-- Yes.

Well, if we take the last few entries there, do you see on the horizontal axis there is a plotting of three points for samples taken on 29 July -----?-- Yes.

5 August and 6 August; do you see that?-- 29th, 5th and 6th, yes.

And do you see that each of those points has been given a place on the horizontal axis equally apart?-- Yes.

Is that the way that should have been plotted?-- In hindsight, after being shown by ACIRL, it would have been better to do it on a daily X/Y axis.

I am not criticising you at all in relation to this, Mr Morieson, but it is the case, isn't it, if you plot it this way what you get is really a misleading representation of what the make is doing?-- Well, it is how you interpret the angle.

Yes. So, at the end there between - if we take 29 July to the last one on 6 August, what you have is an increase at a certain angle?-- Yes.

Had that been plotted to represent the last two samples being taken on 5 and 6 August, that is being only a day apart as opposed to a much greater distance apart, you would have a much steeper increase in the trend, wouldn't you?-- Yes.

So, plotted correctly that trend would appear to rise rapidly between 5 and 6 August this year?-- Yes.

And that would be the sort of rise that you would be looking for to cause alarm in relation to the atmosphere in 512?-- Yes, I would be alarmed.

Now, since having plotted this you have become aware that the way it should be plotted is to make the points - the sample times and dates represent a relative distance apart on the horizontal axis?-- Yes.

So you get a more realistic representation of what the trend is doing?-- Yes, it helps.

Otherwise it distorts the whole appearance of it, doesn't it?-- But it doesn't matter how - you can present statistics a thousand ways, it is how you interpret those results. I can still see that is going up and -----

Well, it goes up, but on 5 and 6 August it rises somewhat sharply, doesn't it?-- Yeah, it shows a sharp -----

Plotted correctly it would show a sharper rise, significantly sharper rise?-- Than what is shown on this, yes.

So, if you are using a graph to show a trend of the CO make this would be quite misleading, for the period 5 and 6 August this year?-- When I presented these graphs I photocopied on the back of each graph the actual readings.

Oh, yes -----?-- So, they had not only just that graph to go by, they also had the readings.

But Mr Morieson -----?-- The graphs might be easier to read.

A graph is a very quick way to determine what the trend is doing?-- Yes.

As opposed to reading off the parts per million and the date and time it was taken?-- Yes.

In any event, you now know through - is it ACIRL you said?-- ACIRL, yes.

How this should be done. Just one matter in terms of the previous sealings. We have talked about 5 North in '86 and '91. Your comment, I think, in the statement was that there were rapid increases in that sealing such that after it was sealed the CO make went from about 15 litres per minute to be five and a half hours later over 20 litres per minute?-- Yeah.

How did you measure that? What did you mean by saying that?-- In the '86 one?

Was it the '86 one you are referring to there?-- Sorry, I just -----

Yes, if you look at page 4 of your statement, the top question and answer, and you are right, it is the '86 sealing?-- Yes.

Rapid increases, and it went from 15 litres per minute to be over 20 litres per minute five and a half hours later?-- Yes. Now, actually, that was only monitoring one return. That wasn't the combined - these other graphs are showing both.

The top and bottom returns?-- Top and bottom returns added together. That comment there was only on the one active return and not taking in the bottom. When you added the both in it was more like 40, I believe.

But are you saying though that reading of in excess of 20 litre per minute was achieved after the sealing had been completed or during the course of sealing when the return was still operating?-- During the course of sealing, as I recall.

Because after you have sealed -----?-- No, we hadn't sealed. This was - I was down there from 8 o'clock in the morning through to about 12 taking readings all the time and it was through that period that it had gone up into that.

That is what I mean,. After you had sealed -----?-- No.

You wouldn't be able to determine -----?-- You can't produce litres, no.

So, the increase was actually happening rapidly whilst you were sealing in '86?-- Yes.

You also, in your statement, distinguish between the sealings in 5 North West and 512 by virtue of a benzene smell in 5 North, or 5 North West. You mention that was one of the differences in the two panels?-- Yes.

Had you smelt a benzene smell in the 5 North West panel at the time of sealing or thereabouts?-- Yes.

And you hadn't smelt it in 512, I take it?-- No, when Reece said he had smelt a benzene-like smell, all I smelt was the chemical smell from before - the two part chemical emits a smell of its own.

What chemical is that, sorry?-- The anchor -----

The roof bolt anchors?-- When Arnalls anchor compounds were mixed it has got that two part thing. When that gets pulled out during a fall it let's off an odour. Now, that was the smell - when Reece said he smelt benzene, that's what I smelt and I was not alarmed and I could tell the difference between benzene and chemical because, you know, I had smelt the lot before.

Anyway, one of the distinguishing features, as far as you were concerned, between the 5 North West and 512 was a benzene - was a true benzene smelt in 5 North West?-- Yeah.

You knew of other reports in the 512 section that there had been reports of benzene or tarry smells?-- No, I wasn't present -----

You didn't know that?-- When they made those further reports at the end.

Had you smelt a tarry or benzene smell yourself in 512. If you had that would, no doubt, have increased your concern about what was going on in 512?-- Yes, definitely.

Because that, coupled with all the other indications you had of this air flow or layering effect and increase in

temperature, all of those features, would again point towards a heating, wouldn't they?-- Yes.

Just in relation to the gas chromatograph, as you understood it it was designed to be a specialist instrument to analyse a wide range of gases?-- Yes.

You didn't think it was used in relation to 512?-- No. As far as the concentrations - when you look at what we were getting, when they were only getting 5 and 6 ppm CO, it just didn't give you an accurate reading, it wasn't -----

Not designed for an accurate reading of CO below 10 parts -----?-- Below that - at that level it wasn't going to be any advantage to you.

Because it is also designed to analyse the presence of things like hydrogen; is that so?-- Yes, but, like, I mean, to my knowledge hydrogen is not produced until you get over 100 degrees C, so -----

Well, of course, at one stage on 17 June you had detected a difference in temperature at the goaf edge of about 5 degrees, hadn't you?-- Yeah, which made it about 30 degrees as against 25.

But you didn't know where that was coming from? I mean, you had the air current which is 5 degrees warmer, but you didn't know where that was originating from?-- Mark McCamley had walked around that area, that's the areas of warmth. The No 4 heading was cool, there was no heat. The No 3 heading was cool and there was no heat. It was only the No 2 heading that was warm.

And what was the volume of air coming into the - that panel to ventilate it?-- Possibly 45 metres.

Per second?-- Yeah.

Every second 45 cubic metres would be pumped into the panel?-- Yeah.

That's a significant air flow, isn't it?-- Yes.

And to have an increase in temperature of about 5 degrees in an air flow like that, does that tell you something about the potential temperature elsewhere within the panel?-- Yes, it tells you - like, with that it had a dead spot in it on that corner so the temperature, you know, was able to develop.

Whenever you - you did from time to time, I take it, adjust regulators for air flow? You have told us about some of those occasions?-- Yes.

When that was done were there readings taken before and after the change?-- It depends whereabouts they were.

When, for instance, would you take a reading before and after a regulator change or alteration?-- Sometimes I was called

in. They said, "We have got no air in this section." I would go down. I would take a reading at the normal vent point and I would find that that quantity was normal. I would get down to the face area and I would find that the problem was in their bag line right at the face, some, you know, 15 pillars away from where a vent station was. So, if I found that it was - if it was a position later I would, after doing the change, you know, go back and check that.

That it had been corrected sufficiently?-- That had been corrected and the monitoring was stable.

And would there be a record kept of that fact, that you had checked the new ventilation?-- No, not always. Most of my instructions for changing regulators would be verbal over the phone from the undermanager. I would say I have got - I was sent down this particular time when I altered the regulator in 510 which was on the Sunday, the 19th. I had cut the regulator down in half which probably represented 4 square metres I cut off that airway. It was done verbally over the phone to the undermanager, that I said I was going to do it and then after I had done it I would check the Unor to make sure that, you know, I wasn't starving anywhere else for air and that we had had no build-ups anywhere through that change.

All right. Just a final matter. I think you have stated that there was an incubation period as far as you understood it for coal?-- Yeah.

What was it as far as you knew or understood?-- Well, I would have to look at my statement. I said in some cases it - it would be in places, like, six months, other places 12 months. It depended on what conditions, you know, were prevailing at the time.

And was it relevant whether or not the coal seam had been drained?-- That's definitely relevant, if it has been drained.

If it is drained is the incubation longer or shorter?-- It will tend to be shorter because the coal is dryer.

That was the position, I think you said, in 512 on this occasion?-- In 512.

As compared with some of the other panels?-- The other panels, yes.

Thank you.

WARDEN: Thank you, Mr MacSporran. Would you have the same enthusiasm tomorrow morning at 9.15?

MR MARTIN: Yes.

WARDEN: Gentlemen, an early start tomorrow, if possible, 9.15; a short lunch, 12.30 to 1.15. Other people will have flight arrangements to make. We will probably cease at 3.15 to 3.20. So, they can get to the airport on time.

XXN: MR MacSPORRAN

WIT: MORIESON A G

Witness, you will be required tomorrow morning, do you understand that, at 9.15? You are still subject to cross-examination?-- Yes.

You should not discuss your evidence with any other party?-- Yes.

MR CLAIR: Your Worship, arrangements for Monday for the

inspection are well advanced and the liaison has taken place with the mine management, and in fact the company's representatives are in a position to provide some forms together with a protocol for those who wish to visit the site. I think those forms have been distributed already to legal and media representatives, but if there is anybody who requires to fill one of those out, then they might approach Mr Morrison's instructing solicitor.

WARDEN: All right, thank you.

THE COURT ADJOURNED AT 4.26 P.M. TILL 9.15 A.M. THE FOLLOWING DAY

WARDEN'S COURT

MR F W WINDRIDGE, Warden and Coroner
MR R J PARKIN, General Manager, Capricorn Coal Pty Ltd
MR P J NEILSON, District Secretary, United Mine Workers' Union
MR C ELLICOTT, Training and Development Officer, Department of
Mineral Resources, New South Wales
PROF F F ROXBOROUGH, Professor of Mining Engineering, School
of Mines, University of New South Wales

IN THE MATTER OF A CORONIAL INQUIRY IN CONJUNCTION WITH
AN INQUIRY (PURSUANT TO SECTION 74 OF THE COAL MINING
ACT 1925) INTO THE NATURE AND CAUSE OF AN ACCIDENT AT
MOURA UNDERGROUND MINE NO 2. ON SUNDAY-MONDAY, 7-8 AUGUST
1994

GLADSTONE

..DATE 21/10/94

..DAY 4

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THE COURT RESUMED AT 9.15 A.M.

ALLAN GEOFFREY MORIESON, CONTINUING:

EXAMINATION:

WARDEN: Would you take the stand, please. We will resume from yesterday. You are under your former oath. We will proceed with some cross-examination this morning -----

MR MARTIN: Mr Morieson, some of your background, if you would. Is it so that you left school in 1968?-- Yes, that is correct.

And in grade 10?-- 10 or 11.

Well, don't you remember?-- It was the 11th in Victoria, but I think that's 10 in Queensland. I am not sure.

Did you finish the year?-- Yes, I finished the year.

Did you do any science subjects?-- I was - it was in those days just the normal, like, science, chemistry, just very basic.

Following leaving school is it the case that you had some time at a radio station?-- Yes, that's true.

Doing what?-- I was a control panel operator in production work.

And did you then go onto work on a cattle property?-- Yes, I worked on a family -----

Following that a farm worker?-- That's correct.

And following that a railway employee?-- That's correct.

Doing what?-- I was doing - I started there just with the what's a name, relay work, and then went onto looking after the book work for the gang.

Then you went into the mining industry?-- Yes.

Just tell us this: what induction time did you have before you went underground?-- We started the first day and -----

What period of time?-- Eight hours.

A total of eight hours or was it eight hours over a few days?-- Eight hours on the first day and we went on strike the second day.

XN: MR MARTIN

WIT: MORIESON A G

Was there a third day before you went underground?-- There was a third day where they did basic. Then we went underground.

Then essentially, after two days of induction, you are underground at that time?-- Yes.

And that's the thing that distinguishes a miner from a manual worker, a general manual worker?-- I don't understand the question.

I will rephrase it. Basically, you have been doing labouring work till the time you go into the mine?-- Yes, I had done - I was running my own business on the farm so I did do bookwork and I done a management course.

But the thing that distinguishes a basic miner from a basic labourer, in your instance at least, was two days induction?-- Yes.

Then after a period of time you trained up to be deputy?-- That's correct.

What's the deputy's course in terms of time?-- It was over about three months doing two sessions at the high school -----

Is it, in fact -----?-- Per week.

Two months, eight weeks, how many hours a day?-- It was about three hours, four hours work in your homework assignments.

In essence then a very limited number of hours and that distinguished you from a miner?-- Yes.

And even then you didn't get to apply the knowledge required over that short time for some three years?-- No, you need to get that.

I beg your pardon?-- You need to get that background, the six months that was required by the Mines Act.

You didn't apply your knowledge which you acquired when you did this course for three years afterwards, did you?-- No, 12 -----

Isn't it the case there were three years before you became underground deputy?-- No.

Or you were qualified?-- No, I completed my deputy's course in the 13th of the 8th, '81 and I got the certificate on 7 March '83.

What was the delay, you had to get more training?-- I had to wait for the three year time. I had done the sufficient face time of where I was with a face crew, but there was a three year time span which was just years in the industry, not necessarily at the working face.

All right. But no further formal training?-- I -----

Answer the question, was there or not?-- Was there? Yes.

Any more? Tell us what it?-- I went to a seminar or a thing on spontaneous combustion in mines.

How long was that?-- About four hours.

When?-- Some -----

Approximately?-- Some time early in 1982 at the Coal and Cattle Reception.

Was that the last instruction you had on spontaneous combustion?-- We received a little red book on spontaneous combustion in that - around that time of '83.

Just look at that and say whether that is a copy of the book you received?-- Yes, this is a copy of the book I received.

Yes, thank you. I tender that.

HIS HONOUR: That's Exhibit 23.

ADMITTED AND MARKED "EXHIBIT 23"

MR MARTIN: And where did you receive the book from?-- From management.

Have you ever seen a copy of this book?-- Yes, I have. It is a more detailed book of the same - it goes into greater detail.

Yes?-- Than the previous book.

Did you receive it?-- I have - it wasn't given to me as a presentation, but I have - it was either - in the office that I received when I was fire officer and I read it then.

But it wasn't handed to you by your employer?-- Not from memory, no.

And, in fact, it wasn't given to you to keep to refresh yourself from?-- No, but I did have my own copy of it.

So, you had to fossick around and get your own, did you?-- Well, it was in the office that I took over, yes.

What - and it remained in the office?-- Yes.

I tender that document.

HIS HONOUR: Admitted and marked Exhibit 24.

ADMITTED AND MARKED "EXHIBIT 24"

MR MARTIN: When did you first come into contact with that document?-- Probably in the '90 when I became a fire officer and took over that office.

You said it was more detailed - the blue was more detailed than the red? In what respect?-- It went deeper into the gas analysis and I believe it was generally for a higher standard of person.

Which office do you talk about?-- I had an office over in No 4 complex that used to be the old undermanager's office.

At No 2 Mine?-- No, at No 4 office block, but I was - the office space in No 2 Mine was all taken up just about so to give me room I had an office in the No 4 block which is about 200 metres away from the No 2 office block.

And subsequently you became the ventilation officer?-- Yes.

And one week training at the University of Sydney, was it, or New South Wales?-- Yes.

Was it by way of examination or what was it?-- There wasn't any examination at the end of it.

No?-- It was part of a course you could go on to do, a graduate, and you could take examination.

Anyway, you didn't do that?-- No.

Well, that couldn't have been, I suggest, more than the most basic introduction to ventilation?-- It went fairly deep into ventilation.

Over one week?-- Yeah, over one week.

And how many hours per day?-- Around the eight hours, nine hours.

For five days, I take it?-- Five days, yes.

And then you also later, I think you told us, became the fire officer?-- Yes, I was appointed the position of - fire officer was the main position and ventilation officer was part of - came under that, and stone dust collecting.

You did a course for one week on that as well?-- That is correct.

I suggest to you that the course you did was only in relation to fire extinguishment rather than fire detection?-- Yes, it was mainly in fire extinguishing and very basic on detection.

You mentioned yesterday the Maihak system and that you came to

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know how to use that?-- Yes.

The only instruction you received, I suggest, in relation to that was from Mr Reed?-- Yes.

And do you know what he knew in terms of competency to operate the Maihak? Do you know whether he was competent?-- Well, I believe so.

Did you have to request to be trained on the Maihak?-- No, he showed me so I could do the CO make.

And since that time - when was that, by the way?-- That was in early '90.

Since that time have you done any course of instruction or retaining on operation of the Maihak?-- No.

What about the gas chromatograph, was that present at No 2 Mine premises all of the time you were there, that you speak of?-- Yes, it has been there as long as -----

In the same room as sits the computer -----?-- Yes.

The Maihak system. I understood you to say that you wanted to be trained on it, but you couldn't be because there weren't enough personnel available?-- Yes, there was a course there a while back and -----

You weren't released to do it?-- With the shortage of man power, we had two people on the work model and one on compo.

Despite your request to be trained on it?-- Yes.

Mr Abrahamse, did you know him?-- Yes.

Was he an engineer?-- Yes.

Employed by BHP Australia Coal?-- Yes.

Your superior?-- Yes, I -----

Well, he is, isn't he? Let's not fuss around about it. He is senior to you and you obey him if he orders you to do something in the system of things?-- Under my thing, I was - by "order" - the people I took my job from, orders, were the undermanager-in-charge and the superintendent. I wasn't directly answerable to the undermanagers.

If Mr Abrahamse told you to do something you would do it, would you not?-- If possible, yes.

If you understood how to do it; that is what you mean, isn't it?-- Yes.

Mr Abrahamse was also one of the persons who asked to be trained on the gas chromatograph, wasn't he?-- Yes.

That was declined by his employer, wasn't it?-- Yes.

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And I will just ask you now: you were talking yesterday about the computer graph on the analysis of the Maihak on a weekly basis?-- Yes.

You didn't understand the significance of the weekly instead of daily graphing?-- Not - no, I didn't understand.

You didn't understand until it was pointed out to you after the explosion on 7 August?-- Yes.

And neither did Mr Abrahamse understand that, did he?-- No.

And I take it that you didn't insert the programme or design the programme for the computer?-- No.

What I suggest to you is that whilst you have a basic knowledge of some matters relating to mining ventilation, it is only very basic and nothing much in particular?-- It is probably more than what the other deputies would understand.

In the hierarchy of BHP there is the front line crew, the miner; the foreman, in other words the deputy; is that right so far?-- Yes.

Going upwards. Then the lower echelon of management such as undermanager and then the higher echelon going up there ultimately to mine manager?-- Yes.

Apart from the courses you have told us about that you have attended, have you attended any other courses of instruction?-- By "courses" -----

You tell me, just tell me?-- We have safety meetings, we have had ACIRL give discussions on different matters.

What different matters?-- On the roof structure - David Hill, I believe was his name, he went with us underground at the start of the 512 extraction and showed us different points and explained why we should not go into the goaf and walk through as we had done in the 401/402 because of the reduced safety factor.

But more specifically in terms of your area of operation in recent years in the mine, what courses, if any, of instruction have you been given?-- I assisted Andrew Self in doing a pressure vent survey.

Just let me get this right. Andrew Self is a bathroom attendant in reality, isn't he?-- No.

What is he?-- He is British Coal -----

What is he at -----

MR MORRISON: Excuse me. He is answering the question. Can you not hector him, please.

MR MARTIN: I beg your pardon, a similar name.

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MR MORRISON: Would you mind letting him finish the answer now?

MR MARTIN: No, please finish?-- Andrew Self was a consultant brought in by BHP to analyse the air quality and quantity and to recommend where we put the new overcast down the main dip.

"Over" what?-- Overcast.

I don't know that term?-- It is an object to direct the air flow across the intake roads.

How long did that take?-- Two weeks.

When was that?-- I can't recall the exact date. It was probably -----

Just -----?-- Two years ago.

In relation to spontaneous combustion, any course or

retraining?-- Only what I was given as part of the train-the-trainer course I had done. I had - when we had new starters start at the mine I would give them the induction on spontaneous combustion which was just a basic course, and I would be giving that from a management book.

And explaining to them from your extremely limited knowledge?-- Yes, I suppose you could say that.

I am not being critical of you. Do you know of an organisation called SIMTARS?-- Yes.

And that, of course, is an organisation set up specifically in relation to safety in mine training rescue?-- Yes.

And the gas chromatograph is essentially linked into SIMTARS, isn't it?-- That's correct, it's a phone link.

Just tell us of your understanding, if you would. Is it the case that if the gas chromatograph was in use and sampled an atmosphere from the mine - is it the case that it then, having been sampled by the gas chromatograph, can be sent by Telecom modem direct to a computer at SIMTARS near Ipswich?-- I believe that's correct.

There is a 24 hour a day scientist on duty at SIMTARS; do you know that?-- I couldn't tell you.

Could the witness please see, Your Worship, the collection of books 16, 17, 15, 16, exhibits for identification?

Just run your eye over those. Starting perhaps, firstly, with the book with the picture of a man wearing some breathing equipment?-- Exhibit 15?

Yes. Have you ever seen that?-- Yes, that's our basic mines rescue safety manual.

Where is that kept?-- In my bookshelf at home.

Have you read it carefully?-- Yes.

I suggest to you that's a 1985 edition?-- Yes, and there was an earlier edition too.

Perhaps a later one. Do you know of an earlier edition?-- Yes.

Do you have that?-- I have that at home too.

Look at the next document. Just tell us if you are not confused about that perhaps. I suggest that's a later edition, a 1990 edition of the same book?-- Yes, that's a later edition.

Do you have that?-- I have read that, yes.

But you have another one preceding the -----?-- I have one -

I did my mines rescue course in 1980 and it was in a loose leaf page folder then in those days, then this book came out, then Jacques Abrahamse, I believe, purchased these and that was in his office, and I have read parts of that in his office.

Did you have to buy the books you have for yourself?-- No, the brigade bought those books.

But not BHP?-- I beg your pardon?

What brigade?-- Mines rescue.

But that's not part of BHP, is it?-- No. They pay into it.

Basically those two books which you refer to don't deal with ventilation, do they?-- No, but they do deal with spon com.

Oh, yes. That's where you got your information, if I remember?-- That's correct.

That at 10 ppm you have got to start exercising considerable care?-- Yes.

Before 7 August 1994 -----?-- Excuse me, did you say 10 ppm or 10 litres per minute?

Sorry, I said "parts", I should have said litres?-- Yeah, okay, 10 litres.

Thank you. Before 7 August 1994 who was trained to operate the gas chromatograph at No 2 Moura?-- In '74?

No, before 7 August 1994 who was trained to operate the gas chromatograph?-- I believe Andrew List that had left to go to Crinum, Max Robertson and -----

Sorry, who is he?-- He is the electrical superintendent - not superintendent - shift electrician. He runs the shift. He is below the superintendent.

Who else? Is he still at the mine?-- Yes, he is still at the mine.

Who else?-- Patterson, an electrician, and Andrew Self.

Is he the man I mistook for the British Coal fellow?-- Yes, he is the lamp room attendant. Oh, Kenny Self, sorry, yeah.

The lamp room attendant?-- Kenny Self, not Andrew Self.

The cap lamp attendant?-- Yes, cap lamp attendant.

The bathroom cleaner?-- Bathroom cleaner.

How old is he?-- He would be somewhere around my age, I believe.

Do you know whether he ever actually used the gas

chromatograph for the purposes of testing atmosphere other than to test whether the machine was working?-- I believe I personally had given him some samples that I had taken from a couple of seals in 401/402 sealed area.

When was that?-- After the then sealed section.

But when?-- I would need to refer to some -----

Just give us an approximation. I don't need precise details?-- Probably a year ago, two years ago. Probably 12 months.

Just going on now, have you ever seen any of those magazines, the SIMTARS magazines? Not that document. There is a couple to your left - right?-- I have seen these. I think Jacques might have had some in his office.

That's Mr Abrahamse?-- Mr Abrahamse, yes.

Not distributed to you?-- No, not distributed to me.

Or to anybody else, that you know of, in the mine?-- I believe management received them.

And didn't pass them down the line for the men to read?-- No.

Or at least so far as you know?-- Not to my knowledge.

Have you seen that other book? Read out the title if you would?-- Exhibit 17, "Mining Ventilation Practices in Coal Mines Liable to Spontaneous Combustion".

Have you ever seen that?-- I think that it might have been in Jacques' filing book file.

Abrahamse' filing cabinet?-- Mr Abrahamse' filing cabinet.

But not given to you and say, "Mr Morieson, you ought to look at this and study it most carefully."?-- No.

The last of the documents, what is that called?-- "Training for Officials for the Underground", Exhibit C.

What's its title?-- "Training for Officials for the Underground Coal Mining Industry, Mine Fires, Spontaneous Combustion, Explosions of Methane, Coal Dust".

A production of SIMTARS?-- Yes.

Have you ever seen that before?-- Yes, I have seen this book and read it. There is a copy at the mines rescue centre in Moura.

Not something available to you on an everyday basis, however, at the mine site. The mines rescue station is not at the mine site, is it? It's in the middle of town?-- No, but I borrowed this from - Phil Reed gave me a copy of this and I

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have that copy.

Did you have to get it for yourself?-- Well, I saw it there and I asked to borrow it and he lent it to me.

All right. When was that?-- Probably '91.

And you had to give it back, of course?-- Yes, but I still have it.

You haven't given it back?-- I haven't given it back, no. I still have that copy.

All right. So you have the mines rescue station copy?-- No, no, I have a copy that belonged to Phil Reed that he lent me to look at.

I am tempted to say something funny but I won't. It was not given to you in your important role as ventilation officer or in any other capacity by No 2 Moura?-- It was given to me by him to help me understand ----

All right?-----

MR MORRISON: Let him finish the answer.

MR MARTIN: Please go on?-- It went on - it's a very detailed report and it's something that you refer back to when required to.

The gas chromatograph is the only method, is it not, of accurately determining the content of a mine atmosphere?-- Of the hydrocarbons, yes, but not of low CO make.

Do you know that?-- Yes, I was informed by Colin Hester from SIMTARS on one of his trips.

Well, what is low make in your understanding?-- Below 5 parts, it was very inaccurate, 5 to 10. It was only just-----

And that ties in, doesn't it, with Mr Mackenzie Woods' work?-- Yes.

If I might ask you a little about the Maihak operation system. Is it the case that it is programmed to alarm on receipt of a certain quantity of carbon monoxide?-- Yeah, there is ----

And carbon dioxide for that matter?-- Yeah, and methane.

And methane?-- Or oxygen.

So one can pre-set it, as I understand you, to alarm when methane, for instance, goes above 1 per cent?-- Yes, that's correct.

Or -----?-- Or whatever you set it to be.

Or whatever you like you can program it to alarm, and the same

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situation applies, as I understand it, with my limited knowledge of Maihak, with carbon monoxide and dioxide?-- Yes, I believe that's correct.

So you can program it to tell you 10 litres per minute or 11 or 12 or 13?-- No, that's not correct. It relates to parts per million, not litres per minute.

All right, so the machine can be set to alarm for 10 ppm?-- Yes.

And when that alarm goes off, the alarm can be accepted by the person operating it and then reset for another standard, say 12 ppm; is that the way it works?-- No.

Just tell us?-- Well, the alarm comes up, it will flash on the screen on that point that's set the alarm off. You then press the thing to accept it. The keyboard will come up with zero to 9 and you will put in your lamp number, which mine was 26, so I would put in 26, and that would accept the alarm. Now, the next cycle, which would take about 20 minutes, if it came back up, it would re-alarm at that same level unless you had altered it. You would have to then go to the keyboard, which I wasn't allowed to touch -----

I am not suggesting you were allowed to touch it. All I wanted to get from you was the way the system works so far as you understand it?-- That's the way.

Am I wrong when I say that the operator, the trained person, can keep resetting the standard at which it alarms?-- Yes.

Do you know some of the graphs which are produced by the Maihak system were showing blanks from 6 to 8 August? Do you know anything about that? That is, that the alarms were not accepted?-- No, I wasn't at work at that time.

No, I am just asking whether you know, from reading any document subsequently, that there was a blank on acceptance of alarms?-- What do you mean by "blank"?

In the graphing?-- Can you show me a graph where there is a blank so -----

No, I am asking you the question. I am just asking you whether you can help me with that or not, and you say you can't?-- No.

Do you know of a machine called probeye?-- Yes.

That's referred to in Mr Mackenzie Woods' book, isn't it?-- Yes.

Apart from other places. Its function, as I understand it - and correct me if I am wrong - is to determine by an infra-red system the presence of a heating, of heating, of heat?-- It can detect a heat source. You can put your hand on a book, take it away after a few seconds and you can see the fingerprint where your hand has been, so it picks up a

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difference in temperature, yes.

And it also has such finesse that it can pick up the heating in the wheel bearing of a vehicle, can't it?-- Yes.

It can also be used to detect heating underground in a mine?-- Yes.

And, of course, one wasn't there, or was one, before 7 August at Moura No 2?-- Yes.

But apparently never used?-- No, not to my knowledge.

Was anybody trained on it? Just let me know, I only want your knowledge?-- Mines rescue people used it. Myself, Reece Robertson, most of the rescue people had seen it and been shown it.

Where was it?-- It sat in the instrument room.

At?-- At No 2 underground where the Maihak and the chromatograph is.

But nobody used it that you know of?-- No. You had to have permission from the manager to take it underground. It was an aluminium container and, therefore, it had special requirements to be taken underground.

When you were worried about heating associated with poor ventilation before 7 August nobody suggested to you that, "Well, we had better have the probeye and have a look around."?-- No.

Had they done so, you wouldn't have known how to do it?-- I would have known how to do it, yes.

You had the capacity but none of your superiors gave you any instruction about it?-- No.

Can you tell me whether there is a requirement that you know of under the Coal Mining Act or any of the numerous rules, whether they be special or general, relating to the compulsory monthly gas chromatograph analysis?-- Gas chromatograph, the analysis of what?

Of the mine atmosphere?-- Not that I can recall.

Do you know whether records exist at No 2 Moura in relation to monthly gas chromatograph analyses?-- There's a book kept next to the gas chromatograph.

Just digressing to another aspect, you know for yourself that the Bowen Basin Coal is very gassy coal?-- Yes.

And Blair Athol is not so far from here, is it - sorry, from Moura?-- I'm not familiar with that area.

Is there a library kept at No 2 Moura?-- There is some books kept in Mr Abrahamse's office and there is some books kept in George Mason, the superintendent's office. I wouldn't know if you would call it a library.

But have you ever been given access to those volumes except that which you have told us about here this morning?-- No.

And you know for yourself, don't you, from what you have read and heard over the years that the Bowen Basin, and particularly around Moura, is an infamous reef for spontaneous combustion problems?-- According to this book, its spontaneous is in the low to moderate.

But, nonetheless, it's a known factor that it has that propensity?-- Yes, you can get a heating as we had in 5 North.

Do you know of an incident when there was a spontaneous combustion of a sample of coal in a boot of a car while it was being taken to SIMTARS?-- No, I was not aware of that.

Let's talk about incubation for a moment, if I could. I take it you don't profess any in-depth knowledge of that phenomenon, do you?-- Only from what I have learnt from experience over 15 years.

Tell me if you know anything of the following factors relating to spontaneous combustion: that the incubation time depends on the type of coal?-- Yes, that's correct.

The quantity of coal?-- Yes.

It's size distribution?-- Yes.

It's inherent oxygen?-- Sorry, I can't - I couldn't hear.
Would you repeat the question?

I couldn't hear either. It's inherent oxygen?-- Yes.

Fusain, F-U-S-A-I-N?-- No, I don't understand that.

Its moisture?-- Yes.

Its epigenetic sulphur?-- No.

Its cleavage plane and pattern?-- Yes.

Its fracture plane and pattern?-- Yes.

And how well the coal is sheltered?-- No.

You don't know that - you are not disagreeing?-- I'm not disagreeing, just that I haven't heard that. Explain it in different terminology.

Its pressure differentials?-- Yes.

The temperatures of the air?-- Yes.

And the coal?-- Yes.

Wetting and drying cycles?-- Well, moisture content. I couldn't tell you what the difference between that and the first one is.

You knew many of those. I suggest that all of them are unpredictable?-- Yes.

Inconsistent?-- How do you mean by inconsistent?

One is not consistent with another circumstance?-- Yes.

But all critical?-- They all add up together, yes.

And in the order of the things, I suggest that a critical factor is the known propensity for it to occur at all?-- Yes.

And its propensity, when it occurs, is to develop extremely rapidly?-- I'm not really familiar with that word propensity.

Sorry, its capacity, I suppose?-- Yes.

Did I understand you yesterday to say that 512 was a large panel?-- No.

In fact, it is a fairly small panel?-- Yes.

I'm just intrigued as to how you developed your expected - not

your expected - your estimated - what was it - 10 litres or 10 ppm over the life of the panel?-- 10 litres, yes, or 12 I said.

You used 2 as a base?-- 2 as a base.

And then you said to yourself - well, what did you say to yourself to get to 10?-- The size of the air that was going to be exposed comparing to the previous area, which was 401/402 and the area similar in 5 North.

That I suggest to you is quite useless, comparing one panel with another, because of, amongst other things, the very factors I put to you before as some of the critical factors?-- You've got to have some comparing. You have got to make some comparison, make some assessment yourself of what you think.

But where did you get the .5 per month - was it per month or per what?-- Just looking at what I thought it would go from my experience at being at No 2 for 15 years.

And that, I suggest, is an assessment which could be critical?-- Yes.

And it was left to you by management?-- It wasn't left to me - that was only my own personal opinion of what was going to happen. They might have had a different opinion to that but they didn't inform me - they didn't give me to say that they expected this to make 15 litres or 20 litres or 10 litres. I was never informed of any prediction.

Do I understand you to be saying that in your position as ventilation officer, with your admitted fairly limited knowledge of the subject, you have to make your own assessment and run by that in relation to the safety of the panel?-- Yes, that's - yeah.

The thing that appears to me to be somewhat remarkable - and this is not a comment, I'm going to ask you - is that the sealing-----

MR MORRISON: Excuse me, I am objecting if there is going to be editorial comment and that he is going to put it to the witness. That is what I understand Mr Martin to say. "It's somewhat remarkable to me - it's not a comment, I am going to put it to you." - what are we going to have, headline stuff?

MR MARTIN: I object to this.

MR MORRISON: I insist on proper questions. This Inquiry should insist on proper questions and not this sort of stuff.

MR MARTIN: We will leave the remarks to the panel of the Inquiry.

But it is the fact, is it not, that this panel was sealed at 1 a.m. or so on 7 August 1994 and less than - well, perhaps Friday morning or the night shift completed all of the production for the panel?-- Could you just repeat-----

The extraction of the coal from 512 ended on about Friday the 5th of August?-- I was not present so I cannot comment on that.

But in any case sealing commenced Saturday afternoon?-- I believe so.

And the coal is extracted really almost up to the sealed area, there was just part of a pillar left?-- Yeah, from what I have seen on this plan, that would be correct.

Just whilst I'm on your estimation of the CO make, by the time you got back on 5 August, it was already well in excess of your estimation or in excess of your estimation?-- Yes, when I left it, it was actually up to 14.6.

By the time you left?-- By the time I left to go on annual leave.

Did you point that out to anybody?-- Yes, I said that I wanted to pass the information on to the next person that was taking over my job.

Roof falls, you saw evidence of those from time to time on 512 panel?-- Yes.

There was a lot of loose coal in that panel?-- Yes.

A roof fall would cover inevitably loose coal?-- Yes.

Dry, loose coal?-- Yes.

On occasions block the fall, that is, block the ventilation?-- No.

Or distort the ventilation?-- I beg your pardon?

Distort the ventilation away from - stop the ventilation from doing its job in other words?-- It might reduce the ventilation, yes, but it still had a cross-sectional area because of the extraction method, taking bottoms. When the fall came, there was still an arch for the air to flow over.

But beneath the rock you have loose coal?-- Yes.

Is that something you had learned from the literature you have read, is that a situation which can give rise to spontaneous combustion?-- That is correct.

And, of course, once the roof collapses it is left like that?-- Yes.

Because it is a waste area?-- Yes.

And dangerous to enter?-- Yes.

This system existing in 512 of ramping, that had a particular effect, did it not, of causing loose coal to be left?-- Yes.

XN: MR MARTIN

WIT: MORIESON A G

Impossible to retrieve by the continuous mining, it just couldn't get it?-- It just couldn't get it, no. It just pushed it ahead.

And the system of ramping really made a proper inspection impossible in the circumstances which existed in that panel, didn't it?-- It made it very difficult, yes.

And the ramp runs down at an angle in the floor and meets, as I understand it, a face of coal?-- Yes.

Which, incidentally, is up to the usual level of the bottom?-- Yes, there is a step, a ledge.

And loose coal inevitably would rest at the bottom of that ramp, I think you have agreed?-- Yes.

If there was a heating down at the bottom of some of the loose coal there, what would happen in terms of whatever gas, say CO₂, which came off it, would rise, would it, or not? Sorry CO, not CO₂?-- CO being .97 in relationship to where it's about the same.

It might rest there?-- It would stay pretty well-----

Except when it is heated?-- Except, yeah.

It would then rise?-- It would be displaced by the ventilation.

And be swept out, hopefully?-- And swept out.

But CO₂ is not in the same category, it's not in the same category, is it?-- No, it's heavier.

About half or what?-- .53 in relationship-----

Sorry?-- .53 in relation to it.

The specific gravity of air?-- Of air.

So, CO₂ would be likely to remain down at the bottom of the ramp?-- That would be correct.

And not get into the system of being swept away so it's air content of CO₂ can be read?-- I believe that would be the case.

I just want to ask you now - my learned friends, both of them I think, perhaps yesterday, were talking about the development of a cavern following a roof fall?-- Yes.

How high could these caverns be?-- 1 or 2 metres, generally about 1 metre with a couple of areas fill maybe 3 metres high.

Is that from floor level?-- From roof height.

You might have a height of a roadway of how high in ordinary

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circumstances?-- About 3 metres.

May have 6 metres?-- Yes.

Or perhaps more or perhaps less. What instrument exists which enables one to test the contents of a cavern in terms of methane or CO?-- As far as methane, there is a probe available for the minder with an extension wand and it has bellows and you pump that into your minder. As far as CO, you wouldn't tend to find CO up high. It's in more general body.

Unless it is heated?-- I can't see it rising even when heated.

Why not?-- Well, it's in the same general body as - usually if it is heated, it would just be in a general body reading.

Some of the caverns become fairly large, don't they, or the roof fall underneath the cavern can be quite large in area?-- It could be 30 or 40 metres long.

What earthly use would a probe attached to a Minder be if one was trying to reach the uppermost extremity of a cavern some 20 metres or at the uppermost 40?-- I am talking about the length of roadway of the floor area is 30 metres long. The roof that is falling from the roof down to the floor has filled in the bottoms so there is still only around 4.5 metres from where you are standing to the roof.

But one wouldn't enter into that area because it is a waste and might collapse again?-- Yes, as a rule one wouldn't.

That's a good rule, isn't it?-- Yeah.

How does one with a probe detect the upper atmosphere of a cabin in that situation?-- Well, you can't, really.

That is what I wanted to know. I left a subject a little while ago before I concluded. The most - is the most definitive thing in determining the state of heating of a particular area the CO/CO2 ratio?-- What do you mean by "definitive", please?

I am sorry?-- What do you mean by "definitive"?

The one likely to be most precise?-- I believe from this lecture that I was told that the CO - working out the CO in litres per minute was the most accurate way of assessing spontaneous combustion.

Well, you don't know the CO2 relationship or its importance; is that what you say?-- I know it is another method of determining, but of the different methods, the litres per minute was the most reliable function.

There were a lot of rib spalls in Panel 512, weren't there?-- Yes.

When one looks back over the deputy's reports - have you, for instance, looked back over some of the -----?-- Yes, I have looked back over them.

There is reference after reference in deputy's certificates of rib spall, isn't there?-- Yes.

Leaving inevitably loose coal on the floor in a ramping situation - in a ramp area?-- On the sides, yes.

Do you have any view as to the placement of roads in Panel 512?-- No.

You don't have that expertise?-- Placement of roads? I didn't design the section.

Of course, I am not suggesting you designed Moura No 2?-- I don't understand the question then.

Have you any comment to make as to whether the roads were appropriate in a ventilation sense?-- In a ventilation sense, the large pillars where you went from -----

I am sorry?-- The plan is gone.

For my purposes I prefer if you describe the situations?-- Where you went from 4 headings to 5 headings, it blocked your air, it made it harder to ventilate.

And you personally became aware of several incidents of recirculation, didn't you?-- Yes, on three occasions.

Is the best observer of what happens in a mine somebody who comes - somebody who isn't there all the time, working with complacency, perhaps? An outsider from another panel coming in to observe what is going on?-- No, well, the people that are in the panel, of course, have got a better intimate knowledge of the panel and what is happening.

This may not be your field and you may not know, please say so if that's the case, but is the roof designed to be three metres - sorry, the heading heights? If you don't know that say so?-- I don't know. It was part of the thing that we never cut past three metres on advancement.

Do you have a view as to whether underground coal mining is a dangerous occupation?-- I would have to say it is a more dangerous occupation than a lot. You are your own safety person. Everyone that is in the mine has to look after his own safety and you rely on other people.

You rely on a proper system, I suggest, provided by your management?-- Yes.

Accidents in mines and Moura No 2 that you are aware of personally, I suggest, have occurred through a variety of circumstances underground?-- Yes.

Roof fall? From roof fall?-- No.

Rib spall?-- Rib falls have killed two people to my knowledge in No 2.

Not to forget a mine explosion?-- Plus this latest.

Great care has to be taken?-- Yes.

I suggest to you, and probably already have, perhaps not too directly, the incidents of sealings elsewhere in Moura No 2 or in the other mine have really no bearing on what might be appropriate for, say, Panel 512? At the best it can be no more than a broad guideline?-- I think you learn from what you have done in the past.

Just tell me this: I am told that the simplest way to think of a coal mine is to think of one's own human body; it breathes and gives off carbon monoxide and carbon dioxide. Does that make sense to you?-- Not really, I am not a smoker.

I wasn't - touche. What I am saying, I suppose, is that coal breathes?-- Yes.

If there is oxygen, and no seal is a seal - is a complete seat. It is impossible -----?-- No.

Do you have a view on the - well, you may not have any view because there was never a complete seal erected. Were there seals completed in Tecrete in No 2, final seals?-- This was the first time that this particular Tecrete 400 was used as a final seal. We had done one seal in the 4 South level to use as a test bed to see how it went and how it built. It was just one prep seal there to give us an indication whether the product was workable and by all outward signs it looked like it was a workable seal and it was a high strength seal when it was cured.

Well, you don't know what the capacity of Tecrete was at all, do you?-- Not the technical specifications or - as far as MPA, it was higher than brick.

Well, I suppose that depends on the thinness of the Tecrete and the thickness of the brick?-- Not really. What the people that showed us the product told us was that it had a - you know, an MPA nearly twice that of brick and -----

That is what they told you?-- That's my knowledge of it.

The capacity of a Tecrete seal to withstand a pressure from within the seal would totally depend upon the length of time it had been cured?-- Yes, it doesn't gain strength until some time down the track.

And there is a rule under the Coal Mining Act and Rules, is there not, of a sealing - of a final sealing of a panel that has to have a capacity to withstand 345 kilopascals of pressure?-- Yes, well, yeah.

Do you recall that that is rule 4.17 of the general rules or not?-- I couldn't recall that. I still work the old pounds per square inch.

There is a requirement also under the Act or rules to seal - finally seal within three hours, is there not?-- Yes, that's correct.

Obviously - probably have my rule mixed up. Is that rule 4.17?-- I couldn't tell you that without it in front of me.

I have asked several people this, none have been able to tell me, you may be able to: who authorised the placement of the monitor - monitors for 512?-- The initial monitors?

Mmm?-- Initially we discussed - I think it was myself, Albert and George - where we placed the ones for doing the CO make. I am not aware who made the decision to place them after sealing.

After final sealing, I suggest, that the monitors should be in at least one further pillar inbye from where - you know where

they were placed by having looked at things since?-- Yes.
Yes, I would have liked to see the one on No 1 heading further
inbye.

And that couldn't be done, of course, because a pillar been
taken, extracted?-- No, that is not correct. They could
have placed that further inbye.

But didn't apparently. Yes, all right. I suggest where it
was placed, in fact, was in a place where the atmosphere was
likely to be the least representative sample of the area inbye
the seal?-- I just have to refer back to the plan where that
top monitor is now. Could I have a look?

Oh, please?-- Yes, that is not where I would have put the
second monitor point in the seal.

Because it would be getting there a diluted atmosphere,
wouldn't it?-- That is -----

On this breathing mechanism of a mine, not despite a seal
across a heading, if you have a heating inside the sealed area
one has a thermal fan which is, in fact, going to suck air
in?-- I am -----

If you don't feel competent please say so?-- I don't feel
competent.

Do you know anything about mine risk analysis carried out by
Moura No 2, say, in May of 1994?-- I believe there was a
committee of people, yeah.

You know nothing about it personally?-- Personally I wasn't
involved in it, no.

Is it a custom, at least on weekends, for men to work double
shifts end on end? In other words, 16 hours of straight
work?-- No, that is not the case, with the exception of
deputy's, maybe.

I used the word "weekends". I just want to know generally?--
The general hours are eight hour shift).

This is probably not your field so please say so immediately
so we don't waste - the coal is dusty generally in 512 because
of the prior methane extraction?-- Yeah, that's correct.

But isn't there another method of extracting the methane by
water which doesn't involve degassing or by drilling?-- It is
not in my -----

You don't know that. I want to ask you some more particular
questions, if I can? After the explosion occurred late on
7 August do you have any idea what happened to the samples of
the air which were taken from the mine from time to time?--
What sort of samples?

To be analysed for gas?-- The Maihak just continued on
sampling.

But in boreholes, for instance?-- Oh, yes, I went over there and took some samples with Mines Rescue.

Do you know what happened to the samples, the ones you took, anyway?-- I think they were brought - we brought them back and they were put through the gas chromatograph.

In respect of previous sealings - and just ignore 5 North and 5 North West for the moment - are you aware that other panels were sealed?-- Yes.

Were they sealed because of spontaneous combustion - a fear of a development of spontaneous combustion?-- One - with the exception of that, no.

With the exception of what?-- Those ones you mentioned.

All right?-- Yeah.

Do you know anything about oxides of nitrogen in connection with your ventilation duties?-- Yes.

And that's required in two sections or two parts or two different rules, as I remember it, under the ----?-- Yes.

Under the legislation. Do you know whether the oxides of nitrogen were monitored as required?-- Not off-hand. We had tubes to test for NO2.

Is that part of the Draegar system?-- That's part of the Draegar tube 21/31, yes.

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Coal does not produce oxide of nitrogen, does it?-- No,
diesel machines.

Only diesel. Perhaps not only diesel but certainly not
coal?-- Certainly not.

So if one were worried about whether a haze was a diesel haze,
one could run a reading with the Draegar and determine it, or
not?-- Yes, I suppose one could.

There was a monitoring point, so far as you are aware, in 512
after it was sealed?-- Yes.

And there was a sealing taking place in 4 South, wasn't there,
on the Saturday? Mr Stampa - assume there is evidence that
there was a sealing taking place -----?-- No, he was putting
up prep seals.

I see. As ventilation officer would you say that you have a
responsibility under rule 3.5 of the Coal Mining Act - or the
rules made under the Coal Mining Act?-- Could I see that
rule, please?

I will. I will try and find it. It probably goes over to the
next page too. General rules for underground coal mines, rule
3.5. What I am asking - and I am not wishing to interfere
with your reading -----?-- Yes.

----- is that whether you had any responsibility or whether it
was somebody else's responsibility?-- It's the
responsibility of the under-manager.

I am not certain, Your Worship, whether one of the plans on
the board is plan 45/34. I think it probably is.

WARDEN: No 2 Underground Ventilation Station/Monitor Points,
that's the one you want?

MR MARTIN: Yes.

You may be able to tell us without referring to a plan, were
there openings in the stoppings between 12 and 13 cross-cut -
cut-throughs?-- Yes.

And in the stoppings of cross-cuts 9, 11 and 12 into the No 1
heading?-- To my knowledge when I was last down there, which
was on 15/7, there was only holes in 13 and -----

There were or were not?-- Were holes.

What about 9, 11 and 12?-- The only holes that I knew of
were in 12 and 11. 12 had a two metre square hole and 11 had
a one metre square hole in it.

That situation or set-up could cause short circulation, would
it not?-- Which situation is that?

The holes in the stopping?-- Back out by 9, and what did you
refer it to?

XN: MR MARTIN

WIT: MORIESON A G

No, I am talking about 12 and 13 had holes in the stopping?-- They increase the air in that area, yes.

That plan 45/34 seems to show -----

MR MORRISON: 45/24.

MR MARTIN: Sorry, 34 I have got here.

MR MORRISON: I am not sure that's the one that has been put up. I have gone from what the Warden said. You have got 45/24.

MR CLAIR: It's Exhibit 8. You want 45?

MR MARTIN: 34.

MR MARTIN: We are at cross-purposes there, I am sorry, Mr Morieson. Can I ask you again: does that plan show openings in the stoppings between 12 and 13 cross-cuts?-- 12 and 11. 13 is the last -----

Right at the -----?-- It's the last face. Yes, that's open.

They are all open. In the top of the door to the roof what spacing is it, open space?-- In which heading?

Down at the back of the panel - I call it the back - down towards what would have been the first face?-- In 6 heading, the bottom return?

Between each of the pillars shown at the back of the panel?-- Oh, what space between the back -----

Between the pillars?-- Around 14 metres wide.

Don't you know how to read a map?-- Yes. It's just that your terminology is different to my terminology.

We are all confusing each other?-- Yes. This plan has no cut-through numbers marked on it. I am just counting them out. Now, if you are - the last cross-cut where they punched into solid coal, if that's what you are referring to, which is 13 cross-cut -----

But inbye of that. Between 12 and 13. The map shows between each of the pillars?-- You have got a two metre square shown at 12 cross-cut.

But they are holes, aren't they?-- They are holes, yes.

That's what I asked. We are at cross-purposes. I think we are coming close together now. From the top of the stopping - the stopping is not a stopping from floor to ceiling, is it? The stopping is only, what, some brattice sheet?-- That was a brattice sheet from floor to ceiling, yes, with a hole cut at around that height, which is 1.5 metres, and the hole was cut so you could observe.

Right to the ceiling on each of them?-- No, not to the ceiling, not to the roof.

Well, that's what I want to know. Let's have this clear. The brattice goes right to the ceiling?-- That is correct, to the roof.

From the top of the hole in the brattice to the roof how high?-- About a metre.

It took a lot of getting, Your Worship.

Go back to 9 cross-cut on the same map, if you would, adjacent to No 1 road, 1 heading?-- 1 heading of 9 cross-cut.

It shows a 3 metre opening, doesn't it?-- Yes, opened and re-sealed.

That was the point of my question. Can you say when it was opened and when re-sealed?-- Yes. That was opened on 11/6/94.

Did it remain open?-- No, it was closed by the following shift and bag placed over to make it airtight.

Before the following shift began or during the following shift?-- During. If you go to the deputy's reports, Bob Newton has said he - I believe it was Bob Newton - he closed it.

Yesterday you were talking about a high layer of air and a low layer of air in relation to, I think, an incident when Mr Reece Robertson was the deputy?-- Yes.

And you found 1.2 per cent methane in the lower layer coming out?-- In the lower layer, yes, certainly.

How did you achieve that reading?-- By holding my minder, MSA minder.

Did it have a probe?-- It didn't have a probe.

What was the level of the roof? How high was the roof from the floor?-- I could reach it by standing on a lump of coal.

I think you said that in your evidence. Are you familiar with the work of Bakke and Leach?-- Not the name, but I might be familiar with the work if you go on and explain what it's about.

They are the principal experts, or the principal authority, I suggest, on determining methane concentration and layers of air; do you know that?-- No, I don't know.

Can you help the Inquiry with - say, in the month of July, you weren't there all of the time obviously, but you know from some records, and you were there half of the time, and thereafter to the time of the explosion, what were the

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pressure differentials across the regulators in the top and bottom returns of 512, can you tell us?-- What do you mean by "pressure differentials"? You mean the quantities of air that were going into the section?

No, I want to know whether you understood the term "pressure differentials"?-- No, we didn't have a Magnehelic to -----

Would you spell that?-- Pass.

I hope we don't get at cross-purposes again, Mr Morieson?-- The Magnehelic is an instrument for measuring pressure differences.

You didn't now how to spell it. Did you know how to use it?-- Yes, I knew how to use it. The only time we had one and used it was when we had Andrew Self doing the pressure survey.

So there wasn't one at the mine?-- Not to my knowledge.

Do you still have plan 45/34?-- Yes.

When one looks at the top return down opposite about cut-through 11 - I am sorry, that's 11 in 512 panel?-- Yes.

When you look towards the bottom of the plan one then sees from 5 South a road partially driven towards No 1 return in 512?-- Yes.

And when one looks further to the left there is another road driven?-- That's correct.

And what was going to happen, I suggest, was that 5 South was going to be linked to 512?-- I don't know. I know the reason originally they drove that was there was a water problem, I believe, and that was a sump - and that area was used as a sump. As far as being linked, I don't think the intention was to have it linked with the -----

You yourself don't know?-- I don't know.

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WARDEN: Excuse me, Mr Martin, if you need a bit of time, it would be convenient if we took a 5 minute break.

MR MARTIN: I wouldn't mind 5 minutes.

WARDEN: The witness has been there a while and he is going to be a while longer. We will take a break.

THE COURT ADJOURNED AT 10.55 A.M.

THE COURT RESUMED AT 11.23 A.M.

MR MARTIN: Thank you, Your Worship, I have regrouped a little.

You might need a plan to tell me the answer to this question: can you give the Inquiry some assistance as to whether the stoppings were removed between the No 4 and No 5 headings at the time retreat mining started?-- Could you just repeat that question, please?

Yes. Can you say whether the stoppings between No 4 and No 5 headings, that is on the bottom road, were removed on retreat mining?-- Whether that stopping had been removed?

Whether they were removed in conjunction with retreat mining?-- No, not in 4 and 5.

Across each of the cut-throughs down the panel?-- Between the row 13 and 12?

No. No 4 Road, the bottom return?-- The bottom return?

Weren't all the stoppings between the cut-throughs removed?-- I have no knowledge of that area, of whether they had been removed or not.

I see. But weren't you down there from time to time?-- I - the examination route was down No 1 Heading from 1 cross-cut down to 13 cross-cut, then across from 13 cross-cut to No 6 Heading.

You just don't know because you have never been down that -----?-- Yes, I was down that area, but - are you referring to these two stoppings marked on this particular plan?

I am referring to all of the stoppings between the pillars at the end of the cut-through leading into the 5 return, or what was the 5 return?-- I -----

The 5 road?-- It might be easier if you would point it out with a pen to me. Your terminology is very -----

I will leave it -----

MR CLAIR: Your Worship, there is a detailed plan of 512 Panel which is up on the whiteboard behind the plan there. I wonder if while the witness is looking at these areas of 512 and being asked questions about it he could just indicate on that detailed plan there where we can all see just what he understands the question to be about and what his answers refer to because it is very difficult with the witness sitting there looking at a plan in front of him and pointing to it. The rest of us can't simply see it.

WARDEN: Yes, that might help, witness, if you do that -----

XN: MR MARTIN

WIT: MORIESON A G

MR MARTIN: Before you do that, if you look at plan 35/34, that's a different one?-- Yes.

Towards the top of the plan you have got the word "bottoms" written in what would have been 5 Heading or was 5 Heading?-- Yes.

If you look down the bottom?-- Here?

To No 1?-- Here?

Well, just look at the plan for the moment. I am trying to identify or have you locate yourself. You see No 1 Heading?-- No 1 Heading is here.

Right. Well, when you look at the cut-throughs leading in 1 Heading?-- You mean the cross-cuts 1, 2, 3?

Up to 13?-- And up to -----

Up to 12, I am sorry?-- Up to 12, yes.

Each of them show a stopping?-- These stoppings here? Is what you are referring to?

Yes?-- Yes.

When you look to the top of the plan, at what I call 5 Heading?-- The bottom return, yes, here.

Bottom return, in between the pillars or the stooks, or whatever you like to call them -----?-- Yes.

There are no stoppings?-- That is correct.

What I wanted to know was whether those stoppings were removed in conjunction with retreat mining?-- Yes, they were removed. Sometimes they would remove three or four stoppings at a time before they got to that area.

Why?-- To enable them to mine.

And what - would that not cause a problem with ventilation if they removed three or four before they came to mine that?-- It did cause some problems due to the fact that at times the falls would blow down the regulator, that was at the prep seal.

All right, we will leave that. You used an anen - anen -----?-- Anemometer.

Yes, thank you. That measures the air quantity, of course?-- Yes. Well, the velocity, and then you multiply it out by the cross-sectional area.

Is that calibrated?-- To my knowledge it hadn't been calibrated for some time.

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All right. For what time?-- Not as long as I was fire officer. So, that was '90. For the last four years I was unaware of it having been calibrated.

For all you know it might have been measuring incorrectly?-- That's correct.

I would just like you to clear something up. No 1 Road or Heading, or whatever term you prefer, in 512?-- Yes.

If you look at any of those plans - well, 45/34 will do for the moment?-- Yes.

The final position seems to be that the final seal was placed almost or just inbye the No 1 Road in 510?-- Yes.

Now, if you go to 1 Road in 510?-- Yes.

Outbye No 1 Road there is something marked "R"?-- Yes, that's the section regulator.

Right. So, that roadway is partly blocked off, is it?-- Yes, there are louvres where you could adjust the air going into the panel.

And further inbye in the same road, No 1 in 510 -----?-- There is a door.

A door?-- In a stopping.

Yes. You won't quite see it on this plan, but outbye No 1 Heading in 512 across No 1 Road in 510 and then inbye there is another stopping?-- Is this the one you are referring to here?

Yes, I think it is, yes?-- Yes, that was a Tecrete stopping.

And within that - I don't suggest it is a totally enclosed box, but within that area there ends up the final - sorry, a monitoring station?-- Yes.

And would that not have the effect, with the impediments to air flow, of interfering with what it was reading?-- Yes. Well, I believe the door here had been removed and bag had been placed out here and this bag here had a door and there wasn't balanced pressure across all the seals. These one, two, three, four seals had air going this way, across them and this seal here was being wiped by this No 5 cross-cut in 510 Panel. So, there wasn't a balance of air across the seals.

You believe so?-- That is only what I have been told. I have not seen that personally.

The question was wouldn't those impediments interfere to some extent with a proper representative reading of the air?-- They may have had some effect, yes.

I just want you to look, Mr Morieson, if you would, at part of Exhibit 21, numbered FB700-009. It is a graph and it says "CO

XN: MR MARTIN

WIT: MORIESON A G

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make 512 start 29/4/'94"?-- Can you just repeat that?

Yes, it looks like that -----

WARDEN: Just hold it up, witness, show it to me. Yes, thank you?-- -----

MR MARTIN: Yes, thank you. That's a graph of litres per minute of carbon monoxide on 28 February 1994 to about 22 July or so - I am sorry, I have got a different one, I am sorry, 6 August?-- Yes.

MR MORRISON: Could you read that again, what that name was? I can't find it in Exhibit 21.

MR MARTIN: Look, I will show you it, it is the easiest.

MR MORRISON: Okay, thank you.

MR MARTIN: That shows a graph of the CO make in 512 Panel on 28 February 1994 onwards to 6 August?-- Yes, that's correct.

If I can take you to a date, 16 July - June on the bottom?-- Yes.

And by and large it has been an upward make until about 11 June; that is right, isn't it?-- Yes.

And then it falls quite significantly?-- Yes.

And is that the occasion of that incident you talked about with Mr Robertson?-- Yes.

So, the panel gets flushed on or about - I have forgotten the date precisely - the goaf is flushed. You have told us about that yesterday?-- Yes, yes, I am just trying to correlate the dates which was Mr Robertson's -----

I think you can accept it is about the 16th?-- Yeah, the 17th I was with him, yes.

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So that dive, as it were, in the CO make is when you flushed the goaf?-- Yes. Well, I had done on - the 11th of the 6th is when I increased the ventilation and that was when it was flushed and went down.

I see, all right. So it took something like, what, how many days to come right down to its lowest point, four or five days, or perhaps three or four days?-- Yes.

The point I want to elicit from you is that immediately having flushed the goaf?-- Yes.

It rises again and keeps rising?-- Yes.

So the flushing of the goaf had no effect in the long-term?-- In the long-term, no. What you need to look at too is the actual air quantity involved, the amount.

But you can't tell us it was done with accuracy?-- Beg your pardon?

But you can't tell us it was done with accuracy because of the absence of calibration?-- Not with 100 per cent accuracy, no.

Perhaps with great inaccuracy?-- Well, the instrument has been sent away for testing. We can find out.

Document 123 I expected might be part of Exhibit 22, I am not sure. It doesn't have a - it's document No 123. You recall yesterday talking about 18.98 litres per minute on Friday 22 July?-- Yes.

And that reading is said to have been incorrect?-- Yes, I believe that was what that - they believed it to be incorrect.

It's part of Exhibit 21, I am told. Could he have Exhibit 21?

You have got Exhibit 21 there?-- Yes, I am looking at that where it says -----

FB700010. Right at the bottom left-hand corner of the page you will see some numbers, right down here. So there is FB700010?-- Page 1 or page 2?

Page 2?-- Yes.

That shows the CO Lpm of 18.98 said to be an error. Right at the top right-hand side under "Total CO Lpm"?-- Yes.

I am just interested in the typing underneath the boxes containing the figures where it says, "Reading Friday a.m. 22 July not graphed", beneath that - August, I am sorry - August not graphed. It should read July in fact. That's a mistake, I suggest?-- Right.

Then the following words appear, "The 18.62 litre per minute was obtained using a velocity of 1.77 times the 8 ppm of CO on a peak Draegar Tube reading not the weekly average."?-- Yes.

XN: MR MARTIN

WIT: MORIESON A G

Isn't 18.62 litres per minute the production properly of that measurement taken on the Draegar tube with that velocity? In other words, isn't the 18.62 litre per minute correct?-- I didn't take this reading. This was taken by people other than me.

I am not asking you - if you accept that reading to be correct?-- Well, it looks to me that looks like, yeah, 1.7 times the area times 8 parts which would work out to be around that, 18.6.

Unless there is some better explanation than we have, it was 18.62 litres of about that date in July, 22 July?-- Yes.

After the final sealing can you help the Inquiry as to the height of the tube above floor level inbye the final seal?-- No, I have no knowledge of that.

Who could give us some knowledge?-- One of the electricians that was on shift on that particular day probably.

Do they place the final monitoring point, or affix the -----?-- I wasn't there and I cannot comment.

No, but just as a generality?-- Not always. It depends who is available, who is there. If they had to join more tubing on to put it in that position where they put it, or if they - the ones that are in the seals in that number - in the belt road, they would have had to add more tubing onto it and, therefore, the electrical department would have joined that on.

It's surely not left to electricians to determine where it should go?-- I would believe the under-manager would have given instructions to the person concerned of where he wanted the monitor.

Yes, thank you. Thank you, Your Worship.

HIS HONOUR: Thank you. Thank you, Mr Morrison?

CROSS-EXAMINATION:

MR MORRISON: While you have got Exhibit 21 with you, Mr Morieson, can you just look again, please, at the graph which has your name on it and date 18 August 1994? I think you will find it's about the fourth last page?-- Yes.

Now, that was a graph referred to you yesterday and today in relation to CO make for 512 Panel?-- Yes.

Do I understand correctly that the points which make up the graph, that is to say, the points which coincide with dates, are weekly mostly?-- Yes, mostly.

XXN: MR MORRISON

WIT: MORIESON A G

Did you obtain the figure for putting on that graph from the weekly average of the CO reading from the Unor system?-- Yes, from the weekly average.

So this graph was never meant to indicate readings taken in a spot fashion from a Draegar tube?-- No.

So where we talk about the dates that our learned friend, Mr Martin, last took you to, 16 June, the drop from 11 June to 16 June, the figure for 16 June is the average weekly CO reading on the Unor for that week just past?-- Yes.

Now, this graph was generated by computer?-- Yes.

That computer was located in Mr Abrahamse' office?-- That's correct.

You cannot generate this graph off the Maihak computer?-- No, that's true.

And never was intended to be generated off it?-- No.

When you come to the figure for 5 August 1994, that is a point on the graph not done by you; is that right?-- That is correct.

That was done by Mr Bryon?-- Yes, I believe so.

Am I right in saying that that is the last point plotted on the graph before the explosion?-- Yes, I believe it would have been.

The graph as we see it here in Exhibit 21, taking it through to 6 August 1994, that last section was plotted by you and added to the graph after the explosion?-- Yes, that's correct.

So that the graph in the form we see it in Exhibit 21 was not available at the mine before the explosion?-- No.

This is a post-explosion calculation?-- Yes, that's correct.

Now, that graph was done on a Friday routinely?-- Yes.

Done by you when you were available. If not you, then by Mr Bryon in your absence?-- Yes, I think Jacques Abrahamse did it for Mr Bryon because he wasn't familiar with the computer.

Yes, the figures would be obtained from the Unor system?-- Yes.

You would take a print-out, go down the mine, crosscheck the print-out of individual points with the Draegar?-- Yes.

Come back up, take the average weekly CO make for 512 Panel?-- Yes.

That's a figure you can generate on the Unor system computer?-- Yes.

And you take that computer-generated figure down to Mr Abrahamse' office and that, plus the other data, is entered into a computer in Mr Abrahamse' office and the graph is plotted?-- Yes, that's correct.

Then that graph is taken by you, or was routinely taken by you, and a number of copies were posted?-- That's correct.

Where was the first one taken?-- The first one was taken to the manager and placed into the record book, or given to him personally, whoever was the acting manager at that time.

And then another copy was taken by you routinely where?-- It would go down to the under-manager's office and into the deputies' cabin.

Is there a noticeboard in the deputies' cabin?-- Yes.

Is it right next to the table where the deputies sit to have their lunch and so forth?-- Yes. They don't always have their lunch. Those that are on top would have their lunch there, but it's where they start off from.

And the graph was stuck on the noticeboard routinely by you?-- Yes.

In full view of all the deputies?-- Yes.

On the back of the graphs as generated they contained the figures which go on to make the graph?-- Yes, that's correct.

So that if one needs to do any analysis beyond looking at the graph face and analysing from its features, you can turn over the back and look at the readings?-- Yes.

So one in the manager's mine record book, one in -----?-- One in the under-manager's office.

And one in the deputies' cabin?-- Plus one in the QA file, and I usually print out one for myself that I had in front of my noticeboard.

Would the one you printed for yourself be stuck up in your office?-- It would be placed in the office. Anyone could see it that came into that office.

Did people usually come to your office for one reason or another?-- Some people came through.

Deputies were always in the deputies' cabin, you know, during the day?-- Deputies would always have to go through the deputies' cabin to get their methanometer - sorry, minder.

All right. Now, can I just show you a document, please? Would you have a look at this one? Is that the graph as it

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existed on the Friday before the explosion?-- I believe this would be the graph, yes.

The only addition to this graph was the extrapolation of 5 August to 6 August which was done by you after the event?-- Yes.

I tender that document. I have a number of copies.

WARDEN: I will mark that Exhibit 25.

ADMITTED AND MARKED "EXHIBIT 25"

MR MORRISON: The graph in this form was the one that would have been stuck up on the Friday before the event?-- Yes. I cannot confirm that. You would have to ask someone that.

Mr Bryon should know?-- Mr Bryon or Jacques Abrahamse.

But that would be the routine, the graph done on the Friday and stuck up on the Friday and all the points would be mentioned?-- Yes.

Now, can I take you back then to the figures for the graph in Exhibit 21, and specifically to the 18.62 litre figure and the 18.98 litre figure? That's the graph and figures. I think it's the next following document from the graph. Do you have that?-- Yes.

Now, the notations under the figures show that the reading for Friday morning, 22 July, was not graphed. That's the reading of 18.62 litres per minute?-- Yes.

The reason for that was that there was an error in taking the CO parts per million reading upon which that calculation was based; is that right?-- That's what I was told.

And also, not only an error in taking the CO ppm reading, an error in calculating velocity?-- Yes.

So, the notes tell you, beyond what was read out to you, that the 18.62 litres per minute was obtained using a velocity 1.77 times the 8 ppm of CO and peak Draegar tube reading, not the weekly average?-- Yes.

It should have been the weekly average but someone calculated it incorrectly, didn't they?-- Yes, I believe so.

And not only incorrect but based on the incorrect reading of the parts per million?-- That's what I have been told, yes.

Then, the reading Friday p.m. 22 July 1994 was graphed after verifying the CO ppm make at a maximum of 5.5 ppm. I said make. I shouldn't have said that. CO ppm at a maximum of 5.5 using a Draegar tube, that's what the notes read, and as you understand it, that that was the case?-- I believe they would have used the Maihak reading 5.7 to get that 13.7.

Yes, in fact, it shows that, doesn't it?-- Yes.

The 13.7 litres per minute was obtained by a velocity 1.78 times the 5.7 parts of CO on the weekly average?-- Yes.

So, firstly, the 8 ppm reading, not verified, was substantially lower at 5.5; that's correct?-- That's correct.

And that reading as verified lower was verified not only by Mr Abrahamse but Mr Dave Kerr, you know him to be a Senior Mines Rescue Person?-- Yes.

And a person called Atkinson?-- Undermanager.

Mr Atkinson, undermanager?-- Yes.

So, the mine engineer, a Senior Mines Rescue person, and a mine undermanager all verified the incorrect CO ppm reading?-- Yes.

And then the true weekly average was taken of the Unor and that's why 13.7 was the true graph position in the 18.98; is that so?-- I believe so.

If we can go back to Exhibit 25. I'm not sure if you have a copy with you, the graph as at Friday. Perhaps the witness could have it back. If one looked at that graph on the Friday before the incident?-- Yes.

And accepting that it weekly bites for the most part?-- Yes.

One would see not a dramatic increase in CO make, would one?-- No.

One would see, in fact, quite the opposite, a gentle rise?-- Yes.

Just go to the point where a day separated the two graph points rather than a week, that occurs on 10 June to 11 June?-- Yes.

And 22 July to 23 July?-- Yes.

In each case if one collapses those two readings, joined them together, they would make, I suggest, very little difference to the graph?-- Yes.

Those two readings, that being a day apart, on any view do not create any distortion in the graph?-- Not to my looking at it.

The first 10 June to 11 June is a minimal rise?-- Yes.

The second, 22 July to 23 July, a slightly greater drop?-- Yes.

The graph, as shown prior to the event, was not wrongly calculated or miscalculated or a bungled graph, was it?-- I don't believe so.

Thank you. I want to show you another document, please. You have been asked a number of questions about your training and period of time as a miner and to a large extent you have answered from your memory; is that right?-- That is correct.

Can I just show you a document, please, and ask you if you can confirm that this sets out your formal qualifications and certificates and the courses that you have done over time?-- Yes.

You will see I have deleted (iii) because it is a position rather than a course?-- Yes.

I tender that document.

WITNESS: There would be more first aid courses I attended in between those periods too because but that's shown most of - my current certificates what I hold and I haven't - there's no - I've done probably five or four more first aid certificates than is shown.

ADMITTED AND MARKED "EXHIBIT 26"

MR MORRISON: While you have got the document in front of you can you just tell us - you have done some extra courses?-- Yes.

In relation to which entries?-- First aid, I've done several others along the way than what's shown. When I did first aid back in '83 and I have - I've just continually kept my ticket

XXN: MR MORRISON

WIT: MORIESON A G

current.

You have actively sought to keep your qualifications to as high a standard as you can?-- Yes.

That seems to indicate across in other areas too with you following up the latest books or at least a range of books in relation to ventilation and spontaneous combustion?-- As much as possible.

If I might pause there, Your Worship, I tender now the exhibits for identification which Mr Morieson earlier identified as exhibits in their own right. A and C only, I think - no, all three, A, B and C. Mr Morieson has identified them all. If they could be given separate numbers.

WARDEN: You still want separate numbers?

MR MORRISON: I don't mind one way or the other.

WARDEN: Separate numbers, A, B and C will be 27, 28 and 29.

ADMITTED AND MARKED "EXHIBIT 27"

ADMITTED AND MARKED "EXHIBIT 28"

ADMITTED AND MARKED "EXHIBIT 29"

MR MORRISON: Mr Morieson, you are a deputy at the mine?-- Yes.

Tell me: deputies have to generate reports of inspections they make?-- Yes.

Those reports have to be provided to the undermanager?-- Yes.

At the end of the shift. And eventually posted?-- That's correct.

They would be routinely posted in the start area of No 2 Mine?-- Yes.

Behind the perspex faced notice board?-- Yes.

The deputies' reports should be read and probably are mostly read by deputies on-coming reading outgoing deputies' reports?-- Yes.

Was a direction issued by the undermanager-in-charge, Mr Mason, in relation as to what should be done with reports? I want you to look at this document and perhaps you can answer once you have seen it. On 10 November 1993 did the undermanager-in-charge issue a directive in relation to what should be done with deputies' reports and is that it?-- Yes.

I tender that document.

ADMITTED AND MARKED "EXHIBIT 30"

MR MORRISON: People adhered to the direction?-- Most did.

Hot seat changes would take place down the mine?-- That's correct.

Hot seat changes where one production crew effectively hands over to another production crew?-- Yes.

The deputies in that case would routinely meet at the crib room?-- Yes.

As often as not one deputy would still be filling in his report while the other one was waiting to start?-- Sometimes, yes.

And, no doubt, the deputies would as matter of routine speak to each other about what had just happened on this shift and the condition of the panel?-- That's my experience that that would happen, yes.

And that's an ingrained system in most mines and No 2; that is to say, outgoing deputies will tell incoming deputies about anything important on the shift?-- Yes.

And the same with outgoing deputies and the undermanagers if there is anything important to note from the shift and the deputies will inform the undermanager?-- I believe so.

And, conversely, the undermanagers routinely seek out the deputies at the end of the shift to ask them as to the status of the section?-- Yes.

Likewise, incoming deputies do the same with outgoing deputies?-- Yes.

And that all of those aspects that I have spoken to you about are part of the ingrained practice of deputies and undermanagers?-- Yes, the undermanager would ask you to ring up and inform him towards the end of the shift where you were so he could tell the next deputy what sequence you were on and where you were.

Anything of importance that had taken place or any feature about the panel that had changed would be reported in that way?-- Yes.

And that was certainly a routine and usual thing?-- Yes.

To your knowledge the deputies at No 2 would routinely and usually do just that?-- Yes.

Likewise, the undermanagers?-- Yes.

Could I revert to some of your history but not overly long, hopefully. Your training included being trained to trainer standard - sorry, to use so many similar words, but unavoidable?-- Yes.

That means you are a trained to a much higher standard in some courses than ordinary miners?-- I've been trained to pass on to my knowledge and how to present it to them and how to give feed back from them so that they understand what I've given to them.

And you have, in fact, trained new miners?-- Yes, I've done induction of new miners that have started.

And new miners after the induction aren't let to wander loose down the mine?-- No.

Isn't it the case that new miners are not allowed to go around the mine without experienced miners?-- Yes.

For a certain period of time?-- Yes, that's correct.

And new miners are sometimes not even allowed to go to the face for a period of time?-- No, that's correct.

So that, after the induction, one doesn't just turn loose these new men, does one?-- No.

And that's never been the case, in your experience at least?-- Not in the last five/ten years.

In training miners and in inductions did you do all induction or only part of it?-- I did just part of it. I would take fire fighting and maybe health sometimes; mining terms.

Did the induction course include what might be called lectures or seminars as well as practical things?-- Yes, takes over two days.

Effectively, sit in a class room, whatever room you want to call it, and new miners would have to listen to you talking to them?-- Yes.

And hand out material?-- Yes.

And if appropriate there would always be practical training?-- Yes.

And the inductions vary from what level the person was; visitors' induction is different from a full-time miner's induction, which is different again from a new full-time miner?-- Yes.

And the inductions are taken seriously?-- Yes, very seriously.

Very seriously by you and management?-- Yes, I believe so.

And performed in that serious manner, one does not take this lightly?-- No.

If after an induction you were not convinced that the person either understood what you were talking about or properly appreciated the points that you were making would you say something about that to the undermanagers or the deputies?-- Yes, there was the training officer, Joe Barraclough. In one particular case he had to have help because of his writing standard and he was given an oral exam so as to not be discriminated against.

If a person effectively fails induction they are not allowed down the mine, are they?-- No.

They are given extra help to see if they can pass the induction?-- That's correct.

And some might eventually never pass at all?-- That hadn't happened at this stage but it could happen.

It's feasible but it hasn't happened in practice?-- No.

Were you involved in training miners apart from inductions in other sorts of training courses?-- Yes, miners would come with me in their first week of where they had to get to be familiarised with the mine. They might come and do the round with me stone dust sampling so they would get familiar with the pit.

They would always be in your company when taken down?-- Yes, they were never out of sight.

You would instruct them practically in what was going on?-- I show them practically and show them different areas, faults, points of danger, things to look out for.

And this was done not only for brand new miners, this was done for miners who might have been around for a while as well?-- This was even done to experienced miners.

And that ongoing training is something the management took very seriously and so did you?-- Yes.

And the miners took it seriously too?-- Yes, most did.

I don't mean to single them out but everyone took this sort of aspect of ongoing training and safety very seriously?-- Yes.

You have mentioned having had in your possession and read over the various years books that refer to the feature of spontaneous combustion?-- Yes.

Did you have to as a part of your deputy's course receive information or training in relation to that?-- Yes, there was a segment on spontaneous combustion.

To your knowledge does every deputy undergo that?-- Yes.

And is spontaneous combustion or its existence or features a topic of discussion from time to time between deputies?-- At certain times, yes, especially when we are concerned about an area.

So that, in fact, it wasn't something that would be ignored, deputies would, in fact, exchange information on this topic?-- Yes, always.

It's not something that passes out of mind in your experience?-- No.

In relation to spontaneous combustion, both in terms of the training you received or the lectures you received as part of your deputies' course, and since, has that involved both detection and then steps to cope with it?-- Yes.

In relation to safety, there was, in fact, a network of safety features at the Moura 2 Mine, were there not?-- Yes.

There was a training committee?-- Yes, yes.

There was a work model management committee?-- Yes.

And there was a consultative safety committee?-- Yes, I believe so.

On each of those committees all levels at the hierarchy of the mine were represented?-- Yeah, there was a cross-section of miners, deputies and staff.

There were also mass safety meetings regularly?-- Yes.

Tool box lectures very frequently?-- Well, monthly, yes.

Regularly rather than very frequently, monthly?-- Yes.

And, once again, management and the miners would take that safety aspect, safety meetings and the safety issues, quite seriously?-- Yes.

There was no inhibition on miners speaking about anything that concerned them?-- No, they usually spoke their minds.

Whether to one degree or not very emphatically or otherwise?-- Yes, quite heatedly at times.

And in certain language and other times other sorts of language?-- Yes.

Miners were not backward in coming forward and pithily expressing what they thought about safety issues, were they?-- No.

And the check inspectors likewise?-- Yes.

And the deputies to the undermanagers likewise?-- Yes.

And in your experience at No 2, when those sorts of things were raised, did management take them seriously?-- Yes, on most occasions.

The undermanagers in No 2 were approachable by deputies?-- Yes.

You felt no inhibition about going and talking to undermanagers about any topic you wanted to talk about, did you?-- No.

They were certainly open to suggestions from not only you, but the miners, the deputies?-- Yes, but they begged to disagree at times, but they had the final say.

I think everyone reserves the right to disagree with another's propositions. Nonetheless, they would be received and receive some attention?-- Yes.

Now, you were involved in terms of ventilation on a number of projects to improve the ventilation system in the mine?-- Yes.

Did that include the pressure survey?-- Yes.

Is that the one conducted in conjunction with Andrew Self?-- That's correct.

Just remind me, who was he?-- He was a British Coal consultant, I think, out of Brisbane, and specialised in doing pressure surveys.

And he was up for how long?-- About two weeks.

Did you spend most of the time with him?-- I spent a lot of time, yes.

Largely underground or in planning?-- Mainly underground and also when he was doing his calculations in my office.

Now, when was that?-- I can't remember the exact date.

Can we check something to find out? There would be some record of it?-- There is a document here which gives the exact date and when it was done.

And in his survey he would have seen just about all of the underground?-- Yes, he saw everything at that stage.

And, effectively, made recommendations on what might improve the ventilation?-- That's correct.

As a result of what he did were changes made?-- Yes.

What were they?-- They were the construction of the new overcasts in the 6 South area.

Perhaps, rather than use the laser because it is very inaccurate, you can stand up and show us on the plan to the left where the overcasts were put in. You are showing 6 South area which runs south-west off 1 North West; is that right?-- Yes.

And did the construction of the overcast take place?-- Yes.

And did they improve the ventilation?-- Yes.

Were you also involved in other ventilation projects? Perhaps in relation to 5 South, the installation of an additional return?-- Yes, we put another return in and we did other work on stoppings, upgrading them.

In 5 South?-- In 5 South.

It was all for the purpose of improving ventilation?-- Yes.

Did it work?-- Yes.

Was there also a dust survey conducted - a ventilation survey conducted in 1992?-- Yes.

Was that the one with Mr Self or -----?-- That probably was, yes, the one.

August 1992?-- That would be the date, yes.

Was there some widening of existing overcasts done?-- We were in the stage of preparing to widen a restriction on the 26 cross-cut overcast, yes.

Could you just point that out? That's 26 cross-cut on the main dip?-- Yes.

And that had been planned and it was about to be done?-- Yes.

Was there also work planned or done on the overcasts - I am sorry, on Tecrete and Holywell stoppings?-- Yes, they were being upgraded all the time.

Now, Tecrete stopping is not a Tecrete seal, is it?-- No.

Describe for me a Tecrete stopping?-- A Tecrete stopping is a wire - quarter inch wire, like, square, wire bird cage type wire, and that is sprayed with the Tecrete compound and makes a very good seal, very little leakage.

It is never intended that will be a permanent seal on a section?-- No.

That is simply to cut off airflow?-- That's correct.

And it is installed in situ?-- What?

You don't make it on the surface and take it down, you do it down there?-- Yes, it is made down there.

And the stopping that you indicated in outbye No 1 heading 512 and in the 510 section -----?-- Yes.

I think, as you said, that was 5 cross-cut, 510?-- This - which stopping?

Outbye No 1 road in 512?-- This stopping here?

Yes?-- Yes, that was a Tecrete stopping.

A Tecrete stopping of the kind that you have just described, not a full seal?-- Not a final seal, no, a stopping.

Keeping your attention on that map, you were asked questions about the door which is in the No 1 road of 512?-- Yes.

Now, that is a door set in a prep seal, is it?-- No, that's -----

Describe it for me then?-- It is another door set in a stopping, Tecrete stopping.

Right?-- It is steel framed with a rubber seal so it seals well when it is closed.

And when it is opened the air flow is unimpeded?-- It is unimpeded by that opening, but it will create turbulence.

Yes, quite, it might create turbulence, the air can easily get through when it is opened?-- Yes.

And the roadway at that point, where that door is, is approximately how wide? Eight metres or seven metres?-- Probably seven and a half metres by three metres.

Three metres high?-- High.

How big is the door?-- About a metre square.

The door set in the stopping?-- Yes.

Now, in relation to the ventilation in the mine, and in particular in relation to 512, what was the ventilation flow that was delivered to there in terms of cubic metres per second?-- It was around 45 cubic metres most times.

In your experience is that a good, indifferent - good or indifferent flow?-- Well, that was a reasonable flow for what we were doing, yes.

How does it compare with what other mines might have or do you not know?-- I couldn't compare it with other mines.

In relation to - that's 45 cubic metres to 512?-- Yes.

How does that compare with what other panels got?-- They would be getting a bit less, 30 metres. I would have to refer to a vent survey to give you an accurate figure.

Certainly a measure less than 45?-- Yes.

Now, I want you to look at a document, please? Can you have a look at this document, please? I asked you questions before about where the graphs were stuck up that we were discussing; do you recall that?-- Yes.

Looking at that plan can you confirm for me that that is a plan of the layout of the offices at No 4 and No 2 Mines?--

Yes.

And can you - if you have got a pen with you, can you mark on that with an arrow the undermanager's office in No 2; the office where the mine record book is kept where an additional graph is placed; the deputies' cabin where it is stuck up; and your office where you kept your copy. Now, can you also indicate with the letters or with the words "start point" where the start point for the men in No 2 is, and confirm for me, if you would, that the start point is simply a covered area where the men gather in order to get into PJB's to go down?-- Yes.

Have you done that now?-- Yes.

I tender that plan. I am sorry, I will have to provide copies after lunch. I thought they had been done.

WARDEN: Yes, thank you. We will mark it Exhibit 31 and get copies made available as soon as possible.

ADMITTED AND MARKED "EXHIBIT 31"

MR MORRISON: I might just take this opportunity to indicate at this stage that this will be the plan given to all persons attending at the inspection on Monday so they will have a plan layout.

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MR MORRISON: Perhaps we could borrow that back during lunch
and return it after the lunch break?

WARDEN: How much longer did you propose to be?

MR MORRISON: I won't finish before lunch, I certainly won't
do that.

WARDEN: If this is a convenient time, we will take the break
now. Resume 1.15.

THE COURT ADJOURNED AT 12.25 P.M. TILL 1.15 P.M.

THE COURT RESUMED AT 1.21 P.M.

WARDEN: Thank you, Mr Morrison?

ALLAN GEOFFREY MORIESON:

MR MORRISON: Could the witness have Exhibit 31 or does the witness still have it?

MR CLAIR: If I might just interrupt before Mr Morrison and Mr Morieson proceed further? I just want to draw the Inquiry's attention to an article in this morning's Courier Mail and I do so because the Courier Mail, in fact, was late today. I understand there was some delay in it being delivered so it wasn't possible to read it until much later in the day than normal, otherwise I would have raised this at the beginning of the day, but the article which appears on the front page of the Courier Mail under the headline, "Killer Gas Bungle", and a sub-headline, "Miner tells of faulty graph", then goes on to set out in the body of the article the situation that makes it appear that the graph that Mr Morieson was shown yesterday, and which he dealt with in the course of answering questions from Mr MacSporran, was a graph which had been posted at the mine some time prior to the time of the explosion and, in fact, that is not what the witness said in evidence yesterday and it does - and the distinction between what the witness said and what, in fact, appears in the article is a very vital one, particularly in the way that the article is presented. Now, it is not the case, Your Worship, that I would propose to raise every minor inaccuracy which appears in media reports as the Inquiry goes on, but where there is a significant inaccuracy it does seem appropriate that it be mentioned in Court and that Your Worship say something about the need to ensure accuracy and, secondly, about ensuring that there is some correction of the incorrect report. As I have mentioned before, Your Worship, as counsel assisting I am not unconscious of the dangers of inaccurate reports. That derives as much from experience in the past as it does from anticipation of the future in a matter like this, but in order to overcome that, as I have mentioned again before, we are prepared at this end of the Bar table to answer any queries about the evidence that has been given or for any doubts, I should say, about - on the part of any media representatives about what has been said in evidence, and as Your Worship is aware, the protocol established by Your Worship for dealing with the media through the Inquiry indicates that the transcript and copies of exhibits will be placed in a position just outside the Court where the media can have access to them. Thank you, Your Worship.

WARDEN: Do you wish to say anything on it?

MR MORRISON: No, Your Worship, I don't. Mr Clair has said

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what needs to be said, I think.

WARDEN: Yes. I don't think I will need to add anything further then. Perhaps the following reports may emphasise the matters that you have raised in cross-examination. Thank you, then.

MR MORRISON: I asked you if you still had the layout plan. I think you do?-- Yes, I do.

Can I just establish with you that that was, in fact, the layout at the date of the incident at Moura No 2?-- Yep, that's correct.

As we look at that plan there are two dotted lines on the bottom left-hand side, one of them starting at the start point and heading towards the bottom left corner of the plan. Does that indicate the roadway down to the cut where the portals to No 2 are?-- Yes.

I will put that aside. Now, in dealing with the graphs we have been discussing, that is to say the weekly CO make graphs that you stuck up at various places around the office layout, when you put them up would there be comments made about them?-- What sort of comments? You mean like some people would come and ask me, "Do you think this is too high?"; is that what you mean?

Any comments? Would miners comment on or ask you about what the graph signified or what it meant?-- No, no-one asked me.

Deputies?-- No, not to my recollection.

Okay. Did you proffer any comments to any people when you put them up about this or that to do with the graph?-- I said, you know, "We will have to watch this.", if it became higher or if there was an increase - sudden increase there, but - there were two occasions I commented we would have to watch that.

If there was a sudden increase, a rapid rise?-- Or rapid rise.

Now, at no stage of the graphing that you did was there such a rapid rise indicated, was there?-- There was at one stage there on that long weekend, and as I wasn't working I put just another bar graph - not a graph, but a "what if" equation in so if there were 6 parts, 7 parts, 8 parts it - and the air would have been the same because there had been no changes. So, I put a calculation in there that, you know, there would be 15 litres or 14 or 13, according to the ppm.

Like a prediction?-- Like a prediction of - you know, so it was already worked out if the monitor point showed there was, you know, 6 parts. So, they would say, well, the air - if it was - hadn't been changed, which it wouldn't have been because there was no mining done on the weekend -----

Then it would have been at this CO make?-- That CO level and

they could have made an informed decision.

In fact, you took active steps with the graphs to provide information so persons looking at them could interpret them and could make their own assessments?-- Yes.

Now, when you go about a ventilation survey do you go to the known ventilation stations?-- Yes, there is measured cross-sectional areas which are the stations and that is where I measured the -----

A ventilation station is simply a point established in the mine where there is a very accurate cross-sectional area known so we can have the same cross-sectional area, therefore, determine the quantity of air moving?-- Yes, that's correct.

There is no other significance about a ventilation station but that, is there?-- No.

And you would go there to check airflow?-- Airflow.

And how would you do that?-- By using the anemometer to take the average of three readings.

From any particular part of the drive?-- In the method as prescribed in the Mines Rescue Manual on how to take a reading.

You would take an average over those three readings?-- I would take an average over those three readings unless I had two readings the same first up and then I would take that reading.

Then from that you can work out the quantities of air?-- Yes.

And were changes month to month checked and dealt with?-- Yes, we would discuss any changes, if it needed more air in another area of the mine and regulators would be adjusted as and where to get that balance.

When you say "we would discuss", who are you speaking of?-- That would be the - Albert and George.

That's - "Albert" is Albert Schaus, the manager?-- Albert Schaus.

"George" is George Mason, the undermanager-in-charge?-- George Mason. I myself did not have the authority to move any regulator without an undermanager's instruction.

Now, you also mentioned checking the integrity of the Unor system. You did that?-- Yes.

And is that the method that we were discussing earlier where you would take a printout of readings, go down the mine and then cross-check them at various point with a Draegar tube?-- Yes.

Now, is there some error - margin of error in relation to

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readings you can get from a Draegar tube?-- Yes, there is, up to 20 per cent, I believe, error you could get from a tube.

Is that because the tube operates by way of a stain coming down a set of crystals?-- Yes.

And it depends upon the colour of the stain or the point that it has reached and that as to what level it signifies?-- Yes.

And at the point or the - the lowest edge of the stain as it advances, is there a fairly indistinct margin?-- It is very indistinct, yes.

Is that why you can get the situation where one man's reading of 8 might be another man's reading of 7 or 9?-- Yes, that's correct.

And is the real significance of Draegar readings that they are more useful to demonstrate trends than they are for particular point readings?-- Yes.

When you took Draegar readings to cross-check against the Unor system would you go and take the readings at the monitor point?-- Yes, underneath the monitor point.

So, if one moved away from the monitor point that would effect the validity of the cross-check?-- Yes.

What if one went further away than, say, ten metres?-- Yes, that may affect it.

Within ten metres it would be reasonably accurate?-- Yes, I believe so.

And the accuracy of the reading on the Draegar tube or the use of Draegar tubes is affected by the fact that you have to pump air in a certain number of times depending on which tube you were using?-- Yes.

And if you don't pump the right number of times you can have an inaccurate reading?-- Yes.

Or if you pump too many?-- Yes.

Or if you don't pump the right way?-- Yes.

All of those things will affect the amount of air pumped through the tube?-- That's correct.

The tube itself is a glass tube which is broken at the relevant ends by bending it in a part of the Draegar itself?-- Yes.

Then it is inserted in the top and air is pumped through by means of hand-held bellows?-- Yes.

Now, when you came to the 512 Panel - to considering the 512 Panel, you have been asked some questions about having established its natural or prior extraction CO make level?--

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Yes.

You told us about that. You have also given an indication that later on the CO make had increased steadily as expected?-- Yes.

Now, you always anticipated that once extraction started the CO make would increase?-- Yes.

And do I understand you correctly, from what you said yesterday, about having predicted ahead from that initial level of 2 litres per minute over the life of the panel, that the CO make having gone past 10 was as you expected?-- Yes. Well, I - with the way that the coal was being left I thought it would be going into more than 10, yes.

This was not some thought you had well down the track of extraction, you anticipated this from the start?-- Yes.

And your anticipation was that this panel was likely to produce more CO than other panels had because of the method used?-- Yes.

So, the fact that this panel's CO make was higher than another panel's CO make really doesn't - didn't tell you anything except that was what was expected?-- Yes.

And does the CO make depend on a variety of factors to do with the coal?-- Yes.

Such as coal type?-- Yes.

Depth? Does that play a part?-- Yes.

Whether it is drained or not?-- Yes.

The method of mining, things of that nature?-- Yes.

And in all extractions - I am sorry, I will phrase that better, maybe I will, I will try. In all panels that are extracted one expects to see a CO make increase by the mere fact that you are exposing raw coal to the air?-- Yes, that's correct.

So, the fact that there is CO being produced at any particular level is not of itself of any surprise at all?-- No.

Likewise the production of methane from this coal seam in extraction is not the slightest bit surprising, it is what you would expect to see once you start cutting coal?-- Yes, it released methane.

And that's the whole point of having a drainage program which very heavily drains the seams ahead of production and extraction - sorry, development and extraction?-- Yes.

Now, there was an intensive drainage program across a large section of this mine, wasn't there?-- Yes.

Were those drainage holes drilled for some distance into the coal?-- Yes.

In some cases about 400 metres?-- Yes, that's correct.

Of what size were the holes?-- Around 65 millimetres.

At their point of exposure to a heading, that is to say, the point from which they were drilled, were they then effectively capped and the gas collected by tubes connected to a methane drainage range?-- Yes, that's correct.

And thence to a borehole and exhausted to the surface?-- On most occasions, yes.

And that drainage, depending upon which panel we are talking about, could have extended anywhere between one and three years?-- Yes, that's correct.

I think in the case of 512 it might have been something over three years?-- I think it would be close to that, yes.

So the methane that one would expect to get upon extraction in 512 would be low?-- Yes.

And was in fact quite low?-- Compared to some other panels we have been in, yes.

Routine readings of 0.4 or 0.3 or 0.6 per cent methane are in fact quite low in terms of extraction, aren't they?-- Yes.

Now, I asked you about your anticipation for CO make in relation to the 512 Panel. At the outset you anticipated that it would go above 10 litres per minute. Was that a topic of discussion between you and the undermanagers and managers and mine engineers and so forth?-- With myself and the mine engineer.

So it was not something that you kept to yourself?-- No.

Now, you have the graph still with you, and I think it's Exhibit 21?-- No.

Not the graph, I am sorry, but Exhibit 21. If I can ask you to go to page 6, six from the back. It's the CO make for 512 in tabular form consisting of two pages. You were asked some questions about this by Mr Clair and he directed your attention to the highs around 10 June from 6.91 to 11.43?-- Yes.

Now, I think you said to him in relation to that, by reference to a deputy's report, that there had been some stoppings

placed in the mine in order to redirect air and that this was effectively a flushing out of CO?-- Yes, that's correct.

I would like you, if you could, to tell me again just where that was done. It is not entirely clear. Now, what I would like you to do, if you wouldn't mind, is - you will have to raise your voice because I will ask you to go without the microphone, but go across to the plan on the board and tell us by reference to heading and cross-cut just where that was done?-- One of the other plans I had earlier might just help me to -----

One of the other plans?-- Yes.

Is that like a layout plan for 512?-- Yes.

I will ask you to look at plan 45/34. That might help you. That's the Moura No 2 Underground 512 bottoms and belt openings plan for 512. Now, can you identify cut-through and heading, please?-- Yes.

That's between heading 1 and 2?-- Between heading 1 and 2 at 9 cross-cut.

At 9 cross-cut?-- Yes.

And you extended a piece of brattice stopping - brattice -----?-- Yeah, bratticed bag was placed from this corner here across to the corner of that pillar there.

So you are indicating a piece of brattice attached from the pillar immediately outbye cut-through 9?-- Yes.

Between headings 1 and 2?-- Yes.

Diagonally north-west as we look at the plan?-- Yes.

To the opposing pillar and attached there?-- Yes.

And the effect of that was to direct intake air that was coming down heading No 2 right across cross-cut 9?-- Yes.

And thence to the back of the panel so the air would turn right, go through along cross-cut 9 and then follow the rest of the air back out through the rear of the panel?-- And also this stopping here, this flap was opened down and that then created negative pressure here which pulled this air that was recirculating back up and pulled that air out there quickly.

So you are indicating that a stopping in 9 cross-cut between headings 1 and 2?-- Yeah.

Was opened or rolled down and in that fashion created negative pressure at the point of that stopping and drained the air that was inbye in roadway 2 out through that stopping into the return?-- Yes.

Thank you, you can sit down. They were the actions that were

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followed which resulted in that leak to which you were directed yesterday?-- Yes.

Was it successful in flushing that area?-- Yes, well, it went down to 7 litres there later on.

Now, can I ask you to pay attention, if you could, to the meeting between you and McCamley, Robertson and Edelman of 17 June?-- Yes.

The occasion when you were called into the 512 Panel in order to deal with a ventilation problem?-- Yes.

Was it the case that if there was some difficulty with ventilation, that deputies, and indeed undermanagers, would seek your assistance and you would go to the panel?-- Yes, when I was called I would go.

Now, what I am going to do is ask you, if you wouldn't mind - take a copy of plan 45/18 and you will need a pen. Mr Morieson, before we embark upon this exercise, I want you to look at two more documents for the purposes of reminding yourself of just where extraction was at on 17 June. Now, I think you will see from that the extraction or work was taking place in 7 cut-through?-- Yes.

7 cut-through at which pillar? Is it 7 cut-through between 4 and 5?-- Yes, that's correct.

And that's where production was going on on 17 June?-- Yes, I believe that to be correct.

Can you hand those two that I have just given you back and we will go now to the large plan? I am sorry, just to make it clear, when I am talking about No 5 heading, I am not talking about the bottom return, am I?-- No, not the bottom return.

Now, you went into the panel and went straight to where production was taking place?-- I would have to check the deputy's report. I believe I went - Mark McCamley and I checked the two regulators first and then travelled into the panel.

Was that deputy's report part of your own documents or was it given to you yesterday?-- It's listed here somewhere.

3983 I think the number was?-- Yeah, 3983. I have got a rough copy here that I can work with.

I am happy for you to consult it. Don't think I don't want you to look at it. Do so if it helps?-- Yes.

Mr Morieson, I think you entered the section and checked the regulators. You are talking about the regulators at which point?-- The one just outbye at monitor point 16 and the other one on the bottom return 5 cross-cut 510 between - outbye at 1 cross-cut 512.

Thank you. What did you see when you checked the

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regulators?-- I found that the regulator on the bottom return was open more than what it should have been.

I think you said yesterday that you had determined that that had occurred as a result of a fall inbye?-- That's what I believe, yes.

Certainly that was the effect of discussions with the deputy Robertson and so forth?-- Yes.

So you then moved, after inspecting those regulators, to where?-- We moved down to around 5 cross-cut, I believe, on No 2 heading.

5 cross-cut No 2?-- Yes.

Now, are you sure that it was - when you said 5 cross-cut No 2 yesterday you weren't saying that with reference to where the face was. You now know that the face is in fact around the 7 cross-cut?-- Yes, well, Mark McCamley came in another PJB and that's where I met up with him.

Right, okay, so that point is at 5 cross-cut No 2, and did you take readings there?-- Yes. I didn't have anything in general body there, from memory.

So you in fact took readings - which readings, CO and CH4?-- No, just CH4.

Could you just indicate a "1" at that point right on the plan? You can use the pen and write on it number "1". Do it in red - I am sorry, could you do it in red? We will see it easier. Point 1 then is where you met McCamley, 5 cross-cut No 2, and the reading in there was - there was nil in the general body?-- 0.1.

And then moved where?-- To around 8 cross-cut.

Still on No 2 heading?-- Still on No 2 heading.

Were you walking at this stage?-- Yes.

Had you driven the PJB, or had McCamley driven the PJB actually into the return?-- I think he might have. I can't recall where the crib table was exactly then. I can't remember if he drove it in further or whether when we got to there we all got out - they got out and -----

Normally the crib table would be one or two pillars outbye the face and in the supply road?-- Yes, it was, or just off between 2 and 3 headings.

Yes, in one of the cross-cuts. I don't mean in the roadway itself?-- Yes.

So you moved into about 8 cross-cut No 2?-- Yes, and that's where we had a layering of up to 1.8 per cent methane.

A layering at the roof?-- Yes.

And that was measured at roof?-- Yes.

By you or by someone else?-- I believe those readings were Reece Robertson's readings.

Now, could you just put number "2" in red at that point? That's 8 cross-cut No 2. Were other readings taken at that point?-- Yes.

What were they?-- I believe CO readings were taken at that point.

Do you have any recollection of that? I don't mind whether it's your own recollection or the deputy's report, but does it indicate a CO reading at that point?-- On the second inspection he's got readings down at 9 cross-cut where the diagonal stopping was of 5 ppm.

Well, were you present when he did those?-- Not on that second inspection.

Well, let's stay, if we could, with the positions and the readings for which you were present. So you are presently - the point we are at is 8 cross-cut No 2?-- Yes.

Where do you go then?-- Down No 2 heading to 12 cross-cut.

Right down to the bottom of the panel?-- Yes.

Now, you are effectively going down through a waste area at that point?-- Yes, that's correct.

All points inbye cut-through 8 down No 2 would have been waste at that point?-- Yes.

Were you by yourself when you went down there or with McCamley and Robertson?-- There was four of us.

Edelman as well?-- Yes.

So down to No 2 heading 12 cross-cut and what happened there?-- Mark McCamley and Reece Robertson went to 3 heading and took readings around the fall area.

Now, you stayed with Edelman?-- I stayed with Edelman, and we went around into 13 heading and back up the cross-cut and back up the No 1 heading.

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Just pause there. Robertson and McCamley headed across 12 cross-cut towards number 3 roadway to take readings around a fall area that was there?-- Yes.

You saw the fall area yourself?-- Yes.

What sort of size was it?-- It seemed fairly large. It was in the intersection area.

That was an area where bottoms should have been taken?-- Yes.

Notwithstanding the fall, there was still a ventilation area above the rock?-- Yes.

So that air could get through still?-- Yes.

Could you estimate the height of the fall from the bottom?-- From memory, it was around about 4.5 metres high.

Once bottoms are taken that's about the height of the roof anyway?-- Yes.

So, you have got a fall-out but equivalent space above it?-- Yes.

Once they had moved off, you and Edelman went across to precisely where you said, 13 Heading?-- Yes. I'm not 100 per cent sure at that stage whether we went through the immediate stopping first.

No, just pause there, are you talking about the stopping but cut-through 12 between 1 and 2 or are you talking about the rdoor at the - just outbye of cut-through 13?-- The door just outbye of 13, 2 Heading.

You are not sure if you went out through there for where else?-- I'm not sure if we went out there first and then walked around to the back of 12 and took a reading or whether we took a reading there at 12 against the stopping.

What was that reading?-- It was higher methane. It was around 1.2 or 3 per cent, from memory. I couldn't swear to that but it was high.

Perhaps you could just mark - I think, in red numbers we are up to number 3 - and that was the reading taken by you?-- That was a reading taken by me.

And Edelman was present at that time with you?-- Yes, I believe so.

It was either just one side or the other of stopping in 12 cross-cut?-- Yes.

Then where did you go from that point?-- We went back to the 2 Heading where we spoke to Mark McCamley who was - 2 Heading 12 cross-cut.

I did ask you to mark that point as mark 3, didn't I, next to

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the 12 cross-cut?-- Yes.

You then moved across to No 2 Heading, 12 cross-cut?-- Yes.

And met McCamley again?-- Yes.

And Robertson?-- Yes.

They having been off at least to the fall area at number 3 Heading and possibly elsewhere?-- Yes.

Did you take any further readings at that point where you met?-- I believe we had taken readings, yes.

Can you recall what they were?-- I think they were around about 1.2, to 2 per cent area.

We are talking about the intersection of 12 cross-cut No 2 Heading?-- Yes.

Could you mark No "4" on that, please. Your understanding is that when Robertson and McCamley went off to the fall area that that was to take readings around the falls?-- Yes.

From that point, that's No 4 point, where did you proceed then?-- We discussed what to do with Mark McCamley because he was undermanager and had the authority to authorise me to cut a hole in that point 12 cross-cut in the stopping, which is what we did.

There was, what, about a 2 square metre hole?-- Yes, we then cut a 2 square metre hole.

Did you notice an immediate effect from that?-- Yes, the air started to move and the CH4 started to dilute.

Having cut the hole did you take more readings either just inside or outside that stopping?-- Yes.

After the hole was cut and before you moved away?-- Yes.

What did that demonstrate to you?-- That demonstrated that the methane was moving down, lowering.

Were they the only methane readings you were taking or CO?-- I was only taking methane readings at that stage. Mark was taking the CO.

Were you all four still together at that point?-- I believe so.

Did you remain there for sometime?-- No, not for long.

What happened then?-- We moved back outbye to 9 cross-cut.

Did you do that by going up No 2 Heading?-- I can't recall whether Reece and Mark went via 2 cross-cut and I went via the number 1 Heading to check the other stoppings.

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You think you may have split up at that point?-- I think so.

McCamley and Robertson walked up No 2 Heading up towards 9 cross-cut?-- Yes.

And you went where to check the stoppings?-- I went through the door.

Into cross-cut 13?-- Into cross-cut 13 and back out along the return.

Walking up the top return towards 9 cross-cut?-- Yes.

And did you take readings as you went up?-- Yes.

Of CO and CH4 or just CH4?-- I took readings of both. I just - I think the readings I got were about .5 parts - 5 ppm.

That's your memory of the readings you took?-- That's the memory of the readings I took.

Certainly not high?-- No.

You don't have any memory of taking high readings of CO?-- I never took any higher readings than 5 ppm at that stage.

So, you moved up to 9 cross-cut?-- Yes.

Did you take readings at 9?-- Yes.

Of CO and CH4 again?-- I believe Mark took the readings of the CO and I took the CH4.

Where did you and he meet was it in the return or in the No 2?-- No, in No 2 Heading. I kicked the flap down in 9 cross-cut.

I was just going to ask if you went in that stopping?-- Kicked the flap and gone through the stopping.

Can you just mark - I think we are up to number 5. Can you mark a red number 5 in 9 cross-cut in the return. Up to that point you had taken no CO readings greater than 5 parts?-- That's correct.

Methane of varying levels would now at any points of the inspection be seriously dropping?-- Yes.

You meet McCamley at 9 cross-cut 2 roadway?-- Yes.

Robertson was still there?-- He was with Mark, yes.

Edelman was with you?-- Yes.

More readings there?-- We had taken, yeah, more readings.

And the results, from memory?-- From memory, they were a little bit lower than what we had. They had only dropped the methane by about .2 per cent.

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I don't know if I had asked you to mark a number for 9 cross-cut 2 Heading but if I haven't mark one beside it, number 6. And then from that position where did you go?-- Back out to 8.

8 cross-cut, No 2 heading?-- 8 cross-cut or between 7 and 8.

What did you do there?-- Measured this layering of the methane that was dropping.

That's the area you noticed the layering in the first place?-- That's correct.

And the percent of methane was dropping?-- Yes.

Can you recall what the readings were?-- I just can't recall what the readings were.

But significantly lower than the first time?-- Yes, they had dropped probably .4.

And CO readings as well?-- No, they didn't take any CO readings at that point.

That's an area which I'm not sure at that point bottoms had been taken there or not?-- Not-----

I think not?-- Not at that point I don't believe so, no.

Could you just mark a "7" there. Don't write over any numbers you have already marked. Put "7". Where did you move to from that point?-- Moved outbye to the-----

This is all four of you?-- No, I think he assigned two or three other miners to come with us and put up this bag on the bottom return where the prep seal was.

So, you moved outbye going along No 2 roadway?-- Yes.

Up to what, up to the first cross-cut?-- Up to the first cross-cut and through there under the belt.

Across to bottom return?-- Bottom return, yeah.

And the regulator there was fixed up?-- Regulator repaired.

A piece of brattice was sealed?-- Yes.

From there did you then leave the panel?-- Yes.

And those miners assigned to assist went back no doubt?-- Went back down to the panel.

All right. I think we have marked seven occasions in that process upon which you were present or when readings were done or you did them yourself. Did you understand that Robertson and McCamley took readings when they were not with you?-- Yes, well, Reece reported later in his report that the methane

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was .7 behind the diagonal bag.

Just pause there, where do you understand the diagonal bag to be?-- At .6 that I have marked on this plan at 9 cross-cut, 2 Heading.

0.6 behind the bag?-- Yes.

And other readings?-- He had .2 in the top return number 1 Heading and-----

Hang on, I'm sorry, .2 in the top return?-- Yeah.

Number 1?-- Number 1 Heading is what was in his report, I don't know-----

You don't know what cross-cut?-- I don't know what cross-cut he took that at.

During that process or that inspection that day did you form any view about the success or otherwise of the ventilation corrections that you had made?-- Yes, I assumed - not assumed - but had seen the fact that this had lowered the methane layering and it had stopped - it was in Edelman's report that the air that was quite warm there inbye of 9 cross-cut had become cooler and was being ventilated. The dead spot - when we went in the panel, there was very little air between - at 12 heading - at 12 cross-cut. Between 2 and 3 Headings there was very little air movement in that corner.

That's the prime reason for opening up the stopping at 12 cross-cut?-- Yes, that's correct.

And had an immediate effect which was ultimately successful?-- Yes, I believe so.

That decision was made by a conjunction of you, McCamley, who is undermanager, and Robertson, who was production deputy at the time?-- Yes.

And Mr Edelman is not a deputy just an experienced miner?-- Experienced miner, a Mines Rescue member.

He is a Mines Rescue person?-- He is also trade.

During that walk through or that inspection - I shouldn't call it a walk through - that inspection, did you form any view - no, I withdraw that. I will start again. You mentioned yesterday, I think, that Robertson indicated a smell at one point?-- Yes, he had indicated that, you know, he originally had smelled a benzene-type smell, I believe, is what he had in his report - or is that his report? I would have to-----

Does the report disclose a benzene smell by Robertson?-- That mightn't be the time that he had the benzene smell.

I don't think it is on the report, is it?-- No, no, I need to look at the deputy's report located where he smelled benzene.

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You can recall an occasion being with him when he smelled benzene?-- Yes, I can recall an occasion.

You didn't think it was benzene?-- No, it was to me a chemical smell.

And you obviously are fairly firmly of that view?-- Definitely.

You having smelled all the variables before?-- Yes, I have smelled it all the time.

No doubt in your mind it was a chemical smell?-- It was a chemical smell not a benzene smell.

Yesterday Mr MacSporran was asking you a number of questions about some of the features that you saw on that inspection, such as layering, warm air, a rock fall and so forth, and asking you whether they were features consistent with spontaneous combustion or a heating; do you recall that?-- Yes.

You answered those questions but did I understand you correctly when you answered those questions to be indicating that now you agree that those are features but they weren't actively in your mind at the time?-- Yes, that's correct.

When you did this inspection you didn't see those features as indicating a heating or spontaneous combustion?-- Well, it was in the back of my mind that it could be and I-----

You weren't sure though, obviously?-- I wasn't sure at what stage it was and I had said that to Mark McCamley that if it was that, we would either have a flare up or we, you know, would sufficiently cool at this early stage.

Subsequently, you didn't see any sign of any flare up, did you?-- No.

I tender the plan that Mr Morieson has been writing on. I apologise immediately for not having ten copies of this straight away. I will see if I can do something about that at some point.

WARDEN: Thank you. It will become Exhibit 32.

ADMITTED AND MARKED "EXHIBIT 32"

MR MORRISON: Mr Morieson, I am going to ask you, if you wouldn't mind, to have a look at the Maihak printout for that day of the average readings of each of the four gases that are there. You can have a look at the front page if you wish to

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confirm, as I am sure you will, that that is the Maihak printout; is it not?-- Yes.

And if you turn over to - I think I have opened, maybe I didn't open it - the second last page, you will see an entry for June 17. It's about just over half-way down the page?-- Yes.

And these are the average readings for that day?-- Yes.

For monitor point 16?-- Yes.

That's the monitor point in the top return or just outbye the top return?-- Yes.

You will see there, I think - correct me if I read them wrongly - CO average for that day 3.9 parts?-- Yes.

Methane 4.05?-- Yes.

Carbon dioxide CO2 .11?-- Yes.

And oxygen 13.62?-- Yes.

I tender the printout.

ADMITTED AND MARKED "EXHIBIT 33"

MR MORRISON: Can I just ask you one other question, if I may just take your mind back a moment, on that inspection we have been talking about were the stoppings across 13 cross-cut shut when you were down there?-- No.

They were open?-- They were open.

And that's a normal position?-- Yes.

Would Your Worship just excuse me a moment while I check some things.

211094 D.4 Turn 15 gc (Warden's Crt)

Now, you mentioned yesterday when we were discussing that inspection that the goaf was warm. I think you might have said that to Mr MacSporran?-- Yes.

Goafs are usually warm compared to intake air, aren't they?-- Yes.

And I think you described it as being - when you went to the goaf edge in No 2 it was slightly warmer?-- Yes.

There wasn't a staggering difference at all?-- No, not a staggering difference, but it was warmer and there was no - because there was low air movement in 2 heading you can get that -----

Cooling effect?-- Cooling effect on -----

Now, did I understand you correctly yesterday to indicate that two days later you went down into the section again, that is 19 June?-- Yes.

And can you tell us about that occasion? What was the purpose of going there?-- Just to check on everything, to make sure it was okay.

So, you were specifically going to check that what you had done on 17 June was still okay?-- Yes.

And was it?-- Yes.

Was that inspection the subject of one of your reports?-- Yes. On 19 June I found 1.3 -----

Can you speak into the microphone a bit better?-- On Sunday, the 19th I found 1.3 CH₄ No 2 heading and 8 cross-cut, I had .2 CO₂, 5 ppm CO and put up a stopping in front of the Miner - the - I found that I had to shut or - I don't know what the what's a name - the regulator in 510, 6 cross-cut was opened at full open, really, and I had to close that regulator down by half.

Now, that was - you found once that was done ventilation was adequate through 512?-- Yes.

And you did a second inspection that day as well?-- Yes, I believe so.

On that occasion did you find .5 methane in No 1 heading?-- I haven't got that report in front of me. I think, from memory, yes.

Perhaps I will just show it to you?-- Yes, that's correct.

This is a report - production deputy's report 3407? It is part of document 45. That's your deputy's report when you shut down the regulator. Does that appear from the report to be on the occasion of the second inspection?-- Yes.

I tender the report. I will put it in separately, I think,

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rather than have people hunt for it in document 45. It is production deputy's report 3407 by Mr Morieson dated 19 June '94.

WARDEN: Admitted and marked Exhibit 34.

ADMITTED AND MARKED "EXHIBIT 34"

MR CLAIR: Did you say that was one of Mr Morieson's reports?

MR MORRISON: Yes.

WITNESS: Yes, that was.

MR MORRISON: Now, you left on 17 July at which time the CO make, the last one that you had done, was 14.59 litres?-- That's correct.

Now, at that stage that figure didn't cause you any alarm?-- It was high, but -----

It was in line with what you anticipated for a high CO make panel?-- It - you know, I had concern, but it was at that point not a rapid rise from the previous - it had only gone up 2 litres.

So, there hadn't been the rapid rise that you knew to be a signal of something untoward?-- It was hard to interpret just on those. If it continued rising I would have shown more concern, but the trouble was it was - I was handing over to go on annual leave and Steve Byron was going to take over from me.

Now, you briefed him when?-- I - no, what - I was unable to brief him. I had to brief Rod Stafford.

Who is Rod Stafford?-- Rod Stafford is another mine deputy. I saw Joe Barraclough as I was concerned that I couldn't - the person that originally was going to be assigned to do my job while I was on holidays said that he wasn't going to do it and that Steve Byron would be doing it and as I couldn't contact Steve Byron and I was about to leave I passed on the inspection to Rod Stafford. Rod Stafford then would pass on the inspection to Steve Byron.

All right. Now, there were - were there quality assurance documents at that time in relation to ventilation in your position?-- There were some quality assurance. The CO make, Steve was familiar with, I believe.

Steve who?-- Steve Byron.

Byron or Bryon? It is easier to call it Bryon, I think. It is Bryon B-R-Y-O-N?-- Yes.

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He was familiar with it, anyway?-- Yes.

So, you weren't concerned about the quality of the person to do your job in your absence?-- No.

Now, you came back on that Friday, 5 August?-- Yes.

And the work you were doing that day was not in your position as ventilation officer, you were, in fact, on production?-- Yes.

Or, at least, down below as part of an ordinary team?-- I was the deputy assigned to the 5 South section.

So, on that day you certainly didn't produce any CO make calculation as would normally be produced on a Friday?-- No, I didn't, but I am not sure whether Steve Bryon did or not.

We can see from the graph that we referred to earlier that I showed you that he did do a calculation?-- Yes, yes.

In accordance with normal procedure you would have expected that graph to have been posted on the Friday?-- Yes. I did not see that graph when I went down to start the shift due to the hot seat change.

Now, I am sorry to take you back in time, but I should have done this in better sequence. After June did you, between that time after 17 and 19 June, in that time and when you went away, continue to monitor what was happening in 512?-- After June.

After the occasions of your inspections on 17 and 19 June, the ones we have dealt with in some detail, between then and when you went away which was 17 July?-- Yes.

Did you continue to keep an eye on 512?-- Yes.

And did the results of readings that you saw for 512 confirm in your mind that the ventilation was adequate and the steps you had taken on those occasions were sufficient to clear the recirculation and layering?-- Yes.

And is it correct to say that as a result of that inspection you did in June and the tests that were done subsequent to that and prior to going away that you certainly did not have the view that there was a heating going on in 512?-- Not an active heating, no.

Now, you were asked some questions about 5 North and 5 North West yesterday. If you can turn around and have a look at the mine map, the general map?-- Yes.

Confirm for me that the first sealing in 1986 was, in fact, designated as 5 North? Would you like to get up and go over and have a look? That was sealed at the point you are indicating, what might be called the throat of 5 North?-- Yes.

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And the second sealing in 1991 was down at the junction of 5 North section?-- Yes.

Just north of 1 North West or just north of the main dip?-- Yes.

Sit down again. Now, 5 North was the one where there was a known heating; is that right?-- That is correct.

And that was the one you were describing to us yesterday where the litres - CO litres per minute were much higher than you were seeing in 512?-- That is correct.

And you also saw there that very high and rapid increase that you did not see in 512?-- Yes, that's true.

Now, that was in 1986 when 5 North was sealed?-- Yes.

And then later 5 North West was sealed in 1991?-- Yes, that's correct.

And 5 North West was the sealing when there was an increase in CO; is that right?-- Yes.

But you could not get in to inspect inbye because of bad roof?-- Yes, that's correct.

In fact, no-one was prepared to go in there?-- No.

No. Nor should they have?-- No.

And because you couldn't get in to inspect in there there was no way of telling what was going on?-- That's correct.

And that's the reason it was sealed?-- Yes.

And after it was sealed there was a suggestion, was there not, from maybe a deputy, maybe a miner, that there might be a chance of rock-on-rock ignition?-- Yes, from Ken Mills.

Ken?-- Mills, the deputy.

He was a deputy? He raised that as a question because that was something that had been aired in the 1986 Inquiry into No 4 Mine?-- Yes, that's correct.

And because the management were not prepared to take the stance of excluding the chance of rock-on-rock ignition, that's why men stayed out?-- Yes, that's correct.

It was only 24 hours, wasn't it?-- Yes.

In fact, if I remember rightly deputies still went down though to take samples?-- Yes.

And the 24 hours did not encompass the period when 5 North West went through an explosive range?-- I just can't recall that, no.

Right, okay. Now, that is the only occasion - 5 North West occasion is the only occasion on which men in No 2 stayed out of the pit after a sealing, isn't it?-- On those two occasions.

Yes, both to do with 5 North, when there was a known heating, and 5 North West, when the question of rock-on-rock ignition was raised?-- Yes.

In all other cases, in your experience on sealings, men have stayed down the pit or worked down the pit notwithstanding that the sections inside the seals were going through the explosive range?-- That's correct.

Now, I apologise for dancing you around in time, but can I ask you to direct your attention to Friday, 5 August when you were back at work and on as section deputy for 5 South?-- Yes.

Can you recall being in a crib room at any stage with Mr Caddell on that day?-- I can't actually recall, I may have.

Caddell, Kerr - any of these names: Caddell, Kerr, O'Brien, Helander, Young?-- O'Brien.

You can recall seeing O'Brien?-- Yes.

You don't recall Caddell?-- Not with my memory.

I was wondering whether you might have been present when Mr Caddell made a phone call from the crib room to Michael Squires?-- No, not to my recollection.

Now, is it the case that you, personally, but also the persons at the mine generally, when they come to checking the gas situation anywhere would rely much more heavily on the Unor system and Maihak results than on hand-held Draegar results?-- You would use a combination of both.

The Maihak monitors 24 hours?-- Yes.

And roughly, I think in the case of points for around 512 every 13 minutes?-- Yes, I believe that was about the time span.

And the gas is put through a sophisticated analyser?-- Yes.

And both the readings and what you can do with the readings are plotted by computer on a screen?-- Yes.

So one can sit at a screen and either see the tabular form of readings for any combination of points?-- Yes.

Alternatively, call up graphs which are represent any point or combination of points and other inspections?-- Yes.

You can also print out any of those screens?-- Yes, that's correct.

And that screen is located in such a position that it is possible for men at the start point to see it?-- Yes, that's correct.

In fact, from time to time men at the start point do look through the window and observe the screen?-- Yes.

You have seen that yourself from time to time?-- Yes, I have seen that.

We are talking here not about deputies, necessarily, but ordinary miners as well?-- I am talking about ordinary miners and just anyone can have a look at it and most of the fellows there were experienced miners and, you know, from time to time if they were concerned with something they would look.

That's certainly not an unusual experience at all?-- No.

And the miners themselves showed an active interest in what might be demonstrated on the Maihak screen?-- An active interest if there was something - change going on or if there was word, you know. Like with the sealing, I believe, yes, more people would look at it than normal.

An occasion of sealing is always an occasion of change and would generate that sort of interest?-- Yes.

And general discussion amongst the miners themselves?-- Yes.

So, after a sealing period one would expect that would be a topic of conversation amongst the miners?-- Yes.

In 512 - you know, "What's happening with 512?", "How's it going?", whatever?-- Yes.

Now, you were asked some questions about the position of No 57 monitor point and I think you might have indicated that you would have, had the circumstances allowed, preferred it further inbye?-- Yes.

Could it go further inbye given that bottoms were taken and given the lifting of fenders off the pillars in that vicinity?-- Not at that point, no.

You wouldn't recommend anyone going out into that area to install a monitor point?-- No, it was too dangerous to go out.

In fact, monitor point 5 was situated just about as inbye as you could get it safely?-- Yes.

And you were asked some questions then about the position of monitor point 16?-- Yes.

And you, I think, expressed a preference in relation to it too?-- Yes, well, it was reading all right. In the past though we had used two points in the return to monitor from, not just one as in this case.

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All right. Now, monitor point 16 picks up air moving up the top return?-- Yes.

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As it goes up the top return prior to sealing you would have turbulence generated by the prep seal just inbye, just inbye the edge of the top return?-- The doorway with the Tecrete stopping?

I am sorry, in No 1 heading between - no, no, I am talking about the top return itself, that's prep seal in the top return?-- That one here?

That's it. You would have turbulence generated by that as the air passed through it?-- As it passed across here.

Air moving up the top return, prior to sealing?-- Oh, this is prior to sealing.

Prior to sealing, I am sorry?-- Yeah, prior to sealing there was too much turbulence at that point. The anemometer would read backwards on half the reading.

And that's in the vicinity of the prep seal?-- Yes.

And so there is no question that air moving up the top return prior to sealing would be very much mixed up by the time it moved just outbye the prep seal and hit monitor point 16?-- Yes.

So the anticipation would be, in your mind, surely, that you were getting a representative reading for the top return?-- Yes.

And, likewise, after sealing with air moving down the No 1 heading for 510 it also passes through a door and, therefore, there would be turbulence and mixing of the air?-- Yes.

You would expect it to give you a representative reading there too?-- Yes.

Likewise, I think point 5 which was in the bottom return prior to sealing?-- Yes.

I am going to ask you to look at another document or two. Look at this document, please. Will you confirm for me that that's the Maihak print-out for point 5?-- Yes.

Commencing date?-- 28 October.

Through to finishing date?-- 7 August.

Are they daily averages?-- Yes, they are daily averages.

I tender that document.

WARDEN: Exhibit 35.

ADMITTED AND MARKED "EXHIBIT 35"

MR MORRISON: We have copies.

MR MARTIN: I might just say at this stage, if I might raise a point, Your Worship, that I have been impaired in my cross-examination of this witness because I haven't had that document, so I will make an application on Tuesday - if I have time to consider the copy when it arrives perhaps - to cross-examine on that document.

WARDEN: Yes. Well, thank you for that forewarning. You can make the application at the time.

MR MARTIN: Yes.

MR MORRISON: Before I distribute the copies, what I might do is deal with the second part because I will put them into proper bundles together.

I ask you to look at these next three documents, please. Look at these three documents, please. Could you identify those for me, please?-- Monitor point 16 from 22/7 to 4/8/94.

Giving you what readings?-- Giving recorded values.

That's monitor point 16 between 22 July and 29 July?-- 22 July and the 4th of the 8th - no, sorry, it only goes to - yes, to 29 July, yes.

And that is the actual recorded values for point 16?-- Yes.

Perhaps I should do these separately, I think. I tender that document as well.

WARDEN: That's Exhibit 36.

ADMITTED AND MARKED "EXHIBIT 36"

MR MORRISON: And the next one is again monitor point 16, the Maihak print-out, between which dates?-- 27 July.

To August 10?-- To August 10.

Does it give you hourly averages for point 16?-- It gives hourly averages, yes.

I tender that document.

WARDEN: Exhibit 37.

ADMITTED AND MARKED "EXHIBIT 37"

MR MORRISON: And the third one is again point 16 commencing August 5 through to 7 August and is recorded values?-- Yes, that's correct.

I tender that document also.

WARDEN: Exhibit 38.

ADMITTED AND MARKED "EXHIBIT 38"

MR MORRISON: My tendering of them separately has just created logistical problems with the bundles, so I will move on while that is attended to.

Now, you mentioned yesterday in answer, I think, to Mr MacSporran that you couldn't go into the goaf subsequently to extraction because it was simply too dangerous?-- Yes.

That's quite common, isn't it, with extracted areas?-- Yes.

Nothing unusual about that?-- No.

In fact, it's routine that once extracted, unless there is particular pillar and roof support, one doesn't go into an extracted area?-- No.

So when ACIRL suggested that you not go in there, that was no surprise?-- No.

Would Your Worship just excuse me a moment while I check I have covered the things I wish to cover?

Yes, I wanted to ask you something. Mr Martin was asking you about the fact that you had desired to train on the gas chromatograph but because of staff shortages you weren't able to go to the course?-- Yes.

Is it, nonetheless, the case that you did in fact get a copy of the papers?-- Yes, I got a copy of the papers.

Two volumes from SIMTARS?-- Yes, that was on my own personal -----

I understand it was your own initiative, but you did in fact obtain the papers from that course and you studied them?-- Yes.

You also answered Mr Martin at one stage when he was asking you about the carbon monoxide oxygen deficiency ratio as being an indicator of spontaneous combustion or indicator in assessing spontaneous combustion?-- Yes.

You answered him by saying that your understanding was that the CO in litres per minute was the most accurate way?--

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Yes, that is correct.

That's a result of various instructions you have received?--
That's a result of reading that course from SIMTARS and what
the manager at that stage, Phil Reed, had told me.

When you were in No 2 roadway on the occasions of your
inspection, that's particularly 17 June and 19 June?-- Yes.

Was there any fall in No 2 roadway?-- Not at that stage, no.

On subsequent inspections when you were in 512 can you recall
any fall being in No 2 roadway?-- No, I cannot recall any
fall.

Does the same apply to No 3, you can't recall any fall in No 3
other than the one -----?-- That initial one.

Which was right down at cut-through 12?-- Yes. I didn't do
much of the inspection of the actual section. My main points
of - would be to do the set route which was down No 1 heading
and across at 13 cross-cut to check the regulators and just
check the outbye regulators and the two vent stations. That
was the only result -----

You were asked earlier today by Mr Martin about the fact of
having cut some holes in the stopping at cut-through 12, that
that would have - the term he used was short circuit the
ventilation?-- Yes.

Do you recall him asking that question?-- Yes.

And I think you said it would to some extent?-- Yes. Well,
it causes more air to go there than where it was going before,
yes.

That would only be a percentage of the ventilation?-- Yes,
it was -----

It would still have ventilation going the normal way?-- Yeah
that was the intention.

That was the reality from what you assessed afterwards?--
Yes.

I have nothing further, thank you, Your Worship.

MR MARTIN: Before Mr Harrison starts, Your Worship, could I
just say this: that those documents which I have not yet
seen, they surprised me, they are highly relevant and so is
point 5 up to the time of sealing, the Maihak print-out, up to
the time of sealing of point 5 relating to 512 panel. I don't
have those. Mr Clair would be unable to give them to me, I am
sure, so I would like an order that the company produce them.

MR CLAIR: I might just mention, Your Worship -----

MR MORRISON: Mr Clair, can I deal with this? There is no
necessity for orders. They may not have been in the parties'

documents because the Inspectorate didn't want them or didn't take them. Now, I don't want any suggestion from anything Mr Martin has said to indicate that BHP in any way has been unwilling to produce documents or holding documents back. That is not the case and never has been the case. They were simply not taken by the Inspectorate. We assumed the Inspectorate weren't particularly interested in them.

MR MARTIN: For all of that, they are highly relevant and I would like them, please, Your Worship.

WARDEN: Well, thank you. Then if the Inspectorate could obtain copies and then distribute them to the parties.

MR MORRISON: There are copies here. They are welcome to them.

WARDEN: Thank you. I don't think an order is needed.

MR MacSPORRAN: Your Worship, I suspect those documents were in fact taken by the Inspectorate as part of the Maihak system and I think they form part of the SIMTARS appendices. I haven't checked the documents tendered, but I suspect they are the same ones.

MR MORRISON: That is in fact so, but the SIMTARS information starts at a later point in the entirety of those documents, but the documents were taken.

MR MacSPORRAN: I haven't checked the dates, but most of it is in here, appendix volume 1, I think.

MR MARTIN: I would like them from 1 July, please, and for June.

WARDEN: I am sure they can be obtained. Mr Harrison, do you want to start?

MR HARRISON: I have got some points I can take through to 3.15, if that's convenient, Your Worship. I only mention it, Your Worship. I probably won't be finished by 3.15, but I am in your hands as to whether you would like me to take up that time.

WARDEN: I think we will play safe, Mr Harrison, and meet the travel arrangements other people have got. I am not going to finish today, or in that space anyhow, and I wouldn't suggest that you be placed under that constraint, so we will adjourn the formal sittings until Tuesday morning at 9.30. The parties are -----

MEMBER OF THE MEDIA: Excuse me, Your Worship, I would like to seek leave to address the Inquiry about a matter that was raised before.

WARDEN: Yes, just one moment. The other parties who are participating in the inspection will meet on Monday and proceed to Moura as per the travel itinerary that they have been given. Perhaps Mr Boiston could take up that matter with

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the media at the moment. Otherwise we will adjourn until Tuesday morning for the formal sittings.

THE COURT ADJOURNED AT 2.52 P.M. TILL 9.30 A.M. ON TUESDAY,
25 OCTOBER 1994

WARDEN'S COURT

MR F W WINDRIDGE, Warden and Coroner
MR R J PARKIN, General Manager, Capricorn Coal Pty Ltd
MR P J NEILSON, District Secretary, United Mine Workers' Union
MR C ELLICOTT, Training and Development Officer, Department of
Mineral Resources, New South Wales
PROF F F ROXBOROUGH, Professor of Mining Engineering, School
of Mines, University of New South Wales

IN THE MATTER OF A CORONIAL INQUIRY IN CONJUNCTION WITH
AN INQUIRY (PURSUANT TO SECTION 74 OF THE COAL MINING
ACT 1925) INTO THE NATURE AND CAUSE OF AN ACCIDENT AT
MOURA UNDERGROUND MINE NO 2. ON SUNDAY-MONDAY, 7-8 AUGUST
1994

GLADSTONE

..DATE 25/10/94

..DAY 5

THE COURT RESUMED AT 9.36 A.M.

ALLAN GEOFFREY MORIESON, CONTINUING:

WARDEN: Yes, thank you, Mr Morieson, you took an oath a couple of days ago. You are still on that former oath; do you understand?-- Yes.

You are bound by it?-----

MR MORRISON: Your Worship, I have a couple more questions which I would like to ask Mr Morieson before he departs, and I see him grinning with great glee.

Mr Morieson, I want you to have a look at Exhibit 22. You were asked some questions about Exhibit 22 by Mr MacSporran and you identified that as a CO make comparative graph of various panels?-- Yes, that's correct.

Am I correct in saying that that graph did not exist in that form prior to the accident; that is something produced at the request of the Inspectors?-- Yes, that's correct.

There was no comparative graph, was there, prior to the incident?-- No.

And so no information in this form, either in graph form or tabular, was posted up at the mine?-- No, nowhere.

And certainly there were the results from which this comparison could be done if one went to various archival records and extracted them and did the analysis?-- Yes, that's correct.

Which is what was done here at the request of the Inspectors?-- Yes.

Thank you, you can hand that back. Now, I asked you on Friday about questions that had been suggested to you by Mr Martin in relation to the use of CO make as an indicator as compared with a different indicator, and I think I suggested to you it was the CO oxygen deficiency ratio?-- Yes.

Now, we heard your answer about that. On checking of the transcript Mr Martin referred to a CO carbon monoxide ratio?-- Yes, that might have been.

A carbon dioxide - CO carbon dioxide ratio?-- Carbon dioxide he referred to earlier?

Yes?-- Yes.

The same answer applies, that you understood, from all your training, that the CO make was a better indicator?-- From what I understand in the red book that SIMTARS put out was

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that the CO make in litres per minute was the most reliable form.

All right. Now, you were asked a question or two in relation to a drive off 5 South, the bottom return in 5 South, towards approximately cut-through 11 in 512. You can see it on the large map. I will give you a small map to work from. Perhaps you could stand up and point on the large map to the point I am directing your attention to. Thank you. Now, that was in fact driven for the purposes of a sump and used as a sump, wasn't it?-- Yes, that's correct.

In other words, a collection point for water in the mine?-- Yes.

And there was a pump installed there and regularly that sump would be pumped out, or at least the water level reduced?-- Yes.

And that pump was connected to the transformer?-- That pump was later removed from there. It wasn't there at the time of the incident.

Right, but the drive was, nonetheless, used as a sump only?-- Yes.

And, to your knowledge, not intended to be used as anything else?-- No.

Now, you were asked some questions about new miners starting at the mine and their induction. Remember I asked you some questions about that?-- Yes.

Could I ask you to look at this document, please? Could you confirm for me, please, that that's the module for induction for new starters in your area, that is to say, fires and firefighting and so forth?-- Yes, that's correct.

Could you just quickly check at some of the yellow markers there, without removing them, that those yellow markers indicate areas where spontaneous combustion is dealt with? Don't read them one by one. If you could just check through them. There may be others. I have just identified a few for you. I think the last one is questions to be put to the new inductees on that topic?-- That's correct.

Is what I have said to you correct, those yellow markers indicate areas where spontaneous combustion is a topic of teaching and assessment?-- That's correct.

I tender that document.

WARDEN: Exhibit 39.

ADMITTED AND MARKED "EXHIBIT 39"

MR MORRISON: May I say immediately that I haven't bothered to copy it in its entirety for all the members of the panel or the Bar table.

WARDEN: They can inspect it and make numerous copies of it, thank you.

MR MORRISON: No doubt there were other modules for other areas?-- Yes, that's correct.

And that's the one for your area?-- There is about 19 modules in the series.

19 -----?-- Modules in the series, books like that.

Now, you were asked some questions about roof falls by Mr Martin. It is the case, isn't it, in a mine like this that it's routine to have falls from the roof?-- Yes, we have local falls.

And inevitably when the roof falls it's going to cover some sort of coal?-- Yes, that's correct.

Whether it's loose coal or coal on the floor. Nothing unusual about all of those features?-- No.

Can you tell us where monitor point 5 was before it was taken into 512? Can you do so identifying cut-through and roadway?-- Well, it's opposite 5 cross-cut 510 in the bottom return. It was placed just here outbye - about 5 metres outbye where the vent station was.

All right. Now, prior to point 5 being designated in that position, was it in a different panel?-- Yes.

Was it in 401/402?-- I cannot recall, but I think that might be the case.

Are you able to tell us approximately when - if not by date, then certainly in relation to the development of 512 - when point 5 was taken across to 512?-- At the start of the panel.

Start of development or start of extraction?-- Start of development of the panel.

I have nothing further, thank you, Your Worship.

WARDEN: Mr Harrison?

MR HARRISON: Thank you, Your Worship.

CROSS-EXAMINATION:

MR HARRISON: You have been questioned at some length about the CO make graphs that you used to update every week?-- Yes.

I note from the SIMTARS report that there is another document which you appeared to prepare called a No 2 Underground Mine Ventilation Survey?-- Yes.

You are familiar with that document?-- That's my monthly survey as required by the Act.

I see. Now, in the SIMTARS report we have two of them. We have one dated 27 June 1994 and one dated 12 July 1994?-- I can't recall the dates or ----

Perhaps if the witness, Your Worship, could be shown the appendices to the SIMTARS report. It's appendix number A.3, volume 1.

Now, if you have got the documents I am referring to, in the case of each monitoring point you appear to have ----?-- Can I just check what page this - I don't recognise this document that's in front of me.

You might not have the right page. I don't think they are numbered in terms of pages. It should have in the top right-hand corner "Appendix A.3". You have the one for 27 June?-- Yes.

On the following page we have the one for 12 July?-- That's correct.

Have a look at the second one. Is it the case that when you prepared this document you include various particulars relative to each of the monitoring points?-- Yes, that's correct.

And do you actually have CO make figures in relation to various monitoring points?-- That's correct.

There is a CO make figure for 12 July of 15.07 ----?-- Yes.

---- for the 512 top return; you see that?-- Yes.

I am interested in how that was calculated. Was it done the same way as your weekly figures for the graph by way of reference to average figures for the Unor?-- No, no, that's a spot reading, not a weekly average reading.

So that's something you would have done yourself with the Draegar?-- That's - yes, taking the 21/31 reading and just reading the stain tube and calculating from that.

Now, that at that point, I take it, was slightly higher than what you were getting on your graph?-- Yes. If I could see

the other graph I would have to compare it. From offhand I couldn't say that what was 15 was on the -----

I won't waste your time with that. Just tell me, what happens to these reports when they are done?-- This report here that I am looking at now?

Yes?-- Is presented to the superintendent and placed in the mine record book, placed in the undermanager's office and in the deputies' cabin, plus one in my room in the quality files.

Now, has it been your experience that the Mines Inspectors visited the mine on a regular basis?-- That's correct.

Did the Mines Inspectors, when they visited Moura No 2, inspect the CO make graph and also inspect these reports that we are looking at?-- I believe they did see them, yes.

At any time did any of the Mines Inspectors express to you any concerns in relation to the CO make levels that appeared either on your graph or on those reports for 512?-- Not that I can recall.

Has anyone else associated with the mine led you to believe that any such concerns have been received from the mining Inspectors who had visited the mine?-- Not to my knowledge.

I would just like to turn to the 1986 sealing of 5 North-west. Put that report to one side. You provided us with information through the graphs of what the CO make was in what I might term the lead-up to the original sealing of 5 North-west?-- Yes.

Do you have any personal knowledge of what the CO ppm readings were in the - leading up to the sealing of 5 North West?-- Yes.

I have here a copy of a report from Mr David Kerr. I would just like you to have a look at it -----

It is part of document No 125, Your Worship, on the list of documents that has been provided.

I would just like you, if you would, to just read through all of page 1 and the first half of page 2, just to yourself?-- Yes.

Now, on that particular day there was a very sharp rise in the ppm CO readings, weren't there?-- Yes, very sharp.

They varied from point to point in terms of where they were taken?-- That's correct.

But certainly it appears - firstly, would you agree that the information contained in there appears to be consistent with your recollection of the readings?-- Yes, I took these readings at the goaf and some of the ones outbye.

It is consistent with your recollection that at 7.15 on 19 April the readings obtained for ppm CO were about 13 to start with?-- Yes, that is what Rod Stafford, the deputy on duty at the time, told me.

Building up to anything between 120 to 150 shortly prior to the sealing, depending on where they were taken?-- Yes, that's correct.

You actually monitored a lot of that throughout the day, didn't you?-- Yes.

I might get that report marked for identification at this stage, Your Worship.

WARDEN: Exhibit "D" for identification.

MARKED "D" FOR IDENTIFICATION

MR HARRISON: Now, that trend in relation to CO ppm - from your experience was that trend that occurred that day in April of 1986 fairly well known to the people in management at No 2 and also the deputies in No 2?-- I believe so, but some people that were on annual leave may not have been aware of that, but I believe most people knew about the heating after it because it involved sealing machinery in behind the mine. So, it was well known throughout the mine.

From your experience was it a fairly generally held view at No 2 say from the deputy level up that in the case of a

XXN: MR HARRISON

WIT: MORIESON A G

heating you would expect a sharp increase in the CO ppm readings as opposed to any gradual increase?-- Yes.

From your experience this feeling or acceptance tended to stem back to what happened in 1986?-- In relationship to what?

Well, in relationship to the sealing at 5 North West in 1986?-- It was, yes, because of the rapid rise.

Now, Michael Squires, to your knowledge, was he working as a technical officer back at the time of the sealing in 1986?-- Yes, I believe he took the GFG tubes that we took and took them up to Rockhampton.

From your knowledge of Michael and your dealings with him did he appear to be familiar with the trend in the increase in CO ppm in 1986, leading up to that sealing?-- Yes, I would believe so.

If I can just turn to 1991 at 5 North, and, as it sometimes has been called, 5 North West?-- Yes.

You know the incident I am referring to. Now, you have mentioned there that roof falls or possible roof falls was the main reason for the sealing on that occasion?-- Yes, that and the upwards of the CO make in litres.

Was it the case on that occasion that there was evidence of some crushing to the pillars because of the roof weight in that particular panel?-- Yes, that is correct.

Have you been made aware of what happened on 22 July 1994 in relation to the CO make reading and a possible mistake in relation to that?-- If that refers to that reading by Steve Byron, yes.

Now, are you aware there was some suggestion that daily CO make calculations would be done and that they would be recorded in a log book?-- Yes, they are recorded in the deputies' report book.

Did you ever see those calculations or those entries?-- I saw them later on, yes.

Were they of any concern to you as such, what you saw in those entries?-- I just cannot recall. After the events it is very easy to say, yes, they caused concern.

I am really concerned about before the event?-- Before the event I didn't - I was not present when those entries were being made before the event, I was on annual leave, and, therefore, when I came back and then saw the last couple of readings I was concerned with the couple that were obviously higher.

Well, in fairness to you you never saw them after you got back, but before the explosion?-- No.

Yes, thank you. I have nothing further, Your Worship.

MR CLAIR: I did have some re-examination, Your Worship, perhaps, before Your Worship calls on the panel.

WARDEN: Yes.

RE-EXAMINATION:

MR CLAIR: You were asked a number of questions in the course of your evidence about the graph which is Exhibit 21. I think you still - do you still have that in front of you?-- No, I don't.

Could the witness see that, please, Your Worship?

While that is being obtained, you mentioned at one point in your evidence that the graph of the CO make could be taken off the computer automatically at any time. Can I just clear up which graph it was you are referring to?-- There is a different graph that you can call up on the Maihak system where it plots just the ppm and not the litres per minute.

I see. So, that graph could be taken off at any time, but the actual graph which you tended to use both in terms of that Exhibit 21, the comparison graph, and also the graph which is contained in the other exhibit which showed the CO make for 512 alone, they were the ones that, of course, showed the litres per minute and you had to calculate that; is that right?-- Yes.

And was that your task, to calculate that?-- Yes, or whoever was, you know, assigned to that task.

Whoever was acting as the ventilation officer at the time?-- Yes. I was sick one Friday and Jacques Abrahamse did one point for me while I was absent and I believe he did the points for Steve when he was acting as ventilation officer.

I see, Steve Bryon?-- That's right.

Now, well, that comparison graph, you calculated that?-- No, I didn't ----

You didn't do that?-- Do this.

The graph ----

Perhaps if the witness could see Exhibit 20, I think it is, Your Worship, the bundle of documents, documents 121(a).

While that is being obtained, Mr Morieson, perhaps if you could turn to that graph for 512, the one that Mr MacSporran asked some questions about. Pass the document ----

If the document could be passed to me, Your Worship?

RXN: MR CLAIR

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To identify the page, it is the page fourth from the back of the document; is that right? Just so we know on the record?-- Yes, that's correct.

Now, that graph there, of course, is one that you did produce yourself?-- Some of the points, yes.

But the actual document, the finished document, is one you have produced, although you might have used points that were calculated by other people; is that right?-- Yes.

Okay, and that was produced on 18 August?-- Yes.

According to the date on the bottom?-- Yes.

That was the day that it was published?-- Yes.

And is that the kind of graph, I think it has been established in your evidence, that - the kind of graph that you did as a matter of course?-- Yes, that's correct.

The calculation of CO make for the various panels, in this case 512 Panel?-- Yes.

How often did you produce a graph of that kind?-- Once a week.

On any particular day of the week?-- On Friday.

Did you produce one for Friday, 5 August of this year?-- I didn't, I was on annual leave.

You returned to duty on? The first explosion occurred on Sunday, 7 August?-- Yeah, I returned on the 5th, afternoon shift, yes, that's correct.

And when you returned on the afternoon shift on the 5th what were your duties that day?-- I was the deputy of the 5 South Panel.

Who was the ventilation officer that day?-- Steve Bryon.

And do you know if he produced a graph which would take the place of your normal weekly graph as ventilation officer on that day?-- I imagine he would have done so out of course, but I cannot say whether he did or not.

And now have you ever seen one?-- No, I haven't seen one.

Now, you, when you produced your graph as ventilation officer, each time would post that graph?-- Yes.

In various places, I think you have told us?-- Yes.

At least you placed one on the noticeboard in the deputies' room?-- Yes.

You would give one to the undermanager?-- Yes.

Do you know whether that would be posted on a noticeboard in his room?-- If I didn't put it in his undermanager's production book I would post it on the actual noticeboard.

If it went in the production book it didn't go on the noticeboard in his room; is that right?-- Well, they would look at it, yes, and put it up. There was a plastic A4 sleeve like one of these and they just used to slide it in on the noticeboard.

One way or the other it would end up on the noticeboard in the undermanager's room?-- Yes.

Did it go on any other noticeboard?-- I had a board in front of my desk, it went on that.

That's in your room?-- That's in my room, yes.

Being - you actually used two rooms; is that right?-- That's correct.

There was one in the old No 4 block in which you had your equipment kept?-- Yes.

Then there was another room or part of a room that you used in the No 2 administration block?-- That's correct.

Which was - was it near the instrument room?-- No, the last one closest to the pit.

The last one closest - in the planning room, would that be it?-- Yes, that's it.

Which one are you referring to, the noticeboard in which room?-- In the planning room.

The planning room. Invariably your graph would go up on the noticeboard there?-- Yes.

After it had been done on a Friday each week?-- Yes.

Now, did you at any time see the graph on Friday, the 5th on any one of those noticeboards?-- I cannot recall seeing it, no.

Certainly you didn't put one there yourself?-- No.

Because you were on production?-- Yes.

Now, the - what was the purpose of posting that CO make graph on the various noticeboards?-- So other deputies could be informed and people could see it.

Other deputies could be informed. That would be as a result of the one in the deputies' room; is that right?-- Yes.

Then you say "and other people" could see it. Which people are you referring to?-- Quite often miners would come into

the deputies' room. It wasn't like a deputies only, there was quite a few miners would come in.

Did they go in there as a matter of course or was that just when they had some occasion to deal with the deputies?-- The fridge was there for the milk and that so they used to pick up the milk for the crews or what have you. So, they would check it there, some of them.

Was there any system in place to ensure that miners did familiarise themselves with the CO make?-- No, there was no system involved.

Beyond that weekly graph being posted, was there any other means of ensuring that the miners were aware of the CO make?-- Not of the CO make, no.

There was a noticeboard in the assembly area; is that so?-- Yes.

That's the assembly area which is adjacent to the deputy's room and where the men used to gather prior to going underground?-- Yes.

Was the CO make graph posted there?-- No.

Yesterday when we went to the mine we were shown the location of a computer in the monitor room adjacent to the assembly room?-- Yes.

Are you familiar with that computer screen?-- Yes.

There are a few computers there, but the one I'm speaking about is the one which is, as you are standing in the room looking at the assembly area, in the right-hand corner?-- Yes.

The corner to your right, and that's the one that was used to calculate the CO make; is that so?-- Yes, from the data on that computer, yes.

The data on that computer was data that came from the tube bundle system?-- That's correct.

Did you use that computer yourself?-- Yes.

You used it from inside the monitor room, I take it?-- Yes, you had to be inside.

And of course the screen would be facing to the inside?-- Yes.

Was there any practice of moving that screen about so that it wasn't facing inside?-- There was a practice of leaving the screen facing outside because before they replaced that computer there was a fault and you would lose it, so you had to work it with the screen facing the outside which made it very hard for me, but if you turned it - there was a sign on it "Do not turn screen into room" otherwise it would drop the screen out and that's why that computer was replaced and updated while I was away on holidays.

Do you know at what stage while you were aware on holidays?-- I can't recall the date I was told.

By the time you came back on the afternoon of the 5th anyway there was a new computer there?-- That's correct.

Was there then no need for the practice of facing the screen out into the assembly area?-- No, it means you could - the first computer had a touch screen, so to operate it you just touch the screen. This second computer you had to use a

mouse. So you could safely turn the screen to yourself, use it and then turn it back outbye so people could see as the deputies usually would have a look before they go down, at the screen.

And that was the practice, that it be facing out through the glass?-- Yes, you always left it facing out through the glass.

What would be shown on that screen at any given time when it was facing out through the glass?-- Just all the monitor points and what readings on what particular point.

You say that was so the deputies could look at that?-- Yeah, deputies, miners, anyone.

Did you notice the miners looking at it much?-- Some miners would at sometimes.

Some at times, but it wasn't the practice for the miners to consult the computer screen?-- No, the miners with more experience look at it, yes.

Assuming that you did your graph weekly or that your system was followed in your absence, that is that it was done weekly on a Friday, the CO make graph then for any particular panel would - the one that was posted, the hard copy one, that would remain for a week on the noticeboards that you have mentioned?-- Yes.

It wouldn't be updated at any time during that week?-- Not unless you took an extra point which I did on one occasion.

I see, and you replaced the graph?-- I replaced the graphs around with the updated one.

But otherwise it would stay there?-- It would stay there for the week, yes.

So if there was a change in the CO make during the week, really the only source of information about that change was the computer screen?-- Yes.

No graph as such showing rises or falls?-- No.

In the case of the graph for Saturday, the 6th of August this year there was no graph that would show, I think what you conceded yourself was a fairly sharp rise if the graph was plotted correctly?-- Yes.

The shape of that graph or the extent of the rise indicated on that graph would be something that really wouldn't have been - would have been information, I should say, which would not have been readily available to any of the miners who, for instance, congregated in the assembly area on the Saturday or the Sunday?-- I don't know what happened or what the procedure was on the Saturday. I wasn't there, so I don't know if they were told about the increase in the CO or what.

Well, on the basis of the established systems at least, that is that there is a graph posted once a week showing the CO make and that there is a computer screen which is faced into the assembly area from the monitor room, on the basis of those systems at least there would be no ready source of information for the miners showing a steep increase in the CO make on Saturday the 6th?-- No.

Now, you mentioned in the course of taking the readings and those readings then being used for plotting the CO make graph that the way it was done was to use the weekly average?-- Yes.

Rather than the spot reading on a particular day?-- Yes.

Are you able to say what affect the use of that weekly average would have if there was a rapid increase in the CO make reading? Would it tend to flatten the graph out? Would it enhance the steepness of the rise in the graph?-- It would tend to flatten the graph out.

Are you aware of the theory behind the use of the weekly average rather than the spot readings in plotting the course of the CO make?-- We are looking for - I believe we are looking for a trend and not a spot reading. That's what the theory is.

But if there were a series of spot readings which showed a steep rise that would still indicate a trend?-- That would alarm, yes.

I want to turn briefly to this occasion in June when you and Reece Robertson and Mr Edelman, one of the miners, made an inspection of the panel -----?-- Yes.

After Mr Robertson stopped work in 512 Panel because of concern about the mustiness in the goaf. On that occasion you say that you went down No 1 heading to the back of the goaf area; is that right?-- I believe so.

Were you able to actually go along the back of the goaf, that is along cross-cut 13?-- Yes, I could go along cross-cut 13 along here to that point there. At this point it was a bit dicey, but you could get to there.

That's between 4 and 5 headings?-- Yes.

Just one matter I want to clear up, those stoppings between cross-cuts 12 and 13, were they closed or open when you saw them?-- They were open, as I recall.

When you actually arrived there?-- When we arrived there some of them were down a little bit from roof crush, but they were intact, yes.

They were intact and they were open. When you say they were open, segments -----?-- The door setting was where they should have been.

It wasn't the case that they were closed and that you opened them?-- I cannot recall.

But you did do something to the stopping, I think you've told us, in cross-cut 12?-- Yes.

Which was closed and you did something to open it?-- Yes, cut the hole.

Cut a two metre hole?-- Two metre hole.

Okay. Now, from what you observed that day would you have said that there was anything in the order of a suspected heating or concern about a heating at that time?-- I had concern that there is always that possibility, and I had spoken with the undermanager on making a decision to when we cut that extra hole in that we could either have accelerated or cooled it, and it cooled it. So at that stage if there was anything it was controllable.

To some extent, of course, the use of terminology is very subjective and sometimes people speak about there being "a suspected heating"; when you use that term, what would you mean yourself, "a suspected heating"?-- Once we got to the stage of having the smoke haze I would then say we had a heating.

The term, "the beginning of a heating"?-- When the CO started to rise and just be high, probably in at around 15 litres you had to suspect that you might have had something.

Back there in mid June when you were there with Robertson would you have said, "We may have the beginning of a heating", or would you describe it that way yourself?-- I would describe it that we could have, yes.

Now, a suspected heating though, you would see as being somewhat further up the scale?-- Yes, to me if that was anything it was just an early, very early - and I would want to see a more rapid rise continuing from that.

Well, let me ask you this: some people speak on occasions of a suspected heating and others talk about a heating, what would you yourself say is the difference between a suspected heating and a heating?-- Once you start to get some more of those signs of the sweating, the smoke, I would say that I've got a heating. From my experience in 5 North we were looking at around - we knew that we had a heating because we had over 40 litres - 40 ppm and there were reports in 5 North I can remember of around 13 litres - 13 parts before that day, on the Saturday morning, but when we went down there there was - you could see the actual smoke and the sweating and the smell. You had those three things. So to me to have a heating you needed to have those three indicators to call it a heating that you had there.

That's haze or smoke -----?-- Haze, smoke, benzene smell.

A haze, a benzene smell, and then in terms of parts per

million what kind of level?-- Well, I believe that you'd have in excess of 10 to 15 ppm.

10 to 15 litres per minute?-- No, parts per million.

In excess of 10 to 15 -----?-- Without normal airflow of around 45 cubic metres.

10 to 15 ppm, how does that convert into litres per minute dealing with the area of the monitor point in No 1 heading? Obviously to talk about litres per minute you've got to look at a particular monitor point, don't you?-- Yeah, I've got to look at a monitor point.

You'd have some idea of how that relates from your experience?-- It would be - looking at around - once you had 10 plus parts per million.

What would that mean in litres per minute?-- That would mean that you are getting probably 18 odd or maybe 20, I just can't work it out in my head, but I'd be having concern when I had 10 ppm in that general body reading.

I see. At 16, say at 15 or 16 litres per minute plus a haze plus a benzene smell, what would you say at that point?-- Yes, I would tend to say that yes, we had the starting of a heating or suspected heating and needed to look further.

To confirm it?-- To confirm it.

So the difference between a heating and a suspected heating is that a suspected heating really means that it needs further investigation to confirm that there is a heating?-- Yes.

But that really all the signs are there to indicate that there may well be a heating?-- Yes.

You also at one stage in your evidence were asked a question about whether when you went away on holidays were you satisfied there was no heating in 512, and I think your answer was, "Well, not an active heating, no." Now, I don't want to be boring about terminology, but you seem to make a distinction between a heating and an active heating there. Can you just explain that?-- If I thought there was a heating, for the way that that CO make had gone up I suspected that there might have been some area under a fall that was being cut off from oxygen and that was generating that CO. It wasn't becoming any worse. It wasn't accelerating, it was remaining at a constant level and by the time there was only a short period to go for that section that before it had become active we would be out of there.

I see. Now, of course in order to control whatever it was that was there, that is a heating or suspected heating or the beginnings of a heating, you had to bite the bullet and decide to provide more ventilation and you thought that that cooled it down; is that so?-- That's correct.

Now the control of that heating was really dependent on

ventilation in that goaf area being maintained as good ventilation; is that right?-- Yes, I believe so.

So that any slowness in the ventilation in the goaf area during that period from mid June on would tend to exacerbate what you perceived to be the beginnings of a heating; is that so?-- Yes, that's so.

That was really something that should have been looked out for?-- Yes.

Were there any systems in place to ensure that the ventilation officer's concerns about what needed to be - that is, for instance, in this case to ensure that the goaf was well ventilated, was there any system in place to make sure that your concerns were passed on to other people during your absence?-- There wasn't a good system, no.

For instance, if a deputy during your absence was to put in reports saying "ventilation in goaf slow" or words along those lines, was there some system whereby that kind of report might ring an alarm bell and have people take steps to check it out and make sure that this beginnings of a heating weren't getting any better - weren't getting any worse?-- There wasn't a system as such, just relying on the undermanager's interpretation.

I see. Thank you Your Worship. Thank you, Mr Morieson.

EXAMINATION:

MR PARKIN: Mr Morieson, can I refer to this Exhibit 25 again which is the graph I think Mr Clair has just been speaking to?-- Yes.

This is basically for clarification on the 15 -----

MR MORRISON: The witness doesn't have 25. Mr Clair referred him to -----

MR PARKIN: This?

MR MORRISON: No, he doesn't have this one. He has the one after the event before him. He hasn't got Exhibit 25.

MR PARKIN: It's not showing the Saturday reading, this one. It's the one that's showing up to the Friday reading.

MR MORRISON: Yeah, Exhibit 25 shows up to the Friday reading. Mr Clair asked him to look at something else, not that one.

MR PARKIN: Now we have got that clarified, were you - I guess were you concerned that a level of 14.27 litres per minute when you left on 15/7?-- Yes, I was concerned, and I made sure that there was plenty of air going to that section.

Did you communicate those concerns to anyone else?-- The changeover at that time was very poor between me and the next person coming on. The acting manager then was Joe Barraclough. I told him of a concern that I hadn't yet been able to speak with the person that was going to take over and I wouldn't be able to before I left, so he arranged for Rod Stafford, that was a very experienced deputy and he was the deputy concerned in the 5 North heating, to pass that information on to Steve Bryon that was going to do my job.

Can you tell me on 5 August - if you look at the graph - were you concerned at the trend when you arrived late? Did you follow it on when you arrived late about the condition of 512?-- Yes, I had spoken to Jacques Abrahamse on the Thursday when I got back to Banana and asked him what was going on in the 512 CO make litres, and he told me of this misreading and that the, you know, CO make remained high.

Can you tell me that between 15/7 and 5/8 - this may not be a question that you can answer but I will ask it anyway - did you know that the ventilation quantities changed at any time at the sampling point?-- Looking back on the graphs after the event, yes, I have seen that the ventilation quantities has varied.

Because, of course, that would have a very significant impact on the litres per minute reading, wouldn't it?-- Yes.

The next question is that on the following day, the 6th, if people had concerns about the litres per minute, why wasn't the graph updated on the Saturday? Are you able to answer that question?-- I wasn't there. I can't really make any comment.

Okay. Just one final question: could you just elaborate a little bit on what you know about the methane drainage system at Moura No 2? I mean, how do you operate with the methane drainage people as ventilation officer?-- I maintain that they have got enough air in their particular section for their - when they are drilling. At the time of my leaving they were not drilling in the 510 section. I don't know when they restarted the drilling. The drill was down when I left to go on holidays, so if they had restarted drilling, then maybe the ventilation had been changed for them.

But you work as a team with the methane drainage people?-- Oh, you have got to work in with them, yes. They need a supply, and if the general body goes over, you know, 1.2 per cent, we had a policy that there was no drilling.

And you are fully familiar with all the methane drainage rules and procedures?-- I would say I am familiar with most of them, yes.

Thank you.

EXAMINATION:

MR NEILSON: Mr Morieson, you have indicated that you have had some instruction in relation to spontaneous combustion?-- Yes.

Can you tell me what type of instruction and where you received that instruction?-- Just after I started there was - when I was doing my deputy's course, so it was in the early 80's, I think they had - Mr Strang attended the Coal and Cattle Hotel and gave a lecture for about four or five hours on dealing with emergency procedures and also on spontaneous combustion, and there was another expert - I can't recall his name - also spoke.

Was that orchestrated by the company or the Mines Rescue Brigade?-- I don't know who organised that. Then we were given the red book along the line of, I think it's Jones, isn't it, the red book, and when I took over the job as fire officer I had found the blue book which was more detailed and that was, from what I can recall, my training apart from the actual deputy's course and my Mines Rescue background of dealing with spontaneous combustion. I attended the fire at Leichhardt and had been shown what had happened at that particular mine, what they thought the cause of that was through the changes in ventilation, so I was aware of that.

The documents that Mr Morrison referred to earlier, I haven't had the benefit of seeing them, but I understood that during the course of induction, or at some subsequent stage, there was some further instruction on spontaneous combustion. Was that correct or not?-- I also had borrowed Phil Reed's book from SIMTARS on spontaneous combustion which was a very good and detailed precise thing, but as far as being instructed by someone on spontaneous combustion, apart from doing - giving that spontaneous training to the new starters, I couldn't say that I have been instructed specially in spontaneous combustion. I know of other people that went down to a particular course at one stage, but that's about all the training that I know of.

As a result of the instruction that you have had, can you tell me what you have learnt about spontaneous combustion?-- It's unpredictable. You can't always - it's a learning curve that we are still learning as we go. I think now with this gas drainage it certainly does present another set of problems by degassing the seam. We had learnt -----

Sorry, Mr Morieson, if I can. I am not specifically relating to your understanding of spontaneous combustion at No 2 Mine or any mine in Moura. I am talking about your general learning of what spontaneous combustion is all about?-- The oxidisation of coal, is that what you wanted me -----

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Yes?-- It's the -----

I want you to tell me what you have learnt about spontaneous combustion, how it starts, what it does and what the final product may well be?-- Well, the final product is an active fire. It's a period of the coal absorbing oxygen over a period of time, heating up. You are going to - at 100 degrees it's going to give off hydrogen, and then when it goes on to about 140 degrees you have got your ethylene, and then at about 150 degrees it goes on to give off propane, and from there, you know, you have definitely got an active - once you get to that hydrogen stage you are in the reaches of an active fire.

So it's basically a process that if it goes uncontrolled, it just gets worse and worse?-- Oh, that's - yeah, definitely.

And can end up in a fire?-- Yes.

Do you agree that a fire in an underground coal mine is a dangerous situation?-- Yeah, extremely.

Would you agree that a fire in a coal mine that has an inherent seam gas of methane is an extremely dangerous situation?-- Extremely dangerous, yes.

Would you say that it would be the most dangerous situation you could get in a coal mine, to your own knowledge?-- We have had ignitions of gas through bad cable practice where, you know, we have had actual open fires burning through the gas ignition. That is one of the scariest things to ever see underground because you just don't know when it's going to pull up.

But that was still a fire?-- It was still a fire.

So a fire, regardless of how it's caused, would be the most dangerous situation? I mean, I am asking you, is that right or not?-- Well, a roof fall or that - to me, the fire's got the potential to create the biggest damage, yes.

Through all your instruction in relation to spontaneous combustion, given that it is either the most or one of the most potentially dangerous circumstances that you could have in a mine, have you had any instruction on what you would do with the men in the case of the process of spontaneous combustion? When I say what to do with the men, has there been any instruction about the danger then of that process to the lives of people underground?-- As far as the deputies were concerned, we withdrew the men on those occasions in '91 and '86.

No, no, sorry, Mr Morieson, I am asking you about your instruction. When you have been instructed on spontaneous combustion has part of that instruction been that anywhere through that process you would then pay regard to the livelihood of people underground?-- Not directly, except for in the book where it tells you on suspected heating you

withdraw everyone from the mine, and even in that other book by SIMTARS it tells you if your gases are getting up to that explosive range, even though you haven't completed sealing the mine, you still get out and your men are the foremost thought.

So even on a suspected heating you would withdraw the men from the mine?-- Yes, I would.

What would you then do?-- I would wait for it to go through the explosive range.

In your answer to some questions posed here by Mr Clair you indicated - and I am not trying to put words in your mouth - but I sort of understood you to say that at some stage in your own mind there was a suspected heating; is that correct?-- Yes, I believe so.

Well then, in your own mind why was there nothing done about the withdrawal of workmen?-- I just don't know why they didn't - why they sealed the mine, do the withdrawal. I was unaware until that Sunday morning that they had even sealed the mine, that particular part, and I was surprised actually that - with that set of circumstances of seeing the haze and the thing that the men were down there.

In your current position as fire officer would it be your responsibility or would you assume the responsibility of making the decision to withdraw the workmen, or would that be made by another person?-- As a deputy and the fire officer you are always looking out for overall safety. I believe if you think something is unsafe or going through it, you, you know, talk to the manager and tell him - explain your grievances and a decision is made, and so it would be in that respect, yes, you make a decision.

So would that decision be made on the spot by a person, be it a deputy or undermanager, or would there be consultation to talk about what the problem might be before the decision was made?-- I would say you make - you talk and explain - you raise your concerns, as what was the case in '91. We explained to the manager then that we were concerned about the possibility of frictional ignition, even though it was only a suspected heating, and then he went on to say, "All right, I concede that, you know, that is a possibility.", and, therefore, we never went down except for the testing of the gas from behind the seals.

You have indicated that you did have some concerns with your findings in terms of the gas levels at certain points in time?-- Yes.

Did you raise those concerns with anybody else?-- I raised the concerns with - about the rate and I said that, you know, it was high and, you know, we had discussed about it and I had spoken to the engineer, Jacques Abrahamse, about the levels, and we concluded that the mining sequence - we were just about out of coal, and at that time that we had finished - would be out before it got to the critical stage and, therefore, we wouldn't be, you know, concerned with the outcome.

When you say "critical stage", what, in your mind, is a critical stage?-- When the CO make starts to go rapidly, as in the 5 North where it just in a matter of hours went - you know, doubled. It was 13, the next time it was 20, later on it was 50. This is all in the same shift. We obviously, you know, we had a full blown heating in that case. So, if you saw that occur in this 512, you would have automatically just got out and sealed off and waited.

But you have indicated that spontaneous combustion, as far as your instruction is concerned, is an ongoing process. I mean, from where it starts to the eventual fire it goes through a process?-- It goes through a process, yes.

Okay. Now -----?-- A series of stages.

You have then said that, in your view, the critical stage would be when it rises rapidly?-- Yes, when it starts to rise rapidly.

Before it rises rapidly it may go through a slow rising period?-- Yes.

I mean, would that not then tell you if it starts to rise slowly that, unless you do something about it, then it will reach the stage where it will rise rapidly?-- Yes, and what I did at that stage was we gave the section more air to cool it, which seemed to work, which we did on 10/6, and on 15/7 if you look at what cubic metres was in the section you will find that that is an increase over the time before, so you will find that was a peak of ventilation around that time.

Yes, but after that cooling period when you flushed the goaf -----?-- Yes.

----- it then rose rapidly again, didn't it, the readings, on the 17th?-- It rose not rapidly but only gradual.

It did, it took another rise, it was increasing?-- Yes, it continually increased.

Is that around the time when you would have discussed your concerns with Mr Abrahamse?-- I discussed my concerns around 10 and 11 June.

Prior to flushing the goaf?-- Prior to flushing or just after flushing the goaf.

After you have flushed the goaf and the readings dropped, what did that indicate to you? That you had achieved what?-- That we had achieved and that it was going - that problem of the recirculation had been stopped and that area was being better ventilated and then we expected that it would continue on developing because we had more and more coal exposed so we were going to get an increase of CO as the panel went on.

Before you flushed the goaf I think you have indicated before that it was in your mind that you were concerned because that could be the start of a heating?-- Yes.

What would you expect to happen if you did have the start of a heating and you all of a sudden inject significantly more ventilation to it?-- I would have expected that the litres per minute would have increased rapidly.

No, I am asking what you would expect the effect to be on the heating itself?-- It could flare it up, add more oxygen to the fire and, therefore -----

Or it could?-- Cool it down. If it was only just in the very early stage it would cool it and reduced the heat that had been building up.

Well, then, can I go back to the 17th? After the 16th when the readings dropped significantly -----?-- Yes.

What would you then have thought when the readings once again began to increase? What, in your mind -----?-- At that time -----

What would the flushing have done?-- Well, I thought that would flush that initial problem and now we were going to get back to the stage of this slow increase and that it wasn't going - it was under control, it wasn't going to get worse.

How were you going to control it?-- Well, we talked about different ways. If it had flared up we were obviously going to have to seal off or the only other thing was to flood. So, that was what was discussed.

Okay. Now, if it had flared up - and I am not suggesting that it didn't - but if it had to an extent far more significantly than it did and that was a possibility -----?-- Yes.

Then were there any discussions at that stage about if it reached the worst case scenario what would be done with the men?-- No.

There weren't? Thanks, Mr Morieson.

EXAMINATION:

PROFESSOR ROXBOROUGH: I would like to ask you some technical questions on the general ventilation in 512 and if I could take you back to the stage of first workings while the panel was being developed. I presume there were ventilation aids used at that stage to ensure that air was getting to the face?-- What do you mean by "aids", just -----

I am thinking brattice sheets, perhaps auxiliary fans, I don't know?-- We don't use auxiliary fans.

You put brattice sheets along the headings to conduct air to the face and return it from the face?-- On the top heading we had built Tecrete stoppings as we advanced. On the bottom return we had used -----

Forgive me, I think we might be at cross-purposes here. In pillar development when we are advancing there are, if you like, blind headings that are being driven by continuous miners?-- Yes.

You need to get air up that heading and out. How was that done?-- Done by brattice on snap jacks.

How was that erected?-- On snap jacks.

What are snap jacks?-- Snap jacks are like adjustable props with a handle and a spring on them that you lock to the floor and roof and then staple - they have three lots of wooden pads, sort of thing, on them and you staple your brattice to those pieces of wood.

Were any wooden props used?-- Very few wooden props are used.

So, as you are retreating now from the panel is there a systematic arrangement to take all of those devices out?-- Yes, as they retreat the, what's a name, snap jacks are reused and are put back on the MPV supply tray.

Is it conceivable that any of those devices may have been left in the goaf?-- It is not inconceivable.

Unlikely?-- But unlikely.

If they were left in the goaf do you think they could have a significant influence on the airflow in the goaf?-- To my knowledge there was nothing left in the goaf.

I think you said that the quantity of air entering 512 Panel was about 45 cubic metres per second and all of this air was used to ventilate the goaf?-- Some of it, as you see by the

XN: PANEL

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split of the thing, was used on the bottom bleeder road and the majority was on that main return on No 1 heading.

Well, of course, as the panel retreats the area of goaf to be ventilated increases?-- Yes.

And apart from the occasion when you flushed the goaf there was no systematic increase in the quantity of air passing over the goaf to establish steady state conditions?-- No, not to my knowledge.

So, you had virtually the same quantity of air required to do an increasingly demanding task as the face was retreated?-- We probably had more air than what we needed at the start and that amount was just left at a set amount.

But as you are retreating the volume of the goaf is increasing?-- Yes.

The quantity of air is roughly constant so the velocity of the air across the goaf reduces?-- Yes.

Now, are you aware of the fact that the flow properties of air change as its velocity reduces?-- I am aware to some degree.

Are you aware of the difference between turbulent flow and laminar flow?-- By "laminar flow" do you mean the two splits of the air or -----

There is -----?-- A high current and a low current?

There is a velocity at which air moves where its properties - its flow properties change from being what is known as turbulent flow, that's air which is moving randomly, to air which is virtually streamline?-- Yeah.

Are you aware of that?-- Not in relation like that, but I am aware there is a difference of having air that is turbulent, like through a regulator, and just your normal incoming air where it is just a smooth flow with the resistance of what it is going through.

If you have laminar flow in the goaf would you expect there to be a greater propensity for gases to separate out, to get layering? You wouldn't know?-- I wouldn't know to be honest. I would say yes.

Can I momentarily take you to - I don't know the exhibit number, but it is drawing 45/35 which, I think, you have seen previously. Do you have that?-- I have got 34 which, I think, is similar.

I am looking at the top return and the adjacent parallel road which is part of 5 South?-- Yes.

Now, the road connecting those two headings at the right hand end of the map has a regulator. I think you have referred to that on a number of occasions?-- Yes.

Now, by having that regulator in that position would you expect there to be a significant - in fact, a quite substantial pressure differential between the top return and that 5 South parallel heading?-- Yes, there was a difference in pressure there.

One which is governed largely by the location of that regulator?-- Yes.

Now, two things about these two parallel roadways. We see that there are a number of what I think I have heard previously described as methane drainage holes?-- Yes.

And they are from the 5 South heading intersecting the bottom return - sorry, the top return?-- Yes.

Now, I have heard also that there may have been a systematic system for ensuring that those holes were completely sealed?-- Yes, I believe they were filled with grout.

Is it possible that any of those seals - any of those holes may have been unsealed?-- I didn't actually have personal contact with that. Probably if you ask Jacques Abrahamse. I think he was involved in that task of sealing that.

If one or more of those holes were open what would you expect to happen?-- You would have a pressure difference between -----

Well, the pressure difference is already there?-- Yes.

What would the pressure difference do? It would cause air to move -----?-- It would cause air to be sucked through those holes into that return, 5 South return.

And that, if it were happening, could influence, contaminate the readings you were taking in that return?-- Yes, but I believe that they were all grouted up.

Okay, fine. One further thing: just a little bit further down that heading near the bottom you have drawn our attention and described the heading which appears to be on the road to connecting that 5 South heading with the top return stopped short and I think that was described as a sump?-- Yes.

Now, just to the right of that there is another one?-- Yes.

And that one hasn't got an end on it, if you understand what I mean?-- Yes.

Now, I don't know what that means in this particular case, but I would read that as meaning that roadway wasn't finished, it was in the process of being driven; would that be the case?-- I don't think so. I think it was finished, I think.

You think it was finished? Well, it is strange that on all of the plans it is shown as unfinished?-- I think that's just a computer thing where they haven't put a line in.

I see. I think you have made reference on one or two occasions to ventilation surveys having been undertaken and that you have had an expert out conducting pressure surveys around the mine?-- Yes, just on that one occasion.

Has there been a total ventilation inventory - if you like, a total ventilation survey taking account of air going into the mine, air coming out of the mine, air going down different splits, to try to determine where leakages might be occurring in the mine?-- Yes, there was.

Such surveys -----?-- There was a computer model made up for the mine.

I am sorry, a computer model?-- A computer model that you could put in, add in on roadways, predict - if we put five heading on here instead of four it could tell you what to expect to get flows in each heading.

But I don't suppose the computer model would be telling you of inefficiencies in the ventilation system such as leaking stoppings and - or other connections that were in the mine that were presumed to be sealed that perhaps weren't?-- When we did the computer modelling we took a number of readings to check the leakage of what we got on an average sort of stopping and there was leakage figures drawn up for three different types of stoppings and you could put those into the model and you could also - it would come out as - if you were having a problem of recirculation with that amount it would show that number to reverse. So, that was a capability of the model.

Thank you

MR ELLICOTT: I have no questions.

WARDEN: I have none either.

MR CLAIR: Your Worship, just a couple of questions arising out of some questions Mr Neilson asked.

FURTHER RE-EXAMINATION:

MR CLAIR: Mr Morieson, you came back on Friday, the 5th of August, from your leave?-- That's correct.

You were the trained fire and ventilation officer; is that so?-- Yes.

The person - as far as you were aware the person who had done your job as fire and ventilation officer whilst you were away was Mr Bryon?-- Yes.

You said some reading may have been taken by Jacques Abrahamse, but Mr Bryon was the fire and ventilation officer;

FRXN: MR CLAIR

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is that so?-- Yes.

Now, obviously when you came back on that afternoon shift on Friday, the 5th, you didn't resume your duties as fire and ventilation officer?-- No.

You were deputy for the extraction in another - or at least on a production team for -----?-- Yes.

For another panel altogether. Was there any particular reason why you didn't resume your duties as fire and ventilation officer?-- We were short of deputies. George Mason - I was still on holidays and George Mason had rung me up, knew that I was back in - at home and said if I could help him out by coming in as he had someone else going away on holidays on that Friday and that they were short of deputies.

So, you worked the Friday afternoon shift?-- So, I just worked the Friday afternoon shift.

As a deputy?-- As a deputy.

When did you work next?-- I was called out with Mines Rescue on that night.

On the Sunday night?-- Sunday night.

Okay. So, you really had nothing to do with the fire and ventilation side over the weekend prior to the explosion?-- No.

At all?-- At all.

Okay. Thank you, Your Worship.

MR MARTIN: I have no questions.

MR MORRISON: Your Worship, may I just ask one or two?

FURTHER CROSS-EXAMINATION:

MR MORRISON: You said that you - I am just trying to find my note of it - became aware of the fact that sealing had taken place on the Sunday?-- Yes.

Was that when you went to attend after the accident?-- No, I went to a union meeting Sunday morning at Kianga Hall.

That union meeting was a regular thing?-- Every four weeks or so, yes.

And attended by a very large number of the miners from this mine?-- Not a large number, probably 100 odd.

Well, sorry, let's not get into the subjectives, let's talk

FXXN: MR MORRISON

WIT: MORIESON A G

about numbers. About 100 odd miners including deputies?--
Yes.

Deputies who had been working on the sealing process?-- I am
not sure.

Len Graham, George McCrohon?-- No, they weren't there.

I suppose they were a bit tired after working on a sealing all
Saturday night. Mr Ziebell gave a report to the meeting about
the fact that sealing had taken place, didn't he?-- Yes, he
had to authorise extra overtime.

That's right. He reported that sealing had taken place in 512
and gave some description of why?-- I think so.

And no-one put their hand up at that meeting and said the men should be out of the mine, did they?-- No.

Thank you.

MR HARRISON: I have just one question.

WARDEN: Thank you.

FURTHER CROSS-EXAMINATION:

MR HARRISON: Mr Morieson, you were being questioned by Mr Neilson about potentially the most serious thing that can happen in a mine, that being a fire, and in the course of those questions you mentioned some problems - and correct me if I have my note down here wrong, I took this very quickly - but you said something to the effect that you've had problems with emission of gas through bad cable practice is what I wrote down. Can you explain what you meant by that?-- Ignition. We had ignition of gas through the cablehand not being there on the spot. The miner driver backed up and it lit up a blower from the floor and there was a flame just burning like a barbecue burner.

Is this something that happened quite regularly?-- No. This was a once-off.

When did this happen?-- It was when we were in the 5 North so it was early 80s.

You are not aware of any similar problems?-- No.

Thank you.

WARDEN: Thank you. Thank you, witness. You may stand down. We will have a short adjournment while we get the next witness in.

WITNESS STOOD DOWN

THE COURT ADJOURNED AT 11.11 A.M.

THE COURT RESUMED AT 11.30 A.M.

ALLAN GEOFFREY MORIESON, RECALLED AND FURTHER EXAMINED:

MR CLAIR: Your Worship, somewhat reluctantly I ask Mr Morieson to resume the stand because I realised that in fact there is another statement, that's statement 62/1 from Mr Morieson dealing with the events on 9 August at the time of the second explosion and I wanted to have him speak to that.

Mr Morieson, you will recall you did make a statement?-- Yes.

In relation to events at the time of the second explosion?-- Yes.

Do you need to refer to that statement or do you remember the events of that day, 9 August?-- I may need to for more accuracy, but I can generally - you don't forget.

Just have a look at that statement there. This statement was in fact made on 9 August too; is that right?-- That's correct, yes.

It records some times and your account of what you saw on that day. Now, at about 12.20 p.m. on that day, 9 August, were you somewhere near the fan shaft?-- Yes, I was taking a sample from it.

How far away from the shaft itself were you?-- From here to the back wall there.

That's about 10 metres?-- Yes, about 10 metres.

What were you doing there?-- We were just going to take a gas sample for the chromatograph.

Where were you taking the sample from?-- We were taking it from a tube. We had a truck with a generator and a pump in it and we were just sucking the sample from the fan housing into the bag.

There was a tube running from the fan housing, was there?-- Yes, we placed the tube in the fan the day before.

And prior to placing the tube there had you actually taken your samples from -----?-- Right next to the fan.

The fan housing itself?-- Yes.

So that would have been on the Monday, the first day after the first explosion?-- Yes, I'm not sure if that was the Sunday - no, it must have been the Monday that I took the first samples.

What happened whilst you were taking the sample?-- We started the generator and it was running and there was a rumble from the ground, and the actual shaft housing started to vibrate and the next minute you could just feel the pressure blast. It blew upwardly with great force. It started off just as an

FXN: MR CLAIR

WIT: MORIESON A G

air blast to start with then it changed and - black smoke for about 30 seconds and then it sort of changed to a white and it rose up into the air some 300 metres. It lasted for probably 30 or 40 seconds and then I turned to run, but I sort of - I blew a hamstring in the process and I looked back and I could see this great black smoke coming out from over the high wall which is from the portals and by the height of the what's-a-name, smoke and that from the portals, to me it must have happened seconds earlier than when the actual shaft was - when we had overburden shots there is a delay always from when they have the shot to the actual smoke arising out of the cut.

I see. So you are saying it takes a little time for the smoke to come up above the spoil hill itself. Yes?-- Yes, that's right. The spoil hill is probably a hundred metres or so high or more.

For that reason you say that must have come out some time prior to the -----?-- That's what I would have expected, that it had come out slightly ahead of when the fan started to disintegrate.

I have no further questions of Mr Morieson.

WARDEN: Mr Macsporrان?

MR MacSPORRAN: No, thank you.

WARDEN: Mr Martin?

FURTHER EXAMINATION:

MR MARTIN: Tell the inquiry what you did with the sample you took?-- We never got the bag full. We only just started to place it in and the sight of the steel coming towards you, you didn't think about the sample.

Who was with you at the time?-- Bob Stewart.

Thank you.

WARDEN: Mr Morrison? Mr Harrison? Thank you, witness.

WITNESS STOOD DOWN

MR CLAIR: Your Worship, I call Gregory Craig Edelman.

Just while Mr Edelman is coming into Court, Your Worship,

could I mention that there are statements in the exhibits, being statements 62/2 and 62/3, from miners Mr Russell and Mr Coleman respectively whose evidence in the statements is directed to the events at the time of the second explosion. Unless there is some party who wishes those witnesses to be called to give oral evidence, I wouldn't propose to actually call them to give oral evidence. I can raise it at this stage and if the parties who want those witnesses to give oral evidence could let me know.

WARDEN: Yes, thank you. I will check that.

MR MORRISON: I have nothing about that, but if this is a convenient moment, may I hand to the panel - tender some documents that Mr Clair asked me to have prepared? They are a list of the personnel at the mine on Friday, Saturday and Sunday by shift and by area in the mine where they were employed.

MR CLAIR: Yes, I thank Mr Morrison for that.

MR MORRISON: I tender that list.

WARDEN: Do you want them formally admitted as an exhibit? It may be advisable. It is then on the record.

MR CLAIR: Yes, I certainly would be proposing to tender it. Perhaps if I can look at it first of all, Your Worship, and then tender it at some later stage.

GREGORY CRAIG EDELMAN, SWORN AND EXAMINED:

MR CLAIR: Now, your full name is Gregory Craig Edelman; is that right?-- Yes.

Mr Edelman, you are a miner at Moura No 2 Mine?-- Yes.

And in fact you started in the coal mining industry in 1982?-- Yes.

At No 2?-- Yes.

You have worked there ever since?-- Yeah, that's right.

You have made a statement in relation to the events leading up to the explosion at the mine on 7 August this year?-- Yeah.

You have a copy of that statement there, do you?-- Yes.

Now, since about 1984 you have been a continuous miner driver?-- Yeah.

And you work both on development of panels and extraction from panels?-- Yes.

XN: MR CLAIR

WIT: EDELMAN G C

You worked in the last two extraction panels 511 and 512?--
Yeah.

On the way into the panel during development did you find anything particular about the feeling in the working area of 512?-- Oh, it was hot and humid for the first few pillars and, oh, we just sweated a lot when we were working.

It was noticeably different in that way from other panels or -----?-- Oh, yeah. It's like we didn't have much ventilation at first, but later on it got better.

That was on the way in?-- Yeah.

Now, what about during extraction, did you have any particular feeling about the panel in comparison with other panels?-- Oh, no, it was just that it was extracted a bit different to other panels.

That is in terms of the way you extracted the pillars on the retreat; is that right?-- Yeah.

Okay. Just turn to your right and you will see up on the whiteboard there a plan showing just that 512 Panel. Are you able to orientate yourself with that document?-- Yeah.

Okay. Now, I want to ask you about an occasion during extraction of 512 around about the middle of June when Reece Robertson was the deputy. Do you remember that?-- Yeah.

And he stopped work in the section. That's the occasion I am asking you about?-- Yeah.

Can you tell the Court about your memory of events on that day?-- Oh, well, we got down there to start a shift and Bobby Newton said he had a problem with gas.

If you can keep your mouth reasonably close to the microphone?-- Sorry.

I know it's distracting, but it's so that everyone in room can hear you, you see?-- And I went off down to the miner to take over from the miner driver. I don't know really where that was on the plan.

Are you able to say approximately where the work first was at that point?-- Not really.

Had you just begun a retreat or were you halfway through the retreat?-- About halfway back.

Okay, that will do. What else happened?-- And I started cutting the coal and Reece come down and said he had gas backing up to the crib table and put the miner back, shut it down and go back to the crib table.

Did you do that?-- Yeah.

And what happened when you got back to the crib table?-- Oh, well, Reece asked me to come with him and go down the top return and check it out, and as we were walking back up the final door that goes down the return Mark McCamley and Allan Morieson turned up and we all went down together.

So the four of you went?-- Yeah.

If you pick up that laser pointer there, can you just indicate on that plan of 512 Panel where you went?-- Well, we went through this door here and we walked down the bottom. We took readings on the way down with -----

Who took the readings?-- Oh, Reece and Mark McCamley.

Just pause a moment if you would, Mr Edelman. Before you went down the top return with Reece Robertson and the others did you go somewhere with Reece Robertson?-- Oh, we went from the crib table - we walked down this way a bit to the goaf edge and it was hot and musty, and we didn't want to walk that way any further.

It was quite musty?-- Yeah.

When you say "musty", you smelled a musty smell; is that right?-- Yeah.

Had you smelt that kind of smell previously in the goaf?-- No, not really. I haven't walked through the goaf before.

Okay. Anything else that you observed when you were at the goaf edge with Reece Robertson?-- We were getting over 1 per cent methane in his readings, and we didn't want to walk down that way - well, we couldn't get up to the back to the doors 'cause there were big cams where we took the bottoms and we couldn't climb up them, so that's when we walked back up this way and we got to this door, and that's when Mark McCamley and Allan Morieson met us.

So you went through the door, I think you are indicating there in 3 cut-through?-- Yeah.

And the four of you set off down the No 1 heading?-- Yeah. Yeah, we took - oh, Reece and Mark took readings of CO, CO2 and methane as we walked down there. We walked down and across the bottom.

Across the bottom. That's right along cross-cut 13 then?-- Yeah.

What do you recall happening when you were down there?-- Well, we were checking out the bag stoppings and Allan Morieson said that those - the doors in the bag stoppings should have been up and they weren't.

Which bag stoppings are you talking about there?-- Those ones.

The ones you are indicating are in the roadways?-- Yeah.

2, 3 and 4?-- Yeah.

And 5 in fact?-- 1, 2 -----

At that point, between 12 and 13 cross-cut; is that right?-- Yeah.

Now, your memory is that he said those stoppings should have been up, that is, there should have been openings in the panel?-- Yeah, should have been openings so the panel could bleed off.

Well, were you actually with him at that time or is this something that he told you about?-- No, we were with him then. Then we walked back up this way.

Just pause a moment. Before you go on to that, what did he then do in relation to those stoppings between 12 and 13?-- He didn't do nothing while I was with him, and - well, Mark and Reece started walking - went through that door there and we started walking up that way taking readings again.

Mark and Reece went through the door in No 2 heading?-- Yeah.

And walked outbye?-- Yeah, and I went with them, and Allan stayed behind.

He stayed back in No 13 cross-cut?-- Yeah.

Okay?-- And we got up to here and we got readings. Mark McCamley went over - there was a fall there.

There was a fall in 7 cross-cut?-- Yeah, a roof fall, and he went over there and took readings there. Then Allan caught up with us, and I surmised that he lifted those bags up, doors, because it was clearing, the readings were coming down.

So there was then a flow of air passing through the area where you were at about No 7 cross-cut?-- Yeah.

In No 2 heading?-- Yeah, you could feel it cooling down a bit.

The fall that you referred to in No 3 heading, what can you say about the size of that?-- Oh, it's fairly big. From what I remember it went down kind of like that.

Now, you say Mark McCamley took some readings there. Did you have any conversation with him about what was happening?-- Well, I didn't really, but Reece and Mark were talking, general talk, and I remember Mark saying that this could be the start of a heating, possible start of a heating, there is something definitely going on here.

Okay. What happened then?-- Oh, we just came back out and found that it all cleared at the edge of the goaf, and Allan come back up and that bleeder heading, he said it should be

closed off, so he took a couple of fellows from the crew and they went up and closed it off.

Closed off. That's in fact number -----?-- No 6.

No 6 it would have been at that stage; is that right?--
Yeah, that one.

Where did they close that off?-- At the regulator they said. I didn't go with them, so they just bagged it all off.

When you say they cleared at the goaf, were there some more readings taken at the goaf edge?-- I don't recall.

Okay. Now, anything else then that occurred before you finished your shift?-- No, it seemed to clear and we just starting cutting.

Then the following day were you back on shift there again?--
Yeah.

What happened that day?-- Oh, because the crews swap over at the face we have a conversation with the miner drivers, and apparently they had a bit of trouble with backing up the gas again and there was concern. They ended up putting segregation stoppings in between No 2 and 3 headings on that roadway, so after they did that they seemed to have no trouble with it.

That's in 2 and 3?-- Yeah, roadway.

Cross-cuts?-- Yeah.

In 2 and 3 roadways?-- Yeah.

Just at what point are you indicating there on the plan?--
Well, when these pillars are full in between there and there, the belt road and the supply road.

All right, in 3 and 4 cross-cut?-- Well -----

They were still full pillars; I see what you mean?-- All the ones to the crib table past where we were cutting at the time.

What was the effect of those segregation stoppings? Where did they direct the air?-- Probably equalised the air out more and it pushed it straight down the roads.

Between 2 and 3 headings?-- Yeah.

Okay. Now, did you work the afternoon shift on Friday, 5 August?-- Yeah.

What were you doing that day?-- Oh, getting all the machines out of the section.

You had finished taking coal from the section at that stage?--
Yeah.

Now, were you there when Mick Caddell, a deputy, and Craig O'Brien, one of the experienced miners, did an inspection?-- Yeah.

Down the top return on that shift?-- Yeah, I was.

You didn't go with them?-- No.

Were you talking with Mick Caddell after he came back from the inspection?-- Yes, I was.

What conversation did you have with him?-- Oh, he was concerned. He reckons he smelt a tarry, benzene smell down there, and he said he rang Michael Squires up and said it should be sealed as quick as possible.

All right. Did he make any comparison between that smell and any other smells?-- He said something about No 4, it smelled like No 4.

You continued to get the gear out; is that right?-- Yeah.

And most of the gear was taken out of the panel that afternoon?-- Yeah, it was.

Okay. Now, the following week, the following Tuesday after the first explosion, you were there as part of the Mines Rescue team; is that right?-- Yes, I was.

I don't know that I asked you this, but you had been in Mines Rescue since 1986; is that right?-- Yeah.

Now, you witnessed that second explosion; is that right?--
Yeah, I -----

Whereabouts were you at the time?-- We were driving down to
monitor the boreholes out in the paddock.

Who were you with?-- Clive Russell.

What did you see?-- Well, we were driving along. I don't
know why, but I glanced over my shoulder and saw a plume of
smoke start to come out of the shaft and I said to Clive, "We
don't have to bother about monitoring now, look at this.", and
then we realised there were two fellows there monitoring so we
raced back to see if they were all right.

That was back in the fan area?-- Yeah.

One of those was Allan Morieson; is that right?-- Yeah.

And how long did you see this smoke coming up out of the fan
shaft?-- For about 30, 40 seconds.

That was black smoke?-- Yeah, it was black. Then it went
greyey white and then just nothing, just stopped.

The greyey white smoke continued for how long?-- About
10 seconds, I think.

Then all the smoke stopped coming out?-- Yeah, and I saw the
plume of smoke going over the bathhouse behind as we were
driving back.

That was from the area of the cut?-- Yeah.

Okay. I have no further questions of Mr Edelman, Your
Worship.

CROSS-EXAMINATION:

MR MacSPORRAN: As I understand your evidence you speak of
one occasion in the working life of 512 that something
happened, in about June?-- Yeah.

Is that so? As you recall it, it was only one occasion that
those events all took place?-- Yes.

There were not two separate occasions?-- No, that was the
only time I remember.

And the occasion you speak of was the occasion involving
deputy Mark McCamley?-- No, he is the undermanager.

I beg your pardon, the undermanager Mark McCamley; Allan
Morieson?-- Yeah.

Yourself and Reece Robertson?-- Yeah.

So, whatever happened happened in about June on one occasion involving those people, as you recall it?-- Yeah, that's right.

What you recall about that is that the actual process of extraction was stopped because of a gas build-up?-- Yeah.

And you had learnt something about that from the previous shift's deputy, Bobby Newton?-- Yeah.

Had you spoken to him yourself?-- No, but I heard him say it to Reece as we got out of the Rover.

It was a conversation between the deputies changing over shift?-- Yeah.

What exactly did you hear Mr Newton say to Reece about the problem?-- He just said he had a problem with gas.

Did he say where?-- No, that's all I remember him saying.

In any event, shortly after that the mine was shut down and you retreated to the crib room?-- Yeah.

Whereabouts was the crib room at that stage; do you recall?-- I can't recall for sure, no.

Around about 5 cross-cut?-- Yeah, could be. Yeah, about half-way back, yeah.

In any event, you went back to that area and spoke about what you should do?-- Mmm.

Was there any conversation about any reason for the gas build-up or what was happening?-- No, there wasn't.

Had you ever encountered such a situation before in 512?-- No.

Had you heard of any such situation occurring before in 512 from talking to your workmates?-- No, that was the first time I have heard of it.

Before you carried out the inspection with the deputy you walked to the goaf edge?-- Yeah.

And you smelt what you called a musty smell?-- Yes.

Had you ever smelt anything like that before?-- No.

Can you compare that with anything?-- Well, I said to Michael Squires later on it smelt like a toiletry smell, like a toilet.

Right, a musty toilet?-- Yeah.

It certainly wasn't something you had smelt in the mine

before?-- No.

Had you ever had any experience with a heating taking place in a mine?-- No.

Had you ever been given any instruction or training about a heating underground?-- No, I haven't.

Do you know what a heating is - sorry, I should ask you: did you know what a heating was at the time back in June of this year?-- Oh, not really, no.

All right. You went on the inspection with the undermanager and the deputy and Mr Morieson?-- Yeah.

You weren't recording any readings yourself, you could see they were taking readings?-- Yeah.

Now, you say there was a fall at about the area of 7 cross-cut and No 3 heading?-- Yeah.

Now, I think you demonstrated on the map - on the whiteboard there the size of that with the laser pen?-- Yeah.

Can you just do that again, if you would, but just describe the areas you are pointing to as the size of this fall as you go?-- Oh, well, it went across there, across that corner, off down that way, kind of thing.

So, you are indicating between which cross-cuts?-- It was the belt road - well, that used to be the belt road.

That's 3 heading, is it?-- 4 heading, yeah.

4?-- Yeah, it was across 3 heading in that 7 cross-cut there, like there, yeah.

What are you saying, it extended between 3 and 4 headings at about 7 cross-cut?-- Yeah, that, and in around there too.

That's - is that at about between 7 and 8 cross-cuts?-- Yeah. It went into 8 cross-cut a bit, it went down - it was a fairly big fall.

What size does that make it if you pointed out on the map those cross-cuts? About how big is that roof fall?-- It could be around 30 metres long.

What sort of height from the floor are you talking about -----?-- Well -----

Was the pile?-- Oh, about 2 metres high, I suppose.

You could clearly see that?-- Yeah.

You - that's where Mark McCamley went to inspect?-- Yeah.

Do you know from work you had been doing in the panel when that fall had occurred?-- It was on dog-watch.

What is that, the -----?-- Night shift.

11 till 7 in the morning?-- 7 in the morning, yeah.

What, the dog-watch the day before?-- No, it would have been a couple of weeks before. We were back up here somewhere.

You are back around - just so we know where you are pointing?-- About 5.

About 5?-- Somewhere around there, yeah.

You think that fall had occurred a couple of weeks earlier?-- Yeah.

You had seen it there on your shifts in that couple of weeks all the time, had you?-- Yeah.

Now, that was the area where McCamley, after he had inspected it, said to you there was definitely something going on?-- Yeah.

He actually mentioned the word "heating", did he?-- Yeah, he said a possible heating.

A possible heating?-- Yeah, or a start of a heating - a possible start of a heating.

He said that to you, did he?-- No, he said it in general conversation between Reece and I.

Did you ask him what he meant by that?-- No.

Was there any conversation between McCamley and Robertson about what they were discussing about the heating?-- No, I don't recall. I don't recall what they said. They might have kept talking.

Was there any conversation about a smell associated with a possible heating at that time?-- No - I don't remember.

Did you smell anything yourself at the time?-- No, only that musty smell at the start.

That was earlier?-- Yeah.

Do you remember either McCamley or Robertson asking you at any stage whether you smelt something, "Could you smell that?", or something like that?-- Reece, at the start when we went to the goaf, but - you know the goaf edge, but not at any other time.

So, you remember Reece asking you that earlier when you had gone to the goaf edge?-- Yeah, he said, "Can you smell that?", and I said, "Yeah."

That's the musty smell you told us about?-- Yeah.

That was the only occasion you smelt anything that was unusual?-- Yeah, and on that inspection.

There was no other inspection with Robertson where he asked you if you had smelt something unusual?-- Yeah, there was one other inspection before then. I just got them muddled up.

I see, all right. So, before the inspection where you smelt the musty smell there had been another inspection where you smelt something different?-- Oh, it wasn't too much different, but we did just a routine inspection that day and -----

Now, when in relation to the musty smell inspection was the other inspection? I mean, was it the shift before, was it days before?-- It would have been days before, a week. It could have been a couple of weeks before.

But you remember there being an inspection where Reece asked you whether you could smell something unusual?-- Yeah.

Whereabouts were you in the panel when he asked you that on that occasion?-- I wouldn't have a clue.

Was it anywhere near the goaf edge?-- No, we were up in the return walking back.

You are indicating the top return?-- Yeah.

Walking?-- Walking back.

Inbye out of the place?-- Yeah. Oh, this was all extracted still and we done an inspection down around the bottom. We were walking back up. We come past one stopping and he said, "Do you smell that?", and I said, "Yeah, I can." He took readings there, but I don't remember readings and I think he rang Michael Squires up about them afterwards.

Now, as you remember that, that was before the inspection where you smelt the musty smell at the goaf edge?-- Yeah, it was.

Could you be confused about that, about the timing of that inspection?-- No, they were separate.

They were separate, but in terms of which one occurred first, are you sure about which one occurred first?-- Yeah.

Which one was that?-- That inspection - that routine inspection, we just walked down and back up, was first and the second one was that one where I smelt that musty smell near the goaf edge.

Are you sure on which occasion it was that the miner was shut down and withdrawn from the face?-- Yeah.

Which one was that?-- That's the one where the musty smell - when I walked to the goaf edge.

Now, you know where it was, which cross-cut, that Reece stopped and asked you whether you could smell that smell?-- No, I can't recall that.

Could it have been the area of 7 cross-cut?-- No, I don't think so. I think we weren't that far back in the extraction at the time.

You think it was closer to - it was further outbye than 7, do you think?-- It was further in that area.

You are indicating down around 11 or 12 cross-cut, are you?-- Well, 9, 11, yeah.

Around 9 to 11, that area?-- Yeah, I think so.

That was with Reece Robertson?-- Yeah.

Was there anyone else present when you conducted that inspection?-- No, it was just us - just Reece and I.

In any event, when he asked you on that occasion whether you could smell anything you did smell something?-- I can't recall. Not - I didn't take much notice.

From what he said he had smelt something, had he?-- Yeah, yeah.

He asked you whether you had smelt the same thing?-- I just said, "Yeah, I can smell something."

You can't now tell us?-- No.

What it smelt like?-- No, I can't.

It was different to the musty smell you later smelt?-- Yeah, it was.

You think on that occasion Reece Robertson reported -----?-- Yeah.

That to Mr Squires?-- Yeah.

How do you know that?-- He told me.

He told you he was going to report it?-- Yeah.

On that occasion did he say anything about a heating or a possible heating?-- No.

Now, in your statement you refer to the inspection where the musty smell occurred in about June?-- Mmm.

Then you talk about Friday, 5 August in your statement?-- Yeah.

Were you working in the 512 Panel between June and 5 August?-- Yes, I was.

On a regular basis?-- Yeah.

And I take it, what, you noticed nothing unusual on any other shift than the ones you have reported on?-- No, I didn't.

Nothing unusual at all?-- No.

Did you hear anyone talking about any unusual occurrence or observation they had made in respect to the panel in that time?-- Oh, only those other shifts having that gas come back and where - that recirculation stopping, that was the only thing.

They were the shifts fairly soon after you had smelt the musty smell?-- Yeah.

Were you working in the mine for all of that time?-- Yeah, I was.

Part of the method of extraction of 512 involved taking the bottoms?-- Yeah.

Ramping in to do that?-- Yeah.

Each time you do that would there be left a pile of coal you couldn't retrieve?-- Yeah, that's true.

What sort of amount of coal were you leaving behind each time you would ramp in?-- Oh, it all depends. Sometimes we left a fair bit because the miner would get bogged and you couldn't go and get it.

Was that a regular occurrence, that the miner would get bogged when you were ramping and you couldn't retrieve the coal?-- Only at the start of the panel. We had difficulty getting down that area because there was coal ----

That's down around 11, 12 cross-cut?-- Yeah, when we were ramping down that way coal is very soft and the miner would just go through it.

So, right down the back of the panel you had most trouble ramping because of the bogging of the miner?-- Yeah.

So, you would leave most - that's where most of the coal you couldn't get was left?-- Yeah. As we come back we were leaving coal still in the ramps and that, but not as much.

Not as much. Can you give us some idea of the quantity we are talking about? What about in terms of a shuttle car full of coal? What sort of quantity were you leaving behind?-- Oh ----

Just roughly?-- About four or five shuttle cars after every ramp because you would leave about that high up off the ground where the last ramp was.

So, those piles were simply left in the panel as you retreated?-- Yeah.

There was no way they could be cleaned out?-- No, not unless we went illegally and got it.

And you obviously weren't going to do that?-- No.

The plan was to take the bottoms and then retreat and leave the loose coal?-- Yeah.

In the panel?-- Yeah.

Were there a set number of piles that you left behind on each cross-cut?-- No.

Because of the number of ramps you made?-- We had limits on - like, we could only go back - go 20 metres in the pillar and ramp over so the shuttle car drivers didn't go over the 3 metres.

But how many ramps would that be per cross-cut?-- Two in a pillar.

Whenever you did a ramp you would leave a pile?-- Yeah.

Thank you, Your Worship

EXAMINATION:

MR MARTIN: A few questions, if you would, please. Just so that - it is very hard to describe a smell, I suppose, particularly if you haven't smelt it before. Is the mustiness associated with a sweetness, a sweetish odour?-- No, no.

On the first occasion that Mr Robertson smelt it is there any doubt he said that he was reporting it or had reported it to Squires?-- He said he was going to report it.

The description you gave Mr Squires was that the smell you smelt smelt like a toilet?-- Mmm.

When did you tell Mr Squires that?-- When he come down for his inspection.

On that day?-- Yeah.

I think you've said that Mr McCamley was the undermanager?-- Yeah.

Now, on that day in June it was possible to get from right down roadway No 1, wasn't it?-- Yeah.

To cut-through 13?-- Yeah.

Were you able to observe the position thereafter right up to the last occasion you worked there? Did it remain so that you could get right down cut-through 13 down No 1 road?-- Right up to the end of the section?

Yes. If you don't know, say so?-- I wouldn't know.

I would just like to take you to some more general questions, if you would, just a little of your background, please Mr Edelman, before you started at the mine. You are now aged 30?-- Yeah.

You started at the mine at age 20 -----?-- 18.

At what age did you leave school?-- 15.

What grade was that?-- 10.

Did you finish 10?-- Yeah.

What did you do briefly, if you would, after you left school and before you started at the mine?-- Went on -----

Just a few instances?-- Went on cattle stations.

When you came to work at Moura No 2, what induction did you get before you went underground? How long was it?-- A week, I think - two weeks it was.

Was that on the surface?-- Yeah, it was.

Were you given at the end of the time any document or any book or - a red book? You don't remember now?-- Safety rules, I think. One book. Tagging procedure, I think.

Beg your pardon?-- A book on tagging procedures.

Might I ask the witness to look at the exhibit which is the red book and see whether he remembers ever seeing it? The red

and the blue if you would, please. They are the very small books.

Do you recall receiving that book or anything like that?-- Never seen it before.

What about a blue book? Just say if you have ever seen that before. 24, I think it is?-- No, I haven't seen that one either.

Is there any doubt that this is the position and has always been the position at Moura mine where you worked, that there was a definite chain of command and the miner received his instructions and orders from perhaps a deputy or not? Did you get your instructions on the surface from the undermanager?-- Yeah, we get our instructions from the undermanager.

But on occasions, I suppose, from people superior in the pecking order to the undermanager?-- Yeah.

Like Mr Abrahamse, for instance?-- No.

Mr Mason?-- Yeah.

Mr Schaus?-- Yeah, perhaps.

Before you went underground at Moura do you recall receiving any training in spontaneous combustion?-- No.

You don't recall or you didn't?-- No, we didn't.

Since going underground at Moura, since, have you ever had any course of training or instruction in spontaneous combustion?-- No, I haven't.

Not that you know of anyway?-- No.

Have you ever seen posted outside the mine any graphs of a CO make?-- Not in our mustered area.

At all then?-- I have in the deputy's cabin.

Did they mean anything to you?-- Not really, no.

Do you know anything about the gas detection systems at the mine other than that they exist?-- Not really, no.

Is there any point in my asking you about the operation of the probeye or its purposes?-- I've only read it in a book.

What you have read, I suggest, is that it's an instrument which can be used to detect heating?-- Yeah.

Is that all you know about it?-- Yeah, that's all.

I suppose you know that the Bowen basin coal is gassy?-- Yeah.

Did you ever know that it had a capacity to ignite

spontaneously?-- Yeah.

Did you know much about that?-- Not really, not until 1986.

Do you mean that incident in April 1986?-- Yeah.

In consequence of that incident did you know much about it?-- No.

Other than the fact that it can happen?-- Yeah, that's right.

What were you taught at Mines Rescue?-- We were taught gasses and how to use instruments and detection of gasses.

What instruments were you taught?-- Sifor tubes, minders

What was the tube you mentioned? What tube?-- Sifor tube.

Minders, anything else?-- Anemometer for ventilation surveys and hygrometers.

Anything else you recall?-- BA5.

Sorry?-- BA5.

I don't know that term?-- It's for ventilate surveys too.

My learned friend Mr Macsporrnan asked you about loose coal on ramping, very significant quantities; do I understand you to say that two or three shuttle carts on occasions -----?-- Yeah.

In a particular ramp?-- That was a fairly regular occurrence all the time.

I have nothing further.

WARDEN: Thank you. Mr Morrison?

MR MORRISON: Thank you, Your Worship.

CROSS-EXAMINATION:

MR MORRISON: Mr Edelman, you were a miner driver in the 512 Panel from the start, weren't you?-- Yes, I was.

Were you a miner driver on development as well as extraction?-- Yes.

When you came to extraction there was an agreed sequence plan for how you would take the pillars?-- Yeah, there was.

You as a miner driver and some of the other miners were involved in working out that plan?-- Yes, we were.

XXN: MR MORRISON

WIT: EDELMAN G C

It involved a two side stripping of pillars and taking one pillar row and then leaving a row, taking the next?-- Yeah.

And the miners themselves such as you were consulted about that plan?-- Yes, we were.

In particular about the safety aspects of that plan?-- Yeah, they had a committee for the safety of it.

There was some identification of the risks involved in that sort of extraction?-- Yeah, there was.

In particular injury to people from spall from the ribs?-- Yeah.

The consequence of all that was there were a number of fairly strict rules laid down for this extraction, weren't there?-- Yes, there was.

For instance, the shuttle car driver was not to go beyond a three metre rib height?-- Yeah.

About three metres is the normal drive height, isn't it?-- Yes, it is.

And as well the miner driver, you, were not to go beyond a certain point yourself?-- Yeah, that's right.

And the continuous miner was operated by remote?-- Yeah.

in fact at the start of extraction in 12 - 13 cut-through you took some bottoms there, didn't you?-- Yes, we did.

And didn't Mr Schaus come down and get stuck into you for doing that?-- No.

Didn't Mr Schaus get stuck into the miner drivers for taking bottoms in 13 cross-cut?-- He didn't get stuck into me anyway.

Not you, but you understand he got stuck into someone for doing that?-- Yeah.

There is no doubt about that, is there?-- No, that's right.

Everybody was very conscious of obeying the rules?-- Yeah.

Particularly you?-- On our shift we were, yeah.

Sorry?-- On our shift we were.

At one stage the miner drivers or the miners proposed a change in the sequence, didn't they, thinking in particularly the bottom return, the way in which ramping was done in the bottom return?-- Driving back up towards the regulator, yeah.

The original plan was that ramping would be done in one direction and in particular the miner drivers wanted to try

doing it in the opposite direction?-- I didn't have any part in that.

Didn't you?-- No.

Did you in fact do a sequence where you ramped in the reverse direction in the bottom return?-- Yes, I have.

That was the only occasion of that wasn't it?-- We did it a couple of times.

There was one set sequence of ramping?-- Yeah, uphill, yeah, one.

And then it was back to normal?-- Yeah.

For that one sequence where that mining direction was changed in the bottom return the ventilation had to be changed too, didn't it?-- Yeah.

In order to make sure that the ventilation was going over the miner driver in the right direction?-- Yeah, that's right.

Do I take it from what you've been saying earlier that you have no clear memory of where you were in terms of extraction at the time this incident with McCamley and Morrison and so forth happened?-- No, I can't remember.

Can I show you a document that might assist you to remember? I think when you look at the book you will realise that is a book of the approved sequence plans by the undermanager in charge?-- Yeah.

Does that show you that you would have been at about sequence 17?-- Yeah. What, mining at that time?

You were mining 17 or 16 at the time?-- Would have been mining 16.

16? Let me show you another one that will help. That's Reece Robertson's deputy report for that day. Do you see I have highlighted in yellow where he says you were mining, sequence 16. Do you see that now?-- Yeah, I see it.

Do you agree with that, sequence 16?-- I suppose, yeah.

Sequence 16 would place you just inbye cut-through 5, wouldn't it?-- Yeah. Yeah, that's right.

So can we take it from that that the crib room would have been one or two pillars outbye cut-through 5 and in the supply road?-- Yeah, that's right.

Can I just have that document back for a sec? I'm sorry, I might have misled you. 16 is just inbye cut-through 7. I think I said 5. Can you just check to make sure that's right?-- Yeah.

It's just inbye cut-through 7, isn't it?-- Yeah, that's

right.

On 17 June it's fairly clear that that's where the working face was, just inbye cut-through 7?-- Yeah.

And in between or pretty much in line with roadway 4?-- Yeah.

Thank you. You can hand those documents back. So having established that the crib room at that time would have been somewhere around 6 or 5 cut-through in No 2 roadway?-- Yeah.

That being the supply road. On that basis the fall that you noticed couldn't have been in cut-through 7, could it?-- Well, not at that time, no.

You hadn't got across to mining that sequence in the 3 roadway?-- No.

Where was the fall then do you think? Was it further inbye, do you think?-- Yeah, would have had to be there somewhere.

I think you indicated before with the laser that the fall previously was effectively commencing in about - in between the No 2 and No 3 roadways and then spreading into the belt road?-- Yeah, I think I said there. It would have been somewhere there then.

So we are in fact talking down about -----?-- Nine.

9 cut-through?-- Yeah.

That's where the goaf edge was?-- Well, yeah, the goaf edge would have had to be back here somewhere.

Slightly inbye cut-through 7?-- Yeah.

When you arrived to do that shift where Robertson stopped production you in fact met the outgoing crew down there?-- Yeah.

That's a hot seat change?-- Yeah.

That's what it's called where one deputy takes over from another in the panel itself; is that right?-- Yeah.

You'll have to respond verbally so these ladies can hear what you are saying. The deputy's report book would be in the crib room?-- Yeah.

That's where one deputy would sign off and the other one write in his inspection report?-- Yeah, that's right.

And the deputies would meet there for the changeover?--

Yeah.

And usually, if not always, they would exchange information about what had just happened on the shift?-- Yeah.

Where they were, any problems that were occurring, that sort of thing?-- Yeah, that's right.

And, likewise, oncoming shift members would talk to outgoing shift members and the same sort of thing would happen?-- Yeah.

You know, you would hear, "How is the panel going?" "Well, this is happening, that is happening."?-- Yeah, that's right.

"The miners bogged down there.", and so forth?-- Yeah.

So there is a fair exchange of information between one shift and the other always, isn't there?-- Yeah.

About the condition of the mine, the condition of the mining, the condition of the machinery and so forth?-- Yeah.

And there is no chance in that. On a hot seat change there is always that exchange of information, isn't there?-- Yeah.

And to some extent the same sort of thing happens if there is a change on the surface, outgoing deputies talk to incoming deputies?-- Yeah.

And even shift members themselves talk to who is coming on?-- Yeah, they do, yeah.

And that's very much a routine thing?-- Yeah.

Now, you were obviously on the miner when Robertson came over and said to shut off the power?-- Yeah.

And isolate it?-- Yeah.

And for you and the rest of the miners to go back to the crib room and wait there?-- Yeah.

You obviously did that?-- Yeah.

Did Robertson wait with you?-- When we got to the crib table?

When you went to the crib table was Robertson waiting with you?-- Yeah, he was there.

Is that where McCamley and Morieson came to when they came down?-- No, we met them at two pillars outbye.

So from the crib table you and Robertson - he asked you to come and do an inspection with him?-- Yeah.

Did you go inbye first?-- Yeah.

Down to the goaf edge?-- Yeah.

You were walking down No 2 roadway?-- Yeah, that's right.

Did you walk into the goaf itself?-- No, only to the edge.

Is that where the conversation about smell occurred?-- Yeah.
Oh, I could smell it.

Well, you could smell it?-- Yeah.

There was this musty smell you have talked about?-- Yeah.

You mentioned, I think, in answer to one set of questions that - when you were asked to describe the smell you pointed out that you hadn't in fact been in the goaf before down there?-- No, I hadn't.

It's a fact, isn't it, that goafs have their own peculiar smells, don't they?-- Yeah, that's right.

And one goaf will smell different from another goaf?-- Yeah.
Oh, I don't know.

Each has a smell about it?-- Yeah, it has, yeah.

And unless you had experienced the normal goaf smell for 512, you couldn't be sure whether this was normal or not?-- Yeah, that's right.

So all you thought to yourself at the time was, "Well, that's just a smell."?-- Yeah.

Didn't strike you as being anything in particular either, just a smell?-- Yeah, that's right.

You went outbye on No 2 up to around about 5 cut-through, it must have been, where you met Morieson and McCamley?-- Yeah.

Two pillars outbye the crib table?-- Yeah, around there.

Okay. Now, how did they come to be down there, those two, did you find out?-- Reece rang them up about the methane that backed up to the crib table.

Now, when you went down to the goaf edge did Reece take any readings down there?-- Oh, I can't recall.

He would have had the instruments with him to do that obviously?-- Yeah.

He may well have done but you weren't aware of it?-- Yeah, that's right.

He certainly took readings around the crib table?-- Yeah.

And around where the miner was?-- Yeah.

Then when you met McCamley and Morieson at 5 cut-through, thereabouts, where did you go?-- We went into the return.

Through?-- Through a door.

Well, was it the door at 5 or the door at 3 cross-cut? You said 3 before but that may not be right?-- Well, that's 'cause I couldn't - there is no door written up on 5.

Oh, right. Did you walk outbye to find a door to go through?-- Yeah.

And all four of you went through?-- Yeah.

And then down the return?-- Yeah. Oh, they took readings when we got into the return.

So that's in the top return at about 3 cut-through, some readings there?-- Yeah.

Is that just Robertson or McCamley as well?-- They both had Draegar tubes.

Was Morieson taking readings too?-- I can't recall.

Well, you certainly weren't?-- No.

Were you looking at what those readings were?-- Oh, I noticed one reading was 0.3 per cent of CO2.

Okay. Then you walked inbye down the top return, and I think you said they were taking readings all the way down?-- Yeah, they were continuously reading.

Okay. So that was right through to the back of the panel?-- Yeah.

So, in effect, you got readings the whole way down the top return?-- Yeah.

Or the group did, I should say?-- Yeah.

Not you personally?-- Yeah, that's right.

Was anybody discussing these readings?-- Oh -----

Not that you can recall?-- No.

Then at the back of the panel I think you said you walked across the back, No 13 cross-cut?-- Yeah.

As far as No 6 heading?-- No, you couldn't get down there.

As far as 5?-- Yeah.

And readings being taken all the way across there?-- Oh, I can't remember.

Were the stoppings inspected all the way across there?--
Yeah, they were.

They were in what condition, can you recall, open or closed or partly open?-- They were closed.

Was there some discussion as to how that might have happened?-- No, I can't remember any.

Might there have been a discussion about the fact that there was a roof fall that might have blown them shut?-- No.

You don't recall that, or did it not happen?-- Oh, that didn't happen, no.

Having got over to about No 5 did you then return back along 13 cross-cut?-- Yeah, to No 2 road.

What happened there?-- We went through the bag door.

Just pause there for a second. When you say "we", that's not all of you, is it?-- No, that's Reece, Mark McCamley and myself.

And Morieson stayed out?-- Yeah.

Could you have split up two and two?-- No.

Okay. So you three went in through the door at No 2 roadway?-- Yeah.

And went where?-- We just went up this road.

You walked up No 2 roadway?-- Yeah.

Through the goaf?-- Oh, we call it a goaf, yeah.

Well, that's the area that you didn't go down into earlier with Robertson?-- Yeah.

You stopped at about 7 cross-cut or 8 cross-cut?-- Yeah.

So you are now walking back up through that same area?-- Yeah.

And taking readings?-- Yeah, they were.

That's Robertson and McCamley both taking readings?-- Yeah.

Can you recall any particular discussion about what the readings were?-- Oh, they were just comparing their readings with the same tubes.

Each of them using Draegar tubes, each of them using a minder?-- Yeah.

At one stage did McCamley and Robertson go over to look at a fall area?-- Mark McCamley did. He went over to that fall we were talking about. It must be there.

So the likely fall there is somewhere around 9 cross-cut?--
Yeah.

And somewhere in the vicinity of the belt road?-- Yeah.

So McCamley peeled off to go and look at that, and you understood when he did so it was for the purpose of taking readings around it?-- Yeah, it was.

And he went by himself?-- Yeah.

Are you sure about that?-- Yeah, Reece and I stood in the intersection and waited for him.

Now, were further readings taken by Reece while McCamley was away?-- Yeah, he was reading - taking readings there too.

At that point in time had anything been done to any stopping?-- Well, I am only surmising that Allan Morieson lifted the bag stoppings, those doors at the back.

There was an increase in ventilation and you put that down to the fact that one of the stoppings had been open?-- Yeah.

Was there any discussion when the group split that that was what he was going to do?-- No.

Were you present when Morieson might have discussed with McCamley what might be done?-- No, I wasn't.

Did you have any idea what stopping might have been opened?-- No, I don't.

You can't recall there being any discussion as to which one might have been the intended one to open?-- No.

Was anything done to the stoppings along the back of the panel as you inspected up and then down?-- No.

Morieson rejoined you, I think you said, at about 9 cross-cut No 2 road?-- Yeah.

How did he get in there, did you see?-- He walked up the same road we did.

So, he came up No 2 to where you were?-- Yeah.

And while you were waiting for him to rejoin you were readings being taken still?-- Yeah, they were taking readings all the time with the Draegar tubes.

After the ventilation started the readings got better and better, didn't they?-- Yeah, dropped down.

Almost straight away?-- Yeah.

And continued to drop?-- Yeah.

And was there some discussion between the three of you while you waited for Morieson to arrive about how whatever had been done had solved the problem?-- Yeah, they were saying how - well, the hot air must have been just forcing its way back up these roads and opening these stoppings you - just more positive pressure coming down put -----

Sweep it out into the return?-- Yeah.

Whether it was a stopping at the back of the panel or a stopping on the side, say, at 12 cross-cut?-- I think out the back.

Out the back. All right. Now, the readings continued to drop?-- They stabilised, yeah. They come back down to normal anyway.

And the general view was that that was the problem solved?-- Yeah.

And you could go back to work?-- No, we got back to the crib table and they discussed - and they went and bagged that other bleeder heading.

Now, you are talking about the prep seal area of the bleeder return?-- Yeah. They went up and bagged it right off.

Now, who went and did that?-- Allan Morieson and I can't

remember the other two.

A couple of miners?-- Yeah.

Soon after that you went back to work?-- Yeah.

No more problems on your shift?-- No, not on our shift.

And on other shifts you worked on, no more problems?-- No.

You continued to work right through that area, didn't you, following the sequence plans?-- Yeah.

So, you were working as you came back across 7 cross-cut, then 6 then 5 and so forth?-- Yeah.

For quite some time till you finished the panel?-- Yeah.

On your shifts, no problem?-- No, we had no problems.

To your knowledge no problems otherwise?-- No.

Are you sure in relation to that inspection occasion that you didn't go off with Morieson at one stage to do something about stoppings?-- Yeah, I am sure.

You stayed with Robertson and McCamley the whole time?-- Yeah.

Except when McCamley went to the fall area?-- Yeah.

By himself?-- Yeah.

Well, one way or the other it is a fair comment, isn't it, that you got a pretty much blanket of readings down the top return, across the back of the panel and through a fair proportion of the goaf?-- Yeah.

In particular, around the fall area in the goaf?-- Yeah, just stopped there for a while.

When McCamley came back he didn't say he had got any particular sort of readings around the fall, did he?-- No, he just had the discussion we were talking about before.

There was some discussion between McCamley and Robertson with Morieson there about what to do?-- I can't remember.

Certainly some discussion you can recall about what might have been happening and what to do to overcome it?-- Yeah.

And then when that thing was done the fact that it had overcome it?-- Yeah.

Now, can we - can I just ask you, could it have been Robertson who went to bag off the bleeder return?-- No.

Definitely not?-- No.

Now, the only occasion you can recall, apart from that one

where you were present with Robertson on some form of inspection where there was something of note, and that was earlier in time than that one -----?-- Yeah.

That was an occasion when you were in the return?-- Yeah.

And had gone in with him down the top return to the back of the panel?-- Yeah.

Now, that was the normal inspection route, wasn't it, down the top return and across the back?-- Yeah, it was.

And that was kept in a condition so it would always be an inspection route to the end of the panel?-- Yeah.

So, on that earlier occasion you had gone in, nothing of any note on the way in?-- No.

It was on the way back out again that some comment was made?-- Yeah.

Now, bearing in mind we now know that on 17 June you were about 7 cross-cut, where might that other occasion have been then? Obviously inbye 7, but where? Do you have any idea?-- No.

Okay. Once again there was a smell that was just a smell to you?-- Yeah, that's right.

So I can understand, I am not sure I have made that note right about that, I think you - when you were answering Mr Clair you might have said that smell was not much different to the other one?-- No.

Mr MacSporran, it might have been?-- No, well, to me it wasn't much different.

Nothing greatly noticeable about it?-- No.

Now, as a Mines Rescue Brigade member you undergo more training than other members who aren't members of the brigade, don't you?-- Yeah.

The brigade regards itself pretty highly in terms of its training, doesn't it?-- Yeah.

Takes it very seriously?-- Yeah, it does.

To the extent of having competitions against other brigades?-- Yeah.

As to who is the best at this and who is the best at that. Have you participated in those competitions?-- Yeah, I have.

And one of the things you learn about as a Mines Rescue Brigade member is things to do with spontaneous combustion?-- Oh, not really, no.

You had some knowledge about what it was?-- Oh, I knew it was

like a heating coal.

Well, it was common knowledge, wasn't it, amongst the miners that, one, the D seam at Moura was a gassy seam?-- Yeah.

Two, that it was a seam that could have spon com in it?-- Yeah.

And, three, that what spon com was was it was heating coal?-- Yeah, caused by air or oxygen.

Coal oxidising?-- Yeah.

Now, so far as those elements we have talked about, would you say that was fairly common knowledge amongst all the miners?-- Oh, it would be, yeah.

Also that if you increased the ventilation over that hot coal you can cool it down again?-- Oh, not everybody would know that sort of information.

But you did?-- No, I didn't.

Let me just ask you about the ramps. In terms of the amount of coal left there, you agreed it was some shuttle carts worth. I take it you have never made that sort of calculation before?-- No.

If I said it was one as opposed to two or three, I mean, it is hard to tell, isn't it?-- Well, in one place it was one, in other places it was more.

Mostly what would happen when you put the ramp in you would leave a stub in, wouldn't you?-- Yeah.

Like a little V shaped pillar of its own?-- Yeah.

So, a lot of the coal that is left that you are taking into account was, in fact, solid coal, not loose coal?-- Yeah, that's right.

There would be some loose coal, perhaps, at the bottom?-- Yeah.

But the large bulk of it is in solid form?-- Yeah.

Let me take you back to the earlier occasion when you were with Robertson in the return, the first time we are talking about. He said something to you about he was going to report it to Squires?-- Yeah.

You don't know if he did or he didn't, do you?-- No.

He didn't give you any response from Squires?-- No.

On 5 August, that's the Friday, you were working in the 512 Panel pulling machinery out, weren't you?-- Yeah.

The extraction had in fact ceased that morning?-- Yeah.

You must have been working with - or you and other men working with an Eimco and an MPV?-- Yeah.

Pulling out the belt or is it -----?-- A boot end.

Sorry?-- The boot end.

So the machinery would have been working there fairly consistently that day?-- Through the dayshift they would have. Our shift the machines were breaking down a lot, so they weren't.

Were you on afternoon shift, were you?-- Mmm.

Which machines broke down, the MPV?-- When we tram the miner broke down, when we freed it the tracks were broken, so -----

There is a bit of difficulty about shifting stuff out?-- Yeah.

You were there when Caddell came down?-- Yeah.

You know who Caddell is, he's a deputy?-- Yeah.

And he came down and did he go on an inspection, did he?-- Yeah.

And he came back and said something about what he had observed or smelled?-- Yeah.

I think the words that you mentioned before were it was a tarry/diesel smell?-- Yeah.

As best you can recollect that's what he said, or is that -----?-- He said a tarry smell.

I ask you because in your statement you say it was a tarry - in fact it's spelled "tardy", but that's just a reflection on someone else, I'm sure - a tarry/diesel smell?-- I can't exactly say about a diesel one, but I know he said a tarry sort of smell.

When this statement was taken were people suggesting to you words he might have used? "Did he say this? Did he say that?"?-- No.

I'm just wondering why you said tarry/diesel then and tarry now?-- I don't know.

Is it likely your memory would have been better when this statement was done than it is now?-- Yeah.

Certainly you can remember "tarry"?-- Yeah.

Not those other things?-- No.

Just before you threw in a couple of others like benzene; you don't remember him saying that, do you?-- No.

You said that he told you that he had told Squires on the phone something?-- Yeah.

You weren't there when he rang?-- No.

Do you know where he might have rung from?-- The crib table phone.

Where were you when you had this conversation?-- We were sitting around the shuttle car.

He came over to you and said, "This is what has happened."?-- Yeah.

Now, you didn't think to go off and have a sniff of this yourself?-- No.

In fact you shouldn't be in the return at all, should you, without someone like a deputy?-- That's right.

That's a very strict ruling of mining?-- Yeah.

In fact you worked on the Saturday too, didn't you?-- No.

Did you do the Saturday night shift?-- Yeah, Friday night I worked through.

Sorry, we get into this terminology thing. In a chronological term it's the shift that starts about half past 10 Friday night?-- Yeah.

It's called on the mine the Saturday night shift?-- Yeah.

You worked that one so you in fact did a back-to-back -----?-- Yeah.

What were you doing on that shift, that nightshift? Still in 512 pulling machinery out?-- No, I was TA to the fitter.

That was in relation to the machinery at 512?-- Yeah, we had to get the miner going.

So you were down, around and in the 512 area?-- Around the area, yeah.

Just in the very outbye most parts of the roadways of 512?--
Yeah.

Because you couldn't tram the miner right out of 512
originally because it broke down?-- Out of the section we
were going along the road with it, yeah.

On that shift, that is to say the nightshift, you didn't
notice anything unusual around 512, did you?-- No, we didn't
go near the seals. We were just working on the miner. It was
about two pillars out from the seals.

You mean the prep seals?-- Yeah.

There were no seals in place at that time, were there?--
There was - no, they were working on the belt road one.

So did you go down to near where they were working at all?--
No.

Did you stay right away from there?-- Yeah.

Did anyone come and say to you anything like, "This has
happened" or "That's happened", "I've seen this. I've seen
that."?-- No.

So there is no indicator to you on that night of anything the
slightest out of the ordinary at 512?-- No.

After that nightshift you didn't come in over the next
weekend, did you?-- No.

Were you at the union meeting on the Sunday morning?-- No.

I have nothing further, Your Worship.

MR HARRISON: I have no questions, Your Worship.

WARDEN: Mr Parkin?

EXAMINATION:

MR PARKIN: Could you briefly tell me what your understanding
is on the methods of work when you are retreating? Could you
indicate on that plan on your right-hand side? In other
words, you've got the first pillars, you've developed all the
pillars in the panel and you are starting say in cross-cut 12.
Just give me your understanding of how the sequence would be,
please?-- If we started cross-cut - we start there and take
the bottom back. No, we'd start there, punch it, take the
bottoms and go around, take the bottoms out of there, come
out, strip half the ribs off there and then take the bottoms
and then come back, strip another lot off and leave it stooked
there and take the bottoms, come back around and take the
bottoms that way and take the stook off, come back up around

XN: PANEL

WIT: EDELMAN G C

here and strip half that pillar off, take the bottoms and strip off and leave that stook there.

So you do it half the time?-- Yeah.

Then you work your way through to the belt roadway?-- Yeah.

And then do the same from the other side?-- Yeah.

Have you at any time had any concerns, and I'm speaking in reference to 512, have you had any concern whatsoever in terms of the method of work or indeed the ventilation?-- No, I didn't actually.

The last point I'd like to ask you is have you had any concerns at all over the period of time with regards to a heating in 512 Panel?-- No, I didn't.

Or any concerns about the panel whatsoever?-- No, I didn't.

Thank you.

EXAMINATION:

MR NEILSON: Just a couple of questions, Mr Edelman. You last worked on the Friday afternoon shift on Friday the 5th?-- Yeah.

You didn't go back to the mine after that?-- No.

During the course of the weekend, say for example on the Saturday, did you have any cause to have any conversation or talk to any miners in the town about what might be happening at the mine?-- No, I didn't.

So you wouldn't have heard anything about concerns that there may be an atmosphere about to go through an explosive range?-- No, I didn't.

Just one other question, Mr Edelman, it probably won't be too relevant to the inquiry, but certainly important to me, I am concerned about the direction that miners might be going. You said that you told Mr Squires that the smell at the edge of the goaf smelled like a toilet?-- Yeah.

You didn't really use the word "toilet", did you?-- He suggested it was a toilety smell.

Thank you.

EXAMINATION:

PROF ROXBOROUGH: Mr Edelman, I think you said you started working at the mine at the age of 18?-- Yeah.

You became a continuous miner driver from my calculations at the age of 20?-- Yeah.

That's rather young for a miner driver, I would have thought?-- Yeah, they were short of miner drivers.

What did you do between the ages of 18 and 20?-- I was in crews, production crews and just general work around the mine.

In your 10 years of operating continuous miners would you

judge the coal that you have been cutting at Moura to be easily cut coal?-- Yeah.

Or is it hard coal?-- No, it's pretty easy.

It breaks up very readily, does it?-- Yeah.

And in the cutting of the coal does your machine on occasions encounter rock or stone?-- Yeah, on the roof, yeah.

Does that happen quite often?-- Only through faults and that.

And do you get a lot of sparking from the cutters when that happens?-- You do get sparks, yeah.

Tell me, when you are stripping the sides of the pillars on retreat do you set supports?-- Not in that panel, no.

You haven't set any supports in that panel at all. The remnant pillars as you are retreating, is there any evidence, in your experience, of them crushing, of breaking up as you are retreating?-- Not when we are cutting, no.

But the stooks, as you call them, they remain substantially intact, do they?-- Yeah.

MR ELLICOTT: I have no questions.

WARDEN: I have none.

MR CLAIR: Might the witness stand down, Your Worship?

MR MORRISON: I am sorry, there was just one question I wanted to clear up. I think it comes from -----

WARDEN: Thank you then by leave.

FURTHER CROSS-EXAMINATION:

MR MORRISON: Mr Edelman, when you did the Friday afternoon shift you did stay on and do the back-to-back doubler, didn't you?-- Yeah.

Thank you.

MR MARTIN: There was one question I would like to ask but I need to look at the board over lunchtime.

WARDEN: Okay. We can stand you down, witness, take the lunch adjournment and then get you back after lunch just for a very short couple of minutes?-----

Thank you, gentlemen, 2.15.

FXXN: MR MORRISON

WIT: EDELMAN G C

THE COURT ADJOURNED AT 1.02 P.M. TILL 2.15 P.M.

THE COURT RESUMED AT 2.15 P.M.

MR MARTIN: Thank you, Your Worship.

RE-EXAMINATION:

MR MARTIN: The only thing I wanted to know, Mr Edelman, was in relation to that plan number 45/18 there which is immediately to your right, the first plan on the board, the one you were talking about earlier today?-- Yes.

When were you last in that section?-- That Friday afternoon shift.

Would you just have a close look at the plan, please, and tell the Inquiry whether that reasonably represents the state, when you last saw it, of that section; in other words, is it accurate?-- Yeah, it looks accurate to me, yeah.

That's all I wanted to know, Your Worship.

WARDEN: Anything arising out of that?

MR MORRISON: No. Can I just mention one thing? It's nothing to do with Mr Edelman. That is document 110a is the approval plan for this panel and contains the detailed sequence of mining for ramping and bottoms that Mr Parkin was asking about. It may be better to see that than have the explanation we had before. 110a.

WARDEN: Thank you. Thank you, witness, you may stand down.

WITNESS STOOD DOWN

MR CLAIR: May it please Your Worship, I call Kenneth Mills.

MR PARKIN: Mr Morrison, I was just after the last witness's interpretation of it, his understanding of what the mining sequence was. Thank you, Your Worship.

WARDEN: While that witness is coming, there was a mention before about the statements of Russell and Coleman, 62/2 and

RXN: MR MARTIN

WIT: EDELMAN G C

62/3. My interpretation of them is that we have already heard that evidence from at least three witnesses and unless any of the parties require them called to repeat that evidence, we might dispense with their need to appear.

MR MacSPORRAN: I don't require them, Your Worship.

MR MARTIN: I haven't looked at them carefully but I don't require them, I don't think. I wouldn't mind looking at it overnight.

WARDEN: They say exactly what three have said in the witness box. If that's okay, we will make arrangements for them to be notified.

MR MORRISON: At this stage we think both those men can go.

MR HARRISON: I certainly don't require them, Your Worship.

WARDEN: Thank you, gentlemen.

KENNETH DOUGLAS MILLS, SWORN AND EXAMINED:

MR CLAIR: Your full name is Kenneth Douglas Mills; is that correct?-- That's right.

Mr Mills, you are a Mine Deputy at the Moura No 2 Mine?-- Right.

How long have you worked at the mine?-- 18 and a half years.

At Moura No 2?-- Right.

When did you become a deputy?-- 1981.

Now, you recall the explosion that took place, or that an explosion took place at Moura No 2 on 7 August of this year?-- Yes.

You have made a statement in relation to that matter; is that right?-- I have.

During the period leading up to that date you were working as a deputy in 5 South; is that so?-- That's right.

And you last worked on 4 August?-- I last worked 5 South on 4 August.

What did you do after that, that is, between 4 August and the 7th then, where were you working?-- 1 North-west, I worked there for 5 August and then I didn't go to work over the weekend.

Okay. Now, during the workings in 5 South did you make any observations of the ventilation in that panel?-- As far as

XN: MR CLAIR

WIT: MILLS K D

the - it was good, fair.

Any difficulties with it at all?-- No.

As part of your function as deputy did you take readings, gas readings, throughout the panel?-- That's right.

When you were on shift there, and in particular the methane readings, were they as you would expect or higher than usual?-- No, they weren't higher. They were fairly good.

And those readings you took were in the general body readings?-- Most readings would be at the face, after rib bolting, and during cutting operations you take them around - as close as you could get to the face.

Would you take readings near the roof and in the general body?-- Yeah, general body mainly. The roof when the seam is low enough.

I see. Was there any problem with layering of methane in that panel at all?-- No, I didn't strike any real problems. There was one incident that is in the statement.

That you mention in your statement?-- In the statement.

What sort of incident was that?-- It was an uphill drive, driving across cutting uphill, and there was gas coming from a previous drainage hole and layering up near around the face and, as I said, we got rid of that by putting some FRAS hose into the hole and bending it straight into the return.

Bending the hose?-- The hose went over the roof into the return bag and got rid of the layering.

I see. That cleared the problem up?-- That cleared the problem up.

Tell me, these methane drainage holes that were there in the panel, what steps were taken? I gather the methane drainage program was on foot before development into the panel; is that right?-- That's right, yeah.

And then as development progressed through the panel, what steps were taken in respect of the methane drainage holes that already existed through that area?-- They would vent just into normal ventilation, in the normal atmosphere. If there was a problem with one of them putting too much gas in, it was bagged or piped to the return.

When you say "bagged", what do you mean?-- Basically a bit of bag would be put up to stop it - to allow it to be broken up and then travel just with the normal ventilating air.

I see. Do you remember whether, in respect of 5 South in particular, there was any sealing up of the ventilation holes as development into that area took place?-- There was no sealing of the holes in this block of production.

Now, I would ask you, if you would, Mr Mills, to have a look at that plan that's on the left over there. Stand up and step up to it, if you like, because it's a bit small for you to see from where you are sitting in the witness box. You can see the 5 South panel there?-- I can.

And also the 512 Panel?-- Yes.

Can you see some red lines that emanate from the -----?-- From the panels, yes.

Yes, in particular from that part of 5 South panel which is, I think, just slightly inbye or about the point of where 510 panel goes off. Do you see that there?-- This here?

No, where 510 panel runs off 5 South. Yes, that's it, that junction there. Now, there was some methane, or at least some red lines that emanate from that junction across towards the 512 Panel; is that right?-- You are talking about these?

Yes?-- Yeah.

Now, they, we have been told, indicate the position of methane drainage holes?-- Right.

Are you familiar with that area of the mine there?-- Familiar with it in respect to -----

That is the position of those methane drainage holes there?-- Well, I couldn't say they were exactly where they were. I know there were holes there, yes.

Now, holes of that kind where methane drainage holes have existed across an area like that - perhaps you can sit down again, Mr Mills - what would happen with those as there was development into the area? Would they be sealed or -----?-- No, most of the time you just cut across them.

Cut across them, I see. Now, you say that this problem in 5 South was similar?-- Yes.

Apart from that in 5 South were there any difficulties in respect of accumulation of gases?-- No, 5 South was pretty good as far as that goes.

Now, did you ever work in 512?-- No. If I - I can't remember. If I did work as a deputy it would be on development only and that would have been rare. I was not the section deputy.

I see. Well, even rarely then did you work in 512?-- I can't recall.

You can't recall, okay. Now, you had mentioned earlier in your evidence that you worked on the Thursday, the following day, you worked in?-- 1 North-west.

The following day you were in fact rostered to - on the Saturday - were you rostered to work on the Saturday?-- No.

XN: MR CLAIR

WIT: MILLS K D

On the Sunday you were rostered to work -----?-- No, I wasn't rostered to work.

I see. Well, your crew was rostered to work on the Sunday?-- The Sunday night you are talking about, Monday shift?

Yes, the Monday, what we will call the Monday night shift that in fact starts late Sunday night?-- Yeah.

Well, were you rostered to work with your crew in 5 South?-- That's right.

Commencing late Sunday night?-- 10.15 p.m.

Now, you didn't work with the crew; is that right?-- No, I called in sick.

Was that something that happened frequently?-- No.

That you had to call in sick?-- No.

On this occasion when did you become aware of the fact that you couldn't go underground with -----?-- About 8 p.m.

Did you at any time have any concerns about going underground in the mine at that stage that night?-- No.

Had you been aware of the sealing of the 512 Panel?-- No.

The previous day?-- I wasn't aware.

Okay. Just bear with me for a moment?-----

I wonder if the witness could see drawing number 45/14, Your Worship, out of Exhibit 8, I think it is.

Just have a look at that, first of all, if you would. That plan there shows the mine, but in particular you can see the 5 South Panel and then the 512 Panel; is that right?-- That's right.

And if, for the moment, you assume what I have told you is correct, that is, that those red lines, broken dotted lines, indicate the position of methane drainage holes, is it true to say that there are two methane drainage holes that leave from the No 1 heading of 510 section just inbye this junction with 5 South?-- I see it.

See what I mean?-- Yes.

And across a perhaps west-south-west direction through the No 1 roadway or top return in 512 Panel; you see that?-- Yes.

And then they continue on through the area of the 512 Panel; is that so?-- That's right.

Okay. Now, you say that as a deputy you weren't aware of any

practice of sealing those holes, those methane drainage holes, as development took place, but rather they were just cut through?-- Yeah. Yes, generally they were. They used water in the development program of 5 South once on a previous block when the methane became - the methane was pretty high then in coming out of the hole.

How did they use the water?-- Basically injected water and held it in there to cut across the hole.

So the water would be pumped in and then the ends of the holes sealed?-- Yes.

At each end wherever it emanated from the coal face?-- Yeah.

I see. I have no further questions, Your Worship.

CROSS-EXAMINATION:

MR MacSPORRAN: You can't ever remember having worked in 512?-- No, I can't.

Were you involved at the 5 North or 5 North West panel at the time of the seal back in '91 - 1991?-- I was a deputy in 5 North West at one stage.

Do you remember an occasion when the - the occasion, I suppose, when the panel was sealed in September 1991?-- Yes.

Do you recall the circumstances in which that panel was sealed?-- I don't recall exactly when it was sealed, but I - I don't recall exactly the day it was sealed, no.

Do you recall why it was sealed, the reason?-- Well, the only reason I knew of was because of the roof conditions, possibility of falls, rib crush.

Was that a concern that became more apparent after the sealing process or was that the reason it was actually sealed in the first place?-- Well, that is what I understood the reason I understood it to be sealed at that stage.

Was that at a time when you had been working with your crew in that panel?-- I am not sure whether I was on holiday for the last couple of weeks of that panel.

Do you remember anything about the men being kept out of the underground after that panel had been sealed?-- Yes.

Did you have any involvement in the - that action being taken?-- Yes.

Can you tell me about that?-- I expressed concerns to management of the possibility of it going through the range and the frictional ignition - the possibility of friction ignition with the methane going through the range.

Right. Do you mean that after the panel was sealed at some point the gases inside would go through the explosive range?-- Yes.

That was to be expected?-- Yes.

And you had some concerns, did you?-- That at some point when that was happening there could be a source of ignition.

For that mixture?-- That's right.

What was your concern about the ignition source?-- Frictional ignition with roof falls.

Was it expected that there might be roof falls in that panel?-- It was - yes, it was certainly possible.

Was there any policy in relation to the mining of that panel in respect of keeping the men out when it went through the range?-- I don't know of any separate policy, no.

Were you aware of it ever having happened before, that the men were kept out when the gases went through the explosive range?-- In the earlier years, I can't recall which section, but there was a time when we did not go down.

That was you personally and a crew?-- No, I mean the full - the whole working, but I could not give you a time. This is the first time I, with a crew, stayed out, in September.

At the earlier time was that at No 2; do you recall?-- Yes, but I can't recall when.

Who did you approach with your concerns about going underground on that occasion?-- George Mason.

And was it his response that if you didn't want to go underground you didn't have to?-- Not to me. Originally it was - I think it was said to another person.

Part of your crew?-- No, I didn't have a crew at the time.

I am sorry. Well, you expressed your concerns to George Mason and he spoke to someone else about it, did he?-- I can't recall.

In any event, the end result was you didn't go underground?-- We didn't go underground.

For how long did you remain out of the workings?-- Thursday and the Friday.

Was that by arrangement with management?-- Yes.

Do you know who the manager was at the time?-- Phil Reed.

Did you speak to him yourself?-- After we had words when - on the Thursday.

And when had you first stayed out of the pit?-- From the start of the shift on the Thursday.

What was discussed with Mr Reed about that, between you and Mr Reed?-- I expressed a concern of - my concerns with frictional ignition, the possibility of an explosion behind the seals, and Mr Reed then decided that no-one would go down until the section went through the range.

You say you stayed out for two days?-- Two days I know of, the Thursday and Friday. I don't know what happened after that.

You tell us the next time you did go down it was at a time when the mixture was out of the explosive range?-- That's right, through the range.

And obviously the condition of the gases inside the panel were monitored for that period?-- Yes.

Do you know how they were monitored?-- On the Maihak system.

Do you know anything about the monitoring points inside that panel to monitor the progress of the gases through -----?-- I don't know where they were placed, no.

Whose job was it at that time with respect to that panel, that is the placement of monitor points behind the seals?-- I don't know.

You don't know. Was that the only occasion or the only two occasions you have spoken of now where you didn't go underground in respect of some concerns over the mixture of gases?-- I think so, yes.

You think that last occasion was about 1991?-- The last occasion with 5 North you are talking about was 1991, yes.

Do you know anything about the CO make for that panel at the time that you refused to go underground?-- No, no.

You don't know the details about that?-- I don't know the details, no.

Thank you.

EXAMINATION:

MR MARTIN: Just taking it from where my learned friend, Mr MacSporran left off, talking about 1991, do I understand you correctly that it was not a matter of your decision whether you could - had to take the men down or not or -----?-- I didn't have a crew at that time.

I beg your pardon?-- I did not have a crew at that time. I was a spare deputy.

What I am asking you is whether you had to consult the manager as to whether the men should go down?-- As far as I know the undermanager-in-charge was aware of the concerns and he more or less give permission that no-one - anyone that did not want to go down wouldn't have to.

Just a little of your background, if you would. You left school when?-- 1965.

What grade?-- 10.

I am sorry?-- Grade 10.

Did you do science subjects at school or not?-- Probably general science, I would say.

XN: MR MARTIN

WIT: MILLS K D

I beg your pardon?-- I can't really remember, but general science, I would say.

You became a deputy, what, in 1981, was it?-- 1981.

When did you actually start in the mining industry?-- 1976 in Moura.

And you were just the ordinary miner until -----?-- I was a fitter.

I beg your pardon?-- I was a fitter.

A fitter. Then you did your deputy's -----?-- I did.

Work. To become a deputy was it something like 20 weeks of course?-- It was, yes.

What, I understand, two by three hour sessions per week?-- For most of those 20 weeks, yes.

As a miner you just had an induction period of, what, a few days?-- Yes.

When you became a deputy or, indeed, before that, were you given any literature by your employer in relation, particularly, to spontaneous combustion?-- Yes, they did have a small book.

What was it? Did it have a colour?-- I can't remember.

Was it a red book or a blue book?-- I think it was a red. I have seen both, but I can't remember what colour it was.

Do you know when, if ever, you received a blue book?-- No, I don't know.

What is the order of things or what was the order of things, the chain of command: manager, underground superintendent, then downwards to the undermanager, then to the deputies, then to the miners; is that right?-- That's right.

So, the orders flowed, I suggest, from the top to the bottom?-- Yes.

What training, if any, or instruction, if any, did you receive in relation to spontaneous combustion before you became a deputy?-- I can't remember any.

In connection with you becoming a deputy?-- It is in the course, yes.

I beg your pardon?-- It is in the deputy's course.

To what extent? Tell us about it?-- They just explained the normal oxidisation of coal and how it went from there.

Is that about all you knew about it?-- Well, basically, yeah.

XN: MR MARTIN

WIT: MILLS K D

Since you became a deputy what, if any, courses or instructions or information have you been given by your employer in relation to spontaneous combustion?-- None that I can remember.

Apart from spontaneous combustion do you remember in recent years, say in the last four years, any course of instructions or up-to-dating of knowledge given to you by your employer?-- Just normal safety meeting talks.

Safety meeting?-- Just the talk, are you talking about, when the undermanager would do a safety meeting?

I just want to know what you remember?-- None other than just -----

Safety meeting?-- Safety meetings.

Just explain to me, if you would, what a safety meeting usually contains?-- Basically a safety meeting, from memory, is a - you will be given details on accidents, last lost time injuries, recommendations. There would also be a talk by someone on something like cutting width or manager's rules. That would be the gist of it.

As a deputy at the mine did you ever see any graphs posted up anywhere of CO make?-- There were graphs in the - posted, yes.

Did they have any significance to you?-- Mainly for information.

Did you understand them?-- You are talking about litres make?

Yes, I suppose so?-- Yes.

What did you understand it to mean?-- That it was - the litres were on the rise.

If they were on the rise?-- If they were on the rise or on the wane.

Where does your finesse of knowledge finish beyond knowing that litres rising means something?-- Well, we have been taught that once it gets above 10 litres per minute that it is starting to get into a danger zone.

This graph exists also, I take it, in the undermanager's office?-- I don't know.

You don't know. Do you know of the SIMTARS system at No 2 Mine?-- The Maihak system, you mean?

Indeed, the gas chromatograph system?-- I know it is there.

What do you know about the gas chromatograph system?-- Very little.

Were you ever trained on it?-- No.

How long has it been there?-- How long has it been there?

Yes?-- To my knowledge since '86. I don't know.

Since about 1986?-- I think so, yeah.

Do you know if the mine used it, management?-- No, I don't know whether they used it.

Do you understand or have a basic understanding of its purpose?-- I do.

What is it?-- It is to detect carbohydrates - carbohydrates in the - like, it will detect different gases in the section.

Does that really summarise what you know about it?-- Basically, yes.

Do you know who was trained to use it, if anybody?-- I don't.

Did it first arrive in No 2 after the 1986 explosion at No 4?-- I don't know. I can't answer that honestly.

Do you know about a device called a probeye?-- I have seen it, yes.

Where did you see it?-- It was in the gas analysis room.

That is where the Maihak is as well?-- That's right.

What do you understand about the Maihak?-- I understand it to look at the screen and see what the status of the gas is.

You are not trained on that either?-- No.

And other than to be able to know you can look at a screen and see the status of, what, CO, is it?-- It covers a few gases, CO, CH4.

Apart from CO, what other gases do you know it covers, from memory?-- CO2, CO4, oxygen.

You are not an operator - trained operator of the machine?-- Of what?

The Maihak?-- No.

You mentioned seeing the probeye. What do you understand its function to be?-- Detects any heat by, I suppose, infra-red.

Have you ever seen it used underground?-- No, I haven't.

I suppose you know, as everybody seems to know, that the Bowen Basin is a particularly gassy coal?-- At Moura, yes.

And similarly at Moura, Moura coal, to use a loose term, has a propensity or a capacity to ignite spontaneously?-- Yes.

Are you able to help the Inquiry with any finesse of knowledge at all in relation to the incubation period?-- No, I am not.

Do you know that loose coal lying around on the floor of a pit, particularly if it is dry, is one of the sources ----?-- Yes.

That is likely - not "likely", which could cause spontaneous combustion?-- Yes.

Are you familiar with the mining technique called "ramping"?-- Yes.

Well, you seemed a bit hesitant?-- There have been different ways of ramping.

Well, just broadly, is the system of ramping one that necessarily leaves loose coal behind which the miner - continuous miner can't gather?-- The system that was in operation in 512 I understand did.

Wasn't it in operation in sections you worked in?-- No, not the same system.

Was it a new system?-- It was a system, this one, introduced to protect the operators.

If I might just ask you this: if as a deputy you had this history before you, say on 24 June, a benzene smell - just listen and stop me if you don't understand - and then thereafter until about 4 August readings varying up and down a little, 7 ppm, 8 ppm, 5 to 4 ppm, 6 to 7 ppm to 5 August when a tar smell is experienced - I'm not finished yet so just be patient with me - on 6 August a reading of 7 to 8 ppm and a haze, and on that same day a reading of 9 to 10 ppm with a heat shimmy, again a tarry smell, and on that day rising parts per million to 12 ppm, then later on 6 August 15 to 20 ppm and then again the following morning on 6/7 August something in the order of 56 to 50 ppm and then throughout the morning of 7 August rising parts per million from 49 to 102 at about 3 p.m. and thence towards about half past nine that night 150 ppm; what would that tell you?-- It would worry me.

It would worry you?-- Yes.

I have nothing further, thank you.

WARDEN: Mr Morrison?

CROSS-EXAMINATION:

MR MORRISON: Mr Mills, you've been a miner for, I think you said, 18 and a half years?-- That's right.

18 and a half years at Moura No 2?-- Yes.

Consistently as a miner?-- I started as a fitter in 1976.

'76?-- That's right.

How many years as a fitter?-- '76 until 1980 - '81, sorry.

Then as a miner?-- Then as a miner and deputy.

Deputy in '86?-- '81.

Now, so leaving aside the period as a fitter, that's about 13 odd years, 14 years as a miner and deputy?-- That's right.

Over that time, that's mining in No 2, I think I'm right in saying the only spontaneous combustion event you had to deal with was sealing 5 North in 1986; is that right?-- I had nothing to do with that. I was away that weekend.

So in fact you've had no dealings with spontaneous combustion in that mine over that time?-- None personally, no.

In all of those years in being down in mining you haven't actually come across a spontaneous combustion event?-- I have

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not come across one myself, no.

You were asked to look at the map in front of you which I think you will confirm for me by looking at the right-hand bottom corner is plan 45/14?-- That's right.

The layout of in-seam drilling in No 2?-- That's right.

You were asked some questions about the red lines which appear at the junction of 510 and 5 South and extending in a south west direction into the 512 Panel; do you recall that?-- Yes.

Do you see also a number of red lines parallel to the cross-cuts in 5 South heading north west into 512?-- In the 5 South return, you mean?

Yes, in the 5 South return?-- Yes.

They were also gas drainage lines of one sort or do you not know?-- I'm not sure, no.

A lot of those drainage lines were in fact at floor level?-- They were a couple of feet off the floor.

Are you aware of whether they were sealed or not or are you saying they were not sealed?-- To my knowledge none of them were sealed.

Have you been party or ever seen the sequence of sealing them by plugging them with grout or cement?-- Not these, no.

By "these" are you talking about from 5 South bottom return across to 512 or are you talking about the other ones?-- Which one are you talking about?

Let's deal with them in sequence. The first ones you were asked to look at are those which emanate around the 510/5 South intersection?-- Right.

Do you know anything about those or are you guessing?-- I know there were holes there, but that's as much as I know.

You don't know whether they were sealed over near 512 or not?-- No, I don't.

The next ones I want you to think about are those which come from the 5 South bottom return run parallel to cross-cuts across towards 512 of which there seem to be half a dozen?-- Yes.

Do you know anything about those or are you just unaware of their positioning and state?-- I don't think any of them are sealed, no.

Then the next ones I might ask you about are in 520?-- Right.

What about those? Are they still connected to - or were they at the time of this incident still connected to the drainage range?-- I can't remember.

There was in fact a drainage range at 520, wasn't there?--
There was a range there -----

Connected to a borehole - sorry, I cut you off?-- I'm sure it was disconnected.

The next ones are those which run in the same direction as 5 South level extending into the solid coal from the face of 5 South level?-- Yes.

Those were still open?-- Yes.

And those were occasionally intersected by a miner?-- That's right.

And are they the ones that you tell us in your statement had negligible methane coming out?-- That's right.

You can't recall an occasion, I take it, where a miner has intersected such a drainage hole and received a lot of methane?-- I can.

What happened on that occasion? Did the Trolex cut off the heads of the miner?-- It was a Baccarach at the time. It was a different system and it was in the previous block.

Not in 5 South?-- It was in the previous block of 5 South.

I beg your pardon. 5 South rather than 5 South level?-- Are you talking about the 5 South section going this way?

Yes?-- Previous block of 5 South, the previously drained block.

As long as 5 South was developed they would drill ahead, let it drain, advance, drill ahead, let it drain, advance and -----?-- Yes.

And they were in that process still at the date of this accident?-- They were fairly well drained and we had started - commenced production in there, development.

You would know from the position of your usual crew in 5 South that in the direction in which mining was going on at the date of this accident there was a chance of intersecting a drainage hole?-- There would have been, yes.

Had such a drainage hole been intersected before in 5 South?-- We had intersected in previous cross-cuts, yes.

Not the previous block, in this block of development?-- Yes, we had intersected drainage holes.

Had much methane come out on those occasions?-- No.

Negligible?-- Negligible, yes.

You would, based on your experience, have no expectations that

if a drainage line was intersected in that section there would be any significant methane?-- No, not methane that you could not control.

Were those drainage lines at roughly floor level, that is at the fullest extension of 5 South?-- The drainage holes varied through the seam. They could be at floor level, they could also be in the roof.

As deputy in 5 South were you also called upon to inspect the 5 South Sub panel from time to time?-- Are you talking about 520 or -----

No, not 520, 5 South Sub panel, that is to say the sub panel between 5 South and 4 South?-- I have, yeah. I have been up there, yes.

Did you inspect that at any time recent or close to the date of this accident?-- I can't recall.

Can you recall any unusual feature in what I term the 5 South Sub panel, that is to say those pillars created between 5 South and 4 South?-- You'd have to be more specific. Are you talking about the new development?

I will just put a mark on the plan, Mr Mills, so you can understand?-- Right.

Do you see where I've marked with the green sticker the area I am indicating?-- I do.

That's what I will be referring to as the 5 South Sub panel?-- Right.

Can you recall when you last inspected that area?-- I can't recall when, no. I did inspect it, but I don't know when.

When you last inspected it, whenever it was, do you recall any unusual feature about it?-- No.

Thank you. Now, Mr Mills, you in fact have done a number of sessions, lectures, call them what you will, on various subjects by way of refresher training, haven't you?-- In the safety meetings, yes.

At the mine there were safety meetings held on a regular basis, weren't there?-- Fairly regularly, yes.

And at what might be termed mass safety meetings not only would miners be there, deputies, undermanager and sometimes the managers as well?-- The safety meeting was held on a crew basis.

On a crew basis?-- Yes.

It was designed so that over a couple of days all crews would be caught?-- That's right.

So that any one of these topics I am now about to mention to

you could routinely span two days in order to catch all crews?-- Yes.

I am just going to ask you to look at a document, please, rather than take you through it. This is what I might call the training records of refresher training. Look down and find your name, please, just over half the way down the left, Mills K; can you follow that line across and confirm for me that you did have the topics discussed that are mentioned there on the dates indicated for you?-- I don't recall spon com.

I'm just about to come to that, don't worry. Are the rest correct?-- I'll have to have a better look.

So far as you can remember? I am happy to concede you may not remember precise dates?-- That's right, yes.

Does it seem generally correct to you?-- Generally, yes.

The spon com one that's listed there under that heading, that might have been on cable flashes; does that ring a bell with you?-- We did have talks on cable flashes.

Cable flashes as a source of ignition in this mine?-- Yes.

Potential source of ignition?-- That's right.

How to guard against them and how to cope with them?-- How to guard against them, yes.

I tender the document.

WARDEN: Admitted and marked Exhibit 40.

ADMITTED AND MARKED "EXHIBIT 40"

MR MORRISON: In 5 South there was a particular additive put into the water to help cope with dust, was there not?-- That's right.

Endo dust?-- That's right.

That was, in your experience, successful?-- Yes.

You were in fact a member of the mine consultative committee; is that right?-- That's right.

Indeed a member of the sub committee of that committee concerned with production?-- That's right.

You were involved at looking at the mounting of gophers?-- Yes.

That's g-o-p-h-e-r-s?-- That's right.

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WIT: MILLS K D

That is, a hand-held roof bolting machine; is that right?-- Yes.

And ways of fixing them to the continuous miner so that men wouldn't have to hold this 45 kilo instrument?-- Wouldn't have to lift it.

And thereby it would reduce injuries or the potential for injuries to men?-- That's right.

It would also improve the delay time that was involved in setting up and using bolting equipment?-- Right.

The most important thing though was it would reduce the handling injuries?-- Yes.

In fact is it the case that a prototype had been trialled?-- Yes.

And successfully so?-- And what?

Successfully so?-- Unsuccessfully.

Was that project ongoing?-- It was.

You were also on the main mine consultative committee during a period - or stemming from the period when you were rehabilitating from injury; is that right?-- Yes, I was appointed to that committee before I was injured.

So you continued. Generally speaking that committee was charged with looking at safety procedures, better ways of working in the mine, better ways of working safely in the mine?-- Right.

It was part of a network of what might be called safety controls at the mine in the sense that there were various bodies actively looking at safety matters?-- There was a sub committee looking at -----

There was the main committee of which you were a member, there were sub committees of which you were also a member and there was a training committee?-- A training committee for machines?

Yes, in relation to machines and men as well?-- Yes, in machine operating.

You were involved not only in the safety meetings from time to time, but a number of accident investigations; is that right?-- I filled out incident reports.

That's the document that institutes or commences an investigation into an incident?-- That's right.

You knew from such training as you had from a deputy that there was such a thing as spontaneous combustion?-- Yes.

You knew that it was a potential in this mine?-- Yes.

You knew that this mine had a seam that was described or could be described as gassy?-- A seam that was gassy, yes.

You also knew that this was coal which had a potential, however you measure it, potential for spontaneous combustion?-- That's right.

Those things that I have just discussed were all commonly known features, weren't they?-- Yes.

Even ordinary miners who didn't have to train as deputies knew those things?-- Yes.

You had received some training in how to detect spontaneous combustion? In other words, what its signs were?-- As far as CO detection or measuring.

You knew that its best indicator was CO?-- First off CO, yes.

Either in parts per million or litres per minute?-- Converted into litres per minute.

You understood that the litres per minute was the best indicator rather than parts?-- Yes.

You understood that because the parts per million might be affected by the ventilation?-- Yes, the number of parts per million can be affected by whatever airflow you had.

And you knew that when you were looking at the CO make or the litres per minute it wasn't just any particular value, it was a trend you had to look for to indicate whether you had an incident?-- Yes, a trend.

In other words you would look to see how things were going?-- If it was rising, yes.

And more particularly if it was rising rapidly?-- Yes.

As a deputy you must have been involved in the production of reports?-- Deputy reports, yes.

And you knew the importance of those reports in terms of

informing the oncoming deputy of the next shift as to the features of the mine that you had been involved with on your shift?-- Right.

Which is why deputies, I suggest, took it very seriously, that is to say, took the making of their reports very seriously?-- Yes.

And also the exchange of information contained in those reports was taken seriously too?-- Yes.

Particularly on hot seat changes deputies would exchange information both via report and orally?-- Sure.

And, likewise, on the surface on shift changes deputies would exchange information by report and orally?-- Yes.

And it was a very common feature for shift changes aboveground to be accompanied by the undermanager talking to the outgoing deputies about how things had gone?-- Yes.

And informing the oncoming deputies about what he had found out?-- Yes, or the oncoming undermanager.

Or the oncoming undermanager, indeed, indeed. Likewise, the exchange of information on the surface at shift changes would include information exchanged between miners, the oncoming shift guys would talk to the outgoing shift guys?-- If they were there, yes.

Unless the outgoing shift wanted to jump in the showers and clear off in a hurry?-- Or they were still down the pit waiting for a hot seat change.

On a hot seat change there would be quite a usual exchange of information between one shift and the other?-- Yes.

And that is all part of the routine and usual functions of the miners and the deputies at this mine, isn't it?-- It's part of their job, yes.

And not something treated flippantly, but treated seriously by both miners and deputies and undermanagers and managers?-- Yes.

Excuse me a moment, Your Worship.

Now, you haven't been shown the deputy's position statement, have you, not recently?-- I don't recall.

I am sorry, position description?-- I can't recall getting it, no.

Well, perhaps you just better have a look at this if you wouldn't mind. It's Exhibit 12 and it commences, when you get it, seven pages from the rear. I think it's 12 or is it 11? 12. I think seven pages in you will find position description for an underground mine deputy?-- Right.

Do you see that?-- Yes.

Could you now turn two pages to an acknowledgment form. I think you will confirm for me that the fourth signature from the bottom is that of you?-- It is.

Dated on 2 January '94?-- Right.

That would have been the last occasion on which you were sort of signed off this form?-- I assume so, yes.

Now, could you turn back to the first page where that position description starts, for mine deputy, not the first page of the whole document. You will see there it sets out the purpose of the position and the responsibilities that go with it?-- Right.

You are aware of your responsibility as a deputy, weren't you?-- Right.

Number 3 says that the deputy has the mandatory responsibility, at least has the power and responsibility, to suspend any operation likely to cause danger to any person?-- Yes.

Do you see that?-- Yes.

You knew you had that power?-- Yes.

And so did every other deputy?-- I would assume so, yes.

In 1991 you had no hesitation, did you, in going to see the manager when you thought there might be a difficulty with the men staying down. Sorry, I think you went to see the UMIC, the undermanager in charge?-- That's right.

And there was no difficulty approaching him?-- No.

And he treated your concerns seriously and promptly?-- I'd assume so. I don't - yes.

Things happened pretty much straight away, didn't they?-- What are you saying happened?

Well, you got a response from management about your concern pretty much straight away?-- Yes, yes.

And you would have expected all deputies who had grounds to think that the men underground might not be safe to be aware of the responsibility that I have drawn to your attention and to exercise it, wouldn't you?-- Yes.

You would expect if any deputy formed the view that conditions underground might not be safe for men, they would exercise the power and the responsibility they had to suspend the work?-- Did you say I would expect it?

You would expect?-- Yes, I would.

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Thank you, I have nothing further.

WARDEN: Mr Harrison?

MR HARRISON: Thank you, Your Worship.

CROSS-EXAMINATION:

MR HARRISON: Have you still got that plan in front of you, 45/14?-- I have.

Can you have a look at the end of the 5 South panel and tell me if what is recorded there records your understanding of how far production had gone in 5 South?-- No, I can't tell you.

You can't tell me?-- From memory I can't tell you where it was.

All right. Now, you have been questioned about the drainage holes at 5 South and how, in particular, at different times, the crews would cut across those drainage holes that appear at the end of 5 South?-- That's right.

As I understood what you said earlier, there hadn't been any particular problem with methane at such time as that had been done?-- In this block.

Had you had problems on earlier occasions in similar circumstances when working in panel 403?-- 403? You mean cutting across holes?

Yes?-- Or into them? I can't remember cutting across a lot of them. I don't -----

Well, if I take you back. Firstly, you worked at 403 for some time?-- I was relieving deputy for 403.

Did you at times express concerns about the fact that there had been any problems with holes that were blocked or partially blocked?-- In 403 I can't remember, no.

You can't recall that?-- No.

Can you recall any incident in any panel where you were concerned with the fact that a hole may have been blocked or partially blocked and there was a substantial amount of methane present at such time as that hole had been cut across?-- I can, yes.

And in what circumstances can you recall that?-- In the previous block in 5 South.

So did you express concerns to anyone at the time about what happened to you on that particular occasion?-- I did.

XXN: MR HARRISON

WIT: MILLS K D

Was the problem there the fact that the hole in question was blocked or partially blocked, do you recall?-- The question was that there was a lot of methane coming out of the hole and I didn't want to cut across the hole in that position. Someone suggested blocking the hole with water and I wasn't really happy with that.

When you say "a lot of methane coming out of the hole", what do you mean?-- Methane coming out of the hole under pressure.

I see. So are we talking about back to where the hole had been cut from previously, allowing for the work that had been done in the meantime?-- I don't understand what you are saying.

All right. Well, where was it coming from in terms of where you were at that stage? You were about to cut across or had you actually cut into the hole?-- We cut across it at one time and it dropped the power off the miner, and I spoke to the management then about the operation.

Would that have been at a cut further outbye from the one that you expressed the concerns about?-- Well, the hole was taking gas to the return a pillar outbye of where we intersected it.

Now, you didn't encounter any particular problems as such further down at 5 South at the more recent level of production?-- With this block, no. This block was well drained.

But you had never come across any situation where you cut across any holes that may have been blocked or partially blocked?-- Only ones deliberately blocked with water to try and contain the methane.

You mention in your statement that you don't know of any problems with cable flashes involving your particular crew?-- Yes.

Are you aware that there was in fact a reported cable flash in 5 South on 6 July 1994?-- Yes.

I take it that involved another crew?-- Yes.

And was it your understanding that that was something which occurred in the 34 cross-cut in 5 South?-- I don't know what cross-cut but -----

Nonetheless, you had some knowledge of that?-- Yes.

You are aware that there was an investigation into that?-- Yes, it was roped off.

Were you aware that on that particular occasion a cable to a shuttle car had been severed?-- Yes.

Now, you have also been questioned about how the stone dusting

was done in 5 South?-- Right.

And you were questioned about the use of the wetting agent; do you recall that?-- Yes.

Was there some problem in terms of the use of the wetting agent in the week before the incident on 7 August?-- I don't know exactly when but we had no - the actual injection machine was broken down at one stage but I don't know exactly when.

Did you understand that there was some delay for some time while parts were acquired for the pump?-- Yes.

So was it the case that you went some period of time without any wetting agent being available?-- Yes, we could not get any.

Do you know if that was up to a week or for how long that was?-- No, I don't know how long. I couldn't tell you.

Am I correct in saying it was sometime in the week leading up to the incident?-- I don't know.

Is it a problem that you yourself had any personal dealings with in terms of having to contact anyone?-- The undermanager on shift, yeah.

Were you involved in any follow-up in terms of any parts being ordered or any parts being obtained?-- No, I have not got that authority.

To your knowledge, had that particular problem been resolved prior to the incident?-- I can't recall.

You also make reference to the use of the hydraulic duster in 5 South?-- Yes.

Was there a Canton duster in there in the week leading up to the incident?-- I don't know that either. There was one in there a fair bit of the time, but I couldn't tell you exactly when.

Did you find that the Canton duster gave a thicker coverage than did the hydraulic duster?-- For its application. If you use a hydraulic duster properly it worked well.

Did you find overall, however, there was a better coverage if the Canton was used?-- Yes.

And was it the case that there was only the hydraulic duster in there in the last week as opposed to the Canton duster?-- I don't know. I can't remember.

You also mention in your statement the positioning of the bag at times when the wetting agent was not used. You say that it was usually positioned about two metres from the face?-- Yes.

Was that always the case or were there times that even though

the wetting agent may not have been used the bag would have been further back, say five metres from the face?-- No, not five metres.

Further back than two metres?-- Oh, yes, further back than two.

Thank you, I have nothing further, Your Worship.

WARDEN: Thank you.

MR CLAIR: No re-examination, Your Worship.

WARDEN: The panel have a couple.

EXAMINATION:

MR PARKIN: Mr Mills, could you tell me if there was a procedure for methane drainage in 5 South panel?-- I would assume the procedure was - well, there's a basic procedure for methane drainage throughout the mine.

Right. If we can just keep to 5 South. What's the procedure in 5 South?-- The procedure was as each hole is drilled it's put into a range, a six inch range, and -----

Are these - beg your pardon - are these holes - are we talking about in-seam holes?-- In-seam, yes.

So they drill them, then what happens?-- As they were drilled they were fed into a range and piped to the surface.

What duration of time is it between drilling the holes and then mining that particular area?-- I can't recall exactly, but I think it was something like 18 months, but I'm not dead sure.

Okay. I am really trying to get to refer to a question that Mr Harrison asked in terms of the cutter heads intersecting holes, because I would presume if you are mining forward and you have got in-seam holes that you are going to intersect quite a few holes at some stage?-- We intersected when driving cross-cuts.

Right. And it doesn't happen often that you have any build-up of methane, only on rare occasions?-- These holes were well drained.

They are well drained?-- Yes.

Thank you.

EXAMINATION:

XN: PANEL

WIT: MILLS K D

MR NEILSON: Mr Mills, have you attended any courses or received any instruction on spontaneous combustion?-- I can't recall any special courses, no - any courses.

Well, if you can't recall them, we can assume that you didn't attend any?-- No, right.

That's all I have, thank you.

EXAMINATION:

PROF ROXBOROUGH: Mr Mills, listening to the questions and answers that you have given, I have a feeling I might have got lost somewhere along 5 South return, and I wonder if I could take you back down there. You have been deputy in that district for how long?-- Possibly since '91.

Since '91. Now, you are talking about the continuous miner intersecting drainage holes. If I can take you to that plan to your immediate right. Are you talking about the holes that cross from 5 South return to the top return in panel 512?-- No, the holes I am talking about are the ones drilled straight ahead in 5 South.

I understand. Implications are from this plan that I have in front of me, that's 45/34, which shows the drainage holes, is that the 5 South return was driven well ahead of the development of panel 512, would that be right?-- Yes, 5 South was down to, I think, 34, 35 cross-cut.

And those holes that are at right angles to the 5 South return were driven from 5 South return?-- They were.

And how long have those holes been in place before 512 was developed?-- I can't recall -----

Approximately?-- ----- at what stage.

Would it be weeks, months, years?-- I can't answer truthfully.

Thank you. If I could just take you a little further down that return, 5 South return, and clear something up for me. You will see at the final pillar at the extremity, left extremity of the plan, just before the dog-leg, that last pillar, there is a cross-cut which is started approaching the 512 return which I believe was a sump?-- That's right.

There is one outbye of that which doesn't show if that roadway is terminated. Could you tell me the status of that cross-cut?-- Not exactly, but I don't think it was that far in.

XN: PANEL

WIT: MILLS K D

251094 D.5 Turn 16 mkg (Warden's Crt)

But that wasn't active?-- How do you mean "active"?

It wasn't being worked?-- No, it wasn't, no.

XN: PANEL

WIT: MILLS K D

MR ELLICOTT: No questions.

WARDEN: Anything arising out of that? Thank you, witness, you may stand down, you may leave.

WITNESS STOOD DOWN

MR CLAIR: I call Reece William Robertson, Your Worship.

REECE WILLIAM ROBERTSON, SWORN AND EXAMINED:

MR CLAIR: Your full name is Reece William Robertson; is that correct?-- That's correct.

You are a mine deputy with the Moura No 2 Mine?-- No, I have finished now.

You have finished now, I see. When did you finish?-- 17th, I think, of this month.

17 October?-- Yeah.

Now, up to 17 October then you had been a mine deputy?-- That's correct.

In fact, you had started in the coal industry in 1976; is that right?-- That's correct.

At that stage as a cleaner at the Moura Open-cut?-- Yes.

You have always worked at Moura; is that so?-- Yes.

You moved from the open-cut to No 4 Underground Mine in about 1978 as a miner, working up in time to a machine man miner; is that right?-- That's correct.

You joined Mines Rescue in December 1980?-- Yes, somewhere around there.

You were appointed a mine deputy in about 1981?-- Yeah.

Was that at the No 4 Mine at some stage?-- That's correct.

Had you worked at Moura No 4 for some time?-- Yes.

Then from '78 -----?-- Yes.

Through until 1981 and then you continued there as a deputy through to 1984?-- Mmm.

At that point you were transferred to Moura No 2 Mine as a

XN: MR CLAIR

WIT: ROBERTSON R W

deputy?-- That's right.

Now, you are aware, of course, of the explosion to Moura No 2 Mine on 7 August of this year?-- That's right.

And you were interviewed and you made a statement in relation to that matter; is that so?-- That's so.

Okay. Now, Mr Robertson, you worked in various panels?-- That's right.

As a deputy in No 2?-- Yes.

In recent times you had worked on occasions in 512 Panel; is that right?-- That's true.

Was it exclusively in 512 that you were working in the period prior to August or were you working in other sections too?-- Mainly 512, yeah, not - if someone was away, another deputy, you would be placed in another panel.

Okay. But you were basically a deputy in 512?-- Yeah.

And was that from the commencement of development of 512?-- Yeah.

So, in other words, you became quite familiar with the panel?-- Mmm.

Throughout its development and throughout the period of retreat?-- Yes.

Now, I want you to apply your mind particularly to events during the retreat phase in 512. Were you - no doubt, as a deputy you were familiar with the ventilation arrangements in 512?-- Yes.

Did you have any general concerns about the ventilation set-up in 512 Panel during that extraction phase?-- No.

Were there some specific incidents then?-- Yes.

Which you have spoken about in your statement?-- Yes.

Now, the first of those was on 17 June 1994; is that right?-- Yes, I believe so.

And you did, in fact, fill out a deputy's report in relation to your shift on 17 June, as you must; is that so?-- Yes.

I will ask you to just bear with me a moment, Your Worship.

I want you to look at this report, if you would ----

While he is looking at that, Your Worship, this is a copy of the deputy's report, No 3401. It is in the large exhibit, Exhibit 9, but I have extracted a copy of it. Part of document 45, Your Worship. I have copies for my learned friends.

Mr Robertson, that is your carefully written deputy's report; is that right? I must say it is a pleasure to read writing that is as clear as this. Now, at this stage, perhaps, if I can ask you to tell the Court what occurred during that shift and in the course of doing that if you need to refer to your deputy's report in order to tell the Inquiry about particular readings, well, then, you can do so?-- Do you want me to start roughly when I started the shift?

If you can tell us, first of all, what time you came on shift that day?-- Normally we start at 6.15 in the morning after that shift, if it is a day shift that I was on, and the undermanager would come around, let you know what section you were going to and inform you if the deputy that was on shift would ring up and let him know or the undermanager, say, on night shift what had taken place and what primarily we should expect when we get down into the panel. So, from there you would, you know, get all your gear ready, hop in the Rover and go down into the pit. You would then change over. Normally I would change over at the crib table with the deputy. The crew would then go inbye to change over with the other workers while the offgoing deputy and I would have a talk about what went on and at that stage he told me, Bob Newton, that he was having problems with methane coming up No 2 heading.

Bob Newton was the outgoing deputy?-- That's right. I then read and signed his report and I am not sure whether I read and signed the previous report from that. Normally I sign the previous deputy's and initial the one previous to that again. So, that would be the afternoon shift one. I then -----

Just pause a moment if you would, Mr Robertson. I will just ask you to look at that report of Bob Newton's that you signed -----

That again, Your Worship, is part of document 45 in Exhibit 9, but I have extracted a copy of that. This particular one is report No 4000.

If you can look at that, please?-- Yeah.

That's the report of Mr Newton that you looked at on that occasion and signed; is that so?-- No.

It is not?-- No.

17 June '94?-- That's correct, but this is not the report.

I see, that's -----?-- This is the original copy. The report that I signed is actually the duplicate copy in the book.

I am sorry, yes, I should say this is the original copy -----?-- Yeah.

Of the report, the original of the report?-- I signed the book.

This contains the same information as the copy that you

XN: MR CLAIR

WIT: ROBERTSON R W

signed; is that so?-- Yeah, I believe so.

He refers there to a first inspection; is that right?-- Yes.

And it is noted in his report there .4 per cent methane in the top supply road?-- Mmm.

Then a second inspection report. He has there noted .9 per cent methane at the edge of the waste in the top road; is that right?-- Yeah.

In the "Action Taken" panel of the report has he noted there "Trying different methods to clear methane from top road"?-- Mmm.

And under that on - again in respect of the second inspection on the left-hand side he has noted the ventilation is slow and on the right-hand side he has entered in the "action taken" panel, "Asked undermanager to get more ventilation for panel"?-- Yes.

Okay. Well, that's effectively where you took up?-- That's correct.

Against the background of that report, and you spoke to Newton?-- Yes.

He discussed those concerns with you?-- That's correct.

Just pause a moment -----

Your Worship, it is an appropriate point at which to tender some other reports, two of them from Mr Newton and one of them from Mr Guest. Perhaps I should, first of all, though tender that report of Mr Newton, that's No 4000 so that has a separate exhibit number, that's the one the witness has just dealt with.

WARDEN: Exhibit 41.

ADMITTED AND MARKED "EXHIBIT 41"

MR CLAIR: Thank you, Your Worship. I will then tender, Your Worship, reports No 3970, that's a report of Mr Newton's from night shift on 7 June '94, and 3976 which is a report of Mr Newton's from night shift of 9 June 1994. I notice they have been handed to the witness.

Are you familiar - are they reports that you saw - did you, as a matter of course, follow Mr Newton onto duty or are you unable to say?-- No, I couldn't say unless I seen the report.

That's all right. I am not concerned with showing them to the witness at this stage. If they can be tendered, those two reports I have just handed to -----

XN: MR CLAIR

WIT: ROBERTSON R W

WARDEN: Exhibit No 42.

ADMITTED AND MARKED "EXHIBIT 42"

MR CLAIR: I will pass up copies for the panel, Your Worship. I will also tender at this stage, Your Worship, a copy of a report of Mr Guest. That's report number 3983.

WARDEN: Exhibit No 43.

ADMITTED AND MARKED "EXHIBIT 43"

MR CLAIR: Did Your Worship give a number to those two reports of Newton? I think they went in as the one exhibit.

WARDEN: 42.

MR CLAIR: Yes, thank you, Your Worship.

Now, Mr Robertson, was this the first occasion on which there had been any discussion with you by an outgoing deputy of any concerns about a build-up of methane in that 512 Panel during the extraction phase?-- I believe so, yes. I couldn't be absolutely sure.

Had you had any discussion with any of the other deputies, not so much in a situation where you were making a hot seat change over, but just generally, about any methane layering or methane build up in 512?-- Not that I recall, no.

Now, if you can tell the Court then what happened after you had the discussions with Mr Newton?-- I then - when the other crew left - read and signed his report, as I said. I don't know what possessed me, but I took my MSA Minder out, whether it was in preparation for it, but at that stage when I took it out and looked at it I noticed that it was getting a reading there which is unusual, you shouldn't be getting readings in a cross-cut back that far from the work area. I then proceeded out of the crib room area and went down along No 2 heading.

Just pause a moment. Do you remember where the workings were at this stage, at what cross-cut?-- Only by my report here.

Yes?-- Sequence 16.

Sequence 16?-- Yeah, 5 to 7 cross-cut, that is where the miner was working and where I was detecting the gas was between 5 and 7 cross-cut No 2 heading.

You mentioned, first of all, that you noticed that at the crib

XN: MR CLAIR

WIT: ROBERTSON R W

room. Do you remember where the crib room was?-- Yes.

Perhaps if you can take that pointer on the table there. No, the black one?-- Righto.

You have to turn that on. You can stay seated, if you like?-- Just there anyway. in that area.

If you can sit down, Mr Robertson, we can hear what you are saying. If you switch that pointer on it is a laser pointer. It will produce a red light?-- Oh, right.

That's the way?-- Yeah. That's nifty.

Make yourself comfortable. I was as troubled by it when I first saw it as you?-- Yes, gets you, doesn't it. The crib room area was around about there, I suppose about five to ten metres inbye of the outside - outbye edge of the rib.

Now, you are indicating - unfortunately I have got to put this on the record - between - it is in No 2 heading and between 5 and 6 cross-cuts; is that right?-- No.

Sorry, maybe if we can hold that red light -----?-- Just there. Oops, there you go.

Along 5 cross-cut?-- That's correct.

Is that so?-- Between 2 and 3 heading, 5 cross-cut.

It was there that you got the .4 per cent?-- That's correct.

What did you do then?-- I then proceeded down No 2 heading doing readings as I was going down, and went down to here which was between 7 and 8 cross-cut on No 2 heading which is in there, and I got a maximum of 1.5 per cent methane. I then went across to where the crew were working and done a test at the miner and got .3 per cent but I still asked the miner driver to withdraw the miner, turn the power off and isolate it and come with me back to the crib table and inform him what I found. We went up the belt road. I seen the car drivers on the way back, asked them to park their vehicles safely, shut the power down and come with me and informed them. I took the whole crew back to the crib table and rang up the manager and informed him that I had a problem and I was closing the section down and I required some help in there.

Did somebody come down then?-- They did. Mark McCamley -----

Was he the undermanager on shift at that time?-- I'm not sure whether he was the undermanager or relieving manager or what he was at that stage, and Allan Morieson who was a fire officer.

They arrived down at 512?-- Yes.

Did they take up with you at the crib table, did they?-- That's correct.

You had a discussion with them?-- Yes.

To explain the problem to them?-- Yes.

And what did you do then?-- It was decided that we would go down on the top return and check the state of the stoppings down along that top side and have a look at the stoppings across the back of the panel.

Can you take the magic pointer again and just indicate where you did go with them?-- We went back up to number 3 cross-cut where the door is there, went in there, checking as we went down around -----

That's down No 1 heading?-- That's correct. Across the bottom of the workings and at that stage Allan said the doors in these stoppings here were not open and that they were to be opened.

The stoppings you are indicating there are those in numbers 2, 3, 4 and 5 headings between 12 and 13 cross-cuts; is that right?-- That's correct.

Did you walk along there with him? Did all of you go along the back of the panel?-- At that stage I think we did, yes.

And did you see whether or not those -----?-- Yes, they were -----

Those stoppings were fully closed?-- Yeah, they were because

XN: MR CLAIR

WIT: ROBERTSON R W

at number 4 heading, I believe, I'm not quite sure, but we had a look through number 4 heading down there and we had to lift the door flap up to have a look in there, and then, like I said, they said, "Well, these shouldn't be closed."

Allan Morieson said that they should be open?-- Yep.

What happened then? Did you take any part in opening them?-- No, I did not.

Did you see anybody take any steps?-- At that stage no, not that I can recall because Mark McCamley, myself and Greg Edelman, we went back up No 2 heading. Allan went -----

Just indicate again where you went?-- Through that one there, started coming back up there while Allan opened those across there and one across there, I believe, I'm not sure, and that one there.

Did he open one in 12 cross-cut?-- I believe so, I'm not quite sure at that stage. We went back up, as I say, No 2 heading.

How far did you go up No 2?-- Back up to number 7 cross-cut, but on the way up -----

Were you able to walk all the way through there?-- Yes, yes.

Were there bottoms taken in that area?-- Yeah, had to jump down through them and that. It was very - what we call tiger country. It's not real nice to be in. If I remember I think I made a comment to Greg about it, that this was silly being in there because the roof often popped and banged and carried on, and it wasn't a place that you bothered to go into because it would fall on your head real quick.

Anyway, you did manage to make your way up No 2 as far as 7 cross-cut?-- That's right and then -----

Were you making measurements as you took this journey?-- Yes, we did.

Do you remember where the measurements were made?-- We took one back at 12, I believe it was, after we come down out of it, the bottoms are out there, we took one there and there was one further on and I'm not exactly sure which one it was, but there was a fall across to the left of us in the belt road, somewhere around that area, and Mark went over there to do a reading. I jumped one -----

Further out into the -----?-- Further across, yeah.

Across? Further across in the goaf area?-- He done a reading there and I done one where I was at No 2 heading and when we got together he asked me what readings I got and I said - told him my readings and he said he only got 8 ppm, and I said, "No, I got 10.", and he said, "No, get out. You're blind.", and he had a look at mine and he said, "No, that's only 8.", and I said, "No, give me a look at yours.", and his to me read

10 as well.

These are with the Draegar tubes?-- That's correct.

Do you remember which type of Draegar tube?-- Yeah, CO tube.

A CO tube?-- Yeah, and was it the CO tube that required the five pumps or one pumps?-- No, 2 in 10.

In your view both of them read 10 ppm?-- Yeah.

But Mark McCamley claimed both of them read 8 ppm?-- Yeah.

Just to be clear you had taken yours in No 2 cross-cut?-- That's correct.

No 2 heading but around about somewhere - how many cross-cuts back from, that is inbye of 7, would you think?-- Yeah.

Two, three, four, five,?-- To be honest I couldn't say exactly where it was at that particular time in relation to things because there had been areas taken out, things appear a little bit different you don't have cut-through numbers back up again, all that was gone.

It wasn't adjacent to number 7 where the current workers were taking things?-- No, it was further inbye.

Further in -----?-- That's correct.

Just pausing a moment, had you run into differences of opinion previously between individuals as to what the reading was on a Draegar tube?-- Yeah, all the time.

On other occasions had there been the same difference, 2 ppm difference in opinion?-- I don't know whether it would have been there or whatever. What I mean by that is you run it across - Mine Rescue do competitions - people read those tubes differently. You've got to be pretty well spot on the mark on the actual graduation. The first colour graduation is what you read and some people don't see that first colour graduation.

You say it's subjective according to how well a person can see the colour?-- That's correct.

The colour comes down the crystals inside the tube; is that right?-- Yeah.

When you read it, where do you read? The very first part of the colour or where the colour is solid?-- The last colour tinge that you can see, whether it's - sometimes only appears as a light greyey colour, you know, but the tinge is still changed. You read it to there and you will find that you are reading it accurately.

But if somebody just looked for solid colour as opposed to where it began to fade -----?-- They read it wrong.

They might read a lower reading?-- That's correct.

What sort of experience have you had in reading these Draegar tubes?-- I've competed in Mines Rescue competitions and actually won an individual practical for reading one of those. It's what we call a surface exercise where they give you a lot of different instruments and you have to perform and use these instruments as, you know, required by the manufacturer and then read off a given quantity of gas, whether it be with a Miahak, 21/31, whatever the instrument is there, plus I've used them lots of times doing gas tests on vehicles and throughout those sorts of things.

So you have certainly made it your business to learn how to read the Draegar tubes well?-- Yeah.

As part of your Mines Rescue experience, and I suppose in the course of your normal work as a deputy?-- Yep.

Can I ask you to tell the Court what happened after you had that disagreement about the readings?-- Nothing really. I just reported my readings as I found them there. I don't know how Mark reported his. I couldn't say.

What happened though on the day? What was the next thing that occurred?-- We didn't - we just proceeded on then up to 7 cross-cut from that point back on No 2 heading, back up to here.

Up to 7 cross-cut?-- We then had a discussion on what we were going to do about the problem between myself, Mark McCamley - I'm not sure whether Greg was there at that stage, he might have still been standing around with us, and Allan Morieson. Mark then decided that we would block the bleeder return off back at the prep seals and we'd put a stopping up in front of the miner that would force all the ventilation down No 2 heading. We had taken the stopping down that was there, as I say, to clear it just to blow it straight through down that No 2 heading. So we did that.

Just indicate where those signs were put up in front of the mine?-- Yeah, well, I'd have to have a look. It was at 16, sequence 16, so wherever that was at that stage at cross 7 cut. I'd have to have a look. I couldn't -----

Sequence 16?-- Yes.

I will organise that. While we are waiting for that, what remedy was agreed upon?-- We put that stopping across the front of the miner and the one back on the bleeder return and then the ventilation was forced down No 2 heading. That was the only way you could get out, and it cleared the gas immediately.

This was still during the same shift?-- Yeah.

Did you take some further measurements?-- Yeah, we did. We then went -----

Who was with you on that occasion?-- Mark, I think. I couldn't be sure again there. I went and done a return reading then we went back - before that, before I done a return reading I think we went back down No 2 again, down inbye possibly 10, 11 cross-cut, down there, and it had cleared down there. We weren't getting - I think my readings after that were trace CO₂ - 3 ppm CO, .3 per cent CO₄, trace CO₂.

Did you feel then that the ventilation through the goaf was good right to the back of the panel?-- Yeah.

According to your deputy's report 3401 there, you made a second inspection and is that the one you refer to in the second inspection?-- Yeah.

That's the one you've just told us about?-- That's right.

Now, the observation that you make there in respect of the second inspection is that "Ventilation is slow down No 2 roadway and in the waste"; was that still the case at that point or ----?-- Yes, that's correct. What I mean by slow down No 2 and slow in the waste, slower to the intake air going across the top of the miner. Naturally there was good ventilation but it's always slow around the waste because of the sheer area that you've opened up, but it's not bad ventilation, but it's slower ventilation, but it's adequate.

It's got more area to cover with the same amount of air?-- That's correct.

That's previously travelling down your intake; is that right?-- Yeah.

At the goaf area it spreads out?-- That's correct.

You mentioned earlier in your evidence that when you got down to the - this is on your first inspection after Mark McCamley and Allan Morieson came down, you went down to 13 and you went across the back and those stoppers were all closed?-- That's right.

Should they have been closed?-- I was told later that no, they weren't to be closed up. Until that point I had no idea of it, no.

Do you know how they might have come to be closed?-- No, I do not.

If a ventilation hole in the stopping has been changed like that - first of all, would you as deputy alter the position of those ventilation holes in the stoppings yourself?-- I would on the instruction of the undermanager or manager.

Would there be some record made of that kind of change?-- There should have been, yes.

Would it be made in the deputy's report?-- It should have been, yes.

That was on 17 June; can you recall what happened then after that? Did you continue to work the same shift each day during the time following that or did you work different shifts?-- I worked different shifts.

Do you remember over the days following the 17th how the ventilation was in the panel? Any difficulties with it?-- From time to time we had difficulties similar to what I had here, but I don't recall that I ever had the methane problem. Normally problems that I found was that a stopping may have gone over either from a fall or a rib spall dropping out and knocking it over and you'd have to re-erect it and that's what had caused the problem so you would remedy it.

Now I want to move to the events on 24 June 1994?-- -----

before I do, Your Worship, I'll tender that report that the witness has been refreshing his memory from, report number 3401.

WARDEN: Exhibit 44.

ADMITTED AND MARKED "EXHIBIT 44"

MR CLAIR: Now, you deal also in your statement with events on Friday, 24 June 1994 when you worked the afternoon shift; is that right?-- That's right.

Do you remember who you took over from as deputy on the job on that day?-- No, I don't, not off-hand.

You filled out a deputy's report in respect of your shift on that occasion?-- Yes.

Have a look at this one, if you would?-- -----

it's report number 3423, Your Worship. Again I have extracted the report itself from Exhibit 9. I have copies for the members of the panel and for my learned friends.

Mr Robertson, I wonder if you could tell us about events on 24 June. Again if you need to refresh your memory from your deputy's report for the details you may do so?-- As I say, I can't recall which deputy I took over from on day shift, but we started mining and I believe we broke down, the machine broke down or something, and anyway, the section was down. So I asked Greg Edelman being the miner driver and experienced miner would he accompany me to do an inspection down the waste return and across - we went down right to the bottom of the panel again, across the bottom and done some readings across the bottom down around that area down here. I think I also done readings back on number 4 heading again.

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We then come back up - those readings were consistent with the readings I was getting. We started coming back up the panel. As I got to this area here I detected a strange smell that was unusual in the waste return, or waste workings, normally a musty-type smell, but this one had a bit of a sharper acrid smell to it. It just wasn't normal. It just didn't have that normal smell that you were used to. I turned to Greg and I said, "Can you smell that?" He said, "What?" I said, "That smell. Just have a smell." He said, "Oh, yeah, I sort of smell it now." I said, "That smells a bit strange, almost like a benzeney smell." So I said, "By the way the ventilation is running it's probably coming out of No 7" - that we were in - "between 1 and 2 cross-cut." I said, "We'll just stick our head through here and have a look." So we stuck our heads through.

Between 1 and 2 roadways?-- Yes, that's correct.

Go on?-- And there was - you couldn't smell any different than when a nose is acclimatised to it. I didn't actually smell anything in through there then, but I decided at that stage to take another reading, so I done a reading and took the results of them. I got back - we went back to the crib table area. I rang the undermanager up, Michael Squires, and informed him that I had got a strange smell down at 7 cross-cut between 1 and 2 heading and just, you know, it smelt a bit benzeney or something like that. I said, you know, "Do you think you can keep an eye on it over the weekend?", because that was the last shift and I was off, I believe, until the Tuesday or whatever. It was a rostered day off, I'm not sure. I said, "Can you keep an eye on it?" It just didn't seem right. I don't know whether he noted it in his book or whatever, and then when I got up at the end of shift I think the deputy that was coming on - like I say, I can't remember who - I let him know there was a bit of a strange smell down there. As to whether that deputy was going to that panel that night, the Friday night - the deputies could be in any panel because it wasn't on production or whatever, and I went home. That was that.

You did put it in your deputy's report, that report in front of you; is that right?-- Yes.

Under the general comments where you listed the readings you found; is that right?-- Yeah.

First of all. What readings did you find at that 7 cross-cut?-- 20.4 per cent O₂, 7 ppm CO, 0.3 per cent CO₂ and 0.8 per cent CH₄.

You have said in your statement that was different to your results from other inspections. In what way?-- Well, the CO was up by 1 part per million and the CH₄ was up slightly.

Well now, you do record those, as I say, in your general comments section of your second inspection - report. Do you put there, "Also informed the undermanager that at this point there was a strong 'benzene' type smell and to keep a check on it."?-- Yeah.

And that report was put into the system; is that right?--
That's right.

Okay?-- It was handed to the undermanager when you came up
at the end of shift, physically handed to him.

Now, do you recall which of the night shift deputies that you
spoke with?-- No.

Or which people were there that night?-- No, I can't.

You don't recall?-- No.

There was a deputy named Campbell. Do you remember whether he
was one of the ones that you spoke with?-- No, I'm sorry.

Mr Newman was another deputy that was coming on after you; is
that right? Do you remember whether you spoke to him?
Newton, I should say?-- No, I don't recall.

You have got no memory?-- No, none at all.

Now, you continued to work in 512 through until about a week
prior to 7 August; is that right?-- Nine days prior to it,
yeah.

And you went on leave for a week?-- That's correct.

Did you come back from leave prior to 7 August?-- No, I
didn't. I come back the night of the disaster. I got a call
out to come in. I was to start on that Monday day shift.

Just bear with me a moment. Now, of course, Mr Robertson, you
filled out your deputy's reports for the shifts that you
worked in 512 after that 24 June instance; is that right?--
Yes.

I just want to take you to some of those deputy's reports.
There was one that you did for 5 July '94 afternoon shift. If
you could look at this, please?-----

I have copies of that report for the members of the panel,
Your Worship.

Now, Mr Robertson, in that report both on your first
inspection and your second inspection you mention that
ventilation was slow in the waste; is that right?-- Yes.

Just before I proceed further, do you still have in front of
you that report for 24 June?-- Yes, I do.

That's number 3423?-- That's correct.

I will tender that, Your Worship, as a separate exhibit.

HIS HONOUR: Exhibit number 45.

ADMITTED AND MARKED "EXHIBIT 45"

MR CLAIR: That notation in 3456 that ventilation was slow in the waste, was that a matter of some concern for you?-- No. As I said to you previously, one, I write slow in the waste. Naturally the ventilation in the waste is slower than that on the intake side, so the movement is slower, so that's my way of reporting that it's slow in the waste. It's adequate for the waste you getting a good pull down the bottom of the stoppings down the bottom and it's clearing the waste, but naturally it's still slower than the ventilating pressure going over the top of your miner where you are working.

XN: MR CLAIR

WIT: ROBERTSON R W

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Yes, I see. Now, that same description occurs in several other of your reports following that. First of all, 29 July, 3752 -----

If the witness could look at this? Sorry, in reverse order here. 7 July, 3462.

Just look at that one. If you could put it behind -----

WARDEN: I propose to terminate pretty soon.

MR CLAIR: Sorry?

WARDEN: I propose to finish the proceedings very soon. Is there any point in getting them in now? Would you refer to continue in the morning?

MR CLAIR: We can finish in the morning.

WARDEN: If you are going to start with a big series of documents it may be better to finish now.

MR CLAIR: I can finish fairly quickly in the morning. It may be quicker to do it then than now.

WARDEN: Are you sure?

MR CLAIR: Yes.

WARDEN: Thank you. You just want them handed back so you can restart in the morning.

MR CLAIR: If I can take back the two that the witness has, that's 3456 and 3462, and I will give those to him again in the morning.

WARDEN: Yes, thank you.

You will be required again tomorrow morning, witness, about 9.15 to finish your evidence -----

Thank you. We will adjourn the Court and start again at 9.15 tomorrow.

THE COURT ADJOURNED AT 4.26 P.M. TILL 9.15 A.M. THE FOLLOWING DAY

XN: MR CLAIR

WIT: ROBERTSON R W

WARDEN'S COURT

MR F W WINDRIDGE, Warden and Coroner
MR R J PARKIN, General Manager, Capricorn Coal Pty Ltd
MR P J NEILSON, District Secretary, United Mine Workers' Union
MR C ELLICOTT, Training and Development Officer, Department of
Mineral Resources, New South Wales
PROF F F ROXBOROUGH, Professor of Mining Engineering, School
of Mines, University of New South Wales

IN THE MATTER OF A CORONIAL INQUIRY IN CONJUNCTION WITH
AN INQUIRY (PURSUANT TO SECTION 74 OF THE COAL MINING
ACT 1925) INTO THE NATURE AND CAUSE OF AN ACCIDENT AT
MOURA UNDERGROUND MINE NO 2. ON SUNDAY-MONDAY, 7-8 AUGUST
1994

GLADSTONE

..DATE 26/10/94

..DAY 6

THE COURT RESUMED AT 9.20 A.M.

REECE WILLIAM ROBERTSON, CONTINUING:

WARDEN: You are on your former oath, witness, the oath you took yesterday?-- Yes.

MR HARRISON: Could I raise a matter before Mr Clair continues? I am seeking an application to have Mr Mark McCamley present here this morning for the purposes of instructions. It is obvious he is someone who is connected with the case's development. I make that application along the lines of those that have been made previously.

WARDEN: No problem with that?

MR MARTIN: No.

WARDEN: All right. Thank you, I will grant that application. Thank you, Mr Clair, you were at the stage of introducing some documents to this witness yesterday, I believe.

MR CLAIR: That's correct, Your Worship.

Mr Robertson, yesterday afternoon I showed you a couple of documents, one of which was the deputy's report No 34 - deputy's report No 3456 and then one, 3462. What I have done is put those on the top of a bundle of reports and I will hand that set of reports to you ----

Your Worship, 3465 has already been provided to the panel and my friends. I will pass up copies of the balance of that bundle which I have just handed to the witness. I have copies of those also for my learned friends.

Mr Robertson, you had already looked at 3456, that was the one for 5 July '94. 3462 you looked at that yesterday afternoon. Each of those has the notation on both inspections in respect of ventilation, "Slow in the waste, adequate elsewhere in the section." The next one in that bundle is 3469 and that is for 10 July 1994, night shift; is that right?-- Yes.

And in respect of ventilation in the case of both inspections on that sheet you simply have, "Adequate throughout."?-- Yes.

And the next one is 3473 for the day shift on 11 July '94 and on both inspections there you have, "Adequate throughout the section."?-- Yes.

Then the next one is 3707, the day shift on 14 July '94 and on both inspections there you have noted in respect of ventilation, "Slow in the waste, adequate elsewhere throughout the section."?-- Yes.

Then 3726, which is for the afternoon shift on 20 July '94,

XN: MR CLAIR

WIT: ROBERTSON R W

and on both sections there you have, "Slow in the waste, adequate elsewhere throughout the section."?-- Yes.

The next one is 3729 which is for the afternoon shift on 21 July '94 and in respect of both inspections there the notation for ventilation is, "Slow in the waste, adequate elsewhere in the section."; is that so?-- Yes.

The next is 3735, being the afternoon shift for 23 July '94, and in the case of each of those you have entered - that is in the case of each of the inspections on that sheet you have entered the notation against ventilation, "Slow in the waste, adequate elsewhere in the section."?-- Yes.

The next sheet is 3746, the day shift on 27 July, and again on both inspections there you have noted against ventilation, "Slow in the waste, adequate elsewhere in the section."?-- Yes.

The next sheet is 3749, being the day shift for 28 July '94 and again against ventilation in respect to both inspections you have entered, "Slow in the waste, adequate elsewhere in the section.", and the next sheet then is 3752 for the day shift, 29 July '94 and the entry in respect of ventilation on both inspections there is in the same terms, "Slow in the waste, adequate elsewhere in the section."; is that right?-- Yes.

I have outlined all of those accurately?-- Yes.

Now, you mentioned yesterday afternoon when I was asking you about the first of the sheets in that bundle that it was your practice to put, "Slow in the waste", simply because the volume of air coming down the ventilation heading would slow down when it hit the greater area of the waste; that is, in the goaf?-- That's correct.

And that was all that you intended by putting, "Slow in the waste"?-- Yes.

In fact, you wouldn't see anything unusual in that entry?-- No.

Can I just ask you this though: in respect of two of those sheets that you have looked at there, 3469 on 10 July and 3473 on 11 July, you have actually made the entry on both inspections, "Adequate throughout.", or, "Adequate throughout the section.", you haven't made any particular distinction about the waste area. Can you make some comment about that?-- Well ----

You see, I am just looking to see what kind of distinction it is that would cause you to put "adequate throughout" on some occasions, but "slow in the waste" on other occasions?-- Well, I honestly can't say why I would have done it like this. This is a Sunday night shift. It would have been a non-production shift and more than likely I haven't been in the waste or - I actually don't know why, to be quite honest, that I did it like that looking at it now, because, as you can

see, I normally put "slow in the waste". I don't know why I have done it like that.

You see, the important thing, in the end result, is it not, is whether your entry is one which provides information as to any difficulties with ventilation; is that right?-- That's correct.

Now, when you put down that notation that ventilation is slow in the waste did you intend that might indicate that there was some difficulty with ventilation?-- No, if there was a difficulty with the ventilation I would have noted it as such, that we were having problems with ventilation and then on the action side what action I would have taken to try and remedy that problem. What it was a notation for was to let people know the ventilation in the waste or goaf area is naturally slower than that on the intake side coming in.

Yes, okay. Now, Your Worship I will tender that bundle of documents, the production deputy's reports completed by Mr Robertson from that No 3456 and the other numbers I mentioned earlier through to 3752.

Now, just one matter further, Mr Robertson -----

WARDEN: Before you start can we mark them Exhibit 46.

ADMITTED AND MARKED "EXHIBIT 46"

MR CLAIR: Sorry, Your Worship, I thought they had a number.

When you were appointed as a deputy you were no doubt informed about the responsibilities of deputies at that stage?-- Yes.

As part of your course. At some later point was there a system whereby underground position descriptions were instituted in relation to positions in the mine?-- No, I don't understand what you are asking me.

Okay. Perhaps it is best if I just show you the relevant document -----

If the witness could see Exhibit 12, Your Worship?

If you go to the seven pages in from the back of that bundle of documents, Mr Robertson, is the best way to find it. There is a document there which is headed "Position Description Underground Mine Deputy". Do you see that one there? That sets out various aspects of the position and the position responsibilities and then if you look at the next page you will see that those details are continued and then the page behind that has an acknowledgement form with a series of signatures on it. I think the sixth one down from the top would appear to be your name and -----?-- That's correct.

And signature acknowledging that you read and understood the contents of that position description; is that so?-- Yes. As I say, I don't recall signing the document like this. It is quite obvious I have. I don't recall seeing a document like this. I may have. As I say, I don't recall, but it is quite obvious I have because I have signed it.

It dates back to January this year, just to put it in time context. I think your signature is put on there on 3 January this year. Does that ring a bell? Pretty early in the new year?-- Yeah. No, sorry.

All right, okay. I have no further questions, Your Worship.

CROSS-EXAMINATION:

MR MacSPORRAN: On that shift on 17 June you came on shift and you read the previous deputy's report and signed it?-- Yes.

And did you say also that you read the shift before that and initialled it?-- I usually did so far as I can remember, yeah.

Was that a practice that you adopted each time you came on shift?-- If I was in a production section, yeah.

Is that a practice you had been trained to take up or was it just your choice to read those reports?-- No, it is a requirement that we read and sign the previous deputy's report, but the one previous to that I am unsure whether we had to do that. It is just that I normally done that to see what the flow of things was going on.

By reading the two previous shift reports you are able to get some better idea of the general trend in the section?-- Yeah.

And as far as you recall you regularly did that?-- Yes.

Were there many other deputies who undertook that practice?-- I couldn't say.

Now, in this 512 Panel there were only two occasions you can remember when there was a problem?-- Yeah, that caused me a great deal of - not a great deal, a deal of concern where I had to contact someone higher to get assistance as via the Act, if you have a problem you contact the next higher up.

And that's part of your duty, to report to your superior any problem you perceive underground so it can be noted and dealt with?-- Yes.

The person you report to ordinarily is the shift undermanager?-- That's right.

Now, the problem on this occasion then or the first occasion

on 17 June was a build up of methane?-- Yes.

That was reported to you by the outgoing deputy, Mr Newton?-- Yeah.

Did he tell you exactly what he had encountered on the shift before yours?-- Yeah, he said he had methane coming up No 2 heading, or the tranny supply road as we called it, and they were then trying to get rid of it and they hadn't had much success.

What did you understand him to mean by methane coming up No 2 heading?-- It was migrating back outbye of the ventilating current.

Would that mean you had the fresh air going into the roadway and on a higher layer you would have methane coming out?-- I don't understand what you mean.

Would you have two separate air currents?-- Not in that particular case going down there because it would become equalised at some point and it was equalising just outbye the crib table which was at 5 cross-cut on No 2 heading. So, just outbye of that the readings were down to normal. So, I perceived then it was going down the belt road, like, circulating around there. When we checked that it wasn't, it just migrated out against the ventilation pressure.

When you say migrating out, was your understanding it was coming out the general body up No 2?-- That's correct.

Were there tests done, to your knowledge, by Mr Newton to confirm that?-- Yes.

So you were told that there was a high concentration of methane coming out the general body up No 2?-- That's right.

When you did your Minder test was that confirmed as well?-- Yes.

Your initial Minder test was done in the crib room area?-- Yeah.

Which is around about 5 cross-cut?-- It was at 5 cross-cut.

I think you said in evidence it was unusual to find that concentration of methane that far back?-- Yeah.

Did you do any separate tests in the roof area? When I say "roof area" I mean to take a sample from the roof of the area?-- No, I didn't. Once I detected it there in the crib room area I done what we call a general body reading to give you an overall picture of it so that when you go down you hold it centre of the board, go down the centre of the board watching your instrument so that you don't go over turkey, and you just keep an eye on it that way.

You were trying to take the reading at a similar level all the way down the roadway?-- That's correct, so I could keep my eyes on view on that Minder.

That level you were taking was in the general body of the roadway?-- That's right.

Which is about what height on you? Waist, chest height?-- Roughly about chest height.

The roof height in that roadway was what approximately?-- Seven and a half foot possibly. If I stood up on tiptoes I could touch the roof.

So if you wanted to take a sample from the roof area you could have taken it without even a probe attachment on the Minder?-- Yeah.

But for areas where the roof was higher there were probe attachments that could be used on the Minder to take those samples?-- That's correct.

Were there different length probes for different height roofs?-- No, I think the only probe that I'm aware of that we had there was a three metre probe, and you had a length of tubing that went on to a head piece that sat on to your Minder. The tubing would have been around about a metre long.

That was used on the Minder?-- Yes.

Was there any equipment like that that could be adapted for use on the Drager tubes for sampling the roof areas for CO?-- Yes, there is an aspirator that can go with the Drager. You aspirate it into a bag sample then take it from a bag and get your reading from that if you want it.

Was that equipment available at No 2 at this time?-- Yes, I believe so.

Was it, to your knowledge, ever used?-- No.

All right, so you established there was an increased concentration of methane in No 2 and that was the case as you walked down No 2 taking samples?-- Yeah.

That concentration was in the general body?-- Yeah.

It was so severe - or caused you so much concern that you withdrew the miner from the face?-- Yes.

And informed the undermanager on shift?-- Yes.

And you were joined by McCamley and others?-- Yes.

And the whole group then carried out various inspections?-- Yes.

What were you actually looking for when you were inspecting the area?-- Concentrations of methane, other gasses present.

In particular CO?-- Mainly the methane, but CO and CO2 as well.

Why would you be checking for CO and CO2 as well as the methane?-- Just a natural part of being cautious, I suppose. Just check for everything that's there.

At the time you were doing this series of tests did you notice any difference in temperature in any of those roadways?-- When you go into a waste area the temperature in there, because of the slower air movement, is slightly higher. So yes, you would notice a higher temperature but nothing that would be construed as too hot, if you know what I mean. It's normal waste area workings. It didn't cause you to break out in a sweat straight away.

Was an increase in temperature that might have caused you to sweat one of the things that would have concerned you?-- Yeah, if it had been there, yeah.

You would have noticed that?-- Oh, heck yeah.

What would that have indicated to you potentially?-- The ventilation in there would have been not working properly at all. There would have been no ventilating circuit going through there at all for a start.

So in your deputies' report, Exhibit 44, that's the one of 17 June when it talks about air recirculating, that's what you mean, simply this methane in the general body coming out and then moving down the other roadways?-- Yes.

As opposed to two layers of air passing each other at different heights in the roadway?-- Yeah.

Have you ever experienced that before, different layers of air passing each other in the same roadway?-- Possibly, yeah.

But no particular instance comes to mind?-- No, not to mind, no.

On this occasion, 17 June, did you notice any unusual smell associated with this event?-- No, no, none whatsoever.

Did anyone who was with you on that day doing these inspections notice any smell that they reported to you?-- Not that I can recall, no, not in conversation or whatever. Not that I can recall.

In these circumstances an unusual smell would be significant, wouldn't it?-- Oh, yes.

It's something that if you detected it you would make a note of it?-- Yes.

In fact you did as much on the second occasion with which you were concerned which was 24 June, about a week later?-- Yes.

So a smell would have had some significance for you?-- Yes.

You don't recall on the 17th ever smelling anything unusual?-- No, not that I can recall, no. Just your normal musty smell of a waste area.

During the course of that inspection on 17 June did you notice any areas where there had been falls, coal lying about?-- Coal lying about?

Piles of coal from falls within the area?-- There was rib spalling around the place. Just exactly where I can't recall, but yeah, there is coal spall but there was a roof fall outbye further. Mark went over around it and done a Drager test around it. It was slightly warmer there. We talked about it, but still, as I say, to me it wasn't anything to concern. It was slightly warmer, but that was getting back up to where that recirculating current was that we talked about before and it was around that area, and there was a fall between 2 and 3 headings and I just forget at what cross-cut it was because, as I say, the cross-cut numbers are gone out of there, and Mark went over and done a test and come back with the results, and as I said, I think we had different results. But around the same area in that same current one would have expected my readings and his to be the same.

You say that it was a little warmer in the area where he went to inspect this fall, but in your opinion not significantly warmer to cause you concern about a possible heating?-- No, no.

Did he have some concerns about a possible heating in the area where he inspected that he told you about?-- Not that I can recall, no. He may have mentioned in passing, I don't know. I honestly don't.

With the tests that were done by McCamley and yourself there were different readings obtained; is that so?-- Yeah.

Your recollection is that your reading was 10 ppm, his was eight?-- Yeah. I can't recall the CO2 readings. I think Mark done CO2 readings as well.

But it wasn't the case that you simply informed each other of the readings, you actually exchanged tubes and read each other's tubes?-- Yeah.

So in spite of reading those tubes you still had different results?-- Yeah.

Does that happen often?-- As I mentioned before, because of that type of instrument, and I believe it's an outdated and antiquated instrument as it is, every person -I could get you, train you, give you that, let you do a test and you would read it differently.

So there is a subjective element to it as to how you read the tube?-- Yeah.

Are there, to your knowledge, other more accurate instruments available to read CO?-- I believe so, yes.

Are those electronic instruments?-- Yes.

Do they have an actual digital read out, do they, of the parts per million?-- Yes, we have them in Mines Rescue.

I take it they weren't being used at all in No 2 at this time?-- No, we don't have that many.

In the method of extraction in 512 that you were involved in it was quite common, wasn't it, to have loose coal lying around as you retreated?-- Yes.

That came firstly, I suppose, from the method of extraction being the ramping procedure?-- Yes.

And secondly from falls that were expected given the method of extraction?-- Yes.

So you would have quite a quantity on occasions lying around loosely inside the goaf area?-- Yes.

Was there any system in place for actually reporting the quantity of coal left behind on the floor?-- No.

I mean not with mathematical certainty, but an actual recording of the size of areas of falls and the height and the exact location of them?-- I believe the surveyors used to record the falls, plus we had a mob out there from SIMTARS or ACIRL, one of those mobs and they were doing the planning on it and they used to come down and take photographs of the falls.

Was that after you had retreated?-- Yeah.

So it was still possible to enter those areas and assess what quantity of coal was left behind?-- Yeah, if you were silly enough to.

I think you were saying before it was a dangerous practice because it was somewhat unstable after you had retreated?-- Yeah.

But as far as you know there was no procedure for the deputies after each shift to note locations of falls and quantities of coal left lying as a result of those falls?-- We did have some section plans down there and you would fill out on it where you'd been mining during that shift, and we sort of had added ourselves a little coloured arrangement with pens between the deputies that were working in the panel, but as far as I know those plans were left down there. They were always in the panel and you would update them each shift as to where you'd been mining at the end of each shift.

Can I ask you generally, did it seem to you to be the case that there were very frequent alterations to the ventilation configuration? By that I mean the alterations of stoppings, erecting and dismantling brattice lines. It was a frequent occurrence to change those aspects as you mined?-- Yeah, you had to. As you retreated you had to pull up and put down your stoppings.

There were frequent changes of that system?-- Yeah.

The idea was to properly ventilate the goaf area as you retreated?-- Yes.

Because unless you did that you had a potential problem with spontaneous combustion in those areas?-- Yes.

The ventilation in 512 was of the order of what? Did you know the quantity of air coming into the panel on a regular basis?-- No.

That was left up to the ventilation officer, was it?-- Ventilation officer, yes.

If that was inadequate it was up to the deputies and others perhaps to report it to management who would then have the ventilation officer -----?-- You would ring the undermanager up and bellow at him to get some more air down there and he would then send the appropriate people down to remedy it for you.

Between 17 June and 24 June were you on shift in that panel?-- Couldn't say unless I seen the report.

If you were there was no problem that you recall?-- Like I say, I wouldn't know whether I was on shift.

In any event, you do recall the next event being 24 June, a week later, when you noticed a similar problem?-- Yeah.

Is that so?-- Yeah.

Would you agree that on that occasion, that is a week later, you had more reason for concern?-- Sorry?

You had more reason for concern?-- Yes.

A week later?-- Yes.

Why was that?-- The section was down, as I said yesterday. We had gone for a walk down there on the top return and the waste return, and on the way back at 7 cross-cut, as we were walking past there I detected what I thought to be a benzene type of a smell. It was just not a normal smell for that - a waste return.

It wasn't a musty, normal goaf smell?-- No, no.

As far as you recall you hadn't smelled that in that panel the previous week?-- No, no.

The area where you smelled it which was about 7 cross-cut, was that generally in the area where McCamley had inspected a fall?-- No, I don't think so. I think it was further - he was further inbye when we had that problem.

Around about 9 cross-cut?-- Could have been, yeah. Like I say, I can't remember exactly where we were when we took those tests in the waste area.

Anyway, on that occasion you further investigated the smell?-- Yeah.

By putting your head through the stopping?-- We actually looked through it, had a look around and had a look across and ah, ah, aren't going out there no further because it was tiger country and the bottoms had been taken out from where we were and she was popping and cracking. When you sat there and listened you could hear it working.

As far as you were concerned it was too dangerous to go further to try and find the source of this smell that you detected?-- Yeah.

It was coming from that?-- It was coming from that area. I wasn't getting anything down the back of the panel. There was, like I say, you couldn't smell it all the time, if you know what I mean. It's just once or twice and it was just strange, so I done the test, and even when we were leaving I sort of didn't smell it again and that was it.

That smell, had you encountered that smell before anywhere?-- I believed I had recognised that smell before as something I'd smelled at No 4 during the '86 disaster. I was in Rescue then and the smell of that ----

Post-explosion obviously?-- Yeah, something similar to that. I can't say were it was or it wasn't. The only thing I could put a name to it was a benzeney smell and when you come in to

the mine - see, I live over in Bilo and when you come in from there you cross over the railway line where the old pit was, and in winter, gobstink and that - sort of a bit like that when you cross over there, but nowhere near as concentrated. It was just a short - and that was it, it was something different.

It was a smell that you thought shouldn't be there?-- Mmm.

Unusual smell?-- Unusual, yeah.

And in your job properly you reported that on your deputy's report?-- Yes.

You made specific mention in your report of a benzene-type smell at that area?-- Yeah.

And you made the further note that there was a need to keep a check on it?-- Mmm.

Why did you think there was a need to keep a check on that benzene-type smell?-- Well, if it was what I thought it was, there could have been a problem developing, so naturally you want to stop the problem before it gets any worse, so I reported it to Micky Squires and rang him up and said, "Look, you know, I'm sure or pretty sure there's, you know, a benzene-type smell. It might pay to keep an eye on it over the weekend."

When you say if it was what you thought it was, do you mean you suspected at that time it could have been the start of a heating?-- Yeah, I suppose you could say that, but yes and no. That's basically sort of ----

It was a sign of a ----?-- Yeah, it was something there that I couldn't explain that was different and, to me, that's what it - I thought it could have been, and so I reported it as such.

In the belief that, having reported it, there would be people who would be informed and a check kept on the progress of that area?-- Yeah, well, you would think so once it's been reported.

And this was back on 24 June?-- Yeah.

After that day did you ever hear any more about subsequent smells being detected in that same panel?-- No, and I never either from that time on until I went off on holidays. We actually had a problem later on that I was off shift and Dave Kerry, our head of rescue, went all through the waste with Jacques and they didn't smell anything either. He said no - just the waste was good, you know, it wasn't hot or anything like that. Kerry said, "Yeah, no, we haven't smelt anything.", so, you know, if anyone would have picked it up it would have been Dave, and from then on there was nothing, it was never again. You would go down there and stick your head in and around it, you couldn't smell it, even down the back of the panel.

And, of course, throughout that period from 24 June to the early hours of 7 August, the Sunday, this panel was still being totally ventilated, wasn't it?-- Yes.

The ventilation was only stopped into that panel in the early hours of the Sunday morning?-- I wouldn't know. I wasn't there.

When it was sealed?-- Yeah.

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Until it was sealed the full quantity of ventilation was going through that whole panel?-- Yeah, yeah.

Now, you were one of the deputies who was trained in the use of the gas chromatograph; is that so?-- Not the one that's there now, no.

So you weren't trained on that one?-- No.

Were you trained on a previous one, were you?-- Yeah.

When was that?-- Pass. I can't remember, mate.

Some years ago anyway, was it?-- Yeah, it was a fair while ago.

And just for my information, was that a totally different machine or was it an earlier model of the one that's there now, or what was it?-- To be honest, I couldn't tell you. Like the machine that was there - the one that's in there now looks totally different to the other one and I believe operates different. It's hooked to a computer and all sorts of gizmos.

The old one, what was it there for?-- For testing bag samples that you would take in remote areas or whatever and doing the gas analysis.

What particular use did the chromatograph you had been trained on have in terms of analysis of gases, which particular gases did you understand?-- Carbon monoxide, carbon dioxide.

Hydrogen?-- Possibly, yeah.

Ethylene?-- No.

Methane?-- No.

Anyway, I take it from what you say you have had no involvement at all with the current chromatograph on site?-- No, no.

Do you know whether there was a policy at all at No 2 to have someone who was trained in the use of it on shift?-- No.

You don't know?-- No. I believe Selfy was our bathroom attendant. He was on permanent day shift. I sort of learned later on that he was the one that used it.

Now, when was it that you went away? Did you take leave at some stage leading up to the incident?-- Yeah, nine days before.

Nine days before, so you returned - were due to return after the event, were you?-- Monday day shift.

But you were called back because of your involvement with Mines Rescue?-- Yeah, that Sunday night I got a call back.

XXN: MR MacSPORRAN

WIT: ROBERTSON R W

Now, before you went on leave was there in place a practice of taking the CO make every shift in 512?-- I'm not sure. I used to do the readings in there on the deputy's report as you see the wet and dry. There could have been, yeah. Like I say, up until that point I know while Cocky was off Mouse - Allan Morieson was off, Stevey Bryon was doing the fire officer's job and he was coming into the panel and doing readings, so, yeah, I would guess that he was doing the CO make.

See, normally the CO make would be done once per week, wouldn't it?-- Yeah, on a Friday, I think.

Was that increased before you went on leave to being done -----?-- Daily, yeah.

If not by shift but daily?-- Yeah, because Mouse - Stevey was coming into the panel.

Did you know where that was being recorded, if anywhere, the CO make per day?-- No, we would only have it done - a graph in the deputies' cabin.

That graph, is that a graph that is completely up to date? In other words, is it current for each shift in the mine?-- Not that I know of. Like I say, you just look at the graph and see it on the wall. It was on a board. Fridays it was updated and that was it.

Updated each Friday?-- Yes, as far as I knew then.

In between times would you make any inquiries or look for what the CO make was in the panel?-- No.

Do you ever remember before going on leave nine days before the event checking any records of the CO make that might have been taken daily?-- Not that I can recall, no. I could have, but I don't recall.

Were you aware of the reason behind taking the CO make daily as opposed to weekly?-- Yes, because - well, naturally you would have a higher CO content coming out of your waste, so the graph must have been trending upwards so they were keeping an eye on it with that, you know, doing the tests each day.

But as a deputy who was regularly going underground up to nine days before the incident, were you keeping an eye yourself on the CO make?-- With the tests I myself was doing in the panel you would sort of keep an eye on it then, but not on the make. You would be looking at parts per million. I believe I done a wet and dry and a few tests there in some of the reports getting towards before I went off, so, yeah, you would know what was coming out of your waste.

From your own tests?-- Yeah.

On your own shifts?-- Yeah.

But would you keep an eye on the readings being taken by other

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shifts?-- Not normally, no.

Wouldn't that give you a more accurate picture of what the CO trend was?-- Yes, I would imagine so.

In any event, the last involvement you had was about nine days before when you went on leave?-- Yes.

You had no knowledge, therefore, of the events leading up of the incident and no knowledge of the events in the week before?-- No, when I left everything was going along fine.

When you take the CO readings on the Drager tube and the air velocity with the anemometer, you are able then to calculate, aren't you, the CO make, if you know the area where you have taken the readings?-- Yes.

Was it the practice to always make that calculation?-- No.

Or only if you thought it was necessary?-- Only if you thought it was necessary. No, we never done the calculation ourselves. We just reported the readings that we got. Like I say, normally Cocky done or Stevey done the readings and they did the calculation.

But from the data you had collected through your own tests, you were able to do the calculation if you so desired?-- Yes.

And certainly anyone else could have done the calculation with that data?-- They could have, but I don't think a lot of them have been trained to do that because they wouldn't know the formula. As it is now, off the top of my head I couldn't remember the formula unless I had it there and read it out of my Mines Rescue book and do it through that.

Now, 24 June when you noticed this smell, the ventilation officer was still Allan Morieson, as far as you know?-- As far as I know, yeah. I will have to go along with what you say.

You don't know?-- No, I can't remember.

Now, at what stage did the changeover occur between Allan Morieson and Steve Bryon?-- No, I can't recall when Allan went off on holidays. I know that Mouse took over for a while. The actual dates, no.

In any event, you didn't tell either of those men personally about this smell you detected on 24 June that you now recall?-- No.

But you did make your deputies' report?-- Yes.

Thank you, Your Worship.

WARDEN: Mr Martin?

XXN: MR MacSPORRAN

WIT: ROBERTSON R W

CROSS-EXAMINATION:

MR MARTIN: Mr Robertson, my learned friend, Mr MacSporran, was asking you about towards a time when you went on holidays. I suggest to you that there was an active change by management in terms of direction to deputies to be more precise and more exact in their recording of readings found of CO, CO2, methane, for instance, say from 23 July?-- Why would you say that?

I beg your pardon?-- I don't understand.

Well, I will ask you to do it in a moment perhaps, but before 23 July, when one reads the collection of production deputies' reports, one does not see very much precision at all in terms of recording precisely on deputies' reports the findings of gas make, nor, for that matter, the findings of wet and dry bulb temperature taking?-- Right.

And, indeed, before 23 July not much, according to wet and dry bulb temperature make, occurred?-- Mmm.

I am asking you whether that change, as it were, occurred because of a direction from management about 23 July?-- Yeah, I believe so, yeah. I remember, you know, someone coming in and saying, you know, we do all the tests daily.

And recorded?-- Yeah.

And that someone was who?-- I don't recall.

All right, but one of the other managers at least?-- Yeah. It would have had to have come from the top.

I beg your pardon?-- It would have had to come from high up.

And indeed the sling or whirling psychrometer, is it?-- Hygrometer, psychrometer. Sling psychrometer and whirling hygrometer.

They are not instruments a deputy normally carries?-- No.

In fact, they very valuable instruments, aren't they? You don't know that, all right. Instruments usually kept in the possession of, what, the undermanager?-- Fire officer, undermanager.

But not generally given out?-- No.

But given out for usage after 23 July?-- Yeah, somewhere there.

Beg your pardon?-- Yeah, it would have been around then because there was one left in the crib table permanently then.

But not before?-- No.

XXN: MR MARTIN

WIT: ROBERTSON R W

Do you know why that change occurred?-- No, I don't.

I suggest to you it was because of an increasing concern about the heat - a warming up or a heating in the panel?-- Well, that was never indicated to me.

Okay. Even now you would need a book containing the formula to do the calculation of parts per million to litres?-- Oh, yeah.

And, to the best of your knowledge, a lot of deputies don't even have that capacity?-- No, only those in Mines Rescue, like I said, have been trained for that but even then forget what it is.

In response to a question from Mr MacSporran you said the old gas chromatograph that you had some training on possibly read hydrogen?-- Yeah, I don't recall. It's that long ago since I've trained on it.

What length of time did your training on the old instrument take, what duration? Was it a thorough training or just a light training? Use your own terms?-- Light training.

How long did it take?-- I don't recall the actual time period that we trained over. It might have been a couple of hours out of the shift for a couple of days or whatever, or so much during a shift.

Did you ever have an occasion to use what knowledge you acquired on that gas chromatograph?-- No.

Could you just look at that plan the first to your right? It's 45/18, I think. You won't know that. It's for the benefit of the panel. But you left on holidays some nine days before 7 August?-- Yes.

Could you just look and say, if you can, now to what extent the retreat had extended by the time you went on holidays?-- Unless I looked on my report, no, I couldn't be accurate in where we were. The last report that I had done up to that stage, it would say what cross-cut we were at and what sequence we were in, so ----

All right. Well, you were cutting down towards cross-cut 1 at least?-- Yeah, the crib table was back at No 1 cross-cut and we could have been down at No 4, somewhere down there. I'm not sure.

All I really want to know is whether you recall, or from your recall whether the plan at the time you departed accurately represents the remnants of the panel?-- Yeah, roughly.

You told Mr MacSporran that the smell you had experienced, I think, on 24 June was similar in some way to the post-explosion in 1986 smell?-- Mmm.

And also similar to the smell at No 1 when you drive past?--

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Yeah.

No 1 is on fire, isn't it?-- I believe so, yeah.

You told Mr MacSporran that you had section plans underground?-- Yes.

Are they the mining sequence plans or - I just don't know the document you are talking about?-- Some had - there were mining sequence plans there posted on the board and they were updated as we moved along or retreated. The other plans we used were scale plans.

Were what?-- Scale plans.

Scale, right?-- And they were just of the panel itself and you would just mark in - they were the full blocks and you would just mark in where you had been.

And they stayed underground with the crib table?-- Yes.

Or in that area?-- Yes.

Were they read each day by mine surveyors?-- No.

You told Mr MacSporran also - I think it was Mr MacSporran - that the Drager - is it - the Drager 21/31 is an antiquated instrument?-- Yes.

How do you know that?-- If you have got an instrument that is giving - where people can read it and have different - come out with different outcomes, I believe then that something better should be used and in this year - by that I mean in this time with instruments that are available to us it would have been -----

That was my question, there are such instruments available?-- Yes.

You know that of your own knowledge because you have read something about them?-- That's correct.

You told Mr MacSporran, I believe, that the attachment for the Drager was never used to extend the probe into a difficult area?-- No, it was just a general body reading we done with them.

I beg your pardon?-- It was a general body you used them for.

Where was this attachment kept?-- In the instrument room or in the computer room with - the probeye and Oxywarn are there too, I think. I think it is there somewhere, in a box there.

No instructions from management to deputies, for instance, "If you get an area you can't reasonably test because of safety use that instrument." - that attachment, I should say?-- No, I don't believe you used that because the length of the tube - you still have to physically go in and take a sample with it, or a bag sample from a height aspirated into your bag, and then do a tube sample with it.

Even the attachment wouldn't help in terms of protection in the waste area?-- No.

There is no doubt you rang Mr Squires?-- None whatsoever.

I beg your pardon?-- No, none whatsoever.

In relation to the benzeney or benzene?-- That's correct.

I think it was the occasion before we have been talking about this morning, that is 17 June, when Mr McCamley came with Mr Morieson? That's the date, isn't it?-- Sorry?

17 June when Mr McCamley came down? There are two dates we have been talking about, 17 June and 24 June?-- Yeah. No, Mark wasn't down there on the 24th.

I didn't say that. It was the 17th he was there?-- Yes, he was down. That's when we had the recirculation problem.

There was a discussion, I suggest, between at least Mr McCamley and Mr Morieson about what was being experienced might be the start of a heating? Do you know not recall or don't you know?-- No, I don't know.

I am simply asking?-- Yeah.

Yesterday afternoon, I think it was, you were talking about secure ribs?-- Sorry?

Yesterday afternoon you were speaking about secure ribs?-- Yeah.

Do you recall that?-- No. What do you mean? Secure, unsecured?

I won't pursue that. Just a little about your background, if you would. You are about 37 years of age?-- Correct.

And left school age 14?-- Correct.

In Grade 9?-- Correct.

Then you had some five years as a butcher?-- Correct.

Then in 1976 you started at Moura?-- Yes.

I just want to go back in time to your first induction underground. How long did the induction take?-- It didn't.

It didn't?-- I was taken down with Aggy Bullock into No 4 Underground into the 1st South or 1st North - 1st South - 1st North and shown the shuttle car. He said, "This is what you're going on, go for it." I walked with the driver up to the miner and back. He said, "That's it. He's yours. I'm on the feeder now."

Still, that's a long time ago now?-- Yeah, but I remember it well.

And then you did a deputy's course after?-- After a period.

And that's extremely limited, isn't it, in terms of duration?-- It was eight months all up, but that was once a week. You had one day. Then on the afternoon shift the company gives you a day, if you know what I mean? You went to school at 5 o'clock in the afternoon and finished at 10 or 11 that night.

For how many hours per week?-- Five hours, six hours.

And what, if anything, did you learn about spontaneous combustion?-- We learnt that it was an exothermic reaction where heat is generated - as I said, exothermic is self-explanatory. Heat is generated. The ventilation - the ventilating current doesn't take the heat away, enough oxygen

is supplied, the coal will start to heat up on its own.

Is that about the extent of your knowledge of the phenomenon?-- Yes.

Acquired in the '80's?-- Yeah.

Were you ever given what is called or what might be called a red book on spon com or a blue book on spon com?-- Oh, yeah, years ago, that one.

Which one?-- Red and the blue one, I think.

Since your - I am sorry, was the red book and the blue book given to you in association with your deputy's course or not or do you not now remember?-- No, I couldn't remember, no. Hold on, yeah, it could have been, yeah. Yeah, because with my books that I have got for - when I done the course I think there is a red and a blue book still in there.

Would you just mind showing Mr Robertson those?

WITNESS: Yeah.

MR MARTIN: Are they the two books?-- Yeah, that's them.

One - the red book is not quite as thick as the blue?-- Mmm.

Does the blue contain more information?-- Sorry?

Does the blue book contain more information than the red book?-- I couldn't tell you.

You don't know. Thank you. Since you became a deputy what furthering education have you been provided with in relation to, say, spontaneous combustion by your employer?-- None that I am aware of.

Do you recall since becoming a deputy whether you have been given any retaining or courses in any other aspect, safety aspect, in particular, of mining?-- The only - yeah. The only course I can remember was one - Georgie rang me up at home one day and said, "There is a course on safety - accident analysis.", and myself and a bloke called Trevor Dickson and the personnel officer Frank were sent along to that course. That's the only one I have done.

What did it actually comprise, briefly?-- If there is an accident how to go about breaking it down and sorting the solution out.

For it not to happen again?-- Yes.

Are you familiar with the organisation called SIMTARS?-- Yes.

Do you have any particular knowledge of the service it provides to mine operators?-- Case analysis.

So, is your understanding that through the gas chromatograph

there is a ready and quick interpretation of results if that be necessary? You don't know that?-- No, I don't know that.

Have you ever seen any material published by SIMTARS in relation to the services it provides or what the gas chromatograph can and cannot do?-- No.

To the best of your knowledge who, apart from Ken Self, was a gas chromatograph operator immediately before 7 August 1994?-- No idea.

Do you recall if the gas chromatograph first came onto Moura No 2 after the explosion in 1986?-- Yes, it did. It was as a result of the outcome of the findings from '86.

And at least - you have no knowledge of it ever being used apart from the instances you have told us about with Kenny - Ken Self?-- Yeah. One other time, yeah, a new one. I think they done some tests on it and it didn't work and they had a problem with it when they went to use it. So, they had to fix it up. I don't know the full gist of it. I just remember them talking about it, that there was a problem with it, it didn't work and that was a new one.

And what do you know about the operation of the Maihak system in terms of finesse of you being able to use it?-- The Maihak system?

Yes, the reading of it by the computer and by the - visually on the screen?-- I don't know anything about it. By the "Maihak" do you mean the tube bundle system?

I do, yes, or the Unor?-- Yeah, the Unor. I am a bit muddled.

I am sorry?-- Yeah, we've - we know that there is a print-out plus a permanent screen that you can view 24 hours a day when you come on shift. Usually have a look at it.

Through a glass window?-- Yeah, yeah.

How far away is it?-- Well, at the moment there is -----

Well, sorry, when you were last there before 7 August?-- Yeah, well, I suppose from here to that jug away. Through the glass, you see, you can go and see it.

Anyway, the screen is readily visible?-- Yeah, and you would look at the readings and if it had read a high percentage of gas that it was capable of reading it would set off - an alarm off, flashing on and off, red, and say "active" and then you would inform usually the leckies or one of the undermanagers that it needed to be seen and check the problem.

Tell me this: do you know whether the Maihak - I am sorry, I will use "Unor"?-- Unor.

Had a horn alarm system or whether the horn alarm system was disconnected?-- No, I don't believe it did. I am not sure.

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I couldn't be sure on that.

All right?-- Not that I have heard, anyway.

Earlier in your evidence you mentioned the probeye?-- Yeah.

That's in the instrument room as well, or the Unor room?--
Yeah.

Do you know its purpose?-- Sorry?

Do you know its purpose?-- Yeah.

What is its purpose?-- Oh, sorry. To detect hot spots, as we call them. So, it is an infra-red instrument and it detects heatings.

Do you know whether it ever has been used for that purpose?--
Yes.

And have you ever used it for that purpose?-- Yes.

Where?-- 5 North.

When approximately to the best of - do the best?-- Back before I think we had a heating down in there and we had to seal up.

Who taught you to use it?-- Dave Kerr.

How long ago? Obviously before that instance?-- Yeah. Oh, it would be quite some considerable time ago now.

Have you used it since?-- Not since that point, no.

Do you know if anybody else has used it since?-- No, I don't.

5 North - is it 5 North or 5 North West that you mentioned?--
5 North - 5 North West. I am not sure. It was one of those down there.

That was a case of a sudden development or a sudden increase -----?-- Yeah.

In CO make. Did you have any capacity yourself to punch up on the Unor any of the what you might call fail safe diagrams such as Ellicott's diagram?-- No.

And, of course, you knew of the phenomenon of spontaneous combustion and gassy coal referable to the Moura seams?--
Yes.

What can you tell the Inquiry as to your knowledge of the incubation period of Moura coal?-- I think -----

If you don't know much say so. If you do tell us?-- Well, I think from the start of it, when you started retreating, we were given six months as an incubation period to finish your panel.

XXN: MR MARTIN

WIT: ROBERTSON R W

Is that what you had been given in relation to each of them?--
Yeah, I think that come from the mines inspector, I am not
sure.

But not something deputies determine?-- No.

If you have no finesse or sufficient finesse to answer this
please say so immediately before I go too far: spontaneous
combustion in one area might have a completely different
incubation period to spontaneous combustion in another area
because of numerous variables. You don't know?-- No idea.

Thank you. I think you have told Mr MacSporran that there
were a number of roof falls and they did naturally bury
beneath them loose coal with the ramping system?-- Yes.

Do you have any view - and say immediately if you don't have the finesse - whether the panel design caused any problem with the ventilation that you experienced?-- No, I don't believe so.

Are you able to help the Inquiry at all with any comment upon the suitability of the Tecrete seal? I guess you can't because that's the first time it was used?-- Yeah.

I suppose you yourself know nothing about where a final - sorry, I'll rephrase that - the monitoring point inside a final seal should be placed?-- No.

Who authorises or determines that; do you know?-- The undermanager, manager.

At least to the time you were last there, that is in 512 Panel, it was possible to negotiate your way right down No 1 return to cut-through 13?-- Yes.

This is the case, isn't it, that after sealing the work face, the deputies and the men are expected to go underground whilst the panel necessarily goes through the explosive range?-- We have had occasions where we have done that, yes.

Is there something in the order of a 20 per cent error component in a Drager machine, upwards or downwards that is?-- Drager 21/31?

Yes?-- I couldn't say.

I just want something straightened out once and for all here; the chain of command is this, is it not: miners take orders from you and your superiors such as undermanager, manager, underground superintendent; is that right?-- Yeah.

And you in turn take your orders from all those superior to you?-- Yes.

Have you been in a situation at No 2 where a panel has been flooded?-- Not that I can recall, no.

Do you know why it is that wet bulb and dry bulb temperature readings are taken?-- It gives you relative humidity.

Does that tell you anything about the effect of humidity upon coal? If you don't know, say so?-- I don't know.

You know nothing about heat of hydration?-- No, no.

Thank you, Your Worship.

WARDEN: Yes, Mr Morrison?

MR MORRISON: Thank you.

CROSS-EXAMINATION:

MR MORRISON: Mr Robertson, you were asked to look at a position statement which relates to the duties of deputies and the responsibilities of deputies, you will recall that?-- That form before, yeah.

It was the form in relation to deputies. You couldn't recall having seen it, but your signature was obviously on it?-- Yeah.

Obviously at some time you did see it and signed it off?-- Yeah, if it's there.

What you've read in there was no surprise to you in terms of your duties and responsibilities? Would you like to see it again?-- Yeah, I just had a -----

It's open at the underground deputy page. You will see "Purpose of the position", outlined under about four points. None of those are any surprise to you about the purpose of the deputy's position and then in fact the chain of command is set out in that document in black and white?-- Yes.

Below that the responsibilities of a deputy are set out under a number of points, and again none of those down to six in fact - it goes on the next page - none of those are any particular surprise to you?-- No.

It's what you would expect if someone said to you, "Can you tell me what a deputy has to do and what his responsibilities are?" You might not put it in those words, but it's effectively the same?-- Yeah.

A deputy has quite a responsible position in the mine, doesn't he?-- Yes.

Every miner - it's an old mine truism, I suppose - every miner is his own safety officer?-- That's correct.

Deputies are charged with the responsibilities for sections?-- That's correct.

For instance, a production deputy such as yourself wouldn't, unless the circumstances were quite extraordinary, wander off and leave his crew by themselves down at the face?-- If you had to do your inspection, yeah, you do.

Apart from inspections though you wouldn't go back up to the surface and leave them down there for several hours?-- Not necessarily - not normally, no.

You were charged with directing operations down there?-- Yes.

And when operations become unsafe for some particular purpose it's your responsibility and you have the power to stop those operations?-- Yes.

In fact you exercised that power on 17 June when you had that difficulty with the gas?-- Yes.

You in fact effectively shut the section down until the problem was corrected?-- Yes.

If the problem wasn't readily corrected there is no way you would start up production again until it had been?-- No.

And no deputy that you know would do that, would they?-- Not that I believe, no.

You would confidently expect all deputies at No 2 to behave in the way we have just been discussing, that is to say, if operations were unsafe, operations would be stopped and not recommenced until the conditions were safe?-- That's true.

You would be quite confident that the others would do as you did?-- I can only have confidence in myself. You are your own safety officer, as you said.

You are your own safety officer, yes. What steps do you take if there is an unsafe operation, very big ones?-- Stop them, stop operation.

Exactly. The responsibilities of deputies extends, doesn't it, also to the production of reports on every shift?-- Yes.

Miners themselves don't make reports, do they?-- No.

I mean written reports?-- No, no.

They certainly make verbal reports to their deputies -----?-- Yes.

----- in one form of language or another about what they think is going on, and there is no reason why miners can't make verbal reports about conditions to undermanagers or managers?-- Yeah.

In fact that's frequently happening, miners let their voices be heard?-- That's correct.

This is a mine that no doubt reflects other mines, but people were not backward in speaking up, were they?-- That's correct.

Indeed meetings such as the mass safety meetings that were held fairly regularly - I can't tell you the precise number of weeks in between, but they were fairly regular, there were people speaking up at those safety meetings about safety issues?-- Correct.

In fact I think you are one of them who regularly spoke up?-- Correct.

You certainly weren't in any way inhibited about speaking up, were you?-- Correct.

It is important then in relation to deputies' reports that they do signify matters of importance about what has just happened on the shift?-- Correct.

You would agree with me, wouldn't you, that that is also the importance of doing as you did, reading the previous report?-- Yes.

And signing it off?-- Yes.

I gather from what you said yesterday, mostly the originals of reports wouldn't be signed, but duplicates would be?-- Yes.

And particularly on hot seat changes where the deputies' report book stays down in the crib room that's the case?-- Yes.

And mostly oncoming deputies would speak to outgoing deputies at the crib room on a hot seat change?-- Yes.

Likewise one shift with the other?-- Yes.

If it wasn't a hot seat change that exchange of information is likely to have occurred on the surface?-- Yes.

And that exchange of information not only is deputy to deputy, but it's miner to miner and deputy to undermanager?-- Yes.

That's a very routine sequence?-- Yes.

It's what you would expect?-- Yes.

Now, bearing in mind your responsibilities, you would put into your reports anything of significance that you thought you should draw to someone's attention?-- Yes.

That certainly was your routine?-- Yes.

You would expect that of every deputy?-- Yes.

They are charged with the same responsibilities you are?-- Yes.

I know deputies have different ways of doing their reports, you did your a little more meticulously than others?-- Yes.

They all serve the same purpose; they are for the purpose of informing the oncoming deputy or the undermanager of conditions in the mine?-- Yes.

You notified a smell in your report of 24 June?-- Yes.

And I think you said yesterday you told the oncoming deputy or one of them?-- I think I did. I'm pretty sure I did. In recollecting - on the Friday afternoon shift you come out, there is people in the deputies' cabin, exactly who was there, mate, I couldn't say, but I'm sure in my own mind that I said, "Look, I had a bit of a smell down there, didn't smell right.

Keep an eye on it over the weekend."

There is no doubt given your normal practice that this is the sort of thing you would pass on both in the report and verbally?-- Yes.

Now, the choices - sorry I shouldn't say "the choices", that's a bad use of words. The two oncoming deputies that night were Ray Campbell and Kenny Guest. Hearing those two names doesn't bring to mind which of those -----?-- No, it doesn't. See in the deputies' cabin, the outbye deputies, the non-production deputy and the two production deputies are down the pit. We got up a bit earlier. Sometimes on a Friday night that was the case, on a Friday afternoon shift.

People were a bit anxious to go, weren't they?-- Yeah, and you would come up - they'd still be in the cabin, and plus there'd be miners or whoever else around there talking, whether it be electricians or whatever in the deputy cabin area, but as to exactly who I said it to, I really don't remember.

Certainly one of those deputies that was going down into the pit that night -----?-- Would have seen my report, yes.

Now, when you came back on the next shift that you did, as I understand you read the previous shift report?-- Yes.

And perhaps even the one before?-- Yes.

Depending upon what the circumstances were?-- Yes.

I assume then that when you came back on you were probably looking to see if this smell had been repeated?-- Yes.

And the fact was that it hadn't, had it?-- No.

In fact in no deputies' report after yours was there any indication of a repeat of that smell?-- That's correct.

Now, you would have confidently expected, would you not, that if you had mentioned this feature to a deputy and shown the report with those words written in about the smell and asked that deputy to keep an eye on it that that deputy would do exactly that?-- Yes, plus the undermanager would see that someone did - see, when you get out of the pit you physically pass your report to the undermanager. He then reads it and has to sign it and he must post that report. That was the system we put into place. So as well as the undermanager - the deputy, the undermanager would have known as well, whichever undermanager would have been on.

Then the deputy's report gets posted, doesn't it?-- That's correct.

Where it's posted is in the start point?-- On a board.

On a board. It's a fact, isn't it, at this mine and no doubt at others that oncoming shifts check those reports?-- Yes.

They are there for all miners to see?-- That's right.

And miners do look out for them?-- Yes.

And naturally deputies do too?-- Yes.

They remain there until the next shift report comes up and then that is posted. On weekends it's posted on top of the one that's there?-- Yes, or occasionally on some weekends though it was known that the original copies of some of the reports were left in the book, but either the undermanager or one of them - undermanager, manager would come around and take them out and collect them.

And then they go through the same process of reading and posting?-- Yes.

One way or the other all the shift reports on the weekend would end up under the bulldog clip at the noticeboard?-- Yes.

With the most recent one out?-- Yes.

So that every shift report was posted in order for miners to be able to read and understand what was happening in the section they were going to?-- Yes.

When you came back after 24 June did you have cause to check the deputy's reports prior, that is on the shifts prior to you?-- Yes, I had a glance at them at that stage thinking they have probably gone and looked at it and didn't get any smell or didn't detect anything.

You were thinking that that was the case?-- Yeah, and then when I've gone down into the panel and done my inspections I never got that smell again.

I just want to show you some production reports, if I may, and just have you identify them. You will no doubt be able to recognise the signatures of some of these chaps that I can't because you have no doubt read their reports before. The first one is the Saturday night shift for 25 June, isn't it?-- Yeah.

That's Ken Guest's, isn't it? That's his signature as deputy?-- Yes.

Oncoming deputy from him, Lex Henderson?-- Yes.

Just stay with that one for the moment, please. The Saturday night shift is the one next following your afternoon shift on 24 June, isn't it - sorry, I'm not talking about particular sections, but afternoon shift Friday is followed by Saturday night shift?-- Yeah, yeah.

Guest was in the 5 South Sub on that report?-- Yes.

That's report number 3356 in document 44A?-- Yes.

Mr Robertson, when I read these numbers out I need you to agree with the report number, the 3356 number. The other number I'll read so we can identify them later?-- Okay.

That was to deal with the 5 South Sub panel inspection by Mr Guest?-- Yeah.

If you turn the page to the next report, report number 5603 from document 33 is the outbye deputy's report; is that right?-- No idea. I can't read it.

Look at the top. Does it say "Outbye Deputies Report" in black print?-- Yeah, "Outbye Deputies Report".

Look down at the signature on the bottom right, it's Ken Guest, isn't it?-- Yes, it appears to be, yes.

And very indistinct?-- Yes.

It's hard to read that report, but it's an outbye report?-- Yes.

Which means it's not a report of, say, 512?-- No.

The counter signature there is of the undermanager or manager is Mr Simms?-- I take your word for that.

Turn to the next one, please. Is that report number 3424?-- Yes.

From document 45. That one is hard to read, isn't it?-- Yes.

Let me give you the original. When you see that, compare it with the one that I've got a photocopy of for you in the bundle. It's the same report, isn't it?-- Yes.

3424?-- Yes.

That's Mr Ken Guest's report in relation to 512, isn't it?-- Yes.

On the shift immediately following yours where you got the smell?-- Yes.

Can you recall reading this report when you next came back on shift yourself?-- No, I can't.

When you look at that report there is no sign of any smell being indicated, is there?-- No.

Now, you would have expected that if Mr Guest had done an inspection of 512 on that shift he certainly would have walked the return, the top return and to the back of the panel like you did?-- Yeah.

The top return to the back of the panel was the inspection route that was kept open?-- Yes.

That was certainly the inspection route followed by deputies when they might be doing a waste inspection?-- Yes.

If it was Guest that you told about this smell or Guest who saw your report of a smell on the previous shift report then you would certainly expect him to have gone down and tried to locate it, check it out?-- Don't know.

That would normally follow, wouldn't it?-- I can't answer for his actions.

You can't answer for him, I understand that, but that would normally follow, wouldn't it?-- Yes.

If you read that report - you were the next shift after that one - if you read that report you would think there was no smell continuing, wouldn't you?-- If you didn't read back to my report, yes, if you only read this.

Well, no, even if you read your previous report, then this one, well you would think the next deputy hasn't found this smell?-- Yes.

So, either the smell has gone or it just wasn't detected?-- Yes.

I mean, I don't mean to suggest, and don't think I am suggesting, that this casts doubt on your report. You reported what you observed?-- Mmm.

As you're expected to do?-- Yes.

But certainly there is no evidence on this report, is there, of a smell continuing?-- No, not by reading this, no.

I tender the original of that report 3424. I suspect the copy in document 45 is as indistinct as the photocopy I have. I am sorry, I have just been reminded that we are photocopier mad in producing bundles of the documents I am asking the witness to look at. There is one for each member of the panel, and if I can pass one to the people at the Bar table that might assist.

WARDEN: You still want that individual document as an exhibit?

MR MORRISON: Yes. The photocopy is not very good. It might be easier to read the original.

WARDEN: That's Exhibit 47.

ADMITTED AND MARKED "EXHIBIT 47"

WITNESS: What would you like done with this copy? I have got two now.

MR MORRISON: You have got two. No wonder the panel is running out?-----

46 I think Your Worship said.

WARDEN: 47 is the original report.

MR MORRISON: If you turn to the next page, the next report is 3286, and I think you will tell me that's Mr Campbell's signature on the bottom right?-- What report did you say?

3286?-- I've got 5603.

5603?-----

WARDEN: 3286 is the fourth one in on my copy.

WITNESS: Yes, I have a 3286 here.

XXN: MR MORRISON

WIT: ROBERTSON R W

MR MORRISON: I am sorry, I will have to check out the odd numbered one that doesn't match my copy, but no doubt we will sort it out.

3286 from document 43 is the 5 South Production Deputies Report by Mr Campbell, isn't it?-- Yes.

That again is for the next shift following, the Saturday night shift?-- Yes.

No suggestion in there of any smell, but then it's 5 South?-- 5 South, yeah.

Turn over to the next page. Is that report 2076?-- Yes.

It is, thank you, I am relieved. That's an Outbye Deputies Report for 6 South and 1 North-west again by Mr Campbell and again for the shift following yours?-- Yes.

Now, that, I think - they are all the reports then for the night shift following yours, 512, 5 South, 5 South Sub and two Outbye Deputies?-- Yeah.

Now, if you turn to the next page, the next report is 3731?-- I have got the same copy here.

There is two copies of 2076, isn't there? 3731 is the Outbye Deputies Report signed by Mr Bryon?-- Byron.

Sorry, we will continue to have this debate. I will call him Mr Byron. Outbye Deputies for day shift Saturday?-- Yes.

Turn to the next page and hopefully it's 3287?-- Yes.

In document 43. This is Mr Henderson's 5 South Production Deputies Report for Saturday day shift?-- Yes.

And indicates a clean bill of health for 5 South on the occasion of that inspection?-- Yes.

Turn to the next page, 3357?-- Yes.

From document 44. That's the 5 South Sub-panel Production Deputies Report for Saturday day shift?-- Yes.

By Mr Henderson again?-- Yes.

And again a clean bill of health for 5 South Sub?-- Yes.

Turn to the next page, 2077 Outbye Deputies Report for 6 South and 1 North-west Saturday day shift?-- Yes.

Again by Henderson and countersigned by Len Graham?-- Yeah.

Len Graham was the oncoming deputy for the next following shift obviously?-- Yes.

Now, the next one, again I think we have got two copies of

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that?-- Yes.

The next one should be 3659 from document 35; is that right?-- Yes.

And that is the 520 and the -----?-- The drill site.

The drill site Outbye Deputies Report by Mr Henderson for Saturday day shift?-- Yes.

Turn the page, 510 and drill site, number 5604 in document 33?-- Yes.

And Lex Henderson's report, Outbye Deputies Report, for Saturday day shift?-- Yeah.

Turn to the next page, please. I am sorry, now that completes the reports that I have got available for you for Saturday day shift. Now, on that read through we have got 5 South, 5 South Sub, the outbye reports but not 512. You didn't see a 512 on the way through for Saturday day shift, did you?-- No.

That's okay, we will hopefully rectify where that document is as we go. Nothing on those reports would indicate to you anything of concern?-- No.

Now, let's go to the afternoon shift for Saturday. Next document is 3358?-- Yes.

From document 44. That's the Production Deputies Report for Saturday afternoon shift by Len Graham and in respect of 5 South Sub?-- Yes.

Can you just point out to me - if we can just pause there, you can stand up and do this on the map on the left - point out to me the 5 South Sub-panel, please? You can use the laser pointer, yes?-- I like it.

5 South Sub-panel. Do you need to go a bit closer?-- 5 South Sub is down here, as far as I remember.

You sure that's not 520?-- Oh, no.

Is it an area you are not familiar with because you are mainly 512?-- Mainly 512. I just have to think and run my mind through it again.

If you want to say the word "pass", we will move on?-- Pass.

Thank you. Turn to the next deputies report, please. Hopefully it's 2078; is that correct?-- Yes.

An Outbye Deputies Report for Saturday afternoon shift by Len Graham?-- Yes.

And countersigned by Bob Newton?-- Yes.

It's document number 80. Turn the page. Again we have got two copies of that. Now, nothing in those last few reports

XXN: MR MORRISON

WIT: ROBERTSON R W

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for the afternoon shift gives you any concern?-- No. I remember where the 5 South Sub was too.

You have remembered where that was?-- Yes, up there.

Thank you very much. You are indicating the short sub-panel that's sandwiched between 5 South and 4 South?-- Yeah.

Thank you. The next document I need you to look at next following is George McCrohon's Production Deputies Report for 5 South, number 3288 in document 43. Have you got that one?-- Yes.

Is this a document you recall seeing when you came back on shift?-- Not that I can recall, no.

Could be?-- Could be, yeah.

Nothing of any note in that one either, a relatively clean bill of health for 5 South?-- Yes.

Turn the page. This should be at least George McCrohon's 512 Production Deputies Report for Saturday afternoon shift on 25 June?-- Yes.

So this is two shifts on from you?-- Yes.

No, three?-- Three.

Night shift, day shift, now this is afternoon shift?-- Yes.

And George McCrohon you know to be a deputy?-- Yes.

This one appears to be countersigned by Mr Simms?-- Yeah.

You can't tell the signature?-- No.

Fine, okay. I am not sure if I mentioned this is report number 3426 from document 45. Nothing in that report about 512 indicating any smell?-- No.

Or any concern with the panel?-- No.

Or anything untoward at all?-- No.

Thank you. Turn the page. Outbye Deputies Report 3660 from document 35 by George McCrohon?-- Yes.

That's in respect of the 520 and the drill site?-- Yes.

Turn the page again. Similar Outbye Deputies Report, 5605, in respect of 510 gas drainage by George McCrohon?-- Yes.

That's from document 33. That's the balance then of the afternoon shift for Saturday, and it would appear if you were a deputy reading the 512 report for Saturday afternoon shift that there was nothing untoward in 512?-- That's correct.

And the smell that you had detected was not being repeated?--

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WIT: ROBERTSON R W

No.

Okay. Could you turn the page again, please? These are the night shift reports for Sunday night shift. Production Deputies Report 3359 from document 44 in respect of 5 South Sub by Bob Newton?-- Yes.

Do you recognise his signature?-- Yes.

Clean bill of health for 5 South Sub?-- Yes.

Turn the page?-----

MR CLAIR: Your Worship, just before Mr Morrison proceeds, 5605 I think he mentioned in that he said it was a 512 report. Can I just check on that?

MR MORRISON: No, 5605 is in respect of 510 gas drainage. The 512 report is 3426 for that shift two pages back.

MR CLAIR: Yes, thank you.

MR MORRISON: We are at report 3359, Bob Newton's report for 5 South Sub. I think you agreed a clean bill of health?-- What report did you say?

3359, the first of the - sorry, tell me the number you are looking at and I will try and assist where we are?-- 2079.

One page back. Bob Newton's 5 South Sub report?-- Yes.

Sunday night shift, clean bill of health?-- Yes.

Turn the page - before you do, can you remember reading that report?-- No, I don't.

Could be?-- Could be, yes. I don't remember.

Well, nothing on that report would raise any eyebrows on you?-- No.

Next report is 2079 from document 80, an Outbye Deputies Report for Sunday night shift in respect of 6 South and 1 North-west?-- Yes.

Bob Newton again?-- Yes.

Countersigned by Ray Campbell?-- Yes.

Nothing in there worthy of attention?-- No.

Next report, two copies of that again. Sorry I am burdening you with more paper than might be necessary. Next report that I want you to look at is 3427 from document 45. This is a Production Deputies Report for 512 Sunday night shift?-- Yes.

By George McCrohon again?-- Yes.

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It appears George McCrohon was doing a back-to-back doubler?--
Yes.

As you read that report, can you tell me have you seen that
report before?-- No, I can't say that I have. I don't
recall.

Could have?-- Could have, yeah.

Nothing in that report which would indicate on the Sunday
night shift in 512 that there was any repeat of the smell or
anything untoward?-- Yeah, nothing there.

Thank you. Turn the page then. This again on the Sunday
night shift, 26 June is the date, is the 5 South report by
George McCrohon, number 3289 from document 43; is that
correct?-- Yes.

No first inspection because stone dusting on the belt road was
going on?-- Yes.

Nothing in the second inspection to indicate anything
untoward?-- No.

Turn the page then to 3661 in document 35, the Outbye Deputies
Report in respect of 520 and the drill site by George McCrohon
again?-- Yes.

Again to the next page, 5606?-- Yes.

From document 32, Outbye Deputies Report for 510 gas drainage
again by McCrohon?-- Yes.

If you turn the page, 2080, Outbye Deputies Report from
document 80 in respect of 6 South and 1 North-west?-- Yes.

Again by Mr Campbell?-- Yes.

Countersigned by Len Graham?-- Yes.

Nothing of any note in that report either?-- No.

Turn the page again. There is a repeat of 2080?-- Yes.

That's all of the reports then for the Sunday night shift.
Nothing in any of those reports which would indicate to you,
on reading them, any repeat of the smell in 512 or anything
untoward in 512?-- That's correct.

No deputy, whether he was assigned to 512 or not, has written
any report up to this point which would indicate the
continuation of anything in 512?-- Correct.

I now come to Sunday day shift, the next document?-- Yes.

3428?-- Yes.

Who do we see as the deputy then?-- Myself.

XXN: MR MORRISON

WIT: ROBERTSON R W

Back on shift on Sunday day shift, 26 June?-- Yes.

Now, can we assume from your normal practice that you would certainly have read the 512 report that I just took you to for the Sunday night shift?-- Yeah.

Turn back if you wish. Please do so. That's George McCrohon's report number 3427. Go back about four pages you will find it. Following your normal practice you almost certainly read this report?-- Yes.

And though this one doesn't bear a countersigning signature of yours, that's probably because it's on the other -----?-- It could have been on the board already. I would have signed the board.

It could have been on the other copy of this?-- Yes.

I am not sure if this is a copy of the original or the duplicate at the moment?-- Yeah.

Now, you almost certainly read that 3427 report?-- Yes.

And that would have signified to you at that time, coming back on shift on Sunday day shift, that there had been no repeat of what you had seen?-- What I had smelt.

I am sorry, I apologise, what you had smelt?-- Yes.

And that signified to you whatever it was that you had encountered was not repeated?-- That's correct.

And was no longer present?-- That's correct.

And, no doubt, whatever concern or degree of concern you had when you had noticed that smell was allayed by the fact that no deputies report over that whole weekend indicated that there had been anything?-- Yeah, no.

Now, 3428 is your deputies report for Sunday day shift from document 45?-- Yes.

In respect of the 512 section?-- Yes.

Now, it suggests, am I correct in saying, nothing at all wrong with 512?-- That's correct.

A clean bill of health for 512 by you?-- That's correct.

In fact, you indicate next to the ventilation comment, which is as high on the scale as you ever put a ventilation comment, "adequate throughout the section", and you said you in fact inspected the stoppings?-- Yes.

Does that comment indicate you walked to the top return, down to the back of the panel and across through cut-through 13?-- Looking at this I couldn't recall if I had been down there. Looking at that, more than likely, yes, I have been down there, but to take my mind back to it, no. As I said before

and even in my statement, I never had that smell again. I just never detected it at any stage. I can't recall whether I went down and done that, as you said, but, yeah, going by that I had been there and, yes, I had not smelt it again.

Well, when you write down "stoppings were inspected", you normally do that to indicate -----?-- Checked the stoppings, yes, and the stoppings are intact.

Down cross-cut 13?-- Yeah.

That's what it means to us, stoppings were inspected?-- Normally, yes. Not all the time.

Well, if you combine it with your comment at the end of the second inspection, "roof and sides appear secure and stable outbye of the waste area", that would certainly suggest you have done that?-- Yes.

Now, can we understand that when you came back on Sunday day shift that you might have gone to see for yourself if the smell was still there?-- Yes.

You couldn't find it?-- Yeah, I never found it.

And neither, it seems, did any 512 deputy in the interval?-- No, that's what makes it a bit - it is a comfort, but makes you wonder whether you - whether you are loopy.

Or smelt it in the first place?-- Or whether you have got bad BO or something, you know? You think, whoa, fool.

Unfortunately I can't help you with that and I don't -----?-- Bring the spray with you tomorrow.

There is nothing in my past experience that I can compare it to necessarily. Did you - certainly it is a comfort to you that no-one smelt is since, but would that have raised in your mind the thought, "Maybe I was a bit over-cautious in the first place."?-- Yeah, that did jump into my mind even later on throughout the section. You think, "You fool, you are imagining things."

It is difficult, isn't it, with these smells?-- Yes, it is, it is difficult.

Because people describe smells differently because it is so subjective?-- That's correct. Like, I'd say to other people it may not have even smelt benzene because we all smell differently, if you can put it that way, but, yeah, I never smelt is again, mate, never again.

Okay. In the report - when you did that report for 24 June you used the words "strong benzene smell". That was to indicate it was there, it wasn't sort of completely infinitesimal?-- Yeah, it was like your first sniff of it. When you, you know, detect something different it is usually a strong smell, as you would well know.

It hits you as being different to what you just smell?-- Yeah, a lady comes in with a different perfume and it hits you, then later, you know, but it was just like that, that first hit and that was it.

I am afraid I can't help you with that. Your experience far outweighs my own. I stand in awe?-- I am just trying to help you to understand me in what I thought and that's the part that gets me now, was it just my thought that I smelt - like I said, when I turned to Stoonka and said, "Can you smell that?", he said, "What smell?" Then he said, "Oh, there is something different then."

Stoonka Edelman?-- Yeah, sorry, Greg Edelman.

"Stoonka"?-- Yeah.

Not a description of him?-- No, that's his mother's description.

Sorry, the description of his mother or his mother's description of him?-- No, no, that's a description his mother gives him.

I am sorry, I am getting sidetracked. That's entirely my fault, not yours. His first reaction, from what he said to you, was he couldn't smell it?-- No, he couldn't.

You both jumped in - when I say "jumped in", moved through the stopping?-- Yeah.

Not very far because there is a canch down the road?-- Yeah.

That's because bottoms had been taken there?-- Correct.

You wouldn't get down in there?-- No.

First, because it is waste and, second, it is very hard to get out again?-- Yes, yes.

Now, just while I am on that topic for a moment, Mr Martin was asking you whether there had been attachments to put on your Dragers to test up near the roof?-- Not so much on the Dragers. You could take remote samples with an aspirator into a bag.

And then test it?-- Then you test the bag.

But you wouldn't ever recommend going out into a waste area to do that, would you?-- Not in that particular waste. I have been out in other wastes.

Depends on the stability of the roof?-- That was definitely tiger country.

Yeah, and completely inadvisable to get out there?-- I wouldn't take - if I wouldn't go there I wouldn't expect to take an experienced miner with me and I had one with me and I am not endangering no-one's life.

No. Well, that's something that applies to most people in the mine?-- Yes.

Most people aren't going to do silly things like that?-- Yes.

And if you have to go into the waste you do so with some trepidation?-- A lot.

A lot of trepidation?-- Yes.

You stick to areas where, on the best of your judgment, you are safest?-- Yes.

All right. Now, can we continue this line of the reports. The next report, I think, in sequence is 3360 from document 44, for 5 South Sub-panel?-- Yes.

By Mr Tuffs?-- Yes.

A clean bill of health to 5 South Sub from Mr Tuffs?-- Yes.

Turn the page, should be 5607 from document 33, an Outbye Deputies Report again by Mr Tuffs?-- Yes.

For the 510 Panel and the drill site?-- Yes.

That completes the day shift reports by deputies for that Sunday day shift?-- Yes.

I am sorry, I don't think it does. I might just take you to the next one. There is one final one, that is 3290, document 45 in respect of 5 South and 520 by Allan Morieson?-- Yes.

And apart from comments about stone dusting, a clean bill of health for those panels too?-- Yes.

Now, next in sequence then is the Sunday afternoon shifts for 26 June, 3361?-- Yes.

Document 44 in respect to the 5 South Sub-panel by Len Graham?-- Yes.

And a clean bill of health for 5 South Sub?-- Yes.

Turn the page, document 2081, an Outbye Deputies Report from document 80?-- Yes.

In respect of the 6 South and 1 North West Panels by Len Graham?-- Yes.

Apart from noting the machinery running, nothing of any interest in that?-- No.

When I say nothing of any interest, nothing of any concern to anyone?-- No.

Turn the page. We have a repeat of that, I think?-- Yes.

Then turn the page again to the next one, production report for 5 South on Sunday afternoon shift, 26 June, document 3291 from - that's report 3291, I beg your pardon, from document 34 by Mr Bryon?-- Yes.

Only a first inspection?-- Yes.

And 5 South got a clean bill of health too?-- Yes.

Turn the page. This is the next 512 report after yours that I took you too?-- Yes.

This is for Sunday afternoon shift, 26 June by Mr Bryon?-- Yes.

Report 3429 from document 45?-- Yes.

Mr Byron writes almost as neatly as you. Clean bill of health

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for 512?-- Yes.

No suggestion of the smell?-- No.

No suggestion of anything untoward in the panel at all?-- No.

Turn the page, please. Staying with afternoon shifts on Sunday, 26 June, 5608 from document 33 is the Outbye Deputies Report for 510 drainage by Bryon?-- Yes.

Nothing of any concern in that?-- No.

Nor in the next document which should be 3662 from document 35?-- Mmm.

The Outbye Deputies Report in respect of 520 by Steve Bryon?-- Yes.

That's the last in the sequence that I have asked you to look at?-- Yes.

Now, Mr Robertson, they are all of the deputies' reports, I think, bar one which we are still trying to find, for the mine in all the shifts following your shift on 24 June including one of your own?-- Yes.

On the Sunday?-- Yes.

In none of those reports is there any suggestion at all that what you experienced was being repeated or continuing?-- That's correct.

I tender the bundle. I might just check it because I am concerned about that extra number at the start. I will extract that one if it is not supposed to be there.

MR CLAIR: I think the witness was just looking at the wrong page.

WITNESS: Yeah.

MR MORRISON: I will rest content with that. I will tender the bundle of deputies' reports for weekend following 24 June. May I indicate for the purposes of the record, as we understand it the 512 Saturday day shift report for 25 June is missing from the originals. We are making efforts to try and correct that. We don't know what has happened there.

WARDEN: Thank you, Mr Morrison. If you have concluded on that subject with the witness we might take a five minute break.

THE COURT ADJOURNED AT 11.25 A.M.

THE COURT RESUMED AT 11.40 A.M.

REECE WILLIAM ROBERTSON, CONTINUING:

MR MORRISON: I don't think Your Worship had given a number to that last exhibit. I think it should be 48.

WARDEN: Deputies report for that weekend, yes, 48.

ADMITTED AND MARKED "EXHIBIT 48"

MR MORRISON: Mr Robertson, I want you to look at another document, please, or a bundle. Feel free to take the bulldog clip off at any stage if you need to. As I read these numbers on to the record for these reports I want you to tell me if I'm wrong in what I read. In other words, the bundle I've given to you, I think, are all your reports for 512 commencing 2 April 1994 and finishing 29 July 1994?-- Are all for 512?

All for 512?-- No, the top one isn't.

What's the -----?-- It's got "Drill site" written on it.

Is that 1772?-- Yes.

Put that to one side and go to the next one, 1778?-- Yes.

From document 174H?-- Yes.

Report for 4 April 1994?-- Yes.

The next one, 1781?-- Yes.

Can I ask you to glance at a couple of things as you go through? You can read the whole report if you would refer to do that, and I'm quite content for you to do that, but I really only need you to glance at your comments in relation to ventilations where you inspected stoppings and any comments where you would indicate anything untoward?-- Sorry?

Would you prefer to read each report as I read out their numbers so you can refresh your memory?-- Yeah.

1778 was the first. Are you still with that one?-- Yes - no, I'm with 1781.

That's the next report 1781, 5 April 1994?-- Yes.

The next one is 1784?-- Yes.

1790?-- Yes.

XXN: MR MORRISON

WIT: ROBERTSON R W

3003?-- It's a bit hard to read this one.

It's a little indistinct, but see if you can do your best?--
Yes.

3006?-- Yes.

Then 3009?-- Yes.

3012?-- Yes.

3013?-- Yes.

3020?-- Yes.

3023?-- Yes.

Can I just ask you to pause on that one? Does that indicate
that at 19 April work on the prep seals was being done?--
Yes.

That's the prep seals for 512?-- Yes.

The next one is 3026?-- Yes.

That, I think, is a split report between Morieson and
yourself?-- Yes.

3029?-- Yes.

3032?-- Yes.

3042?-- Yes.

And that one indicates the precision with which you did these
reports. One of the things you put under "General Comments"
was for people to look out for a pallet of stone dust on the
tranny supply road?-- Yes.

They might run into it?-- Yes.

The next is 3045?-- Yes.

Next, 3049?-- Yes.

Next, 3052?-- Yes.

Next, 3055?-- Yes.

And this is the first report for extraction; is that right?--
Yes.

29 April 1994 on the Friday afternoon shift?-- Yeah.

Extraction was along 13 cross-cut between 2 and 3?-- That's
right.

What happened before cutting started?-- When we got down into

the section I had a tool box talk with the boys. There were a couple of blokes that were put into my crew that weren't normally there, and it was a practice of mine that - make them aware of what we were going to be going into and what we were going to be doing, and there was one younger bloke there, young David Wright, and is it was his first time in there so to bring him up to scratch - to let them know if they had a problem with anything, don't jump in feet first, come and see someone with experience then we can sort the problem out together, just a team meeting.

You've got written here the tool box talk was in relation to analysing the risks in an extraction panel?-- That's right. In other words, don't jump in feet first. Think of the job you've got to do and make sure you do it safely. I didn't want anyone hurt.

That's a routine of yours with your crew?-- I sometimes done tool box talks there, yeah, when - if I felt the need that someone come close to getting hurt or something like that, just to make them aware of their surroundings again so that they didn't get hurt.

Put their mind on the job?-- Yes.

The next report is 3060?-- Yes.

3072?-- Yes.

3085?-- Yes.

Can I just ask you to pause for a moment there? Certainly on the last few that we have been looking at, quite a number on each shift you indicate stoppings were inspected?-- Yes.

I gather from reading these reports that your routine was that you would in fact do a waste inspection twice a shift?-- Yeah, that was later on, but when you walk around your panel, the stoppings, you would check close around the face area for a start and make sure they are intact and up appropriately, and depending where the door was or whatever, basically this was at the start of it so your stoppings - you walk outbye a bit on the tranny supply road, come back down the belt road, go back up the other road and back down the other return and have a look at the stoppings and see that they were in order.

The next report is 3088?-- In the general comments there, that's not my writing.

It may have been Len Graham's?-- No, that's not Lenny's writing either.

Someone has written in "General Comments" a comment on either the original or the duplicate of this report?-- Yeah.

3937?-- Yes.

3948?-- Yes.

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3951?-- Yes.

Then 3954?-- Yes.

3957?-- Yes.

3960?-- Yes.

3969?-- Yes.

Then 3972?-- Yes.

3978?-- Yes.

3981?-- Yes.

3987?-- Yes.

3989?-- Yes.

3995?-- Yes.

3998?-- Yes.

3998 is for 16 June, Thursday day shift, isn't it?-- Yes.

They are all the reports up to the one for 17 June when you made the inspection with McCamley and Morieson?-- Yes.

Am I right in saying that in respect of all those reports, and particularly in respect to extraction, the extraction period (1) the ventilation was adequate in your view?-- Yes.

(2) the panel was secure?-- Yes.

There were no problems?-- No.

No indications of any difficulty at all?-- No, not on my shift.

Now, we come then to 3401 which is your report of 17 June 1994 and this was the first occasion upon which you had had this difficulty that you encountered?-- Yes.

I am going to ask you, if you would, to take Exhibit 32. I am overlaying the documents you've got there, but we will do our best. You will see from your report for 17 June that you were mining sequence 16?-- Yes.

I will just ask you to look at this briefly. I'm not going to keep overlaying these documents for you, but I want to show you the Approved Undermanagers' Sequence Plans. You will see it's dated 6 June?-- Yeah.

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And these are the plans that were down in the - held at the crib room?-- Yes.

And which you and other deputies would have regard to in terms of the sequence of mining and where you were?-- Yes, they were placed in the - there was a special box there for them.

And there was a sequence of approved plans?-- That's correct.

Signed by Mr Mason one by one?-- That is correct.

This one will show you, I think, that sequence 16 was in cross-cut 7?-- Yes, between 7 and 8.

Between 7 and 8, and between which roadways?-- On No 4 heading.

Thank you, you can hand that top document back. Which would place the crib room where?-- Back at No 5 cross-cut.

In the supply road?-- Yeah, between 2 and 3.

Between 2 and 3. Now, when you had this difficulty, you pulled your crew back to the crib room, and is that where you met McCamley and Morieson?-- Yeah.

Could you just mark an "X" where the crib room was for me, please, in blue?-----

For the record, the recordings on this Exhibit 32 now in blue will be those of Mr Robertson.

Now, you met there and discussed the difficulty?-- Yes.

Was Edelman with you at that point?-- Yes. Yes, he would have been in the crib room because everyone was there.

Now, from your discussion had Morieson been anywhere before he came to you in terms of 512?-- I don't recall.

You don't recall any discussion about the regulator in the bottom return?-- No, no.

Okay. Now, did McCamley or Morieson take readings at the crib room?-- I don't recall.

You moved off and went in which direction, outbye or inbye?-- I think we went inbye first and done some tests. Went down to the bag at 7 cross-cut.

Could you just mark an "X" there, and the number "1"? Now, you moved down No 2 roadway to that point?-- Yeah.

Readings were taken there by yourself?-- Yes.

McCamley?-- Yes.

And Morieson?-- I'm not sure about Allan.

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WIT: ROBERTSON R W

You certainly can remember you and McCamley doing readings?--
Yeah.

You are looking at CH4, CO?-- At that stage only CH4.

Only CH4?-- Yeah.

As far as you could tell on that occasion that was the only source of difficulty; you weren't looking for anything other than methane?-- Yeah.

You took some readings there. What did they indicate?-- I had 1.5 per cent in the general body.

Now, your experience tells you, I take it, from what you were saying earlier today, that a general body reading is a good indicator?-- Yes.

Is that what you understand most deputies do, take general body readings?-- Yes.

Unless there is some particular reason to take a roof reading?-- Yeah, unless there is a specific layering that you know about when you are doing, you know, other inspections, but normally you do - when you are coming down a road like that you do a general body reading.

Now, I think you might have indicated earlier that you took readings on the way down to that point?-- Yes. I'm not sure whether we done CO or CO2, but CH4 definitely.

Now, having taken readings at that point, you then moved where?-- We had a discussion. I think we went back up to the crib table and got our gear, had a talk and said, "Right, we'll go up and go down the waste return."

Up the top return?-- Yeah.

Did you go into the top return at about cross-cut 3?-- Yes, through the door there.

Did you take any readings at that point or did you wait till you were in the return to take readings?-- In the return.

And did you start taking readings from when you commenced to go down the return?-- Yeah, I stuck a tube in - I'm not sure whether it was a CO or a CO2 tube in - and then I had the Minder there in my hand and we just started walking inbye.

All right. Now, can you just put an "X" at the point where you entered the return and a number "2"? You then all four moved down the top return taking readings as you went?--
Yes.

Stopping to take readings or just walking?-- Just walking, I think.

And you were taking readings and McCamley and Morieson?-- I

think Mark had his Drager out then and was using it. I'm not sure about Allan, as I say, but that's basically all I remember.

Apart from looking at the readings was there anything evident to you on that walk down by way of smell?-- Sorry?

There was no smell on the way down?-- No, there wasn't any smell, no.

You walked down to approximately where, the back of the panel?-- Yeah, we went down. I think it was down at the bottom of No 2 heading we might have pulled up for a while, but we went right across - oh, sorry, to No 4 heading.

Well, just pause for a second. You think when you got down to the intersection of the top return and 13 cross-cut that you might have stopped there for a while?-- I can't recall.

Did you split up at that point?-- No. I think it was when we were further over we had a talk about the stoppings. As I say, it's a bit unclear word for word. We had a bit of a talk about it.

Can you just pause while I take it step by step?-- Yeah.

You went across to approximately No 4 heading in 13 cross-cut?-- Yeah.

Did you take readings to that point as well?-- I believe so, yes.

Could you put an "X" at that point and the number "3"? Then I think you said you had a discussion about the stoppings?-- Yes.

As to whether they should have been open or not?-- Yeah.

Now, can you recall - I think you said some of the stoppings there were closed?-- Yeah, the ones across the bottom were.

I think there might have been a view as to how they got closed?-- I don't know.

I think you might have formed the view, or expressed the view, that it was as a result of falls that might have blown them shut?-- That was - fall or, I don't know. That was what I assumed.

No-one, to your knowledge, had been sent down to close them?-- No, there had been nothing in any reports.

What's more, they wouldn't go through the waste anyway to do so?-- No. You would go down that return.

And the only people allowed down the return are deputies?-- Yeah.

Could Your Worship give me a moment? I have lost the

document.

Did anyone express the view down there that it was falls that had closed the stoppings?-- Not that I can recall.

Okay. There had been a number of falls immediately outbye that cross-cut 13, hadn't there?-- Yeah.

And it would not be unusual for a fall to blow down a stopping or to close a door?-- Yeah, it could do that.

You can't think of any good reason why they would be closed by a deputy, for instance?-- No.

They are part of the ventilation system of the panel?-- Yeah, that's right.

Expressly to draw air through into that cross-cut 13 and out the top return?-- Yeah, to clear the waste.

Now, at that point 4 - I am sorry, No 4 roadway there was a discussion about whether the stopping should be open or not?-- Yes, I think - as far as I can remember, yeah.

And the view was that they should be?-- Yeah.

There was someone sent to do that straight away?-- Yeah, I think Allan volunteered, and he went and done it, and we come back across to No 2 heading and went through there and started to head up No 2 roadway.

Just pause for a moment. When you got to No 2 heading in 13 cross-cut were more readings being taken as you went to that point?-- Yeah, when we went through we started taking readings.

Would you put an "X" there at cross-cut 13 No 2 and the number "4"? At this point it's you, McCamley and Edelman?-- Yeah.

Or might Edelman have gone with Morieson?-- No, I don't believe so.

So you three then entered the waste?-- Yeah.

And walked up outbye on No 2?-- Yes.

Taking readings as you went?-- Yes.

Through what is described as tiger country?-- Yes.

Now, did you move out to some particular point and then pause?-- Yeah, we did.

Might it have been in the vicinity of cross-cut 9?-- It could have been. As I say -----

Hard to tell?-- Yeah, hard to tell, and there was a fall between 2 and 3, if I remember, and Mark went over there to do a reading around there and Greg stopped with me.

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WIT: ROBERTSON R W

Now, can you give me - by looking at either that plan or a different plan, can you give me a best estimate of where it was that you stopped near the fall?-- Yeah, I would have to say at 9, around there.

All right, can you put an "X" there and the number "5"? Now, at that point you could see a fall in the belt road?-- Yeah.

And this was a large fall or a small fall, nothing out of the ordinary?-- Nothing out of the ordinary. Not a big fall, no.

I think that that comment can apply to a lot of the falls in 512, can't it, that generally there was quite a deal of space above them?-- Yeah.

Ventilation had moved through uninhibited?-- Oh, yeah.

And more readings were being taken at that point?-- Yeah.

And at that point McCamley went off by himself across to the belt road?-- Yeah.

To look at this fall?-- Yeah.

And you understood from what he said when he went that he was going to take readings there?-- Yeah.

Can you put an "X" with a number "6" at the point where the fall was? Now, while he was doing that you and Edelman were doing what?-- Gas tests - Drager tests as well.

Where you were?-- Yeah.

That's at the point where you have marked "5"?-- Yeah.

And you waited there for McCamley to come back?-- Yeah.

Did Morieson join you at that point too?-- I'm not sure. It was somewhere around there that I think he rejoined us again.

Could you see where he had come from, through the waste -----?-- No, I didn't take any notice of where he come from.

And from that point where did you move, outbye?-- Yeah, outbye to 7.

Was something done with one of the stoppings in the top return?-- One of the stoppings in the top return?

Could it be that a hole was knocked in the stopping at 12 cross-cut?-- Yeah, and I think, if I recall, Allan said he put a hole in there, it was him that put the hole there.

And you felt the ventilation improving?-- Yes - no, not really at that stage. It was still a bit stagnant around that - getting up to that area at 7 again because that's where it was recirculating.

Just pause for a second. I want to make sure we have got the sequence on the plan. So you three men moved outbye on No 2 up to about cross-cut 7?-- Yeah.

Still taking readings?-- At that stage, no, I don't believe we did. The Minder was still working. We were still looking at that, yes, but I don't recall us using the Drager or anything there.

Did you pause at about the cross-cut 7?-- Yeah.

Can you put an "X" and the number "7" at that point? Now, at some stage in that period between 9 cross-cut and 7 cross-cut Morieson rejoined you?-- Yeah, I believe so.

And it was around when you were up back at 7 is when you first started to see the ventilation start to improve?-- No, not at that stage then, not from what I can remember. It wasn't until Mark decided that we will block the top bleeder road off and put some bag up across in front of the miner to shoot all the air down No 2 heading, and then it started it off and it was perfect.

Thank you. I don't need you to draw any more on the map, so you can put that away?-- Shucks.

Now, can I ask you - you can take the map back - to stay with your reports for the moment? I just want to get down on the record, if I may, all your reports subsequent to that time. That's 17 June. The next time you were in 512 as a deputy was on 20 June?-- Yes.

And that's report 3411?-- Yes.

Have a look at that report. Ventilation was okay at that point?-- Yes.

And no indication of any difficulty?-- No.

The next on 21 June, 3414, and the same thing applies, ventilation quite okay?-- Yes.

No difficulty. Then the next on 22 June, 3417?-- Yes.

Same thing, ventilation was fine?-- Yes.

And on each of these occasions, though I am not mentioning it, you have recorded on each occasion of inspection that you did the stoppings as well?-- Yes.

Then on 23 June, 3420, same thing, ventilation was fine, no problems?-- Yes.

Then we come back to 3423 which is your report of 24 June that we have already talked about?-- Yes.

Now, if I can just pause there in relation to that. No, I am sorry, I will move on in proper sequence. I won't try and

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dance around it. The next time you were there was 26 June, 3428, the one I took you to specifically before?-- Yes.

Then 1 July, 3443?-- Yes.

5 July, 3456?-- Yes.

6 July, 3459. This is a split record between Caddell and you?-- Yes.

Then 7 July, 3462?-- Yes.

And apart from recording, as you told us earlier - sorry, you are smiling?-- Just this particular report.

Oh, yes, I see, yes. I am sorry, we shouldn't have a private joke, should we?-- No.

Under general comments had you made a complaint about someone putting grease on the machines and telephones?-- Yes, I had.

And referred to some childish imbecilic cretin had regreased them?-- Yes.

You weren't very pleased about that?-- No.

And you used a particular Australian appellation in relation to that person's nature?-- Yes, well, it was my ear with the grease in it.

I understand. I wasn't particularly meaning to ask you about that.

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Now, in this period following 24 June - sorry, you had changed the wording on that ventilation to, "Slow in the waste, adequate elsewhere.", and you have explained what that really means?-- Yes.

That is what you expected was a normal feature of an extraction panel as it got through towards the end?-- That's right.

The next occasion is 8 July, 3465?-- Yes.

I don't know that you were asked to look at this one before. The appellation here for ventilation is "Adequate throughout"?-- Yes.

Then 3468 for 9 July, again "Adequate throughout"?-- Yes.

Then 3469 you were shown earlier for 10 July?-- Yes.

3473 for 11 July?-- Yes.

The next, in fact, is 3704 for 13 July?-- Yes.

Then you were shown 3707 for 14 July by Mr Clair earlier?-- Yes.

The next in time is, in fact, 18 July, 3720, after that?-- Yes.

Again, "Adequate throughout the section", is the comment on the first inspection?-- Yes.

Then in time the next is 19 July, 3723?-- Yes.

On none of these occasions are you recording anything like a repeat of what you had on 24 June, the smell?-- No.

Never occurred again?-- No.

Next in time you were shown previously, 3726 for 20 July and 3729 for 21 July?-- Yes.

Sorry, I don't mean to rush you through them?-- No, you're right.

Next in time, in fact, is 22 July, 3732?-- Yes.

Again the comments don't vary in relation to ventilation, each time your assessment was it was normal?-- Yes.

For an extraction?-- I sometimes lapsed. I didn't put it in, but it was still normal. Had there been anything abnormal it would have been reported.

Exactly. Then you were shown 3735 for 23 July and the next in time is for 24 July, 3736. I don't think you were shown this one before and these ones are now recording detailed readings from the top return of methane, carbon monoxide, carbon dioxide, wet and dry bulbs and so forth?-- Yes.

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WIT: ROBERTSON R W

And 24 July is 3736. Then the next in time is 26 July, 3743?-- Yes.

And you were shown 3746. 3749 and 3752 through to 29 July?-- Yes.

Now, on those - the sequence of those reports the only occasion you had difficulty with the ventilation was 17 June?-- That I recall, that was -----

It is not reflected in your reports otherwise, is it?-- No.

It would be if there had been?-- Yeah.

Likewise anything that was untoward would have been in your reports had it occurred?-- I believe so, yes.

Your reports are basically, except for those two occasions we have discussed, clear?-- Yes.

Now, can I take you back, if you don't mind, to just one point? You can turn back to the reports to the one for 22 July, 3732?-- Yes.

Now, you were deputy on the afternoon shift on that occasion and that was the day, I think, when Mr Abrahamse, Mr Kerr and Mr Atkinson did an inspection through the panel to the back?-- Yeah.

You were actually in the section when they did that inspection?-- No, I was afternoon shift, they come out on day shift.

I see. You obviously spoke to them though after the inspection?-- No, I spoke to Kerr, I think, later on at either Rescue or whatever. When I spoke - I did not speak to him straight away there that I recall.

Sorry, I thought -----?-- Yeah, no.

I misunderstood you. I thought you had spoken to him on the -----?-- No, sorry.

You understood from Mr Kerr that he had done a very complete inspection of the waste in the panel with Mr Abrahamse and Mr Atkinson?-- Yeah.

Mr Kerr is a very, very experienced Mines Rescue person, isn't he?-- He certainly is.

And you were comforted, if I can put it that way - at least you drew comfort from the fact that he had done this extensive inspection and got no smells?-- Comforted to a degree and then comes back to the same thing, "Fool. Have you smelt it or not?"

Just raises doubts about whether or not you had been right in the first place?-- Yeah.

Certainly in your estimation if anyone was going to get it he would?-- Yes.

Now, I think you were told by Mr Kerr something about the readings they got on the occasion of that inspection. The readings were no greater than you had been getting anyway?-- Yeah, I believe so. I can't recall.

There was nothing said to you by Mr Kerr to indicate they had found anything -----?-- No, no.

Untoward, compared to what you had got?-- Yeah, that's correct.

Right. All right. Now, you can -----

I tender the bundle of reports -----

If you can put them back. You have mucked them up -----

We will get them back and put them in order and I will tender the bundle.

WARDEN: Exhibit 49.

ADMITTED AND MARKED "EXHIBIT 49"

MR MORRISON: Sorry, I should also, even though I have taken those reports away from you, just establish this finally: on all of those reports when it came to writing down other source of danger there was either "none apparent" or "nothing" written there?-- Mmm.

Had there been a source of danger you certainly would have written it?-- That's right.

Can we conclude from that, in fact, you at no stage of this panel when you were there considered there was a source of danger?-- Only on those two occasions when I wrote in the report that I had. Other than that, no.

And do I take it also from that that on the basis of what you have written that you never considered there was a heating in this panel either?-- No.

Now, had there been in your view you may have sought to use the probe? It is a possibility?-- Hypothetically you are speaking?

Yes, hypothetically?-- It would depend on the situation.

You had used it before?-- I had used it before, but I would have to go back to the station, be brought back up to scratch with it and, you know -----

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WIT: ROBERTSON R W

I think you have used it in 3 North East, haven't you?-- No, I believed it was 5 North. I'm not sure.

5 North?-- Yeah, I think Bobby Suddle, who was an undermanager out there then, come with me. Bobby Suddle, Frankie Puts, one of those. It is a long time ago.

Now, can I take you back for a moment on the occasion of 17 June when you had the inspection with McCamley and Morieson and so forth. You got some slightly higher reading of CO?-- Yeah.

Than you had been getting before?-- Yeah.

I think you formed the view about what might be causing that. Am I right in saying you formed the view that there had been an MPV, an Eimco, working in the panel that may have been the reason?-- That could have been one of the problems that give it an increase, yes.

That was certainly -----?-- I wasn't - like I say, I wasn't sure whether the Eimco was in there when they asked me about it, "Well, it could have been." If the machine was in there it will give you a higher reading or just through the slow ventilation it is not going away, it is not being taken away.

And -----?-- And recirculating.

An experienced - I am sorry, I am phrasing that badly, I will start again. As an experienced deputy if you had that sort of recirculation problem you would keep in your mind the fact that diesel exhaust or fumes could hang in the air?-- Yes.

And come back?-- And be there, yeah.

Now, having gone through the reports for the 512 Panel and noting your comments on it, noting the two occasions as well, is it your view that the 512 Panel is one of the best extraction panels you had worked on?-- Yeah.

Extraction was fast?-- Yes.

No real trouble on the extraction?-- No.

I think you were involved in the plans originally? When it came to draw up plans to extract 512 you were involved in working them out?-- Yeah, there was a group of us, I think, we got together. There was a deputy, miner driver, all that sort of thing - those sorts of people, I should say, as well as management and we sort of started off and took it through a scenario, you know, of how we would work it in the cut and flit stages to begin with. A production meeting.

Involved in that meeting would be miners?-- Yes.

Ordinary miners?-- Yes.

Deputies?-- Yes.

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WIT: ROBERTSON R W

Management?-- Albert, yeah.

And "Albert" is Albert Schaus, the manager?-- Yeah.

Sorry. The engineer?-- I don't recall whether the engineer was there. Might have been. Garry Kunst might have been there.

I am sorry, Garry?-- Yeah, Garry was the foreman, he may have been involved, and a lecky. Like I say, I don't remember.

Okay. But the actual method of extraction was a consultative process?-- Yes.

With the crews as well as with management?-- Yes.

And everybody was happy with it?-- Yes. If they had any problems they were brought up and tried to figure them out, yeah.

And, in fact, there was an approach to the management after you started extraction to alter a sequence in the bottom return, mining uphill instead of downhill or downhill instead of uphill?-- Yeah, could have been. I wasn't involved in that.

All right, thank you. The safety aspects of the mine in your estimation were seriously considered, generally and in relation to 512?-- Yes, I would have to agree with that.

There were - I mean, you were on the mine consultative committee, weren't you?-- Yes.

And on the main committee as well as on the sub-committee to do - dealing with production and productivity?-- Yes.

And on those committees were not only management, but miners as well?-- That's correct.

And the work of those committees was taken seriously?-- Very.

And people spoke up with their concerns or thoughts?-- Yes.

And they were aired and dealt with?-- Yes.

It is a feature - I don't mean to say it is confined to No 2, it is certainly a feature of No 2 - that management were quite approachable if you had some thought to express about safety or method of mining; quite approachable?-- I would have to agree with that.

I am sorry to do this to you. Can I ask you to think about that inspection on 17 June again with McCamley and Morieson?-- Yes.

From the sequence I took you through when you marked the things on the map it seems from your memory you were with McCamley the whole time except for when he went off to look at

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the fall and came back?-- I believe so. I can't be 100 per cent sure.

Okay. You are certainly not aware of any discussion that day - no discussion was had in your presence about heating or something of that sort?-- Not that I can recall, no.

Now, you were asked some questions about whether you knew anything about spontaneous combustion and got a bit cut off after you started describing it as an exothermic reaction, and I'm not going to ask you to spell it either, but it's a topic that you dealt with specifically in the deputies' course?-- A little, yeah. Not in a big way, no.

And you mentioned some books you had. Have you got some books of your own about mining?-- Yeah, I've got those two particular books.

That's the red book and the blue book?-- Yeah, I haven't looked at them in years though.

Sorry?-- I haven't looked at them in years. I know I have them.

Would you say that at No 2 the fact that spontaneous combustion was a possibility was something that everybody was aware of?-- No, no, they wouldn't be.

It just never - crop up from time to time?-- It only crops up - as with anything the mine tends to become dull on events that happened a long time ago, like the 5 North when it heated up there.

I was just about to ask you that. On a day-to-day basis, in all your time at No 2 spontaneous combustion hasn't been a thing to deal with except at 5 North; is that right?-- From thinking about it, 5 North is the only one that I recall having anything to do with it that I can remember, yes.

Spontaneous combustion is not one of the things you had to deal with day-to-day as you went through extraction of 4 South A, 4 South B 401/402 and so forth?-- No.

The only occasion you can bring to mind in all your years at the mine was that one, 5 North?-- Yeah.

You told Mr Macsporrnan at one stage when he asked you a question - I think he asked you were there frequent variations of the ventilation on retreat, and I think you said to him, "Yes." I think you might have been talking about the stoppings around the Miner to direct air over the Miner driver rather than ventilation of the entire panel?-- Yeah, like when you pulled your stoppings back - as you retreat, naturally you have to replace different stoppings to get your ventilating circuit, as you say, running over the top of the Miner.

That's the variations you are talking about?-- Yeah, when you move it.

Direct brattice stoppings in order to ensure airflow over the Miner driver?-- Yes.

Am I right in saying that the extraction sequence for 512 had a repeat pattern, so the sequence for one area was then repeated other and over as you went down the panel?-- Yeah.

Could I just ask you to have a look at Exhibit 40, please? These are the training records for the mine. You will see your name about six or seven up from the bottom, Robertson, R W. What I want you to do is glance along the line applicable to you and tell me if that accords with your memory of when you had some training be it by lecture, tool box talk, seminar, whatever, in relation to the topics shown and can I tell you immediately in relation to the second last one under the heading "Spon Com - gasses" et cetera that that was to do with cable flashes?-- Sorry, where are you? I was just - I'm still up at the first -----

Let's go across them. First Aid in '92?-- Yeah.

Emergency procedure in '89?-- Emergency procedures? Don't recall that one. As far as I can remember we have not done emergency procedures. That was brought up at a safety meeting. We were supposed to have it - a plan on the top - do a table top one with the cards and that, then the next one was to set up an actual scenario.

Like a mock -----?-- Yeah, that would come out of '86. We never done that.

You had the cards, they were in use after this incident?-- Yeah, that's all.

But you didn't get your mock emergency training?-- No, or the table top one.

Fire fighting 1990?-- Yes.

Traffic rules '94?-- Yes.

Mining methods, I think that might have been in relation to 512?-- Could have been.

Then across to accident hazard reports, '93?-- Don't recall that as a course, but anyway.

'94, significant incident reports?-- No, I don't recall that one.

Then cable flashes. It's under the heading of "Spon Com"?-- Yeah, that was at a safety meeting it was brought up. We'd killed a few cables so we had a safety meeting on cables and that. George bought a piece of cable in and he wasn't too happy at the time and we had a talk about the dangers associated with running over cables.

In March '94, self rescuers?-- Yeah.

Now, just one last point, I asked you before about the fact that you had never formed the view that there was a heating in this panel and you agreed with me about that?-- Yeah.

Am I right in saying no-one expressed that view to you either?-- No, not that I know of, no.

XXN: MR MORRISON

WIT: ROBERTSON R W

I have nothing further, Your Worship.

WARDEN: Thank you. Mr Harrison?

CROSS-EXAMINATION:

MR HARRISON: Mr Robertson, you were questioned earlier by Mr Macsporrnan about the practice you had from time to time of looking back two shifts for the deputies reports?-- Yes.

Where would you gain access to the report for the shift immediately prior to the one you were taking over from, in other words the one two back?-- In the book. It was a duplicate copy.

Now, in relation to the one from the shift immediately preceding yours, would that be placed up on a board somewhere?-- Yes, up on the starting point. There was a box there where all the reports were kept.

So your practice was to go to the book in any event?-- Yeah. Well, see, you swapped over with the deputy down there, he usually got the original in his pocket and you have a talk about what went on during the shift, then I'd go over to the book and read his report and sign it in the book that was left at the crib table.

So it was a very simple procedure then to go back one and have a look at what happened the shift before that?-- That's right.

To your knowledge did other people follow that practice?-- I couldn't say. I honestly couldn't.

If there had been a situation where something unusual might have happened such as the sniff you've described on 24 June this year, was it common amongst the deputies to pass it on verbally as well as just including that in the report?-- To me it was. I can't speak for the others. I've had others say yeah, they've had problems and that they tell me, but yeah, normally you'd pass it on verbally, I suppose you could say, as well as written.

If I can just talk to you about 512, you spoke earlier about your knowledge of the incubation period; do you recall being asked about that this morning?-- Yeah.

And you referred to a period of some six months for Moura No 2?-- Yeah.

At the time you made the comment that you thought it came from the mines inspector?-- Yeah.

What led you to believe that?-- It was just something that

XXN: MR HARRISON

WIT: ROBERTSON R W

clicked in the mind that recalled it from that - either that tests had been done and the Mines Department had put a period of six months on from the start of extraction, six months later it had to be sealed to that point.

I would like to talk to you about the start of extraction in 512. Was it your understanding that extraction started on about 29 April this year?-- Yeah, whatever my report says. That was the day that we started.

You may recall that you were shown a bundle of your reports for 512?-- Yeah.

Earlier today?-- Yeah.

I will just get you to have a look at that bundle. I think it could be Exhibit 48 or 49. I got lost in the bundles there, Your Worship.

WARDEN: Which one do you want again?

MR HARRISON: I'll have 48 and 49 perhaps and I'll find the right one. 49.

Turn to numbers 3052 and 3033 that might help you?-- What numbers were those again?

3052 and 3055. 29 April/28 April, around there?-- I don't seem to have them - they are not in order here by the looks. Sorry, I'll have to ask you about what was that number, 30

55. 29 April. Have you got it?-- Yes.

Was that when extraction started to your knowledge? Does that report in fact help you in that regard?-- Yeah, 29/4 is when my crew actually started extraction on the afternoon shift.

So I take it that the starting date would have been within a day or so of that at the most?-- It would have been day shift.

Was it a generally held view in the mine that from your experience the incubation period for No 2 was six months?-- I couldn't answer that. I wouldn't know.

While you've got that report there, there is some reference down in the bottom corner to some problems with a damaged cable on shuttle car number 17; do you see that?-- Yes.

What's the reference to the readings under that mean? I can't pick it up at all on my photocopy. There is something "readings" and then some figures?-- I can't see it either. I can see the ones you are talking about, 95.7 and 97.6 and there is something "readings" there.

Is it "H - readings"?-- Could be. I don't know.

Can you tell me what it means?-- Looking at that now, no, I

XXN: MR HARRISON

WIT: ROBERTSON R W

couldn't, I'm sorry.

Really what I'm asking you, was that some cause of concern in terms of heat?-- I couldn't say for sure.

In your experience within No 2 generally was cable damage a problem from time to time?-- Yes, it was.

Were you also aware from time to time that there were incidents of cable flashing?-- That's correct.

You just can't help me in terms of what that particularly means here?-- No, I can't, I'm sorry.

If I can just turn to something else, you've told us about the two different interpretations of the Drager readings as between yourself and Mark McCamley; has it been your experience that that's quite common, people do read them differently?-- Yes.

And just to be clear on your practice, your practice has been to follow the stain as far as you can to the end of even the slightest colouration?-- That's correct.

And that's a practice you have always adopted?-- Yeah.

You are aware that other people have done it differently to that?-- Well, yes, I am.

Thank you, I have nothing further, Your Worship.

MR CLAIR: Your Worship, just one matter in re-examination.

RE-EXAMINATION:

MR CLAIR: You said in answer to a question from Mr Morrison that - you agreed that on a day-to-day basis spontaneous combustion had not been a thing that had to be dealt with in the No 2 Mine except for 5 North Panel?-- Yes, that I can remember.

Right. What did you mean by that in terms of spontaneous combustion being something that didn't have to be dealt with on a day-to-day basis? Was it a matter that was of concern as a danger, a possibility within -----?-- No, no.

----- the mine?-- No, no.

The readings that you took of carbon monoxide and carbon dioxide, calculations as to the CO make, what was the purpose in taking those?-- To determine litres per minute of CO travelling up the return.

And, in turn, once that CO make was calculated, what was the purpose of having that?-- Well, if it had a sharp rise, that would indicate that there was a heating going on inside, but not all the deputies knew of this litres per minute. There was - those of us within the Mines Rescue knew about it, but there were other deputies there that were not trained or have no knowledge of this litres per minute. You could talk to them and they would go, "What are you talking about?"

So -----?-- It's usually only, as I say, rescue blokes that knew about that.

How many of the deputies were members of Mines Rescue?-- Oh, offhand I wouldn't have the records on that.

Well, half of them, only a few of them?-- I will just do a quick calculation for you now. About five of us.

Out of?-- 14, I believe,.

Five out of 14. And you say the balance of them you could speak with them about the CO make in terms of litres per

minute and they really wouldn't seem to know what you were talking about?-- Not really, no.

And from what you could understand, they really didn't know the significance of calculating the CO make in terms of that perhaps indicating the existence of a heating or a suspected heating?-- Quite possibly, yes.

Quite positive about that?-- No, quite possibly.

Oh, quite possibly?-- Yes.

Thank you, Mr Robertson?-----

WARDEN: Thank you, Mr Parkin.

EXAMINATION:

MR PARKIN: Mr Robertson, just a few questions, please. You mentioned in your deputies reports on a few occasions that you talk about loose roof and ribs being pulled down as required?-- Mmm.

Could you just explain exactly what you mean by that?-- In your day-to-day inspections as you come across any loose rib and sides you would pull them down, so if I seen them - quite often in an extraction panel close to where the miners are working or whatever you are always pulling loose bits and that away to make it secure, so you would bar them down or pull them down as was required or as you seen them.

I understand the ribs. What about the roof, did that happen very often?-- Little flaky bits next to the roof are next to the rib edge on there, yeah. Sometimes gutters and that you work on.

Just for clarification, if you look at that plan on the right-hand side there, and let's assume that the workings are at cut-through 4 or in that area, could you just briefly indicate to me what your normal examination sequence would be, please, just briefly?-- Well, do you want me to use this?

Yes?-- If it was at the start of shift and we were punching that off there, naturally you would talk with the offgoing deputy and that, and go - I'd go down the supply road there, have a look around and see where the men were working, make sure they were safe, probably stop there for quite a while with them to ensure that they were doing their job right. Then I would go across - oh, as I was coming down here I would check my stoppings on the way down. Then I would normally go back up the travelling roads where the shuttle cars were operating to make sure there was nothing going to drop on them, and the cars - the cables were running all right. Check the boot-end and the feeder. Then I'd normally go across to the other heading, go back down, check the stoppings across

there, depending on where they were set up, make sure they were intact. Then I would normally come back, have another word with them, walk around, possibly let them know that I am going to hoik off at some time and go down the return, what's a name.

The bottom - that's the bottom return?-- Yeah, the waste return, and go down the back, have a look around there, and I would come back up, have another look around, and then fill my report out. I would start my report before I went off from there normally, and then go back down and go with the crew again.

Would you go on the top return, would you travel that as well?-- Yeah, you would have a look through there.

On Friday, 24 June you stated that there was a smell of benzene. You also indicated that at a later date Dave Kerr had been through that area and not found any smell whatsoever?-- Mmm.

Do you know of any reason why that would be? I mean, was there a change in ventilation or anything to indicate -----?-- That Dave wouldn't smell it?

Yes?-- No, it's the same - the ventilation was set up the same.

Your Worship, could I refer to Exhibit 25?

Mr Robertson, have you seen that graph before?-- There was one like this used to hang on the deputies' cabin, board in there, yeah.

So that was hung on the deputies' cabin?-- Yeah.

So you were aware then that on the 24th the CO in litres per minute was over 10 ppm?-- Yes, well, my readings indicated when I done that that I had 10 parts.

And that had risen from on 16 June to - from something like - I am guessing this - it's about 7 and a half litres per minute?-- Yeah.

Now, you said that you went on leave nine days before the incident?-- Yes.

So, am I right in assuming that on 15 July that you were aware that there was a reading of 14.27 litres per minute?-- I couldn't say for sure because I don't know whether that was the same one that was posted there or not. I couldn't say for sure.

The reason I am asking the question is really just to ascertain from you whether in fact that increase from the 24th when you distinctly said that you did have a smell of benzene, whether in fact that trend had been monitored by you and others, and the question is were you alarmed by it?-- No, but I didn't say I distinctly smelled it. I said what

appeared to be. It was definitely "appeared".

Appeared to be a smell?-- Yeah.

You did mention gob stink, didn't you?-- I can't recall. I can't recall, but, no, the graph didn't alarm us, no.

You have indicated to a question from a previous questioner about the business of litres per minute?-- Yes.

Now, what's your understanding - I mean, I guess this is from your Mines Rescue training - what's your understanding of a problem with regard to a heating in litres per minute?-- If - again, if I remember correctly, if there is a rise of more than two litres per minute over - if it's 10 litres - between 8 and 10 litres per minute on the normal, a rise of two litres a minute over so many hours or whatever, you have a sure problem in there.

So I guess - do you understand if you got between 10 and 20 litres per minute, somewhere in there, you have got a problem?-- I would say yeah.

So on 15/7 you weren't concerned when there was a reading of 14.27 litres per minute?-- No, not really because if you look back on the 8th and it's there, although it's still rising and it's quite sharp, that's seven days between there. It's not that sudden rise that I believe we were shown at rescue that is the worry one where it just jumps.

Thank you, Mr Robertson.

WARDEN: Professor Roxborough?

EXAMINATION:

PROF ROXBOROUGH: Mr Robertson, in response to a question by, I think it was Mr Clair, you referred to the waste talking?-- Yes.

Do you remember that clearly?-- Yes.

Was the waste talking a fairly common occurrence?-- Yes.

Are you able to say, in your experience, whether the talking waste was the roof on the move or the roof breaking up or was it pillar crush?-- On the pillars there didn't - there was some pillar crush. Naturally you were getting rib spall coming out from it, but you used to get little bits about yeh big just like pressure coming on and it would just spit chips out, and then you get bigger pieces come out and it settled down, but that was, you know, roughly what you got in there, in those areas that were bridging between the larger pillars and we had the support pillars.

And I am getting the impression that there were quite a number of falls in the waste area?-- Yes.

And some of those must have been reasonably large falls if, as has been suggested, there was sufficient effect to blow stoppings?-- Yes. Over on the top return the last fall that I can recall - and again I don't remember exactly where it is - it was a fairly large one. It fell back down along the - inbye and for the whole cross-cut between, say, 1 heading to another and then actually come back up between 5 and 4 or 6 and 5, whatever. If you get my drift, we were punching straight ahead there and the fall fell at an angle across there, went down to there, say, and back in there a bit. It was a fairly large one. It blew the stoppings over outbye and we had to re-stand some of them. Went down and had a look at the ones inbye but they were intact. It was mainly - I think we were at No 1 heading there, the crib table, and it blew these two stoppings over here. It seemed to - the, what's a name, impact of it seemed to drive out on these two and knock them down, but these ones were all right down along there.

There could have been falls in the waste area that you were unaware of?-- Yes.

And if I understand the extraction pattern correctly, supports were not set while you were stripping the sides of pillars?-- No.

So it's more likely, would I be right, that falls would occur in those areas?-- Yes.

And if falls were occurring in those areas, there is a good chance that there was fallen material going into the ramp areas?-- Yes.

And if some falls were going into the ramp areas, they would be covering loose coal in the ramp area?-- Yes.

And that coal in the ramp area covered now would be isolated from the ventilation in the goaf?-- That's correct.

So, things could have been happening in the ramp area which could not be detected from the ventilation current coming across the goaf?-- No, you would - you would have to pick something up inbye that - whether it be two or three - I mean, if you have got a fall and something is occurring underneath there you have still got ventilation travelling over there or around the sides, it has still got to get out of bed for that make to start to go. You would have had a rise on it, wouldn't you.

Wouldn't you have expected that if coal had been covered, let us say, at normal ground level in the waste area as distinct from a ramp -----?-- Yeah.

That the gases that might have been accumulating from a localised heating in a ramp would not be flushed by the ventilating current?-- No, I don't believe so. I believe they would have been flushed. Because of the shape of your falls they weren't ones that blocked to the roof. If your ventilation is travelling up and over it and still coming down you would still get some increase. If there is something happening there it would have been taking it down where you would have picked it up.

You are assuming, are you, that the air is able to move down the ramp?-- Yes.

And then come out of it?-- Yeah.

Like you say, it has got a clear passage through the ramp, has it?-- Yeah, it would have had a clear passage through the ramp, yes.

I see?-- If it was underneath it, naturally, no, but if it is going up and over the top is what I am saying, yeah, it would clear it.

Can I take you to 512 top return? We have had evidence in the past of - I don't think it has been mentioned to you - methane drainage holes connecting 5 South return which is adjacent to 512 top return. Were you aware of those methane drainage holes?-- Yes, they were put in by the programme.

Right. And are you able to say that those holes were sealed?-- No, I am not able to. I went by - I asked Jacques Abrahamse had they been sealed one day and he said, yes, they have all been sealed, but I personally did not -----

In all of your journeys down 512 return did you examine them?-- No.

Thank you.

EXAMINATION:

MR ELLICOTT: On the inspection at the back of the panel on 17 June all the back stoppings were described as being found closed?-- Yes.

I presume they were stoppings with some form of door in them?-- Yes.

Can you describe those doors to me?-- They are a brattice flap.

A brattice flap. Would it be fair to say that that needed some means of holding the thing open?-- Yes.

So, would it be possible for a fall and a subsequent windblast to disturb those to shut them?-- Yeah, if they used the rope on the nail trick, yeah.

Okay. So, their most stable condition was with them closed and with the things falling down under gravity?-- Yeah.

That is how they were found?-- Yeah.

Okay, thanks. Can I take you to Exhibit 45 which is your report No 3423. That is your report for 512 section for afternoon shift on 24 June?-- Yes.

That doesn't appear to be countersigned by either an oncoming deputy or the manager or undermanager?-- Yes.

How many copies of these reports exist when they are filled out?-- Just the one and the book.

There is one original and one left in the book?-- A duplicate.

Would it be fair to say that a copy of this signed by both the oncoming deputy and manager or undermanager must exist somewhere or should exist somewhere?-- There would be a copy - the duplicate would be signed by the deputy. This one, if it is the original, should have been signed by the undermanager because it is personally given to him, handed to him, at the end of shift. It is physically handed to him.

And this is the one in which you recorded your observation that there was a strong benzene type smell?-- Yes.

Do you think it would be fair to describe deputies as line supervisors with a critical safety role?-- Yes.

Would you consider deputies to be part of management?-- Yes and no.

What do you think the prevailing opinion would be amongst deputies?-- We are in the union. You are part of the team and you are not. You are on both sides of the fence, if you get my drift.

What do you think the prevailing view would be of those who you would certainly describe as being in management? Would they consider deputies to be part of management?-- Yes.

They would?-- They would.

But the deputies themselves may be a little ambivalent?-- Yes.

During his evidence Cole Klease, who is a fellow deputy, was asked, I think by Mr Neilson, questions related to what he considered to be the most serious hazards or dangers in a mine like Moura No 2. I believe he mentioned an accumulation of gas as being a significant hazard, and when asked to describe the most likely source of ignition of that gas he indicated that may be from a machine. I am wondering if you can shed any light on that?-- If you intersect a borehole and it bleeds in there, you've got the Trolex sitting on the top of the heads, you have methane coming underneath it, if the heads are lifted up to the roof and dragged back to clean the roof there is a chance of frictional ignition there as one source.

What about ignition from machines other than frictional ignition and other than from continuous miners?-- Cable flashes off shuttle cars.

Apart from the cable flashes we have heard something about you are not aware of any other ignitions of gas?-- No.

From machinery?-- No.

Can I take you to Exhibit 25 again? Exhibit 25 is the graph of CO make from 512 Panel or one of the versions of it?-- Yes.

Would you agree that from 16 June 1994 until 15 July 1994 there is a fairly consistent increase in CO make from 512 Panel?-- Yes.

Would you think that was expected given that extraction was continuing from 512 Panel and there was more coal being exposed?-- Yes.

Would you agree that after 15 July there appears to be a levelling of the CO make from 512 Panel?-- Yes.

Was extraction of coal still continuing in the panel in that time?-- I don't know. I couldn't say unless I seen the report. It could have been, yeah. More than likely it was, yes.

I believe the panel stopped extracting on 15 August?-- Yeah, like I say, I'm not sure if that's so, yes.

That's nearly a month, so you would agree that extraction was continuing, the panel was still working?-- Up until that point, yeah. It could have been beyond. Like I say, I can't remember the dates and that from then, but I made that report on the 17th, didn't I? We were still extracting then, weren't we?

I believe so?-- That's the 17/7, isn't it?

Yes?-- We would have still been extracting.

You probably extracted a fair bit of coal towards the end of the life of the panel?-- Yes.

Can you think of any reason why the CO make would level out and stop increasing over that time?-- More ventilation being directed into the panel. The panel is shortening up so you are getting a higher ventilating pressure coming into it or they have altered regulators around the mine and, like I say, they have increased the ventilation going in, flushed it out, but that's about the only thing I can think that would level it out and go like that.

If they did that or those effects occurred, that would have been between 15 July and 22 July because that's when the levelling out appears to have occurred?-- Yes.

Thanks very much. That's all.

WARDEN: Anything arising out of that? Can we adjourn and resume at 2.30, gentlemen?

MR CLAIR: Could the witness be stood down, Your Worship?

WARDEN: Yes.

WITNESS STOOD DOWN

THE COURT ADJOURNED AT 1.10 P.M. UNTIL 2.30 P.M.

THE COURT RESUMED AT 2.30 P.M.

RAYMOND CAMPBELL, SWORN AND EXAMINED:

MR CLAIR: Your full name is Raymond Campbell; is that correct?-- That's correct.

You are a mine deputy at Moura No 2?-- Yes.

How long have you been there?-- For 20 years.

20 years at No 2 Mine?-- No 2 mine, yes.

When were you appointed a deputy?-- Probably October '79.

Now, you are aware of the incident on 7 August 1994?-- I am.

At that time did you hold the position of outbye deputy?-- I did.

And had you been in that position for some time prior -----?-- I had.

To that?-- I was, yes.

Some months prior to that?-- Just off from memory - it is a bit hard to recall - but I would say probably three years before.

Okay. Now, as outbye deputy what shifts generally would you work? Was it a variety of shifts from week to week?-- Rotating day/afternoon.

Sometimes - were you sometimes also asked to work as a deputy -----?-- I was called on at times -----

A production deputy?-- On a shift, yes.

What were your duties as outbye deputy?-- Outbye deputy, as it states, outbye, well, you do belt roads, returns and mainly I was concerned in dewatering the mine.

Generally speaking would you go underground and - but not into the panels?-- Not into the panels, no.

Down to the boot end; is that right?-- That's correct.

Now, I want to bring your attention to 24 June of this year and I will ask you to have a look at a deputies report. Would you have a look at this one here, the deputies report. That's deputies report 3286; is that right?-- That's correct.

That relates to the Saturday night shift being Saturday, 25 June -----?-- That's correct.

'94, which, in fact, would refer to the night of Friday - or at least that shift would commence on the night of Friday, 24 June; is that right?-- That's correct.

Now, by reference to that deputies report are you able to say that you did work that night shift?-- I can say that, yes.

Commencing on the Friday night?-- On the Friday night, yes.

What time did the night shift commence?-- At 11 p.m. on the Friday.

That would take over from the afternoon shift on the Friday; is that right?-- That's right, yes.

What was the practice on Friday nights so far as communication between the deputy coming off - or deputies coming off the Friday afternoon shift and those that were working the night shift - that Saturday night shift?-- Well, there was none.

No communication?-- Depending on the situation as - on the sections that were done, 5 South at this stage was not a production section and there was no need to communicate with the deputy coming on.

Right. You refer to 5 South because on that Saturday night shift you, in fact, ended up as deputy for the 5 South section; is that right?-- That's correct, yes.

Okay. Now, how were duties allocated amongst the deputies for that night shift?-- Just gentlemen's agreement, we would sort out amongst ourselves who would do what sections.

And was there an opportunity for communication then between -----?-- There was opportunity for communications, yes.

If you can wait till I finish the question. If you start your answer before I finish my question we are in strife?-- Mmm.

Now, was there an opportunity for communication between the outgoing deputies on the Friday afternoon shift?-- Yes.

And the deputy or deputies working the Saturday night shift?-- There was, but I would like to explain just a little bit further, to clarify the point, that if a deputy was coming in to work the night shift, no, there wasn't. If the afternoon shift deputies were working through on the Friday night they could communicate, but the afternoon shift deputies would be gone before anybody else come in at 11 p.m.

Okay. Well, now, was this different to the situation on the other afternoon and night changeovers?-- During the week?

Yes?-- Yes, completely different.

Why is that?-- Because on production then it was changeover - hot seat changeover at the face.

I see. Now, do you have any specific recollection of working that shift that is referred to on the production deputies report 3286 there?-- Now I have viewed it, yes.

You were working 5 South you have told us?-- That's correct.

You had nothing to do with 512 Panel?-- No, that's correct.

On that shift?-- No.

Do you recall having any conversation with Reece Robertson who was the deputy coming off the Friday afternoon shift?-- I do not.

If you will just let me finish?-- Sorry, I thought you had.

That's the deputy for the 512 Panel?-- I do not.

Okay. Do you recall having any conversation with Reece Robertson at any time about concerns that he had about a tarry smell in the 512 Panel?-- No recollection at all.

Yes, okay. Now, if you look - if you have a look at this other deputies report I am going to hand to, you that's report 3424 -----

I might just mention that's a copy of Exhibit 47, all right, Your Worship.

You will see that that is a deputies report -----

The original of that is Exhibit 47, Your Worship.

You will see that is a copy of a deputies report filled out by Ken Guest?-- That's correct.

Perhaps if you look at the original, that's Exhibit 47, it is a bit more readable. Does that indicate that he was working that same - that is the Saturday night shift on 25 June '94?-- That's correct.

And that he was deputy for the 512 Panel?-- That's correct.

Do you recall whether you had any specific conversations with him about the situation in the 512 Panel that night?-- I do not.

Okay. Yes, I have no further questions of the witness, Your Worship.

CROSS-EXAMINATION:

MR MacSPORRAN: Just a couple of matters. You said that on the Friday night shift the afternoon deputy would be gone before the night shift deputy arrived?-- Yes, that's correct,

XXN: MR MacSPORRAN

WIT: CAMPBELL R

yes.

What difference in time was there? When would the afternoon shift deputy finish his shift and go?-- The four production deputies, as with the crew, once they hit the surface they can go to the showers.

Which is what time in the afternoon shift?-- Probably quarter to the hour.

Quarter to 11?-- Yes.

The night shift deputy wouldn't be starting until 11?-- Until 11, yes.

So, just wouldn't see each other?-- Would not see each other, no.

What if the afternoon shift deputy had some concerns about something, that had caused concerns during the shift?-- That's a different matter.

What would happen normally in that situation?-- I would surmise he would report to the deputies who were still there to work through or to the undermanager.

But still he wouldn't ordinarily be able to communicate with the night shift oncoming deputy if it was a different person?-- At that stage if it was the oncoming deputy, it was his section, we would relay the message to him if he had a concern, yes. He would go through the deputies that are there, report his concern. He would also report his concern to the undermanager and the message would be relayed on.

But again, if I have understood you correctly, he wouldn't relay it personally to the oncoming deputy?-- Not personally, no.

Why would that be?-- Because he wouldn't be there.

But that was only because he had simply finished his shift and gone?-- Finished his shift. By the time 11 comes we still haven't probably by that time sorted out which sections we were going to do, anyway.

Even if there was a problem on his shift, the afternoon shift, he would communicate that with the oncoming deputy via someone else?-- Well, if there was a major problem I think the deputies who were going to do that shift would handle it, anyway.

You think he would stay behind to make sure?-- Yes, they would, yes.

Has that happened to your knowledge?-- Not to my knowledge, no.

Now, as far as you are concerned you didn't learn of anything unusual happening in or about 512 Panel?-- No.

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WIT: CAMPBELL R

We are talking here about 24 and 25 June this year?-- Mmm.

Did you hear anything subsequent to that date about something unusual happening in 512?-- Only on the roof fall, that I heard mentioned that Reece had smelt a benzene smell and, as it was said by Allan Morieson when he was testifying, that him and I can't recall who else went with him to check it out and they - I got it back through the grapevine they reckon due to the fall that it was the chemicals in the roof they could smell.

Just so I understand what you are saying, did you hear that in these proceedings or did you hear it on the grapevine?-- The grapevine at work.

At work?-- Yes.

After or - before the explosion?-- Yes.

So, there was some talk about a strange smell in the panel, was there?-- Yes.

Did anyone express the opinion that it was due to some sort of heating inside the panel?-- No. Not to me, anyway.

Was that topic raised at all, the possibility that it could be a heating?-- Not to my knowledge, no.

Now, in terms of changing over shifts, what was your practise about reading the previous reports?-- You always did, yes.

The immediately previous shift report?-- The immediately previous report, yeah.

Any other previous shifts would be perused or just the immediately previous one?-- Immediately only, yes.

Was that the general practice or -----?-- Not for the production deputies, no. When they changed over I seen them read both reports or the two reports ahead, yeah, when they were in production cycle.

Were you aware there was a CO make published each week for the deputies?-- I saw a graph, yes.

Where did you see that graph?-- In the deputies cabin.

What did that record as far as you understood?-- Double Dutch.

Double Dutch?-- Yes, I never understood it at all.

You didn't know what the purpose of displaying that graph was?-- I knew it was a litre make per minute when Cocky posted the graph, but I didn't know what litres per minute signified at all, no.

You had no idea?-- No idea.

Now, obviously no-one ever - you didn't ask anyone?-- No, for the simple reason that ppm was my terminology and that's - ppm is what I worked off. I was never taught at any stage on this litres per minute.

You didn't know how to relate in any way ppm to litres per minute, how they correlated at all?-- No, no.

I take it you were aware that there was a screen in the Unor room for the deputies or anyone else to look at?-- Yes.

Did you ever avail yourself of that?-- Yes.

What did you look at that screen for?-- Just for the CO, CO2, oxygen and CH4.

Was that a regular occurrence for you to look at that screen or was that just occasionally?-- I would say regularly, yes.

MR CLAIR: Was that answer "regularly" or "irregularly"?

WITNESS: Regularly.

MR MacSPORRAN: Regularly?-- Yes.

You didn't ever venture very far inbye of 512?-- No.

Thank you, Your Worship.

CROSS-EXAMINATION:

MR MARTIN: Would you just tell me a little of your background? You left school at what age?-- 16.

And if my mathematics is correct, you started in the industry in 1974?-- That's correct.

That's about when you were 27 years of age?-- That's correct.

So, you had 11 years doing what? Without a blow by blow description, what types of things did you do?-- I was self-employed. I was in business with my father.

What type of business?-- As a butcher and cordial manufacturer.

For the whole of that time?-- Yes.

How long were you a miner before you became a deputy?-- Well, as I stated, it would be five years.

To become a deputy what period of time do you do?-- 20 weeks.

Was that 20 weeks with two three hour sessions a week?-- No,

XXN: MR MARTIN

WIT: CAMPBELL R

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in my course it was on a Monday. It was a three hour session each Monday.

All right. So, you had 60 hours of instruction?-- Yes, that would be right, yes.

And in terms of induction to go underground as a miner in the first instance, how long was that?-- Five minutes.

All right. Do you know of the gas chromatograph facility?-- I do, yes.

It existed, did it not, at Moura No 2 before 7 August 1994?-- Yes, it did.

And it existed there for many years, did it not?-- Only from '86.

All right. In consequence of the 1986 explosion?-- Yes.

Were you familiar with any of the techniques of operating it?-- No.

Did you have any understanding of it?-- No.

What about the Unor system - it is sometimes called the Maihak system - did you have any experience of how to operate that?-- Not to operate, but I have - as Mick Caddell testified, I have done the span gas testing for it, yes.

Underground?-- Underground, yeah, putting the samples through to test the system.

And you have heard, obviously, reference to a red book/blue book spon com information?-- Yes.

Did you receive those?-- I received the red book whilst I was doing my course, yes.

But not the blue?-- Not the blue, no.

You never received the blue?-- Never received it, no, but I have sighted it, yes.

The blue book - sorry, when did you sight it?-- I have seen it, like, on the manager's desk and undermanager's desk and - that was a long time ago, though.

The chain of command at Moura No 2 was you gave orders to miners, as deputy, that is?-- Mmm.

And other personnel above you in terms of position such as shift manager or undermanager - undermanager-in-charge, or Mr Schaus all gave you and the men instructions?-- That's correct.

There is no doubt at all, is there, that you received your instructions from your superior in position?-- That's correct.

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Since you became a deputy have you been given any training or instruction as to the phenomenon of spontaneous combustion?-- No.

Can you help the Court - I am sorry, the Inquiry with any course of instruction or retraining that you may have been given in any other aspect of mining?-- No.

You have heard SIMTARS referred to and facilities it provides?-- Yes, I have.

What did you know about that before 7 August?-- Well, all I know of SIMTARS is that each week they would do a test on our chromatograph.

Can you help the Inquiry with who it is who was trained to operate the chromatograph before 7 August 1994?-- Ken Selff.

That's the bathroom attendant?-- Yes, Max Robertson.

Who was Max Robertson?-- He was the electrical foreman, you would say, yes.

All right?-- 2IC to Dennis Evans.

Any others that you know of?-- Not that I know of.

Do you know this in relation to the Unor system, whether there was a horn, an alarm horn?-- Yes, there was.

So what would happen if the machine alarm - would the horn alarm?-- The horn would go off, yes.

Was that inside or outside the -----?-- That was outside.

Do you ever hear it go off?-- I have.

When, or is that asking too much?-- I know it has gone off. I think it was New Years Day, last Christmas. Last New Year, yeah.

I take it you weren't on duty on 7 August?-- No, I was not.

Do you know whether the horn was disconnected at any time?-- I have no idea.

As deputy are you familiar with the probeye?-- No.

Do you know that one existed -----?-- I know it exists, yes.

Did you know that one existed at Moura No 2 in the Unor room?-- No, I did not.

In any case, did you know how to use it?-- No.

Were you never instructed on it?-- No.

Do you know its purpose?-- Yes, I do know its purpose, yes.

What is its purpose?-- Infrared system that can detect a heating.

Do you know that Bowen basin coal, and particularly Moura, is a gassy coal?-- I do, yes.

And do you know that the Moura coal has a history of spontaneous combustion?-- Only after 5 North West.

But following 5 North West is it the case that you came to know that Moura coal was capable of spontaneous combustion?-- Yes.

Do you know much if anything or a lot about incubation period?-- No.

Have you ever been instructed in that by your employer?-- No.

Would you describe the system of degassing in Moura No 2 as one which was productive of a lot -----?-- Yes.

----- of a lot of coal dust?-- Sorry, I'm answering too quickly again.

Of loose coal?-- Can I have the whole question again, please?

Do you know that the system of degassing applicable in Moura

No 2 in more recent times has produced a lot of loose, dusty coal?-- Well, I don't know whether you've got - I don't understand that question exactly as you've put it, but as far as degassing the seam goes, it doesn't produce until it is actually mined. When it is mined it is dusty, yes.

I didn't take the necessary step in between. Are you aware of the mining technique in 512, that is ramping?-- No.

Is that new?-- No, no.

Do you know the mining system -----?-- Yes, I know the mining system, yes, yes.

Do you know that that was used in 512?-- Yes.

Was a consequence of ramping a lot of loose coal at the foot of the ramp?-- Yes.

You spoke earlier, I think in response to Mr Macsporrán, about the CO/CO₂ relationship on the Unor screen?-- Yes, yes.

What is your understanding of that? What does it tell you?-- Whether there is a rise in the gasses in parts per million.

The CO/CO₂ relationship ratio?-- No.

Tecrete - well, you weren't there on Sunday the 7th so I won't ask you about that. The location of the seal monitors, the final monitor within a sealed area, who determines that location?-- I'd only surmise it would be manager.

Do you know a device called a whirling or a sling psychrometer?-- I do.

When if at all, say in the period of two months before 7 August 1994, did you use one of those?-- I did not.

Do you know that it came into use very consistently after about 23 July 1994 in relation to panel 512 first of all and then any other area?-- I did not.

What is a wet bulb/dry bulb temperature mean to you?-- That's the whirling hygrometer.

What function does that fulfil?-- You take the dry temperature and the wet bulb temperature and relay it to a graph and it will give you the relative humidity of it.

For what purpose?-- No idea.

Do you know that velocity readings were taken - in fact I suppose you take them with an anemometer?-- I have done, yes.

Only occasionally, I take it from that?-- I have done surveys, yes.

For what purpose?-- For the mine record book.

Is that all that you know about it?-- About an anemometer, yes.

But the purpose of doing it for recording?-- Yes, yes.

Thank you, Your Worship.

MR MORRISON: Thank you, Your Worship.

CROSS-EXAMINATION:

MR MORRISON: Mr Campbell, you've been a deputy a fair while at No 2?-- I have.

And you tell us, I think from what I understand your evidence to be, that with the exception of the night shift changeover on that Saturday night shift there was a fairly well entrenched practice of communication deputy to deputy on changeovers?-- On hot seat changeovers, yes.

They are the ones that matter most because it's one production crew dealing with another production crew?-- That's correct.

So they are places where changes in the panels are most likely to occur?-- Pardon?

They are the places, that is to say places where hot seat changeovers occur are in production panels and that's where alterations in the mine features are more than likely to occur?-- More than likely, yes.

You yourself were fairly active not just in your deputy roles but in other features of the mine; isn't that right?-- That's correct.

You had particular interest in location and positioning and were active in developing the location and positioning of the overcasts?-- No.

You had no role in that?-- I did have some input so far as arguments go as to where they go, but actually erecting, no.

My words may have made it sound a little more important than it was?-- Probably.

You certainly had your two bobs worth as to where the overcast should be?-- I certainly did.

You and other deputies certainly also had your two bobs worth about any issue that you had an interest in?-- Yes.

You mentioned that after a roof fall in 512 you had heard that Robertson had reported a benzene smell, then when it came back on the No 2 grapevine, in fact as it came back to you on the grapevine, it was chemicals in the roof bolt that they

smelled?-- That's correct.

That was a topic of conversation obviously at the time?-- At the time, yes.

Can I ask you one other thing? On Sunday morning there was a union meeting?-- I believe so, yes.

You weren't there?-- I was not there, no.

Would you normally have attended such meetings?-- I would, yes.

Any particular reason why you missed this one?-- I was indisposed with a crook back, yes.

I didn't ask the second part, Mr Campbell?-- It was going to come anyway, wasn't it?

Not from me, certainly not from me. Thank you. I have nothing further.

MR HARRISON: I have no questions, Your Worship.

MR CLAIR: No re-examination. Could Mr Campbell -----

WARDEN: His original statement, is there an original handwritten statement?

MR CLAIR: Yes, I don't think that is an exhibit already so I will tender that with two documents attached.

WARDEN: I will admit that statement and mark it as Exhibit 50.

ADMITTED AND MARKED "EXHIBIT 50"

MR CLAIR: Thank you, Your Worship.

WARDEN: Thank you, witness. You may stand down. You are excused. You may leave.

WITNESS EXCUSED

MR CLAIR: Your Worship, I call Kenneth Neil Guest.

KENNETH NEIL GUEST, SWORN AND EXAMINED:

MR CLAIR: Your full name is Kenneth Neil Guest; is that correct?-- That's correct.

Mr Guest, there is a microphone there and that's for the purpose of enabling everybody to hear you, so if you could at least attempt to speak into the microphone. Now, you are a mine deputy at Moura No 2 Mine?-- I was.

Until what date?-- Until last Friday.

How long then prior to last Friday had you been a deputy there?-- About 15 years.

You started in the mining industry at Moura No 1 mine in 1976; is that right?-- That's correct.

In '78 you moved to No 4?-- That would be about right.

You were appointed a deputy at No 4 in 1979?-- That's right.

And you transferred to Moura No 2 in about May 1986; is that right?-- Somewhere there, yeah.

In fact you worked as a production deputy there at No 2 since that time?-- Yeah, yeah.

You became a member of Mines Rescue in 1976?-- That's right.

You have made a statement in relation to events surrounding the explosion at Moura No 2 on 7 August this year?-- Yeah, that's right.

Up to that date in August, during the period prior to that date in August, had you been working at No 2 basically in 510 panel; is that right?-- Yes, that's right.

Did you have occasion as from March of this year through until August to work in 512 Panel?-- I did.

How often would you have worked in 512 Panel?-- Probably - I don't know. Probably only in production three or four times, I suppose, and maybe as many on weekend shifts. I don't remember.

The weekend shifts being non-production shifts, you mean?-- Being non-production, yeah.

Was that during the retreat phase -----?-- Yes.

----- that you worked there in 512?-- That's right.

As part of your duties when you were working in 512 you had to inspect the ventilation in the panel; is that so?-- That's right.

Did you form any view as to the state of the ventilation in 512?-- I was never happy with it, that's for sure.

Are you able to say why?-- Well, I've always felt that only half of the panel was getting ventilated properly.

If you turn to your right you will see a plan up there on the whiteboard which is of the 512 Panel, part of 510 on the right-hand side. If you take that pointer that's on the table in front of you and switch it on you will find it produces a red light up on the plan. That's it. Can you indicate then by reference to the plan just what your concerns were?-- Well, the concern I had was that as the air was coming through these areas back here -----

That's in No 1 and 2 cross-cut?-- Yeah, it seemed to step down, keep on stepping down through to the bottom. There seemed to be good air coming up here, but on one occasion when I was in this headings here -----

Just pause a moment because we can see what you are doing, but unfortunately we also have to get something on the record. You might just say in number 12 cross-cut or just describe it as you go?-- Yeah, well, in this cross-cut in this heading here where the stoppings were, for some reason the time that I was down there when these stoppings were down we had no ventilation coming through here at all.

Just pause a moment, Mr Guest. What you are indicating is that in the numbers 2 and 3 headings between 12 and 13 cross-cuts those stoppings that appear there, at least on one occasion those stoppings were down; is that right?-- Yeah, they had been knocked down by rib spoil.

The affect of the stoppings being knocked down is that the flaps - was the whole stopping knocked out or just the flaps had been knocked closed? Can you explain -----?-- No, there would have been a good half of the stoppings down.

So half the stoppings had been knocked out?-- That's correct.

Are you able to say when that was in relation to -----?-- I think at that particular time I came back it was about 11 June.

You made a note of it in your deputies report; is that right?-- I can't recall.

Perhaps to assist, could the witness see Exhibit 43, please, Your Worship?

Do you recognise that as your deputies report relating to the day shift?-- That's right.

On 11 June 1994?-- That's right.

Perhaps if you would just have a look at your notes there, you mention on your first inspection on that date, 9.30 a.m., in respect of ventilation you say there that air was coming back

along the top supply road to 9 cross-cut, I think you have there; is that right?-- That's right.

"Okay elsewhere in section"; am I reading that correctly?-- That's right.

Is that part of the problem that you were referring to?-- No.

It's not?-- No.

This occasion that's nominated on that 11 June deputies report, is that the occasion when you found those stoppings down or -----?-- That is right.

Perhaps if you can continue to explain what you found, you say half the stoppings were down in 2 and 3 headings?-- Yeah, well, I only went at this particular stage with Allan Morieson, I only went to that area there.

That's in number 13 cross-cut at number 3 heading?-- Yeah. In that return, the reason being I wasn't going to go any further because of the state of the roof and the ribs. These stoppings here had come away from that bottom side rib. We put them back up as best we could.

Stoppings in 2 and 3 headings, yes?-- That's right. We put them back up as best we could, but as I was saying, the thing that - I didn't think much of it at the time, but - until later on, that there was no ventilation coming through those down those roadways.

Down numbers 2 and 3?-- 2 and 3.

Around 12 cross-cut?-- That's right, and No 1 being the main return and those being the closest two roadways should have had more ventilation than any of these others down the bottom but they didn't.

Now, when the stoppings were put back up, were they put back up in such a way as to completely close off those Nos 2 and 3 headings or -----?-- Not possible.

----- or was there some window in the -----?-- There was windows there, but even though we couldn't get them right back up because of the rib spoil and that.

Right, so there was still some gaps around the side of the stoppings too?-- Yeah, that's right.

But I am interested in the windows that were in the stoppings. Were those windows left in a closed position or in an open position?-- I can't recall that now.

You do remember the windows in the stoppings?-- I can't even recall the windows in the stoppings. We only put back up what we found down there.

I see. You can't recall whether there were windows in those stoppings?-- Not offhand, no.

Okay. Well now, you had spoken of this concern about what we will call the top back corner of the panel not being properly ventilated, going back to your earlier answer when you said that the air seemed to step down from one roadway to another down towards the bottom return leaving that back top corner unventilated. Does that sum up what you were saying?-- That's right.

Was that the case when you found these two stoppings down in Nos 2 and 3 roadways?-- Well, that was what was happening. If I may?

Yes?-- The air was back ventilating up No 2 heading at this time and, for some reason, there seemed to be all this area up to those segregation stoppings - all this area here seemed as though it had a hot air flow. The bottom air was coming down through this because that was the main airway.

It was going down - stepping down towards the bottom return?-- That's right, yeah.

Or the bottom road there, and then going along the back in 13 cross-cut?-- And coming up the return. There was good ventilation coming up here. There was no problem with the ventilation coming up here, it was quite good.

So up No 13 cross-cut?-- That's right, and the main return had pretty good ventilation too, but, as I said, those two roadways there - and that was the only two roadways that I went to, I didn't go down any further, but they had no ventilation coming through them.

Even with those stoppings down?-- Even with the stoppings down.

The effect of putting the stoppings up?-- Didn't have any effect.

If anything, it would tend to slow any ventilation in those -----?-- I don't think it could slow something that wasn't there in the first place.

You say there was really none there in the first place?-- There was none.

You did mention that that did seem to be warm in that area?-- That's right. Oh, well, it was quite warm in the return there, but the air that was ventilating back up No 2 roadway was quite warm. Not excessively warm but it was warm.

Yes, I see. Well now, how are you able to say that that was on 11 June, that incident that you mentioned? Is it just from memory or did you -----?-- No, I went back and had a look at the reports for that particular time, because I said there wasn't many times that I was in there.

Now, this report that you have in front of you, Exhibit 43, the incident that you mention there on your first inspection, air coming back up the top supply road to 9 cross-cut, what were you referring to there?-- That was the air - the ventilation was back ventilating back up to, you know, 9 cross-cut, wherever it was at that time, and that was the air that seemed to circle back all the time.

I see. So, that notation did refer to -----?-- That's right.

----- your concerns about there being not enough ventilation in that area that you have referred to?-- That's right.

Okay. Well now, in the "action taken" section of that report in respect of the first inspection, you made a note there that there was a stopping put up diagonally across 9 cross-cut, "CH4 coming back, is bleeding into return in some cross-cuts." Am I reading that correctly?-- "In same cross-cut".

"In same cross-cut". Can you just, by reference to the plan, indicate what you are referring to there?-- Well, I don't recall actually whether there was a door in that or we actually knocked a hole in that stopping, and we put up a diagonal bag stopping across here so that anything that was coming up was being drawn into that part of the return there.

Again with a view to getting as much ventilation into that corner as possible?-- Not only that, but to get as much hot air and methane out of the -----

Out of that area?-- Just out of that part, yeah.

Now, you have also made a comment there in your general comments, "Top return inspected from seal only", I think, is that -----?-- "Inspected from seals inbye".

"Seals inbye", okay. What were you referring to there?-- Referring to the area out from here inbye.

Yes, okay. Your second inspection on that date, in respect of

the ventilation you mention there, "Slow behind stopping, okay elsewhere."?-- That's right.

"Behind stopping", you are referring to what area?-- Behind the stopping would have been a diagonal stopping we put across here in behind that area there, and by "okay elsewhere" would have been in the working areas.

Yes, I can't quite read what you have in the general comments there. Can you just read that for us in respect of the second inspection?-- In the comments I've got, "CH4 dropped from 2.1 CH4 to 0.7 CH4 behind stopping".

And the next two lines?-- "And air has cooled considerably in same area."

That's a reference to the fact that things improved after you took those steps with Morieson in the morning?-- Well, that's behind that stopping they had improved anyhow.

Okay. Now, that 11 June occasion was one occasion on which you worked in the 512 section. Did you work there again later in June on what I will call a Saturday night shift?-- That's correct.

Could the witness see Exhibit 47, please, Your Worship?

That's again a deputies report that you completed; is that right?-- That's correct.

For that shift, and again you were the deputy for 512 on that Saturday night shift?-- That's correct.

Now, when we refer to Saturday night shift, of course, that commences on Friday night?-- That's correct.

And that takes over, of course, from the Friday afternoon shift?-- That's correct.

Do you recall, particularly when you commenced duty on that night, what interaction you might have had with the outgoing deputies?-- I don't recall ever seeing the outgoing deputy of that section that night.

What was the position on Friday nights, say, in terms of communication between the deputies?-- Well, the deputy coming off shift, if he had anything to report would normally report if you were going in there. If you knew you were going in there he would tell you anything he had to tell you.

Were the deputies for that shift commencing late Friday night assigned in advance or was it just worked out at the time as to who would do what?-- Well, normally they're worked out who would be working.

And what particular duties each deputy would be doing or -----?-- Well, you would normally work out which sections between yourselves and what part of the mine you would be doing between yourselves.

That would be worked out at the time on the Friday night?--
That's right.

And would the outgoing deputy be gone by then or -----?--
Yes, I'd say so.

Well, of course, you would have the deputies report from the previous shift?-- Well, it was common practice to hand the reports in to the management, the originals. The carbons would have been there, yeah.

Would you make it a practice of reading the deputies report?--
If you were going into that area, yes.

And on Friday nights - I mean, normally during the week where there were production shifts there would be either a hot seat changeover down in the section itself or -----?-- That's right.

----- or deputies would meet up on the surface; is that so?--
That's right.

Now, of course, Friday night, if the outgoing deputy is gone before the incoming deputy is assigned to the panel, there is not that hot seat changeover or even the opportunity for communication on the surface?-- That would happen, yes.

What would happen in relation to the incoming deputy having the opportunity to read the outgoing deputy's report in that case?-- He would read the report and sign it as such.

Where would he do that?-- Sign it down the bottom right-hand corner.

But would that be down in the panel or -----?-- Well, that could be either way. Most times the report books were brought out on Friday afternoon.

You say most times the report books would be brought out of the section up to the surface?-- That's correct.

Okay. Do you recall whether you read the deputies report for the afternoon shift for that Friday the 24th?-- I don't recall at all.

Could the witness see Exhibit 45, please, Your Worship?

That's a copy of the report done by Reece Robertson who was the deputy for that 512 section Friday afternoon shift. Can you recall whether you have seen that before or any copy of it before?-- I have seen it before but only just recently.

Only recently. In the course of this matter being prepared; is that right?-- That's right.

Okay. Well now, you will see in the general comments in respect of the second inspection there, the last three lines, "Also informed the undermanager that at this point there was a

strong 'benzene' type smell and to keep a check on it." You weren't aware of that report until you looked at this document just recently?-- That's correct.

Now, was there anything said to you by anybody at the mine on the night of that Friday the 24th about there being some benzene smell in 512 Panel that afternoon?-- I can say no because it would be something that you wouldn't forget.

Right. Would you have spoken with the undermanager that Friday night? Would there be an undermanager there at the mine when the deputies arrived for the Saturday night shift?-- There would have been.

Do you recall whether, as a matter of practice, you would speak with the undermanager in those circumstances, that is, on a Friday night going on to the Saturday night shift?-- Well, the undermanager most times - the afternoon undermanager, if there wasn't a deputy on night shift, would tell you where he has got men allocated to and what the men were doing, yes, that's right.

So that it would be a practice to speak to the -----?-- That would be right, yes.

Now, do you recall then specifically speaking to the undermanager on this Friday night?-- I can't recall it at all.

In any event, you say you certainly can't recall any conversation with anyone at the mine that night about there being a benzene smell -----?-- That's right.

----- in 512 Panel that afternoon. Now, I want to bring you forward to the morning of Sunday, 7 August of this year. What section had you been working in during the week prior to that date, 7 August?-- I had only done - I finished work - I went off work on Thursday. I had spent Tuesday and the Wednesday afternoon shift in that panel.

In 512 Panel?-- That's right.

Was there anything that struck you as unusual about the panel when you were there on the Tuesday and Wednesday?-- No, nothing.

Now, there was a Union meeting on the Sunday morning?-- That's correct.

Was there some mention of 512 Panel at the Union meeting?-- The only thing I can recall was that - and don't quote me on exact words - but George Ziebell did say that he had to work people over and above the allotted overtime because they thought they may have had a heating in 512.

Anything more said about it than that?-- Nothing more.

Any discussion at the meeting about -----?-- Nothing discussed at all.

No discussion about whether or not the men should remain underground after the sealing of the panel?-- There was none.

Okay. Well, what was your expectation yourself as to whether men would be underground while the panel went through the explosive range?-- Well, I'd say that I'd be thinking even if I thought there was a heating down there it surprised me that anybody was down there while it was going through the explosive range.

Yes, okay. Pardon me a moment, Your Worship. Thank you, Mr Guest.

CROSS-EXAMINATION:

MR MacSPORRAN: Mr Guest, you had been away on leave until about March of this year; is that so?-- Not leave. I was off on sick leave, yes.

Sick leave, sorry. How long before you had gone on sick leave had you been working in 512?-- I can't recall that.

Had you had concerns about the ventilation system in 512 before going on sick leave?-- No.

It was only when you came back in March?-- It was only on the specific time I came back on that 11th, yeah.

And your time in 512, about three or four occasions on production and some weekend inspection, it was around that time that you raised these concerns about the ventilation system?-- That's correct.

You raised those concerns with both Mr Schaus and Mr Mason?-- That's correct.

Was that on only one occasion to each of those gentlemen or more than one occasion?-- It was only the one occasion.

What was it that you expressed to them about your concerns?-- I expressed to them my concerns about the top part of the section not getting ventilated.

All right. Now, you pinpointed the day or the date of the particular problem, you told us about, as being 11 June?-- That's correct.

And you noted that date by virtue of the report you filled out in respect to that problem?-- That's correct.

Now, normally the supply road, the top supply road, would have been an intake airway?-- It is an intake airway.

And the return airways are the 1st and 5th or 6th ends?-- The first and, well, whatever, 5th or 6th, is the last one.

The last one is the bottom return?-- Yes, well, that can be an end return.

They are normally the two return airways and the others are intake?-- On development.

So, what you saw on 11 June was unusual; is that so?-- Not unusual to the fact that I have had that same problem before.

When you say that same problem, you are talking about air going the wrong way in an intake airway?-- That's right.

Now, when you say the air going the wrong way in the intake roadway, how did you come to observe that?-- Well, mainly you can feel it for a start, but normally if it comes back up you've got methane that comes with it.

Well, firstly, did you feel it in terms of the -----?-- Oh, definitely.

Coming up the roadway?-- Definitely.

Did you do any testing to see what it was that was coming up the roadway?-- The methane.

You tested for methane?-- Yes.

At what level did you test for methane in the roadway, what height?-- Around about face height.

Right. Roughly what reading did you obtain for methane coming up the roadway?-- I think on that report on the 11th there was something around 2.1 per cent.

That was higher than it should have been?-- Most definitely.

There was some warmth in that air that was coming up?-- That's correct.

Did you do any testing around the upper layers, the roof layer?-- I put a methanometer up, yeah, as high as I could go.

This is on the same occasion, 11 June?-- That's right.

Did you get a different reading than 2 odd per cent?-- No,

no.

The same reading of methane?-- Same readings all the way.

Did you do any testing for any other gases other than methane?-- I think at that time Allan Morieson and myself - not in that particular part of the mine, but we did do tests in the return after we had done the inspections, yeah.

This is not 11 June we are now talking about?-- This is 11 June.

But when you say Morieson and you did some tests it wasn't 11 June?-- It was 11 June.

I am sorry. Was that after you had first noticed this air coming up against the intake?-- It was after we had put up across the stopping and gone down and inspected the returns.

Now, from what you observed in the testing you carried out, are you confident it was one flow of air up the roadway in No 2 or was it two layers going different ways?-- I am confident it was just one layering - one flow back.

Had you ever seen the phenomenon when you had two currents in the same roadway going different directions?-- No, I haven't.

In any event, you are confident it was one body coming up the roadway against the flow?-- Just one body coming up the roadway against the flow.

Did you do any testing to check the velocity of the airflow in that roadway?-- Not in that roadway, no.

In the top return at that time?-- I can't recall whether Allan did actually a ventilation or velocity test or anything like that in the top return that day.

Now, apart from simply poor ventilation, did that - the fact of the flow going against the normal direction indicate anything else to you?-- Yeah, as I said, it did. The top part of the section wasn't getting ventilated.

Apart from just the fact it wasn't being flushed, did the - did it say anything else to you, the fact that there was air coming up that roadway?-- It did.

What did it indicate to you?-- It indicated to me there could have been a good build-up of methane still sitting in there somewhere and the way it was going it could have, you know, allowed a heating to happen. You either ventilate a place or you don't ventilate it.

I think you said the air was warmer, but not significantly warmer, the air that was coming up No 2?-- That's right. It wasn't a thing - I can't say it was hot, but it was definitely warmer.

You did have a concern that left in that condition you could

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have a heating starting somewhere in that area?-- It did concern me, yes.

This was on 11 June?-- That's correct.

Did you subsequently learn anything about the events of 17 or 24 June?-- No, I did not.

You didn't hear any talk about similar sort of reverse flow in the 512 Panel?-- No.

In those days?-- No. As I said, I didn't recall seeing that report of Mr Robertson's.

You heard nothing about any smell being detected on either of those occasions?-- I heard nothing.

You didn't detect any smell on the occasion of 11 June?-- Only smell I detected on 11 June was a chemical resin smell off the roof bolts.

That's on 11 June, was it?-- Yes.

Whereabouts did you detect a smell of - a chemical resin smell? Whereabouts in the panel?-- It was a very strong resin smell down in this area here.

That's, what, 13 cross-cut?-- Yeah.

Between 2 and 3 headings?-- 2 and 3.

You were in that actual area when you smelt that smell?-- Yes. It is not uncommon with roof falls.

Was there a fall in that area?-- I can't recall exactly if there was a fall in there, but I know there were falls in that - up in that area, bits of falls and -----

I take it that the smell you are describing is a different smell to a benzene or a tarry smell?-- Most definitely.

You have smelt the difference? You have smelt both of those smells?-- I have.

This was difference to the benzene or tarry smell?-- Definitely.

Did you make a note of that anywhere in any report of yours?-- No.

Was the smell of - the chemical resin smell an unusual smell to be in the panel?-- Not unusual when you are retracting.

Now, the action that you took on that day, 11 June, was to erect a diagonal stopping across 9 cross-cut, I think you said?-- That's right.

The idea of that, you hoped, was to flush out the methane build-up further inbye?-- Well, there is at - that was

XXN: MR MacSPORRAN

WIT: GUEST K N

actually not my idea to put the stopping back up across there, it was Allan Morieson who is the ventilation officer.

Was the desired result to flush out the build-up?-- Flush anything that was behind there out, or allow it to get out.

From readings that you took afterwards did you satisfy yourself that the exercise had been successful?-- Yes.

That was on your second inspection the same day, was it?-- That's correct.

At any stage after that, that is after 11 June, did you follow up whether there had been any subsequent build-up in that area?-- Well, as I said, on 11 June - the next time I was down there was on the 24th or 25th or something.

You have already told us you heard nothing of any subsequent problems in that panel?-- That's right.

Were you aware of the significance of the calculations to give a CO make?-- I wasn't right up into that, no.

Did you know what a CO make indicated?-- Yes.

What did it indicate?-- It indicated that you could have had spontaneous combustion, coal was heating up and that, to what rate it was heating up at.

How would that relate to a figure given for a CO make, for instance? How would the CO make relate to a spontaneous combustion and potential heating? How did they relate to each other?-- Well, heating gives off CO and the higher it gets the more CO it gives off.

What about the figure of litres per minute, did that mean anything to you?-- Not a lot.

Did you ever monitor the situation in respect of the CO make at this time, around 11 June?-- No, only what was written - only on the charts in the deputies cabins that were put up.

What did those charts record, as you understood it?-- Well, nothing out of the normal.

What did they show? What was the graph depicting? Was it depicting ppm of CO or what?-- Ppm CO, yeah, it was - yeah, just ppm.

All right. Thank you.

CROSS-EXAMINATION:

MR MARTIN: You just talked about the graphs that were posted up. Do you really know whether they showed ppm or litres per

minute?-- They used mainly - I thought they did. They were just ppm.

But do you know?-- Yeah, they did show ppm.

Yes, all right. Could you just - I will hand these documents to you. They are deputies certificates 3983, which is the one you have been talking about, and also 3984, which is Mr Newton's on the following shift. Deputies reports, sorry. You can identify No 3983, can't you, as the one you have just been talking about?-- That's right.

Yes, all right. Would you just look at the next one, 3984? That's for the following shift, isn't it? mr Newton took over from you?-- That's right.

Now, just general comments - I am sorry, going to the top first, "Gas present and location, .7 per cent CH4, 7 to 8." Is that at 7 to 8 cut-through, is it, or cross-cut?-- That would be right.

No 2 road?-- Yeah.

All right then. Then you take that line down with an arrow to general comments and say, "Put stopping up in No 5 road 7 cross-cut. Stopping put up in 8 cross-cut between 4 and 5 roads. Brattice pulled down 8 cross-cut No 2 road and stopping repaired 8 cross-cut, 1 and 2 roads. CH4 cleared." Do you read all of that?-- I do.

What can you tell the Inquiry as to how it became necessary for those things to be done? What might have caused it? The stoppings were down? I take it they were down?-- He has obviously pulled down what we have put up.

I will tender the 3984 for identification and I will make it an exhibit when I can get a proper copy for you. It is already part of Exhibit 9.

WARDEN: It will be Exhibit "E" for identification.

MR MARTIN: I will put in a clean copy for you.

Now, what can you tell the Inquiry about ventilation in 512 in comparison with elsewhere in No 2 Mine?-- Well, the difference in 512, I think, was the fact being that the top segregation stoppings, which are these -----

Yes, I have got them?-- Were all good Tecrete stoppings.

Were all what?-- Good Tecrete stoppings. The only two panels before that that I had worked in on extraction we didn't ventilate that way.

But comparing the experiences you had with what I broadly myself term recirculation up in the top return or close to the top return, can you compare that with any other section of the mine?-- Yes, I think the 511 section ventilated the same way and probably some of the others too, but there was always

different circumstances between the lot of them.

All right. When you spoke to Mr Mason and Mr Schaus about your experience, I think it was on 11 June, were they concerned?-- It wasn't on 11 June. That was on the Saturday. I think it was on the Monday or some time then.

That's when you spoke to them, that you told them what you had found on the 11th?-- That's right, yeah.

How did they respond?-- Well, neither of them sort of took - was real concerned over it, I felt they weren't. They did say that the ventilation couldn't be altered and being only the one return that was understandable.

Yes. Just tell us something of your background, if you would. Is it the case that you left school after doing junior, Grade 10?-- That's correct.

And then you had some period of time as - in a garage and then as a tyre fitter and then truck driving and then -----?-- That's correct.

Then you came into the mining industry?-- That's correct.

That was in the year 1976. Three years later you become a deputy?-- That's correct.

Your induction underground in the first instance, what period of training did you have?-- I think - at the time I believe I watched a film and then was taken straight down and put on a shuttle car.

And for your deputyship what period of training did you have?-- I can't recall how long it took, but I do think it was somewhere around about six, seven, eight months, somewhere around there.

With a number of hours each week?-- That's correct.

What, if any, knowledge did you have of the gas chromatograph?-- When it first came onto the lease we were going to be trained on it. I think I got showed it once and then that was it.

Is that soon after it arrived for the first time?-- That was soon after it arrived, yeah.

Back about some time after July 1986?-- That's right.

And that was never taken any further?-- It was never taken any further. We weren't going to do it any more.

I beg your pardon?-- I said it wasn't taken any further, it just didn't get there, that everybody was going to do it. There was just going to be a few or they had people there that were going to do it and that was it.

Do you know in relation to the gas chromatograph whether it

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has been used since then for the purpose of testing mine atmosphere?-- I don't - can't say, no.

And do you know of the Unor or Maihak system?-- I do.

And were you trained on that?-- I could read it.

You could read it. From your favoured position outside -----?-- Outside the glass window.

Outside the window. What were you looking at? When you say you could read it, were you looking at a computer screen?-- That's right, a computer read-out on the screen.

Do you know of a red book on spontaneous combustion?-- I don't.

We just might look at both of these documents and say whether you have ever seen them before?-- I can't ever recall seeing the red book and I don't even recall seeing the blue book.

They are both titled "Spontaneous Combustion" or words to that effect?-- Yeah.

Yes. Is there any doubt, Mr Guest, that in so far as you were concerned you were to obey any of the undermanagers and Mr Mason and Mr Schaus if they gave you an order?-- Only if I thought that order was reasonable.

Yes, all right. Or unreasonable?-- Yeah, or unreasonable, yeah.

Since you became a deputy what course or retraining or instructions have you ever been given about spontaneous combustion by your employer?-- None whatsoever.

In relation to the matters of safety or, indeed, any area of mining, what courses of instruction or learning or teaching have you been given by your employer since you became a deputy?-- We had safety meetings.

Were they of limited duration?-- Yes.

Were a number of features or matters discussed?-- That's so.

Different topics?-- Different topics.

Do you remember any of them with any particularity?-- Well, I can remember getting a reaming out over a cable that had been destroyed.

Is that all you remember?-- No, a lot of other things, but just different things -----

A collection of a number of matters, what, at safety meetings or what else?-- It was things - safety meetings, any problems that we had.

Are you familiar with the organisation called SIMTARS?-- Vaguely. I don't know a lot about them.

And its relationship to the gas chromatograph? Do you know much or anything about that?-- Yeah, I know they handle all that sort of equipment and that.

Is that about the extent of your knowledge about that?-- That's about it.

Just tell us briefly if you would, whether you know at No 2 Mine whether there was a probeye or not?-- I don't know whether there was one at the mine. I knew there was one there, whether it belonged to the Mines Rescue or the mine, I don't -----

I want to know about its location, whether it was at the rescue station in town or out -----?-- Got me. I don't know.

You don't know? Did you know its basic function?-- I know what a probeye does. It's a heat sensor.

To detect heat in other words?-- That's correct.

I take it you know that the Moura coal is fairly gassy coal?-- That's correct.

And that the Moura coal had a capacity for spontaneous combustion?-- I believe so, yes.

Do you know anything about an incubation period in relation to coal, particularly Moura coal, and spontaneous combustion?-- I believe - what I think I know anyhow, that it has a set incubation for that coal. I wouldn't be real sure on that.

How is it you think you know that? Is it because of something that's been told to you?-- I always thought it was pre-determined.

Was that just gossip among the men or what was it?-- Yeah, just hearsay.

Is that about all you know?-- That's about it.

Do you know where the final monitoring point ended up?-- I don't know.

In 512?-- I don't know.

That is after it was sealed?-- Yeah, I wouldn't know.

Before it was sealed did you know where the monitor points

were?-- It was back out around the - up in the seals, probably in the 5 South, 520 return.

Well, 510 or -----?-- 520 return. I think it was just up around the corner there in 5 South.

Do you have any comment to make about the advisability of that?-- As to position of where a tube should be in a sealed section?

No, about the monitoring points that you've just spoken about in 5 South?-- No.

Do you know - I don't want to waste any time on it - how relevant a relationship between carbon monoxide and carbon dioxide is in terms of - in relation to heating?-- Carbon dioxide is not a combustible, carbon monoxide is.

You don't know anything about a specific ratio, for instance, called CO/CO2 deficiency?-- No.

Thank you, Your Worship.

WARDEN: Mr Morrison?

CROSS-EXAMINATION:

MR MORRISON: Mr Guest, you've told us that it was the practice of deputies and your practice to exchange information between deputies on a changeover?-- If you saw each other, yes.

Usually that would be the case?-- Not always.

On all hot seat changeovers that would be the case?-- That would be right.

About the only one where it might not happen might be a night shift where one crew is coming out early to have a shower and go home?-- I don't know about coming out early to have a shower and go home, but, yeah, if you didn't happen to be there when they got out or you were somewhere else you wouldn't see them.

You were pretty certain in your mind that if a deputy had a concern that deputy would ensure that that concern was passed on?-- Well, he'd pass it on to the people he saw, definite.

You would do that yourself, wouldn't you?-- I'm sure I would.

And you would expect everybody else to do it, that is every other deputy?-- I would hope so, yes.

Because deputies are charged with certain responsibilities in relation to the mine, aren't they?-- If we had something to

tell the other deputy coming on you'd try to make sure that he got the message one way or another.

You would either relay it through the undermanager or relay it through another deputy or you would make sure the report came to that other deputy's attention?-- Should hope so, yes.

On the night shift on 25 June you've been asked to look at your report, Exhibit 47; do you still have that?-- No.

Could you have it back, please? That's your night shift report?-- It is.

25 June, and who is the signature for manager or undermanager? Is that Mr Simms?-- It looks that way.

You came on as an oncoming deputy after Reece Robertson; isn't that right?-- I was already on shift.

Did you do a doubler on this occasion?-- That's correct.

Did you come up to the surface on changeover?-- I can't recall where I was on changeover.

Clearly enough you weren't in 512 on the previous shift, were you, because Reece Robertson was there?-- That's right.

So you were doing something else; do you know what it was?-- I can't recall that night, no, what I was doing.

If you are doing a back-to-back doubler and switching sections you would almost certainly come to the surface, wouldn't you?-- It would all depend on what you were doing. Not always.

Sometimes you would have to take miners down with you to the new section?-- No, that's not right.

That's not right?-- No.

Would you remain down the mine and then miners come and find you?-- I wasn't lost.

Excuse me?-- I say I wasn't lost. If I was in another section I would come back to the surface eventually and the undermanager or somebody else would say, "Right, you've got blokes there, away you go." I might not necessarily see those guys.

You wouldn't necessarily see the miners you had to govern in the new section; is that what you are saying?-- Well, the managers used to deploy them to their positions or what they were doing.

Do you recall receiving a phone call down the mine, that is down in the pit, telling you that you are now assigned to 512 whereas you hadn't been on the previous shift?-- That particular night I was in the 510 section. I can recall getting a phone call asking me to go to the 512 section to put

power on the miner.

How do you remember that?-- Because I remember that's where I was at that time.

Have you seen something that reminds you of that?-- No.

Had you seen the previous shift report before this one?-- Yeah, I had read it beforehand, yeah.

Before now?-- Only since the disaster, yeah.

So you are able to tell us you were in 510 doing what, drainage ----?-- I was assigned to the gas drainage and I was doing that section that night.

You then went to 512 and conducted a shift at 512 which resulted in the report you now have in your hand?-- That's correct.

Now, on that shift that was not a production shift, was it?-- No.

You were required to and did inspect 512?-- I wasn't required to inspect 512, but I did inspect 512.

That would have been via the normal inspection route?-- Yes.

That's down the top return to cut-through 13 and across cut-through 13; is that right?-- No. I'm not with you. I'm not following you at all.

Is the normal inspection for deputies down the top return, No 1 roadway, the main return?-- No, that's not correct. You would never inspect it going down a top return, no.

You would never inspect down a top return?-- No, not going into a section.

Where did you go to make your inspections then?-- Well, I was called into the section, I pulled up outbye at the crib table at that time and I walked down - you'd go down the top No 2 roadway and work in with the ventilation.

Where did you go on this occasion, can you recall?-- I wouldn't recall exactly, no.

On this inspection occasion, that is to say night shift on 25 June, are you telling us that you did not go down the top return at all?-- On 25 June I can't recall going down the top return to start inspection, no.

Did you go into the return at all?-- I can't recall at this stage, no.

Did you look for a smell? I suppose did you sniff for a smell is the correct way of putting it. Did you go to investigate whether there was a smell?-- On this time, no, I didn't go to investigate whether there was a smell or not.

And that's because you say that you had heard nothing about such a smell?-- That's because I had heard nothing about it and I had read nothing about it.

Can we assume then that you did not read or countersign Mr Robertson's report?-- That could be possible, yes.

Have you any memory of that or are you just telling us the possibilities?-- No, I'd say I can't recollect ever doing that.

You mean you can't recollect it on this occasion or ever?-- On this occasion. I normally sign a report if I am going somewhere, and I fill a report out. To start off shift I will read the following report. If I've signed it I've read it.

So unless you can see your signature on a report you are not sure whether you have read it or not?-- That's correct.

But your normal practice is to do so, isn't it?-- That's normal, yes.

If you didn't get the shift report down at the crib table where the book was left then you would certainly get to see it up the top of the pit?-- That's correct.

The shift reports are given to the undermanager then posted, aren't they?-- That's correct.

So in normal occasions your practice would ensure that you read the previous shift deputy's report?-- On normal occasions, yes.

It's important to do so, isn't it?-- Naturally.

Now you've been shown Mr Robertson's deputies report; are you saying that you have never seen that before until recently in the preparation for this -----?-- Until recently, that's right.

Likewise you never heard of the fact that he got a benzene smell?-- That's correct.

No-one ever suggested to you around the mine that that was so?-- That's right.

Did anyone suggest to you around the mine or was the grapevine buzzing with the suggestion that in fact he had smelled roof bolts and thought it was benzene?-- I think - it's two different smells, that's for sure.

You tell us you know nothing of the report, knew nothing of the fact that a smell had been smelled, knew nothing of the fact that that report had been made?-- That's correct.

Yet you and Mr Campbell were the only oncoming deputies that night, weren't you?-- That is right.

So only two choices then. If communication was made with an oncoming deputy it's either you or Mr Campbell, isn't it?-- If one of us stays it's got to be either one of us, yes. One of us goes.

Can I take you back then to 11 June, please? That's Exhibit 43. I'm sorry, I can't read some of this writing but please help me. This was originally dated by you, 11 May 1994 but that's obviously an error?-- Yeah, that's right.

When was it corrected?-- I don't know.

It's by you, isn't it? Corrected by you?-- I'm not following what you mean.

The date at the top, 11 -----?-- Yeah, it says 11 there and it looks like it's the 5th.

Is it circled with a "6" written above it on your copy?-- That's right.

Did you do that?-- No.

Your findings were 1.1 per cent methane?-- That's right.

To 1.8 per cent methane?-- That's right.

"From 8 cut-through inbye on the top supply road"?-- That's right.

Then underneath that is "Air coming back along the top supply road 7 or 8 cross-cut. Okay elsewhere in the section"?-- That's right.

On the right-hand side, "Action taken: stopping put up diagonally across 9 cross-cut"?-- That's right.

Just point out to me, please, exactly how you put the stopping up across 9 cross-cut, in which roadway and in which direction?-- The stopping would have been across there.

You are indicating No 2 roadway diagonally north west as we look at the map?-- That's right and there is an opening on that bottom end.

The opening is on the inbye side of the piece of brattice?-- Yes, this was only a makeshift stopping, it wasn't -----

The intention of that is to direct air down No 2 then along 9 cross-cut?-- No, that's not right. The purpose of that stopping was to try and bring air - ventilation back through that stopping rather than have it come back up amongst our electrical equipment.

So the stopping was put up in order to catch the air coming back up roadway No 2 and direct it into 9 cross-cut?-- That's right.

How would it get out?-- There was a hole in that stopping.

Was there a hole already in that stopping?-- I can't recall whether we put it there or there was a door there or what it was, but that was the idea of it.

This was an occasion where you were with Mr Morieson; that's right, isn't it?-- That's correct.

He obviously directed the putting up of the stopping?-- It was his thought about it, idea about it, yes.

You would expect then that the intake air on No 2 roadway would turn right and go along 9 cross-cut?-- It was already doing that.

Did you take readings behind that stopping afterwards?-- Yes.

They showed that the methane was dropping?-- That's right.

And that the area was cooler?-- Yes, it was considerably cooler.

And so the effect of what you had done was succeeding, wasn't it?-- It was working, yes.

On this occasion you did an inspection along the top return, didn't you?-- That's right.

In conjunction with Mr Morieson or by yourself?-- With Mr Morieson.

Down the top return to the corner and across 13 cross-cut?-- That's correct.

Nothing unusual noted on that inspection route?-- Nothing until we got down to the stopping part of it.

Then you noticed some stoppings in the back of the panel were closed or down?-- They were down on the sides, yeah, from rib spoil.

When you say "down on the sides" you mean the entire -----?-- Not the entire structure, no, just the outsides of them where the rib had come away which they were attached to.

Those parts were then loose and therefore open?-- That's right.

And air could come through there?-- Could come through there.

But you say it wasn't?-- It wasn't.

On this occasion everything you did was under the direction or in conjunction with Mr Morieson?-- In conjunction with Mr Morieson.

No doubt you expressed your views about what should be done -----?-- That's correct.

You and he discussed matters?-- That's right.

Did you knock a hole in the stopping at 9 cross-cut?-- As I said, I can't recall whether we knocked the hole in or whether the hole was already there. I can't recall. I think we knocked the hole in.

Did you get undermanager's approval to do that?-- I don't need undermanager's approval to get rid of a heap of methane out of a place.

Perhaps you didn't hear the question. Did you get undermanager's approval to do that?-- No, I didn't.

Thank you. You got a smell on that occasion, 11 June, of roof bolts?-- Chemicals.

Sorry, I meant chemicals, chemicals associated with roof bolts that you would get if there had been a fall that ripped out a roof bolt slightly?-- That's right.

You got that when you were in 13 cross-cut No 2 roadway?-- That's correct.

So air must have been coming through then to bring that smell to you?-- It wasn't. I was standing in the return.

In the return, so it could have come from -----?-- It was coming around with the ventilation around the bottom.

You thought to yourself at the time you knew what the smell was?-- We discussed it, both of us.

And there was no disagreement between you one saying, "That's X.", and the other one saying, "No, that's roof bolt -----?-- No, no disagreement whatsoever.

When you spoke to Mr Mason and Mr Schaus about the ventilation aspects they told you that something had been done about it, didn't they?-- No, they didn't tell me that something had been done about it, no.

Did they tell you something would be done about it?-- They didn't tell me something would be done about it.

Are you sure as a result of what you told them doors weren't put in or weren't put in the stoppings down the top return?-- If there were I wasn't aware of them at this stage, no.

Action may have resulted as a result of what you told them but you are not -----?-- It very well could have.

You are not meaning to suggest they ignored you, are you?-- No, I'm not.

All right. At the Union meeting on the Sunday morning

Mr Ziebell spoke, didn't he?-- He did.

What position does he occupy?-- I think he is Treasurer.

Treasurer of the Union, and what does he occupy at the mine, what position does he hold at the mine?-- He is just a miner.

And he gave a report on the fact that 512 had been sealed?-- He didn't actually give a report on saying it had been sealed. At this stage he said that they were - thought they had to seal it up because they thought or suspected a heating or something to that effect.

This is Sunday morning, isn't it?-- Yeah. He didn't say it had been sealed.

Are you quite sure about that?-- Not that I can recall anyhow, put it that way. He may have said it had been sealed but -----

Because it had been sealed at that time?-- He might not have been aware of it.

All right. So far as you can recall, he said that it was because someone was concerned about a heating?-- He didn't say someone was concerned about a heating. He just said that they thought they could have had a heating.

And he didn't say who "they" were?-- Didn't say, didn't elaborate, no.

It might have been him, for instance?-- Could have been anyone.

Or the Union representatives of the mine?-- That's possible.

In any event, that being said, no-one at all raised the question of whether men should be going down, did they?-- Not at the meeting, no, not that I recall.

And you were there, you were a deputy. There were other deputies there, weren't there?-- I can't recall who else was there, no.

Well, you certainly didn't raise it and no-one else raised it?-- That's right.

If you thought there was any danger to men after that sealing, you most certainly would have raised that, wouldn't you?-- Well, not necessarily because the only two times - the only time I had ever known we had a heating out there or suspected heating, we didn't go down the pit.

That was in 5 North and 5 North-west?-- I can only recall the one in the 5 North.

1991 or 1986?-- I can't recall what the time was. 1980's.

I'm not sure what date it was.

In any event, you didn't consider there was a heating at this mine, did you, on this occasion?-- On this occasion?

Yes?-- When I had problems? No, I didn't consider there was a heating at that stage, no.

Now, how many deputies at the mine were or had been in the Mines Rescue Brigade, can you recall?-- I just don't know exactly how many.

A good number of them?-- A fair number of them, yeah.

And were there members of the Mines Rescue Brigade who were not deputies, ordinary miners?-- Yeah, I'd say so, yeah.

Would it be a fair assessment to say there was something in excess of 30 people at the mine who were in or had been in Mines Rescue Brigade?-- I couldn't say that for sure.

Now, at no time when you were working in 512 - let me understand this correctly - leaving aside the chemicals from the roof bolts, at no time when you were working in 512 did you get a smell?-- None whatsoever.

Nor a haze?-- No.

At no time did you consider there was any sign of a heating?-- No.

And when you and Morieson had to deal with the problem on 11 June, I think I understood you correctly to say that that was not an unusual occurrence, you had seen that sort of thing before?-- That's correct.

Okay. You are not talking about 512, you are talking about other panels?-- Other panels.

Now, it's a fact, isn't it, that - I am sorry, I will just try and find the place. I think you said you were surprised that men went down the mine; is that right?-- I think I said that in my statement, yes.

That's something you thought of afterwards, not something - a view you held at that time?-- I always held that view.

Did you? Are you sure?-- I am positive. No, we have gone down the mine. I have never, ever reckoned it was the right thing to do.

You were in fact coming onto shift that night, weren't you?-- I was called in to do a back-to-front shift, yes.

And you were going to go to the mine at 1 a.m. or thereabouts and go down the mine?-- I was going to the mine but it was up to me whether I went down.

I understand that, but you didn't decline the request to do an

overtime shift on the basis that you didn't want to go to the mine?-- That's right.

Nor did you say anything on the phone to Mr - to anyone at that time?-- No, I didn't.

About any concerns?-- No. I thought the people there would have all been - you know, if there had been any problem, they would have handled it.

That's right, and this is all against the background that on the morning of that day at the Union meeting nobody there had said anything about the men not going down either?-- Nobody said anything at the meeting, no.

Now, you did not have a role to play in developing this panel, did you, and designing it?-- That's correct.

You knew it had been designed by, or largely by staff at ACIRL?-- I don't know if that's totally correct, but I know -----

You know that ACIRL had a big hand -----?-- I know ACIRL had a hand in it, yeah, that's right.

And ACIRL you know are not the mine. They are not the No 2 Mine personnel, they are experts from outside, aren't they?-- They are supposed to be experts.

Well, they are outside the mine, aren't they?-- That's right.

They have an expertise in this area that you don't?-- Yeah.

And you know that there was a risk analysis done in relation to the mine design in 512, don't you?-- Yes.

And that in that risk analysis there were a number of parties participating, including members of the Inspectorate; you know that, don't you?-- How do you mean members of the Inspectorate? Mining Inspectors?

Mr Walker, the mining inspector, you know he participated in the risk analysis of 512, don't you?-- No, I don't know. I knew the management were involved in it, I knew ACIRL were involved in it, but as far as Mr Walker goes, I didn't know he was involved in it.

Miner drivers were involved in that risk analysis, Mr Shorten and Mr Hinton?-- No, I didn't know that.

Mr Newton, the deputy, was involved?-- No.

Tradesmen and surveyors were involved in it?-- I didn't know that.

You were not a regular deputy for 512?-- That's correct.

So the concern you really had over the panel in terms of layout and design and method of mining were things you had

that you had not had an input into?-- No, that is not correct.

Well, you didn't help in the design of the panel?-- What are you saying, because I didn't design it -----

Sorry, can you just listen? You weren't involved in the design of the panel?-- That's correct.

You are not a continuous miner driver in the panel?-- That's correct.

You weren't involved in the risk analysis?-- That's correct.

You weren't involved in designing the sequence of mining?-- That's correct.

You weren't involved in designing the method of mining such as taking ramps in a particular sequence, were you?-- That's correct.

You weren't involved in designing the ventilation?-- That's correct.

That's probably enough. Now, you might be able to just tell us - I think either a note was made wrongly or you might have mistaken something. You were asked about the position of the monitor point and I think you said it was in the 520 return?-- It was up - I don't know whether it was - not in the 520 return.

Couldn't be in 520, could it?-- No, it wasn't in the 520 return.

Are you talking about the 510 return perhaps?-- Well, I thought the monitoring point was just back up around the corner from the -----

Can you show us with the laser light? You nearly had that laser light in your pocket, didn't you?-- I always thought it was just in this area here.

You are indicating the bottom return of 5 South?-- That's where - just in this area here. That's where I always thought it was, yeah.

Thank you very much. Nothing further, Your Worship.

CROSS-EXAMINATION:

MR HARRISON: Mr Guest, have you still got in front of you the Production Deputies Report for 24 June 1994?-- I have.

Now, you have obviously read the report which is completed by Mr Robertson on the 24th at the end of the afternoon shift?--

XXN: MR HARRISON

WIT: GUEST K N

No, I didn't.

Well, you have read it now?-- That's right.

You now know what's in there; is that right?-- Yes.

You now know about reference to a benzene-type smell and also the positioning of where that smell was within the panel?-- Yeah. 7 cross-cut, 1 and 2 heading.

If you were in a situation where you were working on a particular panel and you discovered something like that, you would, as a matter of course, record that in a deputies report, wouldn't you?-- That's correct.

You would attempt to ensure that the person who was taking over as deputy on the next shift would become aware of that?-- I would also make sure - that's right, and I would also make sure the manager was aware of it.

And you would expect the person who took over to monitor that particular area to see whether or not there was still any ongoing smell or any other unusual signs in that particular area?-- That's correct.

You would also expect, would you not, if you recorded something in your deputies report, that the oncoming deputy would read it?-- That is correct.

Now, when you were questioned earlier by Mr Clair about whether or not you were told anything about the benzene-type smell, you said something - and correct me if I am wrong - to this effect, that if anybody had told you something like that, that's the sort of thing you would remember?-- That's correct.

Now, I take it that if you had read something like that, that's the sort of thing you would remember?-- That is correct.

Can I take it from that that you definitely did not read the deputies report completed by Mr Robertson?-- I can't say I did.

Well, you can't say you did. I am asking you whether you didn't?-- Well, yeah, I wouldn't have read it, that's right.

Now, you say you were working on 510 earlier; is that right?-- That's correct.

You didn't come to the surface?-- That's correct.

Did you come to the surface at all throughout that night shift?-- Not at all. I think it was right at the end of the shift I came out.

So if no-one had told you anything, you didn't have any opportunity during the course of the shift to see what was in the previous deputies report?-- That's right.

But you clearly had an opportunity to read it at the end of your shift, didn't you?-- That's right.

You would have gone to the book yourself to complete your own report?-- That's correct.

Did you think then on this occasion to look at it to see whether or not there was anything unusual in there?-- I can't even say - recall ever reading it at all.

Not even then?-- Not even then.

See, if you had and that came to your attention at that stage, you would then really make a point of passing it on, wouldn't you?-- I would have followed it up, yes.

Because it's something that you realised you would have overlooked?-- That's correct.

Something that you realised needed to be followed up?-- That's correct.

So, can I take it again that you never looked at it at all when you came up to complete yours?-- I'd say that's right.

Is it often the case that you don't read previous reports?-- Not often.

Had you been on the surface at the start of the night shift, would you, as a matter of course, have read the previous report?-- I would have.

Has it happened to you very often where you have done back-to-back shifts where you haven't been on the surface and have not been in a position to read that report?-- It does happen, yes.

In any of those cases have you, when you first got to the surface, taken the opportunity of reading it?-- I would normally read them, yes.

But you never took that opportunity on this occasion?-- I can't say I did.

Thank you, Your Worship.

MR CLAIR: Your Worship, just a short question.

RE-EXAMINATION:

MR CLAIR: Mr Guest, you were asked questions by Mr Morrison about what you would regard as a responsibility as an outgoing deputy to pass on significant information to an incoming deputy, and you agreed that if there was something

RXN: MR CLAIR

WIT: GUEST K N

significant, you would make sure that the message got somehow to the incoming deputy. You would either tell him yourself; is that right?-- I would tell him myself or make sure he got the message.

Or make sure that it was relayed. I think Mr Morrison suggested relayed through the undermanager?-- Through the undermanager or another deputy.

If you didn't know who the incoming deputy was at the time you finished your shift, for instance, on a Friday night, then if you had told the undermanager, would you regard that as the end of your responsibility?-- If I report to the undermanager, yes.

Thank you, Mr Guest?-----

Your Worship, before the panel asks any questions, can I make a confession? It's not often I do, but I should. That is that the circle on the "6" on the document that was distributed is mine. I am the author of that and I confess abjectly to having altered an exhibit, but I did say it was my copy that I altered and not the one that was going to be distributed, but I can assure you the original document in Exhibit 9 has not been altered by me and that the numbered sequence of reports indicates quite clearly that what Mr Guest says is a "5" should be in fact a "6" and it's 11 June. I assumed, I must say, that I had a bad photocopy and amended it for my own purposes.

WARDEN: Thank you, defendant. We will hear submissions on penalty tomorrow.

EXAMINATION:

MR PARKIN: Mr Guest, just a couple of points for clarification. Regarding Reece Robertson's report of the smell of benzene, you have just said that you didn't read the report, the previous deputies reports. Did anyone else communicate to you the fact that there was a benzene smell and that Mr Robertson had a major concern?-- No-one at all.

Thank you. Now, the other point is: did you mention your concerns to anyone else other than Mr Schaus and Mr Mason regarding the ventilation in 512 Panel?-- Yeah, with Allan Morrison who was sort of handling all the ventilation at that time, him and I discussed it, yes, and I think I might have discussed it with a few of the other deputies.

Did you at any time discuss it with a miner's officer?-- I can't recall doing that, no.

On 11 June you mention that you got air going down in the opposite direction in, I think it was, No 2 roadway?-- That's correct.

XN: PANEL

WIT: GUEST K N

What did you do about that? Could you just explain to me what you finally did about that situation?-- As I said, what we did there, we erected a diagonal stopping or makeshift stopping. It wasn't a stopping that was actually sealing anything, but -----

Where was that?-- It was to go across 9 cross-cut, and that in turn was allowing this hot air that - hot air and methane-affected air that was coming back up here to direct in through that and into the return.

Thank you.

EXAMINATION:

MR NEILSON: Mr Guest, you said you were working your normal shift in 510 panel on that particular occasion?-- That's correct.

And somebody contacted you and asked you to work a double shift in 512?-- No, what happened, I was already working a double shift, but I was in the 510 panel doing the gas drainage and someone rang me up - I can't even recall who it was - and asked me to go over there and put power on the miner because the tap was going to wash the machine down and they needed power on to do so.

Would that have been an undermanager or -----?-- I can't recall. I really can't.

So, you don't know who it was?-- I don't know who it was at this time.

Thank you.

EXAMINATION:

PROFESSOR ROXBOROUGH: Just one quick question, Mr Guest, and it is in reference to the diagonal stopping that you put in that you have just described to Mr Parkin. How long did that stopping stay in place, do you know?-- Well, it was there at the end of the shift when we finished. I don't know how long it would have stayed there after that night. I don't know.

You don't know when it was taken, down if at all?-- I don't know.

EXAMINATION:

MR ELLICOTT: Was it a common practice for Allan Morieson to come to panels to assist deputies with ventilation problems they had?-- Well, Allan was sort of handling the thing. Like, I really don't know how he come to get involved that day. That was on the day of the 11th. I don't know whether the undermanager sent him in or what happened. I don't recall how he even come to be there, but he just came, anyhow.

But it wouldn't be uncommon for Allan to assist deputies in panels at any time?-- That's correct.

At any time, not just on that day?-- That's correct, yes.

And would you consider the erection of that diagonal bag to be beyond what may normally have been done at the mine just between the ventilation officer and a panel deputy?-- No, I don't think so, no.

So -----?-- I used that system before.

And that was without recourse to an undermanager?-- That's correct, yeah.

Thank you.

WARDEN: Nothing arising out of that? Thank you gentlemen.

That's all, witness, you may stand down, you are free to go.

XN: PANEL

WIT: GUEST K N

WITNESS STOOD DOWN

WARDEN: We can adjourn and resume tomorrow morning at 9.15.

MR CLAIR: Can I just mention something briefly? There are two witnesses whose names are on the witness list: one is Rose and the other is Barnes. Unless there is some particularly good reason that one of the parties advances requiring that those witnesses be called then I wouldn't be proposing to call them to give oral evidence. Can I just leave that at this stage and if there is any question about it somebody could approach either myself or Mr Boiston.

WARDEN: Okay, thank you.

THE COURT ADJOURNED AT 4.32 P.M. TILL 9.15 A.M. THE FOLLOWING DAY

WARDEN'S COURT

MR F W WINDRIDGE, Warden and Coroner
MR R J PARKIN, General Manager, Capricorn Coal Pty Ltd
MR P J NEILSON, District Secretary, United Mine Workers' Union
MR C ELLICOTT, Training and Development Officer, Department of
Mineral Resources, New South Wales
PROF F F ROXBOROUGH, Professor of Mining Engineering, School
of Mines, University of New South Wales

IN THE MATTER OF A CORONIAL INQUIRY IN CONJUNCTION WITH
AN INQUIRY (PURSUANT TO SECTION 74 OF THE COAL MINING
ACT 1925) INTO THE NATURE AND CAUSE OF AN ACCIDENT AT
MOURA UNDERGROUND MINE NO 2. ON SUNDAY-MONDAY, 7-8 AUGUST
1994

GLADSTONE

..DATE 27/10/94

..DAY 7

THE COURT RESUMED AT 9.39 A.M.

NEIL MARTIN TUFFS, SWORN AND EXAMINED:

MR CLAIR: Your Worship, a couple of housekeeping matters first. I have reviewed the statements of the remaining witnesses on the list and there are a number of those witnesses whom I wouldn't propose to call unless one of the parties can point to some particular reason why they should be called to give oral evidence. Those witnesses are, and I will place these on the record: Rodney Buckton; Darren Young; P W Hutchinson; Ricky Ein; Norman Cross. Now, I've set the names of the witnesses out and their statement numbers on a sheet and I will hand a copy of that up to the panel and also to my learned friends.

WARDEN: Two you mentioned yesterday also.

MR CLAIR: Yes, I have also set out on the sheet the names of four witnesses that I have already mentioned, that's Rose, Barnes, Russell and Coleman, as being in the same category. Now, if I can just say this: if any party sees any reason why any one of those witnesses should be called could they advise myself or Mr Boiston before the beginning of Court tomorrow, before the beginning of our Inquiry hearing tomorrow? I might say that in respect of Rose, Mr Macsporrán has already mentioned that his attitude upon the calling of Rose may be dependent upon what Steve Bryon or Byron says in his evidence. So I will put that reserve on Rose, but if there is anyone who wants him called in any event, if they could mention the reason for that and then the position can be reviewed.

WARDEN: Thank you.

MR CLAIR: Another housekeeping matter, Your Worship. The document which Mr Morrison provided and distributed the other day setting out the manning on the shifts from 5 August through to 7 August was distributed but not actually tendered and marked as an exhibit and I would ask that - I tender that now and ask that it be given an exhibit number.

WARDEN: That will be Exhibit 51 on my list.

ADMITTED AND MARKED "EXHIBIT 51"

MR CLAIR: Thank you, Your Worship.

Your full name is Neil Martin Tuffs; is that correct?-- Yep.

Mr Tuffs, you are a mine deputy at Moura No 2 Mine?-- Yes.

XN: MR CLAIR

WIT: TUFFS N M

271094 D.7 Turn 1 dfc (Warden's Crt)

You started your coal mining career in 1974 with British Coal; is that right?-- Yep.

You were then an apprentice electrician; you changed to mining after about a year?-- That's correct.

Gained your deputy and undermanager's certificates in the course of your mining activities and you did three years as a deputy overman before coming to Australia in 1990; is that right?-- Yes.

You started work at Moura No 2 in August 1990 as a miner?-- Yep.

Have you since gained your deputy and undermanager's certificates?-- Yes.

You were appointed a deputy at Moura No 2 in December 1990; is that right?-- That's right.

And you have served in that capacity as deputy since then?-- Yes.

Your job as deputy at the mine is as the deputy in charge of the methane drainage extractions?-- That's correct.

Are you familiar with the 510 panel and the 512 Panel?-- More familiar with 510 than 512, but fairly familiar with 512 as well, yeah.

Was it the case that any major incident in 512 would affect your working area in 510?-- Yes, it would.

You made a point of maintaining a general interest in what was happening in 512?-- Yep.

In that connection did you watch the results of the weekly CO make which was posted in the deputies' office?-- Yes, I did.

And on occasions did you do CO make calculations yourself?-- On occasions I did, yeah.

That was in 512?-- Yeah.

Did you keep an eye on the 512 CO make graph then?-- I did, yes.

Did you notice that the CO make was slowly trending upwards over the period of retreat?-- Yeah, I did notice that, yes.

Out of 512. Now, what conclusions did you form as a result of what you observed with that upward trend?-- Well, once it gets to 10 litres per minute I started to get a little bit concerned then because with me knowledge of Mines Rescue, when the litres make gets to 10 litres per minute there is cause for concern and it should be investigated, and I know it was being investigated. So over the last month or so it was well over 10 litres.

Now I am going to ask you to look at an exhibit. I think the best exhibit to look at is 25, Exhibit 25. That was the CO make graph that was actually produced on Friday, 5 August?-- Yeah.

And posted in the deputies' room and it would show progressively then the graph that you saw during the period of retreat out of 512?-- Yeah.

You mentioned that your concern arose out of the fact that it was over 10 litres per minute at one stage; is that so?-- Well, it's been over 10 from the start of June and if you take the one where it dives down sharply there -----

16 June?-- Yeah, all of rest of them were above 10.

So subject to that one reading that's below the 10 line, all of rest of them were above?-- Yeah.

Now, did you take any steps to register your concern with anyone?-- I, in the course of consulting other deputies, talked to the ventilation officer -----

That was Allan Morieson?-- Yeah, yeah, and the steps which were being taken to keep an eye on it, you know. As far as I know everything - they were keeping a close eye on the section doing their waste inspections et cetera, and I didn't have any concern that it was being ignored.

You thought that -----?-- I know it was trending up, but I thought they were doing the right thing by keeping a close eye on it.

You say that you took CO readings yourself on occasions. Were you getting readings of over 10 litres per minute? You would have taken your readings in parts per million, but you were able to convert that to litres per minute?-- No, the readings I took corresponded to these readings on the graph.

Were you familiar with the ventilation in the panel?-- In 512?

Yes?-- Yeah, up to a point, I suppose, yeah.

Did you have any concerns about the effectiveness of the ventilation?-- I did have concerns, yeah.

What were they?-- That there was re-circulation problems in the top main supply road and also the large pillars what we created to act as - to sectionalise the section to control the roof, they were creating - I'm sure there were dead spots behind those pillars where it wouldn't have been flushed properly.

Now, if you turn to your right there you will see a plan of 512 Panel?-- Yeah.

You might be able to use that pointer there and just illustrate the areas -----?-- The large pillars, the air was

coming in down there.

Down number 4?-- Yeah, whatever - down that one and down that one and it was having to do a - the shot loss there for a start, you know, ventilation shot loss you get, and then the air was coming around and would have been going down like that.

Just pausing a moment so I can place on the record what you are indicating, you are saying the air is coming in what would be the number 4 roadway in fact; is that right?-- Yeah.

That's from the 510 Panel anyway and then passing down one or other of the sub roadways?-- Sub roadways, yeah.

And then the air would be hitting those larger pillars which occur between 4 and 5 cut-through?-- That's correct.

You say that the fact that it hits those larger pillars would cause the movement of air to lose momentum?-- Yeah.

The shot loss and slow ventilation down even at that point?-- Yep.

Then the air would have to make its way around those large pillars and on to the next series of sub headways?-- That's right.

That's at cut-throughs 5, 4, 6 and 7 there?-- Yeah, there as well.

And then hit the large pillars through cut-throughs 8 and 9 which would slow it down again?-- Yeah.

What areas would you see as becoming the dead areas as it were, those areas that weren't being properly flushed?-- Well, must be creating some sort of a shadowy effect behind these big pillars here around that area.

That's both sets of big pillars?-- Yeah, also in those areas there there was large falls.

There were large falls?-- Yeah, a couple of large falls down that area, yeah.

You are indicating between 5 and 6?-- Down that area there.

Between 5 and 6 cut-throughs up near - down near the bottom roadway?-- Yeah.

You saw large falls there. Did you see any other areas that appeared to you to have large falls?-- There was falls in these areas.

You are indicating in number 3 roadway between 9 and 10 cut-through?-- The intersections.

The intersections?-- Yeah.

271094 D.7 Turn 1 dfc (Warden's Crt)

Large falls there?-- Fairly large falls, yeah. The largest fall was - I think it was in that area there.

That's the first one you mentioned?-- Where the Miner was pinned for a while.

In cut-through 5 near the bottom roadway?-- That one there.

That was the largest?-- I think that was the largest fall in the section.

What would be the effect of the falls on the ventilation process in terms of allowing coal or at least having coal in positions where it -----?-- Well, it would have fell on loose coal for a start, and being in the shadowy effect of those big pillars wouldn't have helped the situation at all.

The bottoms were taken in most of those areas?-- Yes.

What effect would that have on the ventilation?-- Well, that would slow it down as well because of the area you are opening up.

When there was a large fall, that would create a cavity in the roof; is that so?-- Yes.

Corresponding with the size of the fall, I suppose?-- Yeah.

What effect again would that have on ventilation?-- Well, that could cause turbulence, I suppose. It could slow it down even more.

The existence of the cavity?-- Yeah, plus also it's an area where methane could accumulate. Not that I had concerns about methane in that panel as such because it had been well drained, but previously. It was the ventilation that was my concern and the large pillars causing the - like, a shadow effect.

Now, in these areas where - that area particularly that you mention that was an area of large fall -----?-- Yeah.

----- in cut-through 5 near the bottom roadway, what sort of estimate could you put on the height of the roof in, say, an area like that?-- ACIRL actually - I took a fella from ACIRL, Dave Hill, and he did a fairly accurate estimate about how high the roof fell. It was something around four metres.

Four metres of roof came out?-- Yeah, over a large area.

So that if there was four metres out of the roof and then the bottoms were taken and you had your normal three metres as a starting size, what would be the full height of the roof?-- It would be eight - seven or eight metres, I suppose. There is the fall on top of the -----

The fall would cut out the bottom section to some extent?-- Yes.

Okay. Well now, the concerns then that you had about the ventilation in particular as a result of the slowing effect that the falls might have, did you discuss that with anyone?-- Yeah, I discussed it with - I discussed it with undermanagers, deputies. Because I wasn't the regular deputy in there - every time I went in the section it seemed to me that there was something wrong with the ventilation. I did probably half a dozen inspections in there. On three or four of them there was re-circulation problems in the top main supply road.

In the top main supply road?-- Yeah.

That's in the second roadway?-- Yeah.

You say on three or four -----?-- I'm not sure exactly how many, but on several inspections I went in there there was re-circulation problems, yeah.

Do you know what was being done to address that?-- Well, I couldn't actually work out how they were going to overcome it. I think they put a couple of flap doors - I'm not sure exactly which ones, but they opened up a couple of those stoppings there.

That's the stoppings between -----?-- The return and the main supply road.

The return and main supply road down around the back cut-throughs?-- The back end of the section, yeah.

And that was to flush the air out of that corner?-- It was trying to get the air flow down here and short circuit slightly into the return.

Right. Now, you say you did discuss your concerns?-- Yeah.

Because you observed these problems there almost every time you went in there?-- They are in the reports.

That's your deputies reports?-- Yeah.

Okay. Now -----?-- I think there wasn't just me who had concerns with the re-circulation. It was being discussed, you know, among the other fellas that were working in that section. I know it wasn't being overlooked, but they were still having problems with it.

So it was certainly a matter that people were aware of?-- Yeah.

That is, you saw it as a problem that they were having some difficulty solving?-- Every time they mined in the bottom of the section, the bottom on the dip side, down this area, they seemed to get re-circulation problems in the top return - in the top main supply road.

Because they had moved the ventilation over to the side on which they were mining?-- Well, they had to pass air over the top of the miner to take the dust away, so the air was doing - it was coming in the section and if they were working down there it was going in and down. I don't know whether that was causing some sort of a swirl, you know, in this area and bringing the air back up the main supply road.

Back up the main supply road?-- Yeah.

So that it was really a case of a constant amount of air coming in and if it was diverted to pass air over the miner then other areas missed out?-- Then they had difficulty in the main supply road, the top main supply road, yeah.

Now, during the week prior to the first explosion on 7 August did you have some discussions about the sealing arrangements for 512?-- I did, yeah.

That was with your methane drilling crew, was it?-- Yeah.

XN: MR CLAIR

WIT: TUFFS N M

Were there certain people that always made up your drilling crew?-- There was three mainly, the three I have mentioned there.

That's John Potter?-- Yeah.

Shane Bishop?-- Yeah.

And Rodney Sonter?-- Yeah.

Is that right?-- Yeah. There's usually two drillers and a deputy on the job, but those three seemed to do a bit of a rotation, you know.

Now, what discussions did you have with them?-- I told them I wasn't happy with the way 512 was going with the re-circulation problems they were getting and when they sealed it off - because of our proximity to it in the 510, that I wouldn't take them underground when it reached - when they sealed the section off when it reached - until it went through the explosive range.

Well, it might sound like a trite question, but why was that?-- Because I had been into 512 a few times and I wasn't happy with the way, you know, the goaf was getting ventilated and I couldn't be sure, in my own mind, that when they sealed it off that it wasn't going to take off as far as spontaneous combustion is concerned.

And that would then cause an explosion when the panel moved into the explosive range?-- It could do.

It could do. Well now, assuming that there was some beginnings at least of a heating in 512?-- Yeah.

And the panel was sealed, what effect would the sealing have on the heating?-- It would take the cooling effect away. If the hot spot, or whatever it was, was being cooled somewhat and it was just keeping it to a certain oxidation level, you would take that away straight away and as soon as you stop the ventilation -----

The heating would increase?-- Could take off, yeah, especially while the oxygen content is still high.

No doubt over time as a result of the sealing the oxygen content would decrease?-- Yeah, it would decrease.

And the heating would be deprived of fuel?-- Yeah.

And ultimately extinguished?-- Yeah.

So that there would be a time at which the heating would extinguish following the sealing?-- Yeah.

But you would say the gamble is whether the heating extinguished before the panel moved into the explosive range; is that right?-- Yeah, I'm not into gambling that way. No,

I wouldn't have even thought about - I was trying to play safe, you know, as far as I'm concerned.

Well, that's why you weren't prepared to take your men down there?-- That's right.

Okay. But, as a matter of fact, what would be happening is that the heating, you say, would initially increase because the cooling effect has been taken away?-- Yeah.

And ultimately -----?-- Until the oxygen levels went down, you know, to starve it of oxygen there would have been a danger period there, you know, especially while the methane went through the explosive range.

Yes?-- I wasn't prepared to gamble that it would go off okay, you know.

Okay. Now, you discussed that with your men?-- Yeah.

Did you discuss that with anybody else?-- I didn't know when they were going to seal - I know they were going to seal it at the end of the week there. I discussed it with Dick Stafford on the Friday.

Dick Stafford?-- Dick Stafford, the deputy. He agreed with me.

He was the deputy?-- He was just - I'm not sure where he was. He wasn't in 512.

He was a deputy at the mine?-- He had gone through a few spontaneous combustion incidents at Moura and Kianga and, you know, I valued his opinion, and I asked him what he thought and he thought the same as I did, and especially when I found out that - when I got called in on the Saturday, as far as I was concerned, my fears were, you know, justified. When I got phoned up and I was told there was a stink and a haze -----

Can I come to that?-- Yeah, sorry.

Just before you move on to that, dealing with the Friday, you had the discussions with Dick Stafford?-- Yeah.

And you say he agreed with you?-- Yeah.

Did you discuss it with anyone else at that point?-- No, because I wasn't sure - that was on Friday morning. I wasn't sure when they were going to seal it exactly, you know.

Right. Well now, on the Saturday you received a phone call about 1.30 p.m.?-- Yeah.

And that was from Cole Klease?-- That's right.

He was a deputy in the 512 Panel?-- Yeah.

What discussions did you have with him?-- He said, "Do you want to work this afternoon?" I said, "Not particularly but"

- because I had already done an extra shift that week, but, anyway, he told me that there was - it was a safety issue and that there was a heating and a haze and instead of sealing it later they were going to accelerate it. I'm not sure exactly when they were going to seal it but I understood that they diverted man power to seal the section quicker.

All right. Now, what was your view when you were told that there had been a stink and a haze in 512 Panel?-- I half expected it.

All right. Well, what did you do then?-- I went to work and there was already deputies on the sealing process, and I inspected other parts of the mine, and I just - I went down - I can't remember the exact time but it was between 6.30 and 7 o'clock - to give, I think, George McCrohon - well, George McCrohon was down at the seals then and I went down so he could come up and have his crib.

When you went down at that time did you do an inspection of 512?-- Yeah, I did an inspection. At first when I went in there there was a lot of diesel machinery being used and there was a diesel haze all over the place. There was two PJB's and an Eimco and an MPV all running at the same time.

Are you able to indicate on that plan there of 512 just where that diesel haze was apparent?-- All round this area here and also in the return.

So that's -----?-- Sorry, sorry, this one here.

Okay. That's in the No 1 heading there?-- Yeah.

And you have indicated also across No 1 cross-cut?-- Yeah.

Where were the diesels being used?-- The diesels were moving bags of Tecrete round from - they were shifting - they were bringing Tecrete up this road here round and dropping it up here.

So that's up zero cross-cut and down into No 1 cross-cut?-- Yeah.

Through No 2 heading there?-- So what I did was I - the diesels stopped after a few minutes and then I did a CO - a few CO readings on the edge of the goaf in this area.

Was George McCrohon still with you at that stage?-- No, George went up.

Did he tell you anything before he went up?-- He said the most he could find was 7 parts CO and -----

Did he indicate to you where he had done his readings?-- At the edge of the goaf and in the return.

Okay. Sorry, I interrupted you. If you can continue to describe what you did?-- Yeah, I let - when the diesels had stopped I let the air clear because the air was really good at

that point. I have never - that was the first time I had been in the section and the air was good, and it took the haze away fairly quick, the diesel fumes.

Did you have any theory on why the air was better at that point?-- I did when I went in the return and I saw the regulator.

Just indicate - you went into the -----?-- I didn't go in there straight away actually. I inspected the working area first.

Okay. Well, just tell us about your inspection of the working area first?-- Well, the air was good in that area and I could only find - I could find about 5 parts CO in that area and 0.5 methane at the goaf edge. When I went in the return to that part of my inspection I found 7 parts, and I never looked up to the regulator the first time I went in there.

So where did you take your CO reading in the return, just at the junction of No 1 heading and zero cross-cut?-- Yeah. I got 7 parts CO there and I think 0.3 methane.

What was the position with that seal at that time?-- The seal was about a metre - just over a metre high.

So you were taking your reading, in effect, in the atmosphere coming through that -----?-- Through where the prep seal was.

Through the remainder of the seal?-- Yeah.

Or at least the remainder of the area of the prep seal?-- Yeah.

Okay, and you found 7 ppm there?-- Yeah.

Did there seem to be good ventilation?-- There was good ventilation, yeah.

Okay, go on. You say you saw the regulator then?-- I didn't actually see it that time, and then I went out back to where the fellas were working. I just give them a hand for a while, sort of back lugging a few bags of Tecrete. I was there for about half an hour or so, and then around 8 o'clock time I thought - I wasn't sure if any of the other blokes had done a CO make and I went and I got the anemometer and the Drager and the tubes, etc, and I went back into the return here and up towards the monitoring point in the vent station, vent station 46, which is just across there.

Yes, that's, in effect, in the first roadway there in 510 panel?-- Yeah.

Which is an extension of the zero cross-cut. 510 panel, I should say, which is an extension of the zero cross-cut in 512?-- I noticed there was a big hole in the regulator. That was the only way they could have got - well, that was the way they must have took the tray.

271094 D.7 Turn 2 mkg (Warden's Crt)

They must have taken?-- The MPV tray.

XN: MR CLAIR

WIT: TUFFS N M

They must have taken -----?-- The MPV tray.

Oh, yes. Now, the regulator, just indicate where that was. Just outbye of the vent station?-- Yeah.

And the hole that was there, did that - had that involved removal of the louvres?-- No, not removed the louvres. As far as I can remember it was - the right-hand side of it was knocked down, the Tecrete part of it. They must have drove - that must have happened on Saturday day shift some time. I am not sure exactly when that was done.

You think that might have been in order to get the -----?-- The MPV tray.

The machines through?-- To get the MPV tray.

MPV tray?-- The tray, yeah. The MPV carries the tray, drops it off full of Tecrete and bags and baskets that we used to fill up.

Well, then, you say that explained to you why the ventilation was so much better than it had been on other occasions?-- Well, I couldn't work out when I looked at the previous reports - I was only getting 7 parts and they were getting 8 and 10 in a couple of the previous reports. I couldn't work it out at first and when I went through there and saw the big hole in the stopping, that's when I - it seemed logical to - that if you increase the size of the hole in the regulator you are going to get more air coming through, so -----

So, really, it meant that you had to start again on calculating your -----?-- No, no, I hadn't done the CO make at that point in time.

You hadn't done your CO make at that time?-- No.

You had to use different -----?-- No, I just did a velocity reading.

You did a velocity reading at the vent station?-- At the vent station. That hole in the stopping wouldn't make any difference to the reading, you know, because I didn't do a reading before they had done it so, you know -----

Yes, I see. So, really your velocity may well have been quite different than the earlier readings; is what you are saying?-- It would have been higher for sure, yeah.

Okay. Well, yes, go on from there. Anything else you noticed there at the time?-- I noticed that the monitoring point had been moved from inbye - that monitoring point was there when I had been in previously and it had been - the monitoring point 16, it had been moved from there to there.

Now, the position you are indicating as its location when you had previously been in the panel was inbye of that seal in the No 1 heading?-- Yeah, yeah.

271094 D.7 Turn 3 gc (Warden's Crt)

Between 0 and 1 cross-cuts?-- Yeah.

In 512 Panel. Okay, so it had been moved out?-- Yeah.

Now, yes, well, go on, did you do anything else down there before you returned to the surface?-- I did the velocity readings.

At the vent station?-- Yeah, and took the ppm so I had all the figures to work out the CO make and I thought I would go up top and use a calculator to do it instead of working it out long hand. So, then I went and sat back around - went back around to the crib table. When Lennie Graham came in to - he came in and relieved me about around 20 past 8 some time.

You had some conversation with him about the situation?-- I told him that there was a stink. I haven't told you that, have I? I had better tell you. There was a definite stink in the return.

Whereabouts were you when you picked up the stink in the return?-- The second time I went in because the first time it was all diesel fumes. The second time I went in to do the CO make.

This was about 8 o'clock?-- This was around 8 o'clock, yeah.

Yes?-- I also noticed it when I went back around to the goaf edge, but it was stronger in the return than it was at the goaf edge.

Now, when you say you went into the return you are talking about that position near the seal in the No 1 heading; is that right?-- Yeah.

And you noticed the stink there?-- Yeah.

Then after you did your readings you went back to the goaf?-- I went back to the goaf edge in No 2 heading and No 3 heading and you could smell it there as well, but you - it wasn't as strong as it was in the return.

What sort of smell was it?-- It was a tarry smell.

Had you smelt that kind of smell previously?-- Not at Moura, no, but I have smelt heating smells before and it was very similar.

Heating smells in other mines?-- Yeah.

Okay. Now, you had the conversation with Lennie Graham you mentioned?-- I told him there was a stink, but I couldn't pick a haze. I couldn't see a heat haze or anything, but there was a definite stink.

Now, you told him also you had found 7 ppm because you hadn't done your other calculations by then?-- I hadn't done the CO make calculations at that point in time, no.

XN: MR CLAIR

WIT: TUFFS N M

271094 D.7 Turn 3 gc (Warden's Crt)

And -----?-- I think I told him that the anemometer and that was there if he wanted to do one later on.

Okay. Anything else happened before you went up to the surface?-- No.

When you went up to the surface you did the CO make calculations; is that right?-- Yeah.

What did you find?-- I found it worked out to 16.25 litres per minute.

Right. Did you discuss that with anyone?-- I went around to - I told George Mason, the undermanager who was on duty, of the results. I told him about the stink.

And the 16.25?-- Yeah.

Litre make?-- Yeah.

CO make?-- Which wasn't - it wasn't a drastic increase, you know, looking from the previous - it was an increase, but it wasn't - it hadn't taken off at that period - at that point in time so I wasn't concerned about the fellows who were working down at the seals. It hadn't taken off. It hadn't gone up to what they call the exponential curve or whatever it is supposed to be when the heating really takes off. It hadn't reached that point.

At that stage had you seen the graph, that's the one that is Exhibit 25 in front of you?-- Yeah, I had seen that graph, yeah.

And that was showing a reading on 5 August, the previous day, of, I think if you look to the sheet behind it, 14.27?-- Yeah, there had been a slight increase, yeah. There had been an increase.

There had been an increase?-- Yeah.

But on the Saturday, the 6th then, that is in the night time around this 8 o'clock mark, it was up to 16.25?-- Yeah, and I later found out after I worked it out with a calculator later that increased it a little bit more to 16.66, but because I did it longhand calculations it didn't give as accurate a figure as what the calculator would have done. So, it would have been slightly higher, but that was afterwards -----

Right?-- I worked that out.

Now, that increase from the Friday to the Saturday, was that of such a proportion to give you concern?-- The stink concerned me more than the increase in CO make.

Anyway, you did mention to George Mason about the stink. What did he say about that?-- We had - we had a little bit of a discussion on other sealing processes that had gone through in the mine and when we sealed 5 North up in 1991 and we didn't take each sealing process the same, it's treated on its

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merits. That was how the conversation went. We treated each sealing process as it came along, you know? If it wasn't showing any signs of a heating, didn't always keep the blokes out of the mine.

Right, but ----?-- In my opinion the signs were there this time that there was something occurring, even though the CO make hadn't taken off, but there were other signs like the stink, you know, and I wasn't - I was never sure that that goaf was getting properly ventilated.

Those things you are saying now are these things you mentioned to George Mason at the time?-- Yeah, we talked about a few different things. At the end of the conversation I said I wouldn't take the blokes down while it went through the explosive range.

What was his response to that?-- Didn't reply.

When you referred to "the blokes" you are referring to your drilling team?-- Yeah, but if I was on - if I was on duty - if I was a deputy on shift, if I didn't let the fellows go down to the drill I certainly would have done something about any other fellows in the mine as well.

Did you have any discussion about the delay aspect on the mine monitoring system?-- Yeah, I did. The Unor system, it is - because it is a pump system, it pumps samples from underground, there is always a delay from what the actual reading is at that point in time. So, if you pick up a reading on the Maihak on the surface it is always so far behind to what the true reading at that point in time is.

The extent of the delay depends on how remote ----?-- How far away from the surface. The further in you go the longer the delay.

That is further in the monitoring point is?-- Yeah.

The longer the delay?-- I said 50 minutes in my statement. I wasn't exactly sure how long the sample time came from 512 to the surface, I wasn't exactly sure, but I know there was a fair delay. So, if you get a reading of 7 parts at 8 o'clock you are actually reading 7 parts at 7.30.

That's on the Maihak system?-- Yeah, you are actually getting a reading.

From the surface?-- Half an hour behind or whatever it is, whatever the delay it is.

Right, well, after you had that conversation with George Mason what did you do?-- I went home, I think.

That was about 10.30 p.m., was it?-- Yeah.

Okay. What was the next thing that happened. There was a meeting the following morning, a union meeting. Did you go to that?-- Yeah, I went to the meeting, yeah.

Was there any discussion at the meeting about the 512 Panel?--
Yes, there was.

Public discussion involving everybody or -----?-- Not so much that, but George Ziebell stood up and asked for the union to waive the four shift per month rule so they could - the fellows who were being called in to the accelerated sealing process wouldn't be penalised and he said that in front of everybody else. So, there was a lot of people aware that there had been some sort of safety concern at the mine on Saturday.

That was discussion that happened publicly. Did you have any discussion?-- No - yeah, he stood up and I - I - to me I thought there was enough people aware of what was going on without me having to stand up and tell everybody, you know?

Did you have any discussion yourself individually with people there -----?-- I think -----

About what had happened the previous night?-- Yeah, I did, I talked to Dick Stafford. I think I sat next to Dick. Actually I was down to work the Sunday afternoon and because I had already done two shifts now extra I decided to - I wasn't worried about going in. I just imagined they would have pulled the blokes out of the mine, you know? The reason I didn't go in on Sunday afternoon is not because I was worried so much, I thought they were going - I thought they were going to do the right thing anyway.

And pull the men out?-- Yeah.

Okay. Well, in particular did you discuss with anybody at that meeting this stink that you had -----?-- Yes.

Noticed the previous night?-- There was a lot of people aware of the conditions prior to sealing. I can't recall everybody I talked to, but I definitely talked to Dick Stafford again at that meeting. There was quite a few people at the meeting who had actually been on the seals, who had been working on the sealing process itself anyway, so I am sure they were aware of what was happening.

Right. Well, now, what was the next thing you were aware of after the meeting?-- The next thing was a phone call I received at midnight - around midnight.

From?-- John Blyton.

And what was that?-- He said there has been an explosion or, "It's blown up." - I can't remember exactly what he said - and he told me to go to Rescue Station and start loading the suits up and breathing apparatus. That was the first - at the station I started throwing - not throwing - loading the suits in the Mines Rescue vehicle.

Right. You are a member of Mines Rescue?-- Yeah.

271094 D.7 Turn 3 gc (Warden's Crt)

How long have you been a member of Mines Rescue?-- Four years.

Then did you go to the mine as part of the Mine Rescue team?-- We went to the mine around 1 o'clock, I think.

Okay. Now, I want to ask you some questions about the methane drainage programme?-- Yeah.

For that purpose if the witness could see plan number 45/14, I think it is, Your Worship, Exhibit 8.

Now, do you see on that plan that, apart from the layout of the mine, there are the red broken lines?-- Yes.

Does that indicate the location of the methane drainage holes?-- Yeah, that's right, yeah.

Now, in particular there are some of those that go from what I will call the No 1 heading leading into 510?-- Yeah.

Across to the No 1 heading?-- This area here.

Yes, that's right, running across to the No 1 heading in 512; is that right?-- Yeah.

Now, those holes would have been drilled, of course, before 512 Panel was developed?-- Yes.

What would happen then as the section was developed and the mining - the extraction, as it were, or development cut across the areas where those holes were located? What would happen in respect of the holes? Would they be left open, would they be sealed?-- No, I think there was gate valves on the stand pipes where they were originally drilled. As far as I can remember I think they were all closed.

That's at the outbye end of the holes?-- There was some in this area here.

Yes. You say that there would be a -----?-- A gate valve.

A gate valve?-- Yeah.

On the top end -----?-- On the hole, yes.

Of the hole?-- Yeah.

And where, for instance, No 1 heading went across the location of those - No 1 heading in 512 went across the location of those holes, what would happen then at that other end, that would just be left open?-- At the other end, yeah, yeah.

But the end over in the 510 area would still be sealed?-- Well, as far as I can remember the last time I looked at them they were - the gate valves were closed.

So, there would be no way for the ventilation to by-pass the vent stations and go through the methane drainage holes,

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nothing like that?-- No, I am sure they were closed.

Okay. Now, you had some concerns at one point which were expressed at a safety meeting prior to the commencement of 5 South; is that right?-- Yeah.

That was in relation to methane drainage holes?-- I suspected that a couple of the holes were blocked there and I raised concerns at the safety meeting when - well, after discussions with Albert Schaus, the manager, me and Phil Draheim, the geologist, went down and we attached a pressure gauge and put in some water hoses to the holes which I suspected were blocked and pressurised them and it indicated that the pressure built and released which indicated to us that the blockage had been removed.

271094 D.7 Turn 4 dfc (Warden's Crt)

Had there been some build-up of methane in the area of those holes?-- No.

Prior to that? No?-- The flow from them was restricted, that's how I thought they were blocked, the methane flow.

This was when they were still draining?-- Yes.

You did fill out some deputies reports in relation to - you regularly filled out deputies reports in relation to your activities; I would like you to look at just three of those, if you would. They are in a bundle. I will pass them over to you. There are copies available for members of the Panel, Your Worship, and my learned friends.

The first of those, Mr Tuffs, is No 1479, it's in respect of 510 panel?-- Yeah.

And the afternoon shift on 16 June 1994?-- Yeah.

Do you see that? You mention in your comments in respect of that shift that - it's the last comment I'm referring to, "The 510 top return monitoring point was not reading correct values."?-- That's right.

That was .18?-- Yeah.

I think you've got there "Undermanager informed"?-- Yeah.

Now, do you recall just what the difficulty was there?-- I went in - this was an ongoing problem. Two or three times this occurred. I went in - when I started me inspection I used to go in the top return. About half-way along 510 top return there was a dewatering point there and the monitoring point was a bit further outbye, and I used to go in where the monitoring point was and walk down towards the - it was like a big reservoir what collected water from the range et cetera, and I took me MSA Minder and I had an AFD, an automatic firedamp detector, as well and they were reading - I think it was .6 methane and I phoned up to check - just to check it out what the surface was one reading, and it was reading .3. So the readings I was getting on me handheld instruments weren't the same as what were coming up on the Miahak screen.

Could you see a ready explanation on that day for the fact that the monitoring point wasn't functioning correctly?-- Unless it was a calibration problem or a leaking tube that was diluting the sample, that's the only thing I could put it down to.

Now, you had the same problem still then on the 19th - it turned out to be the third one in that bundle, report No 1488; do you see that there?-- Yeah.

The third comment?-- Yeah.

"Monitoring point top return is not working (18)"?-- I think I talked to - I can't remember which electrician, but I talked to one of the electricians and said the fellow from Miahak was

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coming to recalibrate the Miahak system on the surface.

That's what he told you?-- Yeah. I can't - cannot remember which electrician I talked to though.

Were you aware of problems later with that same point, monitoring point 18?-- Well, after these couple of times I used to look at the monitoring system before I went down, but I always made sure I checked when I went into the return there to see if it read the same, and most of the times - I think it's after when the Miahak fellow had been and recalibrated the system that it was reading fairly well correct after that.

You weren't aware of any particular difficulties -----?-- No.

----- in July or August, early August?-- No.

Now, the other deputies report there is report 3435 in relation to 512 Panel; is that right, the Tuesday afternoon shift on 28 June, the second one in your bundle there?-- Yep.

This is just one example of your inspection in 512; is that right?-- Yeah.

You were the production deputy on 512 that afternoon; is that right?-- No, there was no production at this point in time. The miner was pinned by the large fall I was talking about earlier and there had been -----

Before we go on to that, I'm just trying to ascertain your task at the mine on this occasion?-- It was a section what wasn't producing coal, that period in time.

Were you assigned as the 512 -----?-- I was assigned as the deputy for that day, for that shift, yeah.

I'm sorry, I interrupted you. You were about to tell us what happened?-- The fall, it was a fairly large fall, it had damaged the Holywell stoppings on the bottom return.

Can you indicate on the plan where the fall was?-- I think it was there.

That's the one that you referred to earlier?-- Yeah.

The large fall?-- Yeah.

Go on?-- Well, the air seemed to be coming in the section and it was going down through the - the stoppings were here.

The stoppings were in the cut-throughs just adjacent to the bottom -----?-- You've got to remember that that wasn't extracted at that period in time. There would have been four pillars, so the stoppings would have been there and there and there and there, and there had been slightly - they'd been pushed off the base. On the roof they'd been moved away and it wasn't a good seal and the air - there was a fair bit of leakage going that way. The air - actually all the air at that point in time was going inbye, so all the air was going

towards the bottom part of the section there.

In the bottom return?-- Yeah, because - I think the bottom return had been stopped off or closed down at that point.

So that caused you to make that notation?-- I tried to repair them as good as I could, but they are big - it's not like - I think they are made of some sort of steel and they slot into one another, and it was too big for me to do meself.

Repair them?-- Yeah, it didn't really affect too much except that it shortcircuited air, because every time they mined at the bottom part of the section they were having this problem in the top main supply road and this just exacerbated the situation, just made it even worse.

And you've noted it then in respect of your first inspection, and also in relation to that inspection you mention that the miner was stuck. I just want to ask you a little bit more about the process that led to that. The miner was ramping; is that what you said earlier?-- The miner was taking - as far as I can remember was taking the last punch in the sequence.

In 5 cut-through?-- I think it's there, and it had taken one punch out and there was a fall down towards the bottom rib. All this area fell in and it pinned the miner between the coal face and the fall. It wasn't actually - the fall never landed on the miner actually, it just fell at the side of it, but it couldn't tram out itself. It was pinned.

Your second inspection on that day, there was still a problem with ventilation in the top man and supply road?-- Yeah.

That was travelling from the goaf outbye and was recirculating up that roadway; is that right?-- Yeah.

That was still because of the same difficulties that you have mentioned earlier?-- I assumed that it was that, but even before the Holywell stoppings were damaged there was still re-circulation problems without those Holywell stoppings being damaged.

And they are the ones you referred to?-- Yeah. Actually I don't - looking back at this report I probably went overboard in saying the stoppings were causing the re-circulation because the re-circulation problem was already there before the stoppings got damaged, so I'm not sure ----

If anything it made it worse?-- It just could have made it worse, yeah.

Finally I want to ask you what sort of training you've had if any in relation to the use of a gas chromatograph?-- I haven't received any training previous to the explosion. I have received training afterwards, but I have never received any training previous to the explosion.

In light of the training you've had since, what would you say about the value of having a gas chromatograph readings for

analysis?-- I'm not sure the readings we were getting would have - with a low parts per million would have even registered on the gas chromatograph. It's my understanding that under 10 ppm CO it doesn't even register, the way we had the gas chromatograph set up, so -----

Above 10 ppm?-- I think - around 10 ppm the way the chromatograph was set up previous to the explosion - this is my understanding, I'm not quite sure, but -----

I don't need to pursue that with you any further.

Your Worship, I'll tender that bundle of three deputies reports.

WARDEN: That will be marked Exhibit 52.

ADMITTED AND MARKED "EXHIBIT 52"

MR CLAIR: I have no further questions of Mr Tuffs, Your Worship.

CROSS-EXAMINATION:

MR MacSPORRAN: Mr Tuffs, you've had a lot of experience in the mining industry; is that so?-- Fair bit of experience, yeah.

That started in 1974 in the United Kingdom?-- Yep.

You were there between 1974 and about 1990 when you came to Australia?-- Yeah.

You were a deputy before coming to Australia?-- Yep.

Had most of your experience in the United Kingdom been underground experience?-- Yeah.

Then you qualified as a deputy in 1990 here in Queensland?-- That's right.

And you have worked ever since as a deputy?-- Yeah.

Did you have any experience with heatings in underground mines in the United Kingdom?-- Yeah, I've been through a couple of heating situations, yeah.

Did you have any training in respect of those?-- Not training as such. I was -----

On the job training?-- On the job training, you could put it

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down to that, yeah.

So you had had two of those roughly when? In which years?-- Well, 1984 there was a heating in the longwall block. We had to seal the section basically. It just took off, you know.

Was the sealing of the section successful in the sense that the heating subsided?-- Yeah, but it was abandoned. The section got abandoned.

When was the second one, if you remember?-- The second one was when I was - wouldn't have been too long afterwards actually, and what they did there was they were salvaging a longwall and the barrier pillar started to get a heating and they just sealed it off, just sealed the section off. Similar type of thing.

On those occasions did you detect a smell associated with the heatings?-- Yep.

Was that smell similar to the smell you detected in No 2?-- Yeah, similar, yeah.

You were involved also, I think, in the sealing of the 5 North panel in 1991 at No 2?-- I wasn't involved in the sealing process exactly, but I can remember the situation.

Was there any smell associated with that sealing that you recall?-- No.

You at the time were working in the 510 Panel and therefore had some concerns for your men in case something should happen in 512?-- Yep.

Because, in effect, if 512 had an incident it could easily cut off your means of retreat from the mine?-- That's right.

So you kept a keen watch on what was going on in 512?-- Yep.

For that purpose you kept a close eye on the CO make?-- That's right.

And you looked at the graphs which were posted in the deputies' cabin from time to time?-- Yes.

They were posted every Friday, was that the case?-- Well, that's when the make was done, yeah. I'm not sure if - I can imagine they would have been probably the same day, yeah.

The make was done and posted once per week?-- Yeah.

What did you feel about the adequacy of that position, that is the make being posted once a week for 512?-- Well, it was indicating a trend, a slow trend upwards, and I think some time in July it was decided to do it on a different basis. I'm not sure if the deputies were supposed to do it once a day or something, I'm not quite sure. I know concerns were starting to be expressed on the make going up and I'm not sure exactly - the outcome of a meeting - I think it was Steve

Bryon or Byron or whatever, and I think they decided to do it once a shift or once a day. I can't remember exactly when.

I think you said in your experience an increasing CO make trend has some relevance to the detection or early detection of a heating?-- COs are the earliest indication of a heating, yeah.

If you are only looking at the trend once per week would that be to some extent inadequate to enable you to detect quickly a heating?-- Well, that's the reason why I think they decided to -----

Monitor it more closely?-- On a more regular basis.

I suppose as the extraction phase comes to a conclusion and the sealing phase starts, that is an even more critical stage for the trend of the CO make?-- Yep.

Because it's then that you are looking at the mixture going through the explosive range around about that time?-- After it's been sealed, you mean?

Yes?-- Yeah, yeah.

It can be quite soon after it's been sealed?-- I don't know about the CO make. How are you going to work a CO make behind seals?

You can't do that, but you can keep an eye on the parts per million after it's been sealed?-- Yeah.

Depending on the number of monitoring points you have behind the seals, for instance?-- That's been a matter for conjecture as well because there was only one which didn't tell a real good story neither.

The one that was in there apparently, I think, was in the 3 heading?-- Yeah.

About 20 metres inbye of the final seal; is that your recollection of where it was?-- Yep.

Do you have an opinion about the adequacy of that monitoring point?-- I can't see how that monitoring point can tell you the story of what is happening further into the goaf or even the return. I mean it would have been dodgy trying to put monitoring points in the goaf itself because they would have been liable to be damaged anyway from falls or whatever, but I couldn't see any reason why they couldn't have run Unor lines down the top return which was well protected. None of that had been extracted, you know, and they could have run lines through these stoppings here, you know? Put them in various different spots.

You are indicating running Unor lines down the top return as far down as the back of the panel?-- Yeah, I couldn't see why not.

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And running tubes in through any number of cross-cuts through the stoppings from the top return?-- That's possible to do, yeah. I know there was a limited amount of points on the Unor system to do it, but I would have thought they could have added a couple more points down in the section somewhere.

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And if that had been done, there would be a better monitoring, as it were, of that panel after it was sealed?-- Well, you were only getting - you were only getting one point. I mean, if you have got more points you are going to get a better overall picture of the panel.

If there is only one point which is 20 metres inbye of the final seal in 3 heading and you have a heating somewhere towards the back of the 512 Panel, the mixture you get at the monitor point up in 3 heading near the front of the panel will be nowhere near representative of the state of affairs at the back of the panel, will it?-- I wouldn't have thought so, no, and another thing about being situated there is the breathing effect of the seals. I am sure that at that point would have been - with the barometric pressure differences during the day that would have affected the - you know, because it's close to the seals, so it must be in that like tidal effect which is close to the seals there.

So you are breathing air in from outside the seals to contaminate the sample taken from the point inside the seals?-- Yeah.

So your CO parts per million reading from that point could well be inaccurate?-- It could be inaccurate, yeah.

And it's the only point that's monitoring the atmosphere inside the seals?-- That's correct, yeah.

Now, your other concern from before the extraction phase had finished was the ventilation make-up inside 512?-- Yeah.

And you had noticed on several of your inspections the re-circulation of air in the top supply road No 2 heading?-- Yeah.

Now, when you say the re-circulation of air in the No 2 heading, what exactly do you mean?-- I mean air which is coming out of the goaf which - once it's gone into a goaf area it's treated as return air, as far as I'm concerned, and if you are getting air which has been goaf contaminated coming back up an intake airway, I would class that as re-circulation.

Now, on the occasions you observed that phenomena was it a general body of air coming out No 2 heading or was it a layered stream of air?-- Generally it was a general body reading. It was - I think on one occasion I was there there was like a thermal effect. There was - a bottom part of the roadway was getting a cold flow coming inbye, coming down the intake way, and then there was this - it wasn't a layering as such but it was - the top part of the roadway was warm and that was the air coming out of the goaf.

So you had two separate streams of air?-- That was on one occasion I can recall. I can't remember which inspection it was, but ----

Right, and that was in the top supply road No 2 heading?--

Yeah.

Which is an intake airway?-- Yeah.

You had cool air in the lower sections of the roadway coming in?-- Yeah.

And you had a warmer layer coming out of the goaf area up No 2?-- Yeah.

Did you do any testing on that occasion to see what the mixture in the upper layer coming out was?-- That's what I meant to say. It wasn't a layering effect. In the thermal part of the - the warm part of the air flow was - the reading was a general body reading which was - I can't remember what it was exactly, but there wasn't a layering on the roof, if you know what I mean.

But it was warmer?-- It was 0.5 methane, but that was in the whole of it.

Yes, so it wasn't an extraordinarily high concentration of methane?-- No. Methane wasn't - I couldn't see - to me, the methane wasn't the problem at all. It was the ventilation in the goaf which was the problem, you know. The methane is only, to me, just, like, going to be the problem when you sealed the section.

When it goes through the explosive range?-- Yeah.

Now, on this occasion you are talking about when you saw the upper warmer body coming out by the intake airway, you didn't take any tests for CO?-- I can't remember if I did or not.

If you had a -----?-- I have done - if it was the same - the same report I made before - I can't remember which one it was, but it may have been the same one. I did test for CO there. I think it was 5 parts. 5 ppm was the one I am thinking of.

If you had a heating somewhere further down the 512 Panel, you would have the products of the heating rising to the roof in the panel, wouldn't you, to some extent?-- Possibly, yeah, because of the thermal effect, yeah.

If the ventilation was poor, you would have the products, or some of them, making it through the ventilation system and just sitting on the roof?-- Possibly, yeah.

And if the ventilation continued to be inadequate, you could have that body of air, upper layer air, coming up, for instance, No 2 heading?-- Well, that's what was happening.

So, what you observed from that occasion was consistent with there being a heating in by of where you were?-- Well, not necessarily.

But could be a sign of a heating in by of where you were?-- Well, it's an indication of re-circulation. I don't know about heating.

Well, you simply didn't know the cause of it, of what was causing the re-circulation other than poor ventilation; is that so?-- Well, yeah. The layout of the panel, though, because of the slope, you would have got warm air - just because of the difference in temperature there would have migrated up -----

Up the slope?-- Up the slope, yeah.

At the higher level?-- So whether or not it was a heating or just a thermal effect of the warm air in the panel, you know, the natural heat coming out of the coal, or whether or not it was a heating or not -----

You couldn't say?-- Yeah, I couldn't say, no, no.

But it certainly was not inconsistent with there being a heating further inbye?-- Well, that was early on in the piece. I mean, if there was a heating, I think we would have been getting more -----

More signs of it?-- Yeah, I reckon we would. I am not saying it wasn't a heating. I couldn't, for sure, say that.

Certainly. No-one is suggesting you could say -----?-- But you couldn't say it wasn't neither.

And when you say that if it was a heating you would have expected more signs of it, do you mean things like a smell, for instance?-- Yeah, there was no smell.

So if you had that effect, that is, the upper layer coming outbye and being warmer in an intake roadway with a smell, you could go further and say that it may have been a heating?-- Yeah, if the smell was evident, yeah, that's another sign of a heating, yeah.

And the smell is a characteristic of products given off from coal only after a certain temperature is reached?-- That's right.

And that's what, about 100 degrees centigrade or above?-- Well, that's when hydrogen starts to give off. I am not sure about the smell. I think the smell is a bit higher than that actually.

But the smell is - I think, as you said, the smell is a better sign that there is a heating than, for instance, the CO make that you observed in respect of 512?-- Possibly.

Now, at some stage through your concern you started doing your own CO make calculations? You have to answer for the microphone?-- Yes.

Was that because - just returning to this question of the weekly graph, was it because you needed a quicker indication of what the CO make was, how it was trending?-- Well, if you wait for a - from week to week, I mean there is nothing to say

something can't happen between Friday and Friday.

So if you had a CO make on the previous Friday and you were going underground on the Wednesday, you would want to know what the make was on the Wednesday or around about the Wednesday?-- It will give you that information, for sure, but I expect the fellas, you know, that were working in there were keeping a close eye on it anyway. I didn't have concerns about ignoring the situation.

Certainly not, but you were taking precautions as deputy for your crew in 510 to keep on top of the CO make trend by your own tests?-- Well, I can remember one occasion when I went down and did an inspection with Lex Henderson and Dick Stafford. That was a time when we were down on the drill and I think we were spare - must have been spare deputies or whatever that day, and it's not in my statement, but we did go down and did an inspection of the return all the way down to the bottom there, down to that area, told the deputy - it was Eddie Bentham that was on - told him we were going down to take a couple of samples, bag samples. We went down and we didn't find anything out of the ordinary. 5 parts per million was the most we could find anyway. There was a slight goaf smell - it wasn't a heating smell - at one point. That was about 10 cross-cut. We went through - I think we went through the stopping there and couldn't get any further because the bottom had been taken out, just a CO - a Drager tube test there, got 5 parts, but that was consistent with the readings we were getting in the return as well, so that set in my mind for a while actually.

The Drager readings, of course, give you the parts per million of CO, don't they?-- Yeah.

There is some element of error, potential error, in reading the tube, isn't there?-- Yeah, I don't think they are as accurate as they could be.

Because you are reading the extent of a stain inside the material in the tube?-- Yeah.

And to some extent it depends upon the judgment of the person reading the tube as to what result is achieved?-- Well, I always used to err on the side of safety. If I thought it was 5 just a little bit, I would say 6. I wouldn't go underneath.

But for that reason you could have two deputies reading Drager tubes and getting different readings?-- Yeah, I reckon you could do.

And there are, are there not, electronic devices for reading CO?-- Yeah.

Which give a digital print-out of the actual reading?-- Yeah, yeah.

And then all you have to do is read the digital indicator on the machine?-- Yeah, that's right.

No question of judgment. As long as you can see and read, you can report it?-- Yeah. We did have those available to us.

When you did your regular inspections throughout 512 and you noted these parts per million of CO, was the testing always done at the same level in the roadway - same height, I should say?-- In the return? In the return mainly - in the return you would do a general body, which I considered to be head height, in the return because there was no chance of layering in the return because of the velocity of the air in there, but if you were in the main supply road and you were getting layering, that thermal effect, you would take a CO reading closer to the roof. There would have been no point doing a CO reading in intake air at the bottom.

Because when that thermal effect, we will call it, for whatever reason, was causing it, the thermal effect, you would have obviously different, potentially different, concentrations of gases in the roof area as opposed to the floor air?-- Well, one is intake and one is coming out the goaf.

Do you remember ever taking such readings of the roof, CO?-- I did on that occasion when I found the thermal effect, yeah.

And I may have missed it, but did you report that anywhere as so many parts per million?-- If it's the same one I can recall, I never mentioned the thermal effect in my report, but I think I got 5 parts per million.

Now, you reported your concerns about the ventilation quality in that panel; is that so?-- Well, they are on the report, yeah. I put - what I can remember, especially one report, I went in and - I can't remember, I think it was the Saturday afternoon - I mentioned that the ventilation left a lot to be desired.

Just so we can have that for the record, could you just look at this for a moment, please? Is that a photocopy of a deputies report signed by yourself?-- It is, yeah.

Does it relate to the 512 Panel on 18 June 1994 afternoon shift?-- Yeah.

That was a Saturday, was it?-- Yeah.

What's the number of the report?-- 3405.

That, I think, forms part of document 45 in Exhibit 9, I think. Perhaps it should be separately tendered. I don't have copies of that to distribute, but if Mr Tuffs can just refer to his notation for the ventilation in the panel on that day.

Is that the report you were referring to a moment ago in terms of your reporting of the ventilation quality?-- I think it is, yeah.

What have you said there about the ventilation quality?-- I

put it leaves a lot to be desired.

And you made that comment in relation to the problems, as you perceived them and you have described to us, with the ventilation generally in 512?-- Yeah.

That was 18 June?-- Yeah.

Are you able to say when, in relation to that date, you witnessed this thermal effect inside the top supply road?-- When I started the inspection.

But was it that day, I mean? Was it 18 June or some other day?-- I am not sure. I am not sure, but it was one of the days when I noticed re-circulation, so, you know, I mean, you could - I'm not sure which one it was exactly, but it was either this one or there was another one I can remember. On this one I have got 6 parts. I think the other one I got 5 parts.

So you are not sure if it was that day you noticed this re-circulation thermal effect or some other occasion?-- Yeah.

But it was certainly on one of the occasions when you noticed the ventilation was poor?-- Yeah.

Can I have that back, please?-----

I tender that formally, Your Worship. I will undertake to provide copies a little later if they are needed.

WARDEN: Thank you.

MR MacSPORRAN: 3405, 18 June.

WARDEN: I will mark it Exhibit 53.

ADMITTED AND MARKED "EXHIBIT 53"

MR MacSPORRAN: Again relating to that date, 18 June, it may be hard for you, if you don't know, simply say so, but did you hear of any other problems in the 512 Panel relating to the previous day, 17 June, the Friday?-- I can't recall.

Do you recall any occasions when what you discovered inside the 512 Panel was being discovered by others on different shifts and being reported?-- Yeah, yeah.

Who in particular do you now recall as having reported those things?-- I can remember Reece Robertson, reading a couple of his reports. I think Eddie Bentham as well, I am not sure.

And again, you can't place those events with this date of 18 June that you reported the ventilation?-- No, I can't.

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Did you have a particular practice yourself in terms of reading other deputies reports?-- Oh, yeah, I always read the reports, the previous two reports.

Previous two reports?-- Yeah, and signed the previous one.

Was that a matter that you were instructed to do or was that just your practice?-- I think you have got to do it by law. I'm not sure. I think you have got to read the previous two reports.

Anyway, your practice was to always read the previous two reports?-- Also if I went off shift on Friday and I came back on Monday, I would read all the weekend reports.

Was there a reason for that?-- Just to give me more information on what the section was like.

Now, on that Saturday - beg your pardon, I will take you back to Friday, 5 August. You spoke with another deputy, Dick Stafford; is that so?-- Yeah.

And did you report it to - you told him about your views about taking your crew underground at the time the 512 Panel after sealing was going through the explosive range?-- Yeah, I did tell him that, yeah.

Your recollection is that Dick Stafford agreed with your view as to what you should do?-- Yeah, he did agree, yeah.

And you say he was an experienced miner as well?-- He is a deputy and he has gone through a few heating situations at - on the Moura lease. I think he worked at Kianga. He was involved in a couple more heating situations at No 2 Underground.

Now, as at the time that you had that discussion with Stafford on Friday the 5th, were you talking in terms of a heating inside 512?-- We couldn't prove it was a heating but there was enough - to me there was - just the re-circulation problem would have been sufficient to not give you a correct - you wouldn't have enough knowledge of what was going on in the goaf while you are getting this re-circulation problem because I am sure you weren't getting the proper readings at the monitoring point.

Was that a reason?-- If you are getting all this swirling effect in the goaf I can't see how you would be picking up the correct readings. If there was anything going off. I am not saying there was at that point.

If there was you may not pick it up?-- Yeah, may not pick it up, no.

Would that ordinarily dictate a more cautious or conservative approach to working underground while the mixture was going through the explosive range?-- Well, it did do with me.

Just in terms of opinions being exchanged as at Friday, 5 August, when you were talking to Dick Stafford was there talk of heating?-- No.

There was talk of the signs that had been picked up inside 512 in the preceding weeks?-- There was the indications of the recirculation problems and - etc.

Then on the Saturday you received a call from Cole Klease?-- Yes.

He reported to you - I think you said in evidence - there was a heating and a haze?-- A stink and a haze.

A stink and a haze. So, he didn't use the word "heating" himself as far as you recall?-- No, I don't think he used the word "heating" himself, but if someone told me that there was a stink and a haze I would assume it was a heating. I didn't need him, you know, to tell me that.

So, again crucially -----?-- From that point on I regarded it either as a heating or a suspected heating.

And is there a difference, in your opinion, in terms of whether you send the men underground if there is a heating or a suspected heating?-- You should treat them the same.

As at that time, Saturday, before Cole Klease rang you, had you heard any other reports of a stink being detected inside 512?-- Not previous to that, no.

No-one had told you?-- But I found out afterwards they did, yeah.

But at the time?-- At the time no-one had mentioned that, no.

So, Cole Klease on the Saturday afternoon, 1.30, was the first person to indicate to you there had been a stink inside 512 as far as you can recollect?-- Yeah, yeah, apart from what Reece Robertson put in his report a while before, like, the benzene smell. That was the first time.

Again, does 24 June - could that have been the date of the report that you read where there was a smell reported by Robertson?-- It was because I was on the shift previous to the one he did that, yeah.

If you had known of that fact, that a smell had been detected inside 512, it would have made sense to connect that, you say, with the recirculation problem in the No 2 supply road?-- Well, you could have assumed it was the case, yeah.

Both of those indications may well have, in your opinion, pointed towards a suspected heating?-- Well, if someone smells benzene obviously that's - whether or not it was a benzene smell or not I don't know, but I think he put a "benzene type smell" in his report. If you smell benzene, obviously that's a sign of a heating.

Now, when you - I am sorry, did you want to add something?-- No, you are right, I am okay.

When you - on that Saturday evening I think you did your measurements to later calculate your CO make?-- Yeah.

And you did those very close to ventilation station 46 which is near the top return in 512?-- Yeah.

The velocity you measured was 1.81?-- Yeah.

You got, I think, 7 ppm -----?-- Yes.

Carbon monoxide. That was at a time when, as the air velocity shows, there was very good ventilation?-- Yeah.

And you later calculated on the surface a CO make of 16.25 litres per minute?-- Yeah.

And that wasn't a sharp or exponential rise?-- No.

In CO make, was it?-- No.

Who had told you, if anyone, what you had to reach for an exponential rise in the CO make before there was need for real concern?-- Just from the knowledge I have gained from Mines Rescue or - you know.

When you say "an exponential rise", what do you mean by that?-- Just the take off, from being a slow curve to a sharp rise in the graph. That wasn't the case with the readings we were getting.

No-one has ever told you that a steady upwards trend in a CO make is cause for concern, if the make continues to rise even steadily in an upward -----?-- Well, that was why I was concerned. I was concerned that it was above - it had been above 10 litres per minute for well over a month or two months, even, but there was quite - there was one or two factors you could explain that away actually because there was more coal exposed in that panel than what had been exposed in any other extraction I had seen at Moura. There was more loose coal around the place.

So, you get more oxidisation?-- There would be more CO make.

Because of the greater amount of coal exposed?-- Because of

the greater amount of coal which had been exposed and left, you know, in piles, but -----

I suppose one of the problems is if there is more coal left unless it is properly ventilated you have a potential spontaneous combustion?-- That's right. The places where it was left was where the roof was exposed, for a start. That's where they got the falls. So, they were getting falls on top of piles of loose coal.

In areas where you say the ventilation was rather poor?-- Well, it would have been poor underneath the fall, you wouldn't - you wouldn't have got much air there.

When you calculated your 16.25 litres per minute did you record that figure anywhere?-- I did, yeah, put it in a notebook.

Was that on your report?-- I didn't actually fill a report in because I wasn't the deputy filling the - covering 512, I just went in to relieve.

On overtime?-- No, I was not on over - I was on shift - that shift, but I was inspecting other parts of the mine. I just went down to 512 to give George McCrohon a break for an hour while he had some food.

George McCrohon was the deputy who filled out the report at the end of the shift?-- I am not sure who filled it out.

Ordinarily he would fill it out?-- I am not sure if him or Lennie Graham filled it out because Lennie relieved me afterwards.

Anyway, you recorded that figure, that CO make, in a notebook?-- Yeah.

Did you tell anyone? You told, I think you said, George Mason about it?-- Yeah, I did, I did.

But did you -----?-- I wasn't concerned about it because it wasn't a drastic rise, you know? It was a rise, but it was a trend which was - you know, even though it was a spot - it was a spot make, it wasn't a weekly make. It wasn't - it was going up, but they were sealing the section so why -----

In order to avoid the problem they were sealing the section?-- Yeah, yeah.

What would you say about a CO make reading of about 19 litres per minute on Sunday afternoon of that weekend? Would that be the sort of rise you are talking about as being exponential?-- Probably not, no, but -----

Getting up there?-- It is getting close to - I would say to where it is going to take off, above 20 litres. That's my experience or from information I have gathered from, you know, Mines Rescue information, that once - between 10 and 20 it is cause for concern and over 20 it is - there is something going

to occur and it is going to take off.

The question is, I suppose, the fine judgment that you have to make as to when you seal - at what stage you seal the panel?-- Well, I thought they were doing the right thing sealing the panel, you know? There wasn't a problem with sealing the panel, it was what happened afterwards.

When you sealed the panel for a time the oxygen in the panel will continue to feed a heating if one exists?-- Yeah, till it drops down, till its -----

Until it drops down and when the mixture goes through the explosive range that's when the danger occurs?-- Yeah.

If that occurs, as you say, the real issue is whether you send the men underground after you have sealed if there is a suspected heating behind the seals?-- That's right, yeah.

Because ultimately the mixture comes out of the explosive range, doesn't it?-- Yeah, eventually it will.

And there are ways of calculating roughly how long a mixture will remain in the explosive range, given the area of the goaf -----?-- Well, you wouldn't know.

The production of methane, things like that?-- Well, if you took a reading of the increase from one point over a period of hours you could plot it on a graph, you know. If it was a constant reading you could work out when - near enough when it went through the range.

So, you may know - well, you would know certainly when it was going to enter the explosive range because that is on the Ellicott diagram?-- Yeah, that's another problem I have got with that Unor system, is -----

The delay?-- Is the delay. I mean -----

Providing you make allowances for the plotting being from delayed information?-- Yeah, as long as you do that, as long as you remember that there is a delay period on it.

So, you could tell rather fairly accurately when a panel was going to be in the explosive range or the gases would be within the explosive range?-- Some panels probably make methane quicker than others.

Yes, certainly?-- This area would had been degassed, you know, so the gas must have been coming from elsewhere, from the virgin areas around it or wherever.

At one stage a moment ago you mentioned the proposal to take some bag samples. Were those going to be used to have them analysed on the gas chromatograph?-- Yeah, I think there was three of us went down to do that reading and it was Lex who suggested we take bag samples. We took two bag samples, one at that point there -----

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That's 13 cross-cut between the top return and the top supply road?-- Yeah, and one where the monitoring point used to be just inbye of the prep seal.

Again the top return between, is it, 1 and 2 cross-cuts or 0 and 1?-- 0 and 1.

All right. So, you took two bag samples, one from each of those locations?-- Yeah.

And -----?-- We also took Drager tube samples. We weren't picking anything up, we were only getting 5 parts. When we got up top I think Lex Henderson, he took the bag samples into the chromatograph room and I can't remember where I went, but afterwards he told me that the chromatograph was down at that point in time or one of the electricians had told him it wasn't working.

And you got -----?-- This was about three weeks before the incident.

You got that information about the gas chromatograph from, you think, Lex Henderson?-- Yeah.

No-one told - I mean, you didn't take the bag samples yourself to the -----?-- No, I didn't take them in there, no.

You think that was about three weeks or so before the incident on 7 August?-- It was on a day shift about three weeks previous. I think it was on a Monday day shift, actually, but -----

Can I just ask you just generally in relation to your gas drainage programme, I think you had been doing that in 510 Panel?-- Yeah.

On occasions you have had to dewater the gas ranges?-- Do it twice a shift.

Is there a set procedure in place for doing that or is that left to the deputy in charge to decide how it is to be done?-- Well, I don't think there is any set procedure, but basically is you open the gate valve up, just crack it so the water comes out. When the water starts - looks like the water flow is going to slow down - when the gas starts to come out you close the valve so you don't let much gas out.

That's the idea, of course, to drain the water, but not let much methane into the working area?-- Yeah, we were in the process actually of having automatic dewaterers - that was part of the methane programme - so you wouldn't have had to actually let any methane out. It was - an automatic water dump was being evolved, for want of a better word.

I should ask you finally: just in relation to the gas drainage system itself, was it the case that there was a procedure for that which you had to follow? There was a manual for that at the mine?-- A training procedure?

XXN: MR MacSPORRAN

WIT: TUFFS N M

Yes?-- There was a training procedure, yeah. We were also - we were in the process of drawing up procedures for every work procedure. Most of them were completed before the explosion, but there were - there was one or two which hadn't been completed.

One of the ones - well, I should ask you, perhaps: was there a proposal to have a procedure for sealing, for instance?-- Sealing?

Sealing the panels?-- I have no idea. I haven't heard of that one. I have never seen a procedure for sealing.

But you say there was a process in place at the mine to have work practices reduced to manuals or instruction?-- Well, there was work procedures being drawn up for the gas drainage. I am not sure about -----

Any other areas?-- Other areas, no.

Thank you, Your Worship

WARDEN: That might be a convenient time to have 5 minutes, gentlemen, before you start, Mr Martin.

THE COURT ADJOURNED AT 11.26 A.M.

THE COURT RESUMED AT 11.42 A.M.

NEIL MARTIN TUFFS, CONTINUING:

CROSS-EXAMINATION:

MR MARTIN: Mr Tuffs, before you came to Australia you had an English undermanager's certificate?-- Yeah.

Nonetheless you sat for an examination here which achieved the Queensland -----?-- That's right.

What distinguishes a deputy from an underground manager in terms of examination or training?-- It's just a lot more indepth, I suppose.

A lot what?-- It's more indepth.

Could you just be a bit more explicit, if you would?-- Well, I know on my deputies' course I didn't have to do things about engineering, not so much about strata control.

More particularly perhaps, what training or instruction were you given in relation to spontaneous combustion in connection with your achieving an undermanager's certificate?-- Yeah, it's part of the syllabus, spontaneous combustion would have been as part of the syllabus for the undermanager's paper.

Could you just say to what extent? How indepth was that?-- It would probably be something - if you read the Mines Rescue Manual, similar information to what you can pick up in the Mines Rescue Manual, the same sort of - good practice -----

What did it say, for instance, about good practice?-- Not leaving piles of coal all over the place, that would probably be a good practice.

Could you just tell us in relation to the Unor system or the Miahak system what did you know about the operation of that? I mean before 7 August 1994? Were you trained on it?-- No.

Did you know the various functions it could perform?-- I could plot the Ellicott graph and stuff like that, but I never had any formal training on it. It was only by asking other people how I could get the Ellicott up or any other features like the 24-hour reports et cetera. I never actually did any training on it as such.

So you informed yourself about that?-- Yeah.

Who told you how to do that? I mean which category of person at Moura No 2?-- Probably one of the other deputies or an electrician.

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WIT: TUFFS N M

The gas chromatograph, did you know anything much about the operation of that?-- Not previous to the explosion, no.

I think you said something in your evidence about you learned something since?-- Yeah, I've been doing the gas sampling from, you know, the underground, been involved in the gas sampling since the explosion and -----

On the surface or underground have you been doing that?-- I've been taking the samples and bringing them to the chromatograph room and I went through two or three days' instruction from an electrician since - this is afterwards.

Yes, afterwards?-- Yes.

So the electrician instructed you on the gas chromatograph?-- That's right.

What can you do in consequence in terms of the gas chromatograph?-- I can put a bag sample through now.

Is that all you can do? Can you -----?-- I can interpret -----

Can you interpret all the results?-- Yeah, I can interpret all the results, yeah, get the results on the screen, yeah.

About hydrogen, for instance, what can you tell us about that in the gas chromatograph? Can it pick up hydrogen?-- Yeah, it can pick up hydrogen.

Ethylene?-- It can pick up ethylene, propylene et cetera. I knew that before, but I didn't know how to use a chromatograph.

Have you ever seen a red book and a blue book on spontaneous combustion?-- I think when I did me induction I was given a spontaneous combustion -----

Would you look at these two little books and say which of or both of you received?-- I think I received the red one.

But not the blue?-- No, I think it was the red one.

You were more informed, of course, than the average deputy at Moura because of your background in England and because you had an undermanager's certificate?-- Well, that's correct, but I'd say the fellows who worked at Moura on the Moura lease would be fairly well versed in heatings et cetera, but, yeah, with me having an undermanager's ticket I would suppose I probably went a little bit more indepth -----

Knowledge than the average deputy?-- Yeah.

This is the position at Moura No 2 before 7 August 1994 in terms of chain of command: manager, underground mine superintendent, undermanager in charge, then undermanagers then deputies and then the miners?-- Yeah.

There is no doubt, is there, that as in any organisation men obey their superiors?-- Not obey without question, but -----

I suppose the question depends on one's knowledge?-- That's right.

Since you became a deputy and since you became an undermanager, tell the Inquiry, if you would, whether you've had any retraining or courses in particular things such as spontaneous combustion provided by management?-- Not at Moura, no.

You know now, I take it, with the gas chromatograph there is a highly sophisticated system of transmitting knowledge, if necessary, to SIMTARS station at Redbank?-- Yes.

Did you know that before 7 August?-- No.

Since 7 August who else has been trained on the gas chromatograph other than yourself?-- I think John Blyton had a refresher on it.

He's a deputy?-- Yeah.

Is he the only one that you know of?-- That's the only one I know of, yeah.

Has there been produced any work procedure in relation to the operation of the gas chromatograph?-- No, I've never seen one.

If not elsewhere, certainly with Mines Rescue you would learn about the probeye?-- I haven't actually been put through probeye instruction.

You know of the probeye?-- I know of the probeye, yes.

Was there one at Moura No 2?-- Yes, there was a probeye.

And that was in the Unor room?-- Yes.

You know its purpose is to detect heating?-- Yeah.

But you weren't instructed?-- No.

Do you know much about incubation period in relation to spontaneous combustion?-- It all depends on the situation, on the - how can I put it -----

A host of -----?-- The circumstances.

A host of variables?-- A host of variables, yeah.

One of the key features of it, I suggest, is its propensity to rapidly rise, the CO make or litres per minute to rapidly rise in the closing stages?-- Yeah.

You mentioned 10 litres per minute of CO and 20 litres per minute as being indicative -----?-- Considerable danger.

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You learned that, didn't you, from reading that book?-- I'm quoting from that book, but I think I already knew it before I read that book, but that's the word in the Mines Rescue Manual, yes.

Have you ever read this book?-- Yeah, I've read that book.

Will you just look at an exhibit which is identical? At page 257 - the pages are numbered at the bottom and there are parts numbered at the top - on the right-hand side about half-way down: "If the carbon monoxide concentration and air quantity is known then 10 litres of carbon monoxide production per minute requires investigation and 20 litres of carbon monoxide production per minute indicates that a considerable danger exists."?-- Yeah.

If I might just take you a few pages further on to page 260 which talks about final sealing, that's the first paragraph of (b): "In order to minimise the risk of explosion, great care must be exercised in general planning to ensure that all seals are completed simultaneously and all men must be withdrawn from all sections likely to be affected by an explosion. Generally, all men are withdrawn from the mine." Did you read that at Mines Rescue?-- Yeah, I'd read that, yeah.

You knew that for yourself, I suppose, from your experiences in England?-- Well, we used to use explosive-proof stoppings. We didn't put seals up the same as here. There wasn't the same danger.

So once an explosive-proof stopping was put in in England it really didn't matter much what happened behind the stopping?-- No.

Because if there was an explosion, the seal resisted it sufficiently?-- Yes.

And on your inspections into 512, particularly down roadway 1, it was really impossible to get inside there because of the ramping?-- You mean get from 1 to 2?

Yes, just to go through a cross-cut?-- You could go through the stopping but you couldn't get any further because the bottoms had been taken out, yeah.

You told us about re-circulation, your problems that you perceived with the panel, so I won't take you there. Did you have any experience at Moura No 2 with the Tecrete stoppings or seals?-- Well, it was the first time they had been used. I think they put one up - I think they put one up somewhere in 5 South level but not as a final seal.

No, not as a final seal?-- No.

And the old system of, what, block and concrete seal, even that took some time to cure, didn't it?-- Well, yeah, it wouldn't have been at its final strength for a few days.

And the Tecrete seal within, say, 20 hours, it wouldn't have cured either?-- No, no.

It would be just like mush?-- It's the same as any - you know, use a grout and there is a period of time where it's glassed as green. I think from the actual fixing the seals - when they actually sealed it off to when it reached its maximum strength is 20 days. I think that's the knowledge I have gained from talking to the fellows from Tecrete, so it wouldn't have been at its maximum strength for 20 days. Not that it would have stopped anything behind it anyway, but-----

Nowhere nearly as secure as the old block or brick stopping?-- Well, I would have preferred to use the old ones because you didn't have to rely on a pump for a start. You could have mixed - you can mix mortar by hand, and the pumps the fellows were using for Tecrete were notorious for breaking down - they had broken down a few times. We weren't using - they were using slightly larger ones, but the fellows that used to work doing the Tecrete ventilation stoppings, they had a fair bit of problems with the equipment, yeah.

But, in any case, it took a long time to seal, or to erect a Tecrete seal?-- Yeah.

Far more than three hours?-- A lot more than three hours, yes.

You told one of my learned friends - I am not sure which - about your opinion as to the final seal - well, the final monitor within the sealed area of 512 and that you yourself were not pleased with it, or words to that effect?-- Yeah.

Who authorises in the hierarchy of Moura No 2 the placement of final seals? Who determines it, who orders it?-- Management.

Which one of management?-- I'm not sure.

I think you have said - oh, well, what was the last occasion you were down No 1 return that you can remind me of?-- Apart from the day?

Well, did you go down on that day?-- The sealing process day?

Yes?-- No, I didn't go down. I went just inbye the seals. I didn't go any further.

All I am asking is on your last visit there prior to that did you go down No 1 return?-- I did an inspection - there was three of us went down about three weeks before. That was the last time I went down.

Could you get right up to cut-through 13?-- Yeah, you could, you could get all the way down.

I think you have said in your view it would be far preferable to place monitors through any one of the stoppings further inbye?-- There was no physical problem why you couldn't have put more monitoring points down there, apart from the limitation of how many points the system will take. I'm not sure of how many it will take, but -----

Certainly. Well, even if one didn't do that, it would have been possible even in road 3, I suggest, to put a final seal further inbye than where it was placed finally?-- The monitoring point further inbye?

Yes, further inbye?-- Well, you possibly could have got it further inbye than that maybe, yeah.

Well, if more of the pillars were left, one could take it at least one further pillar inbye if one further pillar was left?-- You would have been able to do that, yeah, if you would have left -----

So it was only really a matter of leaving more coal?-- Well, if you would have - yeah, I suppose that's right, yeah.

I think you have told us that final point 5 would have achieved a diluted reading because of the inrush of air through the coal - through the seals?-- Yeah, the seal -----

No seal was breathed except the explosive-proof seal you have told us about?-- Well, these seals breathe and it would have been close to the tidal effect, you know, you get from a barometric pressure difference, so you would have been getting variable readings during the day from the peaks and the troughs.

You said something in your evidence before when you were talking about the thermal effect. If there is a heating in 512 after it's been sealed, what you have really is a - am I right, or you may not be able to tell me - a thermal fan

sucking air in?-- Could you ----

Just think about it for a second. If there is a substantial heating in 512 after it's sealed, wouldn't that have the effect of sucking air through the seal?-- Well, it would be consuming oxygen.

Yes, all right, I will leave it. Are you familiar with some risk analysis having been performed at Moura No 2 in about May or so of 1994? Say so immediately?-- There was risk analyses done on certain things. I think one of them was recovering a miner from - a bogged miner, pulling it out with a shuttle car.

Do you know whether there was any risk analysis conducted in relation to spontaneous combustion?-- No, I don't think so. I have never heard of that one.

Is this the case, or was it the case at Moura No 2 until 7 August, that management expected men to go underground whilst a sealed area went through the explosive range unless they protested?-- Well, I have been there since 1990, and in 1991 when they had the incident with 5 North it was only after concerns were raised by certain people that the people were brought out of the mine. It wasn't a management decision to bring them out.

Well, the men have to protest before they are allowed out by management, that's what I am suggesting to you?-- Well, certainly on that occasion it was concerns raised by deputies and the men came out of the mine that day, but just while it went through the explosive range, as far as I can remember.

Yes, all right. If Mr Mason on 7 August or 6 August when you were speaking to him didn't know - if he didn't know of the risk which was emerging and the necessity, in your opinion, to evacuate the men, certainly he knew when you told him what you were going to do?-- Well, I mean, I told him that we wouldn't be going to the drill while it went through the explosive range.

You know of no systems that exist at Moura No 2 laid down by management whereby one could look backwards in time over milestones for the panel which might alert to danger of heating?-- No.

Has there been instances of flooding of panels at Moura since you have been there?-- 5 North was flooded, as far as I can remember.

Obviously, I suggest, to put out any heating?-- Well, I'm not sure if 5 North was flooded to stop heating or was just used as an area to put water into.

All right. Do you have experience of flooding panels to stop heating prior to Moura?-- I have experience of inertising areas but not flooding them.

Is that with nitrogen?-- Nitrogen, yeah.

Just tell us about that for a moment. Is that just a situation where in a suspect panel it needed to be made - nitrogen was pumped in?-- Yeah.

And are the seals erected first and then it's pumped in?-- Yeah.

All right. That could have been done here, could it not, in relation to 512?-- It could have been done.

I think you have told one of my learned friends about towards the end of July there came into existence directions about daily readings of various gases; that's right, isn't it?-- Yeah.

And at about that same time there came into existence, did there not, a system whereby wet and dry bulb temperatures had to be taken and reported?-- I am not sure if that was part of it or not.

Was it the practice, in your experience, over the life of 512 up to about 23 July that there was a daily taking of wet and dry bulb temperatures?-- No, no. I don't think that they took them every shift or every day up to that point in time.

What I am suggesting is that that in fact became the case around about 23 July?-- As far as I can recollect, Steve Bryon was a temporary ventilation officer at that time and I think he decided to - instead of doing just a CO make, a weekly CO make, they decided to - I don't know if it was a shift - every shift or every day, I'm not sure.

You talked about CO, but I am talking about the wet and dry bulb?-- I am not sure if that was involved in it or not.

Thank you. In your experience from England, is there any other method of degassing coal rather than the piping system and the end result dusty coal? Is there any other system?-- Well, you can - you can water infuse after you have drained the methane out of it to get the moisture back in the coal. In fact, we did that in 5 South for a period of time and in fact in 510 previous.

Have you anything you can help the Inquiry with as to why this system was adopted in relation to 510 and 512 and monitor points, this borehole system?-- What, the methane drainage?

Yes?-- Yes, it was to drop ----

Obviously it's to drop the methane?-- Yeah.

The end result is a dustier coal in this mine?-- It is dusty because the moisture has been removed, yeah. I mean, that could affect - that could affect the spontaneous combustion.

Yes, that's exactly what I was asking. In the history of No 2, so far as you know it, this was a relatively short panel?-- Yeah.

Do you know why?-- Just a short term to get coal out, I think.

I am just suggesting to you it was because of a known propensity for spontaneous combustion, hence the shortness of the cut; do you know that or not?-- I don't know that, no.

Do you know a means of detecting the difference between haze in the atmosphere and diesel smoke?-- Well, diesel smoke has got a bluish colour to it.

What about oxides of nitrogen?-- Oxides of nitrogen, I think, they have got an orange tint to it.

I beg your pardon?-- It has got an orange colour, oxides of nitrogen. I couldn't swear to that.

All I am suggesting to you is that oxides of nitrogen does not come off coal, it comes off diesel and other products. Do you know that?-- Well, it is given off from exhaust fumes, I know that.

But not from coal. If you don't know say so?-- No.

But there is a capacity on the gas chromatograph to test for oxides of nitrogen and, indeed, the Unor or don't you know?-- On the Unor? There is no oxides of nitrogen test on that. I don't think there is on the chromatograph either, not the way we had it set up.

Is there no way to test for oxides of nitrogen in Moura No 2?-- Yeah, there are Drager tubes.

Who keeps the sling or the whirling psychrometer usually at No 2, or kept, I should say?-- The ventilation officer.

Before 7 August?-- Ventilation officer, but I think there was one - I'm not sure if there was one on site or not in 512.

When Mr McCrohon spoke to you on - was it the 6th, 6 August? Yes, you had a conversation with Mr McCrohon, George McCrohon. Did he tell you about a stink?-- I thought he told me about a stink.

Just a few matters more. Can you help you the Inquiry as to whether there has been some replotting in recent times of the CO graph?-- Yeah, there was a replotting afterwards.

By whom, do you know?-- I think it was someone from ACIRL. Just pointed out that the way they had got the graph plotted, that he had intermediate points placed in it. Apart from the

weekly ones there were spot sample points put in it and the effect of that was to lower the grading of the graph which looked as though the graph was a less steeper grading trending upwards.

Much like the man who has a normal temperature on one day and a week - in the middle of a week has a temperature of, say, 100 Fahrenheit and then at the end of week - it just flattens it all out?-- That is what they were saying, I think, yeah.

Was there some pressure to get coal out in 512 or generally at Moura No 2?-- There was always pressure to get coal out because we had to justify - we had to justify the continuance of the mine, you know. To get to improve coal production, that was the only way we were going to get new machinery.

Well, is that what you were told by management?-- More or less, yeah, yeah.

Yes, thank you, Your Worship.

WARDEN: Thank you, Mr Morrison. We won't finish you, but you may start.

CROSS-EXAMINATION:

MR MORRISON: When you came to Moura you came in 1990; is that right?-- That's right.

You did a full induction course?-- Yeah, I did an induction course, yeah.

What did it include in terms of general topics?-- Oh, mine ventilation, manager's rules, etc, of the mine, transport rules.

Risks underground?-- Yeah, risks underground, yeah.

Ignition risks underground?-- Ignition risks.

Spontaneous combustion?-- Well, that was part of it, yeah.

Thank you. Now, you already knew something about spontaneous combustion, did you, from your England days?-- Yeah.

So, you were one person, at least, at this mine with experience already in spontaneous combustion?-- I have experienced conditions where spontaneous combustion has occurred, yeah.

On a day-to-day basis in Moura No 2 - in your years on a day-to-day basis, it was not something you had to deal with, was it?-- A seam liable to spontaneous combustion you have got to - it has got to be - it has got to be well monitored.

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Got to be kept in mind and monitored, hasn't it?-- That's right.

On a day-to-day basis you didn't walk around having spontaneous combustion events, did you?-- No.

I mean, the events you had to deal with were things like cable flashes; is that correct?-- Well, cable flashes have occurred, yeah.

You have never dealt with them in this mine, have you?-- I have never been in a section where there has been a cable flash, no.

But you know of it?-- I know of it, yeah.

There are other things you have to deal with such as machinery breakdowns?-- Yeah.

You have experienced that?-- Yeah.

You had for some time been on the drill crew, hadn't you?-- Yes, I had, yes.

In 510?-- Yeah.

You were usually with several men?-- Yeah, there was two drillers and a deputy, but there is a bit of a rotation between three people.

But essentially you had the same crew all the time?-- More or less the same crew all the time.

You would only go to other sections when you had to do weekend work basically?-- That would - that's the case, but the drill was down for quite a bit, periods of time, and I did get around the mine for a fair bit.

Mostly you were in the drill range and in other sections on weekends; correct?-- That's correct, yes.

Weekends are non-production; is that correct?-- No, it is not correct all the time, no, because they used to produce coal on Saturday mornings sometimes and Sunday mornings sometimes.

Did they do so in 512?-- Yes, in periods of time, yes.

Most of the time you were on as the deputy in 512 was on a weekend; is that right?-- The majority of times, yeah.

If we add up your reports, out of, what, the 14 odd times you were there all but say three or four were on a weekend?-- Yeah, that's probably true.

All but three or four on a non-production shift?-- Yes.

So, there were very few occasions in 512 - let's talk about 512 alone - when you were present to witness the method of mining or the effects of the method of mining; correct? That

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WIT: TUFFS N M

is true, isn't it?-- I saw enough of that panel to know there were problems.

Can you tell me the answer to my question, please? Don't answer some other question that you want to answer, just answer mine, please?-- Yeah.

There were very few occasions when you were in 512 to witness the mining method and the effects of the mining method; is that so?-- I was there for three shifts or whatever you said, yeah, that's true, yeah.

And you were a deputy during that time?-- Yes.

You knew what your responsibilities as a deputy were, didn't you?-- Yes.

One of those responsibilities was to make reports?-- Yes.

You were required to make a report on every shift?-- Yes.

And if you shared a shift with someone you would share the reporting responsibility; isn't that right? If someone - I will give you an example so you understand what I am talking about. If two deputies shared a shift in the sense that one did the first inspection and the other did the second inspection they would each fill out part of the report?-- That's correct, yes.

So, for instance, when you took over from George McCrohon giving him the chance to leave the section and go up to the surface, by rights you should have put in a report things that concerned you?-- I wasn't statuted - I wasn't covering that section.

We are not talking about statutes now, we are talking about your responsibilities as you perceived them as a deputy. Wouldn't that mean that you should put into the report anything that you saw of concern during that time you were down?-- I saw - I reported - well, I didn't report it as far as putting them down in a report goes.

No, you didn't?-- No.

Did you?-- No, not at that period of time, no.

No, but your perception of your responsibilities as deputy would have told you that you should have done, wouldn't it?-- The readings I got were ----

No, I am sorry, just answer the question, don't tell me about the readings you got. Tell me about your perception of your responsibilities as a deputy. I am suggesting to you your perception of your responsibilities as a deputy would have told you that you should have put something in the report if there was a matter of concern; isn't that right?-- There was a matter of concern about - I could walk around that mine if and there was a matter of concern I could have reported anything, but why would I?

Excuse me, can you just answer the question? Are you telling me, no, that you did not have a perception that you were required to put in a report a matter you saw of concern; is that what you are telling us?-- I didn't have a concern in what they were doing.

No, we are not just talking about what they were doing, we are talking about the panel, your perception of what was going on in the panel. Are you telling me you did not appreciate or have a view that if you saw something of concern about the panel that you should put that in your report?-- Most of the times I - in fact, nearly all of the times I have seen things which concern - which is of concern to anybody I have put them in reports.

Yes. Can you answer the question, please, or have you forgotten it?-- I didn't write a report out of that one because there - I was there for an hour while someone else went out for a break.

Can you answer the question, please, or do you want me to ask you again?-- Ask me again.

Did you not have a perception about your own responsibilities that told you if you saw something of concern in the panel while you were there you should put it in the report?-- Why would I need to put in the report?

Excuse me, are you able to answer the question or are you having difficulty understanding it? The answer is yes or no, you either had that perception or you didn't. What's the answer?-- No.

Thank you. So, this means, does it not, that your perception was that not all things that you saw of concern needed to be in reports; is that right?-- There are certain things you see what maybe word of mouth is better than writing it down.

Yes, are you going to answer my question?-- As far as ventilation and roof and size and all the other deputies requirements are concerned, yeah.

Sorry, can you answer my question? Does that mean there were things of concern that you observed or saw or experienced but which you did not consider would go in a report? Is the answer yes or no?-- No.

Now, you made out a report for each occasion you were in 512, didn't you?-- Yes.

I think you said to someone earlier that on every occasion you were down there there was this recirculation problem?-- No, I didn't say "every occasion".

You didn't mean to indicate that if that's what you said?-- I didn't say "every occasion", on several occasions.

I think you said on every occasion you were down there there

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was a ventilation problem?-- I didn't say "every occasion".

If you did you certainly didn't mean that?-- I didn't mean every occasion.

No, because that was not true?-- No, that was not true, no.

There were several specific occasions when that occurred, but otherwise you didn't experience such a problem; is that true?-- That's true, yes.

We should rely on your deputies report to demonstrate that?-- Yes.

Because to the extent you did write anything in the deputies report you did write matters of concern?-- Yes.

Can we look at them then? Your first report for 512 was on 8 May 1994, No 3082; is that correct?-- Yep.

On that day you noted very small amounts of methane on both inspections, .1 per cent?-- Yeah.

And ventilation you described as adequate?-- Yeah.

There is only one occasion on which you have used a word better than "adequate", isn't there, maybe two, you have described ventilation as "good" on a couple of occasions?-- I could have done, yeah.

Does it mean the same thing?-- No.

Well, we will explore it when we get to it. That bears your signature countersigned by Bob Newton; is that right? That first report - excuse me, I am looking at the first report?-- Yeah.

It does. Now, you described on both occasions of inspection on that occasion, afternoon shift on Sunday, in ventilation "adequate"?-- Yes.

Sunday afternoon shift is non-production?-- Yeah.

Next report, 3906, Monday afternoon shift, 16 May, do you see that report?-- Yeah.

You described the ventilation on each occasion of your inspection that day as adequate?-- That's right.

Now, I notice that under your general comments you note that miner cable was being hung?-- That's right, yeah.

On the second inspection crib tables were being moved, roads were being cleaned and so forth?-- Yeah.

Do I take it from that this was on a non-production Monday where maintenance work was being done?-- Yeah, must have been, yeah.

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That was again signed by you and countersigned by Bob Newton?-- Yes.

The third one is 3920 on 21 May. On that occasion you described the ventilation on each inspection occasion as adequate?-- Yep.

On these inspections did you go down the top return to the back of the panel?-- No, I don't think I did, no.

Where would you inspect, simply to the goaf edge?-- I would have inspected to the goaf edge and in the top return.

Now, on that occasion also minuscule amounts of methane, .1 per cent; extremely low, isn't it?-- It is low, yeah.

Next one is 3925 for 22 May. I will just establish about 3920, the previous report, 3920, for 2 May was a Saturday day shift; is that right?-- Yep.

And non-production?-- That's right.

Then 3925, Sunday afternoon shift, 22 May, again non-production; correct?-- Yeah.

On each occasion of inspection that day ventilation described by you as adequate?-- Yeah.

No suggestion at all so far, is there, in your reports of any difficulty with ventilation in this panel?-- No.

And this is during the time when extraction had commenced and proceeded for, at this point, nearly a month; is that right?-- Yes.

Next report, 3963, 4 June, Saturday day shift, no production again, isn't it, 3963?-- Yep.

Non-production?-- That's right.

Saturday day shift, each occasion inspection ventilation adequate?-- Yeah.

3966, 5 June, Sunday afternoon shift, non-production again; correct so far?-- Yeah.

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Adequate each time of inspection?-- Yep.

Minuscule amounts of methane?-- Yep.

Next one is 13 June, 3990, first occasion when you've said anything other than adequate for the ventilation; that's right?-- Yeah.

Can you read the copy you've got there?-- I can't read it.

I'll give it to you in a moment - I can give it to you now. I hand you the original. I think you will see that what you wrote was that the ventilation on the first occasion was adequate in the top return, slow or stop on the bottom return, and you corrected that by opening up a bag in front of the miner slightly and that fixed it?-- Yeah.

We can see it fixed it because by the second inspection you did on the same shift you've described the ventilation as adequate?-- Yeah.

By which you mean adequate throughout the panel, isn't it?-- Adequate in the intakes and the return in the areas I inspected. I didn't inspect the goaf.

I might separately tender that because the copies are very hard to read. I tender a report 3990 by Mr Tuffs dated 13 June 1994.

WARDEN: Exhibit 54.

ADMITTED AND MARKED "EXHIBIT 54"

MR MORRISON: That's the first occasion during all the times you might have been in 512 when there was less than adequate ventilation?-- Yeah.

That was a very temporary thing because whatever you did you fixed it?-- Mmm.

18 June is the next one, 3405, and this is Exhibit 53. This is the one you were taken to before. You took a number of methane measurements on that first inspection?-- Yes.

That's a Saturday afternoon non-production?-- Yes.

The methane wasn't high, was it?-- I've seen higher readings in the mine, yeah, than this, yeah.

Not particularly high?-- No, but it was -----

It wasn't the methane you were concerned with?-- No, it was the ventilation I was concerned with.

"Air in the main supply road is coming out of the goaf and

XXN: MR MORRISON

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passing over GEB", that's the gate end box?-- That's the gate end box.

As a result you isolated it?-- Isolated the gate end box.

What did you do to direct the ventilation? Anything?-- All the stoppings were in place as far as I could see.

So you did walk down the return on this occasion, did you?-- No.

So you didn't see the condition of any of the -----?-- I went into the top return and the air was good coming up the return, but I never went down further, no.

There were segregation stoppings put up in this panel from time to time, weren't there, segregation stoppings between No 2 and 3 roadways between the supply road and the belt road; isn't that right?-- Yeah.

You were aware of that, weren't you?-- Yeah.

You didn't check any of those?-- I did check them, yeah.

They were all intact?-- They were in position when I was down there, yeah.

Stone dusting was going on on that occasion?-- Outbye of the section, yeah.

Why would that prevent you from doing a second inspection?-- You couldn't see.

You couldn't see?-- No.

Was there dust blowing in through the 512 Panel?-- The dust was coming in from outbye, yeah.

You've noted 6 ppm CO on the first occasion?-- Yeah.

That's for the Drager tube?-- That was the Drager.

Are you urging on your cautious side again? That was probably five, but you said six?-- I don't know. I can't remember.

You would have no genuine memory of this, would you?-- What I said before was if I thought it was above five and closer to six I would say six, not five.

Now, the next report is 3408, 19 June, next day. Sunday afternoon shift non-production again; do you see that?-- Yeah.

Ventilation is correct now, isn't it?-- Yeah.

You reported on both occasions that it was adequate?-- Yeah, in this one, yeah.

Whatever it was you saw the previous day had obviously

ceased?-- Well, it had because I can remember reading the deputy's report who followed me and they are supposed to have erected stoppings which forced the air down the main supply road.

By 19 June it was fixed?-- It was adequate, yeah.

At this point in time - we are talking about 19 June when you made this report - there was no thought in your mind that there was anything untoward going on in this panel, was there?-- Apart from the re-circulation problems, no.

You didn't have any thought in your head that this might be an area where there was a heating?-- Not that period in time.

Even an incipient heating?-- No, not that time, no.

The next report is 3422, 24 June, and on this occasion you noted some difficulties with ventilation. This was a Friday day shift?-- Yeah.

Does that mean it's production?-- This was a production shift.

You've noted in fact that it was production on the report, haven't you?-- Well, it says "Mining bottom rib and bottom return.", so it's a production shift, yeah.

You found only .4 percent methane in the general body in the man and supply road?-- Yeah.

In that area back through to the gate end box?-- Yeah.

Nil found in the intakes after bag erection. Now, that meant nil methane found in the intakes?-- Nil methane, yes.

You described the ventilation as adequate. Do you see that directly below that line that you've been talking about? That was your description of the ventilation on that occasion, isn't that right, the next line?-- That's after bag erection, "adequate", yeah.

I'm reading the word "adequate", I'm not reading it wrongly, am I? It says "adequate"?-- Yeah.

That's what you wrote?-- Yeah.

That was after you had put a bag up at the prep seal in the bottom return?-- Actually it wasn't the bottom return. It was bottom -----

Does it say "bottom return"?-- It does, yeah.

Why did you write "bottom return" if it wasn't right then?-- Because it's just a mistake I wrote down. It was at the bottom main supply road across the prep seal there, not the bottom return.

The bottom of the man and supply road. Point with the laser

where you are talking about. You put up a bag across -----?-- I don't think I put it up actually. It was someone else. I reported the incident and someone else went out and bagged it across which improved the ventilation in the top main supply road.

You reported this to who? An undermanager or a ventilation officer?-- I can't remember, can't recall.

You wouldn't have -----?-- There was a bag erected anyway. I just can't remember -----

The result of that simple operation was "ventilation now going the correct way", you wrote that?-- Yeah, it did improve the ventilation.

You wrote down "ventilation now going correct way", didn't you?-- Yeah.

That led to you writing down "adequate"?-- Yep.

The next report is 3432, Monday afternoon shift on 27 June. Now, am I right in saying that on the occasion of this inspection, a couple of days later, on each inspection ventilation was found by you to be adequate?-- Yeah.

The next report is 3435, 28 June. It's only the next day from the previous report, Tuesday afternoon shift on 28 June. It seems like it was non-production?-- It was non-production due to the miner being buried, yeah.

This was the occasion when the miner got pinned by a roof fall?-- Yeah, that's right.

To the edge of a rib?-- Yeah.

When you say "the miner was pinned", you don't mean to indicate any person was trapped, you mean the continuous miner?-- The continuous miner, yeah.

That was pinned by a roof fall?-- Yep.

And it was the roof fall which damaged the Holywell stoppings; isn't that right?-- I presume that that was the roof fall which damaged the Holywell stoppings.

You couldn't see any other explanation for that, could you?-- No, no.

Therefore when you wrote "adequate apart from the top of the man and supply road", that qualification was due to the damaged stoppings?-- Well, that's what I assumed at that time, but there wasn't any flow at the bottom there at all anyway.

You made the assumption at the time, your assessment was it was damage to the Holywell stoppings that caused that difficulty?-- Yeah, it assisted it. Didn't make it any better.

Well, the previous day you had written "adequate". The

previous day you had written "adequate" for your inspections of ventilation. You hadn't indicated anything other than adequate?-- Well, yeah.

The only thing that had changed between that day and this is there had been a fall that had damaged some of the stoppings, isn't that right?-- Yeah.

So, isn't it true to say your assessment on the day was it was the damage to the Holywell stoppings that had caused the difficulty you perceived that day?-- Possible, yeah.

In fact you write down on the second occasion "due to damaged stoppings bottom return", isn't that right?-- I have written that down, yeah.

Next report is 3447, 2 July, Saturday afternoon shift, non-production; is that right?-- Yeah.

On each occasion of inspection just a few days after your last one adequate?-- Yeah.

And again very, very tiny amounts of methane, only 0.2 at the most on the first inspection and nothing on the second?-- Yeah.

Now, the next day you made your next inspection on Sunday afternoon shift, 3450, 3 July; is that right?-- Yeah.

Sunday afternoon shift, non-production; correct?-- Yeah.

And on each occasion of inspection on that day you had discerned that the ventilation was adequate?-- Yeah.

The next one that you probably can't read is 17 July, number 3717, Sunday afternoon shift. Don't try and read it, Mr Tuffs, I will give you the original. Just read out the word you wrote for ventilation on each occasion of inspection then?-- Good.

Good, yes. No qualifications expressed on that at that time, were there?-- No.

I tender the report 3717 dated 17 July 1994 by Mr Tuffs.

WARDEN: Exhibit 55.

ADMITTED AND MARKED "EXHIBIT 55"

MR MORRISON: The next occasion of inspection was on 20 July. I think you can probably just read this one. 3725, a Wednesday day shift, non-production. You can see the words, "General comments: maintenance being carried out."?-- Yeah.

And the words you wrote for ventilation on that occasion, again on each occasion of inspection, was "adequate"? You will have to respond verbally?-- Yeah.

The next inspection was a few days later, 30 July 1994, 3756, Saturday afternoon shift, again non-production; correct?-- Yeah.

And you can probably just read the word for your description of the ventilation on each occasion of inspection then, it was -----?-- Adequate.

Adequate, yes. The last report might be the most difficult of all to read. It's dated 31 July 1994, Sunday afternoon shift. That means it's non-production?-- Yeah.

And you probably can read the word you wrote for the description of ventilation on each occasion of inspection that day?-- Yeah, adequate.

Adequate, yes. They are all your reports, aren't they?-- Yeah.

In respect of 512; is that right?-- Yeah.

And with the exception of the two or perhaps three that I have drawn your attention to, all of the rest describe the ventilation from early May through to the end of July as adequate or good?-- Apart from them, yeah.

Thank you. I will tender the bundle as one exhibit, if I may. It should have written on it, for the panel's assistance, the document number from where the reports are drawn.

WARDEN: I will mark that Exhibit 56.

ADMITTED AND MARKED "EXHIBIT 56"

MR MORRISON: I am sorry, it doesn't. Can we provide those numbers or do you want me to read them into the record?

WARDEN: Provide them, thanks.

MR MORRISON: Now, you say you watched the CO make graphs every week for 512?-- Yeah.

That was because of your interest by reason of the fact that your crew was positioned inbye 512?-- That's right.

That's really the source of any concern you had about your position, was that you were inbye 512?-- Yeah, mainly, yeah.

Your concern was being positioned where you were, your line of retreat had to pass outbye the seals of 512?-- Yes.

And that's your true concern about 512 around the sealing time, was simply that concern, isn't that right?-- Apart from the CO make going up. Yeah, my main concern was the retreat.

And that's really all it was, because you were going to be inbye 512, you had a line of retreat that you wanted to protect, isn't that right?-- That's not my only concern. I had concerns that the CO make was trending upwards.

Yes, but it hadn't taken off, had it?-- It hadn't taken off until it was sealed. No, not previously, no.

And it hadn't reached the point that you told us about which, in your experience, was a sign of the heating, had it?-- It was showing cause for concern.

Excuse me, had it reached the point which you told us, in your experience, was a sign of the heating where it took off?-- No, it hadn't reached that point yet, no.

No. You didn't express the view to anyone at that time that that graph was showing such a sign, did you?-- There was discussion amongst ventilation officers and deputies about the CO make trending upwards.

Excuse me, I am sorry. You didn't express the view to anyone, did you, that the graph had that sign?-- What, the exponential sign?

Yes?-- No, because it hadn't reached that point.

No, you didn't have the view that it had that composition and you didn't express any such view to anyone about that, did you?-- I had expressed concern that the CO make was trending up.

Are you having difficulty understanding the question?-- That I didn't mention the exponential -----

Yes?-- No, I never mentioned that, no.

And up to the time of sealing when you were watching it every week, in fact the graph was mirrored by your own calculations?-- Yes.

You weren't reading anything in your own calculations that was contrary to what was being put up on the graph?-- No.

So, from week to week even though the graph was only done on a Friday, in fact the graph was behaving as your measurements indicated it should?-- The readings I was getting were the same as what other people were getting, yeah.

So the graph was in fact accurate, wasn't it?-- The readings were accurate, yeah.

And that graph was done regularly, wasn't it?-- Yeah.

271094 D.7 Turn 11 mkg (Warden's Crt)

And posted prominently?-- Yeah.

In a number of places around the mine?-- Yes.

Not the least of which was the deputies' cabin?-- It was posted there, yeah.

Right at the noticeboard where the deputies sit at the table?-- Yeah.

And all the deputies were aware of the fact that that graph was put up there from time to time, weren't they?-- Yeah.

It was the topic of conversation?-- People commented on the rising CO make, yeah.

But the fact of the graph and what it meant was a topic of discussion between deputies?-- Yeah, it was, yeah.

And not just deputies, with miners as well?-- Yeah, some miners would have been aware of it, yeah.

You mentioned earlier that some of the miners at Moura were very, very experienced with the Moura seam?-- Yeah.

This was in answer to someone who had asked about whether anyone had been trained in relation to spontaneous combustion?-- Yeah.

And those people you anticipated and expected had a degree of experience in spontaneous combustion features?-- Yeah.

That's what you understood and accepted as being the position, didn't you?-- Yeah.

And it would be reasonable to say, wouldn't it, that most people operated on that basis; that is to say, that those miners with a lot of experience in this seam didn't need formal training to teach them things about spon com?-- I think a lot of the miners knew it was bad practice, but as far as leaving part of the coal around and stuff like that -----

They knew features that might be indicative of spontaneous combustion, didn't they?-- Yeah, they would be aware of that, yeah.

Some of them had been through Kianga?-- That's right.

Some of them had even been through the 1986 incident?-- Yeah.

So, there was a wealth of experience to draw on if you were a deputy in terms of talking to experienced miners, wasn't there?-- Yes.

Now, when the question of the graphs was being discussed was Mr Campbell part of the people who discussed the graph?-- I wasn't on the same shift as Ray Campbell so probably I wouldn't have discussed that with him. I was on a different shift to Ray.

Right. Now, you were really doing your own CO make calculations for your own private purposes, effectively, weren't you?-- I did them a couple of times, yeah.

Is it only a couple of times or did you do it more frequently?-- No, a couple of times.

Did you do them while Allan Morieson was on leave?-- No, no, I didn't do them when Allan -----

Did you do them in conjunction with Mr Bryon?-- No.

And no doubt you went to vent station 46?-- Yes.

In terms of doing your calculations in 512?-- Yes.

And you said earlier - I think I am paraphrasing it correctly - that you were of the view at the time that the CO make position was being, in fact, carefully monitored?-- It was being monitored, yeah.

You were not concerned about that aspect?-- No.

You don't mean to suggest that you were keeping an eye on it while the mine management weren't?-- No, I am not saying that at all, no.

In fact, in so far as the CO position was concerned your view at that time was, and still is, that people were, in fact, taking steps to monitor it and log it and record it?-- Yes.

And that's what you would expect them to, do wouldn't you?-- Yes.

Your Worship, I am about to pass onto another point.

271094 D.7 Turn 12 gc (Warden's Crt)

WARDEN: I though you might be. This might be a convenient time to take the lunch break. Can we resume at 2.15, please.

THE COURT ADJOURNED AT 12.52 P.M. UNTIL 2.15 P.M.

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WIT: TUFFS N M

THE COURT RESUMED AT 2.16 P.M.

NEIL MARTIN TUFFS, CONTINUING:

MR MORRISON: When we were last discussing matters we were discussing ventilation in 512; can we just establish one thing? It was not in your mind a question of whether to ventilate the 512 Panel and goaf, it was just how to?-- Yeah.

Do you understand what I'm saying?-- Yeah.

You are not going to suggest that they shouldn't have ventilated?-- No.

Now, you say in your statement that the CO make was slowly trending upward; you stand by that, don't you?-- Yes.

You do?-- Yes.

And that was not only on the published CO make graph, but that is in accordance with your own figures?-- Yeah.

You say then in your statement, "This was telling me that there were early signs of a heating." Now, you don't stand by that, do you?-- Above 10 - I know what you are saying.

Can you answer the question then? You don't stand by that statement, do you?-- There is cause for concern when it gets before 10 litres per minute.

But it was not telling you and you didn't think at the time that there were the early signs of a heating, did you?-- I thought it was trending towards that.

But you didn't think it at the time when it was doing that, did you? The answer is no, isn't it? You didn't think that?-- If the section - yeah, fair enough.

Because later on something might happen. You had one view, and later on if things continued in a particular way, then that might lead to a different conclusion?-- The way the graph was going, yeah.

But at the time we are discussing you did not consider that there was early signs of a heating; that's true, isn't it?-- That's true, yeah. Fair enough.

Because if there had been, one thing is certain above all else, you would have gone and told somebody, wouldn't you?-- Apart from - yeah, yeah, I would.

Because that's your duty, not only to your miners, but to the mine generally, isn't it?-- Yep.

And you knew that you had the power and the responsibility,

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like all other deputies did, to shut down the operations if there was danger to men, didn't you?-- Yeah.

You were conscious of that at the time, that you had that power and that responsibility - not just the power, responsibility went with it as well, to shut down the operation if you considered it was dangerous to men; isn't that true?-- Yeah.

You did not at any time shut down the operation, did you?-- No, no.

It must follow then surely, would you agree with me, that you did not consider at any time that there was danger to the men?-- Not before the sealing had finished, no.

You say "not before the sealing", well, the next opportunity you had to speak up was the next morning at the union meeting, wasn't it? That's correct, isn't it?-- Yeah.

And there were upwards of 100 people at the union meeting?-- I don't know how many were there.

Hey?-- I don't know how many were there.

A large number though?-- A few, yeah.

Let's not under exaggerate as well as over exaggerate. A few is two or three; are you suggesting two or three or -----?-- I'm not suggesting anything.

There was a lot of people there?-- There was 50 plus there.

You would never describe "50 plus" as a few, would you?-- No.

Amongst other people there were George Ziebell?-- Yep.

He's in fact a union representative, isn't he?-- Yeah.

And he gave what might be called a report on the fact that the mine had been sealed?-- He mentioned that there was - men had been brought in to seal the section on Saturday afternoon and they had gone over the overtime limit and would the branch okay it.

He had already made that decision the day before, hadn't he?-- Yeah.

And this was seeking formal ratification of what he had already done?-- Yeah.

He told those assembled - and some of them already knew it had been sealed like you, you had worked on it?-- Yeah.

Others didn't know that because they hadn't been there and he told the meeting that it had been sealed?-- Mmm.

And the circumstances in which it had been sealed?-- Yeah.

It's true, isn't it, that not one person spoke up to say that there was any difficulty and that the men should not go down; isn't that true?-- No, nobody mentioned that, no.

Certainly you did not, did you?-- I didn't mention it because there was people aware of the situation before it got - before the final sealing. There was people who were on the sealing process who were at the meeting.

Including deputies?-- Yeah.

And you as well?-- Yeah.

Union check inspectors?-- Mmm.

Yes? That's a yes?-- Yep.

None of those persons raised any question about the men going down the mine, did they?-- No.

And you did not because you thought there were sufficient people around who were aware of the situation and they would speak up if anybody needed to speak up; is that it?-- I'm saying there was enough people aware of the situation without me having to say anything.

I see. Does that demonstrate your normal nature? If there are other people around who know of something that you think you know about there is no need to speak up, you just sit quietly?-- I only speak - if I think I've got to speak up I will speak up.

You didn't think you had to speak on this occasion, did you?-- George had already stood up and said they've had to close the section because there was a stink and a haze.

Did Mr Ziebell actually say that to the meeting?-- I can't remember the exact words.

Please try because it's important. Did Mr Ziebell say to the assembled union delegates and miners and everybody else, and members, that it had been sealed because there was a stink and a haze?-- Possibly not. I can't remember his exact words. But it was something to do with an accelerated sealing process.

You can't remember precisely what he said about that?-- Can't remember precisely, no.

You didn't think the circumstances were sufficient for you to speak up, did you?-- I thought there was enough people there aware of the situation.

Sorry, can you just answer the question? You did not consider that the circumstances were sufficient for you to speak up?-- No.

Consistent with what you've said this morning you would want more than a mere rise in CO make to indicate heating; isn't

that right?-- Yeah, probably other signs as well.

You've mentioned in relation to CO that you would expect to see it - I think your own terminology is you would expect to see it take off, and someone else used the term of an exponential rise?-- Yeah.

That was in fact your state of awareness then and still is, that that is what you would expect to see as a CO indicator of a heating?-- Yeah.

You had not seen that, had you?-- No.

No-one else suggested to you that they had seen that?-- No.

In the week before the sealing you say in your statement that you discussed sealing arrangements with your methane crew?-- Yep.

What sealing arrangements were they?-- That I wouldn't take them underground while -----

Sorry, what were the sealing arrangements that you discussed, not what you told them you would do eventually. What were the sealing arrangements you discussed?-- The arrangements for sealing 512.

What were those arrangements in the week before the sealing?-- I didn't know when it was going to be sealed, you see.

No. There are no arrangements that you discussed then, are there?-- I didn't make any sealing arrangements, but I talked to them what would happen when sealing the section.

You say you discussed the sealing arrangements for 512; you don't mean that, do you, because there were no sealing arrangements for 512 at that time, were there?-- They were preparing. We were preparing to seal it. I didn't know exactly when.

What had they done in the week before the sealing by way of preparation? Don't tell me the prep seals because they were done a long time ago. What had they done in the week before that you say was the preparation constituting these arrangements that you refer to in your statement?-- I know what you are trying to infer, but what I'm saying -----

All you need to do is answer the question. I don't need you to tell me what -----?-- What I am saying the sealing arrangements - what I was meaning was once the sealing had been done, not how they had arranged how to seal.

So where you say in your statement, "I discussed the sealing arrangements for 512 with my men, with my methane drilling crew and indicated after sealing I would be doing some things.", you mean one in the same thing?-- Yeah.

Is this your choice of words in this statement or did you tell someone what your view was and then they put it into words for

you?-- These were my words.

Your words, all right. Now, where was this conversation that you had with Potter, Bishop and Sonter?-- At the drill site.

Down in 510?-- Yeah.

Can you remember which day it was?-- I can't remember, no.

Did you go and tell anyone in the management side of things that day about your decision?-- No.

Why not?-- Because it wasn't close enough to the time when I would need to tell anybody.

It was an important decision in your mind, wasn't it?-- Yeah.

Important in relation to safety, wasn't it?-- Yeah.

Well, why wasn't it important enough to tell management about it?-- I did tell them.

Not that day you didn't?-- No, not that day.

Nor the day after; isn't that right?-- Yeah.

No particular reason for that except that it wasn't time enough to tell them; is that really it?-- No.

You said the time hadn't come for sealing?-- That's right.

So the time hadn't arisen to tell them, is that what you are saying?-- Yeah.

You would tell them in your own good time about this important decision that you and your men had made?-- I am in charge of the blokes down there.

Yeah?-- If I think there is a safety issue, well, I'm going to bring it - what I am saying to you is if I think that something is going to affect the fellows down there, it's my duty as a deputy.

To do what?-- To look after them.

By doing what?-- By explaining what I was going to do when the section was sealed.

And then reporting it. Wouldn't you have to report your decision or you are just not going to turn up at work that day?-- That was talk between three or four blokes what we should do.

Are you suggesting it wasn't some sort of formal arrangement, just -----?-- It wasn't a formal arrangement, no.

I see. If your concern was what might happen to your men down in 510, whatever that concern was would apply to other men in the mine, wouldn't it?-- Yeah.

You did not consider, did you, that you had a responsibility to the other men to take some step, is that what you are saying?-- I made my point on the evening of the sealing.

Yeah, but only in relation to you and your crew?-- If I say, "The drilling crew aren't going to go underground", I wouldn't have expected anybody else to go either.

Why didn't you speak up, Mr Tuffs, and say "I don't think men generally should go down"?-- I didn't have a problem with other sealing arrangements when we sealed the sections before which didn't show signs of anything, any abnormal signs.

Yes?-- Like 401 or 402, they never indicated anything was wrong in there.

According to you, according to your story, the only question you raised was the fact that you and your crew wouldn't be going down the next time they were on shift; isn't that right?-- No, I didn't -----

Your crew wasn't due back until Monday; isn't that right?-- Yeah.

You and your crew were not due to start until day shift Monday; isn't that right?-- Afternoon shift Monday.

Afternoon shift Monday, so according to your version of events all you were saying to Mr Mason was, "Come afternoon shift Monday me and my crew won't go down."?-- Not unless it's gone through the explosive range, no.

Did you say that to Mason, did you?-- Yeah.

That if it had gone through it would be okay?-- Yeah.

Are you seriously telling me you said that to him?-- I said that I wouldn't go down the mine before it went through the explosive range.

When you arrived to work on the sealing arrangements, that was an unusual shift for you in the sense that you had been called in?-- Yeah.

And before the men went down they were assembled near the start point, weren't they?-- I can't recollect. They would have been, I suppose.

Mr Mason addressed them, didn't he?-- I can't remember.

You were there, weren't you?-- I can't remember.

I suggest to you that Mr Mason called all of the men together at the start point, all deputies, everybody, and addressed them as to what would now take place in relation to the sealing; you recall nothing of that?-- I haven't got a clear recollection of it, no.

Mr Mason explained that the sealing would have to be started and continued until it was finished; do you remember any of this?-- I cannot remember that, no.

Then the men went down and you approached Mr Mason before you went down the mine at the start of the sealing. Do you remember doing that?-- No.

You went to see Mr Mason before you went underground that day?-- I may have seen him before I went underground.

And what you said to him was, "What are your intentions in relation to my drilling crew come Monday?", words to that effect. "Excuse me, George? What do you intend in relation to the drilling crew on Monday?"-- That might have been to do with manpower or something else, but it wasn't to do with anything -----

You agree with me you did say words to that effect?-- I can't remember having a conversation with him before I went underground.

Well, you just embarked on an explanation on it saying that might have been to do with manpower or something. Was that pure speculation on your part?-- It's not clear in me mind at all.

You did approach him and you did say to him, "What are your intentions in relation to the drill crew on Monday?" Now, do you have no memory of doing that?-- No.

Do you deny that you did it or you don't remember?-- I don't remember.

And he said to you, "I haven't made a decision on that yet. I'll give you an answer in due course."-- I can't -----

Do you recall that being said to you?-- I can't recollect it, no.

Do you deny it -----?-- I'm not denying it. I can't recollect it.

That was the only time on that day that you spoke to Mason, that was before you went down the pit and you said, "What's gonna happen with the drill crew?", and he said, "Haven't decided yet. I'll give you an answer when I can."-- No.

That's the only time -----?-- No.

----- Mr Tuffs?-- It's not.

You have no memory at all, it seems, of anything up to the point when you went down the mine on that day. You don't even remember the gathering of men, you don't remember that Mason addressed them, you don't remember anything that he said and yet it's quite possible that what I put to you is true, that you did go and see him and said what I've suggested to you; isn't that all correct?-- I can't recollect.

Where did you have the conversation with Dick Stafford on Friday?-- Outside the bathroom.

At the start of the sealing; is that right?-- Start of the sealing? This was day shift.

Outside the bathroom?-- Yeah.

Before he and you went down or after the shift?-- This was end of shift.

And how did the topic come to be raised? Did he raise it or did you?-- I talked to him - I can't remember exactly.

You can't remember what was said?-- I can't remember exactly who initiated the conversation.

And you can't remember what was said?-- I can remember that I said that if they were going to - when the sealing arrangements occurred, when they decided to seal, that because of the situation where the drill is especially, that I didn't think it was appropriate that we should be down there drilling.

"I don't think it's appropriate we should be down there really.", and you were asking him a question or making a statement, eliciting a response, what was it?-- I cannot recollect the exact conversation I had with him, but it went along the lines that we both agreed that we shouldn't be - shouldn't go down there when the sealing process had taken place.

Because of the position the drill crew would be in inbye 512?-- That's one reason, yeah.

Well, that sounds like the only one you raised with him so far as your memory goes?-- Yeah, probably is.

All right. Nothing to do with the condition of 512 itself, simply that you would be inbye it, isn't that right?-- One condition was that 512, because we couldn't get the CO make and there had been re-circulations in the goaf, that I didn't think it was 100 per cent safe to be down there.

Just pause there. You formed this view on the Friday?-- On the Friday?

Yes, that's what you are saying, you had this view on the Friday?-- I had this view on the Friday, yeah.

Did you go and tell anyone at undermanager level about this view, this conclusion you had reached as a result of your analysis of the position? Did you go and tell anyone that this was your considered view on the basis of your analysis of the position?-- No.

Why not?-- Because the sealing - they hadn't even begun the sealing.

You knew it was about to happen, didn't you? Come afternoon shift, at the end of the shift on Friday, extraction had finished in the morning, hadn't it?-- Yeah, I think - yeah.

That's all correct, isn't it?-- Yeah.

So it was only just a matter of a short time until it was done, isn't that true?-- It was going to be done shortly, yeah. I don't know when.

And it had been the subject of the planning committee or the

planning arrangement on the Thursday?-- I don't know.

Were you not there?-- No.

I see. And you chose then not to tell anyone in management about this conclusion you had reached about the general safety of the mine, isn't that true?-- As I said to you before, I told you I based it on Saturday night.

On Friday, is that not true what I put to you, you chose not to tell anyone about your conclusion as to the safety of the mine, isn't that true?-- I was just erring on the side of safety.

Isn't it true what I just put to you? Do you have any difficulty with what I am suggesting to you? Can you not understand the words?-- Yeah, I can understand them.

Then answer the question, please. Is it not true that on Friday you chose not to tell anyone in management about your decision or your view as to the safety of the mine?-- I can't recall exactly how I felt. I didn't tell anybody.

All right. Now, notwithstanding your view that you had formed, it was not part of your consideration that management were overlooking anything, was it?-- No.

You thought things were being done and the right things were being done?-- I thought they had monitored it properly.

And they were doing the right things, weren't they?-- Yeah.

In other words, they were doing what you would have suggested be done, isn't that true?-- Up to the sealing process, yeah.

Now, you got a call from Klease on Saturday to come in as third deputy?-- Yeah.

Normally there would only be two deputies if an undermanager was present, wouldn't there?-- There is usually no undermanager present on Saturday afternoon but there is just usually two deputies work, yeah.

Mason was present; he is an undermanager?-- Not normally, no.

He had come in too?-- Yeah.

So it was overmanned in one sense. An undermanager plus three deputies, that was overmanned, wasn't it?-- Yeah.

And you were the spare - not the spare - the third deputy called in?-- Yeah.

To assist the two who were rostered on anyway?-- Well, they were looking after the sealing process and I was inspecting other parts of the mine.

And you say that what Klease told you was that there was a

stink and a haze?-- Yeah.

He did not say to you that there was a heating, did he?-- He never mentioned a heating but he said there was a stink and a haze.

And you put two and two together in your own mind?-- Well, that's enough for me.

I know that, that's what I am saying, you put two and two together in your own mind and realised in your own mind what you thought he was talking about?-- Yeah.

And yet when you got there, what you saw was a diesel haze; that's true, isn't it?-- When I first got to the - I never saw a heat haze, no.

No, and then the diesel haze cleared?-- Yeah, when the diesels stopped, yeah.

Now, let me just make sure that you don't think - anyone thinks I have been misleading you. I might have suggested to you that before the men went down that Mason addressed the men. Squires addressed the men. Does that ring a bell with you?-- Michael - whoever is the undermanager on usually calls - whatever work is to be done, they usually call them round like to tell them, that's normal. He probably did that as well, but I can't remember anything -----

About what was said?-- Yeah, I can't remember what was said, no. Probably something to do with, "You drive the MPV, you drive the Eimco.", and just it would have been just general shift arrangements.

Well, what you have just told me now is just speculation on your part?-- Just speculation, yeah.

Let's try not to indulge in that; let's try and stick with memory. Now, when you got down there you inspected some other areas first?-- Yeah.

And then went to relieve McCrohon on the sealings?-- Yeah.

At what stage of constructions had the seals reached at that point?-- They were halfway to completing the belt road seal which is -----

That's roadway No 3?-- That one there, yeah.

And the other two?-- They were completed, yeah.

The two on the supply road and the top return I am talking about?-- No, that was as a prep seal and that was as a prep seal as well.

When you got down there was work progressing on erecting the mesh baskets in those two roadways?-- No.

So you could walk down those roadways?-- Yeah.

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And did you?-- I only went just inbye there.

In the top return you are indicating?-- Yeah, and I went to the edge of the goaf and then to these places here.

Now, you are indicating going up cut-through No 1 towards the belt road?-- Along this road here.

And then up as far as No 4?-- Yeah.

That's the goaf edge?-- Yeah.

Did you go down the top return at all?-- No.

Any particular reason why not?-- I wasn't there long enough. I was only there just over an hour, and the rest of my inspections and checking the working area where the blokes were took nearly all that time up, especially when I did - when I went and did the CO make as well.

There was no stink in the return, was there?-- There was a stink in the return later on.

Later, but not when you first went there?-- Because it was diesel, you see. There is all this diesel polluting the air.

I see, all right, I understand what you are saying now. George McCrohon said that, according to your statement, there was a stink but he couldn't pick up any haze?-- Yeah.

And you were the same?-- No, I couldn't see a haze, apart from the diesel fumes, and when they cleared I couldn't see a haze.

And when you took readings, they corresponded with the readings that George McCrohon had got?-- He told me he got 7 parts and that's what I got, yeah, and 0.5 methane.

That wasn't a significant increase on any readings you had taken before, was it?-- Not the parts per million, no.

Now, at that point you had not done a ventilation measurement?-- No, I did it towards the end around 8 o'clock time. I had been there probably an hour at that time.

And you did the calculation on the surface, you say?-- Yeah.

Not down below?-- I did it on the surface, yes.

When you were still down below but before coming up you were relieved by Lenny Graham?-- Yeah.

And you told him that there was no haze too?-- I told him there was no haze but there was a stink.

And his view was there wasn't even a stink, wasn't it?-- I don't know what his views were.

Didn't he offer any view to you?-- I can't remember. I can just remember telling him that there was a stink but I couldn't see a haze.

Can you remember there was general agreement between McCrohon and Graham that the sealing was unnecessarily brought forward?-- I never had much conversation with him apart from just saying, "Oh, I've come to relieve you, George.", and he told me what he told me.

You know that each of McCrohon and Graham had the view that it was silly to be doing what they were doing, there was no warrant for it?-- I didn't know that, no.

Now, at that point in time - even at that point you considered that the right things were being done, didn't you?-- I thought the sealing was the right thing to do.

All the things being done were correct?-- Yeah.

And no-one down there said that there was any problem, did they?-- No, no.

Did you not have much conversation with any of the men?-- I talked to a few but they were more interested in getting the seals up, you know.

Now, when you came back up to the surface you say you did a CO make calculation?-- Yeah.

You didn't put it in any report, did you?-- No.

And you didn't write it in any mine record?-- No.

You say you did it in some notebook of yours?-- Yeah.

You have still got the notebook, no doubt?-- I have still got it, yeah.

Do you have it with you?-- It's in the other room, yeah. There was a photocopy taken of it.

Was there?-- Yeah.

I see. Who took that photocopy?-- I think Mike Walker took it.

I see. You wrote out the calculation there. Why later did you redo it with a calculator?-- I didn't redo it with a calculator. Someone else did.

I see. I thought you indicated you had redone it?-- No, I didn't redo it.

Who do you know what the results were? Did someone else tell you?-- Because after the explosion when they were collating all the bizzo, you know, I said, "This is the make.", and banged it on the calculator and it just came out at a slightly higher figure, that's all.

Now, I think you said before that you had come to the surface in order to do that calculation because you wanted to use the calculator to do it?-- I didn't come to the surface to do it. I was coming to the surface anyway.

Were you going home?-- Not at that time, no. I hadn't had any crib, I hadn't had a stop, I hadn't had a break from the start of shift, so I came up for something to eat.

All right. So, it's in the course of that short period of having crib that you have this conversation you allege with Mr Mason; is that right?-- Yeah.

And then it was a couple of hours before you went home?-- I had something to eat, I had a conversation with George and I went home at half past 10.

Yes, two hours later. You came up at 8.20 or 8.30, according to your statement?-- 8.30.

Two hours later you went home?-- Because they told me - when Lenny Graham relieved me he said, "Don't worry about inspecting the other parts of the mine." He says, "I'll finish them for you, I will inspect them for you or George will inspect them."

To let you go off early?-- I didn't go off early.

Well, according to your story, when you spoke to Mr Mason you delivered to him your decision about not going down the mine; that's right, isn't it?-- We had a conversation.

I am sorry, is that effectively right?-- Yes, but there was a conversation leading up to it.

And you say that he did not give you - he didn't reply at all to that. That's what you have said in evidence, isn't it?-- Didn't give a straight answer, yeah, he didn't reply.

I am sorry, what do you mean by "didn't give a straight answer"?-- He didn't reply.

You just said the words "didn't give a straight answer". What do you mean by that?-- He didn't reply.

Is that what you meant to indicate when you just used those words, "didn't give a straight answer"?-- Yeah.

Are you sure he might not have said to you something like, "I'll give you an answer, I haven't made up my mind."?-- I can't remember him saying that, no.

Well, your story is that he did not reply to what you said; is that right?-- Yes.

Nor did he then in the ensuing two hours?-- I didn't have the conversation with him straight away, immediately when I went up top.

I see. What time was it?-- It might have been around 9 o'clock or slightly a bit later than that, after I have had something to eat.

You have no clear memory of this, do you? You really don't?-- I do.

Not about when or even about where, do you?-- Yeah, it was in the undermanager's office.

Now, there was a big interval of time between when you had the conversation and when you went home, wasn't there? On your story now at least an hour?-- I said I went around - I had a conversation with George which didn't just include the sealing. We talked amongst - about other things as well.

And then there was an interval of over an hour before you went home, isn't that right?-- No, because the conversation we had went on for a while, as far as I can remember.

What, half an hour?-- We talked about other things, how the mine was going, didn't just come out, "This is what I'm going to do. This is what" - didn't just blurt it out that I said, "I'm not going to take the blokes down." We had a conversation leading up to it.

And you didn't get an answer from him on that point, did you?-- I didn't get an answer from him.

Did you expect one?-- Yeah.

Why didn't you insist on one? Here you were delivering this important piece of information to the undermanager-in-charge affecting the safety of your crew, not to mention the safety of all the other men in the mine, and you didn't insist on an answer; is that what you are saying?-- He knew my feelings.

What?-- He knew my feelings.

He knew your feelings?-- Yeah.

Well, is what I am suggesting to you correct, you didn't insist on an answer at all; is that what you are saying? Is that right?-- No.

Well, you did insist on an answer?-- I didn't get an answer.

And you didn't insist on one, did you, not according to what you say? You didn't, did you? Are you going to respond? What I am putting to you is true. If what you say is correct, you did not insist on an answer?-- I asked the question what were they going to do when it reached the explosive range.

I am sorry, this is not what you have said before. When I suggested that that was the context of the conversation, you denied that?-- No, I didn't. I said there was a lead-up to it. I didn't deny it.

You asked him what was he going to do with the drill crew when it was going through the explosive range?-- No, I didn't ask him. I said what were they going to do, speaking about the whole mine.

What were they going to do?-- When it reached the explosive range.

And what was the answer, nothing?-- He didn't give me an answer.

Did he not reply?-- He didn't reply, no.

Did you insist on an answer?-- No.

Why not? You asked the question of the undermanager-in-charge, "What are you going to do with this mine when it goes to the explosive range?" Are you seriously telling me that you didn't get an answer from him and you just let it go at that? Can I have a response, please?-- I can't exactly give you a clear response, but that was it.

Now, you said in your evidence earlier - this was the point I asked you about before - "Every time I went in the section it seemed to me there was something wrong with the ventilation." Do you remember saying that, "Every time I went in the section it seemed to me that there was something wrong with the ventilation."? I am reading to you from page 627 of the transcript, line 48. Do you remember saying that in your evidence?-- I can remember saying that.

It is untrue, isn't it?-- It is untrue, but there were times -----

Why did you say it if it was untrue?-- "It seemed like", I said. I didn't say -----

"Every time I went in the section it seemed to me that there was something wrong with the ventilation." That is an untrue statement, isn't it?-- It seemed like.

It is untrue, isn't it? I took you through the reports one by one, Mr Tuffs. There were many occasions you were in there when you wrote "adequate" or "good" for ventilation, didn't you?-- Because it was in most of the - sometimes when they were mining at the bottom -----

That's right, most of the times?-- Most of the times.

So, when you said this it was untrue, wasn't it?-- I also said "it seemed like".

Was it untrue or not? It was, wasn't it? It is just not true, is it?-- I said "it seemed like". I didn't say every time I went in the section there was trouble with ventilation. I said, like, it seemed like every time I went in.

No, no, no, that is not what you said. Let me read it to you: "Every time I went in the section it seemed to me that there was something wrong with the ventilation.", not, "It seemed to me that every time I went in."?-- That's what I meant.

I see. Now, you also said, "Every time they mined in the bottom of the section, the bottom on the dip side, down this area, they seemed to get recirculation problems." Now, you said that?-- "Seemed". That's when they mostly got the problems, is when they were mining at the bottom.

You don't know that from your own experience, do you?-- They were mining at the bottom every time I went in and they got recirculation problems.

Have you checked your reports to see when that was? Let me tell you: once; once you were there when they were mining the bottom return. Do you doubt that?-- I am not doubting that, no.

Once. So, on the basis of one occasion you tell us that every time they mined to the bottom of the section they got this problem? You didn't mean that, did you, not every time?-- You don't need to be mining down there when you go in the

section to see if there is a ventilation problem. If they had been mining there on Friday and I went in on the Saturday and they were ventilating at the bottom you would still get the problem at the time. You don't need to be mining there.

You were there once when they were mining the bottom return, only once?-- Yeah.

That's all?-- Yeah.

Now, do you say that justifies the comment you gave to us in evidence before, do you?-- You don't have to be there when they are mining to work out that there is a recirculation problem in the top return.

Were we just exaggerating just a little when you gave those two answers that I have gave to you? Were you just exaggerating a little bit?-- Maybe a little.

Yeah. Maybe. Now, you were asked some questions about - I am not sure you were asked these questions, you proffered this information about shadow effect and dead spots behind large pillars?-- Mmm.

Now, this is not something you went and tested, is it?-- No.

No. This is your surmise?-- I can assume that, yeah.

This is just your surmise?-- Yeah.

Okay. You are not a trained ventilation expert, are you? You don't pretend to be?-- No.

Likewise your comments about large falls and cavities in the roof causing turbulence, your surmise again? It is, isn't it?-- No, basic ventilation. I should know that.

Now, you know that ACIRL was involved heavily in the design of the 512 Panel, don't you?-- Yeah.

Messrs Madden and others were involved in designing the 512 Panel?-- Yeah.

You know that a risk analysis was carried out before the panel started extraction?-- Roof control analysis, yeah.

And involved in that risk analysis were not only the ACIRL people, but the mines inspectors as well?-- Yeah.

Would Your Worship just excuse me for a moment?

Now, you mentioned when you were down on the occasion of the sealing that you noticed that part of the right-hand side of the regulator had been taken out for an MPV or an Eimco to go through?-- Yes, that's what I assumed, that.

That was the obvious reason?-- That was for the tray. That was the only way to get in there.

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You would have seen, I take it, also that the louvres were shut at that point when the hole had been made?-- The louvres weren't shut when I saw them.

No?-- No.

You specifically noticed that?-- I know for a fact that those louvres were spragged out to keep them open.

Spragged?-- Yeah, and they were open when I noticed the second time when I went in to do my CO make.

Was it your view they should remain open?-- Well, if you were -----

I am sorry, at the time was it view? Was that your view?-- I shouldn't alter the ventilation as it was, no.

Did you do anything about that?-- No, I left it as it was.

Why?-- Because just assume, right, there is a heating, you increase the ventilation to it it might fan it. Then you say you are going cut the air back to it, again, now, that is just going to take any cooling effect away.

Are you telling us something that you thought at the time or is this your ex post facto thoughts?-- No, I was under the impression you don't chop and change ventilation so I saw it as it was and I decided to leave it.

I see. Even though you thought it shouldn't be like that?-- It was too late to do anything about it. It had been like it for a few hours, obviously.

Did you mention this difficulty to anyone?-- No.

Any particular reason?-- No.

You said they moved the monitor point number 16 from just inbye the prep seal in the top return to just outbye in roadway 1 of 510 near the vent station?-- That one there?

Yes?-- Yeah.

You saw that moved?-- I didn't see it moved, no, but from the time I went in before -----

It had been?-- It had been moved, yeah. I am not sure who moved it.

You saw where No 5 was?-- That one?

Just inbye on the belt road at about - near cut-through No 1?-- Yeah.

Now, I think I am right in saying your evidence was you couldn't have got No 5 any further inbye?-- That one?

Mmm?-- That one down there?

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In the belt road?-- No, it would have been asking for the tube to be cut if there was any falls, etc, down there.

But you did proffer a view you could have - why didn't they, or why didn't someone put another point further inbye on the top return?-- Yeah.

Now, was that your view at the time when you were down there?-- Well, I didn't know - I didn't know what sort of monitoring - what they had worked out for the monitoring of the section.

Was it your view at the time when you were down there that this should be so? I think you said, in fact, they were able to put a couple of points down there?-- No, they could have done.

Was it your view at the time that that was an option and should be followed? Were you thinking that on the night?-- They wouldn't have had time to do it.

So, you weren't thinking about that at that time or were you and discounting it?-- No, I didn't think about it at that time, no.

All of these thoughts are something that has occurred to you afterwards?-- Yeah, well, they do, don't they?

Well, I am sure a lot of them do?-- Yeah.

You didn't question the monitor points at the time and you didn't see any difficulty with their positioning at the time?-- That was as far as they could have put that in the roadway where it was, without endangering itself.

I am sorry, I nearly cut you off. You didn't see any difficulty with the positioning of monitor point 16 at the time, did you?-- 16?

16 is just outbye the top return, the one near the vent station, VS46. You didn't see any - at the time you didn't see any difficulty with the positioning of that monitor point, did you?-- No, I was more interested in doing a CO make than what - where the monitoring points were.

Now, you arrived down in that section, I think, about 7.30; is that right?-- No, before that, I think.

What time?-- I can't remember exactly, but before 7 o'clock, I think.

Had it been moved by the time you got down there, that is to, say, 5 and 16?-- 5 was in position, but 16 - yeah, they were in position, yeah.

Could I just ask you one question: I think that map on the left is sufficient for this purpose, you may need to stand up and go over and have a look at it. I want to ask you about

the methane drainage holes that run from 5 South over to 512 - I think there are about half a dozen of them - and then also the ones that run in a fan shape from 510 in through the top end of 512; do you see them?-- These here in?

Yes, those ones, they are the fan shape. Now, you will see half a dozen running from 5 South parallel to cut-throughs through to 512. If you come down the bottom return of 5 South?-- There?

I am sorry, I am misdirecting you. Put your finger at the intersection of 510 and 5 South. That's it. Now move down that bottom return. As you go down do you see half a dozen red lines? No. Not on that map, perhaps?-- You mean the Proram holes?

You can sit down now. You know what I am talking about now, the Proram holes. They were the ones I have described as going from 5 South to 512?-- Yes.

They were all filled and blocked?-- They were all grouted.

In fact, they were grouted by men on your crew?-- As far as I can remember.

They were grouted by Bishop and Sonter?-- Yes.

Likewise the fan shaped ones that go from 510 through to the top of 512, they were also grouted and plugged?-- I don't think they were grouted, but they have the four inch gate valves on them which were closed. That's as far as I can remember.

That was also done by people on your crew?-- I am not sure.

Now, it is correct to say, isn't it, that whilst you had no training on the - I am sorry, I will start that again, I am losing it. While you had no training on the Unor system you nonetheless could operate it?-- I could do several functions on it, like bring the Ellicott up and - diagram and get the 24 hourly reports.

All of that was relatively easy to do?-- Just tells you more or less how to do it on the screens.

Exactly, it is a windows type of function, you just have to follow the bouncing ball, as it were, and it will tell you what to do?-- More or less.

Mr Martin asked you whether the chain of command at this place was the same as just about every other institution, that is to say, from the bottom down, and asked you whether miners would obey their instructions and you said not without question?-- Yeah.

That's true of most miners, isn't it? If they thought there was a safety issue there wouldn't be any question of obeying a direction such as, "Go down the mine.", if they thought it was unsafe to go down?-- I am sure if they thought it was unsafe

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or if they had the information there they wouldn't have.

No. Now, you were asked about a gas drainage procedure. I will ask you to look at these two documents, please. Are you able to identify the top document, that's the one in your right hand, as the underground gas drainage procedure at Moura No 2?-- Yeah.

I tender that document.

WARDEN: Exhibit 57.

ADMITTED AND MARKED "EXHIBIT 57"

MR MORRISON: I think you had a hand in preparing that document?-- Some of it - some of the parts of it, yeah.

And the other document is the details and procedures for gas drainage areas during drilling operations?-- Yeah.

I tender that document.

Did you have a hand in producing that?-- Parts of it I did.

WARDEN: Exhibit 58.

ADMITTED AND MARKED "EXHIBIT 58"

MR MORRISON: I might just indicate to those at the Bar table that the second document is document 108 in the Inspectorate documents and the first document is part of document 81.

Now, Mr Tuffs, it is correct to say, isn't it, that at no time up until the point when you left the mine on Saturday night did you see the sort of sharp rise or exponential increase that your experience told you was the CO sign of heating?-- No.

That is to say, you had not seen that rise?-- No, I hadn't seen that rise, no.

It is true to say, isn't it, that you did not have the view that there was, in fact, a heating in this area?-- I couldn't prove it one way or the other.

But you didn't have that view, did you?-- I thought there was enough cause for concern - there was cause for concern.

That's all?-- There was cause for concern, yes.

That called for increased monitoring and the steps that were,

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in fact, taken?-- Up to - yeah, up to the sealing process, yeah.

Because if you thought there was a heating or a suspected heating your responsibility - quite apart from anyone else's, your responsibility - was to do something about it, wasn't it?-- Yeah.

Now, you, I think, had a word put into your mouth by Mr Clair when he used the word "gambled" in relation to the sealing procedures and what followed and you said in your evidence that you weren't into gambling that way, you wanted to play safe?-- Well, if there is a suspected heating I would say.

Now, that's a comment you would apply to everybody at the mine, wouldn't you?-- I would have hoped so.

You are not meaning to suggest that other people were gambling, are you?-- No.

I have nothing further, Your Worship.

CROSS-EXAMINATION:

MR HARRISON: Mr Tuffs, you were questioned earlier today about the gas chromatograph; do you recall that?-- Yeah.

And you made a comment that for reasons you outlined, and I won't repeat the reasons, that you didn't consider that it was useful when the concentration of carbon monoxide was under 10 ppm?-- This is what I've been told previous -----

From your experience at No 2 was it the case that that was a generally held view amongst deputies and undermanagers?-- I don't think a lot of deputies know anything about the gas chromatograph.

Are you aware that other people shared your view that it was useless in circumstances where the concentrate of CO was under 10 ppm?-- I think a lot of people thought it was for taking samples behind seals when the concentration was higher than the normal - between nought to the early stages of a - the lower concentrations of CO -----

I don't want to cut you off, sorry. Keep going?-- I think a lot of people were under the impression that it was for when the progression of the heating, you know - how far a heating had progressed, but I wouldn't say that many of the deputies knew anything about it at all.

Are you talking about the exponential stage or the stage when things really take off?-- Yeah, when the readings get higher, yeah.

That was a view shared by other people from what you could see, not just your view?-- I never heard too many people talk about the gas chromatograph because they didn't know anything about it anyway.

You certainly weren't aware of any views within those of the deputy/undermanager level where it would have been of assistance in circumstances where the concentration of CO was under 10 ppm?-- No.

Your Worship, can the witness be shown the plan, 45-14? He did see it earlier in his evidence-in-chief.

Now, I would like you to look particularly at what I might call the production face at the end of 5 South Panel?-- Yeah.

Does that map to your knowledge accurately show just how far production had gone in the 5 South Panel? I should say as at the time of the explosion?-- I'm not quite sure. I hadn't had much to do with 5 South actually.

If you look at that plan, does it appear to you as though, as is depicted on there, the work would have been approaching or near one of the methane drainage holes shown there?-- It looks like that, yeah.

XXN: MR HARRISON

WIT: TUFFS N M

Was it your understanding that 5 South had reached a stage whereby it was likely that on the shift on the night of the explosion that they would be intersecting one of those methane drainage holes?-- Yeah, it's possible they could. I know there had been an overdrive in that - where you've got it squared off there, I know they had just started a break off.

Has it been your experience that from time to time methane drainage holes of the type as depicted there can become blocked or partially blocked?-- Well, yeah, they have done in the past, yeah.

And it is possible, is it not, that at times when they are intersected there can be a fairly substantial emission of methane?-- I'd disagree with that in this area because the area had really been well drained for a long period of time.

But there is still the possibility, is there not, that there could be a blocking or a partial blocking?-- Yeah.

So you can still have the situation, can you not, where a drainage hole may be partially blocked but it's still emitting methane at one end but there could still be a build-up of methane behind the blockage?-- It's possible.

Are you aware, getting back to what I asked you earlier, that from time to time that type of thing has happened in No 2?-- They have intersected the boreholes which have gave a lot of gas off.

Yes?-- But I'm not sure about intersecting blocked ones. I know they have intersected ones what have given a lot of gas off.

See, the situation here was that those holes had been drilled roughly parallel with the headings in 5 South?-- Yeah.

They had been left open, had they not, for some time before -----?-- Yes.

----- that section of the work commenced?-- Yeah.

And your experience was that in the main they drained fairly well?-- Yeah, I did have concern about a couple of them. I thought - because of the low flows which was coming out of them I thought they might have been blocked, but they were actually blocked, but the gas from the areas around them had been drained by the other holes which were on either side of them.

From your experience in the methane drainage program it's possible, is it not, that one could have been intersected in circumstances where there could have been a fairly substantial emission of methane?-- I don't think there would have been a large emission in this area because of the amount of methane what had already been drained. I'm not saying there wouldn't have been an emission, but it wouldn't have been a large amount.

If there had been any blockage or partial blockage it's possible that there could have been sufficient emission to create a dangerous situation?-- There could have been a build-up.

Dangerous particularly if there was some sparking such as frictional ignition?-- Yeah.

If I can just turn to something else, and correct me if I am wrong with this, but as I understand your evidence today you decided some time in the week leading up to that weekend that your men would not be down in the mine after 512 was sealed when it went through the explosive range?-- Yeah.

And that was based on your concerns, as I understood what you said, with the ventilation in 5 South?-- And the CO make trending up, going up.

Now, they were matters that you were aware of in the week leading up to the incident?-- Yeah.

And you made that decision certainly before Friday of that week?-- Yeah.

And you discussed it with your men?-- Yeah.

Were you concerned for the safety of your crew after sealing?-- After sealing?

Yes?-- Yeah.

Particularly at the time when it went through the explosive range?-- Yeah.

So you knew that after sealing 512 was going to go through the explosive range?-- Yeah.

Did you have any idea as to when?-- No.

See this is something that has to be plotted, as I understand it?-- Well, you could plot the methane make and you could have predicted on a graph, if you wanted to draw a graph, exactly when it was going to go through and when it would have actually gone through the range.

Did you give some thought to when it may be that it was going to go through the explosive range?-- I didn't know exactly because this goaf had been a degassed area and I wasn't sure how long it would take for the methane to build up.

Were you aware that it was possible that it could get within the explosive range within a day or so of sealing?-- Yeah, I would have thought so, yeah.

You knew that was a possibility?-- Yeah.

When you expressed concerns about your own men, as I understand what you said earlier, your concerns were the

positioning of 510 vis-a-vis 512. In other words where they were in relation to each other?-- I was worried about not just the sealing, I was worried about if there was any major falls or that disrupting the ventilation to where we were, because we needed a fair bit of ventilation down there to disperse the gas we were producing while we were drilling, and if there was any major falls in 512 and it disrupted any of the segregation stoppings, you know, or the ventilation stoppings outbye, it would affect us.

Are you talking about before or after sealing?-- Well, that was at any time while they were extracting in there.

I would like to concentrate on your decision to tell your men that you wouldn't let them be down there after sealing and when it was going through the explosive range. Am I overstating it by saying your concern was one that there could be an explosion?-- My concern was that it wasn't - because it was a short-term panel, it was only three months old, the panel and the CO make compared with other panels which were 12 months old had gone up a lot higher in the three month period than what 401 and 402 had. So to me, you know, the CO make in there was - although it wasn't taking off it was still higher than what the other extraction panels had been.

In that week leading up to the incident 5 South was in production, wasn't it?-- Yeah.

And you knew, did you not, that in the normal course of events 5 South would have gone back into production on what is called the Monday night shift which commenced on Sunday evening?-- Mmm.

Bearing in mind the position of 5 South in relation to 512 did you have any concerns in relation to any men working down there?-- Yeah, my concerns as far as when they were extracting was just for 510 because if there was a fall in there it wouldn't affect anywhere else apart from us, but when the sealing process would have been completed it would affect everybody.

What I am trying to concentrate on are your concerns after sealing?-- Yeah, after sealing, yeah.

Did you have any concerns for anyone who may be down in 5 South -----?-- Yeah, I had concerns for everybody who would have been underground.

You've told us what you did on the Saturday and you've told us of your conversations with George Mason. Am I correct in saying that you weren't due back until the Monday afternoon shift?-- No, actually I was - they had asked me to work another extra shift on Sunday afternoon, but I told another deputy when we went to the meeting that I had already got two extra shifts in and I wasn't really worried about going in on Sunday afternoon.

Your crew was due back on Monday afternoon?-- Yeah.

And you were due back with them?-- Yeah.

You have already told us that you had concerns for your crew in circumstances when 512 was sealed and 512 went through the explosive range. You found out, did you not, that it was sealed in the early hours of the Sunday?-- Yeah.

On finding that out, what inquiries if any did you make about ascertaining when it went into the explosive range?-- Well, I went to the meeting and that's when I found out it had gone - they had finished sealing it early hours of Sunday morning.

That's the union meeting on Sunday morning?-- Yeah, and there was quite a bit of talk about it and nobody mentioned the explosive range.

But you knew in your own mind -----?-- It would have progressed through that day some time towards the explosive range.

What were you going to do on the Monday? Let's assume you came in on the Monday with your men; were you going to find out then where it was relative to the explosive range?-- I would have done, yeah.

If those inquiries had revealed that it was still in the explosive range, what would you have done on the Monday?-- I wouldn't have took the blokes down, down the mine.

Out of concern for the safety of your men?-- Yeah.

Out of concern for the fact that no-one should be down there?-- That's right.

What did you do in terms of trying to find out after that union meeting whether or not anyone was going down there on the Sunday or the Sunday evening?-- I know the deputies who would have been on Sunday afternoon shift would have been keeping an eye on the Ellicott reading. They would have been monitoring the situation.

Were you aware that Ken Mills, for instance, was the deputy who was due to take a crew down there on the Monday night shift?-- I knew he was on night shift, I didn't know - I know Kenny works regular night shift, yeah, but -----

Did you think to approach him to tell him of your concerns for the safety of anyone underground at such times as it went through the explosive range?-- I didn't think I needed to because the situation was well aware - people were aware of it. There was people who had worked on the seals at the meeting and I just assumed that the deputies who would have been on Saturday afternoon - Sunday afternoon would have kept an eye on the explosive - if it was approaching the explosive range, and I'm sure they did.

The explosive range was not discussed at that meeting, was it?-- No, but everybody knows when the seals - when it's sealed off that it goes through an explosive range.

You heard no-one else at that meeting express the concerns that you had, did you?-- I did talk to Dick Stafford, yeah.

Publicly at the meeting express those concerns that you had?-- Not publicly, no. Nobody stood up and -----

Why did you not express the concerns that you had?-- Because I could - there was people - it wasn't said publicly. Somebody never stood up and said this, that or the other, but there was people talking, people who were experienced people, amongst each other what the situation was.

You never left that meeting secure in the knowledge that no-one was going to go down there?-- I didn't think they were going to go down.

You never left there secure in that knowledge, did you?-- I just didn't consider that they would have gone down from the knowledge what was available to the people who had been working on the seals, and in my opinion.

You were going to leave it until Monday, come in there with your crew, check to see if it was still in the explosive range and if not refuse to let your crew down go? If so, I should have said, refused to let your crew go down?-- Yeah, I would have done that, yeah.

You didn't see the need to do any more than that in terms of trying to notify anyone else?-- I did notify.

Is that your conversation with George Mason you've told us about?-- Yeah, yeah.

You never came away from that, from what you've told us, with any definite answers; is that right?-- I didn't have any definite answers, no.

No definite answers arose out of the union meeting on Sunday morning?-- But there was discussions at the union meeting between several people on what had happened in 5 North when 5 North section was sealed, not publicly.

Did you consider taking your concerns to the miners officers or local check inspectors as they are known?-- They were aware of the situation anyway.

Did you consider taking your concerns, I asked you, your concerns that no-one should be down there -----?-- As far as I know they knew my concerns.

Did you take your concerns to them?-- The conversations which went on at that union meeting which weren't publicly aired, just by people talking to each other, I didn't stand up and personally go and tell whoever, but I - just overhearing what people were talking about.

Were the miners officers at that meeting, Steve Byron and Terry Vivian?-- I'm not sure.

Anyway, you made no attempt to convey your concerns to either of them, did you?-- There was - no, I didn't talk to them two people, no.

Nor to any deputy that may be involved with the Sunday day shift, the Sunday afternoon shift or the Monday night shift?-- I talked to Dick Stafford and he said -----

Did you know he was going to be working then?-- He said he was going to go in on the Sunday afternoon to work instead of me, and then I heard later that he had changed his mind and got John Blyton to go in instead. He knew how I felt, Dick.

I have nothing further, Your Worship.

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WARDEN: Mr Clair?

MR CLAIR: Your Worship just a short matter.

RE-EXAMINATION:

MR CLAIR: Mr Tuffs, would you look at this document here, a photocopy of a document? Is that a photocopy of -----?-- That's it.

----- the page of your notebook on which you made your calculations on the Saturday night?-- Yeah.

It has a time at the top of it; is that right, 8.30 p.m.-- Yeah.

And a series of calculations there with the bottom line being the 16.25?-- Yeah.

That you mentioned earlier in your evidence?-- Yeah.

Your Worship, I will tender that photocopy page. I don't have copies at this stage, but I will make copies available.

Now, you mentioned earlier that after you did that calculation somebody else did a calculation on a calculator?-- Yeah, that was after the explosion.

Was it?-- Yeah.

So that when you went and had a conversation with George Mason, the figure that you had in your mind was the 16.25?-- Yeah.

That's the figure you told him?-- Yeah.

And you told him also about the stink?-- Yeah.

Okay. I have nothing further, Your Worship.

WARDEN: Thank you. That will be Exhibit 59.

ADMITTED AND MARKED "EXHIBIT 59"

WARDEN: Mr Parkin?

EXAMINATION:

MR PARKIN: Mr Tuffs, you are aware that on 24 June Reece Robertson complained about a benzene-type smell. Are you aware of that?-- I was only aware of it at a later date, a fair bit after that.

Before the incident?-- Yeah, yeah.

Your Worship, I would like to return to Exhibit 25 if we can, please.

Have you got - that's a CO make in 512. Have you seen that?-- Yeah.

And it was up to the 5th of the 8th. You have seen that?-- Yeah.

And on the afternoon shift of the 6th you calculated a CO make of 16.25?-- Yeah.

That subsequently became 16.66; is that right?-- That's right, yeah.

You informed the undermanager-in-charge at that time?-- Yeah.

You also informed the undermanager-in-charge about the smell?-- The stink.

The tarry smell, I think you mentioned?-- Stink.

Your Worship, can we refer now to document 123? I don't know what the exhibit is. It's a CO make in 512 and it's updated to the 6th of the 8th.

Can you see that document, Mr Tuffs?-- Yeah.

Now, I think we were told previously that that graph had not been plotted other than from the 5th of the 8th?-- Yeah. This graph - this is a post-explosion graph, hey?

Sure. The question I am coming to, though, is if people have got concerns - and we have heard talk about a potential heating - if people have got concerns about a benzene-type smell or a tarry smell and we subsequently find, and you calculated, that we have got over 16 litres per minute of CO and if we look at that graph now, what does it indicate to you? I mean, it's rising steeply?-- Looking at this graph it is, yeah, yeah.

So there should be some concern about the subsequent event after the 6th?-- Yeah.

Was that discussed with anyone else? I mean, you did report this to the undermanager-in-charge, you have told?-- Yeah.

There were some - I am a little bit confused as to what happened in that area, but you certainly told the undermanager-in-charge about the CO make and about the smell?-- Yeah.

I think you also - I don't know if you did mention this, but some comment was made about this graph being updated on a shiftly basis or even an hourly basis if there is some concern about a potential heating?-- There was a meeting - some sort of a meeting between the ventilation officer, Steve Bryon, that was a couple of weeks before the explosion, and I think they decided to go from a weekly CO make to - I'm not sure if it was a daily or on a shift basis.

If we can move now to - these are just a few points for clarification. You mentioned re-circulation. Now, of course, anybody knows in mining that re-circulation is a very disturbing business?-- Yeah.

I think Mr Morrison said that you had only been in that panel once when it had been in production; is that correct?-- No, I think actually I was -----

MR MORRISON: No, I think I said that once was in relation to mining the bottom return.

MR PARKIN: Mining the bottom return?-- Yeah.

Can you remember how many times that re-circulation occurred, to your knowledge, in that panel 512?-- Quite a few times. It wasn't just on my reports.

Was this concern discussed with other deputies or management or workers inspectors?-- Yes.

You talked about - I think you mentioned explosion-proof stoppings being required when you are going to seal a potential heating. Was this issue discussed with anyone? Did you talk amongst other deputies or management about -----?-- I have talked about explosive-proof stoppings from time to time with different people at the mine, yeah.

And one final point regards the methane drainage, I think you talked about cracking a valve to let water out?-- Yeah.

And you have got to be very careful that methane didn't escape at the same time?-- Yeah.

Were water traps used at all at the Moura mine?-- Automatic water traps you mean?

No, I am talking about a water trap where you isolate one valve, you open the other valve to let water and the gravity fill the trap and then you close the valve and then open up the water valve?-- You could do that with the system we have got.

Could you?-- Yeah. You would be turning the valves off to do it. You would have to turn the holes off to do it. You

have to isolate the trap itself from the range in the hole.

Well, that was just a point of clarification. Thank you very much?-----

EXAMINATION:

MR NEILSON: Mr Tuffs, in some of the cross-examination today - and you have been asked quite a deal of questions - I want to take you back to some of the things you have already been asked because I think there may be some confusion created. Mr Morrison asked you - I probably should say attacked you - in relation to the discussion that you had with Mr Mason when you informed Mr Mason that you would not be taking your crew down the mine whilst the atmosphere behind the seals went through the explosive range. You said that you didn't get a reply and Mr Morrison asked you, "Did you insist upon a reply?", and I think you answered, "No." Did you expect to get a reply when you advised Mr Mason of that?-- I would have expected a reply, yeah.

You did expect a reply?-- Yeah.

You indicated earlier today that in a similar circumstance in 5 North when an area was sealed the men refused to go down the mine whilst the explosive range process was going through?-- Well, the situation there was it was a - it was frictional ignition what the problem was. They sealed an area - sealed 5 North off and the roof was working and so they decided to - I think there was a bit of a CO make increase as well, and they decided to seal it, and because they hadn't got rid of the frictional ignition deal from No 4, there was a discussion on the surface between a couple - two or three deputies that it was approaching the explosive range and they decided at that point that it wasn't safe for the blokes to be down the pit and they phoned up and brought the crews out of the mine.

Are you aware of any occasions in No 4 Mine when areas have been sealed where the men had not gone down the mine for a period of time?-- I was under the impression that they did every time they sealed a section at No 4.

Every time?-- Yeah.

And are you aware of where the decision not to go down the mine under those circumstances may have originated?-- No.

Well, I understood you to say in cross-examination today that it had never been a decision of management. Am I correct in saying that?-- At No 2?

Yeah, at No 2. How about at No 4?-- I don't know - well, that was a management decision, I think, as well.

It wasn't a decision of the men themselves at the time?-- It

XN: PANEL

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could have been because I don't know about -----

So you don't know?-- I don't know too much about No 4, but I know when the sections were sealed they kept the men out of the mine. I'm not sure who made the decision or not.

So in 5 North, even though we were looking at a different problem maybe in respect to frictional ignition?-- Yeah.

It was still a dangerous or a potentially dangerous situation?-- Potentially dangerous situation.

And a decision was made by the men?-- Yeah.

Not by management?-- No.

That they would not go down the mine during that time?-- Yeah.

Well then, can you tell me then why you would have expected Mr Mason to answer your concern? I mean, what I am really asking you is if management in the past haven't demonstrated their ability or their concern to withdraw or withhold men from going down the mine when there is a dangerous situation in the past, would you really expect that they would have done it on this occasion? I mean, I am asking you to tell me what you believed?-- Well, I really thought we were advancing as far as safety went at the mine, you know. I thought there was a lot of good things happening there, and if a question is raised such as this where it's like a life and death situation or whatever, you raise a situation - a question like that and I would just have expected a positive answer, you know.

Can you tell us a little bit about what you mean when you say things were improving at the mine in respect to safety?-- Well, they were doing - getting the work procedures into place and they were doing bits of risk analysis here and there on different things. It was a lot different to when I first started there. It had definitely progressed from when I first started at No 2.

So there was more of a conscious effort to -----?-- Yeah, well, there had been accidents as far as rib spall and cable flashes, people were aware of it. They were trying to get on top of it, so that's why I didn't chase it up too much, because I just thought people were aware, you know.

I think you answered a question of Mr Martin that you have never received any instruction since you have been at Moura in respect to spontaneous combustion?-- Apart from the little book I received at the induction.

So, I mean, you have not been to safety meetings where this has been the topic or there have been no organised instruction programs?-- No.

On spontaneous combustion?-- No.

Are you aware that any other deputies may have received

instruction?-- I know there was a couple of deputies went on a seminar down to Brisbane, but this is before I started at No 2, and a couple of management people went as well.

Approximately when would that be?-- That would be previous to 1990. 1988 maybe. I think it was after - it might have been after when they sealed 5 North-west and they went in and recovered the equipment. This is just knowledge I have gained from talking to other people, but since I started there I have never had any spontaneous combustion instruction or -----

Have you known of any others that have?-- Not since I have been there, no.

Are you aware of - and this may be a difficult question, if you can't answer it, please don't - are you aware of the sort of level of understanding that the other deputies at the mine might have in regard to spontaneous combustion?-- I think most of them were aware of the basics of spontaneous combustion. Everybody knew it was a seam liable to spon com. I don't think any of the deputies didn't know that, and as far as the men goes, everybody who was in Mines Rescue would have been aware, and there was people on duty over the weekend to the explosion - people who were experienced Mines Rescue people, you know.

Well, what would you expect them to have been perceiving might have been happening down the mine at that time, particularly when they knew that the area was going to be sealed and accelerated in time?-- I would have expected -----

I mean, they must have - did they think, "Oh, well, there must be a problem.", and - I mean, we know that the word "heating" has been mentioned from time to time. I mean, was this common knowledge among everybody or -----?-- I thought it was common knowledge amongst everybody who was especially at the meeting, at the Union meeting, and the fellas who were on the sealing process, they would have noticed - you know, they would have been told it was an accelerated sealing process. You don't accelerate something if there is nothing wrong, surely.

No 2 Mine was a gassy mine?-- Yeah.

Classified as a gassy mine?-- Classified as a gas - I think. I'm pretty sure it is.

And the seam, of course, was liable to spontaneous combustion?-- Yeah.

And if you get a situation where spontaneous combustion does occur that would be a potentially very, very dangerous situation?-- Yeah, yeah, for sure.

So, we, in fact, had, at least in the minds of some people, a potential for that very dangerous situation?-- Yeah.

And management - some management people were aware of that?-- I am sure they were.

Apart from your discussion with Mr Mason in relation to what your perceived or your actions would have been in relation to not allowing the men to go down, in other words, an expression of concern for the safety of your crew, were you aware of any other discussion that may have taken place or did you hear any other discussion take place about the concern of the safety of the men at the mine?-- Apart from talking to one or two people who were at the meeting - there was definitely word going around that - about the accelerated sealing process.

No, no, was there any word going around about the safety of the men?-- No.

So, whilst there was a lot of discussion and talk and probably rumours that there could be a potentially dangerous situation, there was either, in some people's view, a heating, in some other views a suspected heating, an accelerated process to seal, you are not aware of any discussion other than the one you had with Mr Mason where the words of safety of the men were concerned?-- I can't put my finger on one, no.

I am not suggesting it didn't happen, I am only asking you if you heard it?-- When you are talking about, you know - such as sealing a suspected heating, you would be thinking safety of the men at the same time, surely.

One would imagine so?-- Yeah.

But it didn't happen?-- It doesn't seem to have.

Can I ask you to go to the whiteboard and roll those two maps up. I am going to ask you to draw for us on the whiteboard a cross-section of the seam as if you were standing to the side looking at it and I have just given you a rough sketch as the sort of thing I am going to ask you to do, but I want you to do it in your own mind. I don't know whether you are a very good artist or not. I will just ask you to give it your best shot. I want you to do it as you would perceive that to have been. Now, if we stood in a roadway and actually looked at the seam as we are standing looking now, yeah, can you sort of draw the seam in from the roof - from the stone roof to the

stone floor on approximately the angle it would have gone from the top of the panel to the bottom, approximately?-- Yeah.

Can you stop there and now extend that line right down to the left-hand side of the - bring that line right through, please. Now, can we assume that that is the roof?-- Yeah.

Now, on development you would come down so far, four metres?-- Three metres.

Yeah. Can you come down then, say, three metres? Come a little bit further so we can - yeah, about there?-- All the way down again?

All the way down, yes. Okay, so, you have now drawn the roof and the floor?-- Yeah.

On development. Okay. Now, on extraction can you now - sorry, before we get to extraction can you now draw a bottom line as to where the stone floor would be, approximately. Okay. Now, all through that panel on development we would have a situation such as that. We then form pillars. As we come back on extraction we strip off some of the pillars?-- Yeah.

And we form what we would call stooks and in doing so we weaken the roof?-- Yeah.

We weaken the support and we create a situation where we don't get what we would normally see in some goafs associated with long-haul-extraction or total pillar extraction where we get a big fall and a clean line of break?-- No.

What we would have in these circumstances would be more localised falls?-- Just minor local falls.

Minor local falls, okay. On extraction we are now punching in the pillars and we are forming stooks and as we come back a pillar length we then dip down into the bottoms, we ramp down into the bottoms. Can you draw on there how you would do that, just in - no, come down the bottom, please?-- Yeah.

We are working our way back?-- Grade in, taking whatever.

Okay. Now, once you have done that you would then move back?-- Do it again.

Please draw it?-- Maybe not as steep as that, but -----

Well, if it is not as steep as that do you want to draw it again? I am trying to get a good visual idea of what we have got here. You didn't do much art at school, did you?-- I am doing it under pressure.

Okay, now, come back down now to the first ramp and I want you to draw a line up where the solid - no, just where the solid coal would be on the floor. Come down to the bottom ramp where you have hit the floor?-- Yeah.

Would you draw a line back up because that would be solid coal there, wouldn't it?-- Yeah.

You could pretty well clean all the coal up there because you have got a solid face?-- You can do on the first punch - on the first one.

When we come to the second one?-- Yeah.

I want you to use your imagination, because you no longer have a solid face in front of you and you are using your machine with gathering arms?-- Yeah.

I take it, it is impossible then to pick up all of the coal, isn't it?-- You would get a build-up.

We would leave a heap like that?-- Exactly, yeah.

And the next one?-- Till we got the same one.

We have another one. Go back another one, please. Then we would have another heap. So, basically all the way back up that roadway we would have these heaps of coal?-- All those piles of coal. You weren't allowed to go chasing that because of the manager's -----

Yes, I understand, I understand, we can only go a certain distance because -----?-- The shuttle car driver would be exposed to the ribs.

We have had people fatally injured in the mine before because of rib falls?-- Yeah, yeah.

I understand that. Now, I just want you to leave that. If you can go back up to the right-hand side and near where those lines finish, I want you to show me how the monitoring point No 5 - do you have the - if you can be shown that - this may not be - when monitoring points are put right throughout the mine are they put in a consistent position?-- I think some sealed areas have two monitoring points in it.

No, the question I am asking is when you put a monitoring point in then the relationship of the end of the tube between the roof and the floor -----?-- It is usually at head height.

So, they are all basically head height?-- Yeah.

Can you just then write - is it suspended from the roof?-- Yeah.

So, that would be about it there?-- Yeah.

Okay. Can you come back down now and just to make this a little bit clearer, get the rubber and where you have got those heaps of coal rub out where it would have been cut away. You have got to put the heaps back. Okay. Now, I don't want to drag this out any further than I need to, we now imagine we have got that all the way back, eventually right back to the end of the panel or within one cut-through of where the seals

may have been placed. Now, because of the stooking of the pillars we now get localised falls?-- Yeah.

So, we would have a situation where in some areas - I mean not all areas, certainly some - we would have a fall and that coal covered by stone?-- Yes.

Can you draw what you think that would look like? Okay. Now, because stone breaks when it falls the pile on the floor is always bigger than the cavity in the roof, isn't it?-- 5 to 3 ratio, whatever it is.

5 to 3, is it?-- I think. Yeah, the pile always looks larger than the cavity, yeah.

Okay. Now, if we imagine that that would be at the very end of the panel, in other words, down on the solid coal in 13 cross-cut, can you show us in your mind how the ventilation would flow through there, just by arrows. It would tend to go up, would it?-- Slightly.

Why is that?-- Well, it would be forced over the top of the pile.

Would you get any ventilation that would follow the floor and go down and under and then back up?-- No, I wouldn't have thought so.

It wouldn't do that?-- I don't think so.

Okay. Now, as we move back out of the panel and ventilation is being restricted in some areas, and through your own evidence we have even had cases of recirculation and ventilation actually coming back against the flow?-- Yeah.

We would tend to get a warming up in some areas?-- Possible, yeah, yeah.

What does that do? What effect does that have on ventilation?-- It causes a buoyancy effect.

I beg your pardon?-- A buoyancy effect. When you are looking at the panel - say we are looking at it from this way. If it was warm here you would get heat migrating up the hill. That's why the top main supply road was always warm, that was, in my opinion, you know, thermal effect. If you have got still air and it is not getting ventilated the warm air is going to rise.

So, I mean, no matter how good our ventilation circuit may have been in that panel, because of this situation with loose coal - and it's dry coal because of the gas drainage process?-- Yeah.

It is covered with stone in many areas?-- Yeah.

Then there would be a tendency for a natural warming effect?-- Yeah.

271094 D.7 Turn 18 gc (Warden's Crt)

I am not talking heating, I am just talking a warming -----?--
Yeah.

Effect. Okay?-- Yeah.

Now, then we seal the panel up. We cut off the air circuit or any air supply to the panel. We have - I will just ask you if you agree. You have said you have got quite a knowledge of spontaneous combustion. If you were going to get a situation where oxidation was going to occur in a panel would it not be more likely that the coal that had been exposed the longest would be the first place for it to start?-- Yes.

I mean, in general rules?-- Yes.

It doesn't - that's not cast in stone, but just that is what you would expect?-- Yeah.

So, you would expect any prospective or potential heating in a panel to be at the very bottom end?-- Yeah.

Okay. Now, if that solid part that I asked you to draw in the floor there was the solid on the bottom end of 13 cross-cut, how far would it then be from that point back to the monitor?-- Thirteen cross-cuts away.

I am asking distance?-- Oh, approximately?-- 13 times 30, 400 metres away.

Can you just write that up there somewhere, "400 metres". Now, we have six roadways, do we, across a panel?-- In places.

Six roadways, 13 cross-cuts and 400 metres in distance. That's a lot of area?-- Yeah.

A lot of area. Okay. Now, once the panel has been sealed and given that we have got the ingredients for us to, at least, suspect a potential heating, you know, we have fire stink, there has been haze seen?-- Yes.

Our CO make has increased - and I think the last reading you did was a reading of 16.6 - surely that tells us we have got -----?-- A problem.

A problem. Okay. We have got one monitor point up at the top there and the area would be likely to start heating up because we have now stopped any ventilation supply to cool it. It is now left to its own device to use up the rest of the oxygen that is in the panel and continues to make all the nasty gases like ethane, propane, all of the things you get if you get a heat. We then have a thing called thermal currents, thermal. Can you, to the best of your knowledge, then explain to us what relationship - given those things - that there would be between what would be actually happening under that pile of rock and what we are being told by that monitor at the top?-- It wouldn't be much of a relationship at all because that is within - that, I would say, is within the area which would be affected by any of the barometric changes for a start. There

XN: PANEL

WIT: TUFFS N M

271094 D.7 Turn 18 gc (Warden's Crt)

is no way you are going to get a reading of what's there and it is going to monitor it there. It is just impossible.

So, do we have any way that we can interpret from the reading that we get up there as to what might be happening down there?-- If you have got a high reading here it stands to reason it is going to be worse down here.

But you could have a low reading up there and still have a potentially dangerous situation down there?-- Yeah, yeah.

So, given that we really are concerned about men's lives, should we really be taking too much notice of what that monitoring point up there is telling us if we have a belief - and be it only a belief and nothing more, if we have a belief - that we have certain ingredients that have caused us to accelerate a process to seal an area, then one could pretty well assume that we have got those circumstances?-- You could assume that, yeah.

Now, if we have those circumstances we know that when we seal and we stop the supply of fresh air the coal will continue to oxidise, spontaneous combustion, the process, which gives off gasses and in the process uses up the oxygen and we get that effect of what we call the explosive range, that that area goes through that explosive range. So we know that's going to happen in any case?-- Yeah.

Why is it, and I'm only asking you if you know or if you don't then tell me, why is it that we continue to place a lot of emphasis on what that monitor up there tells us?-- That's one of the reasons why I didn't think that the CO make wasn't - it hadn't taken off according to what our readings were, but that didn't tell the full story of the panel.

Thanks, Mr Tuffs. Can I ask that that drawing be left there, because we may need it for some other people.

EXAMINATION:

PROF ROXBOROUGH: A couple of minor points, if I may, Mr Tuffs. You have had 20 years experience in the coal mining industry?-- Around there.

16 years of which were in the United Kingdom?-- Yeah.

Those 16 years were exclusively related to longwall mining?-- Yes.

And longwall mining in seams that have been liable to spontaneous combustion?-- Yeah.

Therefore your experience in bord and pillar mining is limited to four years?-- Yes.

The recent four years. In handling spontaneous combustion conditions in longwall mining does it require fundamentally different management, do you think, than it does in bord and pillar?-- Yeah, it does because we used to have a total goaf collapse and use to take all the coal, used to take - didn't leave any roof coal or floor coal, and the problems we had with spontaneous combustion was when we finished the panel in the pillar between - in the barrier pillar, the main problems, or if, as it was, the mine I worked at during the 12 month strike we had, half-way through the strike the coal started to heat up in front of where the longwall was because of the weight what was coming on the roof and we had to seal the section there, seal the longwall block off.

Could you tell me, the experiences that you had were with advancing longwall or retreating longwall?-- One of them was advancing and one of them was retreating.

In both cases there was goaf ventilation? You would always get some leakage through the goaf certainly in advancing

work?-- Yeah, on advancing, yeah.

What about retreating? Did you have bleeder roadways in the retreat?-- No, we had what you call - we had methane drainage. We used to drill above the goaf and we used to have a back return, they call it a back return, used to build a partial - used to split the main return airway and force the air back around behind the face line alongside the goaf, about 20 metres behind the goaf itself, and the gas range stayed intact when we went out, and it used to bleed the gas off from in the cavity in the goaf, used to drill above the goaf.

I see, but there wouldn't be any situation in those circumstances where you would have a deposit of coal that was below floor level?-- No.

Thank you. Now, you describe in your statement that your main job was deputy in charge of methane drainage operations?-- Yes.

Perhaps you can answer a question for me relating to a mine plan that you've already seen, that is 45-14, the one showing the methane drainage holes. Now, on this plan we have a multiplicity of holes in many directions starting in different places. One thing I notice is that some of these holes are indicated by broken red lines with single dots, some of them have double dots and some of them have three dots; do you see what I'm getting at?-- Yeah.

Is there any significant difference at all?-- I don't think so.

It doesn't indicate anything?-- No.

Differences in those holes?-- No.

Now, with reference to the - and you can see it on the same plan - those holes from 5 South return into 512 top return, I think those were the ones that you said still had the gate valves?-- No.

They are not?-- No, they are Proram holes. They were holes what we hadn't drilled actually. It's a different drill completely.

Those weren't the holes. Do you know that those holes were sealed?-- They were grouted, yeah.

That's all I wanted to know, thank you.

EXAMINATION:

MR ELLICOTT: There has been considerable discussion about the meeting or the opportunity you had on the evening of 6 August to speak with Mr Mason?-- Yes.

Was anybody else present during that discourse?-- No.

Did anybody come in or go out? I understand it was in the undermanagers office?-- No.

Did anybody to your knowledge see you go in to see him?-- No.

Did anybody see you come out?-- No. I can't recollect anybody, anyway.

It was just you and Mr Mason?-- Yeah.

I think you've indicated that you've got not inconsiderable knowledge and background in spontaneous combustion and related matters; would it also be fair to say in your estimation that the other deputies at the mine had considerable knowledge and experience?-- Some of them. Some of them did have.

There was one who had been at Kianga?-- Yeah, Dick Stafford.

There were a number who had been at both Moura number 4 and Moura No 2?-- Yeah.

The mine had a number of people who were trained in Mines Rescue?-- Yeah.

There was considerable knowledge imparted related to spontaneous combustion?-- Yeah.

The mine had access to the likes of Dave Kerr who had considerable experience?-- Yes.

One would assume that mine management had similar knowledge and experience related to these matters?-- Yeah.

I would like your response to the suggestion that all this knowledge and experience, in fact considerable knowledge and hundreds of years of experience were in themselves insufficient?-- That's quite possible.

Do you see that there may have been something missing?-- Yeah, but I'm not sure what.

Quite frankly neither am I. You were commonly in charge of methane drainage drilling operations?-- Yeah.

Can you tell me if those holes were surveyed?-- Yeah, they were all surveyed.

They were all surveyed?-- Yeah.

So their position on plans are fairly accurate?-- Yeah.

Deputies, I would assume, were issued with panel or sequence plans or working plans?-- Yeah.

Were the likely positions of methane drainage holes indicated on those?-- Yeah, they would have been for 5 South

specifically, yeah. I'm sure they were, yeah.

Can the witness be given Exhibit 12, please?

This is a document entitled "Underground Position Descriptions BHP Australia Coal Limited - Moura Mine"; is that correct?-- Yeah.

Can I ask you to turn to the page entitled "Position Description Underground Mine Deputy" which I think you will find about seven pages from the back?-- Yes.

Under the heading "Responsibilities" could you please read item No 2?-- "In the absence of the manager and undermanager the deputy shall have charge of all persons in his district or part of the mine."

Can I ask you to tell me what you understand by that?-- The people who I am in charge of, it's my duty to be in charge of them in whichever district I'm assigned to.

Can I ask you to read point number 3?-- "He shall suspend any operation that is likely to cause danger to any person until he has received special instructions from the manager."

Can I ask you to tell us what you would understand by that?-- If you saw - if you thought that there was going to be any danger to anyone, I suppose you suspend the operation.

What would be the scope of that power, do you think? Do you think it would extend to the whole mine, for instance? Would you have the power to suspend operations at the whole mine?-- It doesn't say that here.

What does it say there?-- I think it's pointing to the area he's in charge of.

The normal operations of a mine would mean that the deputy is in charge of a mining crew?-- Yeah.

Or a panel, wouldn't it?-- Yeah.

So normally the scope of a deputy's power and responsibilities would extend to that crew; is that true?-- That's true, yeah.

Can I ask you to turn the page, please? Can you read point number 5?-- "After the completion of statutory inspections the deputy shall enter his findings in the report books provided."

Can I ask you to tell me what you understand by that, please?-- Whichever section he's assigned to he will report on that section, statutory inspections, and write the findings down in the report book.

Can I ask you to again turn the page? Is that a page giving an acknowledgment that that previous document had been read and understood and there are a number of names and signatures there?-- Yeah.

Can you see your name and signature there?-- Yes, at the bottom there, yeah.

Thanks. Just one more thing. Can the witness be given Exhibit 25 again, please?

This is a graph of CO make in 512 Panel?-- Yep.

I think in your evidence you indicated that you have seen this before and that it is a thing that you kept an eye on from time to time?-- Yes.

On examining this do you agree that from 16 June 1994 until 15 July 1994 there is a steady increase in the carbon monoxide make?-- Yeah, there certainly is, yeah.

Would you agree that after that time there is a reduction in the carbon monoxide make and in fact a subsequent levelling?-- There seems to be, yeah.

In your keeping an eye on this at the mine from time to time did you have cause to wonder why that may be the case?-- Well, I had never seen a CO make go up and then level off. They had always seemed to keep ongoing. I couldn't work it out why it had levelled off like that.

So you had noticed this -----?-- Yeah, I had noticed it.

Are you aware of any discussion at the mine amongst deputies or others as to why this may be the case?-- I think there was discussion, but I can't remember the exact wordings of any discussion, but I mean you can see it from the graph that there is a definite levelling out there. Comments were made about how come this occurred.

No conclusions to your knowledge were reached?-- I think one or two people might have said that when you do the anemometer readings, some people do them slightly different to others.

Slightly different?-- Well, I mean it doesn't take much - if one person is doing it then another person takes over, if he is just even doing it slightly, when you are talking about the figures you use to calculate CO makes it wouldn't take much to alter a finding.

That's all. Thank you.

HIS HONOUR: Anything arising out of that, Mr Clair?

MR CLAIR: Your Worship, just one practical matter. I have got no difficulty with the drawing remaining on the whiteboard, but the record of Mr Neilson's questioning may be a bit difficult to follow at any subsequent time without the whiteboard. I just wonder if the witness might -----

MR NEILSON: Photograph it.

MR CLAIR: I wonder if the witness might copy that end result drawing onto a blank piece of paper and perhaps even do in red on that drawing the parts which he put in and then deleted. That may be the best record to have.

WARDEN: Thank you. We will arrange for that when we have finished and then counsel can check it tomorrow morning if they have got any problems with it, thank you. Mr MacSporran?

MR MacSPORRAN: I have nothing, thank you, Your Worship.

MR MARTIN: No, thank you, Your Worship.

MR CLAIR: Your Worship, we would prefer not to have to keep the witness until tomorrow if we can avoid it.

WARDEN: He can do it tonight. Counsel can check it tomorrow with the original if it's kept on the board.

MR CLAIR: As long as they don't want the witness to do any more, we can send him home, that's all right. Thank you, Your Worship.

MR NEILSON: If we need that drawing for another witness and the next witness is asked a question, he can do the drawing in his own mind in any case.

MR CLAIR: Thank you.

WARDEN: Thank you, gentlemen. There was a rash promise from the instructing solicitor for Mr Clair that we would have a short witness, but I think time has overtaken us and Mr Neilson's art class also torpedoed that idea.

MR CLAIR: I am not too sure how tall the witnesses are at the moment, I have not seen them as yet. I am told he is short, yes, that's right. The sitting times tomorrow, Your Worship, 9.15 to 12.15 and 1 p.m. to 3.15 p.m. as per last Friday, Your Worship?

WARDEN: Yes, thank you, people have travel arrangements.

MR CLAIR: Thank you, Your Worship.

THE COURT ADJOURNED AT 4.33 P.M. TILL 9.15 A.M. THE FOLLOWING DAY

WARDEN'S COURT

MR F W WINDRIDGE, Warden and Coroner
MR R J PARKIN, General Manager, Capricorn Coal Pty Ltd
MR P J NEILSON, District Secretary, United Mine Workers' Union
MR C ELLICOTT, Training and Development Officer, Department of
Mineral Resources, New South Wales
PROF F F ROXBOROUGH, Professor of Mining Engineering, School
of Mines, University of New South Wales

IN THE MATTER OF A CORONIAL INQUIRY IN CONJUNCTION WITH
AN INQUIRY (PURSUANT TO SECTION 74 OF THE COAL MINING
ACT 1925) INTO THE NATURE AND CAUSE OF AN ACCIDENT AT
MOURA UNDERGROUND MINE NO 2. ON SUNDAY-MONDAY, 7-8 AUGUST
1994

GLADSTONE

..DATE 28/10/94

..DAY 8

THE COURT RESUMED AT 9.20 A.M.

KENNETH JOHN SELFF, SWORN AND EXAMINED:

MR CLAIR: Your Worship, before I proceed with the next witness, I want to tender the sketch that was mentioned at the end of yesterday afternoon that Mr Tuffs did of the sketch which he had previously put on the whiteboard. A copy of that has been distributed to everyone. Mr Tuffs has signed the document, and what he has done is to put in in red the parts that he subsequently placed on the whiteboard sketch.

WARDEN: Thank you. If everybody is happy with that representation, I will admit it as an exhibit. Thank you. That will be Exhibit Number 60.

ADMITTED AND MARKED "EXHIBIT 60"

MR CLAIR: Mr Selff, your full name is Kenneth John Selff; is that correct?-- Yes.

And you are employed at Moura No 2 Mine?-- Yes.

And your position there is lamp room attendant; is that right?-- Yes.

Now, you commenced in the mining industry in 1969?-- Yes.

You started as a miner originally and were underground for 12 years?-- Yes.

And you suffered an injury and since then you have been in positions aboveground?-- Yes.

Now, as lamp room attendant what are your duties?-- It's just to maintain the underground cap lamp, make sure they are in safe conditions all the time and maintenance on it. Any maintenance I do would be entered into a book, a record book, and candle power tests on them in a cycle every three month period.

The self-rescuers?-- It's done on a monthly basis. They are checked daily for broken seals and bad dints, they would be discarded, taken out of service and replaced with new ones, and once a month every self-rescuer gets weighed.

And you do other odd jobs on the surface; is that right?-- Yes, that's right.

Now, in particular were you trained in the use of the gas chromatograph at some stage?-- Yes, I was - my job is

XN: MR CLAIR

WIT: SELFF K J

instructed by an instructor out there on the job.

When was that?-- I think it was early '93.

And since that time you have been required to carry out regular tests on the gas chromatograph?-- Yeah, we do it on a daily basis.

The gas chromatograph is located in the monitor room?-- That's right.

Adjacent to the assembly area?-- That's right.

Now, what tests do you carry out on a daily basis?-- Well, you go in and - the day before it's shut down and you go back in and you turn all your gases on, you get the chromatograph going, you got to light an FID in the hot wire sensor -----

Sorry, if you just slow down a little bit. You have to light -----?-- An FID.

An FID?-- And it's a hot sensor high heat for heating purposes to analyse your gases, and from there on you do - when it shows ready I do an air method and a low span and I get the results of that and make sure the retention times are right. If the readings are wrong, the retention times are out, so you have got to put the right retention times in there to get a reading properly.

I see. So you do what's called an air method?-- Air methods.

And that -----?-- You have got to do an air method. When I do the low span the oxygen is low in the low span, and if I get a gas sample in I got to know the reference factor number of the air and how - the air span to enter it into the low span method, otherwise it won't calibrate the gas reading.

The purpose of this exercise is to ensure that all your retention times are correct?-- That's right.

Prior to doing any actual test on any sample?-- Yes, that's right.

Is that so? So that's the first step that you take, and what do you do then?-- Well, on the Monday after I do the air - well, when you are doing the low span - I do the low span then, you don't put that air in there because there is a gas bottle there already mixed up by CIG, a special mix we have ordered.

This is a pre-determined gas content?-- Yes, and that - we put that through the machine and make sure it corresponds with what's on the - contained in the bottle. With that - on Mondays I send it through to SIMTARS through the modem. I transferred it from the CG to the PC and put it through the modem down to SIMTARS.

So the CIG gases are a pre-determined content of gases?--

XN: MR CLAIR

WIT: SELFF K J

Yes.

Just wait till I finish the question. Pre-determined content of gases. You put that sample through the gas chromatograph, you make sure yourself that that complies with the pre-determined content of gases, that is, that the gas chromatograph is telling you the same content as is in the sample?-- I do, yeah.

You transfer that result then from the gas chromatograph across to your PC and then you are able to transmit it by modem to SIMTARS?-- That's right.

Does SIMTARS then do its check to ensure that the actual graph that's been printed out of the gas chromatograph complies with the graph that would be appropriate for the CIG gases?-- That's right, yes.

As you understand it, the SIMTARS people can read the graph that's printed out in a more sophisticated way than what you could on the spot?-- Yes, plus more.

I see. Do they advise you if there is some irregularity in the graph?-- If there's any problems wrong, they're straight on - we also got a phone in the chromatograph room which is hooked up all the time while I'm there, and if the SIMTARS people want me, they just ring straight back and tell me something is wrong there.

And are you able to correct that yourself?-- Under instructions, yes, SIMTARS then instruct me how to do it and I will do it, yeah.

Now, you say that you do the tests every day. On Mondays you mentioned you send it off to SIMTARS. Any other day of the week?-- Yeah, Tuesdays, Wednesdays, Thursdays the same method - the same program every day, and back to Friday we do the same again, we send it through to SIMTARS on the Friday again.

But it's only Monday and Friday that you send it to SIMTARS?-- That's right.

Now, apart from doing these tests on the gas chromatograph then, have you been called on to use it to actually test samples of gas taken from some areas of the mine?-- Oh, we were called on about four times in the past and - in that period I have been on it.

So that's since the beginning of '93?-- Yes.

Only four times that you have been called on?-- I would say, yeah, four times.

Do you remember who it was that gave you samples?-- I took one from - I think the first sample I done was 401 and 402 by Mark McCamley, and the next one was 511, I think it was Allan Morieson, and there is another one come up and I think it was from Allan Morieson, I think it was, again from about 5 North

seals.

All right. You mentioned four. Do you recall who else has been involved in it? Mark McCamley once you mentioned?-- Mark McCamley brought me two samples up, one for 401, one for 402.

Okay. Well now, were the results of those tests recorded? Are they automatically recorded somewhere, or what was the position?-- Well, you know, I sort of - when I sort of learnt to do the GC there was a book there and I have just brought the book - when we send them to SIMTARS and when I come to analyse them gases and I remember giving the - well, the people that brought you the gas, they want the results, so on the PC you just ripped the result off, the traces, and give it back to the blokes that bring it to me.

I see. So they go away with the hard copy?-- Yes.

All right. Now, you were away on leave during the period up to Tuesday, 2 August of this year; is that right?-- That's right, yeah.

How long had you been away?-- I went away on - I went to work on the Saturday and mum got crook and I went away that Saturday afternoon.

So -----?-- And I come back Tuesday - Monday night.

So it was only three or four days?-- Yeah.

And then from the Saturday through to Tuesday, 2 August; is that right?-- No, I worked the week before and I was called away - I worked the Saturday and I was called away to mum on the Saturday, Saturday afternoon, and I returned back to Moura on the Monday afternoon, Monday night.

So that was just from one Saturday to Monday, three days?-- Yeah, three days.

Not 10 days?-- No, no.

Three days, okay. You were there then from Tuesday, August 2 through until the date of the explosion, the first explosion on 7 August; is that right?-- Yeah.

Were you asked during that time to test any samples -----?-- No.

----- on the gas chromatograph yourself?-- No.

Do you know yourself whether there were any bag samples taken for testing on the gas chromatograph -----?-- Not that I am aware of.

----- during that period?-- Not that I am aware of.

Tell me, during your absence is there somebody who looks after the testing and the use of the gas chromatograph?-- Yes,

XN: MR CLAIR

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when I'm not there there is another two blokes there who operate it. They generally do it.

Who are they?-- Max Robertson and Gavin Pattison.

Were you involved in the training of those two men?-- No. Max Robertson trained me.

He trained you?-- And Gavin Pattison.

He also trained Gavin Pattison, did he?-- Yes.

Do you know yourself whether either of those persons made any tests on the gas chromatograph during that period 3 August through to 7 August?-- Not that I am aware of.

I have no further questions of Mr Selff, Your Worship.

CROSS-EXAMINATION:

MR MacSPORRAN: Mr Selff, you trained in late '92 on the gas chromatograph?-- I thought it was late '92, '93, but it was '93, early '93.

Early '93, I am sorry?-- Yes.

And the only other two people that you are aware of who have trained on the instrument are Max Robertson and Gavin Pattison?-- Ones what has done - actually run samples on the machine.

Are there other people at the mine who are trained in the use of the gas chromatograph, to your knowledge?-- No, not to the standard, no.

Was there any system in place, to your knowledge, such that there would always be one person trained in its use on shift at any given time? It wouldn't be possible with just three people, would it?-- No, well, I'm permanent day shift. It's more or less I just run it on the permanent day shift basis.

And is there one or other of these gentlemen on -----?-- Yeah, the other gentlemen, he was - he is rotating day afternoon at that time, I think.

Now, you understood the reason why there was access to SIMTARS was to enable you, or any other operator, to have assistance in any problem-solving exercise?-- Yeah.

That was one of the purposes; is that so?-- What was that question again?

Well, one of the reasons you had access to SIMTARS was to assist you if you ever got into difficulties operating the gas chromatograph?-- That's right, yeah.

And also obviously the purposes of calibrating the instrument data was sent to SIMTARS?-- That's right.

And you would be informed if the instrument was properly calibrated?-- Yeah, that's right.

If you ever needed any assistance at all, all you had to do was pick up the phone and contact SIMTARS and they would provide the assistance?-- That's right.

And on many, many occasions they did so?-- They did.

In fact, on no occasion did you have difficulty in your contact with SIMTARS?-- No, I had no difficulties with SIMTARS at all.

In addition to that there would on occasions be personnel from SIMTARS who would visit the mine and conduct talks and instruction in relation to the gas chromatograph?-- Yes, every time they come around they was more than willing to help things, they very good. If I asked them they try to explain. I asked them to try to upgrade my training and they'd tell me or they would tell me.

As far as you now recall you didn't, yourself, receive any bag samples from 512?-- No, I didn't.

Leading up to this incident?-- I didn't receive any.

As far as you know no-one else did either?-- Not to my knowledge.

Is there a log of samples put through the machine?-- From down the mine?

Yes?-- No. When - as I said, we had a book there. I didn't realise how - well, the book, to enter them in the book. I just used to rip the print out, the trace out, and give it back to the people. I didn't realise I had to enter it all into a book, sort of thing. Everyone's view - I didn't know you did that. I thought you just done the samples and give them back to the ones who gave you the sample, type of thing.

I suppose there would be a record on the computer itself?-- Yes.

Of samples going through?-- There would be a record on the computer.

With respect to the machine itself, the maintenance contract was between the company and the manufacturer, Perkin and Elmer, I think it was?-- Perkin and Elmer.

SIMTARS involvement was simply in calibration of the machine and advice?-- Yes, SIMTARS.

Quite separate from the maintenance of the machine?-- If I had any big problems or any problem with it I would get in touch with SIMTARS and they would sort of have a look at it and the problem. If it was sort of major they would throw it right back at Perkin and Elmer.

Thank you.

CROSS-EXAMINATION:

MR MARTIN: Just something of your background. To what age did you go to school?-- I beg your pardon?

To what age did you go to school?-- 15.

XXN: MR MARTIN

WIT: SELFF K J

What, left in junior or Grade 10?-- Grade 7.

And what did you do after you left school before you went into the mining industry?-- I was a construction worker with -----

Did you have any experience with scientific instruments before you came on the gas chromatograph in 1993?-- No.

The position you hold, lamp room attendant, that's usually reserved, isn't it, for people who can't go underground any more?-- Yes, that was, yes.

And there are - some of your duties are the cleaning of the bathroom?-- That's right.

You have never been a deputy?-- Never been a deputy.

How long was your training course on the gas chromatograph?-- I started learning the gas chromatograph in '93 - early '93.

Yes, but for how long did you learn or are you still learning?-- Still learning.

Those very few samples you told the Inquiry about which came from Mr McCamley and, I think, Mr Morieson, is that in conjunction or in connection with the sealing of a panel?-- 401/402 was. They were about to extract it. Mark took samples - actually they had started extracting. Mark took samples in towards the back of it. I think it was about a third of the way out or something like that.

And you were off duty, I take it, on the weekend of 7 August?-- Yes.

Can you tell us about the other two men you mentioned, whether they were on duty?-- I couldn't say.

What instruction was given to you, if any, in relation to monitoring mine atmosphere on the gas chromatograph?-- What was that question again?

Yes. What instruction, if any, was given to you by management to monitor on the gas chromatograph mine atmosphere, the atmosphere in the mine?-- Actually, management didn't say much to me, it was more or less Max Robertson was sort of in charge of me. Max used to ask me to do things and do a sample. It would be Max, type of thing.

What is his designation?-- Electrician leading hand - assistant engineer, I think he is.

But in the electrical -----?-- In the electrical.

Side of it. Were there monthly tests of the mine atmosphere done at all?-- Not on the gas chromatograph.

Do you determine the nitrogen content by analysis or by subtraction on the gas chromatograph?-- Oh, you just look at the analysis of the printout all the time.

XXN: MR MARTIN

WIT: SELFF K J

Do you know how to determine Argon on the gas chromatograph?--
The Argon is the - Argon is the gas that is on the gas
chromatograph all the time, sort of thing.

By 7 August 1994 how would you rate yourself in terms of
competency to use a gas chromatograph, to determine content of
the mine atmosphere?-- Well, I wouldn't call myself really
experienced, but I think I would have been capable of doing
the sample result.

But you weren't told to or asked to?-- No, I wasn't asked to,
no.

Was there any book of instruction or work position laid down
for you by your employer?-- There is.

As to gas chromatograph operation?-- There is a manual there,
steps by SIMTARS.

But not by your employer?-- No.

By the way, how long has it been there, that is, the gas
chromatograph at No 2 Mine?-- How long has it been there?

Yeah?-- I think it was put in around about 1990.

That's the new one?-- Yeah, well -----

You don't know?-- Well, actually, I wasn't operating it then.
I just sort of don't know what time it was put there.

There was an older machine, is that what you are telling us,
but that was never used?-- There was an older machine there
when they updated the gas chromatograph.

Do you know anything at all about the Unor system?-- No, no.

I take it that in the instrument room where you use this gas
chromatograph, at least, to test its efficiency, there is a
probeye? A probeye?-- In the gas chromatograph room, yes.

Thank you.

CROSS-EXAMINATION:

MR MORRISON: I want you to look at a document, please. Can
you confirm for me, once you get your glasses on, that that is
the log book for the gas chromatograph or, rather, a copy of
it?-- Yes, that's it.

That is all in your writing, I take it, or most of it?-- Yes,
I would say it is, from probably around about the 2nd of '93.

Does it show under the headings "Air" or "Low Span" the dates

XXN: MR MORRISON

WIT: SELFF K J

when those tests were done?-- Well, "Air" is the air span and "Low" is the low span, yeah, with the ones I sent through to SIMTARS.

Does it also show on various dates in 1993 and 1992 some samples put through? For instance, 17 September 1992 there was a No 4 sample from the vent fan?-- One is - which was it - the ones on 70, 71, 72, 73, I didn't put them samples through, that is not my printing.

They indicate samples?-- Yes.

I tender that document.

WARDEN: Exhibit 62.

ADMITTED AND MARKED "EXHIBIT 62"

MR MORRISON: I don't think I will need you to look at that again. On the basis of your understanding about the gas chromatograph prior to this incident, was it your understanding that it had certain limitations about what it could effectively read?-- Oh, it had some - yes, I did know a little bit.

And did you understand that it had some limitations about reading carbon monoxide under 10 ppm?-- I knew that, yes.

It had some limitations on reading hydrogen under 100 ppm?-- Yes.

That was certainly your view prior to this incident?-- Yes, I knew.

Now, the fact is that you always had ready access to SIMTARS and they responded readily to assist you?-- Yes.

There were no major difficulties with the gas chromatograph in your dealings with it?-- No.

Is there, in fact, a time delay involved when you put a sample through to get the printout?-- There is no time delay. You have just got to wait till it does its full cycle.

It takes about 17 minutes, that's what I mean?-- 17 minutes.

You can't actually take a sample from any point in the control room, can you? If you are going to put a sample through, rather than a span test, you have to go down the mine to get it?-- That's right.

If one wanted to get one from 512 - behind the 512 seals you would have to get a person to drive down to the 512 seals?-- That's right.

Then the sample would be taken in a bag?-- Yes.

You would have to take that sample in the bag properly, you can't just fill it up, can you?-- No, you have got to do it properly, yeah.

And to take a bag sample properly might take upwards of 10 odd minutes?-- Yeah, 5 to 10 minutes - 10 minutes.

Then having taken that sample you have to secure the neck on the bag properly?-- That's right.

Then drive back out of the mine up to the control point?-- That's right.

After all of that is done there is another 17 minutes before you get your printout?-- That's right.

Thank you. I have nothing further from Mr Self, Your Worship.

CROSS-EXAMINATION:

MR HARRISON: You spoke of Mark McCamley a couple of times giving you some samples. Do you recall if he ever gave you one that was taken in the return of 512?-- No, I can't recall.

Particularly at or about 11 June this year?-- No.

You can only recall something from, was it, 401/402?-- 401/402.

Now, with the gas chromatograph, the mines inspectors used to visit regularly, didn't they?-- What's that?

At the mine the mines inspectors used to visit regularly?-- Yes.

Did they come and see how things were going with the gas chromatograph?-- Always have a talk to - with - I thought, you know, that's my duties, if anything. I would talk to them people.

I am talking about the mines inspectors?-- I talk to them myself. I just tell them the gas chromatograph is going well, sort of thing.

Did they ever expressed concerns about the use or lack of use of the gas chromatograph?-- I think that was my job, my instructions, the way it was handled. I think they were happy with the way I was processing with it.

Did they ever express to you the view that they felt it should have been used more often for analysis purposes?-- No.

Now, similarly, you had dealings with the SIMTARS people; is that correct?-- Yes.

They were helpful to you in terms of how you operated the machine and helped you in terms of how the machine was functioning?-- Yes.

Did anyone from there ever express any concerns along the lines of the machine should have been used more often?-- The SIMTARS had just started up another programme of random gases, bags of gas. I had put one through. I was waiting to put the other one in. I think they had trouble with some of the others, they didn't return the results. We were waiting on another lot of random gas.

That problem you had, was that a problem you had at your own mine?-- No. SIMTARS made up - they sent it back to each gas chromatograph operator at the mine site and you send it back through the modem.

Did any of the SIMTARS people ever express to you the view that the machine should have been used more often for sampling purposes at No 2?-- Well, SIMTARS - every time I sent them a sample down I am talking to them and they said, "Use the machine, use the machine, keep it operating".

Now, your use basically was for testing purposes to see that the machine was working, basically?-- That's right, that's the main use.

From what you said there were only a number of occasions when it was used for analysis purposes?-- That's right.

Now, what I am asking you is did they ever express any concern along the lines that it should be used more often for those purposes?-- At our mine, no, they didn't express anything like that.

Nor did the mines inspectors?-- No.

Thank you. Nothing further, Your Worship.

RE-EXAMINATION:

MR CLAIR: Just one question. You may not be able to answer this, it is just that I have a memory of something I thought was said when we were out there the other day. Is it the case that somehow a sample can be taken off the Unor system to be put through the gas chromatograph?-- I couldn't answer that.

You couldn't answer?-- No.

Okay. Thank you very much.

EXAMINATION:

PROFESSOR ROXBOROUGH: Just a quick question. Would you say that the use of the gas chromatograph was a complicated business? Was it a difficult thing to do?-- Well, what I do is just sort of call - operate and run it like that. It was to sort of pick it up first, but after a while you get confidence in what I am doing, but if you had to go further, yes, it is difficult, yes.

But a lot of its operation is automatic?-- A lot of it is, yes.

Would you describe the instrument as a delicate instrument or a robust instrument?-- Oh, it is a delicate instrument.

Pretty delicate, okay?-- Yeah.

EXAMINATION:

MR ELLICOTT: Can you tell me which gases can be analysed for using the chromatograph system?-- Well, in the low span you have got your H₂, hydrogen, O₂, nitrogen, your CH₄, your CO, your CO₂, C₂H₄ and C₂H₆.

What are C₂H₄ and C₂H₆?-- Ethylene and propylene.

You also have a high span method?-- We had a high span method there. We didn't have any gases to mix it up. I used to just sort of keep it calibrated on the low span method. I think the low span method was about 111 Ethylene and 350 CO.

Why do you think the chromatograph was there?-- To analyse samples.

As required?-- As required.

Was it your understanding that 24-hour advice was available from SIMTARS?-- What, to advise them 24 hours before?

No, I mean 24 hours a day, around the clock?-- Yes - no, I didn't - well, I knew used get in contact with them if you wanted them.

If you needed them?-- If you need them, yeah.

Did you have the impression that advice went beyond just the operation and calibration of the chromatograph to include advice on the interpretation of gas analysis results?-- Sorry, I don't know what you are -----

Rather than just running the samples were you aware that SIMTARS may be able to assist in explaining what the results meant?-- Yes, most certainly to help you if you ask.

Thanks very much.

WARDEN: Thank you, witness. Are you tendering that statement, Mr Clair?

MR CLAIR: Yes, I am, Your Worship.

WARDEN: I've got no note of it, that's all.

MR CLAIR: Yes, I am tendering that.

WARDEN: I will mark that Exhibit 62.

ADMITTED AND MARKED "EXHIBIT 62"

WARDEN: Thank you, witness. You may stand down. You are excused.

WITNESS EXCUSED

MR CLAIR: May it please Your Worship, I call Brian Mark Kelly. While the witness is being sworn, I have that original statement of Selff which I will pass up to be marked.

WARDEN: Thank you.

BRIAN MARK KELLY, SWORN AND EXAMINED:

MR CLAIR: Your full name is Brian Mark Kelly; is that right?-- That's correct.

Mr Kelly, you are employed at the Moura No 2 Mine?-- Yes.

The position that you hold there is described as supply man; is that right?-- Yes.

Now, you have made a statement in relation to your knowledge of this matter?-- I have.

Just have a look at this, if you would. There is a handwritten statement that bears your signature and then in front of that a typed version; is that right?-- That's right, correct.

I tender that statement, Your Worship.

WARDEN: Exhibit 63.

ADMITTED AND MARKED "EXHIBIT 63"

MR CLAIR: Mr Kelly, you started in the mining industry in September of 1977; is that right?-- Yes.

You had 17 years underground as a miner?-- I have.

Also other duties apart from the underground duties; is that right?-- Can you ask me that question again, please? I didn't understand.

You commenced in '77, you worked underground; is that right?-- That's correct.

As a miner until two years ago; is that so?-- No.

When you took on the job of supply man?-- Yeah, I was still underground for that -----

You were still underground, I see?-- Yes.

Your duties as supply man involved your supplying all the necessary material to the underground shifts?-- Yeah, to the best of my ability, yes.

You took some six weeks leave this year and you returned to work about one week prior to 7 August which was the date of the first explosion at Moura No 2?-- That's right.

During the period prior to the commencement of your leave did you have occasion in the course of your duties to visit 512

XN: MR CLAIR

WIT: KELLY B M

Panel?-- Not that I can recall, no.

This is during the period prior to your leave?-- Sorry, yes, yes. On a regular basis, probably a daily basis I guess, yeah.

In the course of delivering material there you would go as far as the crib table or a little bit beyond that; is that right?-- Yeah, just beyond.

You didn't travel into the goaf area?-- Not at all, no.

Did you become familiar with the way in which the seals were prepared for the sealing of 512 Panel?-- No, I didn't know anything about them actually. That was a different technique

To the normal?-- To the normal brick stoppings, yes, seals.

That was the Tecrete seals?-- They were Tecrete seals in 512, yes.

The prep seals were Tecrete prep seals and they were prepared some time earlier, were they?-- They were, but there was two that I know of that - one in the 5 South - 512 belt road which was not sprayed completely, and the one in the top return, I guess, not quite a metre from the floor rib to rib, and by memory I think there were a few holes in the roof for roof bolts and the baskets to be installed at a later date, yeah.

Let me ask you this: did you have any concern about the preparation and construction of those prep seals?-- Just the fact that the one in the belt road wasn't finished, hasn't been completely sprayed, and the one in the top return is different to what I had become accustomed to over the years with brick seals.

You came back from leave the week before 7 August; did you have any occasion to visit 512 section during that week?-- Not that I can recall, no.

You were on duty on 7 August, that's the Sunday?-- That's right, day shift.

Did you assist Mick Caddell with the span gas tests that he carried out that morning?-- I did.

Could the witness see Exhibit 11, please, Your Worship?

The results of those tests were recorded; is that so. Have a look at that document, if you would?-- Yeah.

That's a document that sets out the results of those tests; is that so?-- I really know nothing about this. Michael Caddell was in charge of this. I just merely assisted with the carrying of the CO bottle and equipment to do the tests, nothing to do with the figures which are in front of me here, no.

They were written by Mick Caddell?-- Well, Mick was taking times and -----

Do you recall whether there were any difficulties with any of the monitoring points?-- Yes, it was number 18, I think, cut-through 6, 510. When we arrived on the surface Ian Pearse who was sitting on the monitor in the room there said that it hadn't come through yet, so we gave it a bit longer and that one didn't come through to the best of my knowledge.

During the period prior to your going on leave the retreat had commenced, of course, in respect of 512?-- That's correct.

You say you went to the crib room area?-- Yeah.

Did you have any opportunity to observe the ventilation in 512 during those visits?-- No, not at all.

Thank you, Mr Kelly.

CROSS-EXAMINATION:

MR MacSPORRAN: Mr Kelly, do you remember when it was that you went on leave, what date it was approximately?-- It was the start of June school holidays which I believe was Friday the 18th. I'm not too sure on that, but I left on the Monday.

You were away for about six weeks?-- That's correct.

That brought you back to No 2 about a week before the incident?-- That's right.

The week prior to going on leave which would have been, you think, roughly the 11th to the 18th, thereabouts?-- Yes.

You were daily in 512 Panel?-- That is on the statement. I asked for that to be changed yesterday somewhat. I can't say on a daily basis, but it would be pretty close to it, yes.

I think to be fair to you in the statement it says almost on a daily basis during the week prior you were in the 512 Panel?-- That's right.

So at least on some days in the lead up to you going on leave you were in that panel?-- Sorry, can you ask that question again?

On some days or nights, for instance, some shifts in the week prior to going on leave you were in the 512 Panel?-- Yes, I changed the toilets in there - I'm the No 2 sanitary man, if you like - probably on a two to three day basis.

At no stage did you get further inbye than about the crib table area?-- Yes, I used to take supplies in, dust, stonedust those sort of materials, yeah.

When you took supplies in was that down the top supply road, No 2 heading?-- Mostly, yes. There were times I used to use the bottom supply road.

During the times prior to going on leave that you did that did you notice anything at all unusual about the ventilation in the top supply road?-- No, the ventilation in the top supply road was fair, adequate. It was dusty, a little dusty, but nothing out of the ordinary, no.

The top supply road was one of the intake roads, wasn't it?-- I'm not too sure about that, no.

Do you know whenever you were in the top supply road whether the air was going inbye or going outbye?-- It was going inbye.

On all occasions?-- Yeah, well - yeah, because of the dust. You could look back once you started to leave the section when you were in the PJBs you'd always look back to see if anyone was waving their light, and you could see the dust and on occasions - that dust would always go back to the face areas, not outbye.

Prior to going on leave you didn't notice any problem yourself in the 512 Panel?-- No, I really had nothing to do with the operations in that panel. I was - like I said, I would just drop people off, pick up and take supplies into that section.

Did anyone in your presence discuss any problem or concern they had with anything happening within that panel, 512, in the week prior to your going on leave?-- Well, there was always talk around the ridges about poor ventilation, but I couldn't - I can't really say any more on that, no.

I'm asking you specifically about the period before you went on leave. Is that the period you are talking about, that there was talk about poor ventilation?-- That's right, that's right.

Do you know who was involved in that kind of talk?-- I think almost everyone, yes. It was just common talk, I guess, yeah.

Do you recall what was being said in particular about the so-called poor ventilation?-- No, just that the air was - it was very sluggish and pretty warm in that section.

Did you notice anything like that yourself whenever you were in that panel?-- On the bottom supply road, yes, I did. It was very hot in there.

Again this is before you went on leave?-- That's correct.

Which heading was the bottom supply road? Was that number 4, was it? Number 4 heading? You can have a close look at the map if you wish to?-- That's correct. Yes, number 4.

Number 4, was it?-- That's right.

You noticed, you think, the airflow in that roadway was sluggish, as you put it, before you went on leave?-- Yes.

Did you notice whether the air in that heading was going inbye or coming outbye?-- No, you couldn't really tell. When I'd used that supply road for whether it be PJB or MPV I could spend, you know, 15 minutes, 20 minutes in that section and if I wanted to come out that way the dust in some places would be still in the air, hanging in the air, fine dust.

Did you ever notice before going on leave any unusual smell in that panel?-- No, I didn't.

Did you ever hear anyone mention that they had detected an unusual smell in that panel before you went away?-- No.

When you came back from leave it was about a week before the incident?-- When I came back from leave - yes, that's correct.

So late July early August?-- Late July. 29, I think it was I arrived home and started back on 1 August, I believe - no - yeah, roughly the end of July.

For that period up until the 7th you were not again in the 512 Panel?-- Not to my knowledge, no, I can't remember.

On the 7th you assisted Mick Caddell do the span gas tests?-- That's right.

Did you notice anything unusual on that occasion about what was going on inside the panel?-- In 512?

In 512, yes?-- We weren't in the panel as far as I know.

You mention in your statement during the retreat of the 512 section you observed that the supply road was warm and ventilation in that road was dusty and slow, was that the bottom or top supply road you are referring to?-- That's the bottom supply road, number 4.

Did you ever make any inquiries about why that was yourself, about the ventilation in that roadway?-- Not so much the ventilation. I had expressed my concern about the amount of coal dust on the floor on that particular number 4 supply road, yeah.

How was that dealt with? Stonedusting, was it?-- Yes, we used to dust - we had tried calcium several times and with not a good result at all, no. It was just too thick and too dry.

Just to be totally clear, the only concerns you had about ventilation in the supply road was number 4, not No 2?-- That's correct.

Thank you.

CROSS-EXAMINATION:

MR MARTIN: In No 2 road I think you said that the air was running inbye?-- That's right.

How do you know?-- Because of the dust. When I used to pull up on machines the dust would come back down past you and back towards the crib table.

Down towards cut-through 13 or 9 or -----?-- That's right, down to the face area.

When you first went underground as a miner did you have any induction course?-- Yes, I did.

How long?-- If my memory serves me correctly I think it was half a day.

Have you ever seen a book on spontaneous combustion which is a red book?-- I have not.

Or a book on spontaneous combustion which is a blue book?-- No.

What sort of background do you have or did you have before you entered the mining industry? You went to school to what age?-- Until year 10. I completed year 10.

You didn't immediately enter the mining industry, I take it?-- No.

What did you do just very briefly?-- I worked for a contracting firm at the treatment plant in Moura for a period of 12 months, I guess, and from there I worked at a sawmill for two years and then a little more construction work on the high school and then started in the mines on my 18th birthday.

Just finally, since you've been underground as a miner has it always been at No 2 Moura?-- No, I started at No 1 mine and then to number 4, the commencement of number 4. I was involved in that and worked there for some years, and from there I was transferred to No 2.

Since you first had your half day induction a long time ago now, have you been ever given any refresher training or courses of any kind in relation to particularly spontaneous combustion or indeed anything else?-- No, I have seen some movies on it in the training room on spontaneous combustion.

How long are the movies?-- How long do they go for?

Yes?-- I can't - not very long at all.

Give us an idea. One minute, five minutes?-- Yeah, 10 minutes.

281094 D.8 Turn 4 mkg (Warden's Crt)

And nothing else that you recall?-- We have had self-rescuer training and all that sort of stuff, yeah.

Thank you very much.

WARDEN: Mr Morrison?

CROSS-EXAMINATION:

MR MORRISON: Mr Kelly, you went in on Sunday morning, 7 August; is that right?-- That's correct.

You were rostered to go in on 7 August?-- That is right.

So that you knew when you came back from your holidays that you would be going down the mine on 7 August, on that Sunday?-- I knew the week prior. I came back to work for a week and I was rostered to work that Sunday.

I am sorry, you are quite right, you were back for a week?-- That's right.

So you knew during the week, at some stage during that week, that 512 was going to be sealed?-- No, I didn't.

Did you find out that it had been sealed on the Sunday when you came in?-- No.

When you went down the mine were you aware that it had been sealed?-- Not right away, no.

You did when you got there, though?-- Yeah.

Because you were testing at point 16?-- Yeah.

Which is directly outside the seals?-- That's right.

And you were in company with Mick Caddell when you did that?-- That's correct.

Now, did you go to the Union meeting that morning?-- No.

When you went to go down with Mick Caddell did he say anything about 512 to you? Obviously not because you didn't realise it was sealed when you got there?-- That's correct. Not that I can recall, and he may have, but no.

Nothing unusual?-- No.

Now, the operation for putting the span gas through the Unor system involved you and Mick Caddell underground?-- That's right.

And you would place gas into the tube system at some particular point?-- That is correct.

XXN: MR MORRISON

WIT: KELLY B M

Would that be at a monitor point?-- Not in some cases, no.

Was it at the monitor point in the case of point 16 outside the 512 seals? You can go close to the map if you want to check where it is. I think you will find it's part of the big map or the little map. It's just outbye the top return near the vent station?-- I'm not too sure. I think that is a point there, but I think it was the - I'm a little bit confused with that one and the one that's further down.

You mean point 18?-- No, there's one down near the belt road there somewhere that you - we had to uncouple the line itself, the span tube line, and send the CO up.

That one where you uncoupled the tube itself, did that go in through the belt road seal?-- I would only be surmising if I said yes. I'm not too sure on that.

And then in the course of putting the span test through you went further inbye past 512 and inbye into 510?-- I'm not too sure which procedure we took or which route but, yes, we were in 510.

Sorry, I don't mean the precise sequence, but at some stage you were certainly inbye of 510?-- That's right.

Now, the document you were shown that records some of the results of that span test, you don't know anything about that. I take it it's not your writing?-- No, it's not.

And it's not Mick Caddell's either, is it?-- I'm not too sure, no. Mick put his times and that down on a - I think it was a notepad.

Yes, a notepad?-- Yeah.

Could that be Mr Pearse's writing?-- Oh -----

You don't know?-- No.

Now, there were the two of you underground, and was Pearse the third member of the testing team on the surface?-- That's correct.

And during this process would normally someone remain at the monitor?-- That is right, yes.

So you would expect Pearse to have been at the monitor on the Unor system throughout this procedure?-- That is right.

No-one else, just Pearse?-- Just Ian, yes.

And his job then is to watch the screen and, no doubt, check results and so forth?-- That's correct, yeah.

And you in fact talked to him when you came back up?-- Only briefly about the one that didn't arrive, that was 18 -----

Point 18?-- Yeah.

Now, to your knowledge, on that span test occasion neither you nor Caddell operated the monitor screen?-- Not to my knowledge, no, I didn't - I certainly didn't.

You certainly didn't. You didn't see Caddell do it either?-- No.

I have nothing further, Your Worship.

MR HARRISON: I have no questions, Your Worship.

MR CLAIR: Might the witness stand down, Your Worship?

WARDEN: Thank you, witness, you may stand down. You may leave.

MR MORRISON: I am sorry, Your Worship, I apologise. It is entirely my mistake. There was one thing I wanted to show the witness and I completely forgot to.

WARDEN: Yes, thank you, by leave then.

FURTHER CROSS-EXAMINATION:

MR MORRISON: Mr Kelly, you mentioned seeing some movies in the training room?-- That's correct, yes.

I just want you to have a look at some. Maybe you can identify them for me. Now, can you identify any of these for me, both in terms of having seen them before as just a video cassette and having seen the actual contents of it?-- I have seen the contents of this one.

Would you read out the title?-- "Fight That Fire".

Was that seen by you in the training room at Moura No 2?-- That's correct.

I tender the video.

WARDEN: Exhibit 64.

ADMITTED AND MARKED "EXHIBIT 64"

MR MORRISON: When you saw that you weren't sitting there by yourself in the training room; there were, no doubt, other people there as well?-- That's right.

Like a training course of some sort, or at least a video watching occasion?-- More like a safety meeting, I guess.

FXXN: MR MORRISON

WIT: KELLY B M

A safety meeting?-- Yeah.

All right. I don't know if that's got a title on that one.
You might have to slip it out?-- "Your Self-rescuer".

You have seen that one?-- Yes.

Same place?-- Yes, that's correct.

Same sort of format?-- Yeah.

A safety meeting?-- That's right.

I tender that video.

WARDEN: Exhibit 65.

ADMITTED AND MARKED "EXHIBIT 65"

MR MORRISON: I am sorry, I don't have copies for the panel or the members of the Bar table. No doubt a venue can be arranged for a safety meeting.

WITNESS: Yeah, it's a bit hard to put a movie to the title, but I have viewed quite a few movies in the training room and I have no doubt that I have possibly seen these as well.

MR MORRISON: You have seen quite a few, in fact?-- That's correct, yeah, movies, yeah.

Perhaps if you can't specifically identify those four that remain with you, why don't we just leave them in one bundle and I will tender them for identification?

WARDEN: Thank you.

MR MORRISON: That's all I have, Your Worship.

WARDEN: Thank you, witness, you may stand down now.

WITNESS STOOD DOWN

MR MORRISON: Could I just mention one thing perhaps for the record? Four of those videos are ones that were identified by members of the panel at the inspection as being videos that might be brought in. Just right now I can't tell you which of those six the four are, but four of them are and there is two extra ones.

WARDEN: Thank you. We will have a look at them later.

FXXN: MR MORRISON

WIT: KELLY B M

MR CLAIR: May it please Your Worship, I call Mark Adrian McCamley.

WARDEN: Those videos will be Exhibit F for identification.

MARKED "F" FOR IDENTIFICATION

MARK ADRIAN McCAMLEY, SWORN AND EXAMINED:

MR CLAIR: Your full name is Mark Adrian McCamley; is that right?-- That's right.

Mr McCamley, you are employed at the BHP Australia Coal Mine at Crinum; is that so?-- That's right.

How long have you been employed there?-- Since 4 July.

Now, you are employed there as Production Coordinator?-- That's right.

You have, in fact, worked in the mining industry since 1979?-- Yes.

Initially as a Queensland Cadet Coal Mine Manager at Southern Cross Colliery, No 12 Colliery at Ipswich?-- That's right.

And in 1980 you worked at Cook Colliery for six months?-- Yep.

And Leichhardt Colliery for six months?-- Yep, that's right.

You might, if you like, move your chair forward. You will feel more comfortable, Mr McCamley, than trying to lean forward all the time. I know these microphones are a bit of a nuisance, but it does help. Now, you then spent 1981 at the Rhondda No 5 Colliery in order to complete your cadetship?-- That's right.

In 1982 you were employed at Rhondda No 5 Colliery as a miner?-- Yeah.

You gained your Deputy's Certificate later that year?-- Yeah, that's right.

And then you were appointed as a deputy at Rhondda No 5 in 1983?-- Yes, I think that's right, yeah.

Well, you in fact obtained your Manager's Certificate in Queensland in late 1983?-- Yeah, that's right.

And you were appointed shift undermanager at the Haenke No 1 and No 2 Collieries at about that time, was it?-- Yeah, it was a little bit later than that.

In 1984, in any event, you transferred back to Rhondda No 5 as shift undermanager until mid-1985?-- That's right.

And you were then appointed undermanager-in-charge for both Rhondda No 1 and No 5 Collieries and you remained there until 1987?-- That's right, yep.

Then you joined your present employer, BHP Australia Coal?-- Yes, that's correct.

Initially as an open-cut mining foreman at Norwich Park?--
That's right.

And in 1988 you joined Moura No 2 Mine as a shift undermanager
and relief manager?-- Yeah, that's right.

And you worked there until about 1 July 1994?-- Yeah, I
think it was about the 28th or the 29th was my last shift.

Sorry, 28 or 29 July?-- Of June.

Of June?-- Yeah.

Okay. Now, you then left and subsequently took up your
present position?-- That's right.

Now, you, of course, were shift undermanager throughout the
area then up to that date, the 28th or so of July, and there
is a notation in the records, in particular the shift manager
reports or shift reports, I should say, indicating the shifts
on which you were the undermanager; is that right?-- Yeah,
that's right.

On occasions you relieved as manager during that period?--
Yeah, there was occasions when the registered manager was away
and then I relieved as manager, that's right.

Now, I want to deal, first of all, with a particular event on
the Friday day shift 17 June and then I will ask you some
questions more generally about the system at the mine, but if
I can draw your attention to that day, that's the Friday day
shift 17 June. It was an event when the deputy on the 512
Panel, Reece Robertson, halted production. Do you remember
that occasion?-- Yes, I do.

Well, now I would like you to tell us as much as you can
recall about it in sequence?-- I remember getting a request
- I can't remember who by - but to go down to 512, that Reece
had stopped production, he had problems with methane coming
back up, or backing up the No 2 heading, so I grabbed some
instruments and Allan Morieson and went down into the panel.
I can't remember exactly where I met Reece Robertson, but I
met up with him and Greg Edelman; they were there. We spoke
about the problem. I then decided to go into the top return,
the No 1 road, and take some samples. I think that was up
outbye somewhere around about 2 or 3 cross-cut. It was near
the top of the panel.

Okay. Just pause a moment, if you would, Mr McCamley. At
this stage whereabouts was mining taking place in the panel?--
It was over on the bottom side of the panel.

Use the laser pointer there if you like and you can point it
out on the plan of 512 that's up there on the whiteboard?--
I think it was 7 - I think it was in 7 cross-cut and over in
that area there, between sort of 4 and 5 road.

Yes?-- I think it was in that area. I'm not really - I'm
not positive now, but I'm pretty sure it was over there.

Okay. You previously looked at a deputies report too which told you which mining sequence was being followed at that time and you checked that against the sequence plans; is that right? That confirmed -----?-- No, I haven't.

You haven't?-- No, I haven't gone back and checked those out. It only says the sequence, it doesn't say where it was actually mining, and I can't really remember.

Anyway, that's your best memory of it?-- Yeah.

Okay. Now, what were the arrangements with ventilation at that time in the panel?-- Well, at that stage there were stoppings across No 2 road at 7 cross-cut and the No 3 road and I think one - I'm pretty sure there was one at No 4 road as well.

Just indicate that, if you would?-- Across No 2 road there, No 3 road there and No 4 road there, which was directing air down into the panel and across where the continuous miner was and then down around the return and out.

All right. Go on. You were familiar with the arrangement with the stoppings at the time you went down there?-- Yes.

Is that right?-- Mmm.

I mean, you had been on shifts previously where you had had to keep track of what was happening with the ventilation?-- That's right, yeah.

Okay. Well now, you mention that you went to a point where you took some samples; is that right?-- That's right.

Can you indicate that for me?-- I think I went through that door there in No 3 cross-cut, now that I look at the plan. I went through the door and I started taking samples for carbon monoxide, carbon dioxide and methane and oxygen. I had an MSA Minder and Drager 21/31 multi gas detector.

Just pause a moment. First of all, who was with you at that time?-- At that time Allan Morieson, I think Reece Robertson and Greg Edelman were with me, four of us.

Before you went through that door in 3 cross-cut did you experience yourself what the position was in that man and supply road at No 2 heading there?-- No, I just spoke to Reece and he told me what was happening.

What did he tell you?-- He told me that he was getting methane and air banking up - coming up No 2 Road, actually flowing through the loose stopping there, coming up into the intake air.

You didn't make any particular observations yourself in No 2 heading at that time?-- No, I didn't go right down there at that time. I, first of all, went into the return, made my way down that way.

Okay. Well, now, if you can continue with your -----?-- Yeah, we took our readings and Allan Morieson had instruments as well and we conferred and they were just about the same. Then we moved down the No 1 return. I walked down the return with the other blokes taking samples as we were going. The samples didn't - the readings didn't change. When we got down, I think it was, about 9 or 10 cross-cut my - I think I spoke to Allan Morieson and got him to lift one of the bags across one of the stoppings there to start air moving through there.

Now, just pause a moment. This was on the way down No 1 or did you go to the back of the panel first -----?-- That's right.

And come back, or what was the position?-- No, on the way down.

On the way down?-- Yeah.

You got him to lift - well, in the stopping - we are talking about that stopping in, say, 9 cross-cut or thereabouts?-- Yeah.

In those stoppings was there provision for a flap to be rolled up or a window?-- Yeah. I can't remember - I can't recall whether it was a door we opened or whether it was a brattice flap over a hole which was lifted.

But your memory is that there was something done to -----?-- Yes.

Open up part of one of the stoppings, you are not too sure whether it was 9, 10 or 11 cross-cut?-- Yeah, that's right. It was my intention to open up a few holes in those stoppings to get positive ventilation moving down the No 2 road.

Yes, okay. Now, you say that you took readings at various points down that No 1 heading. How many points down the No 1 heading would you have taken the readings?- I took a spot sample when we first entered the return. Then after that we took a sample as we walked down and we took samples and read the samples as we went.

These were samples on your Minder?-- That's right, the Minder and the 21/31. I was sampling for, I think it was, carbon dioxide and Allan Morieson had a CO tube in his.

Okay. Right. Well, what happened after you got Allan

Morieson to open up one of those flaps?-- Well, I went through and took some more readings through in the flap and had a look at the - what the ventilation was like.

You actually went into the waste area there?-- Well, just the other side of the stopping. I think bottoms had been taken up fairly close to the stopping. They were about, oh, 6, 7 feet deep.

So, you certainly didn't go down as far as No 2 roadway at that point?-- Not at that point, no.

Yes, okay. The readings inside?-- The readings inside were slightly higher on CO2 than the readings we had taken in the return. I can't remember what the methane or the CO - I am pretty sure the CO was almost the same, but I can't remember what the methane reading was.

Now, when the flap was open - when you went in through that stopping and the stopping was open did you sense an immediate difference in terms of the ventilation in that area?-- Yes, it was a lot warmer, the air inside the stopping, when we opened it, walked into there. The air was a lot warmer and you could tell it was a fairly - very slow ventilation in there, almost none.

Anything else apart from that that you noticed at that time?-- No.

Right. Well, what happened then?-- Then I proceeded further down. I think we went down to about 12 and I got Allan to open up another door in 12 cross-cut and then we went around to this stopping here.

That's at the bottom of No 2 heading?-- That's correct.

Short of 13 cross-cut?-- That's right. Then that stopping had a door in it which we left open or marginally open to allow air to move through there and we opened that up wider as well to increase the ventilation down that road.

Can I just ask you this: when you arrived there was that door or flap partly rolled up? Was there some opening in that?-- I think there was, yes.

You think it was?-- I think it was partly up.

Can you give some sort of estimate as to what extent that flap was open; that is, what sort of area of opening there was in the stopping? First of all -----?-- I would say about half - maybe a half a metre off the floor, I think it was, from memory. I think it was half a metre up.

How wide is the flap?-- Oh, probably about 3, 4 metres.

3 or 4 metres. You say it was still rolled or held up about a half a metre off the floor?-- Yeah, I think - yeah, about half a metre, I think.

These flaps in those stoppings along the back there, short of 13 cross-cut, how are they adjusted and fixed in place when they are opened?-- Sometimes they are rolled up and then nailed or held with a bit of rope, sometimes they are just pulled up and just nailed to the props.

I see?-- Some of them are different than others.

Right. Even in the various roadways some might be different to others?-- That's right.

Okay. Right, well, you asked Allan Morieson to open that up further. How much further?-- I think we lifted it up about another metre. I wanted to stop what was happening pretty well straight away in that No 2 road so I wanted to get good ventilation getting down that road straight away, so I lifted it a fair bit.

Okay. Well, what did you do then?-- Then I walked through that flap and back up to 12 - into the intersection of 12 cross-cut.

In No 2 heading?-- Yeah. I am not sure where I went from there. I think I - I am just not positive. I might have gone across to here and up here. I might have gone to there and up here.

You are indicating down along number 12 cross-cut and, perhaps, up 3 or 4 roadway?-- That's right. I went in there up 3 or 4 roadway, had a look around this goaf area.

Just pause a moment there. We can see what you are indicating ourselves, of course, but for the record you are actually indicating you may have walked up in 3 and 4 roadways there and you may have walked up as far as 10 cross-cut; is that right?-- Yeah, 9 or 10 cross-cut, yeah.

And in 3 or 4 or both of those roadways; is that right? What you are saying -----?-- Yes, that's right. Yeah, 3 or 4 or both of them. I probably - I think I went around that area there, across up 4, back across 10, might have come up 3 then and across 9.

So, it was -----?-- It was a general inspection around the pillars through to the punched areas.

Yes. In fact, around that square pillar between 3 and 4 headings and 10 and 11 cross-cut, you indicate you may have walked right around that pillar?-- Yes, that's right. I walked around quite a few of those pillars.

Now, did you do that inspection out there by yourself or did anybody else go with you?-- Yeah, I went on my own. Other blokes stayed out of the extracted area.

They stayed back in No 2 roadway?-- Yeah, I think so, yeah.

When you moved up No 2 heading did all three of them accompany you there or -----?-- I just can't remember for sure. I know

Greg was with me and Allan and Reece - whether they were there - one of them, I know, went up to do some other things outbye. I thought it was Reece that had gone up to the crew to bag off a stopping that I spoke to him about, but it might have been Allan. I just can't remember now.

Did you, or to your knowledge anybody else, go right across cross-cut 13 at the back of the panel at some stage?-- I think when we came up through 13 into 12 and then I started walking around here Allan went across and checked these other stoppings across the bottom.

The other stopping, just short of 13 cross-cut there?-- Yeah.

Okay. Well, now, tell me, the area that you went out into there to inspect, that was very much a waste area; is that right?-- That's right.

Were you concerned at all about the risk of fall in the area?-- Pretty quick on my feet. No, I pretty well know the mine very well. I have spent a fair bit of time in the goafs at Moura and I know what the conditions were like down there. I have been through there quite regularly and I like to get right through the goaf and see what was going on. So, there was a couple of falls there I just walked around the side of, but I generally didn't have a problem walking through the punched areas.

I am pleased we have got you here today, Mr McCamley. The position then when you came back over to No 2 heading was that you were somewhere around number 9 cross-cut; is that right?-- Yeah, that's right.

Now, Greg Edelman was there?-- Yeah.

What about Reece Robertson, was he there?-- Like I said, I can't remember whether it was Reece or Cocky - Allan Morieson.

But certainly there were a couple of people there?-- Yes, there were.

Who you took up with?-- Yeah.

Okay. Now, when you did do your inspection out in the waste there, did you see anything unusual yourself?-- No, no, I noticed that the ventilation was very slow, slower than I had noticed on previous occasions.

Anything about temperature?-- It was - it was warmer.

It was warmer than where?-- It was warmer than it generally is. I didn't notice anything else and the readings I was taking didn't indicate anything out of the ordinary.

Now, in terms of the CO reading, what sort of CO readings did you take then?-- Yeah, I took CO and CO2 and they were - the CO reading in there were slightly higher than they were in the return. I think there was - just from memory, and I am not certain about the readings, I think they were 6 parts.

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About 6 parts?-- Yeah, that's my recollection.

Did you make a record of any of the readings that you took down there on that day?-- Yes, I think I - well, yeah, I wrote them in my little notebook, what the readings were when we first went into the return, what the readings were as we went down the return and I wrote it when we got up to 8 cross-cut. I wrote down what readings we got there.

Right. So, you did make a record in your notebook, did you?-- Yes.

Was that transferred onto any official report of any kind?-- No, I just orally sort of transferred that information into the shift.

Orally transferred that to whom?-- Albert and George.

That's Albert Schaus and George -----?-- George Mason.

Mason?-- Yeah.

Okay. Now, you came together, you mentioned, with at least a couple of people then at the junction of 9 cross-cut and No 2 heading?-- Yeah, that's right.

Any conversations take place there?-- We were talking about conditions and different things all the time. I can't remember exactly what was said.

Now, was Allan Morieson taking readings in the area there, do you know?-- Yes, Allan came up to us there. I remember speaking with Allan, I think, about 8 cross-cut. We walked up No 2 roadway into 8 cross-cut intersection.

Right. Now -----?-- I think that's when - just from memory now, Allan was checking those bottom stoppings and just fixing up the regulators. That is where he met up with us, yeah.

At 8 cross-cut?-- Yeah, about 8 to 9. We were walking up from 9 to 8 and he came up No 2 road and met up with us.

Okay. Now, do you recall Reece Robertson taking readings in the area of about 9 cross-cut in No 2 road?-- I don't really know, no. I don't really recall it. He certainly could have, yeah, but I just don't remember.

Well, he has told us that you and he took readings at the same point and I think he estimated it as being at that junction, the 9 cross-cut No 2 heading, and that you read your Drager tube as indicating 8 ppm and that he read his Drager tube as 10 ppm and you then - because there was this disagreement between the readings that each of you took, that he then swapped his Drager tube with you and he read yours and you read his and he read yours as 10 ppm and you read his as 8 ppm. Now, do you remember that exchange at all?-- No, I don't. Actually, I don't remember that at all.

Has this happened on other occasions, where two people have come up with quite a different view as to the reading in the Drager tube?-- Yeah, yeah, it happens regularly when we have taken readings at Mines Rescue and that. Yeah, people get different readings.

You have been in Mines Rescue; is that correct?-- That's right.

Now, can I just ask you about this difficulty that seems to appear in the reading of the Drager tubes. What is your method for reading the Drager tube? We have heard, obviously, how the colour moves down the crystals so you don't need to go into detail about it, but just tell the Court what your method is?-- There is always uncertainty as to where the colour ends up on the crystal. You spin the tube around, some sides of the colour goes further up one side than the other side. So, it is sort of a fuzzy area. Sometimes you can - it looks like it might be a bit longer or shorter. Generally I go to the end of the colour that I can see a reasonable amount of stain, that's where I read it to.

You read it at the end of the colour where you can see a reasonable amount of stain?-- Yeah, well, you sort of read it right to the end of the stain, but that's how I read it.

You don't actually look to the very last tinge of colour, what you look for is where you see a reasonable amount of stain?-- No, no, you read it right out to the last tinge of the colour, yeah.

Well, you just mentioned a moment ago about a reasonable amount of stain?-- Yeah, well, what I meant was what you can see, you know, where you can see the colour. You read right to the end where you can see the colour.

I just notice you wear glasses. Has there been any consistent difference between the way you see colour and the way other people see it?-- I have never noticed that, no. A lot of - most times my readings are consistent with other people's. Certainly my experience with Mines Rescue is I have generally come up with the same readings as other people, but I will note that on the day I was reading those Drager tubes I didn't have my glasses.

You didn't have your glasses -----?-- No, I did not.

On that day. I see. Can you explain what happened? Do you normally not take your glasses underground?-- Yeah, I usually just use them for - I don't really need them, I can read without them or whatever. They just make things a lot clearer. It is a bit of a nuisance wearing glasses so, you know, I don't usually wear them underground.

Right. When you have done your readings at Mines Rescue, at least in recent times, have you had your glasses on?-- No.

You haven't?-- No.

How long have you been wearing them, Mr McCamley?-- Only about 18 months.

18 months. Was it because of a difficulty with reading or with distance that you got glasses?-- Yeah, just reading things on the wall, yeah, probably 10 feet away, something like that.

Just assume for the moment that there had been a reading of 10 ppm at that point, 9 cross-cut in 2 heading, would that have been a matter of concern to you?-- Yeah, I was concerned.

You say you were concerned?-- Yes.

Was there actually a reading of 10 ppm?-- I remember - I don't remember the actual reading that we got. I just couldn't remember the actual figures. I know it says in Reece's statement that it was 10, but my recollection - I just couldn't recall the actual figures, but I do remember that the CO readings were higher and I was concerned.

Are you able to say what was the highest reading that you got?-- No, I can't remember exactly what those readings are.

Against that background that you can't remember what the readings were you say you were concerned down there?-- Yes.

At this time?-- Yes.

If it was a reading of 10 ppm that would be a basis for concern to you?-- Yes, that's right.

That's even without calculating any CO make as such?-- Yep.

The ventilation was still pretty slow in that No 2 road at that time, No 2 heading?-- Yes, it was still fairly slow, but it was picking up.

If a reading of CO in parts per million was to be calculated over to a CO make in litres per minute what effect would it have that the ventilation was fairly slow at the time that the parts per million reading was taken as opposed to the ventilation moving more quickly?-- Well, slow ventilation would give a low litres on your CO. A lot of ventilation on the same parts per million would give a higher CO make.

Now, can you tell the inquiry then what happened after you took up with the others in, first of all it seems, number 9 cross-cut and then at number 8? You met Allan Morieson?-- Yeah.

Where did you go to then?-- I then walked across 8 cross-cut inbye along here. I'm just not sure, I think there was a fall around here somewhere. It might have been here, I just can't remember now.

The workings at the time were -----?-- Pardon?

The workings at the time were where?-- Well, I was in here. I thought there was a fall here or here, I'm not sure.

You are indicating in 7 or 8 cross-cut around number 3 roadway?-- Yep. I walked over that fall and up around. Whether it was here or here I'm not sure, but I walked up and then came back out 7 cross-cut - no, it was 8 cross-cut I would have - yep, I went in there and around - the fall must have been there, walked up here and then back out to 8.

In fact I think you told us earlier that the workings were somewhere there adjacent to 7 cross-cut?-- Yeah, I think the miner was over there.

Over on the bottom side?-- Yeah.

Did you notice anything in that area?-- Not particularly. It was still fairly slow. There was no - not much ventilation in there and it was still - it was pretty warm.

You say there was a bit of ventilation there and you were coming back up No 2. As you passed 8 cross-cut did you notice anything in relation to the direction of the airflow?-- It was pretty dead. There was very slow movement. I think it was very slowly starting to move inbye, but I know it was very dead.

You say it was slowly starting to move inbye?-- Yeah.

As you walked up No 2 heading did you notice any flow in the other direction?-- When I walked up No 2 road from 8 up to 7 that was - there was a ramp there. I walked up the ramp and then out - there was a very loose stopping across there which was - and I walked up to the top of that stopping. We then walked outside. As I was walking up the ramp the ventilation seemed to be really slow. I sort of noticed that it was fairly warm and that the ventilation was actually going - as I got up near the top of the stopping I noticed the ventilation was going backwards, back up towards the outbye area.

Did you notice anything in relation to a smell at that point?-- Yeah, I smelled a very slight - just a very, very slight tarry smell.

You recognised it as a tarry smell?-- Yes, definitely.

Had you smelled that kind of smell on other occasions?-- I had - I have smelled that smell, yeah, before.

Whereabouts?-- Down around the Ipswich mines there is a lot of old goaf areas. There is sort of old spoil piles which are on fire and you smell it pretty regularly around there, and also out at Moura there is like the old No 1 mine there. There is a bit of goaf stink comes out of there.

Any discussion with the others who were with you about the tarry smell?-- Yeah, I think I spoke to Greg. He was there, and Reece, I think he smelled the same thing.

Did you take some readings at that point?-- Yeah, we took readings there. Again I can't remember what the exact readings were.

What did you do then?-- Well, we went outside the stopping and I got that stopping pulled down. I think I got - previously I had got Reece to take some men and go and block off the number 6 road, the bottom road prep seal to make sure that none of the intake air was being shortcircuited around

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there, being wasted, so that all the intake air we had was available to go through the goaf. He told me that that had been done and we pulled down this stopping here at No 2 road completely and then sort of walked back down the ramp into 8 cross-cut and then started to sort of assess what was happening to the ventilation.

When you walked back down No 2 heading and back down the ramp again, what happened in relation to that smell that you smelled earlier?-- It disappeared. As I walked down into 8 cross-cut the smell went away. When I got down there to the intersection it was still fairly warm but there was no smell.

Did you then walk along 8 cross-cut to see whether you could smell anything -----?-- Yeah, I had another look around then and got around trying to see if I could find where it was coming from because I hadn't smelled it anywhere in the panel and I had walked around everywhere up to that point. I walked back in along 8 cross-cut to see if I could pick it up, but I couldn't.

How far did you go along No 2?-- I'm just not sure now. It could have been one or two roadways inbye. It could have been one or 2. It could have been into there.

Did you see any haze at any time in the goaf area?-- No, at no stage did I see any haze.

Any sweating?-- No, no other indicators whatsoever.

What did you do after that?-- Then I started - I came back to 8 cross-cut. I then - I think I walked back up to 7 cross-cut and again when I got up to the top of 7 cross-cut I just got this little whiff again, the same sort of a smell, but I noticed that it seemed as if the air was starting to move down inbye.

Along No 2?-- Down No 2, yeah.

I walked back down to the bottom, the smell went away and I noticed there was air starting to move down the No 2 road now in the direction that I wanted it. I walked back up the ramp again and I stayed there for a while just having a look what the ventilation was doing, because I think previous to this I had asked Allan Morieson to go outbye and maybe open up some regulators or close some others to get more air into the 512 area, and I can't remember exactly what I might have said to him.

There were ways though that you could at least temporarily direct more air to 512?-- That's right.

Is that the sort of -----?-- At the expense of other panels.

At the expense of other panels?-- That's right, yeah. So at this stage I was there on my own and -----

How long would you have been there - just so we get an idea of time, how long would have have been there at this point from

the time that you first came through that door in number 3 heading into the No 1 roadway?-- Probably half to three quarters of an hour.

Go on?-- I then sort of had a look at what was happening around, and I went and got some stonedust from the floor and held it up to the roof and let it dribble out of my hand so I could have a look at what the ventilation was starting to do and how much it was starting to move.

Whereabouts were you standing when you did this?-- At 7 cross-cut, just virtually where the stopping had been.

At the top of the ramp?-- Right at the top of the ramp, yeah, at 7 cross-cut on the pillar edge, and that's when I noticed what was going on with the air. The stonedust when I dribbled it down from the roof started to move outbye and then as it, fell down further into the road it then started to move inbye and that's when I worked out what was happening. The warmer air from the goaf was actually moving up in a layer and was going outbye and that's - and then the cooler, fresh air, the intake air, was actually moving inbye, down underneath it.

The readings that you had been taking as you went around, were they readings in the general body or readings up near the roof or a variety -----?-- They were mainly general body readings because when we were walking in around the goaf we were down in bottoms, so -----

And the roof was pretty high?-- Even when I was talking readings like this it would have been general body.

There are devices to extend and get up to a high roof, I take it?-- Yes, that's right.

Did you have anything like that with you?-- No, we didn't take that with us.

So you really were only able to test up near the roof when you were in areas where there hasn't been bottoms taken?-- That's right.

Did you do any tests up in this area of the warmer air that seemed to be moving outbye once you discovered that there was this layering?-- I just can't recall whether I did. I probably would have thinking back, but I just don't recall it, no.

Now, you did mention that with the stoppings being open down the back and the other temporary stopping just inbye of 7 cross-cut being taken down that ventilation down No 2 was increasing; is that right?-- Yeah, that's right.

Did that process continue?-- Yeah, it did. While I was there it continued to increase the ventilation and I think probably about another half an hour's time the warmer air that was coming up had actually - the ventilation had started to take it away and it had disappeared, that backing up ventilation that started to turn around and go down the hill, and we had

normal positive ventilation.

Was there any alteration to the waste edge stopping in number 3 road?-- I think I got Reece and Greg to go outbye and check those and see what the condition of that one was. I said it could have a small opening in it, but didn't want to have it really widely open, and then number 4 stopping was - I think do the same thing. I then walked into the miner and had a look at them myself, but I just can't remember what the condition of the number 4 road stopping was.

Was the miner working at this time?-- No, it was not. It was stood down because of this ventilation problem.

You went along 7 cross-cut to the air where the miner was?-- Yep.

What did you do after that?-- Well, one other thing I didn't mention, but another thing I got Reece and Greg to do was to block off the air that was going over the continuous miner which was most of the intake air going straight over the miner and straight down the bottom return. I got them to block that off a bit to put more pressure on the air in No 2 road to get it to flow down.

Where did they block that off?-- Just near the miner. They put a bag across in front of the miner.

That was again just a temporary step to try and flush out this area in No 2 heading particularly?-- That's right. It was a temporary step to get air moving in the right direction, to get cooler air going through the goaf and re-establish it moving in the right direction, and it was my intention then that once it was moving in the right direction we could then take that bag down, for example, at the front of the miner and it would continue to move in the right direction.

What did you do next?-- I think I went back out and I met up with Reece again, spoke to Reece. We were back out at the number 7 cross-cut No 2 road intersection and he was there and he saw that the air was moving in the right direction. He took readings and we walked in then down towards the miner and taking more readings. It seemed to be - everything was flowing right so I believe he recommenced production.

What about the smell? Did you make some checks in No 2 heading again?-- Yeah, once the ventilation started to move it took the smell away, yeah, and I never - I didn't smell it again.

Was the fact that the smell did exist, at least that you could smell it at one point there, a matter that gave you concern?-- Yeah, it was a very, very light smell but, yes, it did give me concern.

What was that concern? What did it indicate to you?-- Well, it indicated to me that we had definite ventilation problems in the area and that this area had been allowed to warm up fairly considerably and it could have indicated the very, very

early signs of maybe a heating, an incipient heating.

What produces the smell, the tarry smell?-- Well, it was my understanding it gets produced from accelerated oxidation in coal.

Accelerated oxidation, is that a form of heating?-- Yeah, that's right. Yeah, that's what a heating is.

So the existence of the smell then would seem to indicate, from what you say, the existence of some sort of heating?-- Yeah, the very early stages because it was a very, very slight smell. It was very slight.

Now, the steps that you took on this day to improve the ventilation in the area, what effect would that have on the heating in whatever form it existed?-- My thoughts were that to get the ventilation moving again correctly, to get cooler air going through the goaf and to take away any warmer air and heated up areas would cool down and take any sort of built-up warmth away, and therefore, if it was a very early stage of a heating it would then make it dormant and static again. If you can keep the heat away then it will then stabilise.

You say if it was a very early form of a heating, but if in fact there was a smell that would indicate at least that there was a heating of some kind even in its very early stages; is that right?-- Yeah, that's right.

One equates to the other, the existence of the smell indicates the existence of a heating even though it might be in the very early stages?-- Yeah, that's right.

So you had this situation where there was a heating albeit perhaps in the very early stages. The ventilation you would hope, I think from what you told us, you would hope would cool the area?-- That's right.

Would that extinguish the heating?-- It would stabilise it and coal oxidises all the time at varying rates. You never actually stop it or extinguish it, all you do is stabilise it.

You mentioned you had the discussion with Reece Robertson and that he recommenced production?-- Yes.

What happened with all the changes to ventilation, the temporary changes to ventilation that were designed to flush out the goaf in that No 2 and 3 heading?-- The changes reduce the amount of air that was available to go over the miner because there was air travelling down a No 2 road now and straight through that 7 cross-cut where there had been a stopping. There was no stopping there. I said to him I wanted it left that way, the stopping was not to be put up, and for him to regularly check that that ventilation was positive all the time. I said that the ventilation had been reduced over the miner but it was still ample to mine, and then I think he sort of went in, and the understanding was that, yeah, he would start mining and see what the situation was like with ventilation. If it was adequate he would keep

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mining.

XN: MR CLAIR

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WIT: McCAMLEY M A

I see?-- And I said to him I didn't want him to put that stopping back up at 7.

What about the stopping at the waste edge in No 3, was that put back the way it was originally?-- No.

Was that still left open somewhat?-- That was still open a little bit, that's right. I wanted air to be - to move in down that road as well.

You mentioned earlier that there was actually a temporary stopping put up just short of the miner in 7 cross-cut at one point. Was that taken down before -----?-- Yes, they had to take that down to start mining.

I see. So that at least to some extent what you had achieved by taking the temporary measures and directing more ventilation down No 2 heading would have been affected by taking that stopping away from where the miner was?-- That's right. That would have reduced the pressure available in No 2 road but I - that's why I stayed there and then had a look at it to see what was happening and it still flowed the right way, and once they started production and everything I sort of assured myself that the ventilation was going to continue to move down No 2 road, and it did, and they started mining.

Okay. Now, what did you do yourself at that point?-- I think I stayed there for about half an hour while they started mining and then I left the section. I can't remember if Allan Morieson was with me when I left, but then I - my recollection is that I walked out of there and over to the other section.

And then -----?-- I'm not sure.

And then?-- I made other inspections of the mine, the areas where they were mining. I think from - I just can't remember where the other area was. I had some men working in 5 South. I went down there. I just can't recall whether I went in to see if the drilling crew were drilling or not, I can't remember, and then I travelled up out of the mine and it was - this was probably, oh, about 1 or 2 o'clock.

And what happened when you got back up to the surface?-- When I got up to the surface I went into George's office and got Albert and George together in his office and took them through exactly the whole scenario, everything that I found and all the steps I had taken to change the situation and what my recommendations are, that they leave that stopping down to make sure that that ventilation stays that way.

So you discussed with them basically what you have told us about here today?-- That's right, yeah. I discussed it with them at length and they understood, yeah, what I had done and what was happening.

You mentioned the layering of the air in the No 2 heading?-- Yeah.

The problem with the two different flows of air?-- Yes.

The smell, the tarry smell?-- Yeah, I mentioned that, smelt a slight tarry smell, very slight.

You mentioned that you had had to make all these changes to the ventilation arrangements while the miner was not working to flush out those areas?-- Yes, yes, I mentioned all those ventilation changes.

Did you mention that production had commenced again?-- Yes, yeah, I told him that they had recommenced production.

Did you mention the level of CO readings that had been obtained in that goaf area?-- Yeah, I got my book out and went through all the readings that I got with them and let them know exactly what they were.

Do you still have your book?-- Unfortunately, no, I don't.

With those readings in?-- No.

Do you have -----?-- I looked for them and I don't have them.

Do you have any record at all of those readings?-- No.

Albert was there that day as the mine superintendent?-- Yes, yeah.

And George Mason was there as -----?-- In his normal capacity, the undermanager-in-charge.

Undermanager-in-charge. Who was to relieve you that day?-- I think it was Terry Atkinson was on afternoon shift.

Well, he wasn't present for this conversation?-- No, he wasn't.

Okay?-- There was no-one else present.

Did anybody make a record of the details that you discussed with Albert and George during that conversation?-- No. The readings, Reece would have put those in his report, the CO readings, but I didn't make a report of what my readings were.

Reece would have recorded the readings he made?-- Yes.

I am interested, though, in the readings that you made?-- I did not record what my readings were.

Or the readings that you passed on to Mr Mason and Mr Schaus?-- That's right, yeah, I didn't record those anywhere.

Well, of course, as part of your obligation you did make an underground shift report at the end of your shift?-- That's right.

How long was that after the conversation that you had with Mr Mason and Mr Schaus?-- Probably half an hour, an hour, I suppose. You would sort of - your shift report, you fill it out during the day. You fill out some in the morning and some in the afternoon, you add to it during the shift, so you just don't sort of fill it all out at once.

But you have to complete it by the end?-- That's right.

Well, what else did you have to do during that half-hour or hour between your conversation with Mr Mason and Mr Schaus at the end of your shift?-- Probably some organisational duties, just organising people and jobs, and filling out paperwork that you've normally got to do like time sheets, etc.

Now, I will get you to have a look at the shift report in fact that you did on this day. What I have here is the carbon copy of it, Mr McCamley, because the photocopy may not be terribly readable. If you could look at this?-----

Your Worship, it's document 173 in the bulky exhibit and the report is -----

These are not numbered, these reports; is that right, Mr McCamley? It's a report for Friday, 17 June '94 day shift?-- That's right.

There are a series of numbers over on the right, but I don't know that - there is no sequential numbers for these reports, are there, Mr McCamley?-- No, I don't think so.

Okay. I do have copies for the panel, Your Worship, and for my learned friends.

WARDEN: Thank you, Mr Clair. We will take a five minute break when you get through this section.

MR CLAIR: Yes, thank you, Your Worship.

Now, Mr McCamley, the shift report is set out in such a way that each panel is dealt with in a different section; is that right?-- Yeah, that's right.

Now, I in fact have a photocopy now with me and I might need to rely on you to just read what you have got there in respect of the 512 Panel in the "comments" section. Just starting with the top line?-- It's "SOS" which means start of shift, "Mining sequence 14. Tail wouldn't go up on continuous miner.", and across I have got three quarters of an hour downtime for that. "SC" is shuttle car. "Shuttle car US steering." I put, "No downtime, same time", as the next downtime. Then I have written in, "Goaf build-up. Ceased mining and re-ventilated goaf. Put up stopping across prep seal No 6 road." Three hours downtime for that. Then I put, "Greased miner", and, "Mining at 1 p.m."

All right?-- There was 80 cars mined in the section, 700 tons of production.

XN: MR CLAIR

WIT: MCCAMLEY M A

All right. Now, those two lines there, "Goaf build-up. Ceased mining and re-ventilated goaf. Put up stopping across prep seal No 6 road.", is that the extent of the record that you made then in your shift report about all of these events that you have told us about today?-- That's right, yeah.

There is no mention there at all, Mr McCamley, about the tarry smell?-- No.

Would you think it appropriate to put that into your shift report?-- Not really. I spoke to Albert and George about it and I spoke to the undermanager on afternoon shift and the deputy going in there about the changes that I made, whatever. I tend to keep the reports fairly brief.

I see. Well, can you just tell me then, either briefly or fully, what you see to be the purpose of the underground shift report?-- It's just mainly to lay down where your men are, where you have deployed your men during the shift, what jobs they are doing, what the general run of the operations for the shift has been, and any areas of downtime that you have in your mining operation, and a run-down of where you have mined coal and how much has come out of each section.

Who is intended to read it?-- It's intended to be read by the oncoming shift undermanager for the next shift so he knows what's going on and the - and for Albert and George to read if they want to, and for the clerk to take the copy and to use it to put into the stats.

The oncoming shift manager, would it be important for him to know about this tarry smell?-- Yeah.

Is there any reason then why you wouldn't have put it in here to make sure he was aware of it and stayed aware of it?-- Because I spoke to him and told him all about it. I told him - it was a fairly detailed thing that happened down there, a lot of stoppings changed, opened up, whatever. There was no room to put it all into here, so I went through it step by step with him what had been done down there, what the situation was.

Changes to the ventilation, do you put those in your shift report ordinarily?-- Generally, yes, yeah, just as a record.

But in this case you really didn't put in any note about the extent of the ventilation changes that you made in the panel?-- I just put in there some of the changes, but all the rest of them, I went through them orally.

But the problem would be that nobody would have a record of the extent of the changes that were made in the panel if it's not put into the shift report?-- Well, the deputies shift report would have what changes were made as well.

But you wouldn't ordinarily, in filling out your shift report, simply rely on the fact that the deputies shift report might make mention of these things?-- Well, it wasn't my

understanding that this report was designed for that - all those things. It was - I suppose the deputies report is where major ventilation changes, etc, gas readings, etc - that's where all that sort of information is put, and then I relied on the deputies to make those observations and those reports.

I might have misunderstood you. I thought you had said that one of the things you put into your shift report is this matter of the changes in ventilation?-- Yes, I mentioned it but not in detail.

Okay, I will tender that - well, the book is already an exhibit, Your Worship. Perhaps the best way to handle it is if I tender a photocopy but on the basis that the book is there to be inspected if the photocopy is not sufficiently legible.

WARDEN: The copy of the underground shift report for 17 June as contained in the book will be Exhibit 66.

ADMITTED AND MARKED "EXHIBIT 66"

MR CLAIR: It might be an appropriate point to adjourn, Your Worship.

WARDEN: Okay, we will take five minutes.

THE COURT ADJOURNED AT 11.29 A.M.

THE COURT RESUMED AT 11.45 A.M.

MARK ADRIAN McCAMLEY, CONTINUING:

MR CLAIR: Just before the break we were talking about the shift report. You have still got that carbon copy there in front of you. Now, I was asking you just what you saw to be the purpose of the shift report. Understand, I am not trying to make any personal criticism of you, I am really trying to ascertain the way in which the system was established and how people approached these things. You say that it certainly was for the purpose, partly, of passing on information; is that right?-- Yeah, that's right.

It was customary for the oncoming undermanager to read the shift report for the previous underground shift?-- Yeah, that's right.

Did you do that as a matter of course every time?-- Yes.

Would you - I mean, there are a number of undermanagers, aren't there, not just two of you alternating. There would be how many in all?-- Well, at different times there would be three or four.

Yes. Now, when you came onto shift would you read the underground shift report for the previous shift?-- I would usually read the previous two shifts.

Previous two shifts?-- That's right.

The purpose of that being?-- So you get a bit of a handle on what has happened at the mine after you left on the previous day.

That's on the basis that if you read the previous two you are, in effect, almost back to where you were on shift the previous day?-- That's right.

So, you are wanting to inform yourself as to all the things that have occurred since you were last on, basically?-- Yeah.

Keeping up with exactly what is happening?-- That's right.

Then you would expect the deputy after you would come in and read your - sorry, the undermanager after you would come on and read your shift report?-- Yeah, that's right.

And then the purpose of your shift report would be to inform him as to what has happened?-- Yeah.

Of course, in the case of this one here the underground shift report wouldn't inform him fully as to what happened in 512 because there is no mention of the tarry smell?-- That's right.

XN: MR CLAIR

WIT: McCAMLEY M A

But I think you said you covered that by mentioning it to him verbally?-- Yeah, that's right. It was fairly detailed so there is not really room to write it down in the report. I just made mention of what happened and I actually went through the details with him orally.

Still, I mean, to register the important fact there had been a slight tarry smell, that is all you really needed to put down after those words, "Goaf build-up", you could just put in, "Slight tarry smell", and even the location of it. I mean, there is not a space restriction that would prevent you from doing that. I don't understand you to say that; is that right?-- Yeah, I could have - there would have been room to put that in, yeah.

In fact, there would have even been room to put in more than that, about the changes in ventilation and all the rest?-- Yeah.

Okay. Anyway, coming back to this sequence, you say, anyway, you discussed it orally with the fellow that was to follow you?-- Yeah.

What about the undermanager that would come on the shift after that now? What about him? How does he inform himself as to what was happening, particularly in this case in the 512 Panel?-- Well, then I spoke to Terry and Terry Atkinson, as the afternoon shift undermanager, would relay that to him or relayed it to the night shift bloke.

You are relying on word of mouth?-- That's right.

For the next undermanager following you to pass it onto the undermanager after that?-- Yeah, and a bit of a note in my report there so when the night shift bloke came in and read it, he could ask for more details from Terry.

But the bit of a note doesn't mention this important fact of the slight tarry smell?-- No.

So, in effect, the system was one where it really relied to a large extent with these important things in panels on items being passed on - items of information being passed on by word of mouth; is that a fair summary of what you are saying?-- To some extent, yeah.

Well, now -----?-- Of course, there is always the deputies reports.

Yes, that's right. Now, of course, if a deputy had come to you during the shift when you were the undermanager, if the deputy had mentioned to you that he had smelt a slight tarry smell in a section, would you consider that a significant event in the course of your shift?-- Yes, I would.

Would you consider that significant enough to put it into your shift report?-- I would go down and do an investigation on it straight away and then I would put whatever details I found or

whatever events took place. I would put something in my report, yeah. I may not go into the full details. I would leave that for the deputy's own report.

But the report of a slight tarry smell in the panel would be sufficient to get you to go down underground to investigate it yourself?-- Definitely.

But would you automatically record that fact in your shift report?-- Not automatically, no.

You wouldn't?-- No. I may do, but I couldn't say that I would.

Is there any reason why not?-- Just because in the shift report you just don't put all the details down. It is just a brief sort of overview and just to flag up certain things that you do.

Does it happen very often that somebody reports a tarry smell in the operating panels of -----?-- No, never before to me have I ever smelt it in Moura and I have never had it reported to me.

Now, you mentioned, of course, that there is a deputies report and that you have an expectation things would be recorded in the deputies report?-- That's right, pertinent things that happen down in the sections, that's where I would expect they would be recorded, in the deputies report.

And would you read the deputies report?-- Yes.

What was your practice in relation to those?-- Well, the practice at the time was that the deputy on shift would bring his report out and hand it to you at the end of the shift. You would then read it and countersign it and then we were supposed to go and hang it on - outside the lamp room where the clipboards were. I generally used to get Glen King - I would hand it to him and he would go and post it for me.

Did you do that invariably, that is, read the deputies report at the end of your shift?-- Yes, when the deputies handed me the reports, yeah, I would read them definitely and sign them. A couple of occasions deputies forgot to give me the report.

Could the witness see Exhibit 44, please, Your Worship?

Now, that report which is report 3401 is Reece Robertson's report?-- Yep.

Resulting from his shift and his involvement in the events that you have described here today. Did you read that one?-- I can't say - I can't recall whether I did or I didn't, not for sure.

You will see over there there is a set of initials, "Manager/undermanager"?-- Yep. That's Terry Atkinson's initials there, at the undermanager's position.

Right. Can you explain how that would have come about?-- Possibly when the report is handed in at shift change Terry picked it up instead of me and signed it and went and hung it up.

So, this was a variation -----?-- Maybe I hadn't got a chance to look at it.

So, this would have been then a variation from your normal system where you ordinarily would receive the shift report from the deputy on the shift on which you had been the undermanager?-- That's right.

And it just happened to coincide with this day when these significant events had occurred involving Reece Robertson and yourself and others?-- Yep, it appears that way.

Okay. Well, now, do you recall whether you have ever read that report?-- I can't recall, no.

Now, of course, you had smelt this slight tarry smell yourself that day; is that right?-- Yeah.

You told us about that?-- Yeah, very slight, yeah.

Did you have any knowledge yourself as to whether Reece Robertson had smelt this tarry smell?-- Yeah, I thought Reece and Greg both smelt the same sort of smell as I did.

I see?-- I was under that impression, yeah.

You did mention, of course, you didn't need to record the smelling of the slight tarry smell because you had expected it would be in the deputies report?-- Yeah, that's right.

But you don't see any reference there to that or -----?-- No, there is no reference, not that I can see at this stage. Hang on, I will just finish reading it.

This would tend to illustrate then the dangers in relying on somebody else - somebody else recording their experiences or those experiences being the same as yours; would that be so?-- Yep.

So, as far as you are aware, anyway, this very significant event, the smelling of a slight tarry smell in the panel, has come and gone without any actual record in the shift report or the deputies report?-- Yep.

Is that a feature that would concern you as an undermanager?-- Yes, it probably should have been recorded in one of those two places.

Did you take any steps yourself at the time to ensure that it was recorded in the deputies report since you weren't going to record it in yours?-- I can't recall.

In any event, you certainly don't recall reading that report at the time?-- I could have, but I don't remember it, no.

The - you will see there in respect of the first inspection that reading of 10 ppm CO is recorded there?-- Yep.

Now, you did tell us earlier in your evidence that a reading of that level would be a matter of concern to you?-- Yep, it was.

Again I'm really looking to the system; what part of the system that was in existence there would ensure that the fact that there was a 10 ppm reading in 512 Panel that day would come to your attention as one of the undermanagers at the mine?-- I'm not really sure what you are getting at there.

Just listen to the question. What system was in existence to ensure that the fact that there was a 10 ppm reading of CO in 512 Panel that day would come to your attention as one of the undermanagers at the mine?-- Well, the deputy would, with a reading like that and methane readings like that in the roadway, he'd ring me up, tell me about that and then when - I would go down into the section, I'd speak with the deputy and he would tell me about - that he has found these readings, and then I would go and make a further investigation.

Assuming that you were not the undermanager on that shift and a deputy had read 10 ppm in a goaf area or any section of the panel, what part of the system would ensure that that would come to your attention?-- The system would probably not invariably ensure that it came to my attention. Possibly it would have, but it's quite possible it may not have.

You see, Mr McCamley, somebody really has to have the overall interest in what is happening in the mine, is that right, somebody who can be aware of all the facts and put all the facts together?-- Yep.

In order to draw a conclusion from the big picture, if we can call it that?-- Yep.

Do you see that as part of an undermanager's role?-- Partly, yes.

To get the big picture and to draw conclusions as to just what is happening?-- Yes, I believe so.

From what you say then, if that's part of the undermanager's role there is a certain haphazard feature about the system in so far as it doesn't ensure that all these pieces of information are brought to the undermanager's attention; is that so?-- Yes, you could say that.

Is that the exhibit that was handed to you?-- Yep.

You can put that to one side now. The problem that you found then in 512 Panel on 17 June, did you take some steps to ensure that that was monitored over the following days?-- Yes, I spoke to the undermanager and the deputy on the afternoon shift, fully explained my findings and what I had changed in the way of ventilation and how it was working and how I would like to see it maintained, and then they were to inform the night shift about it. The next day or the next - I think it was Monday, the next shift I worked I was with a different crew of people and a different deputy and I took the time to explain it to him down in the section exactly what had been done as well and how I wanted him to maintain the ventilation down there.

Who was that?-- That was Eddie Bentham.

Did you mention to him the fact that you had smelled a slight tarry smell in that No 2 roadway?-- Well, I just can't recall exactly, but I would have gone through the whole sequence of events that happened on Friday with him. I probably would have mentioned it, yeah. I just can't recall exactly what I said to him.

Given your involvement with the events on the 17th and the fact that you personally took considerable trouble to ascertain what was happening there and you discovered these two opposite flows of air in No 2 heading and you smelled the slight tarry smell yourself, did you see it, to some extent at least, as your role to keep an eye on what was happening in that panel through until the time that you finished? I think you told us that was 28 or 29 June?-- Yes.

What steps did you take to ensure that all the relevant information about the panel was brought to your attention?-- Well, I read the undermanagers shift reports and the deputies reports as per usual, and I made a point of doing fairly thorough inspections in that panel every day I was down there and kept a check on it.

Now, you say that you read the shift reports as per usual?-- Yeah.

Does that mean you read each shift report that had come into existence since your previous shift?-- The undermanagers reports?

Sorry, yes, undermanagers reports I'm talking about?-- Yeah, the two previous ones, I read them every day.

Also the deputies reports as per usual? Did you read every deputies report for that 512 Panel or did you just read the one that was handed to you at the end of the shift for the shift that you had been on?-- Sometimes I would read previous shift deputies reports that were posted, sometimes I wouldn't. I didn't always read them, but there was occasions I would go and read the previous deputies reports and see what had happened on the back shifts. I just can't say exactly if I did then with the 512 report, but -----

Now, did you become aware of any further problems with that 512 Panel during the remainder of your period?-- No, generally the ventilation stayed fairly stable in there and the general readings were what I would consider to be okay, and I went in and had a good look around on both - on the last couple of days before I left and made sure that the air was quite okay. I was fairly happy with it. I thought the ventilation was quite okay through that goaf.

Did you take any steps to see for yourself whether there was any persistence of that slight tarry smell?-- Yeah, I walked in there around that area every time I went down there and kept trying to find it, walked down through the goaf and other areas to make sure that it had disappeared, and I had never,

ever smelled it again.

If you had smelled it again it would have been a matter of great concern to you no doubt?-- Yes.

So you were particularly careful to make sure -----?-- Yep.

----- that there was no repeat of it?-- That's right, yeah. I made fairly thorough inspections every time I was in there.

That would be even more important because if there was a heating - from what you've said there was at least a slight heating, the early stages of a heating in the goaf?-- Possibly, yes.

Assuming that we had that, then to ventilate that area could either cool the heating or alternatively it could provide more oxygen for the heating and perhaps even cause it to go the other way; is that right?-- That's a possibility, yes.

To some extent ventilating the area of the heating is a bit of a gamble?-- Yeah, it's not an exact science.

So it could go either way?-- Yeah, it's possible, yes.

So you would have been particularly careful to ensure that there was no repeat of anybody smelling a tarry smell?-- That's right. I was aware that those possibilities existed and that's why I carefully had a look around that panel.

Did you discuss with the other undermanagers your concerns about the possible repetition of a tarry smell?-- I don't remember whether I did or not. I know I discussed with them about the situation there and what I thought and how it was very important to maintain the correct ventilation in there, but the details of which I can't remember.

I see. Well, you have told us that you were particularly worried about whether or not there'd be a repetition of the tarry smell; did you discuss that concern with anyone then, whether it was other undermanagers or deputies or the manager or the mine superintendent?-- Well, I don't know about particularly worried, but I was concerned that it didn't happen again. I was fairly confident that the ventilation was good in there and that things had settled down. I was fairly confident the panel was okay.

I just don't think you have answered my question though, Mr McCamley. My question was did you discuss with anyone - when I say "anyone", that is other undermanagers, deputies, the mine superintendent or the mine manager - your concern about ensuring that there was no repetition of this tarry smell in that section 512?-- Yeah, when I came out of the pit that day I talked with Albert and George about it, and that we had to be fairly careful that this didn't happen again and make sure we monitored it very carefully.

You see, you did tell me just a short time ago that if there was a repetition of that smell it would be a matter of great

concern for you?-- Yeah, I'd be concerned about that, yes.

I am simply asking you did you pass that concern on to other people?-- Yes, when I spoke to them I'm sure they understood my concern.

You are referring there to Mr Mason and Mr Schaus, when you spoke with them?-- That's right.

Other undermanagers, did you pass it on to them?-- Yeah, when I spoke to Terry I went at length to make sure that he understood how important it was that this ventilation was kept right, and I can't remember - I think it was probably Danny Sim was on night shift, I had a talk to him about it as well.

That's Terry Atkinson, Dan Sim; other undermanagers?-- I'm just not sure.

Mr Squires?-- I'm just not sure - if Michael was there I probably would have talked to him about it. I just can't remember exactly.

Your Worship, could the witness see Exhibit 45, please?

That's a copy of the production deputies report number 3423 for the Friday afternoon shift, 24 June 1994. You will see that's a report from Mr Robertson?-- Yep.

Have you ever seen that report before?-- I have seen it just recently.

When was that? In the course of preparation for this matter -----?-- Yeah.

----- it was shown to you. I see. Was that the first time you had ever seen it?-- Yes, I think so.

That's for the Friday afternoon shift, 24 June. Just put that to one side for the moment and I'll ask you to look at this underground shift report for that same shift, the Friday afternoon shift on 24 June?-- What shift do you want me to look at?

I am just asking you to look at the Friday afternoon shift. You've got the afternoon shift?-- Yep.

Friday, 24 June, is that right, or is it the day shift, is it?-- I've afternoon shift here in front of me, Friday the 24th.

Sorry, go back a page. I'm interested in the shift you were on. It may be the day shift?-- Yes, day shift.

The day shift for 24 June?-- -----

I've got copies of that for the panel and my learned friends, Your Worship.

Now, that again has a section relating to the 512 Panel; is

that right?-- Yep.

In the comments section you will see that you set out some comments there about the ventilation in 512; is that right?-- Yes, that's right.

I might ask you to read it and read what's in the comments panel. I don't know that the first line is relevant, but starting with the second line?-- Okay. "Stopping (loose) put up across number 4 road prep seal to push air down top supply road flush goaf. Working well.", and then an asterix, "Please do not remove."

Now, the reference "Please do not remove", that's a reference to not removing that stopping; is that right?-- That's right.

Can you just tell the Court what events occurred which led to you making that note?-- I really don't remember it well.

Did you go down yourself to 512 Panel that day?-- I would have, yeah.

You say that because of the nature of the note or because of some independent memory?-- Well, I always go down to the production section every shift I'm the undermanager.

Would this note have resulted from something you were personally involved in or something that was reported to you?-- Just reading it a bit of memory is coming back that we put a stopping up across that prep seal there and - just to improve the air going down the No 2 road.

Why was it necessary to improve the air going down the No 2 road? That's the top supply road?-- Yep, that's right. I don't know. I can't remember what the events were.

You wouldn't have done it lightly, I take it, put in the stopping and redirected air down No 2 road, because there was still production going on in the section. It would still be necessary to direct air across the face of the miner?-- Yeah, yeah.

Is that right?-- Yep.

So to send air down the No 2 road would have been taking ventilation away from the working air?-- No, not necessarily. The intake air could have been coming down the number 4 road and going across the miner, and by doing this I can push the air down the No 2 road and then across the miner.

Where would this take air away from in that case?-- It wouldn't take air away from anywhere. The only thing it would do is slow up the actual ventilation flow in the number 4 road which wasn't very often used. It didn't need to have it.

Now, I would like you to think fairly carefully about it, Mr McCamley, as to what circumstances arose that gave concern about the ventilation in the No 2 road in 512 Panel on this particular day, 24 June. This was the very road in which you

had smelled the slight tarry smell only a week before this?--
I'd say I'd gone down on this day and probably had a look in
the goaf and thought there needed to be better ventilation,
that it may not have been as good as I would like and
therefore I've taken these steps, but I just really can't
recall exactly why I did it or whatever, but I'd say that
would be the reason.

Okay. Well, was it the case then that there were some further difficulties with the ventilation in 512 Panel after the events of 17 June, in fact in the same heading?-- It might have been just an improvement in what was there. If it was a real difficulty, I think I would have remembered it for sure. I don't recall it being a difficulty, so I think I was just probably being cautious and making sure we had that good positive flow down that road. If it was a difficulty, I reckon I would have remembered it.

Is this the first time that you have been asked to apply your mind to what this particular note means? First time since you have made the note in fact on 24 June?-- Yeah, I've seen it, I've seen it recently.

But nobody asked you to recall what happened?-- No, no.

I see?-- I think - I don't think so.

Well, anyway, what is your best memory then, Mr McCamley, your best memory as to the events that lead to this note?-- Can I just read a couple of reports beforehand? That might help.

Yes, by all means?-- Yeah, having read the previous report, it now comes back to mind that they had -----

Just pausing a moment. The previous report being the 24 June '94 night shift?-- Night shift, yeah.

That's Mr Sim's report?-- That's right.

Right. What did you say?-- I see now that they started the flit to the bottom side of the panel, which is a fair move in mining area, and that's when - when we had most of the ventilation problems was when we were on the bottom side when the air was being short circuited in the top area, so I think we started - we had a bit of prep work to do and then had to start production, and probably looking at it I think now that when I was down there I noted that the air was being short circuited and down across the miner and we needed to do a couple of extra things to make sure it maintained that ventilation in No 2.

Now, what cross-cut were the workings in at this stage?-- I don't know, I can't remember. It doesn't really say. It just says sequences, and I don't know where that sequence was.

In any event, when you went down there that day what you found was that the air was being short circuited down to the bottom end of the panel and that No 2 heading was missing out again; is that right?-- Well, it probably was - no, I think it was just being reduced, that there needed to be more air go down the No 2 area to make sure that it didn't - that didn't happen.

Yes, okay. That's why you have made those changes that you have noted in your shift report?-- Yeah, that's right.

Just before I proceed, Your Worship, I will tender a photocopy

of that shift report, Friday day shift, 24 June '94.

WARDEN: Exhibit 67.

ADMITTED AND MARKED "EXHIBIT 67"

MR CLAIR: Now, you did mention that this is when ventilation problems occurred when the mining went off to the bottom end of the section?-- That's right.

The bottom side of the section, I should perhaps say. So that this will be a time at which it really was necessary to keep a close eye on what was happening in No 2 road and generally in terms of ventilation in the panel?-- Yes, yeah, it would be fair to say that.

Particularly since you found it a bit slow in the No 2 heading on this day, 24 June?-- Yeah, so I have taken steps to make sure it was improved, and in my report it says "working well", so -----

Did you pass on to anyone that concern, that is, the need to really watch it now that mining was at the bottom side and ventilation might be a bit slow in the top end and the goaf?-- I can't really remember. I can't remember if I would have said that.

You have got the book there. Who was the deputy following you on shift that day?-- On afternoon shift it says that Reece Robertson was the deputy in 512.

And the undermanager following you?-- It's Michael Squires.

Do you recall whether you had any conversation with Michael Squires about the concerns that you had for ventilation in 512?-- Yeah, I think I did talk to Michael about how we put that stopping up and how I thought the ventilation was pretty good there now but to make sure that they didn't take it down.

To make sure they didn't take the stopping down?-- That's right, the one across No 4 road, because sometimes transport drivers drive in that road, and they would knock it down if they were to do that.

That's why you put your note -----?-- Why I put my note.

----- your note in there saying, "Do not remove."?-- That's right.

And what about this concern about the fact that you had previously smelt a slight tarry smell, did you discuss that again in this context with anyone?-- No, I don't think so.

Okay. Well now, if you would go to that Exhibit 45 that I gave you? That's the deputies report for that afternoon

XN: MR CLAIR

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shift, and you will see a notation there in respect of the second inspection at least in the "general comments" area. First of all, it sets out the readings and the waste inspection, or in respect of a waste inspection, and then it goes on, "Also informed the undermanager that at this point there was a strong benzene-type smell and to keep a check on it." Do you see that there?-- Yes, I do.

Now, did you ever see that deputies report?-- No.

If you had seen it and you had become aware of the fact that there was a benzene-type smell again in the waste area of 512, what would have been your reaction to that?-- I would have gone down there and done a very thorough investigation of where it was coming from and what the situation was down there, possibly taken the probeye down and have a look around, get some more sampling done.

And the reason you would have done that is because you had previously smelt the slight tarry smell?-- That's right.

And the second appearance of the smell - if I can refer to it that way - the second occurrence of the smell would have been something of great concern to you?-- That's right. Especially here it says in the report it was a "strong" benzene-type smell, so that would, yeah -----

Did Mr Squires ever discuss with you the fact that a deputy had reported a strong benzene type smell in 512?-- No, no, I don't think so.

Did anybody ever discuss that with you prior to any point of time when you were preparing for this matter?-- Yes, yes, I have been shown them when I was being prepared for this.

But apart from discussions in preparing for this matter and, in particular, before 7 August when the first explosion occurred, did anybody discuss with you the fact that there had been this re-occurrence of a -----?-- No, not to my knowledge.

Of a strong benzene type smell?-- No.

Or, at least, the occurrence of a strong benzene type smell; is that correct?-- No, not to my knowledge, no.

Well, can you make any observation then about where the system fell down, if there was a system, for keeping undermanagers fully informed?-- As an observation probably it seems it is fairly important that the undermanagers read the deputies reports from each of the panels on previous shifts. That would seem to be what needs to happen.

Well, of course, you would have come back on shift some time after that yourself?-- Hang on.

We are talking about day shift on 24 June and -----?-- Yes, I have come back on 27 June on day shift.

27 June, and would you have then read the shift reports that had been -----?-- It is possible I would have read, maybe, the shift reports from the night shift, but I generally wouldn't go back that far and read the afternoon shift, no. I wouldn't have done that.

You wouldn't?-- No.

Of course, if you had read Mr Squires' afternoon shift report -----?-- Mr Squires?

Yes, that is - you say you wouldn't have gone back as far as the afternoon shift?-- Mr Squires' report, yeah, possibly I would have read that, yes.

You possibly would have read that?-- Yeah, yeah.

I understood you to say you wouldn't have gone back that far?-- I was talking about deputies reports, I am sorry.

The deputies reports?-- I was talking deputies reports.

Maybe I said something that confused you. I was talking about the shift report?-- Okay. Yeah, when I come in on a Monday we read what generally happened on the weekend, see what has gone on, and some of the times, yeah, I would go back and look at what happened on the afternoon shift.

On the Friday?-- Yes.

Of course, if you had read Mr Squires' report for the afternoon shift on the Friday you wouldn't have been any the wiser about the occurrence of the strong benzene type smell?-- No.

Is that so?-- Mmm.

Okay. Well, then in addition to undermanagers reading all the deputies reports, would it be a fair proposition to say that it would be wise for undermanagers to record in their shift reports all of the significant events that have occurred during the shift including, particularly, the occurrence of either tarry or benzene type smells in mining panels?-- Yeah, it would appear to be a better system, yeah, and it would lead to better information flow.

Yes, okay. Now, I want to move to a different matter and that is your familiarity with the CO make trend during the extraction from 512 Panel. What role did you play in relation to that?-- I merely would make sure I read the graph and had a look at the new readings and talk to Cocky about it. We talked on numerous occasions about the CO make.

Could the witness see Exhibit 21, please, Your Worship, and Exhibit 25 too while Mr Dahlke has his head under the table there.

Now, if you look at Exhibit 21, first of all, there is a segment towards the back that sets out all the readings. I think it is about six pages, I think, from the back of the document. It sets out all the readings on the CO make in 512. Can you locate that one? Yes. It has got page 1 on -----?-- Yeah.

On the top and Mr Morieson's signature down the bottom. Now, is that a document that was in existence progressively, as it were, throughout the extraction from the panel or is that a document that has been brought into existence some time subsequent? Are you able to say?-- Yeah, I'm not sure. I am not sure. I know this graph was what I looked at all the time. I didn't look at this.

All right. I will take you to the graph. The graph was posted regularly by Mr Morieson, every Friday, wasn't it?-- Yes, that's right, generally.

That graph would be the one - that Exhibit 25 you have got in your hand would be the one that was posted on Friday, 5 August?-- Well, I wasn't there. I don't know if it was.

I see. Yes, well during the time that you were there?-- Yeah.

It was posted each Friday? The segments up to when you left on 28 or 29 June are as they would have been whilst you were there?-- Yeah, I think so.

XN: MR CLAIR

WIT: McCAMLEY M A

Okay. Now, the readings supporting the graph were on the back of the graph that was put up on the board, is that the case? Not there, but as a matter of practice when Mr Morieson put his graph up did he put the readings on the back?-- I don't know. I never looked at the back.

You only looked at the graph?-- No, I only looked at the graph.

That is probably an indication as to what most other people would do, they wouldn't read the readings on the back, they just read the graph on the front; is that right?-- Well, I don't know what other people do.

Well, now, what sort of observations or concerns did you have or express in relation to the CO make graph during the time that you were there for the 512 Panel extraction?-- Well, I remember talking to Cocky about it when it first sort of got up above 10.

That's the 10 litres per minute, that's the actual make?-- Yes, but I also remember saying to him that, you know, we would just keep an eye of it, but it wasn't of grave concern to me because with the type of mining that we do at Moura - in the rescue book, Strang's book, it sort of says, you know, 10 parts - 10 litres per minute, you know, you should start to look carefully at your system and then when it gets to 20 you have got a real problem, but I remember talking to Allan and saying to him, well, my understanding and the way I looked at it is that that was sort of - wasn't developed - thinking about the Moura system, when you have got the Moura system where you have got a very large surface area of coal in the goaf through the partial extraction system, it would be normal to assume you would have higher CO makes in your panels and still have a relatively stable situation. CO and oxidation is dependent on the surface area of the coal that is available to be oxidised. So, I said to him that, yeah, sure, we sort of - once it was above 10, whatever, we keep an eye on it, but it didn't concern me. I said even 12 to 14 litres could be generally stable situations in our goafs.

So while conventional wisdom indicated that above 10 litres per minute that could be an indication of some beginnings of a heating, you are saying that there were features with this particular panel as a result of the method of extraction and the location of the seam which took away those kinds of concerns?-- Well, they didn't take them away, but they did - they were moderated by the system. I believe - that was my belief.

You will see a funny sequence of things in the middle of that graph, Exhibit 25. You see a reading on 10 June 1994 which - it says - marked on the graph there it's well above the 10 mark; is that right?-- Yep.

It's in fact 11.43. That's the point that's been plotted there, 11.43. So that would have been a point at which at least some concern on your part would be treated because it was above the 10 litres per minute mark?-- Yeah, I would have spoken to Allan about that.

The next point on the graph which appears to be after a rather flat area without a rise is in fact a reading for 11 June, the next day; is that right?-- Yeah.

If that was plotted correctly you would see the graph continue up at the same rate; is that right or about the same rate between the 10th and the 11th?-- I don't get your question.

I'm just saying if in fact 11 June was plotted one seventh further along that part of the graph -----?-- Yep.

That is if it was a graph that was properly plotted with time on one axis and readings on another?-- Yeah, would have been about the same rate.

There wouldn't be that flat segment, would there?-- That's right. It would be about the same.

Then it was some time after it moved into that 10 litres per minute mark that you first smelled your slight tarry smell?-- Yes.

However, it seems at that time that the litre per minute mark was coming down?-- Yeah.

At the time you smelled the smell on the 17th?-- Yeah.

Or had come down?-- Yeah, that's right. It looks that way, yes. It had definitely come back down.

Did you take any steps to try and work out why first of all it had gone up above 11 and then back down again? I mean if your theory was correct about it being a type of coal and the location of the seam and the amount of coal exposed you wouldn't expect that drop down again, would you?-- Not from just that situation, no, but one thing to remember is that diesel machines and diesel machine activity in the panel did affect the amount - the CO readings that we had, and a couple of them - instances beforehand in different panels in the mine

- and I just can't remember - where we actually had our CO alarms go off on the Unor, went down and checked out found out there was no problem, it was merely diesel machines. So diesel machine activity could change those readings by - well, I believe a couple of litres sometimes.

These readings that Mr Morieson took to plot on this graph were taken with a Drager tube?-- I think - my understanding anyway was that Allan plotted average readings from the Unor system.

From Unor you say?-- Yes.

Okay, well, my question really was was it a matter of concern for you that there seemed to be a rise and then a fall first of all?-- Yes, I didn't like - yeah, a little bit of concern that it wasn't very stable, that it was a fair bit of variation.

And secondly, if you are concerned about the readings, what steps did you take to explore that concern further, that is steps to confirm the accuracy of the readings or to look for some explanation for the rise and the fall?-- I know on - I'm not sure of the date, but about - I think it was the 11th, but I'm not certain of this, I took a bag sample from the 512 No 1 road return with the intention - and brought it up for Ken Selff to run through the chromatograph and - not that I was concerned about anything in the panel, it was merely just to it check the chromatograph - not the chromatograph, the Unor system.

Yes?-- Just to keep a check on - the Unor's figures are fairly accurate, to see what was going on there.

Was that put through the gas chromatograph?-- Yeah, because I remember the readings that came out from that that I was handed, that it was pretty well fresh air, it was very close to fresh air. I just don't remember the CO readings, but I remember that the chromatograph couldn't be trusted below 10 ppm anyway and I done my own goaf inspection on the 11th and with the Drager had found only five parts, so I knew that I could rely on the chromatograph for CO.

Did you keep the results of that gas chromatograph test?-- No, unfortunately I did not.

There was a book to record the occurrence of testing on the gas chromatograph; is that right?-- Yeah, I'm aware of it now, yeah. I didn't realise at the time.

Is it the position that we simply have no record of results of the test?-- I don't know, but maybe there is some computer record possibly from SIMTARS, but I don't know.

The CO make at least was a matter, you say, of some concern for you and did that in turn have any effect on your concerns about spontaneous combustion in the panel?-- Yeah, I knew we had to keep an eye on the CO make, but at this stage where it was just over 10, about 12, I still wasn't overly concerned

that it could possibly be a heating or anything. Like I said, I thought that readings from seams of our type were liable to be higher and would not generally mean that it was a problem.

Did you have any particular view as to the propensity of the seam to spontaneous combustion given that it was a seam which was moving deeper as the workings progressed?-- Yeah, it was my view that the deeper the workings the greater the propensity to spon com. At Moura it appeared to me that the shallower panels, the general CO makes, CO readings, were lower and that as we went deeper we had more problems with CO and generally higher CO readings from these places.

Did you discuss those concerns with anyone?-- I don't think so. That might have been just my view. I don't think I did, no.

What about the CO make? Did you discuss your concerns about the CO make with anyone?-- I spoke to Cocky about it, you know, and - Allan Morieson, I spoke to him about it, and like I said, when I spoke to George and Albert on that day I came out of the 512 Panel and we'd just have to keep an eye on it and make sure it stays fairly stable.

You say that was George Mason?-- Yeah, George and Albert that day I came out of that panel. I just said that, "We just need to keep an eye on things down this panel and ensure that these things - that the ventilation stays good."

Did you discuss contingency plans with him as to what might be done?-- Yeah, I can't remember when, but I did remember speaking to George that if things - if we did have a problem and later on if a heating did possibly develop, that maybe we should have a contingency plan of flooding the bottom end of the panel like we did in 5 North. George said, yeah, but - he said "Yeah, if you do that with the angle of the dip it will go across some roads and come up sort of sideways, probably wouldn't work real well." He said it'd probably be better if we'd just seal across some of the big rows of pillars, and I sort of agreed with him that was probably a better way.

To seal off the panel before you had completed it?-- Yeah.

In what sort of area would you see that as a possibility?-- Across those areas there or maybe across those.

You are indicating across the big pillars between 8 and 9 cross-cut?-- Not necessarily just the big ones. They would be best if you had to, but it would be possible to put up seals across those pillars there.

Even between 6 and 7 cross-cut, the smaller pillars?-- Yeah, if I had to. I believe that you could get a seal there that would work.

After you had smelled the slight tarry smell on 17 June and that indicated to you there were the beginnings of a heating, did it occur to you or did you discuss with anybody the prospect of sealing off that partly completed panel?-- No,

because I thought the ventilation changes we had made had stabilised it and the goaf was again in fairly stable condition and there was no heating, so I didn't discuss that it needed to be changed.

Finally you will be pleased to hear, Mr McCamley, finally, can

I ask you about the training you had in respect of spontaneous combustion?-- The only training I have had is some self-training. Earlier on when I was in Booval Mines Rescue a couple of years in a row I sat for the Howard Jones trophy which they used to run and that was based on the blue book which you have exhibited here before and it was an examination run on - for people - anybody in the industry, so I did a bit of study towards that a couple of years in a row, and then with Mines Rescue Brigade, been an active member for about 15 years, we continually update our knowledge on generally gases and spon com, what can happen, and I generally sort of read whatever articles come available about these things.

Do they come available to you in the course of your work at the mine?-- Sometimes you see articles from, like, the mining magazines that turn up at work, sometimes from books released by, like, the Australian Institute of Mining and Metallurgy, a couple of books that deal with those things.

Is there any system to actually control or supervise the extent to which undermanagers are improving their knowledge?-- No.

Okay, I have no further questions, thank you, Your Worship.

WARDEN: Thank you, gentlemen, it might be appropriate to take the lunch adjournment. Can we resume at 1.45? We will finish at 3.15 at the latest.

THE COURT ADJOURNED AT 12.47 P.M. TILL 1.45 P.M.

THE COURT RESUMED AT 1.51 P.M.

MARK ADRIAN McCAMLEY, CONTINUING:

MR MacSPORRAN: Your Worship, I think that, according to the procedure we adopted earlier, in this case I think Mr Harrison would normally take this witness next in chief if he needed to elicit any information, then he had the right to re-examine at the end of the questioning.

WARDEN: Thank you, Mr Harrison?

MR HARRISON: That wasn't my understanding, Your Worship. I understood that the situation was when the formal appearances were announced at the directions hearing, I didn't formally announce an appearance for Mr McCamley, and I point out that doesn't seem to have been the practice with the members of the Union thus far. I am quite happy to leave the order as it is.

MR MARTIN: I am not acting for the members of the Union.

MR HARRISON: There aren't any matters I am seeking to elicit at this stage, and perhaps being in the position I am in, it would be far more tidy if I left it until other matters were raised and merely attended to matters that cropped up in the course of the cross-examination from the other counsel. There is nothing I am seeking to elicit at this stage anyway, so I am quite happy to leave the order as it is, Your Worship.

WARDEN: I think I take that as a waive, so you can go ahead, Mr MacSporran.

MR MacSPORRAN: I take it Mr Harrison is also waiving his right to re-examine.

MR HARRISON: I have effectively got that anyway, but I am not too concerned.

CROSS-EXAMINATION:

MR MacSPORRAN: Mr McCamley, you have been qualified as a deputy and later as an undermanager for quite a number of years, haven't you?-- Yes, that's right.

And you have had, in that capacity, a long experience in the industry?-- You could say that.

And since 1988 that experience has been at Moura No 2?-- Yes, up until 4 July.

Up until early July when you went to the mine at Crinum, was

XXN: MR MacSPORRAN

WIT: McCAMLEY M A

it?-- Crinum.

Crinum, sorry. Now, as an undermanager, part of your responsibility is to, as it were, supervise the deputies?-- Yes.

And, if necessary, ensure that the deputies understood what their responsibilities were?-- Yes, that's right.

And if, on any occasion, it appeared to be the case that there was a gap in the knowledge of a deputy, you would take steps to make sure that was corrected?-- Yes, yes, if I thought there was some area they were lacking in, I would speak to them about it, yeah, yeah.

And that really was part of your role as an undermanager in charge of deputies on shift?-- That was part of it. It was more of a supportive role.

Certainly you were always there to, if need be, assist them in interpreting signs in the mine, for instance?-- Yes, yes, if they asked for it.

Has it been your experience at all that some deputies are more knowledgeable than others about, for instance, the signs of spontaneous combustion?-- Yes, it would be true to say that.

Have you, on occasions, given assistance to deputies in relation to such matters, signs of spontaneous combustion?-- No, not really, no.

You have never done that that you can recall?-- No, I don't recall a deputy ever, yeah, saying to me that he had - he wanted - had a problem or something to do with that, yeah, no, not - no.

And has there never been an occasion when any deputy has, from his conduct or what he said to you, displayed a lack of knowledge in that area?-- No, not really, no, no.

I think you said that the training you had had in spontaneous combustion was largely self-training?-- That's right.

And you indicated that had occurred at the Mines Rescue Station at Booval?-- Yes, that part of it was, yeah.

And that was to do with competition when you were, I suppose, answering questions for a - as part of a competition?-- That's right, it was an exam.

And then, of course, you had - have you had experience with heatings underground?-- Not personal experience, no.

But you have spoken to others who have had such experience?-- Yes, yes, I have spoken to other people after their experiences at New Hope and other areas, yes.

I think you said that you had read literature from time to time on the topic?-- Yes, that's right.

Have you ever seen any literature put out by the SIMTARS organisation in respect to spontaneous combustion?-- I may have, but I can't recall.

You can't recall any manuals containing literature on spontaneous combustion emanating from SIMTARS held at your mine?-- No, no, I can't.

Did you have any knowledge of any seminars conducted by SIMTARS in Brisbane on the subject in the time that you have been at Moura No 2?-- Yes. Some years back Phil Reed, who was the registered manager of the mine before Albert Schaus - Phil Reed went on a symposium down to Brisbane about spontaneous combustion, I believe it was run for mine managers, and when he came back I asked him about it and if he learnt anything new and some of the things that came up in it, and asked him that if something like that happened again, if he would consider sending me away to it, and he said yes, he would.

So did you find out about the seminar after he had come back from it?-- Yes, that's right.

You had no idea it was on until after he had come back?-- Oh, I may have. You know, I don't know.

Did you inquire at all as to whether there had been any literature distributed during the course of the seminar?-- I can't remember. We probably would have talked about it. I remember we talked about it a fair bit.

I take it, though, from your previous responses you have never seen any such literature, if it existed?-- No, no, I have not.

Certainly none has been brought to your attention?-- No, not that I can remember, no.

Now, on 17 June when you noticed this problem in the 512 Panel, that was in response to being called underground by one of the deputies, Reece Robertson?-- Yes, that's right.

And did you understand there had been a problem on the previous shift from Reece Robertson?-- Yeah, I do recall there was - there had been some problems on the night shift, yeah, yeah. I think I read it in the report.

Now, you took some time and trouble to try and ascertain what the difficulty was, didn't you?-- Yes, that's right.

You conducted a very thorough and sensible inspection of the whole waste area?-- I thought so, yes.

Taking readings as you went?-- Yep, that's right.

And finally during the course of that inspection you determined that the problem seemed to be the re-circulation of air in the top supply road No 2 heading?-- Well, I don't

know whether - I don't really agree with calling it re-circulation, but, yes, it was - the problem was that there was incorrect ventilation, it was travelling in the wrong direction.

All right. So, I have used the term "re-circulation", but what you actually observed ultimately was two separate currents of air; there was a cool current going inbye down the intake roadway No 2?-- Yes.

And there was a warmer, a much warmer, level coming outbye along the roof?-- That's right.

And you ultimately picked up that trend by throwing some stone dust - I am sorry, releasing stone dust from the roof area and seeing which way the particles went?-- That's right, yeah.

They went outbye initially in the higher layer?-- Yes.

As they came lower in the cool layer they appeared to be going inbye?-- Yeah, that's right.

Now, it took you some time to discover that feature, didn't it?-- Yes, it did, yeah.

It was only after you walked up and down the dip in the top supply road that you also realised there was a smell associated with the upper layer?-- Yes, that's right.

Now, firstly, what did the twin currents, the warmer on top and the cooler below - what did that tell you from the state of knowledge you had and your experience?-- Well, straight away it told me that we had insufficient ventilating pressure in the No 2 road to maintain a positive flow of ventilation down that road and that there was a thermal buoyancy from the warm goaf air which, aided by the dip of the workings, was allowing it to move up and outbye and, therefore, actually defeat the normal ventilating current.

That feature could also be consistent with the beginning of a heating inbye, couldn't it?-- Yes, yes, that's right, you would find warmer air caused by a heating.

The warmer air, at least some of it, escaping the ventilation path and going to the roof area?-- Yes.

And then as it built up travelling outbye against the flow of the ventilation?-- Yep.

So what you saw on 17 June in the top supply road was consistent with there being a heating inbye of where you were standing?-- It was a possibility of a heating, it not necessarily meant there was a heating there.

No, certainly?-- But there was definitely - it was a possibility.

Then when you walked up and down the dip in the top supply road and detected on several occasions the smell, that was a

feature which very significantly pointed to the possibility of a heating, didn't it?-- Yes, it pointed to the possibility of it, yes.

That sign - that is, the detection of a smell - was simply further evidence that a heating may have existed inbye of where you smelt the smell?-- Yes, yes.

And the smell is perhaps a stronger characteristic of a heating than the reverse flow of air?-- Yes, because you can have an air reversal from other means.

But it's far less likely to have a smell from other means, isn't it?-- That's right.

A smell is a fairly clear sign that there is a heating?-- Yes. If you have a - for example, what Reece said, a strong benzene smell, that is a fairly clear sign that a heating is commencing, yeah.

Now, the testing that you carried out was general body testing throughout the course of the inspections on 17 June, wasn't it?-- That's correct.

At no stage did you test the thermal layer coming outbye along the top supply road?-- Up at 7 cross-cut where we had that layer, yeah, I think that was - we did test that, but not inbye anywhere we didn't, no.

Well, testing it at about 7 cross-cut where you detected the smell you wouldn't expect to give you a representative sample of what the air at the site of the heating may be; is that so?-- Yes. If you had a heating in there somewhere, it may not give you a representative sample, that's right.

By the time it got to the area of around about 7 or 8 cross-cut, it may well have been significantly diluted?-- Depends on - like you are saying, if you had a heating, it depends where it was. If it was close to there, it would have been fairly representative.

Now, you may have agreed with this earlier, forgive me if you have already, but you could have used a probeye at that time, at 17 June, to detect the extent of any heating; is that so?-- Yes. It would be possible to go down and have a look with a probeye, yeah.

The probeye would also tell you or show you the source, perhaps, of the thermal layer inbye; you would be able to trace it, in other words, perhaps?-- Possibly, yeah, yeah.

It would certainly be a means by which you could advance your investigation if there was a heating or not?-- Yes, if - it would be a - an additional tool to use, yes, that's for sure.

Indeed, a useful tool given that there may have been a heating?-- Yes, it would have been probably useful, yep, yep.

There was a probeye at the mine, No 2?-- There was.

At this time?-- Yep.

It remained there throughout until - certainly up until the time of the incident?-- Well, I can't speak for the time after I left, but it was there all the time when I was there.

Now, in addition to that, another method that could have been used, perhaps, to investigate whether there was a heating or not was to take bag samples of that thermal upper layer; is that so?-- Yes, bag sampling would allow you to get readings on the Unor, yep.

Well, you could take bag samples from that area around about 7 cross-cut or further inbye and you could take them up to the gas chromatograph, couldn't you?-- Yes, but the gas chromatograph wouldn't be much use because it wasn't very good on CO levels below 10 parts.

No, but you are assuming, of course, the thermal layer contained less than 10 ppm?-- Yes, that's true, yes.

It may well have done at the area where you took the sample at 7 cross-cut, but that may have been a diluted sample?-- That is possible.

Had you gone further inbye and taken a sample, a bag sample, they may have been of a level above 10 ppm?-- Yeah, that's possible, yeah.

In any event, quite apart from the CO reading, you would be looking for the hydrocarbons that may exist in such a sample?-- That's right, carbon dioxide, hydrogen.

Ethane?-- No, not ethane, ethylene and propylene.

Ethylene and propylene. You wouldn't know if they exist in the sample until you put it through the gas chromatograph?-- That's right, yeah.

Was that a matter that didn't occur to you, to, perhaps, use the gas chromatograph on 17 June?-- Yes, on 17 June, like I said, it was a very light smell, it was not very much at all, and after fixing up the ventilation then monitoring what was happening I didn't think there was a problem any further. If, for example, there would have been more problems, well, then, yes, I would have then looked at using the chromatograph and

the probeye.

Had you known about the problems you may have done that?-- If I had known there was a further problem, yes, I probably would have.

In fact, if you had known that exactly a week later in the same area the same signs had been observed you would almost have certainly used the gas chromatograph, wouldn't you?-- Yeah, probably, yeah, I probably would have.

You see, you talk about a very slight smell?-- It was very slight, yes.

But the fact that you detected it at all indicated it was cause for concern?-- Yep.

And without being repetitive, the fact that it existed at all was fairly clear evidence that there was some form of heating in the panel?-- Yeah, yeah, but it - being so very slight and remote it could have - it was just the very start of a heating, yes, it could have been.

You say slight and remote. One of the reasons for that is you didn't know where it was coming from, did you?-- No, that's right. When I walked back inbye to try and source it I lost the smell and I couldn't find it and the ventilation was so slow you couldn't trace ventilation currents either.

So, at the end of the day on the 17th, or the end of your shift, you had no idea where that smell had come from?-- That's correct.

All you knew is it had been detectable at about 7 cross-cut in the top supply road?-- That's right.

And you now know that the same sort of smell had reappeared as a strong benzene type smell in the same area a week later?-- Yep.

What does that tell you about what was going on inside the panel on 17 June when you were there?-- I think it would indicate that there possibly was an incipient heating forming and that the steps I took to ventilate it and cool it weren't sufficient.

When you changed the ventilation as such a deal with such a problem -----

MR MORRISON: Your Worship, can I just ask our learned friend Mr MacSporran to not ask unfair questions? Now, he has put to this witness that a week later the same signs were found. Now, so far this witness must assume that to mean, consistent with what Mr MacSporran has said, that a recirculation or a backing up the roadway was found. Now, Robertson doesn't say that in his report. He simply says "ventilation adequate". All that was found the week later was another smell and now Mr MacSporran has gone one step further and using his own emphasis, without receiving the qualification that

Mr Robertson put in his evidence, described it - and I will try and imitate Mr MacSporran - as a strong benzene smell. Now, we all know that is not what Robertson said. He qualified those words in his evidence quite clearly and to continue in this fashion is simply to invite everybody to have to patch it up down the line. Now, no-one minds the Inspectorate conducting their case as they see fit, but this Inquiry should insist that it be done in a fair way.

WARDEN: Mr MacSporran?

MR MacSPORRAN: Your Worship, I believe what I was putting to the witness is from the evidence.

Perhaps I can restrict it this way to make it clear what I am saying, Mr McCamley: if you accept for a moment that a smell similar to the smell you had detected on 17 June was present a week later, what would that tell you about what was going on in the panel on 17 June?-- Well, it would probably indicate to me that the same situation existed and that there was a possibility of an incipient heating there.

The steps that you had taken on 17 June in good faith to cure the problem had not done so?-- Yeah, it appears that way.

Because when you change the ventilation pattern to deal with such a problem one effect can be - and I think you have conceded this - to, as it were, fuel the heating; is that so?-- Yes, if a heating has developed far enough that can take place.

And increased ventilation can also mask the smell coming from such a heating by diluting it?-- Not really. It is my belief that very low quantities of benzene you still smell. So, it would be very hard to dilute it to a case where you wouldn't smell it.

In any event, at the end of that shift, despite the fact that you don't appear to have recorded the detection of the smell in your undermanager's report, you did take care to bring it to the attention of both the undermanager-in-charge, Mr Mason, and the mine superintendent, Mr Schaus; is that so?-- That's right, yeah.

And, as I understood your evidence, that was not only to simply report the detection of a smell, but to detail where and how you had come across it and what you had done to remedy the situation?-- Well, the basis of my report was to give them a run down on exactly what ventilation changes I had made and what steps I had taken to stop the initial problem of the ventilation and I mentioned to them about the - how I got the slight whiff of the smell as part of that. I didn't go to them to tell them I had smelt something. That was only part of my report to them.

Part of you reporting your concerns after your inspection of the 17th?-- Yes.

And, furthermore, as I understood what you have said, you

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indicated then there should be a close watch kept on the progress of that panel?-- Yes, we agreed on that. We spoke about it and, yeah, Albert and George both agreed on - we came to an agreement on what steps I had taken and that we would have to monitor it fairly carefully, yep.

Can I take you back just very slightly? During the course of your inspections you were with Robertson, Morieson and Edelman; is that so?-- Yes.

And you think at some stage when you detected the smell you were with Robertson and, was it, Edelman?-- Yes, yes.

I think you said that as far as you could tell they had smelt the same smell?-- Yeah, I am pretty sure that Greg, at least, yeah, had smelt the same smell as I did.

Was it apparent to you from what he said that he didn't - had never experienced that smell before, can you recall?-- No, no.

Was there any discussion amongst the group about what that smell might mean?-- Yeah, I don't recall any details of it, no, no. It is possible, but I don't recall anything.

You see, as the undermanager you had - you had no doubt what the smell might indicate because you had smelt it before; is that so?-- That's right.

You had smelt it at the mines at Ipswich?-- Yeah.

Those mines are on fire. They were old workings that were on fire. You had also smelt it after the No 4 incident in - I might be wrong?-- No, the No 1 mine that was -----

You smelt it at the No 1 mine at Moura which was emitting a similar -----?-- A fire stink.

Smell. So, you had no idea - you had no doubt about what the smell was, but did you tell the others, that is Robertson and Edelman, what your opinion was about what the smell indicated?-- I can't remember whether I told them or not. I can't recall what I said to them.

You see, it would have been fairly important, wouldn't it, to have informed them as the people going underground on shift?-- At that stage I still wasn't really sure about what was going on or anything so I just don't know what I said to them.

You weren't, perhaps, sure, but you had a view that it may indicate a problem?-- Yes, that's right.

And if you wanted the deputy, in particular, to keep an eye on the situation it would have been wise to explain to him what you thought it might indicate?-- Yeah, yeah, that's probably right, yep.

Because the important factor would be for him to be aware that if that smell arose again it could confirm that there was this

problem inside the panel?-- Yep.

But do I take it you can't recall whether those discussions took place that day?-- Yeah, I know we talked about what I thought was happening there, but I just can't, yeah, remember what the details were or what I actually said to Reece about that situation, no. I just couldn't be sure of what I said.

In any event, do you agree it would be good practice for an undermanager to make it very clear to the men, including the deputy, obviously, what the undermanager's view was so that the matter could be sufficiently monitored in future?-- Well, at this stage my level of concern wasn't so great that I would single out the men and explain it to them. I just explained to Reece, the deputy, and I was - I made quite certain that he understood what was happening and what I wanted - how I wanted the ventilation to be maintained and I left it at that. Yeah, I didn't think it was at a stage where I would have to address the men about it, no.

You would have expected the deputy to instruct the men that they should be aware of these signs as well so that they could monitor the situation?-- Yes, possibly. If they had asked him he would have explained it to them, yeah.

Why would it be a case where the men would have to ask the deputy to explain something to them rather than the deputy explaining it to the men?-- Reece might have thought we had fixed the problem, which is what I thought, and didn't think it any longer constituted a problem or was worth telling the blokes. Probably thought the same as me, the ventilation had been fixed and there was no more problem and it wasn't - didn't need to be communicated.

Wouldn't it be good safety practice to, at least, warn the men that these were signs that should be kept in mind when they were underground in case they developed again?-- Yes, it probably would have been, yeah.

If they observed anything of a similar nature to report it to the deputy who would then report it to you?-- Yep.

In that way there would be less chance of these signs going unnoticed, wouldn't there?-- Yes, that's right.

Now, between 17 June and 24 June did you go into the 512 Panel that you recall?-- I will just check the book.

Certainly?-- Yes, I did, yes.

In any event, I take it that there were no further indications of this same problem between those dates that you can recall?-- No, no, no, there was - I remember every time I was there going and checking and walking down that roadway and, no, I didn't smell anything any more.

Then on the day shift on the Friday, 24 June - you have been taken to that - that was the day that you put up the stopping across No 4 road at the area of the prep seal?-- That's

right.

And the reason for that was to push air down the top supply road and flush the goaf; is that right?-- Yeah, that's right, to maintain that air current in the top supply road whilst they were working the bottom part of the panel to ensure we still maintained that positive flow through the goaf.

So, again the top supply road on No 2 heading was - seemed to be causing some problem in terms of airflow?-- Yes, it was probably a bit slower than I would like to see. That's why I did it.

I think you said there wasn't a real difficulty with it, it was a precautionary measure for you to change that stopping?-- Yes, it was just to improve what we already had there.

That was day shift. I think you have been shown the report of Mr Robertson of the very next shift, the afternoon shift in the same area?-- Yep.

That is where he reports, at least, a strong benzene smell in the deputies report - a "strong benzene type smell", the wording is?-- Well, he reports it in a slightly different area, but it is very close to the same place.

I was going to ask you about that. Where he reports it is from the top return at about 7 cross-cut he detected the smell; is that so?-- Yeah, he has reported it as being found at 7 cross-cut between 1 and 2 headings at the stopping.

In other words he's in the top return No 1 heading looking in through the stopping or in the vicinity of the stopping into 7 cross-cut between 1 and 2?-- No, not necessarily. He could have been on the intake side of that stopping.

Which was further into the cross-cut, you mean?-- Yes, that's right. He could have been on the No 2 road side of the stopping.

Which would place him even closer to where you smelled it; is that right?-- That's right.

Whether he was on the intake side or the other side of that stopping he would be very close to it, and if he was on the intake side he would be extremely close to where you smelled it?-- It would matter a great deal on what side of the stopping he was. If he was on the return side and he smelled that that had a lot of ventilation going up there and that would mean it could be anywhere or it could be something totally different.

I suppose the chances are, though, if it's at 7 cross-cut it's probably the same sort of source that you had smelled a week before, the chances of that are higher, aren't they?-- Yes, if he was on the intake side I'd believe, yes, it would be fair to think that way.

You may not be able to express an opinion at all, but it would seem that you had smelled something on the 17th, there had been no further reports of it, you changed a stopping on the day shift on the 24th and a similar smell had been detected on the afternoon shift; does that mean anything to you at all or is it impossible for you to express any view as to what may have caused the smell on the 24th?-- There are certainly a lot of factors that must be taken into view. It's hard just from a couple of reports to speculate.

In any event it would be reason enough to be very vigilant about monitoring the panel?-- Yes, that's correct.

That was from as early as 24 June?-- Yes, 24th.

Now, you left the mine, I think - the last two shifts you worked were 27 and 28?-- Yes, I this so.

You carried out inspections on those days and couldn't find any signs of this same problem?-- No, no sign at all, and on the 27th, on the Monday, I spent some time walking around there and, yes, there was no sign.

But you think on that day, that shift of the 24th when you had changed the stopping, you spoke to Deputy Robertson who followed you on shift; am I correct in that?-- On the 24th?

24th, yes. Did you speak to Robertson, the deputy that came on shift as you went off?-- I can't remember. I can't recall, no.

I think you said you remembered speaking to Squires, the

undermanager who relieved you or took on the next shift?--
Yes, I would have explained to Squizzy what I had done and to ensure that that stopping stayed where it was.

You think you would have explained to him at that time if not earlier the problem you had had back on the 17th in the same area?-- Yes, I would have explained it earlier, I believe. I just can't remember when.

One of the factors I think you agreed with was that from that point on, that is certainly the 17th when you had smelled something, it would have been worthwhile keeping a very close watch on the CO make?-- Yes, that's right.

And one way you can do that is to look at the graph that's posted weekly in various places around the mine?-- Yep.

Another way you can do it is to look at all of the actual tabulations of the figures that make up the graph; is that so?-- Yes, yes.

And another way is to look at all of the readings that are taken by the deputies for the CO make?-- Yeah, the readings of the deputies aren't used to formulate the CO make though.

But they can be, can't they?-- They could be, yes, yes.

If they are coupled with known air velocity?-- That's right, ventilation quantities, you can then calculate -----

All you would need is a Drager tube reading of parts per million and air velocity?-- Yes, and to know the cross-sectional area.

Which you know if you take a particular part inside the mine?-- That's right.

So if you are keen to keep an eye on the CO make you could even do your own calculations, couldn't you, on each shift?-- Yes. Yep, you could do that if you wanted to.

By keeping a record of that you could note the actual trend of the make?-- You could probably get - probably a more complete idea of the trend, yes.

One thing you said, the CO make concerned you because it was above 10 litres per minute, that was the first thing of concern to you about the make?-- Yeah, it was - it wasn't that it concerned me, but literature has indicated that you should be watching it over 10. My own personal beliefs through the extraction system at Moura was that you could expect higher levels from our type of system and therefore 12 to, you know, 13 litres would have been to me at Moura similar to what 10 would be at any other place.

So you thought that because of the method of extraction you would have more exposed coal?-- Yeah.

Because of that, the greater surface area of the exposed coal

you would naturally get more oxidation of the coal?-- Yes, there is more coal available for oxidation, that's right.

Which in turn would produce a higher CO make?-- That's right, yes.

But I take it from your answer a moment ago that no-one had ever to your knowledge done any calculations as to what greater CO make there may be for this mine, this panel in particular as opposed to any other panel in the extraction phase?-- That's very difficult if at all possible - I don't think it would be possible to calculate that. There are too many variables.

Not possible to calculate?-- It wouldn't be possible to calculate what it should be and put a single figure on it, I don't believe.

Would you say one of the reasons your concerns about the CO make being over 10 were not great was you expected some sort of increase because of the method of extraction?-- Yes, that's right, yeah.

But you had no idea what sort of figure that may be?-- No, it's a grey area, but, of course, naturally once it got over 10 you would keep a bit more of an eye on it and watch it and see what trends are like and look at other factors as well to help ascertain what the conditions are.

Then when it got over 15 you would be even more concerned?-- Yes.

To state the obvious, when it went up from there you would be even more concerned?-- Yes, certainly.

Then when it gets up to around 20 it's a very dangerous situation, isn't it? The literature says it's a very dangerous situation?-- Yeah, it's a dangerous situation if you don't know what is causing it, yeah, if you don't know what's happening, yep. It certainly is.

If the increased CO make was simply due to increased amounts of coal being oxidised you'd have, theoretically, a very steady, very steady rise in CO make, wouldn't you?-- Not necessarily. It would relate to the production activities as well. If you had quite a good production week you would expose a lot of fresh coal to oxidation. If you had a very poor production week, which actually happened there, at one stage there was four days of no production, you would have very little extra coal exposed and therefore you wouldn't see a rise.

In any event though, I suppose the point is there is no way of knowing, as you yourself know, how much extra would be added to the CO make just through oxidation of coal?-- Yes, it's very difficult.

Thank you, Your Worship.

CROSS-EXAMINATION:

MR MARTIN: You were talking with my learned friend Mr Macsporrnan about the grey area and the variables in terms of oxidation of coal; is it not the case that the only safe practice in a grey area like that is to adopt, mine management, the worst possible scenario rather than the best out of caution for safety of men apart from mine safety or blowing up the mine?-- It's always best to err on the side of safety in all situations.

There could have been an active heating, couldn't there?-- It's a possibility, yes.

Subsequent events show that to be so?-- Yeah, they would indicate that.

So one as a mine manager must not be optimistic, I suggest, and adopt the best scenario. That is, "Oh, it will be right. We have done it so often before and nothing happened so it must be right this time."?-- It depends on the information.

Beg your pardon?-- It depends on the information you have, you know. You just don't go on one fact.

Well, the information which could have been available if anybody had bothered to use it was readily available from the gas chromatograph?-- Well, it was - it could have been used. It may not have been any more help than the Unor system. It was a very good system.

Yes, but may well have been of great assistance?-- It might have been.

Something that some witness - I think Mr Selff said this morning - said confused me, and you may be able to help the Inquiry with this: he rather gave the impression, or certainly gave me the impression, that the only way of getting a sample of mine atmosphere was to go underground to get it, that is for use in the gas chromatograph?-- No, I don't believe that to be true.

It's not true, is it? In fact in the Unor room you can interrupt the tube and take a bag sample there?-- That's right.

And put it straight into the chromatograph?-- That's my understanding, yes.

Can I just take you to a couple of books? Have you ever seen what is called the red book on spontaneous combustion and a blue book?-- Yes, I have.

Are those the books?-- Yes, these are the books that I have seen before.

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Were they at Moura No 2 in the offices there?-- I had my own personal copy of the blue book which I kept.

All I asked you was whether they were in the offices of Moura No 2, in the office or any office of any person? You had yours, of course?-- I can't really remember. I do remember seeing them somewhere, but I don't really recall.

Are you talking only about the red book or both books?-- No, I'm talking about both books.

How familiar are you now with both books?-- Well, I haven't looked at them for a long time.

It is the case, isn't it, and one can read it for himself to see whether I am right or not, that the red book says nothing about evacuation of men from a mine in the case of the possibility of an explosion whereas the blue book does?-- Well, I wasn't aware of that, but -----

Just take yourself to page 58 of the blue book, if you would. At the top words there are reading, "In order to minimise"; do you see those?-- Yes.

Would you read it out?-- "In order to minimise the risk of an explosion great care must be exercised in general planning to ensure that all seals are completed simultaneously and all men must be withdrawn from all sections likely to be affected by an explosion. Generally all men are withdrawn from the mine."

Now, I suggest to you that that is not a book, the blue book, which is given out to the general body of men at Moura No 2 whilst you were there at least?-- No, I don't believe that this book was handed out to the general body of men, no.

Including deputies?-- No, it wasn't.

Have you ever seen a volume called, "Training of officials for underground coal mining industry"? Have you ever seen this document?-- Yes, I've seen this in Phil Reed's - well, Albert Schaus' now office on the bookshelf.

Right behind where he sits or beside where he sits?-- I think they were up behind where he sits.

Do you know how long before 7 August - before you departed obviously, late in June, how long it sat behind him?-- No, I don't know for sure. It was for some time there, probably a couple of years.

I suggest if you look at the first flag it deals, or so it says, with the major hazards at 1.1, explosions of gas and fire. It just says, does it not, that that's one of the matters that the volume considers?-- Combustion processes, yes.

Could I just ask you whether you personally were ever given that book to read by Mr Schaus?-- No, I wasn't.

Did you see that book in the office of Mr Mason?-- I don't think so. There was a lot of books in there. It could have been there, but I don't think I saw it there.

Just turn to a paragraph - or section 9.3. It's flagged for you?-- In the first section?

There is a flag, it's just 9.3. Now, that contains the traditional statement that you have been talking about today about 10 litres per minute causes concern and 20 litres per minute indicates that a heating is well developed and that urgent action must be taken, doesn't it?-- Yes, it says that, "Experience in Australia", yep.

Then could I take you, please, to 10.1 which is also flagged, "Combating active heating"?-- Yep.

And it contains the fundamentally obvious statement, doesn't it, that while the temperature is low and no explosive mixtures are mixed the mine can be worked in safety?-- Yeah, it says that.

But it also says conversely that, "If ignition temperatures

are approached, and a potentially explosive mixture exists in the vicinity of the heating then it will be necessary to withdraw all workmen from the mine and to take immediate action to reverse the situation or to contain an explosion."?-- It says that.

Can I take you then, please, to 11.1? That contains a statement, does it not -----?-- 11.0?

Well, that's under the title "Sealing Off", I think, isn't it?-- Yeah.

Is that right?-- Yes.

Can you see there a statement that, "Once conditions begin to approach explosive limits, men must retreat to a position of safety, or from the mine, until a safe situation is restored."?-- Yes, it says that.

If you go to 11.2 what does that say, I have forgotten, 11.2? It talks about -----?-- Sealing off heating.

But 11.3 talks about gas analysis, does it not?-- Yeah, yes.

All right, I will leave it there. Now, I take it that that book is not distributed to the general body of miners or deputies at least at No 2 while you were there?-- This one here?

Yes?-- No, no, it wasn't.

Can you tell, please, from the - you can put that to one side. I will just clear something up if I can. When you were down 512 panel, I think it was, on 17 June, from memory, with Mr Edelman and Robertson and Mr Morieson was there, can you recall a conversation between yourself and any of them in relation to your concern that there might be an early stage of possible heating?-- No. As I said before, I can't recall the details of what we spoke about. I may have, but I cannot recall any details.

You would be familiar with this because everybody has spoken about it so far, the strong benzene-type smell recorded in Mr Robertson's production deputies report of 24 June. Can you help us, please, as to who was the undermanager on shift, on that same shift, from your shift report?-- On Friday the 24th -----

Same shift as Robertson?-- Yep, Michael Squires.

In his shift report is there any reference whatever to a strong benzene-type smell?-- No, there's only a reference to a waste inspection being carried out.

Is the practice - is it a laid - I said "is" - was it before 7 August 1994 a laid down procedure by management that the undermanager on shift had to receive and sign for the production deputies certificate?-- Yes, I think it was. I

remember George telling us that's how he wanted it to happen. After some discussions he had with deputies he told us the new system and that's what he wanted to have done.

What circumstance can you imagine would occur to a production deputies certificate not being signed by an undermanager?-- Firstly, the deputy could forget to bring it out of the mine at the end of his shift; secondly, the deputy could go and forget to hand it to you at the end of the shift and leave it in his pocket, take it home; thirdly, the deputy could just forget to hand it to you and post it straight to the board; then the deputy could hand it in through the window as they brush past, just throw it in, it could blow on the floor, you could miss it; then the deputy could hand it to you, you could read it and then not sign it by mistake; or the deputy could hand it in if you weren't there at the time and another undermanager could read it, sign it and post it.

But surely an undermanager, knowing that the report might contain something of great significance, would go looking for it?-- That's possible.

Well, surely?-- And you might have other things on your mind at the time. It's a very busy time, shift change.

But that's a very important feature, isn't it, the receipt by the undermanager of the report from the deputy?-- Yeah, that's fairly important, yeah.

It could contain something quite crucial, could it not?-- Yes, it could, but my working relationship was with the deputies that if there was anything that happened that was crucial, then I would be told about it immediately and that it wouldn't be just left for a report, and all the deputies that I worked with acted in that way.

But no managerial laid down system for an undermanager to follow-up the non-receipt of the deputies report?-- Well, there was a system where the undermanager was supposed to receive the report, so I suppose it would be expected by management that they would carry that out.

If you were on a shift as undermanager and found a reading of 19 litres per minute, what would you do about it?-- 19?

Litres per minute?-- I'd go searching for a lot more information, but that would give me great concern and I would investigate it.

Yes, of course. I think you told perhaps Mr MacSporran that the smell you smelt, the - I think you said slight benzene smell -----?-- No, it wasn't a benzene smell, it was a tarry smell.

Sorry, tarry smell - you smelt before at Ipswich but not only there but at No 1, the old No 1 site?-- That's correct.

Which has been on fire for years? The reporters have to take down an answer?-- Yes.

Thank you. Could I just deal with this hopefully. Are you aware on 17 - we have been talking about 17 June 1994. I think it's - that was the occasion - 3401 I think you might have been shown is the certificate of Mr Robertson. Could I just ask you to look at deputies certificate 3402? Is that the shift following, the shift where you went underground; in other words, the afternoon shift on Friday the 17th?-- Yes.

Am I wrong when I look at that to conclude - and you will tell me, I am sure - that what you had done the previous day hadn't succeeded at all?-- The previous day? The previous shift you mean?

Yes, I do mean that, thank you?-- Can I take time to read it?

Of course?-- Yes, it appears the ventilation must have slowed in No 2 road to allow that to re-occur or for that to occur.

Well, more specifically, that deputy, Mr Moody, on his first inspection, I think, at 2.30 found 1.2 methane layer?-- Yes.

And in No 2 heading at 8, 7 and 6 cut-throughs?-- Yes, it says that.

With 10 ppm CO?-- Yes, at 8 cross-cut.

Yes, at 8 cross-cut. No mention, is there, perhaps I am wrong, of velocity on the deputies report?-- No.

And then action was taken or recorded, "Brattices erected at face to push air down No 2 and gas cleared to 0.2 per cent methane general body before cutting commenced."?-- Yep.

Before -----?-- I spoke to Doug before he went down and explained to him what I had done.

But obviously what you had done hadn't worked because -----?-- Well, it had worked, but for some reason it slowed and this was again a situation that occurred.

Can I just take you -----

I tender that document as a separate document. It is part of Exhibit 9.

WARDEN: A separate exhibit?

MR MARTIN: Yes, please.

WARDEN: I will make that 68.

ADMITTED AND MARKED "EXHIBIT 68"

MR MARTIN: Can I just take you to another deputies certificate which is 4,000, one of Mr Newton for the Friday night shift, that's 17 June 1994. Do you have that document?-- Yes.

Now, that document shows that ventilation was only fair and action taken on the second inspection - I am sorry, ventilation on the second inspection is shown to be slow, is it not?-- Yes.

And just as an aside for the moment, reference to rib fretting in both the first and second inspections?-- Yes, he mentions that.

In fact, that was a common thing mentioned in each of the deputies reports for most of the life of the extraction, rip spall, rib fretting?-- From memory, yes, I think so.

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WIT: McCAMLEY M A

The documents speak for themselves, don't test it too much. More particularly, the action taken on the second inspection was - or the record showed, "Trying different methods to clear CH4" - is it - "from top road."?-- Yep.

"Ask undermanager to get more ventilation for panel"?-- Yes, it says that.

I think I said that was Mr Newton. Could you please turn to the shift report, undermanager's shift report, for that same shift?-- Yes.

You have it? Is there any reference there corresponding to some attention being given by the undermanager in consequence of Mr Newton's request for ventilation?-- There is a note here that CH4 is layering up to about .9 per cent at 8 cut-through on the man and supply road.

Nothing to the effect about something was done about Mr Moody's request for ventilation or more ventilation? I am sorry, Mr Newton?-- No, there is no more mentioned.

You told the Inquiry that you had a discussion with Mr Mason at some time, you weren't sure, about some contingency plan?-- Yes, that's right.

In relation to 17 June 1994, the occasion where we are talking about when you went underground, are you able to say whether it was before or after that?-- I can't be sure, no.

Was it during the life of the 512 panel extraction?-- Yes, it was.

Well, in terms of the - I won't take that any further. You told us what he responded. Was there any discussion about a contingency plan for the safety of the men?-- Well, that was designed as, I suppose, the safety of the men, the safety of the mine generally.

In terms of evacuation -----?-- The safety of the mine in general, and the men are part of that.

But nothing about, well, when something is going through an explosive range if there are any signs of a heating, the slightest sign of a heating, that the men must immediately be evacuated, nothing about that?-- No, nothing like that was spoken about.

You mentioned diesel, I think, earlier in your evidence today. The presence of diesel can contribute to a CO make, or not make so much as reading?-- Well, it can affect it certainly, yes.

What do you know about oxides of nitrogen?-- Oh, a bit, I suppose, yeah.

Well, can you tell us that oxides of nitrogen don't occur or emerge from coal?-- Yes, generally that's right.

Well, no, no, not general, is it right? Is it right?-- Well, it is my understanding, that is right.

And oxides of nitrogen do, amongst other sources, emerge from diesel?-- Yes, that's true.

So, if one wanted to determine whether a haze or a smell was diesel one could easily do the test for oxides of nitrogen?-- It wouldn't be oxides of nitrogen, it would be nitrogen dioxide you would test for because oxides of nitrogen is very, very rare. Secondly, it is unusual to get more than, in the general body, 2 ppm of nitrogen dioxide and that can be very hard to read on the Drager tube.

What about the gas chromatograph?-- I believe that it could be used, but whether it could read to 2 ppm with any accuracy I don't know. I couldn't speak about that.

All right. But, nonetheless, if there were a situation of haste to determine what was taking place, as to whether it was diesel CO or, indeed, diesel haze in the air, one wouldn't have to wait, would he, until it cleared to run a sample, a bag sample, and take it straight to the surface, surely, for the gas chromatograph?-- Just run that question by me again, please?

I hope I can. If one was concerned as to whether a haze in the atmosphere or a CO parts per million reading was from a diesel or from something occurring by way of heating in the mine, one could just simply take a bag sample and take it immediately to the surface and run it on the gas chromatograph?-- You could, but I don't think it would give you any real indication.

But why do you say that? You've just said you don't know whether it would or not?-- That's right. Like I said, it was my understanding the gas chromatograph below 10 ppm on CO wasn't very reliable.

I was talking about oxides and you have corrected me - I was going to continue with oxides of nitrogen because that's what I've learned from this case, I can't forget it. One could run the oxides of nitrogen through the gas chromatograph and that would tell you whether the haze was diesel, or whether it was something else?-- If you could get an indication - an accurate indication that there was nitrogen dioxide on the read out from the chromatograph, well then that would indicate there were diesel engines in that airway. Whether you could or not, I don't know.

Or no diesel engines?-- Or no diesel engine, but like I said, diesel engines can operate at very low parts per million, maybe 1.

Quantity of air is quite important, of course, underground, isn't it?-- Very important.

What's more important in terms of ventilation?-- Quality.

Pressure is more important, isn't it? You must have pressure to push the air around?-- Not necessarily. It depends on the resistance of your mine.

But if you don't have pressure or sufficient pressure air doesn't go where it's designed to go?-- That's right.

Can you help the Inquiry with how many inches of water gauge or kilopascals of pressure were available for ventilating the 512 Panel during its extraction life?-- I believe the main fans were running between 4 and 5 inches of water gauge, generally more around - bit over 4.

Is that for the 512 Panel or for the whole of the underground?-- That's for the whole of the mine.

Including 5 South and 401 and 402?-- Yes, that's right, the whole of the mine.

BHP Australia Coal at No 2 Mine had personnel records on every man Jack who was there?-- That's possible, but I haven't sighted them.

You don't know that?-- No, I couldn't say I know that.

Your Worship, I'm getting a little bit disorganised because I

haven't been following my faithful format. Would it be possible to adjourn? I will be a lot more organised -----

WARDEN: We all have a lot of homework to do. Can we adjourn until 9.30 or somewhere thereabouts, as soon as everybody is here?

THE COURT ADJOURNED AT 3.10 P.M. UNTIL 9.30 A.M. MONDAY,
31 OCTOBER 1994

WARDEN'S COURT

MR F W WINDRIDGE, Warden and Coroner
MR R J PARKIN, General Manager, Capricorn Coal Pty Ltd
MR P J NEILSON, District Secretary, United Mine Workers' Union
MR C ELLICOTT, Training and Development Officer, Department of
Mineral Resources, New South Wales
PROF F F ROXBOROUGH, Professor of Mining Engineering, School
of Mines, University of New South Wales

IN THE MATTER OF A CORONIAL INQUIRY IN CONJUNCTION WITH
AN INQUIRY (PURSUANT TO SECTION 74 OF THE COAL MINING
ACT 1925) INTO THE NATURE AND CAUSE OF AN ACCIDENT AT
MOURA UNDERGROUND MINE NO 2. ON SUNDAY-MONDAY, 7-8 AUGUST
1994

GLADSTONE

..DATE 31/10/94

..DAY 9

THE COURT RESUMED AT 9.30 A.M.

MARK ADRIAN McCAMLEY, CONTINUING:

WARDEN: Yes, thank you, gentlemen. Before you start, Mr Martin, I indicate to you that we are keeping a running list of exhibits on the computer and the exhibit clerk is updating it at the end of every day or the start of the next day. This list will probably be incorporated into the report. If you see something there which you think is misdescribed or needs to be described in more detail please raise it with us as we go along so we can maintain a correct list. Thank you.

MR MARTIN: During the adjournment over the weekend I have drawn a couple of things on the board in terms of time saving. So, I just ask that you go over and turn those maps over so you can see what is under there. Now, the drawing on the bottom is not related at all, I can tell you, to the top two drawings. I only want to speak about the drawings on the bottom. You see something which a rough square which looks like, perhaps, a rib or a pillar, a rib on the side or part of a stook. It is very, very rough?-- Is it in plan view or elevation?

If you are looking at it as you are walking, say, down a road which is on the left. In any of your visits into the waste area, whether there was a stook or tender, whatever you like to describe it as, did you see incidents of spalling onto the roadway such as I have drawn there with the spall?-- No, it wouldn't be in that manner, but there was areas of spalling, but not in that fashion.

That is what I want to get from you, if I can. In the waste area, using your best recollection, how high would spall extend and how far out onto the roadway, just roughly?-- Generally there was a discontinuity about a metre above the development floor which then puts that at about 2 metres above the extracted floor height and there was, like, a fracture line in the seam and spalling would occur around that area there and generally it goes up and down half a metre from that area. There was a weakness zone there.

Just so I have got it straight, how high would you put it above, is it, the canch or ----?-- Well, if you talk about the canch which is the developed floor ----

That's really a ledge, isn't it, a canch?-- Yes, that's right, yes. That would be about - oh, about a metre, a metre above, 750 to a metre.

All right, extending across the roadway or the cross-cut, whatever you would like to call it. Was it right across?-- Yes, it would be right through the coal seam.

Would you just like to sit down again. I just want to deal

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WIT: McCAMLEY M A

with this briefly. On Friday you were talking about glasses. I really want to know whether there was any policy at the mine in relation to prescribed safety glasses or prescription, say, glasses?-- Well, safety glasses were to be worn when people were doing jobs where there could be a likelihood of an eye injury. For example, if you were using a hammer smashing out track pins or breaking up lumps of coal or working where there was a likelihood of an eye injury people wore safety glasses, but there was no blanket policy that people would wear safety glasses at all times.

What about persons with vision defects? Was there any policy on prescription safety glasses?-- No, there was no policy on that. People could - the company would get people's prescription glasses and have them toughened so they could wear them as safety glasses.

One of the early signs of spontaneous combustion is sweating; am I right on that?-- No, that is not an early sign.

All right. Well, what is it, a late sign?-- Yeah, that's one of the later signs, yes.

Where does one see that or feel that?-- Generally you would see sweating on steel straps on the roof or on the ribs or on, sometimes, timber props, maybe some other structures in the road or something. That's where you generally get a bit of sweating.

Is that readily visible with a cap lamp?-- Yes.

Particularly a roof strap on the roof?-- Yes, it is, actually.

I am just running at random, tidying up a few things. I notice from your statement towards the very end - you certainly are free to look at it if you wish - you say you were the day shift undermanager on 24 June, Mr Squires was the afternoon shift undermanager. There was no undermanager on the night shift. What does that mean?-- Well, at Moura, the weekend work, we would generally work miners to come in and do overtime commencing on the night shift. The afternoon shift undermanager would stay back, see them when they came to work and deploy them and then go home, and there would not be an undermanager who stayed all night on the night shift. There would be an undermanager who came out the next morning on day shift and then he would see those men and debrief them in the morning.

So, they were left without supervision other than, perhaps, a deputy?-- That's right. There was always sufficient deputies.

All right. Then you go on in that statement, or in this paragraph, "The whole weekend was covered by shift undermanager D Sim.". I just want to clear up as to whether an undermanager works what is really something in the order of up to 48 hours?-- Well, what I meant by that is you work the Saturday and Sunday day shift normally, the undermanager on.

You come out at half past 6 in the morning to see the night shift, you work the day shift, then you stay back and you deploy the afternoon shift, and you would go home, you know, 4 o'clock or something, and you would do that both days. That's what I mean by being in control of the weekend.

So that from, say, 3 p.m. or thereabouts on the Saturday there would be no person on until 6 a.m. the following morning; undermanager, that is?-- Yeah, could be 3 to 4 p.m., but, yeah, that generally is correct.

And similarly on the - on a Sunday, 6 o'clock start for an undermanager and leave 3-ish or 4-ish, something like that?-- That's right, yeah. Then the undermanager would come on on the night shift at about 10 o'clock.

And there would be no undermanager between about 3 and 9 o'clock or 9.30?-- That's right. If there was any problems the deputies knew they could contact us and we were on call.

But what if there was a necessity to look at the Unor screen on the surface with the men underground? How was that covered?-- The deputies all had access to the screen, that room was never locked.

Yes, but what instructions, at least while you were there, were given for deputies to look at the Unor screen when there was no undermanager on duty? Is it the case there was no instructions given by BHP Australia Coal?-- At different times when - at previous panel sealings, or whatever, deputies would be - on the weekend it would be normal to remind them to keep a good eye on the Unor, something like that.

Can you remember doing that personally, "Now listen, whilst there is no person - undermanager on duty make sure you make periodic visits to the surface and look at the Unor screen." Did you ever do that?-- Not in those words, but I remember on occasions speaking to deputies who were out there on the back shifts and they would go down and do their inspections and come back up to their crib, whatever, yeah, and I remember talking to, I think, John Blyton a couple of stages, you know, "Just keep an eye on it." He knew how to plot the Ellicott stuff. I said, "Yeah, just keep an eye on it. Watch them, do a couple of plots.", and I think the same with Bob Newton when we were doing 5 North.

That would depend - the deputies capacity to look at the Unor would depend entirely on what was happening underground, wouldn't it? There may not have been an opportunity for him to go to the surface to look at the Unor?-- That's a possibility, but it would be very rare. I never ran across a time that they were that busy they didn't make it to the surface.

You were speaking on Friday about a seminar that you wished you could go to or raised with Phil Reed at SIMTARS; do you recall that?-- Yeah.

Do you know what category of person was - went to those

seminars, whether it was only managerial - I am not talking about undermanagers?-- Yeah, I was under the impression it was only for mine managers - registered mine managers.

Perhaps Inspectorate from the Department of Mineral Resources?-- Yeah, that's possible.

You are now at Crinum, are you?-- That's right.

That's a BHP Australia coal mine?-- It is managed by BHP Australia Coal, yes.

It is underground?-- It is an underground long-haul mine.

What is the position there in relation to the gas chromatograph?-- We are at present sourcing a gas chromatograph and gas monitoring system.

Is there any laid down instruction yet in relation to its usage?-- No, not as yet. It is being looked at.

You were talking on Friday about pressure differential, perhaps not in those terms precisely. I think I said to you that pressure is the most important thing to drive the air through the mine?-- Yeah, there is a number of factors, you can't just really -----

I isolated that one, but you know pressure differential? Do you know the term?-- Yes, I do.

How is that measured - I am sorry, how was that measured at Moura No 2?-- Well, the only time we did pressure surveys of the mine we had British mining consultants come out and do a full ventilation pressure survey of our mine. It is done with a - I think it is called a heliograph. They do readings in the mine between returns and intakes, work out pressure difference, mine resistance, etc.

Is that, perhaps - what did you say it was, a heliograph?-- I think it is called a heliograph, yes.

Does the term magnahelic -----?-- Yeah, that's what it is.

My understanding of "heliograph" is what the North American Indians or cavalry used from hill to hill to transmit messages?-- Yeah.

There was not a pressure differential testing device magnahelic at Moura No 2 by the time you left that you are aware of?-- Well, I don't think so.

Could I just ask you to look at those two very rough artists impressions of mine. They are entirely separate and representing the same feature, but at a different point. Just looking at the one on the extreme left, what I have tried to depict is my interpretation of air coming down 1 road, going across, say, 13 cut-through and then going down No 1 return, and near 13 cut-through is a pile of loose coal. Now, if that is correct what that does is to pick up from that loose coal

whatever gases are emerging from the loose coal; is that right?-- Yes, that would be right.

And then vents down to the monitor station?-- Yep.

Wherever it was located. All right. Now, the next diagram, the one on the right, what I have tried to do is to represent my interpretation of what a short circuit does in practical terms. The air comes through the short - through the cut-through and doesn't sweep away, does it, the gases, if any, emerging from the loose coal further inbye?-- Yeah, it wouldn't really happen like that because -----

Well, not exactly like that?-- Yeah.

What you are going to tell me is that there is still some ventilation coming down through 13 cut-through?-- That's right, yeah.

But at very much reduced velocity?-- It depends on the short circuit, yeah, but - you know, how big it is.

And then to the monitor?-- Yep.

And a short circuit means exactly that, doesn't it, the air travels a path of least resistance?-- Yeah, that's right.

What, if any, training did you have on the Unor system as to operate?-- When I first went to Moura Mine, in my first week I spoke to Phil Reed and George and they took quite a bit of time to explain to me the whole use of the Unor. I thought that was very important, knowing how all the gas monitoring system worked at Moura Mine, and they took - they took a fair bit of time to explain it to me. Then I practised on it and made sure that I was fully aware and capable of operating the entire system.

Did you remain conversant with that?-- Yes, I did, I used it regularly.

And you were confident you fully understood it?-- Yes.

And its several functions were Ellicott's diagram?-- Yep.

What other diagrams?-- I could bring up Ellicott's or you could bring up gas trends over a certain period, you could pick dates and it would give you a line graph of whatever gas you wanted to put, you could also just get printouts of the actual readings or you could get printouts of averaged readings.

Did it have a CO/CO2 ratio facility?-- Yes, it did, on the main screen. There was a Graham's ratio that was printed out.

That is probably in terms of detecting how hot a heating is; that is probably the most important, I suggest - I was talking about the CO/CO2 ratio?-- CO/CO2.

Yes, the ratio between the two?-- What was the question,

again?

Well, I had better start again. Did the Unor have the capacity to put up on the screen or on the printout the ratio between carbon monoxide and carbon dioxide?-- No, not to my knowledge, no. You will have to do that manually.

Yes, or on the gas chromatograph?-- I am not familiar with the gas chromatograph's capabilities. I don't think the gas chromatograph gives ratios at all. It gives pure percentages.

But in any case is it your understanding or not that the CO/CO2 ratio is the thing most indicative of the temperature of the heating? You are not familiar -----?-- No, that is really not my understanding, no.

What is your understanding?-- It is - the CO2/CO ratio is useful in earlier stages, but, no, that wasn't my understanding, that it could be used to indicate a heating or heat.

Well, I think you have probably answered this question pretty sufficiently, but you had no training on the gas chromatograph?-- I was made aware of what its capabilities were, but I had no training on how to operate the machine. I agreed with that too because I was in Mines Rescue and if anything happened I would be busy with the rescue or actually going underground so I wouldn't be around there to operate it.

All right. How long was the training that you were given by, I think it was, Mr Reed? How long did that last?-- It is a bit hard to remember.

Sure?-- It was about six, seven years ago. I think it was a few hours on the first day and then another couple of hours on a couple of other days after that, a bit of a refresher.

When you were a Mines Rescue member, who trained in Mines Rescue?-- Mr Dave Kerr used to oversee the training at Moura.

What was the training though, particularly in relation to, say, detection of spontaneous combustion?-- We would have some theory sessions where we would sit down in the theory room and Dave would go through the gas readings, how to interpret gas readings, how to work out CO makes, and at one stage he went through the CO/O2 deficiency ratio, how to do that, and generally he would give us a run-down on some samples which have actually come from mines and explain the samples and what was actually happening down there and what happened afterwards, give us a bit of an idea of what percentages really meant.

How long would this training course take in relation to spontaneous combustion?-- I suppose a couple of hours, probably - maybe once or twice a year when we were training for a rescue competition we might do a bit more of it, yep.

Are you familiar with Mr MacKenzie-Wood's book?-- Strang and MacKenzie-Wood?

Beg your pardon, yes?-- Yes, I am.

One, I suggest, is a 1985 edition and that's the one with the glossy cover and the other one 1990. Did you see those at Mines Rescue?-- Yes, I did. I had my own copy of this one and I had access to this one at the Mines Rescue.

Were either of those volumes in either of the room of Mr Schaus or Mr Mason?-- I'm not sure now. I think I remember seeing this one, but I'm just not sure.

For the record the glossy cover?-- Yeah, the glossy one. I'm just not sure. Maybe this one too. Something rings a bell that makes me think I saw it, but I'm just not sure.

You think - I'm not putting words into your mouth - where do you think you saw it? Certainly at No 2 Mine?-- It would have been in George's office. I didn't go into Albert's office very much at all, maybe once a year.

What does the term "district" mean to you in terms of an underground mine?-- To me it would mean - a district is a separate ventilation area where you split a ventilation current off.

Are you familiar with the underground positions description?-- Yes.

The deputy positions description indicates that the deputy is responsible for his district; what does that mean in BHP mine parlance?-- Well, by that we meant a section deputy would be responsible for the area from the tranny or the crib tables inbye and the face at workings. The areas outbye of that would be covered by an outbye deputy.

There is no doubt at all, is there - I want it cleared up from

you - that deputies were expected to obey orders of undermanagers and people superior to undermanagers, as were undermanagers expected to obey the underground superintendent and the undermanager in charge?-- Only expected to on a reasonable request.

Yes, I'm not suggesting -----?-- Yeah.

You are familiar with SIMTARS I think you've told us?-- Well, yes, I am.

As an organisation?-- Yep.

Are you familiar with any of its literature? You have already identified one piece of literature on Friday?-- I don't recall, but anyway, yeah.

Perhaps it wasn't specifically called SIMTARS, but have you ever seen any of their magazines, SIMTARS magazines, and if you would look at these you might be reminded perhaps?-- I have seen a little leaflet, about a two page thing, floating around the offices at different times, yes.

Have you ever seen any of those or anything like those with SIMTARS emblazoned on the front?-- Yes, I recall seeing this one. I don't know where.

Do you know -----?-- I think this one here. This one I recall seeing as well, but again I don't know where. I haven't seen this one.

When you say you don't know where, I want to know whether it was at No 2 Moura?-- Most probably it would have been, but it could have been at the Mines Rescue station.

Did you know in broad terms of the Telecom modem to transmit results from the gas chromatograph, instantaneously virtually, to SIMTARS in Brisbane where there was a 24-hour scientist on call?-- Yes, I realised that our results could be transmitted down to SIMTARS.

I have forgotten when you first arrived at No 2 Moura, Mr McCamley; remind me, please?-- It was about September 1988.

When you got there was the gas chromatograph there?-- There was a British Coal gas chromatograph there at the time.

That was an old one and was replaced?-- That's correct, yeah.

Just tell me this: is there a warning horn that goes off when the chromatograph - sorry, when the Unor receives a pre-set level of, say, carbon monoxide?-- No, there is a beep and a flash on the screen of the Unor and it gives an audible alarm and a visual alarm and a flash. It flashes red, I think, on the point where the alarm is, and also we had an ELPRO system whereby when the undermanager wasn't there on the weekend, if an alarm came up it would automatically ring your home phone number and then we had a number where we had to ring back and

virtually notify the computer that we had got that message and then we would go out to the mine to investigate.

One had to be within the instrument room, I take it, (a) to see the red alarm or light, and (b) to hear the beep?-- To hear the beep you would have but, no, the screen of the Unor was pointed to the window and anybody walking around the bathroom area or out around the marshalling area could see the flash quite easily, yeah.

You know nothing about a horn, an alarm horn?-- No, to my knowledge no.

Was the clock on the Unor checked at any time?-- I don't know. It always appeared to be correct to me.

I don't want to labour this, because I think it was discussed on Friday, but there was a probeye in the instrument room?-- Yes, there was.

Were you trained on it?-- Yes, I was familiar with how to use the probeye, yes.

I think you told us on Friday that at one stage you considered that you might use it?-- Yeah, you gave me a set of conditions whereby, yes, I think I would have used it.

I think Mr Clair or Mr Macsporrán, but in any case was there any laid down procedure by BHP as to what it did and how to operate and who was to operate it and when?-- No, there was not.

Of course, it features in Mr MacKenzie-Wood's book, doesn't it?-- Yes, it does.

It's common knowledge, isn't it, and long before August 1994, that the Moura coal seams had a propensity - a capacity for spontaneous combustion?-- Yes, we were aware that they had a capacity, yep.

Can you identify, apart from what you've told us that was in Mr Schaus' room, that's the particular volume and others which might have been somewhere else, any other publications at Moura No 2 relating to spontaneous combustion or the detection of it?-- There was a report in the end office, the engineer's office you could call it, there was a report there on the Kiangá disaster and about the issues there relating to spontaneous combustion. There was also a report on the 5 North spontaneous heating that happened in Moura.

Where was that? You said the end office?-- Yeah, that was in the end office.

Was that Mr Abrahamse -----?-- Yeah, Mr Abrahamse office.

I don't want to labour this too much, but incubation period, there are just a host of variables, isn't there?-- Yes, there is.

It's just quite useless considering what might have happened somewhere at some time with what is happening, say, at a particular time in a particular panel?-- That's right, yeah. Each panel must be weighed up on its own merits.

Whilst the nose and the eye is helpful, it really is not much of assistance, is it, unless you stumble on a heating or a strong - or a whiff, I think you said, of tar or you see some sweating?-- I don't know. I place a great deal of importance on senses and on peoples ability to read their panels and notice changes.

But do you agree or not that the only safe way is instrument, the fail safe way is instrument? Surely you must agree with that?-- I don't know.

You don't agree with that?-- I know that, yes, an instrument is a fail safe way, but I'm not sure it's the only fail safe way. If I see something and smell something I don't think it's really impossible to make a mistake in any way.

No, assuming you see it or smell it, whatever it is?-- Yes, that's right, assuming that I see or smell it, yep.

Was panel 512 one of the panels in No 2 which had the most loose coal lying around in your experience?-- That's very hard to say.

Well, it's not, is it?-- There was -----

Was it one of the worst then?-- -----

MR HARRISON: Can he be allowed to answer it, Your Worship?

MR MARTIN: He wasn't answering it.

MR HARRISON: He was attempting to before the last interruption.

MR MARTIN: Now could you answer, please?-- The greater the seam and the type of continuous miners operated at Moura always meant you had a lot of loose coal. Okay. 512, it did have a lot of loose coal in the goaf areas, but it wasn't significantly higher than other extraction areas.

I think I dealt with this very briefly on Friday and I'm not going to waste any time on it, but throughout the production deputies reports there is constant reference to rib spall, isn't there, during the extraction?-- There is reference to it, yes.

Almost constant, I suggest?-- Yes, it's fairly prevalent.

I think you've told one of my learned friends sufficiently about ramping. A lot of loose coal lies at the foot or the bottom apex of the ramp that just can't be recovered safely?-- Yeah, there is a lot of piles of coal there that, yeah. The miner just can't pick it up.

512 Panel, is this the first time that ramping was done in this manner in No 2 Mine?-- In this manner, yes. We used to ramp in other panels, but we would take the ramp down and go further. This was a safety initiative to shorten up the ramps in this panel.

Would you just turn those maps back down, please, so that you can look at the plan on the extreme right? Would you just stand there and have a look for a second? I will just tell you what I am about so that you can understand so that you can look. What I am going to suggest to you is that the panel or the pillars within the panel have incoming ventilation air striking them broadly full on, particularly roadways 4 and 5, down comes the ventilation and runs straight into a face of a pillar?-- Yep.

What do you say the effect of that would be in terms of ventilation, in-rushing air?-- It causes a much higher resistance to the flow of air throughout the panel.

There was a mining process, we have heard, of take a panel, leave a panel?-- I think it's called take a row of pillars, leave a row -----

I'm just using the wrong term?-- Yep, that's okay.

It's pillar. I know it's pillar. That didn't happen, did it, in the closing stage of extraction when you look at the plan?-- I'm really not sure what you are getting at. I don't believe that anywhere in this panel there was take a row, leave a row type -----

We are at cross purposes. I was just raising something that somebody else said. Are you aware that 5 North West panel was sealed on about 17 September 1991 with a litre per minute reading of about - I'm not saying exactly, about 12 litres per minute?-- Well, I can't recall that figure exactly but, yes, I know it was sealed around about then.

Could the witness see Exhibit 22?

Don't bother with the first document. The document behind - the copy I have anyway - says "CO Lpm make 5 North-west" at the top on the left. I just want to make sure we are looking at the same document. Yes, that's it. We have the litres per minute on the left-hand side, then the axis across the bottom seems to start about 12 October 1990 and then continues across until about 29 October 1991; is that so?-- Yep.

What I am suggesting - do you know that that is the CO Lpm make for that panel? Have you ever seen that before?-- Yes, I do remember seeing this before.

All right. If it was sealed on 16 or 17 September approximately 1991, at what make litre per minute was it sealed?-- I need a ruler. I can't -----

Why don't you use the one in front of you?-- What date did you say?

16 September or 17 September 1991?-- By this graph it's about nine and a half litres per minute.

Well, it's part of an exhibit already, Your Worship.

Have you ever seen a document such as that being part of a manager's report relating to that sealing? That appears to be, I suggest, the report of Mr Reed relating to that sealing?-- Yeah, it looks like his handwriting.

Yes, but the content, in any case, relates to that sealing you have just been referred to on the graph?-- Yes, it appears to be relating to that, yep.

I tender that, Your Worship, as a separate document. It's part of the - I think it's probably document number 9 or box number 9.

What document have you retained there now? Is that the graph?-- Yeah.

You, of course, weren't there in 1986, you have told us?-- No, I was not. I was at Ipswich.

I want to talk about the seals. They were formerly masonry seals, were they, or brick seals?-- Yes, that's right, yes.

I take it you agree that no seal is perfect, they in fact breathe?-- Yes, yeah, that's been my experience, yes.

You weren't there either when Tecrete was used as a seal. Do you have any opinion on Tecrete seals? Have you ever seen a Tecrete final seal?-- Yes, I have seen Tecrete. We actually - there was one constructed in the 4 South level while I was there.

Was that a final seal?-- Yes, that was to be - it was to be a final seal. It would have been.

Well, it didn't come to be because it was only prep sealed; is that the case?-- No, I think one of them was completed, from memory.

Do you recall whether there was a monitor put within the - inbye the seal?-- No, that was one seal on its own on a roadway that we would not use, so the panel was still open. Extraction hadn't even commenced in there. It was just a preparatory manner.

The seal, of course, has to cure before it has its ultimate strength?-- Yes, that's right, as with any seal.

Do you know the curing time for Tecrete?-- It's my understanding that it reaches a fairly high strength in about 28 days. That's what they - Tecrete say, I think.

Certainly not 28 hours?-- No. It gets to a certain strength within a fairly short period, but total curing is about 28 days, similar to, like, concrete, they measure it on a 28 day strength.

Assuming the prep seal is in place, how long would it take to erect five Tecrete seals? I mean, for five roads?-- Considering that the prep seals are in place?

Well, assuming they are there?-- And all the gear and equipment is on the job?

Well, assume it is?-- Oh, I've never been in an operation where they have done that, so I would only be surmising. It would be only my guess at what time it would take, so I'd say -----

What's your best estimate?-- If you had suitable equipment for each seal, you could put each one up in about three or four hours.

Did you ever see, before the time you left in June, a written procedure for sealing?-- No, I don't think so. I don't recall.

Mr McCamley, I want to talk - just bear with me for a moment. I dare say I won't bother you with assumptions. Was it usual, however, when a panel was finally sealed to have only one monitoring point within a sealed area?-- No. Each panel was weighed up on its merits. Some we had two in. I believe in the earlier stages of, for example, 3 North-east we only had one monitor in there.

Well, on how many occasions was there more than one monitor within a sealed area?-- In the later panels it was fairly common to have two monitors.

Where were they placed in the seal?-- Well, that varied, but generally on the road on the higher side of the panel, one of the returns, and - well, it really did vary. It could be in the belt road or supply road, wherever it was easier to run

the lines.

But as far inbye as possible?-- Oh, no. It was - some panels it was different. Some rising panels they would only be a pillar or two inbye. Some panels which are very flat or to the dip it could be in a bit further, three or four pillars, but generally it wasn't much more than a couple of pillars. Generally two pillars inbye.

Up to the time that you left No 2 at the end of June, had you ever traversed down No 1 return to cut-through 13?-- On numerous occasions.

On numerous occasions?-- Yes.

Well, so far as you know, it would have been possible to put a final monitor point at any point either along No 1 return or through one of the stoppings?-- It would have been possible but difficult. It was possible to walk down there. There was some canches in that road which means you couldn't get a machine down the road and our rolls of tubing, etc, are quite heavy and, therefore, you would have had to do it by hand, but it would have been possible.

I left a point before I asked you this. Who in the mine organisation determines the point of monitor within the final seal?-- There was no laid down procedure for that. I know at times when I was involved with a sealing I would recommend where the monitors would go and I would talk to the manager or George about it, about where they were. I know other times there was meetings held, for example, on a Thursday and George and Albert would speak with the electrical people who set up the monitoring and then they would design where they wanted the monitors to go.

All right. Well, just so I understand properly, the system, at least whilst you were there, was that the undermanager might play a part in where the monitor point went, but, in any case, the final decision rested with one of Mason or Schaus? That's not such a hard question. That's a simple enough question, Mr McCamley?-- Not really. Sometimes they may not have known where the sample point was going until after the seal. I am just not sure that they always had knowledge of where they were going.

You are talking about Mr Mason and Mr Schaus?-- Yeah. I can't unequivocally say that they always had control over what was happening, where they went, but I think generally in, yeah, 99 per cent of the cases, yeah, they would say where the monitor was to go or speak to people about it.

Was there any hard and fast laid down work procedure in relation to the positioning of final monitors that you know of?-- No, not that I know of.

Do you know of a risk analysis carried out at Moura No 2 in about May 1994?-- There was quite a few. What - any particular one?

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One where several risks which might have come to arise in No 2 were assessed?-- Yes, I was made aware that one had been carried out. I was actually on leave.

All right?-- I was not at the mine.

Do you recall ever seeing it?-- Yes, yes.

I will just hand you this, it's loose. It's called "Minerisk" and there are a number of pages involved in it. Have you ever seen that document?-- Yeah, I now remember seeing parts of it, yeah.

But when you say you saw parts of it, was it one document when you looked at parts?-- Yeah, yeah, I think so.

Can you say how it came to be that you saw it? In other words, was it -----?-- I can't remember, but I think George probably handed it to me.

Certainly not something that was handed on to deputies and men, not that you are aware of anyway?-- No, not that I am aware of, no.

There is a yellow flag, isn't there, somewhere there, just on the right-hand side? One of the risk assessments, I suggest, was spontaneous combustion?-- Yep.

And, indeed, how to cope with it?-- Yeah, one possible means of coping, yeah.

Well, there is two, isn't there? One is short panel?-- Yeah, yeah.

And the other is flooding?-- Yes.

I don't understand the measurement of the degree of risk by the codes. Do you know the codes?-- No, no, I'm not familiar with that.

Who should I ask, Mr Mason?-- Probably, yeah, George or Albert, or somebody who was involved in it.

I tender that as a separate document, Your Worship.

WARDEN: We marked the previous document you referred to as Exhibit 69 and this document Exhibit 70.

ADMITTED AND MARKED "EXHIBIT 69"

ADMITTED AND MARKED "EXHIBIT 70"

MR MARTIN: Have you ever seen a graph, Mr McCamley, of CO,

XXN: MR MARTIN

WIT: McCAMLEY M A

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CO2 ratio?-- No.

Well, I won't put a document to you then. Perhaps I should be asking this of an engineer, but the method of degassing contributed to coal being dusty, didn't it?-- Yes, that's right.

Are you able to tell me whether there is an alternative using water pressure rather than the degassing into the atmosphere on the surface? Just say so if you don't know?-- Well, I think your question is a bit - structured a little bit hazy.

XXN: MR MARTIN

WIT: McCAMLEY M A

Too broad?-- You can infuse with water after you have degassed.

And what does that do? The question was silly, that is what you were saying?-- Well -----

That's all right?-- What I am saying, yeah, you can infuse water into the holes after draining and it is - it wasn't really proved at Moura, but it is believed, yeah, that could replace some of the inherent moisture that was taken out by the gas drainage.

There was no system, at least when you were present at No 2, whereby one could look back over significant incidents for an overview of what was happening in the panel? There was no written recording other than the production reports of deputies and the undermanagers' shift certificate and the manager's report too, I suppose?-- That's right. You have got the manager's weekly inspections and you have the CO make graph which gives you a run down of what is happening in the section. There are statistics on production.

What is the purpose of the wet bulb/dry bulb temperature taking?-- It is used to measure relative humidity.

For what purpose?-- For virtually comfort factor and men working in the mine. It is prescribed in the Act that there are certain levels of relative humidity that people - and actual temperatures that men shall work in.

It is also used, I suggest, to determine the heating effect of moisture on coal, otherwise called the heat of hydration?-- No, that is not my understanding, that it is used for that at all.

Would you call panel 512 a short panel?-- Yes, yes, I would.

Why was that?-- Because it was only a fairly short time frame for extraction and it wasn't a very long panel, it was somewhat less than 400 metres.

What you are saying, I suggest, is that it was a short panel because of the risk of spontaneous combustion?-- No, not at all. The panel length was purely and simply a function of the gas drilling arrangements at the mine.

Do you know at Moura No 2 whether there had been any panels inertised with nitrogen?-- Not to my knowledge.

It is clear, isn't it, despite what BHP Australia Coal Mine write in its position descriptions, the governing feature is the Coal Mining Act and the numerous rules made around it?-- I believe the position descriptions were written with respect to the Coal Mining Act, yes.

The Coal Mining Act and rules are always paramount?-- Yes, yeah.

Do you know of any mine using a gas chromatograph or, indeed,

the Unor with the instrument room underground?-- No, not to my knowledge.

It is certainly something that could be done and then one wouldn't have the delay with the vent tube system?-- It would be very difficult to do it because Moura was a gassy mine. You had to have flameproof apparatus and none of the gas monitoring apparatus is available as flameproof. So, I don't think the inspectors would allow you to do it.

Could I take you, please, to the undermanager's - underground shift reports, I think, that were referred to on Friday?-- -----

It is a big book. I don't think it was tendered. I will try and pass onto something else so I don't waste time. That is as far as I want to take it with the exception of that underground managers' shift reports. Here they are.

Could I just ask you to look at the entries for 26, 30 and 31 May, 1994?-- Which shift on the 26th?

I am not quite sure. There is one that refers to what might be a power shutdown for four hours - for about four hours. I can't help you with that, I haven't got copies?-- No, not on the 26th, there is no -----

Just pass to the 30th then and tell us - I can't tell you what shift it is. There was a shutdown in relation to the fans for some two hours - two and a quarter hours, I think it is?-- Yes, 30th, Monday afternoon shift.

What are we to understand from that, that there was no power - no ventilation into the mine for two and a quarter hours?-- Yes, that is what it appears to be, that's right.

All right, thank you. If you just look at - once again I am sorry, I can't help you - 31 May?-- Yes, on the night shift.

Again the fans are shut down, there is no ventilation?-- Well, all it says is, "Lost power to the site.", it doesn't mention that the actual ventilation stopped or the fans stopped.

Lost power to the?-- To the site.

What does that mean?-- That means you lose all power to the mine. That doesn't necessarily mean we lose ventilation. We have a diesel generator on one fan and men can actually work underground on that single fan.

Looking at the production deputies report, 3950, the general comment is, "Fan and power off a total of two hours." Does that correspond with what you are reading there?-- Well, it just says "power two hours" here, it doesn't say anything about the fan.

All right. Well, I will tender the entries, Your Worship, and I will get copies produced for 30 May and 31 May 1994 that

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Mr McCamley has been referring to.

WARDEN: We will mark those copies Exhibit 71.

ADMITTED AND MARKED "EXHIBIT 71"

MR MARTIN: I suppose as a separate exhibit I ought to tender production deputies certificate 3950. I will put this in for the moment and give you a clean copy, that's the easiest way.

WARDEN: We will mark that Exhibit 72.

ADMITTED AND MARKED "EXHIBIT 72"

MR MARTIN: Thank you, Your Worship.

CROSS-EXAMINATION:

MR MORRISON: You had quite a deal of history with various mines before you came to Moura, didn't you?-- Yes, that's right.

And you received various forms of training at those mines?-- Yep.

And various forms of qualifications along the way?-- That's correct.

Can I ask you to look at a document, please? Does that document set out a summary of your staff training and qualifications? There may be more since this document was done, but in essence that sets out your staff training and qualifications?-- Yes, yes.

I tender that document.

WARDEN: Exhibit 73.

ADMITTED AND MARKED "EXHIBIT 73"

MR MORRISON: Can you just leave it with the witness for the moment, if you wouldn't mind.

XXN: MR MORRISON

WIT: McCAMLEY M A

Now, I notice down on that list, down at "X", you have got an entry, "QA inter audit 9 July 1993". Can you tell me what that is about?-- That was a course I attended which resulted in me being qualified as an internal auditor of quality systems for AS3902.

That's Australian Standard 3902?-- That's right, and it is in use at Moura Mine.

I was just about to ask you that. In fact, Moura Mine was undergoing and did undergo the process of Quality Assurance, didn't it?-- Yes, that's right, and received accreditation.

I think I am right in saying that it was either the first or one of the first mines in Queensland to be quality accredited?-- Yes, it was one of the early ones, yes.

And you had a role to play in taking the mine through that Quality Assurance process, didn't you?-- Yes, I did.

And that included looking at systems for tracking information through documents?-- Yes, yes, to some part.

I don't mean to say that was the entirety of it, but part of the Quality Assurance process is to develop systems of documents where you can track down, for instance, in relation to maintenance who authorised it, who did it, when, what was done, so forth?-- Yes, that's right.

It is a system of perfecting in short order much better records of what is going on?-- Yes, that's right.

And - all right. And you had a fair role to play in the Quality Assurance programme at Moura No 2, didn't you?-- Yes, that's fair to say, yes, I did, and I had a fair input into the quality system at No 2.

And you had some assistance from various persons in doing that?-- Yes, I did.

Can you tell us a couple of those persons?-- I had a lot of assistance and direction from Mr Phil Reed who was the quality superintendent. I had assistance from Jacques Abrahamse.

He is the engineer?-- That's right, yeah.

Yes?-- And George and Albert, of course, facilitated a lot of the time that I could spend on that and helped out.

In fact, you were taken not so much out of the mine, but you certainly had the opportunity to work on the Quality Assurance system which meant that you didn't have to go underground with the same frequency as you did?-- That's right. I was spare undermanager at times and I would work on quality, that's right, and I wasn't actually a shift undermanager.

Being the shift undermanager would mean you were required to be actually down the pit a lot more than you were, in fact?-- That's right, yes.

As the result there is a portion of the time in 1994 where we don't find undermanager's reports from you and the reason is you are working on the Quality Assurance for the mine?-- That's right, or some other projects as well.

Sorry, some other project, quite right. Very well, you can hand that document to Mr Dahlke, if you would?-- Can I just make mention of one thing on this document?

Yes?-- Point number 12, I am not familiar with that. I just -----

Maybe it has got a series of letters that -----?-- Yeah, all the rest I can vouch for, but I am just not familiar with that one. It might mean something, it doesn't make sense.

We will have that checked with the source of it. Thank you. Now, when you arrived at Moura Mine you had a degree of awareness yourself about spontaneous combustion as a feature?-- Yes.

And you had already had some training or experience - perhaps not experience, certainly some training and background in relation to it?-- Yes, yes.

And you were aware of it as a potential feature to do with the Moura D seam?-- Yes.

And, likewise, it is your assessment of those at the mine that there was a general level of awareness of the fact that this was a seam with a propensity or liability for spontaneous combustion?-- Yes, that's true.

It is not as if there were people walking around ignorant of that, were there?-- No, I don't think there were.

Now, in relation to that, it is a fact, isn't it, that there was quite a reasonable or good level of monitoring at this mine?-- Yes, I believe the gas monitoring of this mine was very, very good.

I think I am right in saying you would rate the monitoring as top rate?-- Yes, it was one of the best I had experienced within mines.

And monitoring at the mine was also treated by management and miners as well as a very high priority?-- Yes, it always was. It had very high priority and was very well maintained.

And the equipment they had, the Unor system and so forth, was amongst the best you have worked with?-- Yes, certainly one of the best that I have worked with.

Now, there is apparent from the document that I asked you to look at about your staff training and so forth, that you underwent one way or the other a number of courses to train you in various aspects to do with mines?-- Yes.

Including the Quality Assurance work we have mentioned, also safety work?-- Yes, that's right, safety investigations.

And you had an active participation in Mines Rescue which has also an obvious emphasis on safety of men?-- Yes, that's true.

And you also underwent, I think it's apparent from that document, a number or - at least one occasion, maybe more - where you developed some extra skills in communication?-- Yes, I'd been undertaking an Associate Diploma in Business through TAFE and there was communication subjects which I passed in that.

The obvious rationale behind adopting that sort of approach is that communication is an essential feature at a mine?-- Yes, it is.

And you have always recognised it as so?-- Yes.

And you have always been very careful about the degree of communication that you are involved in?-- I'd like to think so. Sometimes we don't communicate as well as we should.

I don't mean necessarily conveying precise meanings, but certainly in terms of conveying information, what you might call data, you've been careful about that?-- Yes, I'd say that's fair to say that, yeah. I try to be anyway. Whether I achieve it or not I try to be.

That's a reflection also of your attitude in the physical sense because you are very careful when you are down the mine in terms of - your inspection is very thorough?-- Yes, I was always very, very careful with my inspections.

It's a fact, isn't it, that you are required to obtain information when you are down the mine, and likewise on top, and collate that information so that it can be provided to others?-- How do you mean "required"?

Well, it's a fact that you have to provide reports?-- Yep.

And that's a collation of information that you obtain one way or the other and then put it in writing and you present it to some other person?-- Yes, that's right.

Not only do you present it to some other person, it's available there for others to read?-- Yes, that's right.

In your position description and undermanagers position - perhaps I could ask you to look at it, it's Exhibit 12. I want you to have a look at the position description in Exhibit 12 under the heading of "Undermanager". I think I've got that open at the page for you?-- Yep.

If you turn over two pages you will see an acknowledgment form, and is the second signature that of you?-- That's right.

Turn back two pages to the position description and you will see various responsibilities listed there at the bottom of the page first, and here I paragraph phrase of course, but you can read them as I go. To be proactive in all aspects of safety management at the underground operation including but not limited to investigation and reporting of all incidents, accidents and incidents, then (3) to coordinate all the activities of the underground mine, various aspects of that; (4) - and this, I think you will agree, was something you were talking about on Friday - to communicate effectively with oncoming shift undermanager so that efficient shift changes can occur and planned goals are achieved?-- Yep.

That description there of your responsibility comes as no surprise to you?-- No.

Number 5 over the page, to monitor all production sections and collate all pertinent information so as to compile a shift report?-- Yes.

That's just what we were discussing a moment ago?-- Yes.

Your training and your position description which you signed off would suggest that all pertinent information about a production shift should go into an undermanagers shift report, wouldn't it? Of course the undermanager has to make a decision about what is pertinent and what is not, but once having decided what's pertinent it should go in the report; is that correct?-- Yes, that's what it says here. That's what we should do.

That's what your training would have told you too?-- Yes, in general. The only sort of training I had on shift reports was more about being more succinct with production aspects.

It's a fact that the undermanagers shift reports deal with mostly what might be called operational matters?-- That's right, yeah.

And that's certainly a feature of undermanagers shift reports but not the only feature, is it?-- No, it's not, but it's the main feature of our report. That's what it was to me.

Undermanagers including yourself have on occasions put more information into the report if it was thought to be pertinent?-- Yes, on occasions, yes.

You yourself have done that, I think, in relation to some gas readings, and another example would be the one that we were discussing on Friday in relation to ventilation aspects?-- Yes, that's right.

So that where you thought it was necessary to reveal information you would certainly put that in your report?-- Yes, when I thought it was necessary, yes.

We noticed on Friday that in relation to your report for 17 June you did not mention the smell that you referred to?-- That's right. I didn't think it was necessary because I had

orally related that to Albert and George.

You didn't think it was pertinent information to put in the report, did you, because if you had done you would have put it in?-- I thought it was pertinent information, but because I had spoken at length with Albert and George, yeah, I didn't put it in.

It's a fact, isn't it, that some time later you heard about Mr Robertson experiencing a smell?-- No, not when I was at the mine. Here now, later I found out about it, yes.

Is it not the case that a few days later or a week or so later you actually heard about the fact that Robertson had experienced a smell in this same panel?-- No, no.

Isn't it possible you read his report?-- Can you just ask that question again?

Isn't it possible you read his report? His report is -----?-- No, it's not. I definitely never read that report. I'm definite on that. See, I would come in on Monday and I would read maybe the weekend undermanagers reports and the previous night shift deputy's reports, but it wasn't my normal system to go back and read right through the afternoon shift.

You would talk to the undermanager going off?-- Yes, the night shift undermanager, yes, I would speak to him.

The same sort of exchange of information that you described on Friday and today would take place between you and the outgoing shift undermanager?-- Yes.

And in that way it may well have been the case that Mr Robertson's report, though not in written form, came to your attention; isn't that so?-- It's possible it could have, but it didn't.

Your memory is that it didn't?-- Yes. Yes, I -----

I'm not suggesting necessarily you read it, what I'm suggesting is it came to your attention though perhaps you didn't read it?-- No, it didn't come to my attention. If somebody had told me he smelled a strong benzene smell I would not have forgotten that.

When you went down on the 17th you went down in company with others, didn't you?-- Yes, that's right.

And except for a period of time when you went off to measure readings around some fall areas you were in company with others the rest of the time?-- Except for a period when I was at 7 cross-cut working out what was going on with the ventilation. I was alone there too.

Now, when you came up after that shift you went to speak to Mr Mason and Mr Schaus; is that right? That's what you say?-- Yes, that's right.

Are you sure Mr Schaus was there?-- Yes.

You were fairly confident when you came up out of the pit that you had solved the ventilation problem, weren't you?-- Yes, I was.

And without wishing you to indulge in any back slapping, you were fairly proud of the fact - or pleased with yourself that you had in fact resolved this problem?-- Yes, I suppose it's fair to say that, yes.

In fact may I suggest to you that that is the sole topic that you discussed with Mr Mason and Mr Schaus, that is to say the changes to ventilation that you had made?-- No, no.

You made a number of ventilation changes and they just happened to be of that whole shift the only pieces of information recorded on your shift report?-- Yeah, not all of them are recorded, but the pertinent ones.

That's right, and that's the information you conveyed to Mr Mason and Mr Schaus, isn't it?-- Yes, along with other information.

On Friday when you were describing what you told to other people such as Moody and Atkinson and maybe Bentham, on each occasion when you did that you did so in terms of having described the ventilation changes to them?-- Yes, the deputies I spoke to I was merely describing what the ventilation system was now and how I would like to see it maintained.

Quite, but on each occasion when you conveyed information after that about that shift it was in relation to the ventilation, wasn't it?-- Are you talking about to the deputies?

To the deputies and to other undermanagers?-- No, I'm not sure, but I think I might have - I'm not sure, no, that I recollect what I actually spoke to undermanagers about at shift change - or the undermanager rather. I think it was Terry. I'm just not sure. I might have been a lot more detailed and explained to Terry in more detail about what happened during the day.

Is the truth of it that you don't have any good recollection about what it was you did or didn't say to Mr Atkinson?-- Yes, I haven't got a good recollection of what I said to Terry.

Nor is there any note of what you said to Mr Atkinson unless he made it?-- No, there is generally no note. We don't write that down. It's just an oral exchange.

Unless he made a note you certainly don't have one?-- No.

Likewise there is no note of what you said to any of the deputies unless they made one?-- Yeah, that's right, I think. I don't think I wrote down anything about talking to the

deputies, no.

As with Mr Atkinson the truth of it is that you don't have any good recollection of what you did or didn't say to any deputies?-- No, I have a reasonably good recollection of what I said to the deputies.

That was to do with ventilation?-- That's right. That's what I spoke to them about, the current ventilation system and how I would like to see it maintained.

That was certainly the same topic that you spoke to Mr Atkinson about. Even though you can't remember the terms, that was certainly the topic?-- Yes, but I believe it could have been in more detail that I spoke to him about, and other things as well.

But you don't know, do you?-- But I really don't know, no. No, I don't remember that conversation.

Can I suggest likewise, and since it's so proximate in time, it's in fact within the same span of an hour or so, likewise you really don't have any good memory of what it was you said to Mr Mason or Mr Schaus or didn't say, but you do remember a topic?-- I have a fairly good memory of what I spoke to them about, yes.

How is it you have such a good memory about that, but the conversation an hour or so later with Atkinson you don't?-- I don't know. Maybe it stuck in my mind more what I spoke to Albert and George about because they are my superiors.

I suggest you did discuss the ventilation changes and how you had solved the problem with Mr Mason when you came up on the surface that night or that day. You certainly discussed that, but you did not discuss the fact of a smell with Mr Mason at all?-- Yes, I did. Actually I can recall the exact way I talked about it because I used the analogy of - I don't know if I'm allowed to say this, but I used the analogy that it was like a shithouse smell. A tarry-type smell is similar to the old tarred tins used in thunder boxes, and that was my analogy that I used, a very slight shithousey, tarry smell, and that's how I recall it because I remember using that analogy.

I know you might think you recall it now, but what I'm suggesting to you is that when you talked to Mr Mason you talked to him about ventilation but you did not mention to him anything to do with the smell on that 17 June?-- No, I definitely talked about that smell.

Nor did you mention it to Mr Schaus?-- Mr Schaus was there to and we were in a closed room.

We can see that, can't we, because it's not in your report that you wrote out at the time. If it was such a pertinent piece of information, how is it possible that it did not get into your report?-- I can't answer that. Possibly it should have been in my report, but I didn't put it in there.

What I am suggesting to you in fact is that your report is indeed accurate. I'm not suggesting that you have mismade your report or that you've been slack in your reporting, I suggest to you your report is in fact accurate and that what is recorded in it is what was discussed with Mr Mason, that is to say ventilation, not smell?-- I definitely discussed that smell with Mr Mason and Mr Schaus in a closed room.

Do you say -----?-- And it was a very slight smell. I told them that. It was just very, very slight and that I believed the ventilation had been done and it had been fixed and it was - things were okay.

Well, you emphasised on Friday a number of times how in your description of what you smelled that it was - I think the term was very, very slight?-- Yeah, it was.

You are really meaning to convey that it was the merest whiff, there and gone?-- Yeah, it was a very slight smell.

Do you say, as I think you might have indicated on Friday, you meant to indicate that you conveyed that also to Atkinson?-- Like I said, I don't recall the conversation with Terry to any great detail, nowhere near like I recall talking to Albert and George.

Do you mean to say -----?-- Excuse me, but at shift change it's a busy time. You get a lot of people coming in and coming out and the exchange of information at shift change periods is a lot more sort of hectic, so -----

You said that on Friday too, but did you mean to convey that you conveyed that information, that is to say the smell information, to the deputies coming on too?-- No, I don't recall that. I don't recall speaking to them -----

Is it possible -----?-- About that.

You have no idea whether you did or not to either Atkinson or any of the deputies?-- No, no, I don't.

And yet this would be, would it not, very relevant information for them to hear about, wouldn't it?-- Yes, yeah, it would be, yeah. I could very well have spoken to them about it, but I don't recall it.

And yet these conversations would have occurred within the span of an hour of the one you had with Mason and Schaus; isn't that so?-- Probably about an hour or so, yeah. Yeah, that's right, and then on Monday I spoke to Eddie Bentham.

In the same terms?-- Yeah, about that ventilation, and when I was in the panel I took him and showed him and sort of made sure he was aware of what was going on and how it was to be maintained.

Yes, I know you discussed ventilation, but I'm asking are you meaning to indicate that you conveyed to Bentham the information about the smell?-- Like I said, I just can't

recall exactly if I did. I think I might have, but I am not certain.

And yet you went out of your way to speak to Bentham about this, didn't you?-- Yeah, on that Monday, yes, we went over to that area with him and - yep, I spoke to him.

You weren't required to. You went out of your way to make a point of speaking to Bentham about the ventilation?-- Yes, yes, that's right. Well, I believe I probably was required to as an undermanager there and to make sure that he understood what was happening in that panel.

Now, that was a conversation, as was the case with Atkinson, one-on-one, you and them?-- Yes, yes.

And in the case of Bentham, on a specific occasion, not just shift change, but you specifically went to convey this information to him?-- Yes.

And you have no particular memory of that conversation beyond the topic of ventilation and its aspects being discussed, do you, that is to say with Bentham?-- Yeah, that's - the main point I remember is about how I ran through with the ventilation because we were standing there and I was showing him some things. Just all the other things I might have mentioned to him, I just don't recall. I might have mentioned readings, I might have mentioned a slight smell, but I really can't recall it exactly.

The main thing you talked about with the deputies was ventilation?-- Yes.

Isn't that right? And the main thing you talked to Atkinson about was ventilation; isn't that right?-- Well, I would have, but I believe with Terry I probably would have spoken in more detail.

But you don't have any memory of doing so?-- No.

Beyond the main topic, do you?-- No, unfortunately I don't, no.

You have no memory of his responses to you, do you?-- No, no, I don't have a clear memory of that either.

That topic again is the only topic you talked about to Mason and Schaus, isn't it?-- What, the ventilation?

The ventilation?-- No.

As with the others, I suggest to you that you really have no particular memory of what was said to Mason and Schaus beyond the topic of ventilation which you had just cured?-- No, I have a good memory of what I spoke about it.

You didn't make a note of it at the time, did you?-- You mean about the smell?

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No, about your conversation, did you?-- No, no, it was not the norm to make a note about a conversation.

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Nor did you make a note about the smell, did you?-- No, I did not.

Can you tell me, when was the first time you were asked to recall the conversation you had with Mason and Schaus? Was it when you gave your statement to the Inspectorate?-- I'm not sure whether it was at that time or with my solicitor.

You can't recall?-- Yeah, I can't recall which one was first but I know - I think it may have been with my solicitor.

Yes, because, see -----?-- The first time.

----- that conversation is not referred to in the statement you gave to the Inspectorate, is it?-- Well, I'm not sure whether it's in there or not.

Well -----?-- I was merely answering questions that the Inspector asked me in the statement.

Not entirely. No, not entirely. There was a section at the start for about five pages before you get to question and answers where you in fact deal with this inspection at some length and in none of that is the conversation with Mason and Schaus dealt with. Can you explain that to me, please?-- No. Maybe I was just recounting what I had done, maybe what was happening in the mine, not recounting reports or conversations.

Well, you were asked in the long dissertation that takes up those pages to turn your attention to 17 June when Robertson halted production and you provided assistance with Morieson. You were asked, "Can you describe the nature of the problem and the actions taken?" That was the question that led to this number of pages of response, and in all of that response you do not refer to the fact at all that you went to see Mason and Schaus, nor do you mention the fact, as you now do, that you told Mason and Schaus about the smell. How do you account for that omission, if it be an omission, in your statement?-- Yeah, I can't account for that because I should have remembered it at the time, but for some reason I haven't put it in.

Your best recollection at that time did not include what you are telling us today, did it?-- That's quite possible, yes.

And that was a number of weeks ago?-- Yes, I think so, yeah, yeah.

And on the same occasion there is just nothing in your report about what you would suggest to be a very pertinent piece of information and you can't account for its absence in your report, can you?-- No, I can't. On looking back I probably would expect that, yeah, I should have put that in. I can't account for why I didn't write it in.

As Mr Clair said to you, there is ample space to do it, ample opportunity to do it?-- Generally, like, it was the norm at Moura that the manager's reports were for production and

operations, so that was mainly downtime and stuff and where you mined, where your people were, and you would add in sometimes bits about the ventilation or something else that might happen just as an additive - just to flag up some areas that the next undermanager might look at, but it wasn't usually treated as a report for statutory matters and those sort of things.

No, but you treated it that way on this occasion. You chose to treat it that way on this occasion, didn't you?-- I put in about the ventilation so the next undermanager would make sure he continued on with the same system. That's why it was there, to ensure that they carried on with the same system and understood what was happening.

Having gone the extra step in this undermanager's report, you do not refer to the fact of having experienced a smell, but you do refer to what I suggest was the only relevant information on that day and that was ventilation changes?-- Yes, I didn't make an entry about the smell, I didn't write down about my gas readings, I didn't write down about the inspection route or anything else, no.

Well, five pages weren't available to you in the report itself, were they?-- No.

And that's how many pages it took you to describe it in your statement to the Inspectorate. In all of those five pages the conversation with Mason and Schaus didn't rate a mention and you can't explain that either except that it was your best recollection then; correct?-- Yeah, generally about the run-down of the inspection, yeah, it was -----

See, it's not the first time you have put in ventilation information and gas readings in your shift report, is it?-- No, it's not. Sometimes I have before, yes.

You did so on the weekend of 11, 12 and 13 June. I can just show you one document that encompasses that. Do you see that?-- Yes.

Now, it's the fact that on that occasion you chose to make comments not only about ventilation but also about carbon monoxide?-- Yes, that's right.

You can hand that back?-- I didn't have a consistent way of reporting, though.

Now, the only persons present for your conversation with Mr Mason and Mr Schaus, as you relay it, were them?-- Yes, that's correct.

And you mentioned a closed room. What was the significance of that?-- Because I felt it was fairly important information and I came up to speak to them about it, and generally people walk in and walk out and, you know, ask questions or, you know, they want to see them for something. If I close the door, then people generally know that that's an important thing and they don't bother you, so I wanted to make sure

there was no interruptions, yeah.

Having conveyed this important information which warranted closed doors and no interruptions, you then went to write your report out, didn't you, isn't that right?-- I think so, yeah. I might have written some of my report beforehand.

Well, not this bit, not this bit beforehand, did you, because this is only the product of your inspection, isn't that right?-- That's right, yeah.

This couldn't have been written beforehand?-- No, no.

This must have been written after your conversation with Mason and Schaus; correct?-- Yeah, yeah, that's true.

So having ----?-- Although it's not certain as to whether I might have written it down, then gone in to see Albert and George, or I went straight in to see Albert and George, I'm not sure, but I probably did fill it out later on.

Well, this is again an area where you don't have any strong memory, do you, because you are not sure at all whether it was before or after the conversation?-- Yeah, I don't have a strong memory of it, no.

Well, you don't mean to suggest your report was completed before the conversation with Mason and Schaus?-- No, it wouldn't have been. I would have completed that right at the end of the shift.

So one way or the other, you certainly had occasion to come back to this document and write in this document after your conversation with Mason and Schaus?-- Yes.

Now, let me just ask you one other thing: you were aware that ACIRL was involved in the design of 512, weren't you?-- Yes.

You have been shown a risk analysis that was performed in relation to the 512 Panel?-- Yes.

That's the Minerisk document?-- Yes.

Did you participate in the risk analysis?-- No, I did not.

You were shown an entry that deals with the entry of spontaneous combustion?-- Yes.

It's evident, isn't it, that spontaneous combustion was taken into account in the risk analysis?-- Yes.

And in fact comments were made in the document itself about the ways to either overcome or control or to deal with spontaneous combustion?-- Yes, yeah.

There weren't in fact one, there were two: short panel and careful monitoring. Do you need to see the document again to see it?-- Yeah, I remember seeing that in ----

And then in addition to that other possibilities were flooding?--
Yes.

Now, that would accord with your approach, would it not, at No 2 Mine of dealing with the chance of spontaneous combustion; that is to say, one way of controlling it was to have short life panels that would be completed and sealed within the perceived incubation time, and the second was to keep a close monitoring on the gas levels?-- Yes.

And your training and experience generally and at No 2 would suggest that they were two quite appropriate measures?--
Yes, that's right.

There was a history of successfully dealing with whatever risk was attached to spontaneous combustion by the use of those two methods?-- Yes, that's true.

In fact, in - I can't remember precisely the dates now, whether they accord with your time, but I think they do. 4 South A right around the southern drift to 511 were all panels, with the exception of 401/402, that were extracted quickly, sealed successfully without any difficulty?--
That's true.

And the only exception that I mentioned was 401/402 in that its panel life was longer, something like 11 months instead of three?-- Yes, it was a bigger panel.

A much larger panel, I think nine drives across?-- Yes, it was two panels hooked up.

And in all of the panels that I have just mentioned, that is 4 South A, 4 South B, 401/402 and 4 South level, they were panels in which you could and did walk the goaf?-- Yes, that's correct.

In fact you made a practice of that?-- Yes, I did.

Others may not have done, but you certainly did make a fairly frequent practice of walking the goaf for the particular purpose of assessing conditions in the goaf?-- That's right, I did.

And that was a practice you followed at 512?-- Yes, that's true.

Sorry, I may have omitted 511 in that sequence. The same applies to 511?-- Yes, it does.

And in 512 again you followed a practice of walking the goaf in order to assess conditions in it?-- Yes, that's right.

And it's not just the occasion of 17 June, is it?-- No, regular occurrences.

You had done it before that?-- Yes.

And you did it subsequently?-- Yes.

In fact, I think you said on Friday - correct me if I am wrong - but I think I understood you to say that you went back in and walked the goaf specifically a few days later to check on whether conditions had altered from the 17th?-- That's right, on the 28th I went in around the back of the large fall that had caught the miner and went down through that goaf area.

Did you see anything on that occasion - that is to say, the 28th - which indicated - well, let me deal with things. Did you see any haze on the 28th?-- Definitely not.

Any sweating?-- No.

Any unusual heat?-- No.

Any smell?-- No. Conditions were fairly good in the goaf as far as ventilation-wise.

And on the 28th - on that occasion did you walk down through that area of 9 cross-cut, 10 cross-cut and across towards No 2?-- I think I -----

You can probably use the magical laser pointer if you wish to. Just as you do, so that we can follow it a little more clearly, can you, as you move the pointer along, indicate which cross-cut and roadway you are dealing with? Actually, what I will do - sorry, I will try and make it a bit easier?-----

Can the witness have Exhibit 32?

Mr McCamley, what I want you to do first - using, for the record, a pink marker pen - let's deal with the 17th first, if we may. Can you turn your mind back to the 17th, the inspection you went on with Mr Robertson, Mr Edelman and Mr Morieson?-- Yes.

Now, you met them where, at the crib room?-- I think it was the crib room, yes.

At that stage mining was going on in 7 cross-cut around No 4 road, between the belt road and No 4?-- No, it was further across in the panel, I think. It was further over to No 6 road.

But in 7 cross-cut?-- Yes, in 7 cross-cut, yes.

So the crib room would have been outbye around No 5?-- Yes, that's right, somewhere around there.

And in the supply road?-- Yes.

Now, when you met the others at the crib room did you take measurements at that point?-- No.

You just had a discussion about what conditions were like?-- Yes, yes.

Did you understand from the others that the others had taken measurements at that point?-- Yes, Reece had told me his measurements taken down inbye No 2 road.

Inbye from the crib room?-- Inbye, yes.

You proceeded from the crib room direct to the stopping at No 3?-- Yes, I'm pretty sure it was No 3.

That is No 3 cross-cut, and through that stopping into the top return?-- That's right.

As you entered the top return readings were taken at that point?-- Yes.

Can you mark number "1" at that point, please? Then you travelled down the top return in company with all three other men?-- Yes.

Taking readings as you went?-- Yes, that's right.

You taking, I think you said, carbon monoxide?-- Yep.

And Morieson taking?-- Carbon dioxide, and we both had our Minders, so we were both continuously monitoring methane as well.

And Robertson measuring?-- I'm just not sure what Reece was measuring.

All right. Now, did you stop at any point down the return?-- Yes, I believe we stopped at a couple of points and, like, when I got - I had the 10 pumps, I had a look at the tube, because the CO tube I was using was a tube where you took 10 pumps to get the full sample, so when I got to the point of 10 pumps I then read the tube, put it in my pocket and got another tube out.

So -----?-- So I think I stopped somewhere down there when I did that, possibly 6 or 7 cross-cut, at a guess.

Can you mark that with a number "2" then? Then you moved further down the top return down to the vicinity of 9 cross-cut?-- Yeah, 9 or 10, yeah.

Was that the point where some stoppings were opened?-- Yes, that's where we started to open up some holes in stoppings.

Now, it was either 9 or 10, can you remember which?-- I really can't, no, no, because there is no numbers in the return, so you don't sort of really know where you are.

There is no road signs at all down there?-- No, none at all.

Now, you directed the stoppings to be opened?-- Yes, I did.

And you saw that as one of the means by which you could clear the ventilation quickly from the inbye section of No 2 road?--

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Yeah. It was a means where I saw that we could get that ventilation flowing positively down No 2 road, yes.

When you opened the stoppings at 9 or 10 did you take readings there?-- Yes, I think we did, yeah.

Could you mark that with a number "3", please? Then further inbye along the top return to 13 cross-cut?-- Yes, I'm pretty sure we went down there.

Did all four of you go across 13 cross-cut to No 6 roadway?-- No, no.

Who went across there, was that just Allan Morieson?-- Yeah. I think Reece and Greg and I came up No 2 road then.

Did you take readings in the bottom - in the No 13 cross-cut before you entered into the goaf?-- I probably was taking continuous readings, but as to whether we stopped and completed 10 pumps there before I walked through or not, I can't recall.

So you went in through the stopping at No 2 roadway between 12 and 13 cross-cut?-- Yes, I think so.

And there was a door in that stopping, I think?-- Yes, yes.

As was the case with other stoppings between 12 and 13 cross-cut across the back?-- That's right, yes.

They had one or other sort of doors in all of those stoppings?-- Yes.

All of those doors should have been open or partly open?-- Yes, they should have been partly open, yep.

And were they?-- Well, like I said, I didn't walk right along 13 that day, I don't know.

Was there some discussion to which you were party about how the doors in the stoppings that I have just referred to might have come to be either closed or partly closed?-- I can't recall anything, no.

Can you recall a discussion about it having been, perhaps, the product of a fall?-- No, no.

So, you entered the waste at No 2 and did you start taking readings inside?-- Yes. I think we went to 12 cross-cut intersection.

And took readings there?-- Took some readings in there.

Right. Can you mark that with the number "4", please? Is it that point where you peeled off to go and do the inspection over the other part of the goaf?-- I think I walked up to 11 cross-cut and then across.

Now, were you in company with Edelman and Robertson when you went up to 11?-- Yes.

Were readings being taken as you walked up there?-- Yes, that's right, yeah.

And at No 11?-- Yes, we were - I was continuously sampling. I think at this stage - somewhere at that stage I changed over to a CO2 tube and did a sample of CO2 as well and then I took one after the other, CO2, CO, then CO2 as I went through.

Can you just mark a number "5" at the 11 cross-cut No 2 intersection, and that, as you recall it, is where you split up from the other two and went off to do the goaf inspection?-- Yes, I think that is where it was, yes.

Now, I want you to, as best you recollect it, draw a continuous line that shows the path you travelled when you went off by yourself to inspect the goaf and can you describe for me the direction you were going along cross-cuts and roadways as you do this, leaving No 2 cross-cut 11?-- Yep, I think - well, I headed down No 11 cross-cut towards No 3 road.

That's towards the belt road - the old belt road?-- That's right, continued along 11 cross-cut to No 4 road intersection and then I turned and went up the pillar - up No 4 road to the 10 cross-cut intersection.

That's past that large pillar?-- Yes.

Right. So, you have walked two sides of the large pillar at

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that point?-- Yes.

This is taking readings as you go?-- Yes, that's right.

Alternating CO₂, CO?-- Yes, I was continuously pumping the Drager 21/31 and I was just intermittently pulling my Minder out and checking methane and oxygen. I might have three or four times checked the Minder.

Okay. So, you have gone up now number -----?-- No 4 road, on the No 4 road 10 cross-cut intersection.

Yeah?-- Then I went - I am not sure now whether I went back out 10 cross-cut and up the belt road or if I continued up the belt road and then across. So, I am just not sure where I went from there. I will put both in dotted, but I ended up at the 9 cross-cut belt road intersection, yeah.

Still taking readings?-- Yes.

Just tell me, at that point - up to that point had you noticed any haze?-- No, nothing.

Sweating, smell?-- No.

Unusual heat?-- No. It was fairly warm in there.

As you would expect the goaf to be?-- Yeah, that's right. It certainly didn't appear to be anything particularly different to me, yeah, fairly normal, but the ventilation was fairly slow once - around that No 2 road 11 cross-cut intersection. I remember it being pretty dead mostly in this area.

On the journey up to this point, that's through the waste proper, have you passed over or by any falls?-- Yes, I had, but I just can't remember exactly where they were.

Had you gone off -----?-- There were a few falls in there.

Sorry, had you gone off specifically to take readings around the fall?-- Yes, I walked - I walked over one fall and around a second one, I think, and, yes, I stood on a - on the rock on the top of the fall and tried to get high readings which didn't indicate anything different.

I was going to say, nothing unusual from the readings you were taking?-- No, I think the methane went up .1 or .2 which would be normal.

Now, you ended back out number 9 cross-cut on the belt road?-- 9 cross-cut in the belt road, yeah.

Headed where?-- Then I went out along 9 cross-cut to No 2 road.

Then is that where you met the others?-- Yes.

By that stage that included Morieson, he had arrived back?-- I think so, yeah.

XXN: MR MORRISON

WIT: McCAMLEY M A

Still taking readings at that point?-- Yes, I had taken readings right up to there.

I am not sure what we are up to, but at 9 cross-cut can you mark the next number? I think it might be number 6?-- 6, yeah.

Then went where?-- Then I went straight up No 2 road.

In company with the others?-- In company with the others, yes, up to 8 cross-cut.

Still taking readings?-- Yes, I think we were all taking readings.

Can you put a number "7"? At the time that's No 2 and 8 cross-cut. Did you then all four proceed further outbye along No 2 to the edge of the waste?-- I can't remember for sure. I know I walked around that pillar, 8, around up No 3 road then across 7, but whether I did it then or later I am not sure.

Then or later it doesn't matter for these present purposes. Did you go, as it were, back into the goaf again?-- Yes.

And can you just detail, again in a continuous line, where you did that and describe, please, the cut-throughs and roadways you followed?-- On that No 2 road 8 cross-cut, and I know at one stage I did go in 8 cross-cut to No 3 road and then up No 3 road to 7 cross-cut and then back out 7. I went up that, right, went up here to the - to that intersection, 7 cross-cut No 3 road, and that's - there was - that was where the bag was.

The bag next to the miner?-- No, the miner wasn't there. That's a ventilation stopping there.

Right?-- At that stage I walked back down and back out to that 8 cross-cut, No 2 road intersection. I didn't go through that bag.

You met the others again?-- Yes, yes - well, I either met them again there or I did that later. I am just not sure if I did it that time or later.

That walk through the goaf, again no readings of any unusual nature?-- No, no. Like I said, I just can't recall the actual readings, but the CO2 was - I recall was .5. It was a little bit higher than what is normal and what was showing on the Unor. So, yeah, I noticed that more than actually the CO reading because I just don't recall the CO reading, but I have been told it was 10, but I didn't recall it at that time.

You never took a CO reading of 10 in this whole exercise, did you?-- Not to my recollection. I just don't recall that, no. I don't think -----

I think the highest you can recall is 6?-- Yes, at the time

that's all I could recall.

Now, do I understand you to mean that when you came up to the surface later you checked your readings against what the Unor had been showing?-- No, I knew what the Unor had been showing before I went down. I had been watching it and monitoring it and I realised that my readings on the CO2 were higher than the Unor, yes.

None of the others were?-- No. Well, not that I remember. I just don't remember, yeah, that, but I know particularly the CO2 one, it sticks in my mind.

Now, at the end of the perambulation that took you to 7 cross-cut No 2; is that right?-- Yeah - well, no, back at 8 cross-cut No 2. All of us - we all walked up to No 2 road.

8 cross-cut No 2 you were still taking readings?-- Yes, I think so, yep.

Put number "8" - I think we are up to number "8", aren't we?-- Yes.

Then back up No 2 to 7 cross-cut?-- That's right. We went out the bag - out the stopping and into 7 cross-cut No 2 road intersection.

In some point of that exercise you sent Mr Robertson off to take a couple of miners to bag off the bleeder return?-- Yeah. I can't remember whether it was Reece or Cocky - Allan Morieson, but I know I did at that stage send them off to do that, yes, and then at a later stage to put up a ventilation bag across the miner to reduce the air going through there.

Just pause there -----

I am about to move onto another point, Your Worship.

WARDEN: Thank you then. We might take a 5 minute break.

THE COURT ADJOURNED AT 11.40 A.M.

THE COURT RESUMED AT 11.56 A.M.

MARK ADRIAN McCAMLEY, CONTINUING:

MR MORRISON: Mr McCamley, I was asking you to mark on that map various features of the 17 June inspection. I think you have now completed that in terms of where you walked and in terms of taking readings, sites for taking readings. That's now complete, isn't it?-- Yes, we are now at the 7 cross-cut No 2 road, yes.

I'm interested in the path you took at the time when others were either with you or you met others again. Now, I'm right in saying, am I not, that the next day you went and got some samples to put through the chromatograph?-- I can't remember for sure whether it was the next day or the Sunday. I'm just not certain on that.

Within that time span of 24 hours at least?-- You know, that's when I think I did it, yeah.

You took them from various parts of the 512 goaf?-- No, that bag sample I took was only from the No 1 road return. I took it as I went down that return.

Sorry, from various parts of the top return?-- Yes, yes.

And you took the bag sample up to Ken Selff?-- Yes.

And so far as you are aware it was put through the chromatograph?-- Yes, I just don't have a recollection of whether it was put straight through or the next day, but I remember talking to Ken that he was there on that day and he said he was running the chromatograph, and I said, "Well, I'll go and get a bag sample for you and you can run it through.", and I just don't know whether he did it that day or not.

The result was it was pretty much fresh air?-- Yeah, it was fairly close to fresh air, that's right.

This was after you had affected changes to the ventilation which you had witnessed were successfully flushing that goaf?-- Well, what I thought, yeah, that's right, I had. I remember the bag sample, it wasn't a fully inflated bag, but Ken had said he had enough there to get a sample through.

A couple of days later you were back down in that goaf just prior to leaving Moura No 2. Can I just go back? Did you say it was on the weekend after the 17th that the bag was taken, the day of or the day after?-- No, my recollection is it's on that weekend before that, on the 10th, 11th, the weekend I worked. I worked the 10th, 11th and the 12th, the Queen's Birthday. That's the weekend my recollection is of taking that sample. I'm sorry about that.

I ask you to look at this document, please, and you can probably find those in other documents but I think these are the undermanagers shift reports done by yourself for 512 collected in one place. Now, the opening one is for 10 June day shift?-- Yep.

And shows the second section dealing with 512 Panel?-- Yes.

I want to ask you one thing about that document. Look down to the second last panel in the document itself and the last entry, "Mechanical session with Clark grout pump rep", is that what that reads entry immediately above the section commencing "Drilling section 510"?-- Yes, I can see the entry. It's a little hard to read. I think it might be "Technical session

Can Mr McCamley have those books that contain the originals of these?

WITNESS: I think it says "Technical session with Clark grout pump rep."

MR MORRISON: You are probably right. "Technical session with Clark grout pump rep". What was that about?-- Steve Davidson was one of the ventilation people at the mine and I was trying to, how do you say, develop the people and get them more into the whole side of their job, so I was trying to introduce them to the reps and get them more involved in the whole side of the ventilation rather than just working in the mine, putting up stoppings. So when this rep was here I made time for Steve to come up and actually meet him and talk to him about grout pumps and stuff.

Did you do this with other people as well, that is to say try and develop the basis of their expertise?-- I was trying to start - I was just starting to do this at Moura mine. It wasn't easy, and it was only the ventilation crew I was trying to start this with.

If you turn the next page, this is the shift report for 11/12/13 June, and under "Shifts" you've written the word "all"?-- Yes.

You did all shifts on that weekend?-- No, the day shifts.

"For the last time" is written with an exclamation mark under your name?-- Yes, that was the last weekend I was going to be at Moura. I was going to Crinum.

Unfortunately your joy was short lived, you did work after that, didn't you?-- Yes, but it was the last weekend, that's what I meant, the last weekend I'd have to work.

This is the one under the heading of the Sunday day shift where you have included in a two lined, that is to say a double lined panel in half-way down the page some information about goaf inspections and parts per million of CO?-- Yep.

On that occasion there were only five parts found in the top

return?-- Yes.

Can you turn over to the next one which is 14 June day shift, then 15 June day shift and then 16 June day shift? Can I ask you to pause at the one for 16 June and ask you about what is noted at the top, "Safety meeting SOS" which means start of shift "7 a.m., two and three quarter hours."; is that it?-- Yes, that's right.

What's that about?-- I think that's the day we had a safety meeting and the people on the shift all went over and had a safety meeting in the training room.

Was that a regular thing?-- Yes, it was a regular occurrence, around about a monthly occurrence at Moura.

Would the safety meetings be arranged so that they caught all shifts?-- Yes, they had them at different times to catch all shifts.

This was a structured thing, not just haphazard?-- No, it was structured and it was planned.

Was Mr Barraclough in charge of that program?-- Well, yes, he co-ordinated the program.

I want you to look at an entry down under the second panel which was to do with 512, then the next had a designation which is scratched out, but you will see two names written there, the second of which is Guest, under "Personnel", and the entry for those two persons is "grout holes from -----?-- "5 South to 512".

"After panel preparation 5 South "?-- Yeah, that's right. I had them down to do that job.

Just explain to me which holes from 5 South to 512?-- That would have been the Proram holes which he drilled between the 5 South top return and 512.

If you walk over to the map, can you confirm for me that there are about half a dozen or eight Proram holes running from the return in 5 South parallel to cross-cuts and to 512?-- Yep, that's right.

The job for those people at least on that occasion was to grout those holes up?-- Yes, that's the job I had designed for them to do as the report says. They actually never got to do it.

"No grouting done", and there is a reason for that?-- Yes, they were mining off that return in 5 South therefore there was a lot of dust.

But that grouting was done eventually, wasn't it?-- Yes, it was.

If you look at the map on the extreme left on the board there, not only are the Proram holes shown but the other ordinary

drainage holes, if you go over and have a look at it you will see some in a fan shape originating at about the intersection of 510 and 5 South and heading across the most outbye parts of 512. Once you have seen those you might sit down and tell me, are you aware whether they were grouted up or sealed off in any way and you may have had gate valves put in them?-- The Proram holes aren't shown in that just, for your information, but, yes, I remember when we first started - when we were extracting 511 we grouted those holes. I remember grouting the inbye ends. The outbye ends, I'm just not sure what happened, whether they actually grouted them or they left the gate valves on. I know I remember on numerous occasions walking past there and seeing gate valves still on the holes there and thinking I'd have to retrieve those. So I do remember seeing gate valves still on the outbye end of those holes.

You mean retrieving them from an equipment point of view?-- That's right.

If they were retrieved it would be on the basis it was grouted?-- Yes, I'm just not sure whether it was grouted or not.

If you turn the page to 17 June, this is the one that you've been taken to before which is now Exhibit 66 and then I want you to turn the page again. The next shift report is 20 June. This is the Monday day shift when you were next in after the 17 June inspection. Now, do I understand your evidence correctly to be that you took the occasion after 17 June when you were back on shift to walk the goaf or at least do an inspection, waste inspection, in 512?-- Yes, I went back in there after the 17th, yes.

Would you have done so on this occasion?-- I can't recall doing it on this day. I recall talking to Eddie about the changes, but, no, I don't recall whether I did on this day. I know I was there and checked out the 7 cross-cut area and went in to 7 to 8 cross-cut and had a look around there, but I don't think I went into the goaf. I'm not sure.

So you certainly went into the panel and as far as the working face at around 7 cross-cut?-- Yes, yes, I would have.

There is no designation on here that says you did so. That's what I'm interested in?-- Like I said, that's a normal thing for me to do. What an undermanager does is check out the mining area. I don't write that in.

Can you look at an entry down towards the bottom of that report, the third last section? There are two names in the middle, Bishop and Sonter, and bracketed together, "Grouting holes in 5 South/512"?-- Yep.

Are they the Proram holes?-- Yes.

It seems from that entry that they in fact did that job?-- Yes, yes.

If you look down to the next section, please, on the same page you will see an entry there "Risk assessment for 5 South gas holes", what's that about?-- Neil Tuffs and John Potter, they were on the big - the methane drill, and I believe that day they came up to the surface and spent the day in the end office with - I don't remember who, it probably would have been Phil Draheim and Jacques, but they were carrying out an assessment of how we were going to mine through the 5 South gas holes and what possible risk there might be with that.

Was the performance of a risk analysis or a hazard analysis a frequent feature at No 2?-- It was becoming so. We had sort of just started doing these sort of things in the last 12 months, I suppose. It was becoming a formalised method of dealing with possible hazards and risks.

Can you turn the page, please, to 21 June, day shift on Tuesday. Again the third last section of that has Sonter and Bishop grouting up holes in 5 South to 512, "Continuation of the Proram holes"?-- Yep.

I think likewise if you turn the page, on 22 June you will see the same thing. Can you recall on 21 June or 22 June, that is to say Tuesday or Wednesday on the day shift, going down into 512 for the purpose of a waste inspection, that is to say beyond the face?-- No, I can't recall if I did on those days, no.

There is no entry that tells us though, is there?-- No.

I think you say that's not the sort of thing that you would record because that's a routine thing?-- An inspection of the working face is a routine thing of where the miner is and where the men are working. Going into the goaf sometimes I record it, sometimes I didn't. I suppose I wasn't very consistent with my reports.

Can you just turn over then? The next one is 23 June, then 24 June. Can you tell us any more, having now read the reports for those or having seen the reports for those, on those occasions you went down beyond the working face?-- On the 24th, on the Friday, when we put up that bag stopping across number 4, I then went down and walked down that No 2 road again down to 8 or 9 cross-cut to check the ventilation and make sure everything was okay and it was.

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So at that point -----?-- But I didn't go right into the goaf.

But at that point when you get down to 8 or 9 you are certainly in the goaf?-- Yes.

But not down in the bowels of the goaf, as it were?-- No, that's right.

On that occasion, that is to say the 24th, was there anything you noticed in the goaf so far as you went that day; that is to say, in No 2 roadway down as far as 9 cross-cut, either haze, sweating, smells, excessive heat or anything?-- No, nothing at all. It was quite okay.

In these few pages that I have now taken you, this is Monday through to Thursday in the week following 17 June, there is no notation here of you having gone in, until this point at least, or no memory of it, to look for this - to try and test if the smell was still there, the one that you got on the Friday?-- Yeah. Like I said, on the Monday I spoke to Eddie at that point where I got the smell and walked in there from 7 to 8 and checked it out and got no - everything was okay, and on this day we went back in and no repeat.

And no repeat in the return either?-- Things were quite all right. I don't recall going into the return at all. I don't think I did, but I watched the Unor readings and they certainly didn't indicate anything.

In your mind at that time you certainly wouldn't have had the view that there was a heating going on?-- No. At that time on the 24th here I don't think - no, I didn't think we had a heating. I thought originally in the back of my mind on the 17th when I had that slight, slight smell, I thought something might be happening, but after the ventilation changes and right up to the 24th I didn't think there was a heating there, no.

Here we are 15 or 18 shifts later and there has been no repeat of the smell. Is that something that played on your mind? That is to say, you drew comfort from the fact that the smell was merely transient?-- Yes, that's right. I thought the situation was under control, I thought the ventilation in the goaf was okay, and I thought that if there was or had have been any problem there, it may be the start of a heating or something, the very initial stages, well then I thought it was gone and under control.

And in your conversations with other management personnel, and not to mention deputies as well, you would certainly have conveyed that as your view?-- Yes.

Now, the next one is 27 June which is the following Monday again and very little noted on that report. Was that an RDO, production RDO?-- No, maintenance people were away that day, so I only just had bare crews, yeah, just so pretty well straight out production.

XXN: MR MORRISON

WIT: McCAMLEY M A

All right. The following day is 28 June, the last occasion upon which you were there, as you note for the last time, Tuesday 28 June?-- Yes.

Now, on 27 and 28 June you went down into the goaf to inspect it, I think, the last two times before you left the mine?-- Yes. Particularly on the 28th I walked right in around the big fall that was on top of the miner.

I just want you to take this marker now, please. For this record, this is an inspection on the 28th in orange. Mr McCamley, can you take the orange marker pen and I want you to draw on for me, again reading out cross-cuts and roadways and in a continuous line, your inspection route on the 28th?-- Well, I firstly went down to the miner straight away, spent some time there with people assessing the situation around the miner. At a later time when people were doing other things I then made an inspection. What I did is I went from the continuous miner which was, from my recollection, at 7 cross-cut and inbye of 7 cross-cut No 5 road.

Just hang on a second. I will give you a document that might assist you to remember where it was precisely. You will see, I think, from that document that the mining on that day was in 5 cross-cut between 5 and 6 inbye the large compartment pillar. I think that's about the position where the miner got pinned?-- Yes.

Does that accord with your recollection?-- Yeah. I knew it was in that area. I was a row of pillars out.

You can hand the document back to me so you have got a clear run of the map. The position of the miner was 5 cross-cut between 5 and 6?-- Yep.

So where did you go?-- Okay, I went back outbye along 5 cross-cut towards No 4 - well, No 4 road at that point, and then I walked up No 4 road to 4 cross-cut, then I walked in 4 cross-cut to the No 5 road, the return, and then I walked down the return to 5 cross-cut to the lip of the fall which had come around that corner.

Were you taking readings?-- No, no. I then inspected the lip of that fall and the extent of the fall down the return. I then retreated back along the same route back to the intersection of No 5 cross-cut and No 5 road between like 5 and 6 cross-cut. I then went down that road to No 6 cross-cut and then along the back of that pillar, and I am not sure how far I got in there. I think that was - the fall had come across there and it was still working in some areas, so I think I stopped about halfway in 6 cross-cut between No 5 and 6 heading, had a look at the conditions in there and the extent of the fall over the back area, and then I went back to 6 cross-cut No 5 road, I went inbye down to 7 cross-cut and just had a look at that intersection and came straight back up to that same - straight back up to the miner.

Now, on that inspection, apart from the fact that there had been a fall and the roof was working, did you notice anything

unusual about that area?-- No. The ventilation was pretty good down there. It was cooler over that side of the panel. There was no problems there, just except the fall, it was still working in some areas.

All right, okay. Is that the completion of the inspection on the 28th?-- Yes, yep.

You can hand that map back, I think. Now, apart from those occasions that I have mentioned to you, particularly the 28th which was when you ceased at No 2, were there other occasions when you walked the internal parts of the goaf down around 9, 10 cross-cut No 2?-- You mean previously?

Yes?-- Yes, yes. At least once previous to that, like probably around 10 June, previous to that weekend, yeah.

On that occasion when you had been down there had you noticed anything unusual about the conditions in the goaf?-- Not really.

No haze?-- I noticed it was warm but there was - there was a couple of areas where the ventilation was fairly slow in the top end but generally, no, I didn't notice anything unusual.

No haze?-- No, definitely not.

No sweating, no smell?-- No. It was pretty well much the same as other goafs I had walked.

I was just about to ask you. In fact, you had walked 4 South and 4 South B, 402 and 4 South level, and how did 512's goaf compare in terms of ventilation and warmth to them, much of a muchness?-- Fairly similar, yeah, yeah. In fact, I would say the 403 goaf I thought was warmer.

Now, when you were talking about CO make on Friday, I think I understood you correctly to say - tell me if I am wrong about this - that you had an expectation of the CO make for 512 would be higher than all the panels because of the method of mining and the depth?-- Well, yeah, that's true. I did really expect that CO make to be higher in Moura as a whole. I think rather than 512 on its own, I think I said.

Yes, Moura as a whole?-- Yes, Moura as a whole I thought it was, yes. Because of the extraction method and the type of machines, etc, and all the other variables, that you could expect a higher CO make, yes.

You mention, and others have too, about the fact that the ramping resulted in some loose coal being left?-- Yes.

Now, as you said, this was not the first time ramping had been used at Moura No 2?-- No.

And the particular form of ramping, I think you said this morning, was the product of a safety analysis?-- Or initiative, a safety initiative, yes.

Generated by who?-- I think by Albert and George. It came down from them, I think. I think they might have consulted with other people, but that was my impression.

As you understood it, the particular form of ramping was designed to enhance the safety of the men?-- That's correct.

Particularly the continuous miner driver?-- Yes.

And the shuttle car driver?-- The shuttle car drivers, yes, the cable boy.

Now, that safety conscious aspect of that decision, is that something reflected in the management's approach generally leading up to this incident?-- Yes, I think so. They were very proactive in safety areas. I remember my own opinions were that this panel would not be as productive as other panels because of the further steps they had taken to make it safer and that we couldn't - we wouldn't expect as good a productivity as we had in previous panels, but it was because of these safety initiatives and the short ramps, etc.

So, in a sense, productivity has been given a lower profile than safety of the men?-- Yes, that's right. That was in my eyes, but I was proved wrong in this case. The productivity of the panel was quite good, but in my eyes, yes, that's what I initially thought.

Now, in your experience at No 2 there had been no difficulty or impediment to men - that is to say, miners or deputies - speaking up to management about any issue they wanted to raise?-- Definitely not. It was welcomed at any meetings or at any time. There was always time made to speak to deputies about any concerns.

And people did in fact do that?-- Yes, they did, on regular occasions deputies would speak about one thing or another that they didn't like in the panel or something that they thought was unsafe practice or whatever.

And there were safety meetings. We have heard reference to that in your report. Was there also a network of safety committees or committees that dealt with safety issues?-- Yes, there was some committees that dealt with safety issues, yeah.

And on those committees miners were represented in their own right as well as deputies and management?-- Yeah, I think so, yeah, yeah.

And in your experience they had regular meetings to deal with safety matters?-- Yeah, I think so, yeah. They had a sort of a consultative committee.

There was a mine consultative committee, then there were various sub-committees that were part of that?-- Yeah, some designed at looking at production improvements, some designed at safety improvements, yeah.

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Would Your Worship excuse me a moment?

You were asked some questions, I think, this morning by Mr Martin who asked you about rib spall and illustrated that with a particular piece of artwork on the board. Rip spall is a very common thing, isn't it?-- Yes, it is.

It would be in every panel?-- Yeah, that's right, yeah.

Nothing at all unusual about it?-- No, nothing at all unusual.

Beyond the fact that it has an obvious safety question if you are standing next to it?-- That's right, but that was known by everybody at Moura. It was a general thing.

And there were mechanical means of trying to cope with the rib stability?-- That's right. Secondary support was put into the ribs and the roof by the use of six foot roof bolts, steel roof bolts.

And there was meshing?-- In some areas there was meshing and the use of straps.

You were asked some questions on Friday about whether - had you been told or seen the repeat of a smell. Mr MacSporran put these questions to you. What you would have done, whether you would have taken the probeye down. Do you recall that?-- Yes, I think so, yeah.

If you got what you say happened, that is to say, a very, very slight trace on one day and then no repeat over the next 15 or 18 shifts, am I right in thinking that you wouldn't be so concerned about taking probeyes down doing anything?-- No, that's right, yeah. If there was no repeat there, I certainly wouldn't have worried about it.

So, the transient nature of a smell is certainly something that is a serious fact to be taken into account. If you get a repeat of it that's one thing, but if it is not repeated that's quite a different thing?-- Yes, yep.

Now, you were also asked whether it was possible - I think Mr Martin might have asked you this - whether it was possible to take a sample direct from the Unor line, breaking the line and taking a sample direct from there to the chromatograph via a bag sample?-- Yes.

Have you ever seen that done?-- No, I can't recall, no.

And there would be more to it than just breaking the line, wouldn't there, because you would be interrupting the potential for the Unor system itself to monitor a mine?-- Yes, you would have to reset the Unor system not to sample that line or just sample one line while you are doing it.

In fact, you would have to tell the sophisticated analysing machine, the Unor system, to not look at what it should be looking at while you took a bag sample out?-- That's right, you would have to reprogramme it.

Taking a bag sample is not just a simple thing like filling a bladder out a wine cask, you would have to fill it and purge it, fill it and purge it, fill it and purge it several times before you get an appropriate bag sample?-- Yes, I would say it would be wise to do it at least three times.

All of that takes time?-- Yeah.

Then you have got to reconnect the line anyway?-- Yeah.

Now, at No 2 Mine not only were there the seals as constructed in 4 South, that is to say, a full Tecrete seal constructed by pumping, there were also Tecrete panels available for use, weren't there, mesh panels with Tecrete sprayed on them that could be used much faster than a full Tecrete seal or you might call them Tecrete sheets, I am sorry?-- Yeah, I am sort of aware of the Tecrete sheets. They were sort of a steel mesh - small mesh we used for stoppings.

Pre-sprayed with Tecrete and available to be set up or, at least, to be available to be set up and then quickly sprayed with Tecrete?-- Like, the only ones, yeah, I knew of, they were just a fine steel mesh that were available to be put up, but they didn't actually have any spray on them, you sprayed them once you put them up.

I didn't mean to confuse you?-- Yeah.

The Tecrete sheets were there, you could put them up, you could quickly spray them with Tecrete and that would form a seal of a sort; that is to say, it would exclude ventilation?-- That's right.

Even though you wouldn't class it as a final seal?-- That's true.

Certainly putting up Tecrete sheets and spraying them with that sort of grout could be done much, much faster than putting up the final seals?-- Yes, that's for sure.

Well within that three hour time period you were being asked about?-- Yep.

Now, just two more things. When you were down on 17 June you were with Robertson and Edelman for a significant portion of the time, weren't you?-- Yes.

There was no discussion between the three of you, was there, about the smell that you referred to; that is the fact of it?-- I think at one stage - I just don't recall exactly, but I think at one stage we were standing there and when we first got to 7 cross-cut and they sort of smelt the same thing.

When you first got there?-- Yeah, first got through the bag there to 7 cross-cut intersection, yeah.

Are you saying there was a conversation about it, are you?-- Well, I don't remember any details of a conversation or whatever, but I vaguely remember that they - yeah, they sort of smelt the same thing I did and sort of quoted about the - sort of a tarry/shithouse smell, yeah.

Which of them said that? Both of them?-- I think it was Greg, yeah.

I see. All right?-- But, like I said. I don't have a good recollection of that. I am just not sure.

It is the sort of thing you would remember, surely, from what -----?-- Yeah. Like I said, the details I don't remember.

This is only a short while before the conversation with Mr Schaus and Mr Mason?-- Yep.

No real memory of that conversation, that's the one you just referred to at 7 cross-cut No 2?-- Yeah, not the details.

No. All right. I understand. Could the witness see Exhibit 41, please? Now, you were asked some questions by Mr Martin about this and deputies report 4000 is the thing I am asking you to look at, described as Friday night shift; do you see that?-- Yeah.

Now, when exactly is the Friday night shift?-- Friday night shift starts Thursday night.

Thursday night?-- Yeah.

This precedes the occasion -----?-- Yes.

That you went down, it doesn't post-date it?-- No.

You can hand that back. Yes, I have nothing further, Your

Worship.

CROSS-EXAMINATION:

MR HARRISON: You were referred earlier to some reference in your shift undermanager's report of 20 June, in particular to an entry under the drilling section, risk assessment to 5 South gas holes. Can you recall that?-- Yes.

And you went on to tell us that that particular day Neil Tuffs and Mr Potter had been on the surface, you think, with Jacques Abrahamse and with Phil Draheim doing this risk assessment?-- Yes. There might have been George there too.

Do you know off-hand from your experience whether that results in documentation being produced?-- I expect it would have, yeah.

Did you ever see any?-- No.

Were you familiar with the layout for the gas holes that had been pre-drilled in 5 South?-- Yes.

Was it your understanding that they had, in fact, been drilled in such a way that they were parallel with the headings and would be intersected from time to time in the course of the cut-throughs being done?-- Yes, that's right.

Now, from your own experience can intersecting pre-drilled holes or gas holes in those circumstances create problems in terms of any sudden out-pouring of methane?-- It is a possibility, yes, yes.

If I can just turn to something else. You have been questioned both on Friday and again today about the practices you adopted in terms of reading previous shift undermanager reports and previous deputies reports. Now, I don't intend to rehash what you have said, but I would merely ask you this: were there any requirements at all laid down in terms of what reports you had to read, both in terms of the shift undermanagers reports and in terms of the deputies reports?-- No, I don't know of any sort of written requirements that we were - had to fulfil in those respects, no.

Very much a case of - certainly in your case is just one of the practices you developed?-- Yes, and it was a standard practice at the mine and everybody did it, yeah.

Now, particularly in situations when you were working the regular shift such as the day shift and you would be away for the weekend, in those circumstances was it ever your practice to go back as far, say with the deputies reports, to the afternoon shift on the Friday?-- No, no, I generally wouldn't go back that far. I would generally only probably look at the deputies report from the night shift, the shift beforehand,

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and I would look at the undermanager's report from the weekend, but, no, I wouldn't go back any further.

To go back that far would it be the case that you would need to rely on someone to, perhaps, bring something to your attention?-- Yes, that's right.

In terms of what you should look at?-- Yeah, yeah.

Now, if I can take you to the time when you left Moura No 2? Was it the case that as of when you left, having regard to your own associations, having regard to what people had told you, that any problem you had perceived on 17 June had resolved itself?-- Yes, that's right. I was under the impression that that problem had been resolved and things were okay there.

I take it you had no ongoing concerns for safety, for the safety of the men in the mine?-- No, I did not.

MR HARRISON: I have nothing further.

MR MORRISON: Just before Mr Clair stands up, having got Mr McCamley to look at that document I meant to tender it and forgot to, that's the underground shift reports of Mr McCamley. I do that now.

WARDEN: Thank you. I will make that Exhibit 74.

ADMITTED AND MARKED "EXHIBIT 74"

RE-EXAMINATION:

MR CLAIR: Mr McCamley, do you have a copy of your statement there?-- No, I don't.

Your Worship, I wonder if the witness could be shown his statement.

Just while that's being obtained, Mr McCamley, you were asked some questions about why you hadn't mentioned in your statement to the inspectors about the conversation that you had with Mr Mason and Mr Schaus on the afternoon of the 17th; do you recall that?-- Yes, yep.

I just want to clear up with you the way in which the interview proceeded. Your statement in a sense is not so much a statement but a record of what appears to be an interview that was conducted by the inspectors; is that right?-- Yes, that's right.

So that the first page and a bit proceeds as a statement and then from about a quarter of the way down page 12 there appears to be more of an interview, but involving quite a long answer from you commencing half-way down that page dealing with events on the Friday day shift, 17 June; is that right?-- Yes, that's right.

That continues for the balance of page 2, all of page 3, all of page 4, all of page 5 and then at the top of page 6, and at that stage you have reached that point in your narrative about the 17th where you speak of events at the end of your time in the section, and I'm referring there to the third paragraph on page 6; do you see that?-- Yes.

At that point you say, "After conferring with Reece I believed he recommenced production and I left the section."?-- Yep.

At that stage you don't appear to deal with what occurred after you left the section and went upside again, went to the

surface?-- No, that's right.

The next thing that appears from this is there was a question asked of you, "To your knowledge did this type of problem persist?", that is the problem with the ventilation in 512, and you appear to give an answer to that; do you see that there?-- Yes, yes.

Half-way down page 4?-- Yep.

Page 6. Were you at any time asked to relate what occurred after you left the section on that day?-- No, no. It was just what happened down in the mine.

Now, you did however tell us earlier what did happen when you went up to the surface. Now, you were asked some questions about the circumstances under which you had the conversation with Mr Mason and Mr Schaus and you mentioned at one point that the conversation took place in a closed room. You said you wanted to make sure there were no interruptions?-- Yes, that's right.

Was there any aspect of secrecy to the meeting?-- No, no, not at all. It was only so that - because people used to walk in and out all the time. It was George's policy - he had a fairly open door policy about talking to people, so we closed the door because I wanted to get their attention.

And you wanted to make sure that they were aware of the things that had occurred that day?-- Yes.

In 512. Was there any tone about the meeting which suggested to you that you shouldn't mention this tarry smell in your report?-- No, no.

It's not as though you left the meeting with any thought about leaving the mention of the tarry smell out of your report?-- No, nothing like that at all.

But you didn't mention it in your report?-- No, I didn't.

You've told us previously that you thought you didn't need to because you had passed it on to other people, Mason and Schaus -----?-- Yes.

Deputies, inspectorate. Are you quite sure you did smell that tarry smell on that day?-- Yes.

Slight tarry smell I think you've described it as?-- That's right, yep.

I think you've told us it was a matter of concern to you?-- Initially, yes.

You regarded it as an important matter?-- Yes, yes, I did.

Important enough to make sure you had the conversation with Mr Mason and Mr Schaus in circumstances where you wouldn't be interrupted?-- That's right.

If, as you've told us, you did notice this slight tarry smell in the section, is there any reason why you would not have mentioned it to Mr Mason and Mr Schaus?-- No.

Was it a matter about which you might be embarrassed or concerned in such a way that you should conceal it from them?-- No, I don't think that at all, no.

One further matter, you were asked some questions about the requirements laid down about reading reports?-- -----

Could the witness see Exhibit 30, please, Your Worship?

While that's being obtained, you did say that you didn't on that particular afternoon read the report which was completed by the deputy?-- Yeah, Reece, yeah.

He noted in that report, and I think you looked at this in your evidence-in-chief, that he had had readings of 10 ppm?-- Yep.

Then I think you said the fact of having readings of 10 ppm would be something that would cause you some concern?-- Yes, some concern, yes, yes.

Do you see that document there, Exhibit 30? It's headed up with the name of the company, the date, 10 November 1993, and it's to deputies and undermanagers from George Mason; do you see that?-- Yes.

In relation to deputies reports?-- Yes.

It sets out there "Deputies reports are to be handed to the shift undermanager at the completion of the working shift."?-- Yep.

"These reports are to be signed by the undermanager and by the oncoming undermanager who is also responsible for posting them on the display board."?-- Yep.

Then it goes on to provide for shifts which are not controlled by an undermanager, the weekend shifts. Now, did you become aware of that directive?-- Yeah, now I that see it I remember about this being started up, yeah, the system, yeah.

Was it started up? Was it something new at the time that was being put in place?-- Yes, because generally the deputies used to come out and post their reports and they changed the system to the deputy handing it to the undermanager.

Now, was the system observed then? Was the directive observed as part of the system that was in place?-- Yes, there was a few occasions of people getting used to the system and deputies forgetting and posting them straight out on the board or whatever, but, yes, it was generally being observed.

Were there steps taken to ensure that people followed the directive?-- Well, I don't really know.

You weren't aware of any either as an undermanager responsible for ensuring the systems were followed, or as an undermanager who might have been checked on by others to ensure that systems were being followed? You didn't become aware of any particular steps that were taken to ensure that this directive was being followed?-- No.

For instance, on your shift of 17 June you didn't read Reece Robertson's report?-- Yeah.

Was that unusual?-- I have to admit I was a bit remiss at different times on reading the reports of the deputies on my shift, mainly because I knew exactly what had gone on because I had been on the shift, I'd been down there or whatever, and you get busy or whatever, and sometimes, yeah, you don't actually read those, but I generally used to always read the reports beforehand from the previous shift.

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From the previous shift, yes?-- Before I started work, yeah.

Thank you, Your Worship.

WARDEN: Thank you. I think the panel have a few questions for you, but it might be appropriate to take the lunch adjournment, resume at about 2.15.

THE COURT ADJOURNED AT 12.50 P.M. TILL 2.15 P.M.

THE COURT RESUMED AT 2.19 P.M.

MARK ADRIAN McCAMLEY, CONTINUING:

EXAMINATION:

MR PARKIN: Mr McCamley, on 17 June you said that you had a discussion on smell and ventilation changes with George Mason and Albert Schaus. Do you normally report in writing any ventilation changes that you make on your shift report?-- Not always. It depends on the circumstances. Yeah, sometimes if it was just a small change or whatever in a panel, I don't always record it. Generally if it is a change to a regulator I will record it in the shift report.

So, you didn't think the changes that you made on this occasion were such that you needed to report in writing?-- Yes, I wrote them in my report, most of them - some of the ventilation changes. The sort of pertinent points about it, I put that in my report that day.

That's because it is important that if ventilation changes are made that they are recorded so that people, instead of - not just word of mouth, those changes are noted?-- That's right, yeah. I put it in there so the next undermanager would understand and remember that.

On a few occasions last week we heard some comments regarding recirculation in 512. Are you familiar with those comments or any problems with recirculation?-- Not really. There was - I heard deputies talking about the slow ventilation and even on the development of the panel the deputies complained about the ventilation being a bit slow and being warm in there so there was the odd comment made about it, but nothing to me specifically, that I can recall anyway, about recirculation.

Just a few things regarding the panel itself. Am I right in assuming that from the 510 junction to the bottom end of 512 there is something like a difference of 50 metres in the level, approximately?-- Yeah, I would say that would be about right, yeah. There is a bit of grade in there.

Am I right in assuming that panel then is about 400 metres?-- Yeah, that's about right.

So, the gradient is about 1 in 8; is that right?-- Yeah. It varied. It's flatter at the top and steeper at the bottom, yeah. That's pretty fair.

I guess those conditions are what you might describe as ideal for layering, but on no occasions did you find any layering of CH4?-- Not in the goaf, no, no.

I think you mentioned on Friday - and you can enlighten me - you mentioned a thermal - you made a comment in that regard. Would you like to explain that?-- Well, what I meant by that was that the - because of the lack of ventilation pressure on the top side of the panel and because the air coming down into the goaf was warming up and was a lot warmer it had a buoyancy effect because warm air is lighter than cool air. As it was warming it was flowing across to the top side of the panel and then back up the No 2 road in a thermal effect.

Over the past few days we have heard on numerous occasions about some problems with ventilation in the 512 panel. Reference has been made to, you know, regulators being opened and closed and also stoppings between the intake and return have been adjusted or breached at some stage. I guess the question I have got is, you know, in your opinion is this good ventilation practice?-- Well, it is really a practice that you had to do something and most of the changes made were recorded and talked over with other undermanagers or George or Albert, whatever. It was sort of a necessity to have to try and improve it.

Well, perhaps the next question might be: do you think the panel layout was conducive to good ventilation practice?-- No, I don't. I think it was a poor layout for ventilation.

You made some reference on Friday - and perhaps again you can enlighten me - you mentioned reference about the examination of the waste areas and I think at one stage Mr Robertson did indicate that some of those areas were tiger country. Can you enlighten us as to how you examined those areas and before you do I just refer you to that plan and in some of those cut-throughs, I mean, the maximum width of those areas, would you like to tell us what they are?-- Probably up to a maximum of 18 metres.

18 metres?-- Yeah, spans of 18 metres. That's across the road. Across the intersections it could be greater.

So, in any of the cut-throughs that would be a maximum of an 18 metre span, in any of the goaf areas?-- Generally, yeah, yeah, I think that would be pretty close to it. You know, some areas would be less where they left a bit of coal, whatever, but generally I would say the maximum, what you would probably find in there, would be about 18 metres.

Well, probably you can enlighten us a bit how you went about that task?-- Well, I used to - when I came through the stoppings from No 1 road sometimes I just jumped down the canch into the bottoms. I would have a look around, have a listen, see what was going on and generally just have a look at what the conditions are down there, if there is any fresh spall or whatever and walk across the - through the bottoms and through the extracted areas. Some falls had been there for some time and there was no fresh rock on them. The place was pretty quiet. I just would walk over around the edge of the falls, have a look at the ribs and whatever, walk up the roads. They weren't very big pillars so it wasn't very far through and there was also these big areas of pillars, of

course, every third pillar or so where there was virtually safe areas of roadway and they were fairly secure. I always took my time to stop and have a listen and a look first before I went in any area that was - had been extracted, but I would have been in there fairly regularly so I sort of knew the conditions and what it was like and I generally knew Moura's conditions and from a lot of experience in the goafs and from even worse places than this and it was fairly stable. There wasn't - to me there wasn't a great risk and I thought the advantage of being able to go in and have a look at what was really happening outweighed the probably slight risk of being caught in a spall or a small roof fall.

Okay. Thank you. Could I just refer you to this Exhibit 25? It is the CO make in 512 Panel, from 28/2 through to 5/8. You are familiar with that graph?-- Yes.

And I guess that you left Moura No 2 at the end of July?-- June.

End of June. So, that, as you can see from the graph, is well over 10 litres per minute of CO?-- Yep.

Were you concerned about that at that time?-- Some concern. I expressed to Cocky that once it was up over the 10 that, you know, we would have to keep a pretty close eye on it and see what was happening, but, as I said before, I said to him that 10 or 12 was of no great concern to me because of our extraction system. I honestly believed that 12 or 13 litres for a Moura goaf would be similar to 10 litres for another type of mining system and I was not overly concerned, but it was a time to start taking a bit more interest, yes.

And you will see on 15/7 that that CO make has increased to 14.27 litres per minute. I guess that would have caused you some concern had you been there?-- Yeah, probably would have caused me a bit more concern, mainly because of the trend. Once you are getting up to near the 15, that would have been of concern. The slope of the trend would have been of concern.

One final point, Mr McCamley, and if you can't answer the question it is not a problem, but I will ask you anyway: between the 15th and the 7th - I beg your pardon, the 15th of the 7th and the 5th of the 8th there seems to be a slight dip in the CO make. Would you have any reasons as to why that is the case?-- No, I am really not familiar enough with production or ventilation or whatever to make a statement.

Thank you very much indeed.

EXAMINATION:

MR NEILSON: I think you said that you won the Howard Jones Trophy, did you?-- No, I got narrowly beaten.

XN: PANEL

WIT: McCAMLEY M A

You just got beaten?-- Yes. I just can't remember his name now. He is up at Middlemount, anyway.

So, you weren't beaten by anybody at Moura?-- No.

Can you explain to us what the Howard Jones Trophy is all about?-- Well, in those days, to my knowledge, it was a trophy, and a perpetual trophy, and it was run, I think, by the Mines Department and administered through the Mines Rescue and they used to run an examination, it was about an hour long and it was based on the blue book, the spon com book, and it was mainly just an examination on spontaneous combustion and information about that and, like I said, it was about an hour long and each year the winner would have his name put on that trophy. It was a cup.

Okay. Now, the blue book that you have identified, it is a fairly detailed description of what spontaneous combustion is all about, isn't it?-- Yes, it is more detailed than the red was. It was my understanding that the blue one was specifically produced for management and the red one for deputies, etc, and the miners.

And it would go into all areas concerning spontaneous combustion?-- Well, at the time I thought so, yeah, yeah. It was pretty comprehensive.

So, being runner-up to the champion you would - one could assume that you have a fairly extensive knowledge of spontaneous combustion; would that be right?-- Well, at the time when I was studying for those exams I probably did, yeah. You know, you try and keep up with things, but your memory lapses and some things you forget.

But you would not forget the important details or the important aspects of spontaneous combustion considering that you continued to work in an underground environment, particularly those areas that are of concern, of safety? You wouldn't forget those, would you?-- I don't think so, no, not the major points, yeah.

Yeah?-- No, I don't think I did.

In relation to other members of management at Moura No 2 Mine, how would you rate your knowledge of spontaneous combustion? In other words -----?-- It is very hard to say with regard to Albert. I didn't - well, he wasn't there that long and I didn't sort of have a lot of dealings directly with Albert and talking about things like that, but, yeah, I would say I had a fairly good handle on what spon com was about. It is as good or better than any of the others, yes.

So would it be the case that if you made some observations about spontaneous combustion then other management people would listen to what your concerns were?-- Yes, that's right.

They wouldn't disregard it?-- No, I don't think so, no. In general or most cases they would -----

In terms of knowledge of spontaneous combustion, what was your understanding - or what did you believe the level of knowledge of spontaneous combustion would have been, for example, with the normal workforce, the average miner that went underground?-- Yeah, it was my belief that they realised that the seam was liable to spontaneous combustion.

But what would that have meant to them?-- It meant to them that it was - I think a lot of them had - no, let me say probably half of them had experience there with the 5 North and so - when the machines were sealed in I'm talking about, that 5 North - had some idea then of how spontaneous combustion turns into a heating and gives off gasses et cetera. That's what their understanding would be, and that it can turn into a fire if left without any changes being made to the ventilation or the system down there.

The average miner would have known that?-- I think - like I said, about half of them who were there when 5 North was there, they would have a pretty fair idea of what spon com was about. Some of the newer blokes that had started in the last couple of years may not have had as thorough an understanding of it.

Can you tell me how they would have known of this phenomenon?-- From talking with people involved in the Mines Rescue. There were quite a few members in the Mines Rescue spread across all the shifts at Moura. There was members sort of on every shift and they would talk about it, and different times when panels are sealed deputies would talk about the readings and I think that's how they would generally get information about it and have some understanding about it.

What would their understanding have been about terms such as "carbon monoxide make"?-- They probably wouldn't have understood that.

I put it to you that they probably would not have understood too much about the terms "spontaneous combustion" other than the word "heating" that derives from it. You think about that before you answer it. If you went to a miner and said, "Okay, you tell me what you know about spontaneous combustion?", a miner that hasn't been in Mines Rescue goes down the mine to mine coal, do you think he would know a lot about it?-- He wouldn't know a lot about it, no.

If you said to him, "What's a heating?", then he'd probably know that that's something to be very weary of, wouldn't he?-- I think - my opinion is most of them would know spon com was a heating, they would equate that, they would understand that.

You have a plan in front of you, Mr McCamley, and I want to

ask you a few questions to it, but I would like the plan put on the board, if we could, please. I want to take you back to 17 June when you detected the slight tarry smell. That was 17 June?-- Yes, yes, 17th.

You were standing at 7 cut-through, was it?-- Yeah, that's right, intersection 7 cross-cut, No 2 road.

Now it was on that occasion that you experienced the warmer air coming back and layering?-- Yes, yes, that's right.

7 cut-through at that point in time was basically on the edge of the goaf, is that correct or not?-- Yeah, that's right, basically, yeah.

We had this layering effect of warm air coming back at you in the higher section of the roadway and cooler air going inbye?-- That's right.

On the bottom section?-- That's what I found.

How many occasions did you experience panels that were under retraction where goafs were being formed prior to that time, not only in Moura, but in any mine?-- Yeah, lots of times. Lots of times.

Did you ever experience that phenomena on the edge of a goaf before?-- No, never.

Did it strike you at that time then that it was something other than just a normal goaf situation?-- Yes.

The slight tarry smell that you smelled, and I think you've established that it was very slight, and I think we have established that you believed that it could have been the start or the signs of an early heating?-- Yes, that's right.

Now, given your understanding and your teachings and your learnings of spontaneous combustion, can I put it to you that to get a tarry smell you must have a heating at some stage, be it early stages or other?-- Yes.

In other words, you cannot get a tarry smell without that circumstance being there?-- Yes, that's right. That's why I thought it being so slight a smell it was the very early stages of what could have been a heating, that's right.

We have established now that it's - I'm merely trying to get the factual situation in your mind. Can I put it to you that really there was no doubt in your mind that there was a heating effect, be it small or large, I don't want to get into that, but it had to be related to a heating to have a tarry smell?-- Yes, there was some heating or spon com down there to cause that smell.

Did you at that time pay any regard to the layering effect of the warm and cool atmosphere and relate that to a heating situation? Did it ring a bell that, you know, this may be related?-- The air was pretty well the same temperature and -

the warm air was pretty well the same temperature as it had been for some time. It was certainly no hotter and none of the areas that I actually walked in or walked around - I was looking for it, and there was no areas where it was particularly warmer or anything that I could detect.

The only thing that was different is that under normal goaf circumstances you would not get this layering effect?-- No. You wouldn't get that sort of air movement against the normal current.

Subsequent to that you then decided to change the ventilation circuit?-- Yes.

When you made the decision in your mind to do that did you pay any regard to what effect that could have if there was a heating situation?-- Yes, my intention was to get the ventilation moving in the correct manner again, and the thought was that if there was some area undergoing increased oxidation, then by getting a cooler stream of air over it, removing the heat from the area if there was a small area starting to build up - if I could remove the heat then I could make the system dormant again and stabilise it. I believed it was such a slight smell and all the other signs didn't point to a problem, like, you know, the readings and everything like that didn't point to an accelerated heating, they didn't give me any indication, so I thought if we could get some air down there - it was the very, very early stages of a possibility and therefore I thought by cooling it we could stop it and make it stable.

I know you've been asked a lot of questions about exactly what you did in terms of redirecting ventilation, but I'm going to ask you to actually show us on that plan so that we have got some other record that we can actually visibly see. I would ask you to take a red pen if you would, Mr McCamley, or as close as you can get to red?-- Right.

Can you show us from the actual point of where you would describe the return airway to start, can you just show us how that return air was coming from and out of the panel, please?-- The ventilation system was -----

I'm talking about on 17 June?-- Yep. The ventilation system was for the air to flow through, past the mining, flow through the goaf, around through here, across these stoppings and up the main No 1 return. These stoppings were all left with slight holes in them so that the air that came through the goaf would actually come through and a little bit would go through each one of these which would maintain some movement here rather than having all the ventilation shortcircuit across to here, maybe leaving this area dead. That's why these holes were left in here to keep a little bit of ventilation going right through the panel. Naturally most of the ventilation would go past wherever you were mining and then across to this area.

That's my next question. I'm going to ask you that. On the top return there can you just take that right through, that

line? Can you now get a blue pen, please, and can you indicate to us just roughly and not in complete detail, but how the intake air was behaving at that point in time. Take each roadway as it comes?-- At the time -----

I want you to bear in mind this strange phenomena that you found at 7 cross-cut?-- There was intake air coming around here going to the miner, coming down here and going to the miner, coming down this road. I can't remember at this stage whether it was around there or around here. We will say that for argument sake. That generally would have been the intake airflow with a split here too, of course.

From there can you take it through to where you believed it would link up with the return air in each roadway?-- Okay. Well, this stopping was a very loose stopping. This one was a bit loose as well and that was supposed to let enough air sneak through here and here, and most of the air was going past the newest miner which - I'm not sure whether it was here or here, I can't remember. For example, if the miner was there the air would come through, most of the air would go over the miner and then down to the return possibly splitting like that and ending up going down there. You could probably expect a split to go around there like that. So if the miner was there, that's the sort of extent of the ventilation - you would expect it to go across there. Supposed to have slight amounts of air coming down here to keep going through this goaf.

Can you draw them in sort of a dotted fashion where you think there would be slight amounts, broken lines, and meeting the return where? Going through the holes in the -----?-- Supposedly these holes and these stoppings would allow air to travel down each one of the roads, possibly some air here would go down this way. That was the system as we saw it. We'd try and get ventilation to keep coming down with holes there.

Now, that was the situation on 17 June?-- Well, that's what was supposed to be happening.

As you would see it?-- But in effect that was supposed to be happening - but in effect the situation as at 17 June was there was insufficient pressure here, and draw on these roads to cause that to happen. So in fact most of the air was going over the continuous miner. There was a small amount of fresh air going in this way, very, very small amount and these areas here - this would actually - had slowed down and there was not sufficient ventilation in this area here and that's why the warmer effect, the warmer air was starting to come up against that ventilation and then be taken in with the fresh air.

Now, given that there was a possibility at that time that there may have been a small heating - when we talk about a small heating we agree, don't we, that a heating can start in an area of a square metre or something?-- That's right.

It doesn't have to be a complete roadway or a pillar area?-- That's right.

It can be a very small piece of coal or a loose pile of dust or whatever?-- The one at Leichhardt was only that big.

I'm trying to ask you what you believed at the time. I appreciate we might be talking in hindsight, because it's hindsight that we are all really here for, and I know that we can get confused, but give it your best shot. At that time -----?-- At the time -----

I haven't asked you the question yet. At that time, given that there was some thought in your mind that there could be a problem with a heating in its initial stages, where would you have expected that to occur given those circumstances? If somebody had said to you, "Okay, yes, there is a heating.", where do you think it would be, can you tell me that? I am only asking you in your mind?-- The thing is, you know, I walked all around there and couldn't find anything -----

We have agreed now that there was a possible heating there?-- Yep.

You have said that?-- Yeah.

I'm asking you on that basis, even though you may not have been able to find it, where would you think it may have occurred?-- Somewhere in this area would be my best guess. If it had accelerated and I had to go in and have a look, that's where I would go, that area there.

Can you tell me why you've just indicated that?-- Because I believe that that was the area where the ventilation wasn't sufficient and had probably for some time not been sufficient to have a flow through there and it had been too slow, and if any area was going to start heating up it would be the right conditions in that area without sufficient ventilation. I think the other areas would have had sufficient ventilation.

Now, can I ask you to get a green pen now, please, and can I ask you to show us first of all what you did to the ventilation stoppings themselves to overcome this problem that you've seen? In other words, if you put a hole in a stopping, can you indicate a flow that may have occurred due to that?-- Okay, well, starting out by I blocked this off so that any fresh air, intake air available to the panel was not shortcircuiting and going back out through here. So we were actually utilising any intake air we had to go through the goaf. So that's one thing. I stopped that.

The next thing is where the continuous miner was, most of the

flow was going over the continuous miner, so I restricted that, causing a higher restriction there and, therefore, forcing the air to go in another direction. Down here, for example, I think it was 10, opened up a stopping there causing a flow to come through there, and similarly, I believe, here, causing a flow to come through there, and open this one here substantially more causing a greater flow to come through there. This is all designed to get what was left - what air I had made available from that restriction to come down that road.

So if we can go back to the - where you cut off your blue lines, okay? Now, using your green pen, can you indicate what you have just said there, where that air would then go?-- To a lesser extent down here because Cocky opened this one up too. I didn't actually go and have a look there but I asked him to get that happening.

What about the 4th and 5th roadway from 7 cut-through in? What effect would what you did have on that?-- That would reduce the amount of ventilation in there and slow it down, yes, but I - it was more than adequate ventilation in there. I believe that we had certainly had plenty of air to play with there and reduction in there wasn't substantial or enough to cause a real problem. The ventilation on that side was quite good.

Okay. Now, you weren't there when the sealing took place, were you?-- No, I wasn't.

You weren't there?-- I wasn't there. I didn't - I wasn't there and I didn't communicate with them at that stage. It was a pretty busy time.

I want to ask you some questions now about the sealing process, but I am drawing on your knowledge of spontaneous combustion and all of the associated features rather than the fact that you were there sealing that. You know where the area was sealed?-- Yeah, the - I think the prep seals were put up across here.

They were there when you were at the mine, weren't they?-- That's right. We were actually - they were built, yeah.

When you seal an area such as the 512 Panel, what happens with the atmosphere in behind the seals? You can sit down, Mr McCamley?-- I have been sitting down all day. Going on past experience of Moura goafs, when we sealed the methane level would rise fairly quickly, the CO level was fairly steady. It would rise - depending on the panels. Like, 2 North-east, I don't think it even got to 50 and then dropped back. 402, I think it got up a little higher, 150, I think. The oxygen level would slowly decrease on a - on virtually a straight line. It would take, oh, depending on the panel and size too, but a few days for the oxygen to get down to around about 16 or so, and then the methane would build up fairly high and the goaf would become inert, and then they would stabilise.

What happens before it becomes inert? Does it go through a stage where you could have an area for concern because of the actual mixture?-- Yes. In some of our goafs the goaf - the oxygen would not drop fast enough and the methane would build up and you would actually get a period where the goaf would go through an explosive range.

Explosive range?-- That's right. In some of them the oxygen dropped fast enough and it would never make it into it too much, in the material, but some of them, yes, it would go through.

If you had a heating, or a small heating, in an area that was sealed, what would it do? Would it feed off the oxygen for a period of time?-- Yes, because of the type of extraction in Moura we had fairly large amounts of oxygen once we sealed in the goaf and, yes, if you had a heating, yes, it could feed off and accelerate using that oxygen.

And as it did that, the temperature would rise behind the seals in the area?-- Yes, it would, temperature - a heating needs temperature to accelerate.

And then creates temperature as well?-- That's right. It's sort of a catch-22. It builds itself up.

Are you aware of the term "convection"?-- Yes.

And convection currents?-- Yes.

Would they be produced in circumstances of a heating?-- Yes, it's possible, yes.

Well, convection means what happens, in effect, when you have warm currents meeting cooler currents?-- That's right.

If you had a heating, then obviously you would have some warmer air than in other parts, whether it be warm or cold or whatever, so there would be a convection effect?-- Yeah, there would be, yeah.

Can you go to that plan again, please, and take another coloured biro? I don't know what you have got left there. I don't know if we have got enough colours in the spectrum. Given that there may be possibly a heating in the area that you have described where you would mostly expect it, can you just show us what you would expect the atmosphere to do? In other words, if there was convection occurring, how it would start, approximately where the heating would be and how the convection effect would actually take place?-- Are you assuming that the panel is sealed?

Yes, it's sealed, yes, sealed?-- Okay. Given, for instance, that we say the site of the possible heating is here, once the panel is sealed and that heating started to grow, it would then make a convection current, and due to the rise of the workings I believe it would set up a ventilation heating up this way and that way and possibly drawing air that way and

that way towards it.

Okay, but then as it got a little bye further out it would once again be cooler air?-- These air currents here, this would go to the roof because they would be lighter, quite warmer, they would be lighter, it would travel to the roof and travel up the panel, yep. You could in fact have the same thing happening, a warm current on the roof and a cooler current underneath. Well, you wouldn't have a current -----

It wouldn't just go straight out, would it? It would go around -----?-- It would very slowly build up.

Wouldn't it go around the pillars?-- No, I don't think so. I think, being warm, it would go to the roof and migrate straight up. It would draw cool air from other areas.

Yes, but as it draws the cooler air down, that air has to be replaced?-- That's right, so you would start a bit of a system like this. It would probably come a fair way up before it would then start to be drawn back, and as it cooled it would then get drawn back, yes.

Okay. Now, given that we have agreed that the heating itself, if it were to be there, could only be a very small area?-- Possibly a small area, yes. It could be a big one but -----

Sure, sure, but you could have a very small area that's heated and then it could actually burst into flames?-- Yep.

And still be creating this effect?-- That's right.

Are you aware where the monitoring point was?-- You mean after sealing?

After sealing?-- Well, it says it was here. I take that as being right.

I can't see that far. What cut-through is it?-- That's 1 cut-through about 20 metres inbye the seal in the belt road.

Thank you?-- At the centre of the intersection.

Yes, that's correct, yes. Given that we had all of these circumstances, before that monitoring point could actually pick up any reading that would be directly representative of what could be taking place in the bottom of the panel could be quite some time, couldn't it?-- Yeah, yeah.

In other words, we could have -----?-- It could be a couple of days.

In other words, we could have a bad situation in the area you have indicated where a heating could possibly be well before the monitoring point would actually tell us that we did have that situation?-- Yes, that's right.

That would be your understanding?-- Yes, yeah. I can understand how that could happen, yeah.

What have you been taught about the considerations of the safety of men after a panel has been sealed in a mine? You can sit down now, Mr McCamley?-- Like I said, probably - as far as being taught, it was more like discussing with Phil Reed when I came back after the 5 North sealing about why he made his decisions and what facts he used to make those decisions, and so getting a bit of a feel for the situation there and what he thought was going on so I would get sort of a similar idea, because at the time he was the manager and when he was away I was the relief manager, so I wanted to make sure I had some commonality between what he would see as how the mine should be run so I would do the same. We talked at some length about it and he sort of explained how he thought about the situation, and I got a pretty good handle on what he thought and how he thought things would happen and agreed with him.

After 17 June - and I refer you to that Exhibit 25 again which is the graph indicating the CO make in 512. That graph indicates that after the goaf was flushed there was a drop in the CO make between 11 June and the 16th?-- Well -----

I am only asking you, does that graph indicate that?-- Well, it indicates a drop between the 11th and the 16th. I am just - I'm not sure that you could say that that was because the goaf was flushed. It may be because the goaf wasn't flushed and there wasn't a lot of ventilation in there and the fresh air was short circuiting straight around the panel and, therefore, it wasn't getting the correct readings and that's why it would look to reduce.

You weren't aware that Mr Morieson actually increased the ventilation and flushed the goaf on 11 June? Sorry, I think it was 10 June when he in fact did it - 10th or 11th?-- No, I don't recall that at all.

You would have seen this graph, wouldn't you?-- Oh, yeah, I saw the graph, yeah, and I'm pretty sure that if Cocky had have changed the ventilation, he would have told me.

Well -----?-- I don't recall it, though.

Well, if you saw that sudden decrease after quite obviously an increase in the make of carbon monoxide right back from 27 April, would you not have questioned why that would have occurred?-- Yes. I remember looking at it and trying to fathom out what was happening, but there was so many factors and they would seem to be inconsistent at the time. It was pretty hard to put it down to any one thing.

Okay. On the 17th or thereafter - as a matter of fact, exactly what day did you make those changes to the ventilation that we have been talking about? Was that on the 17th?-- Yes, it was, yes.

So, even after that date the CO make did continue to rise, didn't it?-- Yes.

It continued to rise?-- That's right, yeah.

Well, given that that did happen and all of the concerns that you were confronted with on 17 June, the panel being subsequently sealed, what do you believe should have happened in terms of the safety of the workmen after sealing? What would you have done? What would you have done, Mr McCamley?-- Well, it's hard to say without all the facts, without actually being there, seeing some things, talking to deputies, watching the Unor, seeing the readings, plotting the graphs. Without all the information it's very hard to make a decision on what you would have done, and, like I said, you look at the graph and it's flattened out or whatever. It would be very difficult to make a decision on what you might have done without all the information. That would be a big decision and I wouldn't make it lightly. It's very hard to say.

Yes, it's certainly a big decision, there is no question about that?-- Certainly.

Okay, thank you, Mr McCamley?-----

EXAMINATION:

PROF ROXBOROUGH: Mr McCamley, I may be revisiting certain areas that have already been discussed, especially by my esteemed colleagues on the panel. We are not learned friends, we are esteemed colleagues. Can you remind me of the senior management at the No 2 Mine when you were there? Not necessarily the names but the positions and where you were in that structure?-- Well, at the No 2 Underground it was the superintendent and he was the registered mine manager, and then the next level was the undermanager-in-charge, and on the next level there was a flat line and you had the undermanagers - shift undermanagers that is - the safety and training undermanager, the mechanical engineer and the mine electrician.

A total of how many people?-- Well, when I was there - when I left it was nine.

And you were fairly senior in that structure?-- I suppose so because I was - I used to relieve as the manager, yeah. I was just the same as everybody else on the graph - on the organisational chart, but, yes, I was probably fairly senior.

So, as you say, you were relief manager on occasions which meant that on occasions you were in charge of the mine?-- That's correct.

Were you, as part of the senior management team, involved in the design of 512 panel at all?-- No, I didn't have anything to do with the design of 512. As it was - the designs were coming in there were some - a number of different designs which ACIRL had come up with and George and Albert were looking at and I had occasion to see those and make comments and the final design I had the opportunity to make comments about, yeah.

So, you were asked to comment on the design?-- I don't know whether I was asked to, but I gave it anyway.

Were your comments generally favourable or were there aspects of it that concerned you. I think you have mentioned to Mr Parkin that you weren't happy with the ventilation?-- No, my comments were that I thought it was poor for two reasons - there are two safety reasons. One is the bottom supply road with all of the corners on it. Because the pillars didn't line up it caused a lot of corners for people to drive around and turn corners with machines and that posed a problem. Every time you have got a blind corner in an underground mine you get a potential collision and we had had some in the mine and we had mirrors put up on our main corners to try and stop that and I saw this as just trying to make it a hell of a lot harder to get machinery and supplies and people safely into the mine, and the second concern was the high resistance that it would cause for ventilation. We would have to - it would push up the resistance necessary to cause an adequate flow.

Did you have any concerns over the strata control in the section?-- If anything, no, I didn't have any concerns. If anything I thought it was sort of over designed for that, yeah.

Did you at any time - sorry, you did express concerns, but to whom did you express those concerns?-- Mainly Jacques and Albert and George in the end office area when they were sort of discussing these designs.

This was just a matter of discussion and not a matter of putting anything in writing?-- No, just general discussion and just times I would walk in and see a plan and talk to them about it.

Some questions on the ventilation of 512. I know a number of people have asked you questions on this, but it is a matter of great concern to all of us. I would ask you to agree or disagree with me as the case may be. I am sure you would agree that the panel was a maze of headings and cross-cuts adding up to several kilometres of airways?-- Yep, yeah, that

would be right.

According to my measurements off the mine plan something between 4 and 4 and a half kilometres of airways?-- Yep, it appears to be close to the mark.

These airways were of varying heights?-- Yes.

Between what limits?-- About 2 and a half metres through to 4 metres.

Varying widths?-- Yes.

Between what?-- You are talking about after extraction?

Yes?-- Yes, varying widths from 7 metres to 18.

7 metres to 18 metres. Pillars of different sizes?-- Yes.

Some of which have been partially extracted?-- That's right.

Some stooks?-- Yes, some stooks.

Quite a few dog legs, quite a few cul de sacs - by "cul de sacs" I mean blind entries, ramp entries, that sort -----?-- Yeah, there is some areas like that, yes, yes.

This was the sort of geometry that was changing from day to day as extraction proceeded?-- That's correct.

Changing the flow and distribution of air?-- Yep.

To the waste?-- Yes, that's right.

With such a scenario do you think it is possible to predict the air flow and distribution of air in the goaf with any reasonable degree of accuracy?-- Probably - probably not.

Do you think anyone had or could reasonably expect to have a clear understanding of what was happening in the goaf with the air?-- Just from looking at a plan you wouldn't, no, but if you went down and had a look through and walked through it, that's the only way you can really see what is happening and know what is happening.

We have heard from your description and your answer to Mr Neilson of air predominantly moving on that plan there from the right to the left and then eventually coming across, but there is an awful lot of cut-throughs there that seem to be possibly devoid of ventilation, and there might have been - I don't dispute there might have been some ventilation flow, but it would probably be very small, might have been negligent?-- Yes, in some areas.

We have heard from several witnesses of changes being made from time to time in the ventilation, the directions of stoppings, dismantling of stoppings, regulators being opened and closed, brattices being erected. Do you think these adjustments were made with any confident expectation of

producing a desired result?-- Generally, yes, I think what changes were made were thought about first and you could fairly confidently predict the results of a change.

In your experience, either personally involved or those that were reported to you, did the desired result always occur?-- A couple of times it didn't.

Would it be fair to say that the adjustments were made on a trial and error basis?-- At times deputies did that, yes, yes, and at times, yeah, I would do that, thinking that something would work and trying it.

Of course, these adjustments were usually made to seek to increase the air flow in a particular part of the waste?-- Yes, that's right. It was never a problem on the bottom side.

Which would always be at a penalty of reducing the air flow somewhere else?-- Yes, sometimes. A couple of occasions the regulator was opened which wasn't at the penalty to other areas, but mostly it was changes inside the ventilation split which - where that would happen.

And whereas you might be able to produce the required positive results in terms of where you expected air to increase, do you think you would be able to predict which parts of the panel would suffer from air losses?-- Yes, yeah.

You believe so?-- Knowing where the air was going you would be able to predict it, yeah, that is where it would be reduced.

Would you know or have any idea of the total area of goaf that was exposed in panel 512?-- No.

Would it surprise you if it was somewhere between 4 and 5 hectares?-- Yeah, I wouldn't have thought it was that big.

Well, you have agreed ----?-- 3, 2 ----

You have agreed it was - you have agreed with me it was about 4 and a half kilometres of roadways and if those roadways are on average 10 metres wide, I suggest that is 4 and a half hectares?-- Yes, you are correct.

If you knew the average thickness of loose coal covering the goaf area you would be able to estimate roughly the amount of small loose coal in the goaf?-- Yes, if you could work out an average thickness.

Would you accept a thickness of - average thickness of 1 cm as a conservative estimate?-- That's very conservative, I think.

Would it surprise you if you did the calculation and found that 1 cm of loose coal over the floor would amount to somewhere between 400 and 500 tonnes of small coal in the waste?-- Yes, I can understand that.

So, the probability is given that 1 cm is a conservative

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estimate we have got possibly several thousands of tonnes of very small coal?-- Yes.

In the waste?-- Yeah, yeah, I would agree with that.

But all of this coal is potentially capable of spontaneous ignition?-- Yes.

More so or less so according to where it is in the unknown ventilation system that we are talking about?-- There is a lot of factors, yeah.

Sure?-- That's one of them.

So, if we don't know precisely what is happening to the ventilation or know precisely how much is going up each entry and so on and so forth or where spontaneous combustion may be occurring, do you think it is possible that a heating could have been much more advanced than might have been indicated by routine gas measurements?-- It is possible that it could have been a heating more advanced than you would expect from the gas measurements, but, like I said, from the inspections I couldn't find it.

For example, again up some of those - not cul de sacs, but those cross-cuts that were poorly ventilated?-- Mmm.

Things could have been happening in there that we were unaware of, we wouldn't necessarily detect it from normal gas analysis - routine gas analysis methods?-- Yes, that's right. A couple of falls in there, it is quite possible there could have been something happening.

Okay. To another area of interest to me, Mr McCamley. You have a first class certificate of competency which was granted in 1983?-- Yeah, I think so, yeah.

In terms of practical coal mining you are about as highly qualified technically as it is possible to be?-- It is a matter of opinion.

There is no higher qualification, apart from academic?-- I see, yes.

Apart from academic there is no higher qualifications?-- No, there is not.

You would be properly described as a professional mining engineer?-- I haven't been described as a mining engineer before, but you could say that.

You know that most professions have professional bodies, often described as learned societies?-- Yes.

I think even the lawyers have them?-- That's a surprise.

This is where professionals get together to discuss matters of mutual interest, often of a technical and educational level. Are you aware of any such bodies existing for the mining

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community?-- Yes, I am a member of the Australian Institute of Mining and Metallurgy.

Any others?-- The Mines Rescue Brigade.

Institution of Engineers?-- Yes, yes, and there is a Colliery Managers' Association in New South Wales, I believe.

Yes. So, you are a member of the Australasian Institute of Mining and Metallurgy?-- Yes.

You receive their proceedings?-- Yes, I do.

Fairly regularly?-- Yes, I do.

You read those?-- Yes, I do. I always look and read them on - especially in the coal mining areas.

Are you aware of any other - I believe the AUSIMM tends to have a stronger emphasis towards metalliferous mining than coal mining; would that be right?-- That would be right.

Are you aware of any overseas bodies that are specifically related or more closely related to coal mining operations? The American Society of Mining Engineers, perhaps?-- Yes, I know there is such societies in America and around the world, South Africa, England, yeah, that do specifically deal with coal mining.

They produce - like AUSIMM they produce regular publications on scientific and technical papers over a wide range of areas, including possibly, even particularly, areas of mine safety?-- Yeah, I don't know of it, but I expect they would, yeah.

Do you get or have you had access to any of these publications?-- No.

Do you know of any technical or scientific journals in Australia that relate to coal mining?-- Yes, one, Monograph 12, put out by the Australian Institute of Mining and Metallurgy. It was a very good volume in coal mining in general.

Do you have a copy of that?-- I have bought my own copy, yes.

Any technical or scientific journals that come out on a regular basis?-- Not that I can recall.

Have you not seen the Australian Coal Journal?-- Oh, yeah, the - the Queensland Mining Journal. Yeah, that's one.

But the Australian Coal Journal, this magazine?-- I have seen it, yes.

You have seen it?-- Yes, I have seen it.

Have you had access to that?-- Probably did, yeah. I have seen it in an office somewhere, yeah, yep.

Would you know if there have been any papers on spontaneous combustion in recent years in that journal?-- I have seen it, but I haven't read that journal, no.

Generally speaking there is an obligation on all professional persons to keep themselves up-to-date on current state of knowledge and latest developments relevant to that profession?-- Yep.

Coal mining engineers wouldn't be any different to other professions in this regard?-- No.

What have you done to meet that obligation?-- Like I said, I have remained as an active member in the Australian Institute of Mining and Metallurgy. We have had some meetings which I have attended which has been coal based. We had a symposium on underground mining in Emerald last year. I attended that, helped organise that. I have read, like I said, the proceedings, especially with regard to the coal mining areas from the AUSIMM, pick up articles in journals where I see them or where the opportunity exists. Like I said, I bought that Monograph 12 and read that, try to keep abreast there, and the Mines Rescue, I have remained as an active member under oxygen and competed in Mines Rescue competitions to keep my knowledge abreast and studied Strang and MacKenzie-Wood's book very thoroughly for the examinations - the theory aspects of Mines Rescue competitions, and spoken to general people in the industry.

It may appear that I have been directing my questions to you on a personal basis, but I would suggest that you were, perhaps, not typical of coal mining engineers; would that be a fair statement in your experience?-- I don't really know. It is hard to say. Possibly I have taken a little bit more time to keep abreast of things and to keep my knowledge up to speed. Because I had a first class ticket I felt I had an obligation to, at least, show that I had reasonable competency and, therefore, that's why I tried to keep up as best as possible.

Thank you.

EXAMINATION:

MR ELLICOTT: You indicated in your evidence that Moura No 2 Mine had a Quality Assurance or QA system in place and had, in fact, achieved accreditation?-- Yes.

That system was in conformance with AS3902?-- Yes, that's right.

In your earlier evidence it was also indicated that you had undertaken training that qualified you as an internal auditor for QA purposes?-- That's right.

Can you indicate how many audits you conducted at Moura No 2?-- Because I was at Moura No 2 I didn't audit my area. It is a policy that you don't audit your own area. So, I would audit the wash plant or the surface, the strip area, and I carried out three or four audits in that area which are documented.

What do you understand to be the underlying purpose of putting the QA system in place at the mine?-- The underlying purpose is to get a consistent approach to the way you do things, a documented and a systematic way of carrying on operations.

Would you also say that represented a disciplined approach?-- Yes, that's right.

Can I draw your attention to Exhibit 25 again? I think you have it in front of you?-- Yep.

Can you see what looks like a document identifier in the bottom left-hand corner?-- Yes.

Can you tell me whether that indicates this document is part of the QA system at the mine?-- Yes, that number indicates this is a registered document and it is part of a QA system.

Can you direct your attention to the fact that the document is signed?-- Yep.

Can you see that the document says "Issued by A G Morieson", but is not in fact signed by A G Morieson?-- Yes, I can see that. It looks like Steve Bryon's signature.

Can you also see that the document appears to be undated?-- Yes, that's right.

I'm wondering if you can express a view on that as a QA auditor?-- Yes, if I was auditing this document I would go back to the original registered document and then see whether the date was supposed to be put on there, and I'd have a look at the issue status of the document and I would then have a look at Mr Bryon and see if he was in fact at the time registered in the appropriate areas to do the job that Mr Morieson is shown to have to do.

Can I draw your attention to the segment of this graph of CO make from 16 June 1994 until 15 July 1994?-- Yep.

Would you agree that over that period there was a fairly consistent increase in CO make from 512 Panel?-- Yes, yes, that's fairly consistent.

Would you agree that after 15/7/94 there was an apparent decline and levelling in the CO make?-- Yeah, it appears that way to me too.

Given that production in 512 Panel didn't cease after 15/7/94 would you consider that to be somewhat unusual, that apparent decline and levelling in CO make?-- Yes, it is a bit unusual, but you need to have a look at maybe where the production was and what - there may have been some significant ventilations increases in there. There could have been a lot of other factors, but -----

Might you reasonably expect that some inquiry may have ensued when that trend appeared?-- If they didn't know the reason why it happened then, yeah, you would want to probably look into it a little bit more deeper, yes, but the people may have realised why it was happening. They might have done something there to cause that to happen.

Somebody may have known exactly why that -----?-- Yes, or may have had an idea why it was happening.

Can I ask you to take the ruler that you had before and to lay it along the segment of the graph between 16 June and 15 July in a manner that satisfies you that the ruler is consistent with the trend over that period, that is the period through which the CO make was fairly consistently increasing?-- Yep.

Would you agree that if that trend had continued consistently the CO make would have reached 20 litres per minute?-- Yes, from my observation it would have reached 20 litres per minute on the 5/8.

During your time at Moura No 2 were you aware of any documented system in operation at the mine that ensured the capture of information related to spontaneous combustion, and by that information I mean such thing as smell, such things as the evaluation of CO make, such things as the observation of heat haze?-- There was only the deputies reporting system that was mainly relied on.

Were you aware of the existence of any system for the rigorous evaluation of that information to set criterior?-- No, no.

Were you aware of the existence of any system that gave criterior for decisions based on that information?-- No, no, no set down system.

Were you aware of any system that delineated set action dependent upon those actions?-- No.

Were you aware of any system that set out who should make such decisions?-- No.

Thank you very much.

MR CLAIR: Thank you, Your Worship.

FURTHER RE-EXAMINATION:

MR CLAIR: First of all a practical matter, when you were answering questions from Mr Neilson you were standing up and looking at the plan there and marking things on it. At one stage he asked you assuming that there was a heating, and you will recall that line of questioning, the area in which you would have thought that heating most likely to occur. Now, you did indicate an area up there, unfortunately first of all, from where I was sitting I couldn't see what you were indicating, but more importantly, on the record there won't be any clear description of what you indicated. Could you just describe the area that you indicated?-- Yeah, the area I indicated was an area between 9 cross-cut from No 2 to number 4 road down to 12 cross-cut between No 2 and number 4 road.

You also mentioned in the course of your answers to Mr Neilson, I think it was, that you were not aware of any activity in respect of flushing out the goaf on 11 June; do you remember that?-- No, I can't recall it, no.

It was on 17 June that you discovered this difficulty in the No 2 road with the air outbye, that's the warmer air outbye and the cooler air flowing inbye on the No 2 road?-- That's right, 17th.

Was that the first time that you had been aware of that kind of problem?-- Yes, definitely.

Had you been aware of any air coming back up that No 2 road at

any time prior to that?-- No, no, not at all. In fact I did that inspection on the weekend of about the 12th, I think, on the Sunday, and it seemed all right.

It seemed all right on the 12th?-- Yes.

If you had been aware of any air backing up, as it were, in the No 2 road prior to 17 June would that factor have made you more concerned about what was happening in the goaf than you might otherwise have been?-- Any major disturbance to the proper ventilation system would cause you to - yeah, have concern, do some investigation and see what was happening.

If you had become aware of something like that happening earlier, then the fact that it had happened earlier and that it was happening - or at least what you observed happening on the 17th of June was in fact happening, well, that might have indicated to you more plainly that there was something amiss in the goaf, is that right, the repetition of difficulties with airflow in the No 2 road?-- Yes.

I think you told us, and I'll ask you to look at the shift report for the weekend of 11, 12, 13 June because I think you told us that you were on duty - that was the long weekend - Queen's Birthday weekend was your last weekend duty as you have noted, I should say?-- Got his moneys worth out of me.

Noted on the shift report, 11, 12, 13 June 1994. I have a photocopy of it and I can't claim that I can read every word of it, so you might have to help me. For a start, because it's a shift report that covers three days it doesn't seem to be set out in the same way as the normal one; am I right there?-- Yeah, that is different, yeah.

The first box there on that report seems to relate to Saturday night shift, 11 June 1994. Does that relate to any particular panel?-- No, it relates - inside it says -----

In the comments column, what appears there?-- Where operations are being carried out it says that the miner in the 512 Panel was washed down, and they did some other jobs and that stairs were put at 4 South - at 33 cross-cut in 5 South to go up and down the belt. So, no, it doesn't relate to any particular panel.

I see. That just deals basically with what happened on that shift. The next box then is Saturday day shift?-- Yes.

What appears in the comments column there?-- Just what the men were doing on that shift that day, making up belt, retrieving belt from another section, some mechanical and electrical maintenance and a belt extension hanging structure in another area of the mine.

So there is nothing particular then on the day shift on the Saturday in respect of 512 Panel?-- No, no, nothing about 512.

The personnel that are listed over in the left-hand column there, are they the personnel that were on duty that day?--

That's right, yes.

Were they in a particular panel or -----?-- No, it doesn't say where they were, which men were in which panel, but it does show which men were doing which job. Guest, Graham and Morieson were the three deputies and between them they looked after the mine.

But you were there?-- Yes, I was there.

You weren't just on duty, but at a distance or anything?-- Yes.

The Sunday there is a different set of personnel there; is that right?-- Yes, that's right.

In fact you have noted some things in the comments box there; is that right?-- Yep.

Again I might ask you just to read those comments?-- I've made comments about which men were doing which jobs and what jobs are being done and -----

Then there is a little -----?-- In a little box I've made a comment about a goaf inspection that I made of the 512 and just see that the ventilation was good throughout and that 5 ppm was the maximum carbon monoxide found in the top return.

Was it your regular practice to make a goaf inspection on that Sunday shift?-- No, I make goaf inspections at any interval, times when you have the time to do it or -----

Do you remember whether there was any particular reason why you did it on this particular day?-- I can't remember if there was any particular reason, no.

Now, during these weekend shifts did you adopt the same practice that you have mentioned earlier in relation to deputies reports?-- Yes, yes. I generally read, for example, on day shift, the night shift deputies report.

That would apply over the weekends too?-- Yes, and I would see the night shift deputies when I came in in the morning and I would look at their reports.

The shifts that you were there for, the deputies on those shifts, would they give you their report?-- Not all the time. Sometimes they would - sometimes they would be up early and they would post their report and not actually hand it to me. Sometimes I wouldn't be around.

Sometimes you wouldn't be around?-- Yes.

In what sense?-- I might be over at the workshop or something or I might be underground and they might just post them without giving it to me.

If for instance there was a deputy report for the Saturday day shift and you weren't around and the deputy posted his report

and went, when you came in on the Sunday would you read reports from the previous day?-- No, I probably wouldn't go back and read day shift because I would know what happened on that day. I would have spoken with the deputy and knew what was happening. So no, I would not go back and read the day shift. I would read the night shift from the night before.

You would be quite confident that you would know what was happening while you were there?-- Yes, generally, yes. I usually used to talk to deputies and they were pretty good. If anything came up out of the normal they would come and talk to me about it.

You feel you wouldn't need to read it because you would be quite confident that you would know whatever happened on your shift?-- Well, yes, that's what I thought, yeah.

Could the witness see Exhibit 43, please, Your Worship?

Exhibit 43, Mr McCamley is a photocopy. You might find it a bit hard to read. I will get you to have a look at this one here. It's the original and it's in a sequence of originals which are document 45 in Exhibit 9 for the record, Your Worship. You will see that when I say it's an original it's in fact a carbon. It's the carbon that's filed. Up on the top right-hand corner - it's a production deputies report signed by Ken Guest. Top right-hand corner it does say 11/5/94, but if you have a look at the one before and the one after in the numbered sequence you will see that it in fact should be 11 June and it does relate to 11 June. Now, can I draw your attention to the first inspection on that Saturday day shift, 11 June? As noted by Mr Guest it's the first deputies inspection and he has this in relation to his 512 Panel inspection: "Air coming back along top supply road to 9 cross-cut. Okay elsewhere in section." Do you see that?-- 8 cross-cut it is, yes.

8 cross-cut, is it? Yes, I can see - I've only got the photocopy here which is a bit more difficult. And then across on the right-hand side in the "Action taken" column it has, "Stopping put up diagonally across 8 cross-cut" - is it "across 9 cross-cut"?-- Yep.

"CH4 coming back is bleeding into return in some cross-cuts"?-- "In same cross-cut".

Now, tell me, have you seen that report before?-- Yes, I remember this now. It reminds me of - I remember this situation, yeah. I had forgotten about this.

When did you remember it? Just now? Is that the first time you've remembered it -----?-- Yeah, just as I read this, yeah.

So you did see that?-- Yes -----

That actual -----?-- Yes, I remember talking to Ken about this.

Did you see his report at any time?-- I'm not sure if I read the report. I could have because it does - it did bring a memory back to me, so -----

What is your best memory as to when you spoke with him?-- I can't recall exactly when I spoke to him, but I do remember this.

At the time it occurred though, during the Saturday day shift on 11 June, or some other time?-- I think it was during the Saturday day shift.

Do you recall whether you went underground to have a look at the situation or did you just speak with him about it?-- I would have - well, no, I can't really recall if I went underground on that day to have a look at that situation.

Now, Allan Morieson was a deputy on that day. Did you speak with him about it too?-- I really can't remember, no, talking to Allan, no.

Do you remember any discussions about putting this ventilation stopping diagonally across the cross-cut in the No 2 road?-- Reading it, I remember talking to Ken about it now and what he had done and how it was working. I just don't recall much more.

All right?-- But, yeah, I do remember now.

That's not an insignificant step to take in terms of ventilation in the panel, is it?-- No.

To put a stopping diagonally across that 9 cross-cut; do you agree with that?-- Yes, that's right, yeah, that's, yeah, fairly important.

Would you have expected some consultation with the undermanager before doing that or -----?-- Not necessarily. Ken's a fairly experienced deputy. He knew that section fairly well. No, I think he has done the right thing and he's - I remember him telling me about it.

Okay. Well, can I come back again - do you recall whether you saw his report at the time of the shift?-- Yeah, I just can't recall for sure whether I saw this report or not, but, like I said, it certainly brought the memory back, so maybe I read it on the day, but I can't recall.

Did you think it was the sort of thing you should note in your shift - your underground shift report, this ventilation - well, first of all, the backing up of air and, secondly, the erection of the ventilation stopping?-- Probably looking back on it, it probably should have been something I made mention of in my report, but then again, like I said, our reports, our weekend - our shift reports were more production orientated and we just didn't generally put in a lot of information, statutory information, or whatever. It was just left for the deputies reports.

I think you agreed earlier just in my current sequence of questioning that the fact that there had been air backing up in that top supply road at some time prior to 17 June would have been a factor that would have enhanced your concern on 17 June?-- Yes.

Now, are you able to say whether on 17 June you were conscious of the fact that there had been an episode requiring the flushing out of the goaf the previous week or whether you weren't aware of that?-- Well, how do you mean a flushing out of the goaf?

Well, this putting up of -----?-- This diagonal stopping?

----- the diagonal stopping?-- Yeah, probably - like I said, I didn't remember this until now seeing this, but it probably influenced my thinking, yes.

Do you agree there would be a bit of a problem in terms of your fellow undermanagers if there was nothing in your underground shift report about it because they couldn't know about it, is that right, unless there was something reported to them about it?-- Yes, that's right, yep.

Do you agree that, once again, there is a situation where the lack of more formal written communication might well put somebody at a disadvantage from being able to understand the bigger picture, the broader picture, of what was happening in the panel?-- Yes, that's true.

Thank you, Your Worship.

WARDEN: Mr Morrison?

MR MORRISON: Thank you, Your Worship.

FURTHER CROSS-EXAMINATION:

MR MORRISON: Mr McCamley, I wanted to ask you just a couple of things. Mr Neilson was asking you some questions about the now elaborate map and the point that was being discussed was on 17 June with ventilation or air at least backing up the No 2 road, that's the top supply road. It's a fact, isn't it, that on that day it was not backing up any of the other roads; is that right?-- Yeah. To my knowledge it wasn't, yeah, that's right.

It was only on the No 2 road?-- Yes, yes.

So have you taken that into account in drawing the various dotted lines on that map when you were responding to where the ventilation flow was going, or might there have been a little more air going down the other roads than you have indicated?-- No, that No 3 road, I remember walking up to that stopping there and there was virtually no ventilation, it wasn't flowing either way, it was fairly consistent there.

Now, Mr Neilson also asked you about the positioning of monitor point 5 which you have to assume from the map is correct because you weren't there and didn't know anything about it?-- That's right, I had no knowledge of where it was put.

And questions were directed to whether monitor point 5 would give you a representative view of what was happening in the panel. I think the context of them was about convection currents carrying various gases around the goaf. Do you recall those questions?-- Yes, in that context, yes.

Now, various gases produced in the goaf wouldn't be bound to convection currents, would they? For instance, methane, which is lighter than air, would naturally migrate to the top of the

panel?-- That's true, it would, but it would be aided by a convection current.

Aided but not bound?-- No, no, it would ----

Likewise, any gas lighter than air would have a natural tendency to migrate to the top?-- Yes, it would layer to the roof and migrate away.

You would expect to find the greater concentration of methane at the top of the goaf, wouldn't you?-- Yes.

That is to say, the most outbye point of 512 panel given its 1 in 8 slope?-- That's correct, I would expect that.

And if one found, say, 5 per cent methane there, you would naturally expect the concentrations lower down the panel to be less than 5 per cent, wouldn't you?-- Generally, yes, yeah, you could have a general body of methane from 3 to 5 per cent, around there, and have 5 per cent at the monitor.

Because of its tendency to migrate upwards, being lighter than air, it would concentrate in greater proportions at the top of the goaf than lower down?-- Yes, yes.

And oxidisation from coal increases the volume of gas, doesn't it?-- Yes.

For instance, carbon monoxide?-- Carbon dioxide and carbon monoxide and methane are liberated.

And because the volume is increasing - that is to say, the actual volume of gas is increasing - that increase must go somewhere, mustn't it, from where it's generated?-- Yes.

So you would expect, wouldn't you, that even in an area where ventilation was sluggish, if there was gas being created, CO, by high oxidation, call it a heating or otherwise, you would have expected that to enter the ventilation system somewhere, wouldn't you?-- What do you mean by the ventilation system?

Well, if there was a sluggish area but, nonetheless, air going up the return, you would expect production of CO from a heating to have entered the ventilation system in the return, wouldn't you?-- And you are talking after the sealing?

Prior to the sealing?-- Prior to the sealing. Mr Neilson was talking after the sealing regarding the ventilation.

Yes, I know that?-- I was on the wrong track. Yes, if you had a heating giving off gases, I expect them to be drawn down and make their way out the return and, yes, be detected.

And show up on monitor points that are installed for that purpose?-- That's right.

If there is no change then in the CO make in a ventilation system, that suggests to you, wouldn't it, that the oxidisation was stable?-- Yes, yes. In fact, you could

actually get a rise in the CO make and it could still be - the oxidation be stable purely from the greater area as you mine being liable.

Could you look at Exhibit 22, please? Mr Ellicott asked you some questions about Exhibit 25 where the CO make graph dipped and flattened in the period leading up to 5 August. This is a comparative graph that was produced after the event in relation to the various panels. If you take the top line, that was for 5 north, and the one that extends furthest to the right, that was for 401/402; do you see those two?-- Yes.

In each case was there not immediately prior to the panel or the CO make taking off - in each case was there not a drop and then a flattening out?-- Yes.

Now, Mr Ellicott also asked you about whether this mine had a number of systems for detecting and interpreting various aspects to do with gas analysis and also information from reports. Do you remember he asked you did it have a system about this, a system about that?-- Yes.

Is there any mine that you have worked at that has such a system as Mr Ellicott said?-- No.

Were the systems that were in place at No 2 pretty much indicative of the systems of mines generally that you have worked at?-- Yes. In some places better.

In some places better?-- Yes.

No 2 wasn't behind the ball, was it?-- In gas analysis, whatever, no, I don't believe so, no.

Thank you, nothing further.

WARDEN: Thank you, witness.

FURTHER CROSS-EXAMINATION:

MR MARTIN: I am out of turn. I am not seeking to get any advantage out of it. I will just tell you what I would like to ask, and that is: who was the manager or undermanager who initialled or signed the deputies production certificate number - report number 3983?

WARDEN: Leave granted.

WITNESS: That's George Mason's initials.

MR MARTIN: Thank you.

WARDEN: I don't think there is much advantage in commencing a new witness now.

311094 D.9 Turn 18 mkg (Warden's Crt)

MR CLAIR: No, that's true, Your Worship. I can't say that I have got a short witness, or even one whose evidence isn't going to take very long.

WARDEN: Thank you, Mr McCamley, you can stand down, and if the learned friends and esteemed colleagues could reconvene here at 9.30, we will commence again. Thank you.

WITNESS STOOD DOWN

THE COURT ADJOURNED AT 4.06 P.M. TILL 9.30 A.M. THE FOLLOWING DAY

WARDEN'S COURT

MR F W WINDRIDGE, Warden and Coroner
MR R J PARKIN, General Manager, Capricorn Coal Pty Ltd
MR P J NEILSON, District Secretary, United Mine Workers' Union
MR C ELLICOTT, Training and Development Officer, Department of
Mineral Resources, New South Wales
PROF F F ROXBOROUGH, Professor of Mining Engineering, School
of Mines, University of New South Wales

IN THE MATTER OF A CORONIAL INQUIRY IN CONJUNCTION WITH
AN INQUIRY (PURSUANT TO SECTION 74 OF THE COAL MINING
ACT 1925) INTO THE NATURE AND CAUSE OF AN ACCIDENT AT
MOURA UNDERGROUND MINE NO 2. ON SUNDAY-MONDAY, 7-8 AUGUST
1994

GLADSTONE

..DATE 01/11/94

..DAY 10

011194 D.10 Turn 1 dfc (Warden's Crt)

THE COURT RESUMED AT 9.32 A.M.

STEPHEN MICHAEL BRYON, SWORN AND EXAMINED:

MR CLAIR: Your full name is Steven Michael Bryon; is that right?-- That's correct, yes.

B-r-y-o-n?-- B-r-y-o-n.

You are a mine deputy and miners' officer; is that right?-- That's correct, yes.

You are employed by BHP Australia Coal at the Moura No 2 Mine?-- That's correct.

You started your career in mining at the No 2 Mine at Moura in 1976 as a miner; is that correct?-- Yes.

You worked for two years in that capacity and then you left and you returned in March of 1979 to No 2 Mine?-- Yes, that's correct.

Then did you transfer to No 4 Mine shortly after that?-- Yes, that is correct.

You worked at No 4 through until 1986?-- Yes.

Then you were transferred back to No 2 and you have worked there ever since; is that right?-- Yes.

You were appointed a deputy in 1989?-- Yes.

You joined Mines Rescue in 1980?-- Yes, that's correct.

Now, you've been at the No 2 Mine, of course, during this year and in June of this year were you acting in the capacity of spare deputy?-- I was, yes.

Were you asked to take over the job of ventilation officer at the mine while the regular ventilation officer, Mr Allan Morieson, took some three weeks annual leave?-- Yes, I was approached by the management to do that, yes.

What contact did you have with Mr Morieson in relation to the duties of that ventilation officer's position before he went on leave?-- I had no personal contact with Mr Morieson.

Were you approached about taking on the position of ventilation officer prior to his departure or after he had left; can you recall?-- I think it was the same day that he had left.

The same day that he had left? He had actually gone before you were approached?-- He had actually gone.

XN: MR CLAIR

WIT: BRYON S M

So no opportunity arose for you to speak with him about his normal practices or any current position in respect of any of the panels?-- No.

Who approached you, Mr Bryon?-- Mr George Mason approached me.

Can you just tell the Inquiry what you were asked to do?-- He just asked me if I would do the three weeks and just carry out the duties that Allan had set down while he was away.

Did you know what those duties were?-- Not until I read the piece of paper that he had left.

So Mr Morieson had left a piece of paper; what, a list of things to be done?-- Yes, that's correct.

Did you have any particular qualifications for taking on the position of ventilation officer?-- No, no specific qualifications for that position, no.

Well, what was on this list of things that you had to do?-- I had to do the weekly stats which were - monthly stats which were checking fire extinguishers, weekly check of water barriers, stonedust sampling which was in and out the mine - he had already done - but he left me the rest to do, and get the relevant readings so the mine engineer could calculate the carbon monoxide make.

For which panels?-- For 512 Panel.

512 Panel was the only extraction panel operated at that time; is that so?-- Yes, that's correct.

Mr Morieson had gone, you got this list of things; did anybody give you any specific instruction as to how to go about those duties?-- No one gave me any specific instruction on how to go about them, but I approached Mr Jacques Abrahamse on the method that Allan had gone about his tasks and he gave me some idea of how he did it and what he was doing.

That was on your own initiative that you approached Mr Abrahamse?-- Yes, that's correct.

Now, in particular did you ask Mr Abrahamse how you might go about taking these readings for the purpose of the CO make being calculated?-- No, I didn't ask him that. I was aware of how to take the readings and what readings were required and where they were to be done.

You already knew where they were to be done?-- Yes, that's correct.

For that purpose?-- Yes.

If you could turn to your right there and perhaps if you stand up - or if Mr Dahlke could just turn over the plan that's in front of the 512 Panel plan, Mr Bryon, you will probably recognise that plan there as being a plan of the 512 Panel?--

Yes.

As at the completion of extraction?-- Yes.

Are you able to indicate on there where it was that you would take measurements for the purpose of this CO make calculation? If you like you can stay sitting down and use that magic instrument there, the laser pointer?-- Approximately there. That was vent station 46.

Vent station 46, and that's in that No 1 heading of 510 panel, in effect, just around the corner from the No 1 heading of 512?-- Yes, that's correct.

Outbye of that corner in fact?-- Mmm.

Now, these readings were taken how frequently?-- Every Friday.

It was a Friday, if I remember rightly, a Friday that Mr Morieson finished, is that right, 15 July?-- Yes, but I believe Mr Morieson had done the readings on that day.

So really the first Friday that you were to take the readings would have been the following Friday, 22 July?-- That's correct, yeah.

That Friday, 22 July, was that in fact the first time that you took readings -----?-- Yes.

----- down in 512 Panel or in relation to 512 Panel?-- Yes.

There was no occasion during that week when you took readings or did anything in respect of ventilation in 512?-- No, not that I can recall, no.

If we can come then to the 22nd, what did you do on that day?-- On the 22nd, I believe after lunch myself and another deputy, Peter Rose, travelled to vent station 46 and we took the readings that Mr Abrahamse required to calculate the carbon monoxide make and we took them back to the surface.

What did that involve? What kind of measurements?-- We took a velocity reading, an oxygen reading, a methane reading, a carbon monoxide reading and a carbon dioxide reading.

The velocity readings, were there more than one?-- We took three and then they were to be averaged out.

I see, and what were those readings respectively? That is, where did you take them from? Were they three different readings?-- They were three different readings, yes.

Taken at the same place?-- At the same place, the roadway traversed three times.

In different positions in the roadway?-- No, in the same position in the roadway.

Can you remember now what those readings were or did you make a record of those readings at the time?-- I passed the information on to Mr Rose and I read them. I read one incorrectly and he copied it down incorrectly. When we returned to the surface we realised when we correlated the information for Mr Abrahamse one was incorrect. We checked this by going back to the instrument, because the last reading which I read incorrect, correlated to Mr Rose, was in fact still locked on the instrument.

The instrument you are speaking of is the anemometer?-- The anemometer, yes, that's correct.

What was that difference, do you recall now?-- The difference was two. It was quite a large difference and that's why we picked it up instantly that I had made a mistake.

What were the respective readings?-- Can I relate -----

Yes, you have recorded them in your statement?-- 1.72 metres per second, 1.76 metres per second, and I said to Mr Rose - or he misunderstood me, 3.76 metres per second but in actual fact it was 1.76 metres per second.

And that 1.76 you say was the figure that was still locked on the anemometer when you were up at the surface -----?-- That's correct.

----- as the third reading. I take it from what you say that you wouldn't expect to have that difference between the other two readings of 1.72 and 1.76 up to 3.76?-- No, if you were -----

Reading at the same position at the same time virtually?-- Yes, that's a remarkable jump. You would be standing in a wind tunnel with a reading like that.

The carbon monoxide reading that you recorded at that point?-- We recorded 8 ppm on the 21/31 handheld instrument.

Was that an increase over the previous week? Did you look at the records that had been kept at that point?-- That was an increase on the handheld of 2 ppm, yes.

Your Worship, I wonder if the witness could see Exhibit 21.

Now, these readings were used to produce a graph; is that right?-- That's correct.

Was it part of your function to draw up that graph?-- No, it was not.

Who did that?-- Mr Abrahamse would do that on the computer.

On the computer, I see. Okay. Well, can I suggest that you go to the sixth page from the back and you will see that that's a table that sets out the readings for the CO make, 512 Panel, and that first page finishes on 15 July. If you go over to the second page of that document you will see the

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first entry there is for 22 July 1994. Now, there are two readings for 22 July. The first of those readings sets out the stations - at least sets out all the relevant data that was used and it gives a total CO make in litres per minute of 18.98?-- Yes.

First of all are you able to say how that was calculated, the 18.98?-- The 18.98 was calculated on the computer using the 8 ppm that I recorded on the 21/31.

Was that calculated using the correct wind velocity readings?-- That is correct.

So that doesn't reflect any inaccurate data. That's all based on accurate data; is that right?-- That is correct, yes.

Now, the second calculation for 22 July again sets out all the relevant data and then gives a total make in litres per minute of 13.7; do you see that?-- Yes.

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Now, before we look at how that was achieved, just comparing the data that's set out along the columns, first of all it's based on readings taken from the same two vent stations; is that right, vent station 46 and vent station 59?-- Yes.

You took the readings from vent station 59 also?-- We did, yes.

Okay. The area in square metres, of course, is the same; is that right?-- Yes.

Because that's constant?-- That is constant, yes.

The velocity in metres per second I see in respect of the first reading there is 1.77 shown and .44 for those two vent stations respectively, and for the second readings it's 1.78 and .44 for the two vent stations respectively. There is a difference there between 1.77 and 1.78 for vent station 46. Do you know how that might have come about?-- No, I can't account for how that came about.

But, in any event, that velocity in metres per second is an averaging of the three readings, is that right, that you have referred to earlier?-- Yes, that's correct.

Well, at least theoretically it should be an averaging of those three readings; is that right?-- That is the procedure, yes.

In fact, if you took what you say were the correct readings of 1.72, 1.76 and 1.76 again, what is actually used in the total is not an average of those three readings; is that so? 1.77 certainly isn't and 1.78 certainly isn't?-- Well, that could be the case, yes.

Well, I mean, as a mathematical fact, though, that is the case, isn't it?-- Yes.

So, do you know what the explanation for that might be?-- No, I can't explain that.

And you can't explain why there is a difference between the two, the 1.77 for the first calculation and 1.78 for the second?-- No, I can't explain that. I handed the gentleman the information and he put it into the computer.

Okay. Well now, then there are the wet and dry temperatures?-- Yes.

They are the same in the case of both of those calculations for Friday, 22 July?-- Yes.

The relative humidity data is the same?-- Yes.

Methane measurement data the same?-- Yes.

O2 the same?-- Yes.

The CO in parts per million, the first is the 8 ppm?--

XN: MR CLAIR

WIT: BRYON S M

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That's correct, yes.

And the second is the 5.5 ppm?-- Yes.

Then the CO readings on the Maihak, that column there, they are the same for each of those calculations; is that right?-- Yes.

Then the CO in litres per minute, that's really the end result of the calculations, and both vent stations are added together to give the final figure of 18.98; is that right?-- That's correct, yes.

So, the second last column is in fact the calculation using all the other data?-- Yes.

For vent station 46 the difference is between 18.62 and 13.34?-- Yes.

Respectively?-- Yes.

For first and second readings?-- Yes, yes.

Okay. Now, there is a note down below. The first of those notes says, "Reading Friday a.m. 22nd" - and it's got August but it's been agreed that that should refer to 22 July - "Reading Friday a.m. 22 July not graphed", and then it says, "The 18.62 litre per minute was obtained using a velocity of 1.77 times the 8 ppm of CO on a peak Drager tube reading not the weekly average. Readings taken by S Byron and P Rose." Now, that refers to your readings on the mornings of that day?-- That refers to our handheld readings, yes.

I mean, you didn't go back down again yourself to measure that day?-- I did not go down personally to re-assess that reading, no.

Okay. Then the note goes on, "Reading Friday p.m." - that's the second of the readings that we have referred to - "22 July '94 was graphed after verifying the CO ppm maximum 5.5 ppm using a Drager tube. Readings by J Abrahamse, D Kerr and T Atkinson." That was done later in the day. Did you have any association with that at all?-- No personal association with that, no.

Was there any discussion with you about it at the time?-- Oh, yes, considerable discussion on the surface.

Right. Then the note goes on, "The 13.7 litre per minute was obtained using a velocity of 1.78 times the 5.7 ppm of CO on the weekly average." Now, it seems that your 8 ppm that you provided was regarded as being inappropriate for the calculation because it was not - at least for a calculation to be interpreted then through to the graph - because it was not the weekly average; is that what you understood?-- That's correct. It was relayed to me by Mr Abrahamse that Mr Morieson, to do his carbon monoxide make, always used the weekly average and not a handheld instrument.

XN: MR CLAIR

WIT: BRYON S M

I see. Well, perhaps if you can just tell the Inquiry what conversations you did have after you provided your figures for the calculation on this day?-- When we came to the surface and Mr Rose and I attained the 8 ppm, we were concerned that it was an increase of 2 ppm. Certain people then said, well, we should go back and try and ratify the situation and make sure that that reading is correct. We discussed it. There was myself, Mr Abrahamse, Mr Joe Barraclough, Peter Rose, and they said that they would make some attempt to go back down and actually see if they could still get 8 ppm on the 21/31. Because it was the practice to use the weekly average, if in fact it was 8 ppm it would show a rather marked increase and would be cause of reasonable concern, if not great concern, so the conversation was basically to try and ratify the fact that it was 8 ppm.

Now, just pausing a moment. You say that that was an increase of 2. An increase of 2 over what figure?-- Over 6.

Yes, but where was the 6 from?-- Well, the 6 would be from the Maihak Unor system.

I see. Was that an increase of 2 over some particular period or -----?-- That would be an increase of 2 over the week.

If you go back to the first page of that document that's in front of you there?-- The first page?

No, no, I mean what I was talking about as the two page document, the CO make for 512. In fact, back on the 15th the reading for the CO parts per million for this calculation was in fact 5 at vent station 46; is that right?-- That's correct, yes.

So on that basis it would be?-- An increase of 3.

An increase of 3?-- 3 ppm, yes.

Over the course of the week between 15 and 22 July?-- Yes.

You say that caused some concern. Well, needless to say, that caused some concern; is that right?-- That's correct, yes.

But in fact at the time it caused concern and that led to these further conversations?-- It did, yes.

Was it only because of that that it came to light that in fact the figure that was generally used was the weekly average? Was that the first time you had been told that the figure that was generally used for the CO make calculation was the weekly average?-- Yes.

Up to that point nobody had told you that?-- That's correct, yes.

When you first provided your figure to Mr Abrahamse for him to do his calculations, that is your figure of 8 ppm, did he understand that to be a weekly average?-- No. He would have understood that to be a handheld reading.

A handheld reading rather than a weekly average taken off the continuous system; is that what you are saying?-- The 8 ppm was the reading that we took personally.

Yes?-- And in the calculations that we used to correlate your graph we always used the weekly average.

Well, who calculated the weekly average normally?-- Mr Abrahamse did that on the computer.

On the computer?-- Yes.

So it wasn't the case that Mr Morieson would calculate the weekly average and provide that to Mr Abrahamse for the purpose of this calculation?-- That could be the case. I am unaware of what the procedure was.

You see, I am really just trying to discover why it is that Mr Abrahamse perhaps accepted your figure of 8 ppm and did the first of these calculations for 22 July, which would have been just the normal Friday calculation, why he did that calculation on the basis of the figure that you gave to him if in fact it was normal for him to then calculate a weekly average?-- We did that - well, Mr Abrahamse did that calculation with the 8 ppm, I would say, more out of curiosity to see if the 8 ppm was in actual fact an accurate reading, that there would be a problem.

Yes, I see. So was there discussion about that at the time?-- Yes.

That he wasn't really doing the calculation for the purpose of providing a final figure to be used on a graph but rather just to see what the end result would be using the reading of 8 ppm?-- That is correct, yes, that's the way I understand it.

Did you understand your 8 ppm to actually be a substantial increase over the actual reading on the handheld the previous week?-- I would, yes.

This reading that we see back on the previous page for 15 July, the 5 ppm CO, would that have been a reading from the handheld or was that a reading which - was that a figure that represented the weekly average?-- I would surmise that that would be the reading from a handheld that Mr Morieson would have taken at that vent station.

I see. So in fact there would have then been the 3 ppm increase in the handheld reading?-- Yes.

Over a week?-- Yes.

Okay. Well now, what further conversation took place about this on Friday the 22nd?-- Myself and Mr Barraclough had a conversation - he was the acting manager at the time - and we thought that if this 8 ppm is a correct reading - and like I said before, there was doubt that it was a correct reading. It may have been a faulty tube or there could have been a

diesel machine in the area or anything along - could have made that reading false, that we should keep an eye on the place and give it a great more amount of scrutiny, and there was further conversation then carried out, I believe, which I was not part of, although I did suggest that we keep an eye on the place and do the readings on a daily basis instead of weekly.

And was that a decision that was taken then?-- That decision was taken and I believe it was carried out, yes. It was carried out the next day in fact, I think.

When did you become aware of that decision yourself?-- I was aware of that decision on the Monday when I returned to work. I was not at work on the Saturday or the Sunday.

Okay. Well now, this reading that was taken on the Friday afternoon by, it seems, Mr Kerr and Mr Abrahamse and it suggests on the document Mr Atkinson, was that while you were still at the mine on the Friday?-- No, that would have been after I left the mine. That would have been on the Friday afternoon shift.

You became aware of that reading at a later time?-- Yes, I did.

What was that, do you know?-- They relayed to me that they could not in their inspection find 8 ppm and they got a lower reading which was, I believe, 6 parts is what was told to me. 6 ppm was the maximum they could find.

6 parts was the maximum that they could find. On the document there the make that is used is 5.5 ppm?-- That could be the case, but I personally can't see how anyone can get 5.5 parts on a Drager tube.

Well, why is that?-- Well, a Drager tube, you measure it with your eye and it's - you could get a discrepancy, and when you are starting to get half a part I would - well, I just personally can't see how you could assess half a part per million on a Drager tube.

That figure in the graph, is that supposed to be a an average or is that the actual reading taken?-- Could you repeat that, please?

Sorry, the figure on the table, I should say, the 5.5 that's on the second page, the second reading 22 July, the one we looked at earlier, the ppm reading 22 July, you will see 5.5 there?-- Yes.

I am really just trying to clear this up as far as you are aware. Is that supposed to be an average or is that supposed to be the actual reading off the handheld?-- I would believe that is the actual reading off a handheld.

Right. That's why you would say that it would be difficult to read half a part?-- Yes, that's correct.

Just tell me, Mr Bryon, how do you read that Drager tube

yourself?-- The easiest way to read a Drager tube is put the tube against a white background and then you have got an indication of the colour change.

Where do you read it?-- I usually read it down the mine.

No, but in terms of looking at the tube, where do you take your reading, against what point?-- Well, that depends on what type of tube it is.

Yes. I don't want to get into differences between tubes, but there is colouration that comes down into the crystals?-- Okay.

Now, against what point in the colouration do you make your reading?-- I would make my assessment a little bit back from the last piece of colouration that you can see.

A little bit back from it. Why is that?-- That's just my personal view on it, that I would - that's the way I would do it.

I mean, the colour fades, doesn't it?-- The colour does fade and it's not extremely distinct, so it's my personal -----

You take it where the colour is just a little bit more solid?-- Yes, that's right.

Down at the very extremity of colour, that's what I understand you to be saying?-- Yes.

Okay. Well, you became aware on the Monday of the decision that there be a CO make done on 512 Panel, what, every day or every shift, what was the position?-- Every shift.

Every shift?-- That the section deputy would travel to vent station 46 and take a CO reading there.

And all the other readings necessary to calculate a CO make; is that right?-- Yes, that's correct.

Wind velocity and the rest?-- Yes.

Okay. Do you know who made that decision?-- That decision was made by management after we had this encounter with the 8 ppm. I was involved in that decision and I suggested that it should be done, and it was - they took that up and ran with it and it was done.

Who passed it on to you?-- There was a note - it was verbally passed on to me by Mr Mason and there was also a piece of paper that was posted on the noticeboard and in the deputies' cabin that it would be carried out.

Right. Now, was there a separate logbook established in which to record the results or an existing logbook used, what was the position?-- There was a logbook where the results were recorded.

Now, what was the purpose in this?-- The purpose in this was obviously to see if there was an increase in the CO which if we saw that it was in actual fact trending up we would then have cause for concern.

And that concern being? It might sound trite, I am just asking you to explain?-- That we may have a problem inside the panel with spontaneous combustion.

Now, tell me, on any times that you went to the panel there did you see any signs that caused you concern or alarm about those? Other than your CO ppm readings, did you see any other signs that gave you concern about that 512 Panel and the possibility of any spontaneous combustion occurring in there?-- I did not, no.

How far did you go when you were carrying out your duties as ventilation officer?-- I would go to the vent station in and around the sealed area, carrying out my duties as the ventilation officer. On a previous occasion when I was working a Saturday shift as a mine deputy, we were producing coal in that section, we had a roof fall which blew the ventilation stoppings down. Mr Barraclough was the undermanager on shift on that day and he came into the panel and him and myself walked right into the back of the panel and erected some stoppings that were down and I walked right into the back - right to the back of the panel and in that inspection then I saw no signs of anything that would cause me any concern.

Are you able to say when that was?-- I can't recall the date, but it was a Saturday.

After you had commenced your duties as ventilation officer or before?-- No, it was prior.

Approximately how long before?-- I would say approximately, perhaps, a week.

So, you are talking about, perhaps, 7 or 8 July, thereabouts?-- In that region, yes.

If it was a Saturday, the 9th - perhaps 9 July?-- It could have been, yes.

Okay. Now, you say that when you were carrying out your duties as ventilation officer you not only went to the vent station, but you went into the sealed area and carried out inspections. Can you just by reference to the plan up there indicate where you went?-- When I say I went around the area where the seals are, I didn't go into the waste area.

So, you mean the area of the seals, in other words?-- In that vicinity there.

You are indicating, really, further down that - well, across 0 cross-cut in 512 panel and, perhaps, into the seals in each of the roadways; is that what you are indicating there?-- Yes.

And did you go inbye of the seals and into No 1 cross-cut, that's at the prep seals?-- Yes, I would have walked around that area.

Okay, but you didn't go any further than that?-- I would have probably spoke to the deputy in the section when they were producing coal.

Okay. Now, can I just for a moment then deal with this occasion when you went down No 1 heading and back across or, at least, across the back of the panel in cross-cut 13 there?-- Yes.

Do you recall - that was the day you had the fall?-- Yes.

Which was the ventilation stopping or stoppings that were dislodged as a result of the fall; do you recall that?-- I couldn't accurately recall which ones they were, but they were -----

In what area were they?-- They were in the 7, 8 and 9 area.

7, 8, 9, and which stoppings were they?-- I would say probably two or three of those were down, but not totally down, just laid over.

But which were they, the ones between 1 and 2 roadways or -----?-- Yeah, these stoppings here.

Those there. What sort of stoppings were they?-- They were Tecrete stoppings, I believe.

Right. Were you able to get those back into place again?-- Yes. Well, when I say Tecrete, they were Tecrete, but they had brattice on them. So, in actual fact what had happened was the brattice had blown down in the corners or was lying down and we actually put the brattice back up.

You went further inbye then along No 1 heading. What was the position with those other stoppings between 1 and 2 roadways?-- They were all intact.

Did any of those have openings in them, that you recall?-- Yes. 12 cross-cut, between 1 and 2 roads had an opening in it.

Was that - was it opened at the time?-- It was open at the time, yes.

And what about along the back, the stoppings between 12 and 13 cross-cuts, what condition were they in at the time you went across?-- They were all intact, but they all had openings in them.

Were they open to any extent?-- The openings were open, yes.

Now, you continued - coming back forward again, you continued after 22 July as - doing your duties as ventilation officer?--

Yes.

Tell me, did you post up a graph showing the CO make in relation to 512 Panel?-- Yes.

Anywhere in the mine?-- Yes.

On that Friday, 22nd, first of all?-- Yes, every Friday when it was calculated I would get four or five copies of the graph and I would post it in various positions in and around the mine on the surface.

That graph being the one that was produced off the computer by Mr Abrahamse?-- That's correct, yes.

Right. Just look to the next page of that document. You see a graph there. It won't be that one, but it was a graph like that; is that right?-- Yes, that's correct.

Could the witness see Exhibit 25, Your Worship?

Now, there is - that is a graph that has actually got on the bottom, "Issued by A G Morieson", but, in fact, signed by you; is that right?-- Yes, that's correct.

That was the graph that was issued on the last occasion on which you were acting as ventilation officer, that is 5 August '94?-- Yes.

Would that be so?-- Yes.

I will come to that date in a moment, but I am really looking to the earlier stages now. The reading on that graph for 22 July is the reading we have already discussed, that's the one that was calculated on the basis of the later ppm reading taken on the afternoon of that day; is that right?-- Yes.

And then the next date that is shown on the bottom axis is 23 July '94?-- Yes.

And there is actually a point plotted on the graph for that date. Did you plot that point or was that based on measurements that you took?-- That would have been based on measurements that I took, yes.

On 23 July?-- Yes.

The Saturday?-- No, they would have been taken on a Friday.

Well, we have already discussed what occurred on the Friday, 22 July, is that right, and that's the date on which you took the reading of 8 ppm?-- Yeah, okay, I am with you. I can't -----

You are with me now?-- Yeah.

That's the week we are actually talking about, you see. So, the day after that, 23 July, we have a point plotted on the graph, albeit, it would seem, on a time axis along the bottom

a whole week later, but, in fact, it is only a day later?-- Yeah.

We will put that factor aside for a moment?-- That's why I misunderstood you.

You see 23 July, now. Can you see what it led to, a point being plotted on the graph for 23 July?-- No, I can't.

I don't have a copy of any document that was actually published as a graph at those earlier stages, but would it be the case that this graph was extended, as it were, I won't say from week to week, but extended at least up to that point, 5 August, from previous graphs that had been published and put up on the board; do you understand what I mean?-- You mean instead of doing it - the graph should be weekly and it now became daily?

No, that's not my point at the moment. Really, I am looking at a graph that purports to be the weekly graph issued over your signature on 5 August, you see? That's the document we have in front of you. Now, what I am asking you is, for instance, the graph that was published prior to this one, would that have been a graph - looking at the dates on this document here would that have been a graph up to 29 July '94? Would it have been the same as this document only showing that segment that runs up to 29 July '94?-- To my knowledge the graph that I published would not have the 23rd on it, it would have been a weekly graph on it.

But this is the one that was published on 5 August and signed by you. Are you saying the one that was published the previous week wouldn't have been the same as this one except without the extension from 29 July through to 5 August?-- What I am saying is from what I can recall the graphs that I published were on a weekly basis and there was no daily calculations in them.

I see. Did you run back over the dates in each case or did you just take the graph that was printed out by the computer and looked to check that the last reading was correctly plotted on each occasion?-- Well, if I signed this I obviously haven't run back and looked over that, no.

Okay. I am really just trying to work out how we end up with a graph over your signature that has a reading on the 22nd and a reading on the 23rd and, in fact, if you go back to the beginning of the graph you will see that it seems to be plotted on a monthly basis, it goes from 28 February, next point is 25 March, the next point is 27 April; do you see that?-- Yes.

Then it seems to move into a more regularly phase then. It looks like 9 May or thereabouts, 13 May, 20 May then and then you get this - back on 1 July there is a reading and then on 8 July, the 15th, the 22nd and then we get the 23rd. You have got no memory of seeing that on it?-- I haven't, no.

And you weren't associated with plotting any point then on the

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graph for 23 July?-- No, I was not.

Okay. Now, the purpose, of course, of that CO make graph was to show any increase in the CO make from time to time; is that so?-- Yes.

Did you understand yourself why that increase was important?-- Yes.

And why was that?-- Well, if you have a trend in an increase in CO make it generally leads to an indication that you are having a spontaneous combustion problem.

Right. What sort of increase would you look for yourself before you form the view that there was a spontaneous combustion problem?-- On a properly correlated graph I would - just a gradual upward trend would indicate to me that we had a spontaneous combustion problem.

A gradual upward trend. Okay. Now -----?-- I should say a rapid upward trend.

A rapid upward trend. Well, how rapid a trend would you look for?-- Well, just a sharp increase. If you had a gradual it would - I would assume that under normal circumstances that you would have a gradual trend of carbon monoxide when you are retreating out of a panel, but if that graph started to rapidly rise or get a more, what would you say, acute curve, it would then suggest to me that there would be a problem.

Okay. Now, the next reading that is plotted on the graph is 29 July '94. That was a Friday; is that right?-- Yes.

And if we go back to that other document which sets out the table, we see that 29 July shows all the relevant data there. Now, did you do - did you provide that data?-- Yes.

That was part of your weekly activity?-- Yes.

As ventilation officer?-- Yes.

Then we go to 5 August and again there is data set out there?-- Yes.

Did you provide that data?-- I provided that data, but I didn't read that data. I didn't take that data personally. My section deputy took that data and he gave it to me and I gave it to Mr Abrahamse.

I see. Was there some reason why you didn't take it personally?-- Yes, I was doing another task, and I was filling up the water barriers which was a weekly task and the section deputy, Mr Stafford, took those readings as it was part of their daily procedure to take those readings anyway.

And he passed it onto you?-- He passed it onto me and I gave it to Mr Abrahamse.

Well, that is the last of the points and you will see from the

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table that is, in fact, a 14.27 litre per minute CO make that is shown on the table and that's the last point that is plotted on that graph that is published over your name?-- Yes.

Or signature, at least. Okay. Now, what conversations, if any, did you have on that Friday, 5 August, with other persons there in relation to the position in 512 Panel, the CO make and any problems associated with it?-- As I recall, I gave the information to Mr Abrahamse and he went through the procedure of plotting the make and I published the graph. I took the graph and made some copies of it and put it in various places in and around the surface area of the mine. I had no problem with the way that it was going at the time and I had a conversation with Mr Mason because on that Friday I was going on holidays. I just asked him, just out of curiosity, when he would be sealing the section up and he made the statement to me that he had no great haste in sealing up the panel. He may seal it up on Sunday, if not he would do it earlier on in the week.

Well, there had been this earlier concern about the prospect of a heating in the panel?-- Yes.

And a decision that there should be CO make calculations every day?-- Yes.

Or, at least, there should be readings taken every shift, in fact, for CO make calculations to be done?-- Yes.

Was there ever any suggestion that there should be daily plottings of the CO make in 512?-- Not that I can recall, no.

I mean, there seems to have been some beginning, at least, on that front with the reading and the plotting for 23 July, the day after that decision seems to have been made, but that wasn't continued on through the following weeks; is that so?-- It may have been continued on, but I have no knowledge of it.

By that I mean the recording of these points on a table like this and then the production of a graph showing the daily readings. That practice certainly wasn't continued after 23 July?-- Not to my knowledge.

You didn't ever see a graph showing -----?-- I did not.

Showing daily points?-- No.

Okay. Well, now, you say that you finished on the Friday, the 5th. Was there any discussion about what was going to happen in respect of the ventilation officer's duties after you left?-- Mr Morieson was going to work that Friday afternoon shift and I would presume that he would then take up his position on the Monday morning.

On the Monday morning. The Friday afternoon shift he was working standing in for somebody else in a production crew; is that right?-- I believe so, yes.

He wasn't coming back as ventilation officer on the Friday?-- No, no. We were short of men at the time and he was coming in to stand in for someone else.

Does the ventilation officer have a particular function in keeping an eye on how CO make, for instance, in this case the CO make in the 512 Panel was running? Was that a specific job that would fall into the ventilation officer's area? Obviously you regarded it as important that the CO make be watched?-- I regarded it as important. I wouldn't - I don't know - it was never relayed to me that that was a specific task of the ventilation officer's job.

Tell me, did anybody ever draw your attention to those tasks that were laid down for the ventilation officer position?-- Yes, they were drawn to my attention when I inquired what the procedure was. That was with regards to stonedusting.

Could the witness see Exhibit 12, please, Your Worship?

You would have seen part of this document, Mr Bryon. If you have a look at the page which is about seven pages, I think, from the back, it will be a page that has up the top "Position Description - Underground Mine Deputy"?-- Yes.

If you turn over two pages from there you will see a list of names and the signatures of people acknowledging having read and understood the contents of the document. About half-way down that list is your name, 5 January 1994?-- Yes.

Do you recall reading the contents of the document, "Responsibilities of Underground Mine Deputy"?-- I don't recall it, but I obviously would have read it.

Now, if you turn to the page behind that list of names and signatures you will see a position description "Fire and Ventilation Officer". You were never shown a document like that yourself -----?-- No.

----- when you were asked to act in that position?-- No.

Now, coming back to that Exhibit 21, just put 12 to one side there. It can go back. Go back to Exhibit 21 and that table that we were looking at, the CO make for 512, and you will see that there is in fact a reading registered there for Saturday, 6 August 1994, 16.66?-- Yes.

Now, that, of course, is an increase of 2.4, 2.4 over the reading for 5 August 1994?-- Yes.

You simply weren't there on the Saturday; is that so?-- No, I was in Maroochydore.

You were on holidays by then. If you had been there and you had seen that kind of increase in the CO make for that panel,

what would you say about that? If that were plotted on a graph, is that the kind of curve that you are speaking of before as a rapid increase?-- That would be, yes.

What effect would that have on you in terms of your concerns about whether or not there was a problem with spontaneous combustion in 512 Panel?-- I would be having a very serious talk with the management.

Would you only do that if you were there as ventilation officer or what about if you were there simply as a deputy?-- I would do that as a concerned human being.

You had finished as ventilation officer anyway and Mr Morieson wasn't to resume until the Monday; is that right?-- That is correct, yes.

So there is really no ventilation officer there that weekend or even anybody who was appointed as ventilation officer that weekend; is that right?-- I would imagine that to be true, yes.

Tell me, have you ever been given any training in respect of the gas chromatograph at all?-- Prior to this incident, no.

There was, of course, a gas chromatograph at the mine during the period that you were ventilation officer?-- Yes.

Were you instructed in what it could do, that is what it could be used for?-- Yes.

Were you encouraged to make any use of it in your role as ventilation officer?-- I was not encouraged.

Did anybody make any suggestion to you then that it was available for any readings if you had some concerns about readings?-- No-one made that suggestion to me. I was aware that it was available if I had any concerns.

Was the use of the gas chromatograph discussed on Friday the 22nd when you had taken that reading of 8 ppm?-- It was not.

I have no further questions of the witness, Your Worship.

CROSS-EXAMINATION:

MR MacSPORRAN: Mr Bryon, you've been a deputy since 1989; is that so?-- Yes, that's true.

And you were shown most recently, I think, the position description which I think you signed some time in January this year?-- Yes.

I think you said you don't remember reading it, but you obviously would have?-- Yes.

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Why do you say that?-- I just can't recall reading it.

Do you recall actually signing it?-- I do recall signing it, yes, but I can't actually recall reading it.

Do you recall at any stage, whether on the day you signed it or not, having read the description outlined in the document, description of deputy's position?-- No, I can't recall that.

You can't recall at any stage having read that?-- No.

On the description itself there appears to be a number on the base of the page to one side. Did you notice that. It's Exhibit 12, I think. Just turn up the one that relates to you which is the underground mine deputy. It's towards the back, I think. Do you see in the bottom left-hand corner there is a number FA100 001?-- Yes.

Do you know anything about that?-- No. I know it's Quality Assurance, but -----

You know that in the Quality Assurance program there are numbers given to various documents that form part of the system?-- I haven't had that explanation, no.

But you recognise the number as having some relationship to the Quality Assurance system?-- Yes, I do.

In any event, you can't remember actually reading the description outlined on that document?-- I can't recall reading it.

Did you ever receive at any stage a copy of that description of your position as deputy?-- I may have done.

But you don't recall?-- I don't recall it, no.

I think you've told us already that you certainly didn't see the description relating to the ventilation officer's job which is the one following, I think, in the bundle?-- No, I haven't seen that document.

And you have never read any such description of his position and duties?-- No, I haven't.

That's despite the fact that you relieved in that position for about three weeks from 22 July through to the weekend of 5 August?-- Yes.

You can just put that to one side, thank you. Now, as you've told us, you had no real prior warning at all that you were to take over Allan Morieson's duties?-- That's correct, yes.

In fact on the day that Morieson was finishing up, he had left the mine before you were notified that you were taking over?-- I never had any personal contact with Mr Morieson, so I would assume that he had left the mine, yes.

So by the time you found out you were taking over his role you had no opportunity realistically to confer with him?-- No.

You were left a work list which outlined the basic duties you had to undertake?-- Yes.

That was a list compiled by Morieson himself?-- I believe that to be so, yes.

But there were no detailed instructions as to what was involved in each of those duties?-- No.

In respect of the readings to calculate the CO make you had some knowledge of how that was done?-- I did, yes.

Because as a deputy from time to time you would take such readings and make calculations?-- I have done that in the past, yes.

Now, you described for us the method you used to take the wind or the air velocity measurements, and if I understood you correctly you said you took three measurements at the same position in the roadway on each occasion?-- That's correct, yes.

And how does the instrument, the anemometer work? You turn it on; is that so?-- You turn - you activate a lever which will give you a certain time, I believe it's about -----

About a minute?-- No, I haven't got that far yet. You flick the lever on the top and that will - and then you'll hear it click, and then you traverse the roadway in an up-and-down movement and you've got a minute to actually traverse that whole roadway and then that will give you a reading.

So when you say "traverse the roadway", do you mean walk down or up the roadway?-- No, where the vent station is marked, that vent station is marked and it has a cross-sectional area and with the anemometer you traverse from rib to rib that area.

So you traverse completely across the width of the roadway?-- Yes.

From -----?-- From floor to roof.

Floor to roof, and you do that three times, do you?-- Three times and then take an average of those three readings.

Now, were you told at some stage that was the way the readings were to be done with the instrument?-- I was not told at any stage, that's just the way I've been trained or taught to do a reading with an anemometer.

Do you recall who instructed you or taught you to do it that way?-- That would have been done at either the mine deputies' course or through the rescue brigade training.

As far as you know it was a standard method of taking the

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reading, a standard method taken by other deputies?-- Yes.

Then having got the three readings you average them to use one figure for the velocity of the air; is that so?-- Yes.

The Drager tube is used for the CO reading in parts per million?-- Yes.

Would you agree that the Drager tube has certain limitations in terms of accuracy?-- I would agree with that, yes.

There are potential errors in, for instance, counting the number of pumps that are required to get a reading?-- Yes.

There are potential errors in the way people read the stain in the tube?-- There is that potential, yeah.

And has it been your experience that there are occasions when people taking readings in the same area in a roadway will get different results?-- Yes, that is correct, yes.

That's quite a common occurrence?-- It is quite a common occurrence, yes.

Are you aware of any other instruments that can be used to determine CO readings?-- Yes, there are other instruments that can be used.

Is there in particular an electronic instrument called - is it a Multiwarn system?-- Yes, you can use a Multiwarn or a Comowarn.

Does that instrument give a digital read out of the CO concentration?-- Multiwarn does, yes.

Then it's simply a matter of the operator reading the digital figures to record them somewhere as the readings are given?-- Yes, that's correct.

Do you agree that's apparently a far more accurate way of taking a CO measurements?-- I would agree with that, yes.

Was there such an instrument available to your knowledge at Moura No 2 at the time we are talking about back in July and August this year?-- That instrument was not available at Moura No 2. It was available at the Mines Rescue station, but it wasn't available at the No 2 underground mine.

Just for the record, where was the Mines Rescue station in relation to Moura No 2?-- In Moura itself.

If you were at some stage or any stage concerned about the accuracy of CO readings being taken it would have been possible to obtain the Multiwarn and get a digital read out of the concentration?-- Yes, that's correct.

I take it that the instrument at the Mines Rescue station could have been used at Moura No 2 if necessary?-- It would have been - could have been used. It may have even actually

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been used that afternoon we were discussing before.

That's the afternoon of 22 July?-- Yes.

The day that you did your first CO make readings?-- Yes.

That was the day, I think you told us, that Mr Abrahamse, Mr Kerr and Mr Atkinson apparently went underground to verify the readings that you and Rose had taken of 8 ppm?-- That was the day, yes. I believe it was Mr Barraclough and not Mr Atkinson.

Sorry. In any event, the reading reported back to you by them was a maximum of 5.5?-- Yes.

You don't know whether those readings were taken using a Multiwarn or a Drager tube or both?-- No, I don't know that, no, I don't.

Mr Kerr, of course, he was from the rescue station, wasn't he?-- Yes, that's correct.

Now, the discussions that occur that day, that is 22 July, apparently led to a change in procedure to do daily checks on the CO make?-- Yes.

And that arose out of concern for the fact that there were different readings being obtained, one of the concerns was there was some worry about the different readings being obtained?-- Yes, that would have been the major concern.

So if there was some jumping about, as it were, of the CO readings you'd keep a closer watch on it by doing readings every shift?-- Yes.

The whole idea being to more closely monitor the trend of the CO make?-- Yes.

And you've told us that the trend was important because it could indicate signs of a heating?-- Yes.

You told us the procedure was for the deputies, each of them on shift, to do those calculations to enable the make to be calculated?-- If required, yes.

If you took the readings it would be a simple matter, wouldn't it, to do the calculation to get CO make?-- Yes.

If you had velocity and parts per million and a known cross-sectional area of the roadway you could do the CO make calculation very simply?-- Yes.

And all of that information was available as from 22 July on a shift-by-shift basis; is that so?-- Yes, I believe so.

That's as you understood the change to the system, that was the idea of it?-- Yes.

So that information would be recorded in the mine deputies

reports firstly?-- It would be reported in some - should be reported in all the mine deputies reports and it was also recorded in a log book.

So every shift you'd have a deputies report which would record the air velocity, the station where it was taken, the parts per million on the Drager; is that so?-- Yes.

And from there it's quite a simple matter, as you've told us, to calculate the CO make?-- Yes.

In addition to those records there was, you say, a log book kept of the same readings?-- Yes.

Which would be air velocity, parts per million and the location of where it was taken?-- Yes, and relative humidity would have been on that as well, wet and dry bulb reading.

Where was that logbook kept?-- That logbook unfortunately would be on the crib table down the mine.

In fact, that's where the logbook was for the whole period that these readings were being recorded; is that so?-- Yes, I believe so.

That would make it perhaps much more difficult to do the calculation to get the CO make?-- Yes.

I mean, you wouldn't ordinarily do the calculation underground, would you?-- Not unless you had that knowledge, no, that's correct.

The knowledge to do it really was located on the surface; is that so?-- Yes, on the computer.

So, the logbook, being at the crib table underground, was virtually useless other than to record the parts per million perhaps of the CO?-- Apart from information to the deputies, yes, that's probably correct.

Do you know who instigated the procedure to have a logbook kept at the crib table as opposed to in the deputies' cabin up on the surface?-- I don't know who instigated it.

Was it ever intended, to your knowledge, that the logbook from the crib table should be taken to the surface for the CO make to be calculated?-- No, not to my knowledge.

The logbook was in fact the only book which had all that information shift by shift collated in one place; is that so?-- Yes.

If you wanted to do the CO make calculation, otherwise you would have to sift through each deputies report and take the information from that report into a different book?-- That's correct.

So, can we assume that the idea of the logbook was to have that information in one place to calculate the CO make very quickly?-- If required, yes.

Well, it was required, wasn't it?-- If there was an upward trend you would then calculate litres per minute.

You wouldn't know if there was an upward trend unless you did the calculation?-- Well, you can still gather an upward trend by just looking at parts per million. If you have got parts per million -----

These are - sorry, finish what you are saying?-- If you have got parts per million, if you have got 6 and then all of a sudden it goes to 8 and it goes to 10, you would then make a calculation on litres per minute. You can also get an indication from the parts per million, and that's how most deputies would react to it, if they saw a CO parts per million was on an increase they would have cause for concern.

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So you are really saying that the change in procedure was only to the extent to do a CO make calculation per shift if required or if needed?-- Yes, I believe so.

You have looked at the graphs, and I may take you back to those, but it's fairly apparent from those there was a steady increase in the CO make from the panel?-- Yes.

If you drew a straight line through the curves, you would have a steadily upward facing straight line, wouldn't you?-- Yes.

Well, is that the sort of increase that you would refer to as being a rather sharp increase in CO make trend?-- No.

Why was that? What would you have expected to see before you had become concerned about the CO make trend?-- I would expect to see a rather sharp climb and that would be a gradual rise with a straight line.

You were a member of - I should say, you are a member of Mines Rescue; is that so?-- That's correct.

And you have been since 1980?-- Yes.

Did you have any training or instruction through Mines Rescue as to the significance of a CO make figure?-- Yes.

Did you receive training or instruction to the fact that a CO make reading above 10 litres per minute was some cause for concern?-- Yes.

The graph indicates, does it not, that from sometime in June, I think it is, the CO make was over 10 litres per minute?-- It does.

With the exception of a short dip around about 16 June?-- Yep.

So you had a steady upward trend above 10 litres per minute from about June; is that so?-- No, you had a very gradual trend from that point.

You call that very gradual, do you?-- What date are you referring to?

Well, we looked at - I am sorry, we should identify this. You are looking at which exhibit there at the moment?-- Exhibit 25.

And that's the graph, the last point of which is Friday afternoon 5 August; is that so?-- Yes, that's correct, 5/7, yeah.

Well, what was the - do you see - take 15 July, for instance. You see the figure there is just below 15 litres per minute?-- 16 July is it? 16/6/94?

No, 15/7/94?-- Okay, yep, righto.

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You see it's about - just under 15 litres per minute?-- Yes.

Then there is a slight dip?-- Yes.

Through the 22nd, 23rd, 29th?-- Yes.

And then the trend starts up again, as it's plotted on this graph?-- Yes.

Well, that level of about 15 or slightly below 15 litres per minute, what did that indicate to you, if anything?-- That the section was reasonably stable in its CO make.

At 15 litres per minute?-- Yep, yes, that's correct.

Where did you get that information from, that it was stable at about 15 litres per minute?-- Well, just by looking at the graph I would then - I would surmise that it's just under 15 and then stays that way for about three weeks. See, with - can I just - with relevance to between 10 and 20 litres, it's my belief that every coal seam is different and that's just a - that's just a figure. If it's a steady upward trend or it's stable, I wouldn't - in my mind, wouldn't show any cause for any concern.

When you say "stable", though, do you mean the level flattening out and not increasing?-- Yes, I do, flattening out or just a very gradual increase.

Well, you had it going past 10 litres per minute in about June and then in July it was up around just under 15?-- Yes.

What sort of increase would you call that?-- I would assess that would be gradual.

In any event, on that graph, Exhibit 25, as you have - I think your attention has been drawn to the fact that you have on there plotted 23 July?-- Yes.

That's the day after your first CO make readings?-- Well, I believe I didn't plot that, but, yes, I can see it's there.

The point is I think you said you don't know how that came to be there?-- Yes.

Because the procedure for that graph didn't change during the time that you were there for that three weeks?-- Not to my knowledge, no.

So, despite the fact that the information was being gathered to enable a shift by shift CO make calculation, the graph was plotted the same, to your knowledge, week by week?-- Yes.

So, the information that was being gathered just wasn't being displayed?-- Yes.

And the information was being gathered because of concerns about what the trend was doing?-- Yes.

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To enable it to be more closely monitored?-- Yes.

So, it was being more closely monitored but not being displayed?-- Yes.

In addition to those Drager tube readings that were being taken by the deputies on every shift, the Unor system was continuing to operate throughout the whole period, wasn't it?-- That's correct, yes.

So, if there was some concern about the inaccuracy of the Drager tube readings being taken by the deputies, they could be crosschecked against the Unor readings being displayed on the surface?-- Yes, that's true.

Indeed, those readings by the Unor system were being recorded on the computer throughout the whole period?-- Yes.

So, another way of checking, for instance, your reading of 8 ppm on 22 July would be to check the Unor system?-- Yes.

I think you may have told us it was reading in fact about 6?-- I did say that, yes.

So you could cross-reference the Drager tube readings with the Unor system?-- Yes.

And you could also use the other instrument we talked about being the Multiwarn electronic digital system?-- Yes.

All of those ways could be cross-referenced to try and get to the bottom of what the CO concentration was?-- Yes.

If you were really concerned about it?-- Yes, that's correct.

Can I show you again, please, Exhibit 21? I think you have it in front of you actually. Could you turn to the page which has CO make for panel 512 which is the one apparently - appears to be signed by Allan Morieson on 18 August '94. Do you have that? I can't quite read it from there, but I think the bottom right-hand corner appears to be Allan Morieson's signature?-- 18 August?

18 August '94, and traces the CO make on that page from 22 July, your first day, through to the Saturday, 6 August?-- Yes.

Now, I think you have said this, but the last reading there, the Saturday 6 August, the CO parts per million is 7; is that so?-- Yes.

You weren't working that day, so you probably don't know where that came from?-- The handheld 7 or the Maihak 7?

The handheld 7?-- No, I don't know where it came from. I would presume it came from the vent station.

So you would expect that to have been taken by a deputy on

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that day at vent station 46?-- Yes.

That records 7 parts per million?-- Yes.

Now, the one beside it, which is the Maihak reading, is also 7; is that so?-- Yes.

What would that represent, as far as you understand it, in that column?-- That is an - compared to the Friday there is no increase, but they are both correlated together, so -----

What I actually mean is that figure which is put in that column, is that a reading to represent at about the same time the deputy takes his handheld reading or is it to be a weekly average on the Maihak system for that period?-- I would assume that would be - still be the weekly average.

Is that perhaps why it's the same as the figure for Friday, 5 August, because normally you wouldn't have two readings on consecutive days, would you?-- No, that's correct.

So, the Friday reading, which is the Friday that the graph goes up, you have a weekly average on the Unor system?-- Yes.

In that column which is 7?-- Yes.

You have a handheld reading in the column beside it to the left which is the deputy's reading on the Drager tube?-- Yes.

And both of those readings on the Friday and Saturday shifts correspond with the Unor readings, don't they?-- Yes.

If you wanted to know more accurately what the concentration of CO was, you could bring it up on the Unor system as parts per million that day, couldn't you?-- Yes.

If the Unor system is reading in excess of 7, you would have a higher CO make for that day, wouldn't you?-- You would.

If in fact the CO make was reading 10 parts per million on a Friday and the Saturday, you would have a significantly higher CO make, would you not?-- You would, yes.

Can you give us some estimation of what that might have been? If it was, say, 10 on the Unor system on the Friday and Saturday. It's an increase of 3 parts per million over the weekly average, or said to be the weekly average?-- How do you mean an estimate? In litres per minute?

Litres per minute, I am sorry, yes. If you disregard it being 7 parts per million and assume it being 10 parts per million, what would the litres per minute come out at approximately?-- Approximately probably be around 18, 19.

18 or 19 as opposed to what you had there of 14 and 16?-- Yes.

And that would be the sort of rise that would give you cause for concern?-- Very much so, yes.

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So it's a little artificial, isn't it, to be taking the weekly average figure at a time when you are trying to closely monitor the CO make trend?-- Yes, not very wise at all.

Because one reading - an average reading for the whole week can be quite misleading as to what the panel is doing on the day that you want to post this graph?-- That's true.

In terms of showing what the trend is, it's going - it can possibly mask the rise in the trend?-- Yes, that's correct. I did have that conversation with Mr Morieson in actual fact.

Which one was that, sorry?-- Mr Morieson, when I had the conversation with him why he was using the weekly average and not a Friday reading on the Maihak.

You mean Mr Abrahamse, not Mr Morieson?-- No, I had it with Mr Morieson, Mr Allan Morieson. This is -----

This is after he returned?-- Yes.

And an example of the significance of the difference you have just given us, that if the Unor system was reading, say, 10 on Friday and Saturday, you would have a significantly higher litres per minute make?-- You would, yes.

Without being overly repetitive, you have - all of that information was available on the Unor screens, on the Drager readings and indeed on these deputies reports and logbook that have been kept since 22 July?-- Yeah, that information was available.

If you wanted to closely monitor this trend, it could have been done on a shift to shift basis from 22 July this year?-- It could have been done, yes.

But it wasn't?-- I don't believe so.

Mr Bryon, were you aware at any stage of the detection of unusual smells inside 512?-- That information was not correlated to me at any time. The only unusual smell that was told to me in 512, that myself and Mr Barraclough encountered when we did an inspection of the waste the day that the roof fell down and damaged the ventilation was the smell of chemical roof bolts.

You may have told us the date of that, but can you tell me again, please?-- I didn't tell you the date because I couldn't remember it, but it was a Saturday a couple of weeks prior to when I took up the ventilation officer's job.

You think probably sometime in July this year?-- Yes, I believe so.

So, you found out about these reports of smells inside the 512 after the event, did you?-- Yes.

Even though you had been working for three weeks in the

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lead-up to this event as ventilation officer?-- Yes.

No-one told you there had been reports of smells inside the panel?-- I had no report of any smell inside the panel.

Had you known there had been reports of smells, it would have had some significance to you, wouldn't it, as ventilation officer?-- It would have had great significance to me, yes.

The great significance being a smell associated with an increasing CO make trend would tell you what?-- Would tell me that we probably had a spontaneous combustion problem.

Which needed action taken immediately to rectify it?-- It would have taken immediate investigation and then perhaps action to rectify it, yes.

Because if you had a heating and you seal a panel, there is going to be a period before the heating goes out through lack of oxygen when there is a dangerous situation?-- That's correct.

The dangerous situation arising through the gases inside the sealed panel, namely methane, going through the explosive range?-- That's correct.

Was there any policy at the mine as far as you know for dealing with that situation in terms of whether the men would be sent underground during that period?-- There was no specific policy. Every case was dealt with on its merit.

I take it though if the men themselves had some concerns about going underground they would not have been forced to do so?-- No, they wouldn't have been forced to do so. If they had a concern it would have been addressed and they wouldn't have been forced to go underground.

Did the procedure seem to be unless the men raised a concern no concerns were dealt with? Do you understand what I mean? Was it up to the men to raise concerns about their safety before anything would be done?-- I wouldn't say that totally, but that would more than likely be part of the case, yes.

Was there an aspect to it if the men raised concerns it would be dealt with, but unless they did it wouldn't be? In terms of this situation I am talking about, that is, the mixture going through the explosive range? If the men were uncomfortable about going underground they wouldn't be forced to?-- If the men felt that there was a possible ignition source when a sealed section was going through the explosive range they wouldn't have been forced to go underground. There was a case in 5 North where as miners' officer I spoke to the then manager, Mr Phil Reed, when they sealed that panel off. We had a possible - the section was crushing down and there was a possibility that we may have an ignition source being frictional ignition. We had a discussion and the men were - did not go down the mine until that section was through the explosive range.

Was that at the instigation of the men or management?-- That was at the instigation of myself and a few other gentlemen that were concerned about that possibility.

As soon as you raised your concerns the management had no hesitation in complying with your request not to go underground?-- No hesitation whatsoever.

But you had to raise it?-- It was raised, yes.

Now, for the men to be aware of a potential ignition source the men would need to know the facts, wouldn't they?-- That's correct.

The men would need to know that the CO make trend was steadily going up, firstly?-- Yes.

They would need to know there had been smells reported inside the 512 Panel?-- Yes.

And unless they knew those facts they might not have appreciated that there was a heating or potential heating inside the panel?-- Yes.

Without those facts the men could not decide to raise concerns about going underground during the period when it was going

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through the explosive range?-- Yes, that's correct.

Just one quick point, Mr Bryon. You have given your estimate of what the CO make in litres per minute would have been had the Unor system on the Friday and Saturday been reading about 10. Can I suggest this to you - I am not being critical of your calculation - but if the Unor system on the Friday and Saturday was reading - on the Saturday, I beg your pardon, was reading 10.5 ppm, the CO make would be 25 litres per minute? It is hard for you to comment, I suppose, because you don't have a calculator in front of you?-- Okay, yeah.

I am talking generally?-- Generally that, yeah, okay.

I mean, that could be mathematically verified, can't it, my calculation?-- Obviously, yeah.

Again, unless you were doing - keeping a close watch on it shift to shift you don't see those high readings, do you, because they were averaged out over the weekly make?-- That's right.

And it is also dependent upon the reading of wind velocity or air velocity inside the panel at the ventilation stations?-- Yes, that's correct.

That was a piece of information that was also taken every shift from 22 July, wasn't it?-- Yes.

In the manner you have indicated, quite appropriately, traversed the whole roadway of the ventilation station rib to rib, floor to floor three times and take the average?-- Yes.

So you get a reasonably accurate measurement of the air velocity, ventilation?-- Yes.

Then use the Drager or Unor system ppm to calculate this CO make?-- Yes.

Thank you.

WARDEN: Thank you, Mr MacSporran. We might take a few minutes for a break and resume.

THE COURT ADJOURNED AT 11.15 A.M.

THE COURT RESUMED AT 11.34 A.M.

STEPHEN MICHAEL BRYON, CONTINUING:

CROSS-EXAMINATION:

MR MARTIN: Whilst you were ventilation officer - acting ventilation officer do you know if any changes were made to the ventilating system in relation to panel 512?-- Not to my knowledge, no.

Is it possible to read on a Drager tube 5.5 ppm?-- That's not my belief, no.

Yet it seems to appear in Exhibit 21, the documents you have been looking at?-- Yes.

In relation to your visit underground on 22 July 1994 at vent station 46, could you help the Inquiry, please, with the - how far below the roof the vent tube for the Unor was located?-- I would say about a metre and a half.

How far from the left and right ribs?-- It would be equal to the centre of the roadway.

The anemometer that you used to take velocity readings while you were acting in that capacity, did it have attached a list of correction factors? Were they located somewhere else or did they not exist?-- I couldn't honestly answer that question.

Again talking about vent station 46, how many metres outbye the regulator in the No 1 entry to 512 was it, or was it inbye the regulator?-- Vent station 46 was inbye the 510 regulator No 1 roadway and it would be approximately 10 metres.

When you were so acting from 15 July or thereabouts, in relation to 13 cross-cut in panel 512 would you walk from No 1 entry to the bottom, to the face or cross-cut 13?-- You mean from No 1 roadway to number 6 roadway?

No, I mean down the bottom - top return, I should say, to cross-cut 13?-- Traverse the roadway this way.

I'm asking you whether you did?-- Yes.

How many occasions?-- Only the once.

When approximately was that?-- That was not when I was acting ventilation officer. Sorry if I've misled you there. It was prior to that.

Whilst you were ventilation officer - you weren't ventilation officer, whilst you were so acting, did you traverse number 5 heading or road, what was the bottom return, call that number 5?-- I may have traversed it to the waste edge, but I would not have travelled into the waste, no.

Could you walk into the number 5 entry, number 5 road, from outbye?-- You could do that before the bottom road was sealed up, yes.

From, say, 15 July?-- From 15 July, yes, you would have been able to walk that road.

When did it come about that one couldn't walk that road? By 5 August could you walk the road?-- By 5 August, no, you could not walk that road.

All I'm asking is when it was that the change took place?-- I couldn't accurately answer that question.

Across the various roads at the back of 512 Panel between 12 and 13 cross-cuts - you know where I'm referring to? Stoppings?-- Yes.

On your visits, say from 15 July to your last visit on 5 August, can you describe to the Inquiry, please, the condition in which you found them, if you remember?-- In that time I wouldn't have been into that area.

In that same time did you go from either the No 1 entry into the goaf from 13 cross-cut? It would be right around the back, of course. You'd be looking outbye from where I'm describing?-- In that time I didn't go in there. The only time that I was in there was on the one occasion when I went in there with Mr Barraclough, and in that case we couldn't go into the waste.

Just coming now, if you would, to 5 August, did you get an opportunity to look at the Unor screen in the instrument room?-- I would have had the opportunity, but I can't recall looking at it or I can't recall what was on it.

You see, we have in the document you've been looking at, say for the Friday, 5 August, a Miahak CO reading of 7 ppm?-- Yes.

I ask you to assume that in fact the print-out shows something in the order of varying between 8 and a half to 9 ppm. If one makes that assumption, I'm asking for an explanation if you can give one, as to how the 7 ppm Miahak gets into the documents?-- 7 ppm would be the weekly average. In fact on the day if you've got 8 to 9 that would be what was read on Friday.

I just want to clear up something which still seems in a little bit of doubt. Within the instrument room sits the Miahak and the vent tube system coming into it; do you know that or not?-- Yes.

If one wanted to take a bag sample for the gas chromatograph, I'm suggesting to you all one has to do is to unhook the appropriate vent tube and take a sample?-- Yes, that would be quite simple to do.

And quite short?-- Quite short, yes. No problem.

Is it the case from your recollection that deputies prior to this occurrence on 22 July were only periodically taking samples or readings of methane CO, CO2 in wet and dry bulb temperatures, only occasionally were they doing that?-- Prior to what date?

22 July, the date that you've told us about in your evidence, Mr Macsporran, I think in particular?-- Yes, randomly.

But when you got back to work on Monday which was probably the 25th, the system had changed, as I understand you?-- Yes, that's correct.

So that the records speak for themselves, I suppose, but a virtually daily take of all of those wet bulb, CO, CO2, methane being taken?-- Yes.

Can I just ask you before I forget, who instructed you at Mines Rescue?-- In what area?

Well, particularly the area we are concerned with in this Inquiry, that is explosion, spon com?-- The rescue

superintendent, David Kerr, would have done that.

Was he there at that time? You said "would". The term "would" always confuses me. Did or would have?-- He would have.

Now I'm more concerned?-- He did have then.

If I can just ask you a couple of short questions about your background, you went to grade 12 at school, I understand?-- That's correct.

But you did no sciences or chemistry or physics?-- That's correct.

Did you go straight into the mine when you finished school or -----?-- No.

Just give us a brief background between leaving school and the mine. What types of jobs did you have, very briefly?-- Very little. I went overseas travelling.

When you went underground for the first time, when was that approximately?-- 1976.

What induction did you get, in time? How long, if any?-- I would say a day.

Then you did your deputies course. Am I right when I suggest that it's about 20 weeks with two, three hour sessions per week of instruction?-- That would be correct, yes.

You've told Mr Macsporrán, I think, that you had no training on the gas chromatograph?-- None.

Do you have any basic knowledge of what it is capable of doing?-- I have basic knowledge of what it is capable of doing, yes.

Just tell us very briefly about that?-- The gas chromatograph is there basically because it's the only instrument that we can use to detect hydrogen.

Hydrogen being a sign of what?-- Hydrogen being a sign of combustion. So it can detect that and other types of fire gases plus methane, oxygen.

And CO and CO2?-- CO and CO2 and any other gas probably you want to feed into it it would be able to do that.

Were you ever instructed on the Miahak?-- I was never formally instructed on the Miahak. I have basic knowledge on it.

Did you have to work it out for yourself or did you get some help from somebody?-- Probably a little bit of both.

Who might have helped you in terms of mine management or did you learn what you learnt from a deputy?-- I may have learnt

a little bit from the undermanager on shift or an electrician and perhaps even a deputy.

What training did you receive in spontaneous combustion in mine rescue? Is it the situation that your acquisition of knowledge about that feature was at the best basic?-- That would be a reasonable description, yes.

Since you became a deputy, or indeed since you became a miner and apart from your Mines Rescue teaching, has the mine ever provided you with any course or training in relation to spontaneous combustion or explosibility of gases, anything like that?-- Not that I can recall. I have seen some booklets.

Well, what type of booklets?-- I've seen a little orange book given to me in 1979 when I returned back to the mine.

I am colour blind and I call it red, but I will ask you to look at it - or look at a book. Have you ever seen either of those?-- Yes, I've seen both.

You have seen the red one? Where did you see the red one?-- The red one was given to me in 1979 when I first came to the mine - second, when I returned to the mine.

Did you when you were at Mines Rescue, have - when did you get your training at Mines Rescue? What approximate year?-- I couldn't give you an approximate year. It was ongoing from 1980.

Have you ever seen a document - or a book with a glossy cover by, say, Strang and MacKenzie-Wood?-- Yes.

Did you ever come to study it?-- Occasionally.

Do you know the organisation called SIMTARS?-- Yes.

Do you know what facilities it provides to mines?-- Yes, it's basically a research station.

Do you know that the research facility is interconnected with a mine to a gas chromatograph by way of a Telecom modem?-- Yes, I'm aware of that.

Are you aware that if a gas sample from a gas chromatograph needed to be analysed in depth it could be transmitted by that means to SIMTARS to a 24-hour a day scientist?-- Yes, I am aware of that.

Have you ever known the gas chromatograph at No 2 to be used apart from weekly testing?-- Yes.

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When?-- We have used it on numerous occasions during rescue training when we have taken bag samples in specific areas and run it through.

But that's in association with Mines Rescue?-- Yes.

But in terms of usage by the mine for gas analysis, have you ever seen it used or know of it being used?-- I have seen it used, yes.

How long ago?-- I couldn't actually give you a date, but I have seen it used.

Well, once or more than once?-- More than once.

More than 10 times?-- Not more than 10 times.

About five or a few, or how would you describe it?-- Half a dozen times.

Do you know anything about the ratio called the CO and CO2 ratio?-- A little bit.

Would you tell me, please, what you understand its purpose to be?-- The CO, oxygen - O2/CO ratio is a ratio which relates to the amount of oxygen being absorbed by the coal to the amount of carbon monoxide being produced.

But what I asked you - and you misunderstood me obviously - the ratio between CO and CO2. I might have not put it properly to you?-- I am not fully aware of that, very basic knowledge.

I am still trying to understand the alarm system on the Unor. Is there an alarm system?-- There is.

Is it constituted only of a red flashing light and a beep?-- No.

All right. Well, what is any other part of the alarm system?-- There is a bell that rings.

All right. Where is the bell situated?-- I believe the bell is - I couldn't exactly tell you where the siren or the bell is, but the on/off switch is located in the undermanager's office.

Well, is it a siren or is it a bell?-- I believe it to be a bell.

All right. So, to cause the alarm not perhaps to operate, the switch on/off is within the undermanager's office?-- It's mounted on the door, yes.

All right?-- Door frame.

Have you ever heard it go off?-- Yes.

Are you aware of an instrument called probeye?-- Yes.

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WIT: BRYON S M

There was one present at No 2 Moura within the instrument room?-- Yes.

Are you aware of its purpose?-- Yes.

By infra-red detection to pick up heat?-- Yes.

Or a heating?-- Yes.

Have you ever seen it used? Have you used it yourself?-- I have used it, yes.

When was that?-- Many years ago.

All right, but in connection with any particular panel?-- No.

All right. Would you first tell us about your usage of it? Was in connection with Mines Rescue again?-- It was, yes.

But not in relation to anything organised by Moura mine?-- No, I have never seen anything organised with the probeye at the Moura mine. There has been a case where it has been used in 5 North, but I was not involved in that.

And, of course, you are aware of the gassy nature of Moura coal seams?-- Yes.

And, indeed, the spontaneous combustion propensity or capacity of those same seams?-- Yes.

Have you ever been within the room of Mr Mason or Mr Schaus?-- On numerous occasions, yes.

Well, you have told us about a book of Strang and Mackenzie-Wood that you are familiar with from Mines Rescue. Within the room of either of those persons did you see that book?-- I have seen the updated version of that book in their room, yes.

Well, I might just show you the book. Is that the book you refer to?-- That's the one, yes.

Just read its title?-- "A Manual on Mines Rescue, Safety and Gas Detection".

When did you see that, over what period of time?-- Relating back over time?

Yes?-- Probably about five to six months ago.

Before or after 7 August 1994?-- Before.

Are you able to say to the Inquiry in relation to incubation period whether it depends upon a host of variables, varying factors?-- Yes, I'd agree with that.

But the principal feature of it, I suggest, is that it has

occurred and, therefore, it may occur again in the Moura region?-- Yes.

When you went into - so far as you went into Panel 512 on any occasion during extraction, was there a lot of loose coal lying around?-- Yes, a considerable amount of loose coal lying around.

They were using there a technique of ramping?-- That's correct, yes.

That, of course, contributed to loose coal being left behind?-- That's correct.

Because it couldn't be gathered by the miner without bogging?-- There is no possible way that you could retrieve all the coal under that system.

Do you have any opinion within your range of knowledge as to the panel design, whether it was good or bad or indifferent in terms of roadways?-- My opinion of the panel design is that it was not good.

Why is that?-- Because of the large barrier pillars in the middle.

The seal used finally for 512, that was Tecrete?-- That's correct, yes.

Are you familiar with that technique as a final seal?-- I was not familiar with it until I saw it at the Moura mine.

What, in its final stages or what? When did you see it at Moura mine, that's what I am asking? Are you talking about prep seals? I am talking about final seals?-- Well, they are both one and the same in the situation that I am referring to.

You mentioned in your evidence probably to Mr Clair, I am not sure, something about diesels and that perhaps the reading you got, I think, on 22 July might have had some association with the usage of diesels?-- Yes.

What can you tell us, if anything, about oxides of nitrogen in determining whether the CO make is from diesel or not? Do you have any knowledge about that?-- I have no real knowledge about it, but I have seen cases where, if you have a diesel in the area, it will increase your carbon monoxide reading.

Yes, but all I am asking is whether you know oxides of nitrogen can't - don't, I should say - come from coal?-- I am aware of that, yeah.

All right. So, if one had a concern about it - if management had a concern about what it was, they could run an oxides of nitrogen test on the Maihak?-- I believe so, yes.

A few more things. Do you know where the final seal ended up within or inbye in Panel 512? Final monitoring point, I

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should say?-- Where it ended up?

Yes?-- On the Unor line inside the seal?

Yes?-- No, I can't tell you exactly where it ended up. That happened on a weekend when I was away.

Who fixes the final positioning of that monitoring point, an inbye final seal monitoring point?-- Who establishes where it would go?

Yes?-- That was usually done in consultation between the mine deputies and the electricians and management. Usually it would be one in as far as possible outside the zone of influence of the seal.

The zone of influence of the seal, I take it to mean that when it breathes, so you are talking about a situation, I take it, where it's not being diluted - the sample is not being diluted?-- Well, the sample is not being diluted by the barometer, that's correct, when the seal breathes or blows.

Have you ever seen a written format for sealing?-- There is no written format for sealing. I have never seen one.

Do you know of any requirement to inform the Mines Inspectorate, otherwise the Chief Inspector of Mines or one of his Inspectors about a final sealing before it's done?-- I can't recall a requirement, but I am quite sure that if there was a final sealing taking place that it would be - there would be consultation.

What time did you finish your shift on the Friday, probably 3?-- 3 o'clock, yes.

That's 5 August?-- Yes.

What was happening at that stage in relation to sealing, if anything?-- Nothing.

What about the provision of materials? Was it being got ready for sealing?-- There would be equipment there ready for sealing.

Do you know of any analysis in the past 12 months of risk generally for the mine conducted by BHP?-- There have been certain risk analyses conducted, yeah.

Do you know anything about an assessment in relation to spontaneous combustion?-- I cannot recall a risk analysis in regards to spontaneous combustion.

Can I just take you, please, to production deputies report number 3738? You can look at mine. Is that your report for the Sunday afternoon shift 24 July?-- Yes.

I note at the bottom under "general comments" that, "Pallets of Tecrete should be taken on site, bottom supply road". All I am asking is for what purpose?-- That would be for sealing

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off.

Getting ready for final sealing?-- Yes.

On instructions from whom?-- Sorry?

Who instructed that? We are talking about 24 July. I am asking whether you received an instruction about that at that time, given its proximity to 22 July?-- I probably wouldn't have received an instruction, no. That's probably my own doing.

I tender that document.

WARDEN: I will mark that Exhibit 75, please.

ADMITTED AND MARKED "EXHIBIT 75"

MR MARTIN: In connection - do you know that BHP Australia Coal has a system of a quality assurance and audits and designations of people to fulfil particular roles? Do you know that?-- Yes, I am aware of that.

Well, can you tell the Inquiry whether you were a quality assured person to undertake the ventilating officer's position?-- No, I would not have been quality assured to undertake that position.

There has been much talk here about a certain Union meeting that - you weren't at Moura?-----

That's all I have, thank you, Your Worship.

MR MORRISON: I didn't hear the end of that question. Was there no question?

WARDEN: I think Mr Martin realised what the answer was as he asked the question.

MR MORRISON: Lucky him.

WARDEN: The witness was in Maroochydore, not Moura, so he couldn't answer the question.

MR MORRISON: That never stopped him before.

CROSS-EXAMINATION:

MR MORRISON: Mr Bryon, when you got the readings on your first occasion as ventilation officer, or acting ventilation officer, you were down there in company with Mr Rose?--

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That's correct.

Was it you who operated the anemometer or was it Rose?-- It was myself.

Did you do all the physical taking of readings?-- I did.

And you gave the results verbally to Rose and he wrote them down?-- That's correct.

Did you take the opportunity to check what he had written against what you had seen?-- I did not.

I see. At no stage did you do that?-- Not down the mine, no.

Did you take the opportunity to do that when you came to the surface?-- Yes.

Is that when you handed the information to Mr Abrahamse?-- When we were in the process of handing the information, yes.

I think I am right in saying that the Drager tube for the 8 parts wasn't brought to the surface. I think it was chucked in the rib?-- It was discarded, yes.

That's usual practice; most people don't hold onto their Drager tubes, do they?-- No.

All right. Just on the Drager tubes, you are saying you didn't think anyone could read 5.5. You might be right about that. I suppose it would depend on a person's expertise and their willingness to venture their eye, wouldn't it?-- That's correct.

Because on the Drager tube it doesn't even give you intervals between 5 and 10; you go straight to 5, 10, 30, 50, 70 and so forth?-- On the tube you have got in your hand, that's correct.

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So then the Drager tube doesn't give you say 6, 7, 8 or 9, that has got to be a judgment too?-- That's correct.

When you gave the information to Abrahamse I think I am right in saying - I am pretty sure I am right in saying - you only gave him one velocity reading, you didn't give him all three and then start averaging out. You and Rose - maybe it was Rose - only gave him the one?-- No, that is not correct.

I think you might have given him 1.77; is that right?-- No, we would have given him three readings and he would have averaged them out.

Did you see him average them out? Did you see the calculation being done?-- No, he was using a computer.

Okay. Now, it was obvious the moment you gave him the third reading then, if what you say is right, that the 3.76 just couldn't possibly be right?-- That's correct.

How did it get recorded as "3.76"? Did Rose do that?-- He would have done that or I would have misread it.

More likely him not hearing you right than you misreading it, I would have thought?-- That's possible, yes.

And you knew when you got to the surface, at least, that there was some - pretty much straight away there was some doubt about the 8 parts too, it wasn't matched by what was on the Unor?-- That's correct.

So, the conversation with Abrahamse, apart from imparting the data to him, was pretty much straight away and always in the context that there were some difficulties with the readings?-- Yes.

There was a need to verify whether the 8 parts was right?-- Yes.

And the suggestion was made, I think you said, after discussion that you might - or you or Rose might go down and verify it?-- We suggested that and it was said that the afternoon shift would do that for us.

All right. So, in any event, some people did go down to see if they could verify the 8 parts and as it turned out the 8 parts was an incorrect reading, wasn't it?-- Yes, that appears to be so.

It wasn't matched either by the Unor or any of the readings the people got on the afternoon shift?-- That's correct.

Those readings were taken, I think, as you understand it, at least - I am only interested in your understanding, you obviously weren't there - as you understand it, it was taken by Dave Kerr, Jacques Abrahamse and I think you said Joe Barraclough, it may have been Atkinson?-- It may have been Terry Atkinson, but to my belief it was Joe Barraclough, but I could be wrong on that.

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You certainly would place a lot of reliance on reading a statement by someone like Dave Kerr?-- Yes.

I think also the reading was verified or, at least, matched against readings taken by the deputy in the section at the time?-- Yes.

That was Reece Robertson?-- That could be the case. I don't know who the deputy was.

All right. And when the correct readings were ascertained they, in fact, matched with the Unor and then were used to calculate the real CO make, not the notional one based on the false CO readings?-- Yes.

Now, your trust in Mr Kerr's abilities would extend also to all aspects of taking that sort of reading, anemometer readings, Drager readings and so forth?-- Yes.

When you were asked to take over the position I think you were saying that you only heard about it virtually the day Morieson left?-- Yes.

Did you have any information imparted to you by Mr Stafford or related to you from Morieson via Stafford?-- No.

I think Morieson spoke to Stafford with a view to you receiving some information about the position. Were you aware of that?-- At a later date I was aware of that, yes.

But Stafford didn't actually pass it onto you?-- No.

You received some sort of document from Morieson, like a list of tasks?-- He left a document on his desk, yes.

And it eventually got to you on the day you took over, I suppose?-- That's correct, yes.

And the headings for the tasks would have been stone dust samples here or there, vent station readings in these vent stations and that sort of thing?-- Yes, that's right.

And in terms of taking readings at a vent station, you didn't need any detailed instruction from Morieson for doing that, as I understand what you are saying?-- That's correct.

This is something you had experience with and done before?-- I had done vent surveys before, yes.

The extent of your knowledge and experience at that time included not only the theory of taking those readings, you had actually physically done them before yourself?-- Yes.

So, in terms of fulfilling that part of the role there was no difficulty at all with you stepping in, in terms of taking vent station readings?-- No.

I take it you didn't ever anticipate that you would be

fulfilling all the tasks of a ventilation officer such as conducting inductions in fire fighting and running the fire fighting team and things like that? You never contemplated that?-- No, I didn't contemplate that.

Your job was really a stop gap. if one could call it that, to take readings and samples and to conduct various vent surveys and so forth?-- Yes.

All right. Now, Rose wrote down the readings on 22 July when he was down there. That presumably was in some sort of notebook?-- Yes.

Do you know what happened to the notebook?-- No, I don't.

Now, shortly after that time, on 27 July 1994, the senior inspector Mr Walker came to the mine and spoke to you; is that right?-- That's possible.

I think he might have done an inspection of the 512 Panel that day in company with Mr Abrahamse. Were you aware of that?-- I can't recall it at this stage.

You do recall speaking to Mr Walker at the mine though?-- I have spoken to Mr Walker at the mine on numerous occasions.

Well, on 27 July you were the ventilation officer still or acting in that capacity and you spoke to Mr Walker that day. Can you recall what the topic of conversation was?-- No, I can't actually.

Did Mr Walker, having inspected the 512 Panel, express any view to you about things being done wrongly or incorrectly in 512?-- I do not believe so. Otherwise I would remember that.

Now, did Mr Walker express any view to you that the ventilation had some particular difficulty in 512?-- I can not recall that either, no.

It is the sort of thing that had he mentioned that that would stick in your mind and you would recall it?-- It would, yes.

I am sorry, I probably misled you a little bit. This may help you remember. I might have said he inspected 512 with Mr Abrahamse. Did I say that?-- Yes, you did.

I meant Mr Barraclough. I apologise. Does that help you remember the occasion at all?-- No.

Did Mr Walker express any view to you about the inappropriateness or otherwise of you fulfilling the particular role you were fulfilling?-- No.

I mean, you knew Mr Walker, you had met him on many occasions?-- Yes, that's correct.

He knew who you were and what position you occupied?-- Yes.

And so he had no expressed concern at all about you fulfilling

the role you fulfilled?-- Well, I can't recall the conversation, but if he did - if that - yeah, there was no complaint with it.

You can't recall him expressing any adverse comment about 512 at all, can you?-- No, I can't.

Nor any adverse comment about CO make?-- No.

Now, you were a miners' officer as well?-- That's correct.

I am sorry, still are?-- Yes.

And another way of calling that is a check inspector?-- Yes.

And that, I think, has some association with, like, a union sanction or union appointment?-- Yes.

And as a check inspector or a miners' officer one of your particular concerns is safety of the men?-- That's correct.

And your role and the role of other check inspectors is that you are there to speak up for the men if, in some circumstances, they don't or should or just don't know what is going on?-- Yes.

And there is no question, is there, that the check inspectors do their job really very well?-- There is no problem there.

They are safety conscious people who will speak up if they consider there is any difficulty with safety for the men?-- If someone approaches a check inspector they will speak up for the men, that is correct.

And the check inspectors will do it off their own bat, they don't need to be told?-- No, they don't need to be told.

And the check inspectors are not reticent in speaking to management, they are happy to bail up management about things?-- In my case I always had a good working relationship with management. If I spoke to them about a problem we usually rectified it.

When you were answering some questions before from Mr MacSporran about concerns being dealt with by the management, I take it you didn't mean to indicate that management ignored such things when they were brought to the attention of management?-- No, that is correct.

That would be contrary to your experience at No 2, wouldn't it?-- In my experience that's correct, yes.

Now, I also understand, I think your evidence to be, that on Friday, 5 August when you did the CO make graph, I think you might still have that there, Exhibit 25 - do you still have it? It is a two page document with the graph on the front?-- Yes, I have it, yeah.

Now, I take it that as at that day, from what you said

earlier, you had no concerns about what that graph revealed to you?-- I personally had no concern.

No. You certainly did not see on that graph the sort of rapid or sharp rise you were describing earlier as being a sign of a heating going on?-- That's correct, I did not.

And there is no doubt about that, is there, because had you considered that the graph showed such a thing then you would certainly have spoken up?-- Yes, that's correct.

Not only to management, but you would have made some comments to others, deputies or undermanagers, whatever?-- Yes.

When such concerns arose, that is to say, safety issues, it was not normal that there would be a one to one between, say, a check inspector and a management person, the discussion would encompass a number of people?-- On most occasions.

So that the topic would be made aware to other deputies who were around and their views would be solicited; likewise whoever was there for management, their views would be solicited and the thing would be thrashed out?-- Yes, that's correct.

I will just go back to one point. When you took over from Mr Morieson you got the list and then you had a conversation with Mr Abrahamse?-- Yes.

And Mr Abrahamse gave you some more detailed information about just what you had to do?-- Yes.

And that was done before you, in fact, embarked on any of your tasks?-- Yes.

And you, I gather, I think correctly, certainly had the view that what you had been told and what was your skill from experience was sufficient for you to perform that task?-- The tasks that were set down there, yes.

Now, you were asked the question just before, and I might just try and understand this a little bit better, by Mr Martin about running a test for oxides of nitrogen on the Maihak. Is that the way you understood his question, that you could, in fact, run a test for oxides of nitrogen on the Maihak?-- I don't believe that you can actually run a test for oxides of nitrogen on the Maihak, on the system we have got.

The Maihak monitors methane, oxygen, carbon monoxide and carbon dioxide, I think, doesn't it?-- Run through them again?

I will reverse the order now. Carbon monoxide, methane, oxygen and CO2?-- And nitrogen.

And nitrogen, okay. Now, if we can stay with the graphs for a moment. You have the other graph there that you were asked to look at, part of Exhibit 21, and you were asked to look at some of the figures on the page immediately before the graph

itself. I think some of them were read out to you. You were asked to look at the fact that the CO parts were recorded as 7 as well as the Maihak average at 7; do you recall that?-- Yes.

Okay. Now, you were asked some questions about 16.66 being one of the figures at the bottom right-hand table and asked questions about the fact that that was a 2 litre rise and what that signified. Now, do you know the circumstances in which that reading was taken?-- I do not.

If it was taken after sealing had commenced and been in progress for some hours, that would affect the veracity of the reading, wouldn't it, because after sealing had been commenced and in progress ventilation would be affected?-- It would be affected, yep.

So that if, for instance, the sealing process was underway and the door - turn to the map if you could, Mr Bryon - if the door which was in the main roadway of 510 - do you see the door marked there outbye the seals?-- There?

Yes, if that door was open during the sealing procedure that would affect the velocity and, therefore, the CO make reading?-- Yes, that's correct.

And if the regulator, which you referred to earlier, down near the vent station had been partly dismantled and not rebuilt at the time this reading was taken, that would affect the ventilation and, therefore, the veracity of the reading, wouldn't it?-- That's correct.

And likewise the fact that the panel itself was partially sealed would affect the reading because it would increase CO itself, that mere fact that you had partial sealing?-- That's possible.

You see, you weren't told, but its the case, that that reading was taken quite some hours after the sealing process was underway. So, on that basis you would agree with me, wouldn't you, that that figure has to be looked at in that context?-- That seems logical, yeah.

And likewise you mentioned that the monitor point position was inbye the sealings and ideally out of the zone of influence of a seal which you described as being the prospect of diluting the sample?-- I said that would be the ideal place to put it. I don't know where it was.

No, I accept that and I am not suggesting you did. If the seal was under positive pressure, in other words, blowing outwards, then that position or the veracity of its position is enhanced because there is no question of dilution, is there, the seal being under positive pressure and blowing out?-- At what stage?

Well, at any stage of the reading. If the seal is under positive pressure from inside the panel it is obviously not breathing in, is it, when it is under positive pressure?-- If

you only partially - if you only got half a seal up you won't get positive pressure.

We are talking about complete sealing. After sealing, if it goes under positive pressure, there is no question of dilution, is there?-- Not under positive pressure on complete sealing, no.

Thank you. Now, when you were acting in your position as ventilation officer for those number of weeks did anyone approach you with concerns over ventilation questions in 512?-- I can't recall that, no.

And the occasion when you went on inspections with Mr - an inspection with Mr Barraclough which you recall as being earlier than 22 July and on an occasion when there had been some falls which had knocked some stoppings down?-- Yes.

All right. I want to ask you to look at some documents, if I can, and we might identify the date for that, actually, with a bit of luck. Now, the ones I have given you at the moment are these - as we go through them you can tell me if I am wrong about them, but I think they are your deputy production reports in relation to 512. You can flick through them. I think you will quickly verify that. There may be, I think, one where you did a combined report with Bony Helander and otherwise they are yours?-- Yes, that appears to be so.

Can I just run you through them for a moment, please? The first - and if I read the document number here it is the report number. I am also going to read a document number. I don't need you to confirm the document number for me, just the report number and date. I am only doing that for the purpose of the record?-- Yes.

The first one is 3911 on 18 May, the Wednesday day shift, document 174. Now, on each occasion of inspection that day you described the ventilation as being adequate?-- Yes.

That was a production day?-- Yes.

The next then is 19 May, Thursday day shift, No 3914 from document 174. Again the description on each occasion of inspection was that ventilation was adequate?-- Yes.

Then the next is 3404 - you will have to help me with the date. I think it is 18 June and I am pretty sure it is a Saturday day shift. Is it hard to read?-- Very difficult to read.

I will try and get you the carbon of that one. Let's proceed for the moment on the assumption I am right and I will get it checked in a moment. That's from document 45. Now, on each occasion then on that day ventilation was adequate?-- Yes.

That was a production day?-- Yes.

And on the second occasion of that day, that inspection you've got down the notation, "Stoppings checked after waste fall. Fall in waste occurred approximately 12 a.m."?-- Yes.

Is that, from your memory, the occasion of doing inspection with Mr Barraclough?-- I'd say that would be it, yes.

We have to get the original to verify the date and I'll come back to that. I'm pretty sure I'm right about it. Can I ask you to turn to the next one, 3406 document 45, it's 18 June, this is the Sunday night shift?-- Yes.

Now, that as we understand it is the shift that actually commences, as we would call it, on Saturday night about 11 p.m.?-- Yes.

Now, that report by you shows only one inspection, the second one not being carried out because of stonedusting?-- Yes.

And on that occasion there were various stoppings down due to a fall, weren't there?-- Yes.

Six stoppings were down due to a fall of roof, and you've got the notation, "Erected same and the methane cleared to acceptable levels."?-- Yes.

The difficulties with methane on that day - or ventilation were caused directly by the fact that stoppings had been knocked down by a fall; is that right?-- That's correct.

And the stoppings that we are talking about were where, can you tell us, on the map?-- The stoppings that I refer to here would not be on that map. They were bag stoppings relevant to the sequencing of the -----

They were the stoppings erected around the miner to ensure direct airflow for the driver?-- That's correct.

Now, if I can pause there for a moment, those sort of stoppings - when I say those "sort of stoppings", that brattice or bag, that wouldn't normally be shown on a ventilation plan, would it, because it's altered from sequence to sequence?-- That's correct.

There is just not many ways of playing with that sort of bagging, one needs to have air over the miner in a particular way and therefore there is really only one or two ways to do it?-- Yes.

Experienced production deputies don't have any doubt usually, do they, with how to put the bags up to direct air over the miner?-- No, certainly not.

I can hand you that document now for the previous one, 3404. Can you confirm for me that that is Saturday day shift, 18 June?-- Yes, that's correct.

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Can you put that in the folder in its place, and we might just leave it in there with the rest. All right, can we turn over then to the next one which I think is 3429 on 26 June, document 45?-- Yep.

Sunday afternoon shift?-- Yes.

Now, I suspect that was not a production occasion?-- No, Sunday afternoons were not production.

On each occasion then ventilation described as adequate on each of your inspections?-- Yes.

Turn the page, please. 3442, document 45, 1 July, Friday night shift?-- Yes.

On each occasion of inspection on that occasion which was a production day ventilation was adequate?-- Yes.

The next is 3451 from document 45 for 4 July, again the night shift on Monday?-- Yes.

Non-production, it seems?-- Yes.

But on each occasion of inspection the ventilation was described by you as adequate?-- Yes.

The next is 3701 for - I think the date is 12 July. This may be another one that's difficult to read?-- Extremely difficult to read.

I will just get the original of it for you to have a look at. 3701 from document 45 is 12 July 1994, Tuesday day shift?-- Yes.

A non-production day again because the electricians were working on a continuous miner?-- Yes.

On each occasion of inspection ventilation described as adequate?-- Yes.

This bears the signature of Helander as well. Is one part of the report his and the other yours or was that simply a counter signing?-- No, that would have occurred because I would have done one inspection and Rod probably would have done the other inspection, that's why there is two signatures on it.

Thanks very much. The next one, if you turn the page - perhaps if you could leave that one in its place too - the next one you've already been shown, it's Exhibit 75, report 3738 for the Sunday afternoon shift, 24 July?-- Yes.

On each occasion of inspection ventilation described as adequate?-- Yes.

This is a non-production shift, of course, being Sunday afternoon?-- Yes.

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We notice that you have written in the readings that you were taking as a result of the decision that you referred us to?-- Yes.

And we notice those under the heading "Action Taken" in the top right corner, don't we?-- Yes.

Now, Mr Martin asked you about the notation of pallets of Tecrete being taken; it's the fact, isn't it, that the bottom return and the number 4 roadway when one is that far outbye in 512 were sealed off ahead of the others?-- That is correct, yes.

And this notation probably relates to one or other of them?-- It would.

That was a usual practice? That is to say, you sealed off those sort of bottom returns and then when the final sealing was taking place you would deal with the other three roadways?-- Well, it's not usual practice, but that has happened on some occasions.

Now, can you turn to the next report, 3740? This is another hard one to read. 22 July 1994?-- Yes, I think so. I can't read this one either.

This shows the benefit of looking at it, 25 July. 3740 is for 25 July?-- Yes.

Is that a Monday day shift?-- It is.

It's from document 45. Now, the occasion of inspection there, on the first time you noted adequate throughout for ventilation?-- Yes.

In the bottom right-hand corner under "Action Taken" we can again see the readings including parts per million of CO?-- Yes.

And you noted the ventilation on the second inspection as being slow?-- Yes.

Now, the next report is the last, I think, for 4 August. 3771 in document 45 again, the Thursday afternoon shift on 4 August?-- Yes.

Ventilation on each occasion described as adequate by you?-- Yes.

And in the bottom right corner the readings for the calculation of CO make if that was warranted?-- Yes.

Now, perhaps just keep them in a bundle for a moment. On none of those reports that we have looked through - and you can check them if you like - on none of those have you indicated under the heading "Other source of danger" anything more than "None apparent" or "N/A", not applicable?-- Yes.

Can we take it correctly then that on none of those occasions

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did you consider that there was any source of danger to men in the panel?-- That's correct.

I tender that bundle, Your Worship, and I'll leave the originals in their place, if I may.

WARDEN: Exhibit 76.

ADMITTED AND MARKED "EXHIBIT 76"

MR MORRISON: I'd just like you to look at another document, if I could. I just want you to look at this document. Any difficulties you have with reading it I will resolve in a moment because I will get the carbons. I think we can make a start. Now, this is an underground shift report for Saturday, and I think the date will be correctly identified as 18 June and the initials you see under the heading of "Undermanager" is Mr Barraclough?-- Yes.

Can you just look down the bottom? There is a notation down there right at the bottom of the page "Substantial falls have occurred in 512 goaf during Saturday and Sunday morning. Stoppings have had to be rebuilt a number of times. All deputies have been made aware and need to monitor" - I think it will be "CH4 and CO carefully"?-- Yes, I can understand that.

Now, having seen that and noted, when I took you to it, your report yourself for the 18 June when you had "Six stoppings down due to fall of roof. Erected same and methane cleared to acceptable levels.", does that now bring to mind that it was 18 June when you made the inspection with Barraclough?-- I believe that to be so, yes.

I will just show you, if I may, the carbon of that undermanager's report so that we can be sure of its date. Is it Saturday, 18 June?-- It is, yes.

Have I read out the bottom portion correctly? "Substantial falls have occurred in 512 goaf during Saturday and Sunday morning. Stoppings have had to be rebuilt a number of times. All deputies have been made aware and need to monitor CH4" - can you read the next words?-- "and CO carefully".

As I read out before?-- -----

I tender the copy of the underground shift report for 18 June 1994 by Mr Barraclough.

WARDEN: Exhibit 77.

ADMITTED AND MARKED "EXHIBIT 77"

XXN: MR MORRISON

WIT: BRYON S M

MR MORRISON: Now, on that occasion of inspection you actually went down - having fixed the stoppings that had been disrupted by the fall, I think you went down the top return and across 13 cross-cut with Mr Barraclough?-- That's correct, yes.

On that occasion, that is down the top return and across, did you notice anything unusual about the ventilation?-- Only that the stoppings were down.

Anything unusual about heat or smell?-- Nothing unusual about heat. There was a considerable amount of dust around, and the smell we did encounter was chemical roof bolts after the fall.

Can I take you back, if I may, to that graph, Exhibit 21. You can probably close up the undermanagers shift report and get it out of your way. I think you mentioned earlier, on 5 August 1994 the readings that led to that point being plotted were not in fact taken by you but by Mr Stafford?-- That is correct, yes.

I assume you would describe him as a reliable deputy in terms of taking such readings?-- Yes.

You didn't double check his readings though?-- I did not do that, no.

When you spoke to Mr Mason before you went away, that is to say on the Friday, what you asked him about was his intentions for sealing the panel?-- That's correct, yes.

Essentially what he indicated was that it would be done early the next week, or the next week?-- He said, "With the weekend work that we have available it may be done Sunday, but if that's not the case it will be earlier on in the week."

Now, you had yourself no difficulty with that proposal, did you?-- No, none whatsoever.

Bearing in mind your role as a miners' officer, looking at it from that point of view, you didn't have any concerns about that proposal either, did you?-- Not at that time, no, none.

You've been asked to comment on the use of the Drager tubes and you've mentioned the fact that different people can have different readings. Quite legitimately they just read them different ways?-- Yes.

Has anyone from, say, the inspectorate said to you at any stage that you shouldn't be using Dragers?-- No, that comment has never been made to me.

Has anyone from the union suggested to you that you shouldn't be using Dragers?-- No.

And you were asked about the red book and the blue book and I think you identified both as having either been in your possession or maybe still in your possession?-- I have seen both the books. I don't know whether they are both in my possession.

You know them to be a Department of Minerals and Energy or Department of Mines production, don't you?-- Yes.

Do you know that they have both been out of print for some years?-- Yes.

Can you think of any reason why the Department wouldn't be bothered about reprinting them?-- Maybe because they need updating.

They do need updating, don't they? The red book, I think, still recommends that you take a flame safety lamp down the mine, doesn't it?-- I can't recall that, but that comment has been passed on to me, yes.

And that hasn't been the case for eight years?-- Not at Moura, no.

Well, it was ruled out after the '86 Inquiry, wasn't it?-- That's correct, yes.

So, to the best of your knowledge then, the Department has not, for whatever reason, it's hard to understand, either bothered to update the books or to reprint them?-- To the best of my knowledge.

Now, when the decision was made to go to daily or shift monitoring of the CO readings, there was a system put in place for gathering that information?-- Yes.

And the first part of that was obviously a deputies report?-- Yes.

To your knowledge, the deputies did report it appropriately?-- To my knowledge, yes.

So that when a deputies report then was made out, it would be taken to the surface?-- Yes.

And the system was that it would be brought to the undermanager's attention?-- The reports were handed to the undermanager.

And then posted so people could read them?-- The undermanagers would read them and then post them, yes.

And then having been posted, eventually they would be taken down and collated somewhere?-- That's correct.

So, in fact for the period we are talking about, which is roughly, say, 23 July through to 5 or 6 August, it's not a long period of time, is it?-- Approximately three weeks.

And one could easily find all the deputies reports in one place for that, couldn't one?-- Yes.

Was it the case also that sheets were given to deputies to put information on about those readings?-- Yes.

They had to record those readings and then those sheets were brought back up as well?-- I don't know about that. They were put into that logbook.

All right. Are you not aware that the sheets were brought up?-- Well, to my understanding they were put into the logbook.

Now, as I understand what you said earlier, the way you understood the system was this: that the information would be there to do a CO make calculation on a shift basis or daily basis if someone thought that there was a reason to do that calculation?-- Yes, that's correct.

But otherwise deputies and no doubt undermanagers would do what deputies and undermanagers have done for long years and that is follow the readings on the Drager results?-- Yes.

You would agree, wouldn't you, that whilst there might be difficulties with a spot reading by a Drager in the sense that we have talked about it already, differences between people and so forth, that that is still a reasonable tool to discern a trend?-- That would be a good tool to determine a trend, but it wasn't an accurate reading.

Quite, and if one saw any sort of a trend that raised an eyebrow, the information would all be there in easily accessible form to see what in fact the make was?-- Yes, that's correct.

In fact the make was calculated by computer?-- Yes.

So there is no difficulty with calculation?-- No.

It didn't depend on anyone's individual knowledge of the arithmetic?-- No.

Now, you were also asked some questions about the readings as revealed on Exhibit 21, and Mr MacSporran asked you to assume that the readings on, say, the Saturday - Friday and Saturday were not 7 but in fact they were 10 and what would that signify. I think you answered him that it would be a higher CO make reading?-- Yes.

I think the figure might have been something like 18 or 19 litres that you postulated, or he postulated, and you didn't demur to?-- I said approximately 19 and he calculated 25.

Yes, well. Now, what you weren't told is that there was no 10 parts on the first of the days you were referred to, the 10 parts only occurred after the sealing started. Would that have to be taken into account in your assessment of the significance of that?-- Yes.

In taking that factor into account we deal with the factors that I mentioned to you earlier?-- Yes.

The fact that the CO make usually goes up on a sealing, ventilation is affected by doors and regulators being manipulated in order to get men in and so forth?-- Yes.

And as well one has to take into account the fact that the very process of sealing involves the use of machines which would generate CO?-- Yes, that's possible.

Diesel machines is what I am talking about, you realise that?-- I realise that.

So, in fact one would have to be very careful about making the sort of leaps of faith that you were asked to make before. You would need to know a bit more before you expressed a view, wouldn't you?-- You would need to know all the details, that's correct.

Now, you were asked whether you could in fact break the line of the Unor and simply take a sample from it over to the gas chromatograph?-- Yes.

Now, normally it's electricians that have to or are permitted to play with Unor tubes, isn't that right?-- That is one of their duties, yes.

Normally if you wanted to play with a Unor tube you would get in a lekky to do it?-- Normally.

I can understand that circumstances might be different from time to time. Have you ever seen anyone take the samples from the Unor direct out of the analysing room to a gas chromatograph?-- I have never seen it done.

Now, you mentioned that you had a view that the panel design wasn't very good because of the large barrier pillars in the middle?-- Yes.

You were referring to those three lines of pillars sort of inbye about cross-cut 3 and 7 or 8?-- Yes.

Now, you were aware, weren't you, that ACIRL was heavily involved in designing this panel?-- I was.

Were you involved in the risk analysis that accompanied the extraction plans for this panel?-- I was.

You were involved in that?-- Yes.

You know then that Mr Walker, the Senior Inspector, was involved in that risk analysis too?-- Yes.

One of the things looked at in that risk analysis was how to deal with spontaneous combustion?-- Possibly.

Well, you might need to see a document to refresh your

memory?-- Yes.

Your Worship, that might conveniently be done after lunch. I don't know when you had in mind breaking. I am happy to keep going. No-one has said anything about when we are stopping.

WARDEN: You can keep going, thanks.

MR MORRISON: Might the witness see Exhibit 70?

You see that's a document to do with the risk analysis on 512?-- Yes.

Someone may have taken the sticker out. Perhaps I can find it. There is the sticker. Could you open up the page at the sticker? Does that reveal at the top of the page - you might have to pull it back a bit - that spontaneous combustion was taken into account in the risk analysis?-- Yes.

And it was given a rating in accordance with whatever scientific analysis led to that rating?-- Yes.

From your memory, there was like a dual set of figures accorded to various risks. There was a figure for probability and then there was a figure for whether it was low risk or high risk and then a rating was generated scientifically from that?-- Yes.

So spontaneous combustion was taken into account and there were ways nominated in the risk analysis of dealing with it. Can you read them out?-- "Pump water into the old workings."

There is a section before that?-- "Panel life is short. Continuous gas monitoring."

Now, they are underway?-- Current controls.

Current controls. Now, can you recall anyone suggesting to you during this risk analysis that those current controls were not adequate?-- I can't recall that.

Did Mr Walker, for instance, suggest at any stage in this risk analysis that those current controls were inadequate?-- No, I can't recall that.

All right, you can put that document back. I have taken the document away from you but you probably remember this anyway: can you recall any similar discussion during the risk analysis about the fact, if it be the case, that the layout of the panel would cause ventilation difficulties?-- There may have been conversation on that but I can't recall it, no.

You would rely on the document to give us the summation of what was said?-- Yes.

I think you would agree with me, would you, that if - I am sorry to dance around like this, but this is as good as I can do. When we are discussing parts per million of CO readings, the Maihak would be inherently more accurate than a handheld

instrument like a Drager and people's assessment of it?--
Yes.

And so it's a sensible thing when one is looking for a trend to go for, say, a weekly average and not spot readings by individuals whose readings might differ?-- Perhaps.

Well, certainly the Maihak is more accurate inherently so, I think we agreed about that?-- Yes, but in the case - I might just pass comment on this. When you start to make an assessment and you use one tool as an advice - like, if you start with the weekly average, you should continue right through with the weekly average. If you started on a Friday reading, you should continue with a Friday reading.

So you wouldn't have thought it appropriate then to plot that graph switching from weekly to daily readings?-- No. If you start with a weekly average, you would stay with a weekly average, otherwise your trend is not accurate.

Okay, I think I understand. Certainly one would use the one tool to crosscheck the other?-- Yes.

I think you know that that's in fact what Allan Morieson used to do, he would take Maihak readings on a sheet with him down and crosscheck them with his own Drager readings?-- I believe that to be so, yes.

For that to be accurate in any way, those Drager readings have to be taken at the monitor points or within a short radius of the monitor points that result in the Maihak readings?-- That's correct.

Otherwise there is no point in the comparison?-- That is correct.

So that, for instance, for that last reading that I was talking to you about on 6 August after the sealing process that was taken by Mr Tuffs, if he didn't take that at the monitor point that would also affect the validity of any comparison between that reading and what was showing on the Maihak?-- That's correct.

You mentioned earlier that when the graph was done it would be posted in a number of places?-- Yes.

I think that includes the undermanagers' room and the deputies' cabin?-- In the end room.

That's Mr Abrahamse' room?-- Mr Abrahamse' room. A copy would be given to Mr Mason, the undermanagers' office, the deputies' cabin and also on the noticeboard.

The noticeboard we are talking about, is that at the start point?-- Yes.

So, the graph, in your experience, both before acting in place of Allan Morieson and during, would be that the graph was prominently displayed for everyone to see?-- As I can recall, yes.

Do I understand correctly that, in fact, it was the topic of discussion from time to time?-- It was.

I am not interested in how informed that discussion was, but certainly people would pay attention to the graph and it was a topic of discussion amongst people?-- The people who were aware of it, yes.

Now, you were yourself involved in the training aspects at this mine, weren't you?-- To some degree, yes.

I think you are a member of the Work Model Training Committee?-- Yes.

And part of the job of that committee was to identify training requirements and opportunities?-- Yes.

And there was a Safety Committee as well that you were involved with?-- Yes.

And part of its work was to develop or, at least, look at developing mock emergency procedures?-- That's correct.

I think, in fact, there might have been a mock emergency call-out done by McCamley at one stage?-- I believe that's the case, yes.

He sprang it on everyone in the mine without warning them, didn't he?-- Yes, conveniently on a Friday afternoon.

Yeah. Everyone got out of the mine within 30 minutes except McCrohon who was wandering on the belt somewhere and he got out in 40?-- Yeah, that could be the case, yeah.

You were trained yourself to a standard which is called "train the trainer standard"?-- Yes.

And that involved you then imparting your knowledge and experience to others?-- Yes.

Particularly in relation to operation of machines and

things?-- Yes.

Barraclough was in charge of safety and training, wasn't he?-- That's correct, yes.

And, in fact, there was quite a systematic set of seminars, safety meetings, whatever you want to call them, where people would have knowledge imparted to them about various things?-- Safety meeting, yes.

Those safety meetings could easily go two or three hours sometimes?-- In some cases they did go that long, yes.

And but for sickies attendance would be compulsory because they would put it on over two days to catch all shifts?-- Yes.

Now, you were also, I think, secretary of the Mine Consultative Committee?-- Yes.

And on the Underground Safety Sub-committee?-- Yes.

And it is true to say, isn't it, that those committees, together with the training committees and everything else, all constituted a commitment towards increasing safety and training for personnel at No 2?-- Yes.

And increasing standards of expertise?-- That was the intent, yes.

And that was really the thrust of the work model that was being worked on, it was to effectively - I will use the word "reward", but that's not probably a good word to use - it was effectively to recognise individual skills?-- Yes.

And those committees would - that is to say, the safety committees and so forth - deal with quite a number of safety issues over a period of time?-- Yes.

And represented on those committees would be not only management, but miners as well?-- Yes.

And -----?-- A cross-section.

And persons such as yourself who are put into a dual category of sort of deputy, miners' officer?-- Yes.

And there would also be quite a deal of - quite a number of Mines Rescue Brigade members on that - on those committees as well?-- Yes, there would be some.

Now, I have got to get a document to help you confirm this date. I think it is Exhibit 40. What I am going to ask you to look at now, if I could, is the training records from the mine. I think you will see your name about four or five down and you might just run an eye over the dates and topics. I think they are all correct in relation to you and might I just indicate straight away the one for 16 June, the third column from the right, under the heading "Spontaneous Combustion

Gases and Dust" was in relation to cable flashing so that may bring your memory back, but does that line, for you, accord with your general memory of the sessions that you have attended and the dates?-- These relate to safety meetings?

Yes, safety meetings - I don't care what you call them, safety meetings, seminars, discussions, whatever?-- Yeah.

Now, can I just ask you to look at this other document, please. I think at those meetings there was tabled this set of minutes. Can you recall seeing them?-- Yes.

And if you turn over a few pages from the back I think there was some graphs attached towards the back showing the increasing safety of the mine by reference to the decreasing number of injuries over time; do you recall that?-- Yes.

That would accord with your experience at the mine, that, in fact, safety was increasing and injuries were dropping, lost time was dropping and severity rate was dropping?-- Yes, that's correct.

I tender that document. It can be called Minutes of Safety Meeting held 16 and 17 June 1994 and it is document 64A.

WARDEN: That will be marked Exhibit 78.

ADMITTED AND MARKED "EXHIBIT 78"

WARDEN: If this is a convenient time I have been persuaded by my erstwhile colleagues we should take the adjournment while they check some short-term investments.

MR MORRISON: Imminent, Your Worship.

WARDEN: Can we resume at 2.45 at the latest?

THE COURT ADJOURNED AT 1.09 P.M. TILL 2.45 P.M.

011194 D.10 Turn 13 dfc (Warden's Crt)

THE COURT RESUMED AT 2.42 P.M.

STEPHEN MICHAEL BRYON, CONTINUING:

MR MORRISON: I have nothing further.

WARDEN: Mr Harrison?

CROSS-EXAMINATION:

MR HARRISON: Mr Bryon, you expressed a comment a couple of times today to the effect that you doubted that anyone could read a Drager tube to half a point when you mentioned 5.5, for instance?-- That's correct.

Were you referring there to the higher range of Drager tubes than nought to 700 ppm tubes?-- No.

Have you got any experience with the lower range tubes, the nought to 60 ppm tubes?-- Yes.

Do you still have that same reservation about anybody's ability to read 5.5 on a lower range Drager tube?-- I do, yes.

If I can just turn to something in your statement, you talk in your statement about how a decision was made on 22 July that the CO make would be done every shift until the section was finished as an added precaution. That's on page 2 in the fairly large paragraph about a third of the way down. Do you see that?-- Yes, I do.

When are you saying that decision was made?-- That decision would have been made on the Friday afternoon.

So after you had left on the Friday?-- Yes.

When did you find out about this decision?-- I found out officially about that decision on the Monday, although I was involved in the conversation and we had discussed making that decision although it was never clarified that it would be done by the time I had left.

You say "we discussed"; you discussed it with whom?-- Mr Barraclough, Mr Abrahamse.

Who communicated the decision to you on the Monday?-- Mr Mason, I believe.

Were you asked to play a role in that?-- Not specifically, no.

XXN: MR HARRISON

WIT: BRYON S M

You've mentioned the log books and certain readings that were kept in the log books?-- Yes.

Did you ever see the log books?-- Yes.

Was this at times when you conducted your own inspections at the mine?-- Yes.

Were you aware if any CO makes were done from the figures in the log books?-- No.

Did you do any CO make figures yourself at all at any time from 22 July onwards?-- No, not that I can recall personally.

But you merely passed the information on to Mr Abrahamse and let him do the calculation?-- Yes.

As at 22 July and again through to the Monday, 25 July, to your knowledge was Michael Squires on holidays at that stage?-- I couldn't answer that question.

Do you recall him being on holidays at any time up to the week before the incident?-- No, I can't recall that - yes, I can actually. Mike did correlate to me that he was going to go on holidays at a similar time to myself, but I can't say exactly when.

Could it have been before yourself?-- It could have been, yes.

Were you made aware of any other CO make calculations that were done from, say, 25 July onwards other than the one for 5 August which appeared in the graph or 29 July which appeared in the graph?-- I don't believe so.

Now, how long had you been a miners' officer for as at 7 August this year?-- I've been a miners' officer for approximately 10 years.

Is it the case that you had the power, if you ever decided to exercise it, to stop the operations at the mine and evacuate the men from the pit?-- I believe I have that power, yes.

Has it been your experience that when the men have had any safety concerns at all they have come to you as a miners' officer or to the other miners' officer?-- Yes.

Were any approaches made to you in terms of safety in the days leading up to your leaving on 5 August?-- No, none.

Were you aware of any approaches having been made to Mr Vivian, the other miners' officer?-- No, I'm not aware of any approaches.

Did the State check inspectors have any contact at all with Moura No 2 in the weeks leading up to the incident?-- I can't recall that, no.

Would they visit from time to time?-- They would. In fact Mr Allison was going to make a visit on the Monday after the explosion.

He was due to come the following day?-- Yes.

Prior to that, how long had it been before the State check inspectors had visited Moura No 2?-- I couldn't exactly give you the date, but Greg Dalliston visited No 2 previously.

Are we talking about weeks, months?-- It would only be weeks.

Did he ever express to you any concerns in relation to the CO make graph for 512 Panel?-- No, he did not.

When you came back on 25 July you were informed as to the outcome of the inspection that had taken place on the 22nd?-- Yes.

That was an inspection that involved in part Mr Dave Kerr?-- That's correct.

Who communicated to you the outcome of that particular inspection?-- Mr Kerr.

Did he indicate to you that there was nothing abnormal from his inspection?-- That's correct.

Did he indicate to you that he discussed certain matters about the CO make after his inspection with Mr Paul MacKenzie-Wood and with Mr Brian Lyne, the chief inspector?-- He did.

Did he appear to you to place some reliance on what he was told by them when indicating to you that nothing appeared to be abnormal?-- I would imagine that to be the case, yes.

Was that the way he appeared to convey it to you?-- Yes.

Thank you. I have nothing further, Your Worship.

WARDEN: Thank you. Mr Clair?

RE-EXAMINATION:

MR CLAIR: Mr Bryon, you mention in the course of cross-examination that this log book that recorded all of the readings each shift for CO parts per million and wind velocity and the other readings necessary for the calculation of the CO make was kept down at the crib room?-- That's correct, yes.

You weren't yourself aware, from what I gather of any document that was brought up to the surface which recorded those things?-- I was not aware of that, no.

The purpose of taking those readings each shift was in order

RXN: MR CLAIR

WIT: BRYON S M

to calculate CO make; is that right?-- If required.

If required, yes, but I mean the purpose of taking the wind velocity, for instance, could only be for the calculation of this CO make?-- That's correct, yeah.

That was the difference. From the time that that meeting took place that you mentioned on the Friday, the idea was that deputies would not just take the parts per million, they'd take the parts per million and they would keep a record of it and they would do it each shift. Who was it that was charged with the task of co-ordinating the recording of that material, first of all, and then the results that it might reveal as to any increase in CO make in the panel? I mean the decision was made that these steps be taken, that is wind velocity measured every shift, all recorded, together with parts per million. Was there anybody in particular then appointed to supervise the ongoing results of that exercise?-- Not to my knowledge, but I think Mr Abrahamse would correlate that information if it was required.

How would he know then if it was required?-- From the deputies report. Some of the deputies may say to the undermanager on shift that there has been an increase, and then if that's the case, then they would use that information.

Would the deputies be calculating the make or would they simply be recording the parts per million and the wind velocity?-- They would be recording the parts per million and the velocity readings, yes.

But not actually calculating the make?-- Some deputies could do that, but others probably couldn't.

In any event, as far as you were aware you thought that was something that fell into Mr Abrahamse's area, that is the ongoing supervision of these CO make results or CO make figures?-- I believe so, yes.

Just another point, you were asked some questions about the reliability of readings that were taken at that VS46, I think it is - or is it 59? VS46, the one that's just outbye the No 1 road in 512 Panel?-- Yes.

I just wanted to clear up one point. When you were taking your readings there which you did with the Drager tube for the purpose of calculating the CO make, would it be as a matter of course that you would make a check on the position of the doorways - the doorway, for instance, in that location between No 1 and 2 roads in zero cross-cut?-- Yes, that would be my access. So I would open that door then close it then go and take my readings.

So you could be sure the door was always closed when you take your reading?-- Definitely.

Finally, you've mentioned that on the inspection on 18 June - I think you told us that you went right down the back of the panel, that was the occasion on which you said there had been

a fall and stoppings were down and that you smelled the smell of the chemical on the roof bolts, I think you mentioned?-- Yes.

You were familiar with that kind of smell -----?-- Yes.

At the time. Had any mention been made to you at any time of a smell being detected in the panel on 17 June?-- No.

A smell described as a slight tarry smell?-- No, I have no recollection of anyone mentioning that to me.

No-one ever told you that at all?-- No.

If you had been told that would it have made you a bit more conscious of determining just what it was you might have been smelling on the 18th?-- Certainly.

If you knew that there was a background, that is that the previous day somebody had smelled a slight tarry smell, would you have been a bit more interested in trying to determine what it was that you smelled on the 18th?-- Yes, without a doubt.

But on the 18th when you smelled a smell there you just took it to be the smell of the chemical on the roof bolts?-- That's correct. It definitely was the chemical on the roof bolts. It's got a very distinct smell.

You couldn't confuse that with any tarry smell?-- No, no possible way.

I have no further questions, Your Worship.

WARDEN: Thank you.

EXAMINATION:

MR PARKIN: Mr Bryon, you are aware that Moura No 2 Mine has an Australian Standards Approval for Quality Assurance?-- I believe so, yes.

What do you know about Quality Assurance?-- Very little.

Has anybody talked to you about Quality Assurance or what it means or what it's about?-- I have had one small session with regards to Quality Assurance, but not in any great detail.

So as a check inspector you've had no real training or whatever in Quality Assurance at Moura No 2?-- Not in the system that I believe to be in practise, no.

What about communications along the lines for Quality Assurance? Have you had any communications at all to you, any -----?-- I don't understand your question, sorry.

XN: PANEL

WIT: BRYON S M

In terms of QA, have you had any communications regarding it?-- No, I don't believe so.

Prior to taking up your duties as acting ventilation officer, I think I understood you to say that you had not seen the position description for a ventilation officer?-- That's correct.

And that you had had no contact with Mr Morieson prior to the taking over of his duties?-- That's correct.

That would be a bit unusual, wouldn't it?-- I had no contact with him on that day.

No, but I mean that wouldn't be a normal practice, would it, at Moura No 2? If you were going to take over from a ventilation officer's duties you would have some prior contact with him?-- It would be the normal practice, that I would have prior contact with him, yes.

Why wasn't it carried out on that day?-- I don't know. I can't answer that question.

I understood you to say that you had got no warning that you were to take over that position; is that correct?-- No prior warning.

No prior warning. Could you describe to me what training you have had in terms of ventilation at the mine?-- Just basic ventilation training with regards to a deputies course.

So you've had no other training at all?-- None.

I'd like to ask you a few questions about the ventilation of the 512 Panel. What problems have you encountered in 512?-- In the time that I spent in 512 as a production deputy the only major problem that I encountered was a problem of re-circulation where methane was coming out of the waste area and making its way back along the No 2 roadway.

What did you do about that?-- We set up some segregation stoppings.

When you say "we", who do you mean?-- Me and the rest of the gentlemen that were in the crew.

Okay?-- To try and force some more ventilation current down that No 2 roadway.

Did you communicate those changes to anyone else?-- Those changes would have been communicated to the undermanager, yes.

So you only heard about re-circulation on the one occasion?-- That's the one occasion I encountered it. I have heard about it when other deputies have encountered the same problem.

You understood that re-circulation is a very serious business?-- I do, yes.

Over the last few days we have heard comments about regulators being open and closed, stoppings being breached in the 512 Panel; what are your views on this kind of business?-- Regulators in other parts of the mine?

No, affecting 512?-- My views on that - it's not a very good idea because you are depriving the section of its ventilation current if you are restricting it, of course.

So what you are saying to me is it's not good ventilation practise?-- No, certainly not.

Can we just return to Exhibit 25 just briefly, that's the CO make in 512 Panel, and if you look - and I don't wish to reiterate Mr MacSporran's cross-examination this morning, it's just for clarification purposes, but if you look on 15/7 we have got a CO make of 14.27 litres per minute?-- Yes.

If you look back to 16/6, that's a fairly steep rise, isn't it, from something like seven and a half litres per minute to something like 14.27 litres per minute?-- It is, yes.

Were you concerned about that steep rise, or that rise?--

No, I wouldn't be concerned about that rise. From my knowledge, that was caused by the changing of the ventilation current from one return to the other.

Well, if we move then from 15/7 to 5/8, you see that that graph seems to dip and then level back to just below 14.27 litres per minute; do you agree with that?-- Yes.

Can I ask you, from your point of view, do you know that any of the ventilation quantities were changed in that period of time from 15/7 to 5/8?-- By me personally, no, I do not know of any.

So you have got no - you wouldn't have any reason as to why there is a dip in that graph?-- No.

Okay. Did you know why management did not upgrade the graph of the CO make in 512 Panel on a daily or shiftly basis if it was a matter of concern?-- No, I can't answer that question.

You stated that you did not agree with the panel design. Could you elaborate a little bit on exactly what you meant?-- The way the panel is designed with those large pillars in the middle, apart from the two - the three top roadways, if you have got ventilating current travelling down those, they would travel through the waste, around the circuit and back up the return, but in two of those roadways they encounter a large pillar and then when the air would break around that pillar it would be logical to surmise that they would not be ventilating behind that pillar.

So you weren't very happy with the ventilation layout in 512?-- No.

Did you communicate those concerns to anyone else?-- Those concerns would have been communicated to other deputies and probably to management, yes.

Can you remember what management they were communicated to?-- Probably to undermanagers.

Thank you, I have no further questions.

EXAMINATION:

MR NEILSON: Mr Bryon, can I take you back to Friday, 22/7? I refer to Exhibit 21, the CO make for 512. It's the page where it describes the reading that you got - the one that was contested actually. It's page 2. Is that the one? With Allan Morieson's signature down the bottom?-- Yeah, okay, I've got it.

In your statement you say that on the first Friday. Now, when you mean on the first Friday, are we talking about Friday the

22nd?-- Yes.

Okay. It is said that your anemometer readings were 1.72 metres per second, 1.76 metres per second and then 3.76 metres per second?-- Yes.

And you said that later on you realised that the last reading of 3.76 metres per second was incorrect?-- Yes.

And you checked the anemometer because a last reading was still locked on the instrument and it was in fact only 1.76 metres?-- That's correct.

Can you tell me how then on this chart we have a velocity of 1.77 metres per second?-- No, I cannot answer that.

Because obviously the figure of 3.76 metres per second wasn't used, because if it was, then the average of the three readings would have been 2.4 plus metres per second, but if you use the correct figure, as I understand it, which was locked on the anemometer, of 1.76 metres per second, then the average then of the three readings is only 1.75, or 1.746 to be exact?-- I didn't make that average. I correlated those three figures to Mr Abrahamse. He then made the average and put it in the computer.

So Mr Abrahamse was aware that the incorrect reading was in fact 1.76 metres per second rather than 3.76?-- Yes, he was very well aware of that.

I know you have been asked a lot of questions about the incorrectness, or the inconsistencies, I should say, that can exist among different people reading Drager tubes?-- Yes.

Drager tubes, to the best of your knowledge, have never, ever been used as a 100 per cent correct analysis of particularly gas that you are reading; is that correct?-- That's correct.

Drager tubes are used more to give an indication in trend?-- Yes.

And in your analysis of - in your view, when you take a Drager reading one would surely go to the worst case scenario rather than the best, wouldn't you? I mean, I have heard the way that you read a Drager tube. You don't go to the very end of the stain but you go to where you believe it's a more definite situation?-- Yes.

Or a more definite defining line. But would you agree with me that if someone was to read a Drager tube, carbon monoxide Drager tube, and give the reading as 5.5, they would maybe be looking for the best case scenario?-- I would agree with that, yes.

So you would at least go to 6, wouldn't you?-- Yes.

So if we go back to that Friday, you have recorded a reading of 8 ppm?-- Yes.

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Now, are you confident in your mind that that was a correct reading?-- I am.

And yet it was questioned?-- Yes.

And it was questioned because of the reading that was registered on the Maihak?-- Yes.

Subsequent to that Mr Abrahamse, Mr Kerr and Mr Atkinson went down to 512 Panel and took another reading?-- Yes.

Or a series of readings, whatever?-- Yes.

And obtained the reading of 5.7, was it?-- Yes.

5.5, sorry?-- 5.5.

5.5. Were you still around when that happened?-- No.

You weren't. When did you learn that that in fact took place, the following Monday?-- On the Monday, yes.

What was your reaction to that? I mean, did you, for one moment, question the fact that your reading may have been wrong?-- I thought of the possibility that my reading could have been wrong, but I also had Mr Rose with me who read it and he read it at 8 ppm as well.

So, both of you read the Drager tube at the same time?-- Yes.

Of course, there are a number of factors that could have influenced the difference between two readings in that period of time in any case, aren't there?-- That is correct, yes.

Can you tell us what they might be?-- They could be the presence of diesel machinery. It's possible that someone could have opened a door perhaps somewhere and maybe flushed a little bit out. It's even possible that you may have a minor roof fall in the panel that may have moved a little bit of carbon monoxide in and around and flushed it out.

Or it could be possible that there was a difference in the barometric pressure?-- Yes, that could - yes.

So, in your mind, on Friday the 22nd the reading of 18.98 litres per minute was correct?-- I believe so, yes.

Were you aware of that at that time? Did Mr Abrahamse do the calculation in your presence or -----?-- Yes.

----- did that come about at a later stage?-- No, in my presence.

In your presence, okay. Now, if you go back to Exhibit 25, and I know that this graph is supposed to represent a weekly average, but I put it to you that it certainly doesn't. It ranges from monthly average to daily readings. There are two occasions when there is a reading on one particular day and then on the next day following?-- Yes.

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I refer you to 10 June and 11 June and 22 July and 23 July?--
Yes.

So, you would have to agree with me, Mr Bryon, that this graph does not represent a weekly average?-- I would agree with that.

Okay. Well, if we go to 22 July and accept that your reading was a correct reading, would you just like to put a little dot at 18.9 - sorry, 18.62 where you would think that would be? Just in front of you?-----

MR MORRISON: Excuse me, Your Worship, I would ask that if this is going to be marked that it be on another version of this exhibit which will be shown to other people. So, if it's going to be - if we are going to have what happened to our map yesterday happening to the graph, I would like for the exhibit to remain clean and a new version of the exhibit be marked.

MR NEILSON: That's fine.

MR MORRISON: It seems Mr Mitchell wants to make some submissions about what I said. I am not sure if he wants to do that. He is certainly making enough noise for that. Maybe he would like to stand up.

MR MARTIN: Mr Mitchell is doing some calculations.

MR NEILSON: I don't have a problem with that at all, that's fine. Have you got another copy?

MR MORRISON: Yes.

WITNESS: Marked with an "X".

MR NEILSON: Marked with an "X", okay. Now, I want you to then go to the reading before that which was 15 July?-- Yes.

And draw a line from the point of 15 July through to the point that you have just marked "X"?-- Yes.

Okay. What does that tell you?-- That would suggest to me that we had a large problem in the waste area.

Okay. Can I ask you, Mr Bryon, why at the time you took that reading you didn't have the same concern as you have just expressed to me now?-- Because on this graph - and like I expressed before, if the graph starts and is gauged using the weekly average, it starts from zero, and I used a handheld instrument, it's not the same tool used to make the measurements, so the graph would then become irrelevant.

But the graph is already irrelevant really, isn't it? I mean, you may not have known or recognised that at the time, but you have agreed with me here today that the graph really is irrelevant if you are looking at weekly average readings?--
Yes.

Okay. I mean, I only want you to tell me what went through your mind, I am certainly not trying to put words in your mouth. So, at the time you got that reading it didn't ring any alarm bells to you?-- It rang alarm bells to me and that's why I organised for us to do shift by shift examinations of that area.

Okay. So it suggested to you that there was a change and that change needed to be monitored more closely?-- That's correct.

You say you have been a miners' officer for some 10 years?-- Possibly 10 years, yes.

Can you tell the Inquiry on how many occasions you would have been to what we call miners' officers conventions or seminars that are held on an annual basis?-- I probably would have been to half a dozen of those.

Okay. Have you ever been to one where the question of spontaneous combustion has been dealt with?-- To my knowledge, no.

You haven't?-- I don't believe so.

Have you ever been to a seminar organised by the mine in relation to spontaneous combustion?-- No.

I think you said that your knowledge of spontaneous combustion has come about through your Mines Rescue training and your studies when you sat for your deputy's ticket; is that right?-- That's correct, yes.

Okay. If we go back to that reading of 18.62 - sorry, 18.98, you say that you weren't overly concerned but you expressed the need for the situation to be more closely monitored?-- That's correct.

You were asked a question, I think, by Mr Morrison in relation to - I think he suggested to you that the graph - and that is the Exhibit 25 or Exhibit - yes, Exhibit 25 - was a topic of discussion and you agreed with that? You answered "yes" to his question?-- Yes.

Who did you mean was involved in those discussions?-- Only probably the deputies who had an indication of litres per minute carbon monoxide make.

Well, was Mr Robertson involved in any of those discussions in your presence?-- He may have been.

You said that you had no knowledge that anybody had indicated that they had a sensation of a smell?-- No.

In one of Mr Robertson's reports he reported that there was a very strong benzene smell. If he was involved in any discussions, I would assume he would have made you other deputies aware of that?-- I would assume so too, but I can't recall.

So it's possible that you weren't in any discussions in Mr Robertson's presence, is it, or -----?-- That would be the case, yes.

You can't remember him actually being there?-- I can't recall, no, that conversation with Mr Robertson.

On 22 July after you were aware that the carbon monoxide make was 18.98 and a correct reading, and specifically in your mind a correct reading, had you been aware of the fact that Mr Robertson had smelt a strong benzene smell, what would your reactions have been, or what would your thoughts have been?-- My reactions would have been that we would have to investigate this considerably further.

Would it have told you anything a little bit more conclusive than that?-- It would probably tell me that we had a spontaneous combustion problem in the waste area.

What would tell you that, what factor would tell you that?-- His reporting that - of a tarry smell.

I didn't say "tarry", I said "benzene"?-- Well, I think someone else mentioned "tarry". That is where I am getting mixed up.

You have been reading those books. Yeah, precisely, because it is a fact, isn't it, that you can't get a tarry smell or a benzene smell in a mine, unless it is ever present, without the phenomena of a heating, can you?-- I don't think so, no.

I mean, you have never heard of any other circumstances?-- No, I have not.

So, had you been aware of that and with that, I put it to you, a fairly sharp increase in CO make, at that point in time you would have been very concerned I would put it to you?-- I would agree with you, yes, very concerned.

Now, you are aware that there was a decision taken to seal 512 Panel prematurely?-- Yes.

Were you involved in any discussions with either other deputies or the undermanagers or anybody as to why that time period was brought forward?-- No.

Were you back at the mine at the time or were you still on holidays?-- I was on holidays. I returned to the mine after the explosion.

After the incident. With the knowledge of hindsight and what we have just been talking about what would you have - what course of action would you have taken after that area was sealed?-- I would have consulted with management. If it was sealed for a potential heating or a heating, that was a possibly ignition source, and I would have consulted with the management and recommended that no men go down the mine.

So, that would have been because if there is a heating or a potential heating then there is a potential ignition source?-- That's correct.

It would have been because the atmosphere would have to pass through the explosive range?-- That's correct.

As the oxygen is depleted and methane and other nasty gases accumulate?-- That's correct.

Okay. What would you have done if as a course of those discussions management would have said, "Well, we don't believe it is that bad so we are not going to prevent the men from going down the mine."?-- I probably would have flexed a little bit of muscle and said, "Well, that situation won't occur."

Why would you have done that?-- Because I would have thought there would have been an extreme risk involved in taking men down the mine.

So, you would have exercised your concern about the safety of the men in a potentially very, very dangerous set of

circumstances?-- That's correct.

Why do you think that wasn't done? I mean, why do you think nobody else would have done that? I mean, don't answer that if you don't have a view?-- I would rather not answer it.

Okay, that's okay. Thank you.

EXAMINATION:

PROFESSOR ROXBOROUGH: Mr Bryon, can I ask you to refer once again to Exhibit 21, to the table that Mr Neilson referred you to earlier; that's the carbon monoxide make in 512 panel, page 2?-- Yes.

Now, would I be right in assuming or accepting that ventilation station 46 was effectively measuring the air flowing out of the top return?-- Yes, that's correct.

And ventilation station 59 was measuring the air flowing out of the bottom return?-- Yes.

Can we move down that table to 23 July, the Saturday. Up to that point in time we have got air flowing both along the bottom return and the top return; correct?-- Yes, that's correct.

Now, for ventilation station 59 on the Saturday, there are no entries, there are no figures in that line, are there, no velocity measurements?-- No.

No temperature measurements. Why was that?-- I would assume that stopping was then -----

Erected?-- Erected, yes.

I think you said in reply to a question by Mr Martin that there had been no change to the ventilation in 512 while you were acting as ventilation officer?-- Yes.

That was a change that was made, if that is the case, while you were ventilation officer?-- Yes, that would be correct.

So, it is possibly something that was done that you knew nothing about?-- No, I would know about that.

You would know about that?-- Yes.

Now, although the table doesn't show quantities of air they are readily calculated from the velocities and the areas in that table; correct?-- Yes.

Without doing the calculations would you accept that approximately 38 to 39 cubic metres per second was passing along the top return and about 8 cubic metres per second out

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of the bottom return?-- Yes.

When the bottom return was stopped off would you have expected an increase in the ventilation flowing out of the top return?-- I would expect that, yes.

Approximately a further 8 cubic metres per second; not quite, but of that order?-- Approximately.

Yet we see that there has been no increase, effectively, in the amount of air flowing in the top return? If you look at the velocities they are much of a muchness?-- Yes.

So, it looks as if we are missing 8 cubic metres a second of air?-- That would appear to be the case, yes.

Have you any idea where that 8 cubic metres a second might have been going?-- No, I have no idea.

Is it possible that the stopping in the return - bottom return wasn't, in fact, erected?-- I suppose it is possible.

If that was the case then it is possible that some of the telltale gases could have been escaping into the mine atmosphere, into the returns, the main returns, without anyone knowing about it? In other words, it was another 8 cubic metres per minute possibly carrying carbon monoxide that no-one was detecting?-- That is possible.

Thank you.

MR NEILSON: Excuse me, Your Worship, could I please have the document that I asked Mr Bryon to mark as an exhibit tendered?

WARDEN: Exhibit 79.

ADMITTED AND MARKED "EXHIBIT 79"

EXAMINATION:

MR ELLICOTT: Can I ask you to again look at Exhibit 21, please, and again to the same table of figures relating to the CO make from 512 area? I think in response to Mr Morrison you agreed that ventilation changes can seriously affect the veracity of CO make figures; would that be true?-- I believe so.

Can I ask you to look at the first page of that table for the figures for 15 July '94. You see there are figures for both the top return and the bottom return ventilation stations?-- 1.78 and 0.95.

Yes. Can you accept that the total quantity going through the

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panel at that time was of the order of 58 cubic metres per second; if those figures are added together?-- Yes.

Would you consider that to be a rather large quantity of air for that panel, something approaching 60 cubic metres a second?-- Possibly, yes.

Can I now ask you to turn the page and look at the figures for 5 August. You see there is now - I think you have already agreed and indicated - no figure for the bottom return station?-- Yes.

Can you accept that the figure for the top return station leads to a quantity figure of approximately 34 cubic metres per second?-- Yes.

So, over the period from 15 July through to 5 August 1994 there has been a reduction from approximately 58 to approximately 34 cubic metres per second in that panel, that approximates to a 41 per cent reduction. There has also apparently been the shutting of a regulator on one side of the panel. Would you class those as significant ventilation changes?-- Yes, I would, yes.

Would you say that they may well affect the veracity of CO make figures obtained?-- Certainly.

And I understand that these did occur during your period as temporary ventilation officer?-- Yes.

Can the witness be given the risk analysis for 512 Panel? I haven't made a note of the exhibit number, but it is document 75, if that helps.

You agree that this is the risk analysis you looked at, I believe, during the questioning by Mr Morrison?-- Yes.

And there is some coverage of spon com within that risk analysis; I think it was flagged?-- Yes.

Okay. Do you agree there is no indication of the composition of the team that conducted this risk analysis as part of the document, is there? In other words, by picking the document up I can't tell who was involved?-- I agree.

Would you agree that in assessing a risk analysis a critical component of that may well be a look at the composition of the team to check the knowledge and balance of that team?-- I would agree with that, yes.

I want to ask you now to look at the - first of all, would you agree there is no indication on the document as to how the risk score was arrived at?-- It appears to be that way, yes.

There is no indication as to whether a low risk score represents a low risk or a high risk score represents a low risk or vice versa?-- There is no indications along those lines, no.

Would you agree in order to sensibly understand such a document then some indication as to how the risk scores were arrived at should be there with the document?-- Yes, I would agree with that.

Okay. Can I now ask you to look at the composite column titled "Consequence" in that document?-- Yes.

You see that it consists of four sub-columns?-- Yes.

The first one is labelled "Probability"?-- Yes.

That is not really a measure of consequence, is it?-- No.

I would suggest it is more a measure of likelihood?-- Yes.

Okay. Can you see now that the three remaining columns are consequence related and they are described "People", "Property", and "Production"?-- Yes.

In the absence of any knowledge as to how risk scores are evaluated could you get the impression from this document that property and production have equal ranking to people?-- Yes.

In other words, there is no weighting factor given or knowledge of how the risks are arrived to make you come to some other conclusion?-- No.

In a question from Mr Clair there was some discussion of the ventilation door near the top of 512 Panel through which I understood you said you went through in order to take ventilation readings at the station there?-- That's correct.

You stated that you were careful to always close that door?-- Yes.

Can you generally describe the condition of that door?-- That door was in reasonably good condition. It, when closed, would give a reasonable seal, yes.

A reasonable seal?-- As good a seal as any seal that was in or around that mine.

Okay, thank you, that's all.

RE-EXAMINATION:

MR CLAIR: Just arising out of that, Mr Bryon, you mentioned in answer to Mr Parkin, I think it was, that you did experience some problems with recirculation in 512 at a time that you were a production deputy there; is that so?-- Yes.

Are you able to say when that was?-- No, I can't recall the date.

Was it before or after the occasion which has been identified as 18 June when you found the stoppings to have been dislodged by a fall in the goaf?-- I would say before.

How long before that, would you estimate?-- Possibly a week.

So, you are talking about somewhere around about the middle of June?-- Yes.

Were you made aware of the experience of anybody else as a deputy in that panel observing problems with recirculation in the No 2 roadway in 512?-- Yes.

Was that before or after you had noticed it?-- Before.

How long before?-- I couldn't give you any - probably a few days before because the stoppings were already in the process of half being erected and they were knocked down and then we would put them back up, in the case I am referring to.

That's the stoppings that were dislodged, you mean, by the fall?-- Well, no, they were more windbags or segregation stoppings between 2 and 3 headings.

I see. You say they were being put up as a result of someone else finding a recirculation problem in No 2?-- Yes.

I see. It was at that time you noticed it yourself?-- Yes.

Did you make a note of it anywhere?-- Probably in the deputies report, that I would have taken a reading on the waste edge in that roadway.

Did you note in your deputies reports anywhere that you had found recirculation in the No 2 heading?-- That is possible. I can't recall that.

Well, you were shown all your deputies reports this morning. Did you see any note there?-- I think I saw notes where I said I would have taken a methane reading on the waste edge and that in No 2 roadway, yes.

But no note about recirculation, as such?-- Well, perhaps "recirculation" is the wrong word. What I would have encountered is methane coming out of the waste and travelling slightly back up that supply road or No 2 roadway.

Well, what would you describe as "recirculation", if you say that is the wrong word for what you found? It is just I want to make sure we have our terms properly understood?-- Well, you could describe it as recirculation if it got back into the ventilation current and then moved back into the waste area again, but it was more of a case of it just emanating out of the waste up that roadway.

Backing up, in other words?-- Backing up, yes.

Along No 2. Okay. Righto. By the time you have taken over as acting ventilation officer what was the position with any

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backing up then in the No 2 roadway?-- I don't believe there was any at that stage then.

Whilst you were ventilation officer did you take any steps to check on that yourself?-- No, not personally, no.

Okay. Thank you, Your Worship.

WARDEN: Anything arising out of that?

MR MARTIN: No.

MR MORRISON: Sorry, I was just waiting for Mr Martin to finish his turn since he was so tidy last time.

FURTHER CROSS-EXAMINATION:

MR MORRISON: I didn't mean that in a spiteful way.

Mr Neilson was asking you some questions about your three readings of velocity. When you gave the statement to the inspectors did you have the notebook with you in which they were recorded?-- No.

Were you relying purely on your memory of what they were in order to give those figures to the Inspectorate?-- Yes.

You didn't have any other document contemporaneously recording those figures at the time you gave the statement?-- No.

In fact the figures recorded in the tabulation for the graph are contemporaneous because you said Mr Abrahamse did them while you were there and handed him the figures?-- Yes.

I understood you to indicate to Mr Neilson that you believed your eight parts reading was an accurate reading?-- Yes.

You've checked it against the Miahak read out for that day, haven't you?-- Yes.

And you will see that it's not confirmed by any part of any reading for monitor 16 on any part of that day, is it?-- No, that's right.

Every part of that day was five to six?-- Yes.

And there is no doubt that you took your eight parts reading at the monitor point at VS46?-- There is no doubt.

So from what you told me earlier in the day we can look at this Miahak to see if in fact this reading was true, even though you believed it to be true?-- Yes.

Mr Neilson also put it to you that you agreed, I'm not sure that you did, that the graph was irrelevant if you were looking at weekly average readings. That's Exhibit 25. Do you understand what he meant by that?-- I believe he meant that instead of it being a weekly calculation the graph is muddled, so to speak -----

It's got a couple of occasions where there is a day interval instead of a week interval?-- That's correct.

When you look at Exhibit 25 that happens on two occasions, between 10 and 11 June and on 22 and 23 July. They are the only two, aren't they?-- Yes.

Collapse those two sets of points together, there is no change to the graph, is there? The one between 10 June and 11 June goes up marginally, the one between 22 July and 23 July in fact drops?-- Yes.

So it's really not the case that the graph is irrelevant at all, is it?-- Like I said before, if you start off on one line of sampling you should stay with it.

I understand that, but you don't find no benefit from this graph, do you? It couldn't be the case. You continued to propound it?-- I don't understand the question or the comment.

Perhaps I won't persist with the comment?-- Thank you.

I will leave the question go. I want you to look the these documents, please. Are you able to identify these documents for me? Are they some of the data that explain the Minerisk document in terms of the weighting of probabilities and occurrences and also an article detailing the systematic analysis behind the Minerisk approach?-- They appear to be,

yes.

I tender those as one exhibit and I will work on the list of personnel later.

WARDEN: Exhibit 80.

ADMITTED AND MARKED "EXHIBIT 80"

MR MORRISON: I might just indicate that I will get copies of that done for everybody, or that can be done through the Panel. That analysis will be the subject of explanation later.

MR HARRISON: Your Worship, I don't have a question as such, I could just indicate following on what Mr Ellicott asked, there are particulars of who participated in the formal risk assessment for 512 in a report from Mr Walker, the senior inspector, which forms part of document No 184, if I could just advise you of that.

WARDEN: I think the question was more related to it didn't appear on that document.

MR HARRISON: I accept that.

WARDEN: There obviously must be people, but we don't know who they are from that document.

MR HARRISON: I was just wondering if Mr Ellicott was concerned about following it up, that's where the information is as far as I am aware.

WARDEN: Thank you.

FURTHER EXAMINATION:

MR NEILSON: Mr Bryon, you are probably even more confused than you were to start with because I certainly am now. I will take you back to the graph that I was talking about and Mr Morrison was talking about. He has now asked you to agree with him that there is no confusion about this graph, that it's not in fact a misrepresentation of a weekly average type situation. He has indicated on two occasions there are two subsequent daily readings and that that shouldn't have much effect on the graph. I take you back to the beginning of the graph. The first reading is 28/2/94, the second reading is 25/3, that's a month, and the third reading is 27/4 which is another month, and then 9/5. So I mean it cannot be an accurate account of weekly average, can it?-- No.

Thank you.

MR ELLICOTT: It was my impression that document 75 was gathered or tendered or distributed as a stand-alone document. In that form I thought it was very poor and that the absence of identification of the team members and methodology within that document stood to seriously affect its credibility, but I am pleased that that's to be redressed.

WARDEN: Thank you. Mr Clair?

MR CLAIR: Your Worship, I'd like to ask some further questions about what has been referred to as a weekly average, because I think we may otherwise end up with some aspects of this witness' evidence that could be difficult to understand, with Your Worship's leave?

WARDEN: Yes, by leave.

FURTHER EXAM.-IN-CHIEF:

MR CLAIR: Mr Bryon, I want to go back to what you've said about the way in which the readings were approached, that is the CO parts per million readings were approached in order to calculate the CO make. We can go back almost to the beginning of your evidence in that sense. As I understood you, you said that the first time that - at least the calculation which appears on that table in Exhibit 21, the CO make 512 for 22 July, Friday a.m., that what was used there was a reading of 8 ppm and that that, as it were, was what we will call a spot reading. That was the reading you actually took that day; is that right?-- That's correct, a spot reading with a 21/31 Drager.

Now, that was used then to calculate that figure of 18.62 litres per minute for vent station 46?-- Yes.

Is that right?-- Yes.

Now, I did draw your attention to this note at the bottom which reads, "The 18.62 litre per minute was obtained using a velocity of 1.77 times. The 8 ppm of CO on a peak Drager tube reading, not the weekly average parts per million." Now, you see those words "not the weekly average"?-- Yes.

As I understood your evidence what you said was that it was explained to you by Jacques Abrahamse?-- Yes.

That in fact it wasn't the practice to simply calculate the CO make in litres per minute using what I will refer to as a spot reading, that is in your case the 8 ppm?-- That's correct.

But rather the practice which had been adopted up to that point was to take the reading which had been made that day, but to average it back over the previous week; is that

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right?-- Yes.

So that each time this calculation was done the spot reading wasn't used, but the weekly average for that day, that is the average of the reading that day back over the readings for the previous week, the weekly average was taken; is that so?-- That's correct.

And, of course, if you've got an increasing reading of CO in parts per million, the weekly average will be lower than what I've referred to as the spot reading?-- Yes.

If it was rapidly increasing then it would be significantly lower than the spot reading; is that right?-- Yes.

Now, that document indicates that in fact there was this reading taken later of 5.5 ppm or at least that reading of 5.5 ppm was used to calculate the CO make of 13.34 for vent station 46?-- Yes.

That's on the afternoon of that Friday?-- Yes.

Do you know whether that 5.5 was a spot reading that day or was that a weekly average that was used to calculate that?-- I would surmise it was a spot reading.

A spot reading and not a weekly average. Okay, now you were asked questions by Mr Neilson about the graph, Exhibit 25. You've got that in front of you. Mr Neilson referred to that as really not being a graph representing weekly averages because on some occasions it involved a time difference of a month, on other occasions a time difference of a day between the respective readings that are plotted on the vertical axis of the graph?-- Yes.

Now, putting aside for the moment what time lapses there might have been between those respective readings in litres per minute, was that calculation in each case, as you understand it, based on what might be referred to as a weekly average calculation?-- Yes, that's the way I understand it.

Each individual reading was based, because of this practice that was explained to you by Mr Abrahamse, on a weekly average calculation; is that right?-- That's correct, yes.

But the point that was made about the graph is that in fact the spaces varied. Sometimes they were a week's difference in time, sometimes it was a month, sometimes a day on the graph itself?-- Yes.

But earlier in your evidence when you were talking about weekly averages you were talking about the way in which the calculation was done to calculate the litres per minute; is that right?-- Yes.

Thank you, Your Worship.

WARDEN: Thank you, witness. You may stand down.

WITNESS STOOD DOWN

MR CLAIR: I call Craig Charles O'Brien.

CRAIG CHARLES O'BRIEN, SWORN AND EXAMINED:

MR CLAIR: Your full name is Craig Charles O'Brien; is that right?-- Yeah.

Mr O'Brien, you are a miner employed by BHP Australia Coal at Moura No 2 Mine?-- Yeah.

You started in the mining industry on 18 February 1990?-- Yeah.

You commenced first at Cook Colliery and you've been at Moura No 2 for the last 20 months; is that so?-- Yes.

Now, at No 2 did you usually work in the 5 South Panel?-- Yeah.

Did you have occasion to work in 512?-- Every now and then I worked in 512.

How many times in all would you have worked in 512?-- About four or five times.

And was that when 512 was being developed or during the

retreat and extraction phase?-- A couple of times when it was being developed and a couple of times when it was in extraction.

Now, the last time that you worked in 512 was on the afternoon shift on Friday, 5 August of this year; is that right?-- Yes.

And the deputy on that occasion was Michael Caddell?-- Yes.

You had been working in 5 South but some machinery broke down; is that the case?-- Yes.

And were you asked to, or told to go to 512 to assist with the removal of some machinery from 512?-- Mmm.

512 was being prepared for the seals to be completed; is that right?-- Yeah.

Okay. Now, you went to 512. Whilst you were there did Michael Caddell ask you to go with him?-- Yeah.

On an inspection of the goaf area?-- Yeah.

Can you tell the Court then - perhaps if you turn to the right there you will see a plan depicting the 512 Panel?-- Yeah.

Do you recognise that? Step up and have a closer look at it if you like just so you know what's where. It's a bit hard to read it at a distance?-- Yeah, I know where I am now.

Okay. You think you can locate yourself on that plan?-- Yeah.

Okay. Well, can I ask you then to tell the Inquiry what occurred, and if you need to refer to the plan to show us where you went and what you saw, you can use that laser pointer there and that may assist us. So where did you go?-- We went through - yeah, we went through that stopping there.

That's a doorway in that stopping. That's in zero cross-cut?-- Yeah.

In 512 between 1 and 2 heading; is that right?-- Yeah, and we commenced to walk down here.

That's down No 1 heading?-- Yeah, and we walked over to the seals and we stepped over that and Michael took a reading there.

Just inside the seal in No 1 roadway?-- Yeah. Then we took a reading there and then we commenced to walk down the return till we got to about, oh, around about that area there.

Well, just pause a moment so I can describe what you are indicating. That's still in the top return there between 9 and 10 cross-cuts; is that right?-- Yeah, about - around about - yeah, as we were coming into 10 cross-cut, that's

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where we could smell something there, and Michael took another reading in the middle of that roadway there.

In the middle of No 1 in the top return?-- Yeah.

And right at the end of -----?-- In the middle of the roadway of the cross-cut in the return road.

Right. Well, just pause a moment there. You say that you smelt something?-- Yes.

What sort of smell?-- Oh, tarry smell.

Had you smelt that kind of smell before?-- No.

Right, okay. Well, what happened then?-- Michael took another reading there.

Took another reading. Where did he take that reading?-- Around the middle - in the middle there.

Well, you mentioned a moment ago that he did. Did he take two readings there or are you just saying that after you smelt the smell he took a reading?-- After he took the first reading there we walked down to there.

That's 13 cross-cut?-- Yeah, and he took another reading there.

That's still in the top return at 13 cross-cut?-- Yeah. Then we come back 10 cut-through and at the hole in the stopping there Michael took a reading inside there by putting his arm in.

Okay. Well, you first smelt this tarry smell in the top return opposite cross-cut 10?-- Yeah.

You went down to 13 cross-cut in the top return. Did you continue to smell the smell or what happened?-- No.

When did it disappear?-- As soon as you sort of walked out of that - walked past that cross-cut.

As you walked further inbye from No 10 cross-cut in the top return it disappeared then?-- Yeah, as you left that cross-cut, yeah.

Okay. So there was no smell down at 13; is that right?-- That's right.

And when you came back to 10 you say that Michael took another reading. Whereabouts did he take that reading?-- Right in where the stopping is, there.

In the stopping which is in that 10 cross-cut?-- Yeah.

Just off No 1 roadway?-- Yeah.

Or the top return. What, he actually took the reading beside

XN: MR CLAIR

WIT: O'BRIEN C C

the stopping or -----?-- At the hole in the stopping. I think he actually put the Drager inside sort of.

Inside, in through the hole in the stopping?-- Yeah.

Was the smell still there?-- Yeah, it was.

And did you notice any change in the smell as you approached that hole in the stopping?-- Well, I stayed out about that area there.

Did you? You stayed in the top return?-- Yeah.

It was only Michael that went up to the hole, okay. What happened then?-- He took a reading in there, and after he took the reading - well, we agreed we could smell something and we walked out of the return, I went to crib and Mick rang up the management.

And were you present - who rang up the management?-- Michael.

Were you present when he rang up the management?-- I was at the crib table and he was over at the phone, so -----

Do you recall overhearing what Michael was saying?-- No, I couldn't hear anything he was saying. I was talking to other blokes at the crib table.

Right. Well, how long was he on the phone?-- I think he was still on the phone when we went back to work, I think.

You went back to work?-- I'm not sure, I wasn't taking any notice.

Just have a look at this. After you went back to work did you do anything further in relation to this matter, the fact that you had smelled this smell?-- No.

Did you have any further discussions with anyone about it?-- No, not really. Probably mentioned it to blokes in the crew that I was working with.

Okay. Just have a look at this document, if you would. You will see that's production deputies report 3774 and it's one completed by Mr Caddell for that Friday afternoon shift 5 August '94, 512 Panel; do you see that?-- Yeah.

And he notes on there the first inspection was at 3 p.m. Does that accord with your recollection, that it was about that time of the afternoon?-- Well, a bit later than that, I think.

A bit later than that?-- Yeah, because we start at quarter past 2, I went to the 5 South section first.

So, your memory is that it was a bit later?-- Yeah.

Sometime in the course of the afternoon. How late would you

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put the outside?-- Oh, well, I think it was before crib, about half an hour, an hour later.

You will see there is a notation down the bottom, "Time inspection completed 6.15 p.m."?-- Oh, yeah.

So sometime between those hours?-- Yeah.

That accords with your recollection?-- Must have been close to crib time. We had crib as soon as we come out.

What time would that be?-- Usually have crib at - what time do I have crib - smoko at 5. It must have been smoko or something like that, I think.

Okay. Well, you see the general comments there, "An inspection in company with Craig O'Brien was made of the top return to 13 cross-cut. A strong tar smell was evident at 10 cross-cut with the above readings taken." Do you see that?-- Yeah.

Did you take any interest in what readings he was actually taking?-- Oh, I didn't ask him, no.

Okay. I will tender that copy of that report, Your Worship. It was referred to by Mr Caddell but a separate copy wasn't tendered earlier. It comes, of course, from the original which is part of Exhibit 9. I have no further questions of Mr O'Brien, Your Worship.

WARDEN: I will mark that Exhibit 81.

ADMITTED AND MARKED "EXHIBIT 81"

CROSS-EXAMINATION:

MR MacSPORRAN: Mr O'Brien, you recall working on the last occasion in 512 on 5 August?-- Yeah.

That was a Friday?-- Yes.

And you had worked there in total three or four times?-- Oh, around that, yeah.

A few times anyway?-- Yeah.

Do you know when those times were? Were they all close together or were they spread over -----?-- Spread over. Some were overtime shifts. A couple of times.

You mainly worked in 5 South but on occasions you came in to work at 512?-- Yeah.

XXN: MR MacSPORRAN

WIT: O'BRIEN C C

Those occasions were separated -----?-- Separated by a fair period of time.

On that Friday you smelt something you had never smelt before?-- Yes.

Did you discuss with the deputy Caddell what that might be, that smell?-- Well, yes, yeah.

What did he indicate to you he thought it could be?-- Well, it could be like a starting of a heating or something.

I take it you hadn't experienced yourself any previous instances, or any instances, of heating underground?-- No.

You say the reading was - one of the readings was taken at 10 cross-cut?-- Yes.

And that was taken through the hole in the stopping, was it?-- Yes, there was two taken, I think, at 10 cross-cut.

You didn't go through, it was only the deputy?-- Yeah, and he was on this side. He just put his arm through the stopping.

The report you were shown that he filled out seems to indicate a reading of 10 ppm of carbon monoxide at No 10 cross-cut. Do you remember that figure being mentioned by him at all at the time he took the reading?-- I don't know, he might have said it.

You don't recall?-- No.

Do you recall anything about the level of the CO reading taken, or readings taken at that time?-- No, I never asked him what the readings were.

Did you know anything about the significance of the size of the CO reading?-- Well, I sort of know that certain levels can be dangerous, yeah.

How do you know that?-- Oh, it's just general knowledge, I think.

Have you ever had any training about that, or instruction?-- Oh, not really.

Well, on that day I think you told us a moment ago that the only people you discussed that with, that is the smell, were the other blokes on the crew?-- Yeah.

Had they, to your knowledge, smelt anything that day?-- Not to my knowledge, no.

What did you tell them about it?-- I just told them that we could smell something down at 10 cut-through when we walked through, that we should get all the gear out and that, you know, as soon as possible because I believed that they were going to seal it up as soon as they could.

Did you indicate to the rest of the crew what the deputy had told you he thought it might be, the smell?-- Oh, I might have said something to them, yeah, I can't really -----

You can't remember?-- Just a general conversation.

Do you remember any of the people on the crew that day?--
Yeah.

Who were they?-- Darren Young, David Wright and Stoonka. I don't know his proper name.

Stoonka?-- Yeah.

We have heard of him before?-- I don't know his proper name.

They are the ones you remember by name anyway?-- Yeah.

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They are the only ones you discussed this smell with that you had noticed that day?-- Yeah.

Thank you.

CROSS-EXAMINATION:

MR MARTIN: You started at Moura No 2, what, in about January 1993, about?-- No, November.

November 199 ----?-- I was about there about 20 months. 31 November. It must have been '92, I think.

When you first started did you go through an induction course?-- Yes, oh, one of a couple of days.

And were you given any of a red book or a blue book relating to spontaneous combustion?-- No.

Were you instructed in any way in relation to spontaneous combustion?-- No.

Since you had that first induction have you ever had any training by management, that is, or courses provided to you in relation to spontaneous combustion?-- No.

Do you have any or much knowledge of that condition?-- Not a great deal, no.

I beg your pardon?-- Not a great deal, no.

Is it the fact your knowledge is of the most basic kind?-- Yes.

How would you describe the smell that you experienced in terms of strength? Obvious?-- Well, you could notice it when you sort of walked into it. You would notice it.

When Mr Caddell put his - when you went down to number 10 cut-through was the hole in the stopping open?-- Yeah.

It was open. Mr Caddell didn't have to do anything ----?-- No, no.

To that?-- No.

Yes. Thank you, Your Worship.

CROSS-EXAMINATION:

MR MORRISON: When you were working in 5 South you were working on what jobs?-- Development panel, shuttle cars, bolting.

Sorry, developing the section?-- Development of the section.

Had you, prior to this day with Mr Caddell - prior to working in 5 South have you ever worked in an extraction production crew?-- Yes.

Where?-- 402 here at Moura and at Cook.

You did only a few days in 512?-- Yeah.

But you can't remember which days?-- No.

Or what was going on on those days?-- Well, a couple of times -----

Beyond the extraction?-- The extraction? Well, we were extracting a couple of times we were in there. Most of the time I was in there it was overtime shift.

What is that, weekend work?-- Yeah, and I think most of the times we broke down.

Okay. Now, when you were with Mr Caddell did he come and get you in 5 South -----?-- No, I was sent over to 512.

To go with him. You went down the top return, that was your first time in the top return in 512?-- No, I think I had been in there once before.

By yourself?-- No.

What, with a deputy?-- Yeah.

Who was that?-- I don't know. It was a few of us. I think we were just getting the gear from a different part - I think we had to walk up through - back over here somewhere, I think.

Just getting some gear of some sort?-- Yeah.

Okay. When you hit about 10 cross-cut it was Caddell who noticed anything first?-- Well, yes, he said to me, "Can you smell something here?", and I said, "Yeah, you can notice it." I could smell something when we walked in there, yeah.

You didn't readily identify it at the time?-- Who?

You?-- No.

It was only when Caddell said something about it that you were able to identify it; is that right?-- Well, yeah, when he said something I said, "Yeah, I can smell it. I can smell

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something different too."

But also it was Caddell who said something about it being tarry and you hadn't identified it up to that point, but you agreed with him?-- Yeah.

All right. You might not have made that identification yourself had he not said something about it?-- What, what sort of smell it was?

Mmm?-- Oh, probably not, no.

Caddell only mentioned the smell once and only at 10 cross-cut?-- Yes, that's the only time I smelt it, yes.

Thank you. I have nothing further.

CROSS-EXAMINATION:

MR HARRISON: Mr O'Brien, you mentioned earlier a phone call Mick Caddell made?-- Yeah.

Do I take it you weren't particularly listening to what was being said in the phone call?-- No, I wasn't.

Yes, thank you. I have nothing further Your Worship

EXAMINATION:

MR PARKIN: just a small point. This smell at 10 cut-through, did you communicate that to anyone else other than to Caddell, the deputy?-- I mentioned it to the other crew when I got out and started working. I said we could smell something down there at 10 cut-through.

So, you didn't mention it to any other deputies or any management?-- No.

Okay, thank you.

EXAMINATION:

MR NEILSON: You just answered a question to Mr Morrison, or maybe put the question to you, that you wouldn't have readily recognised any different smell had Mr Caddell not asked you did you smell something?-- No, I wouldn't put a name to it. I smelt something different.

XXN: MR HARRISON
XN: PANEL

WIT: O'BRIEN C C

In your statement you say - I just want to clarify this point because I have got a problem with some things in statements and then things that witnesses have been asked to clarify. I mean, as long as it is the truth then I don't care, but you have said that you had never experienced a smell similar in my years underground?-- Yeah.

So, it must have been a significant different smell to you for you to say that, surely, or not?-- Well, yeah, it was a different smell. I never smelt it before.

And a tarry smell does have a distinct smell about it in an underground environment, doesn't it?-- Well, yeah. Well, that's the first time I smelt it, yes.

So, please, tell me, had Mr Caddell not mentioned it would you have noticed the smell or wouldn't you have?-- Yes, I would have.

You would have, thank you. Just one other very quick question: after you experienced that smell did you mention that to anybody else, after that particular time?-- Only to the blokes that I was working with.

Okay. When you mentioned it was there any - did anybody say, "Well, gee, that smells like a heating.", or, "That could be this.", or, "That could be that."? I mean, was there any conclusion sort of drawn through these discussions about it?-- Well, talking about it?

Yeah?-- Blokes said it could be a heating or something like that, just general conversation.

I am asking you did somebody mention, "That could be a heating.", for example?-- No, not really, no.

Not that I can recall?-- No.

Thank you.

EXAMINATION:

MR ELLICOTT: Where was the phone on which Mr Caddell made the call in relation to the crib table? Was it far away?-- It was diagonally across the intersection.

So, if somebody was paying attention they could have heard what he said?-- Well, you would have to really listen pretty good, you know? If you were paying attention you could have, yeah.

Would the noise of the belt be in the background there, if the belt was running?-- Oh, yeah, you should have been able to hear it from there, yeah. It is only one pillar away, I

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think.

Thank you.

MR CLAIR: I have nothing further, Your Worship.

WARDEN: Thank you. Witness, you may stand down.

WITNESS STOOD DOWN

MR CLAIR: The next witness is a short one.

WARDEN: Mr Boiston is making rash promises again.

MR CLAIR: I call Phillip Wayne Shorten. Sorry, it was Mr Boiston's line, Your Worship.

PHILLIP WAYNE SHORTEN, SWORN AND EXAMINED:

MR CLAIR: Your full name is Phillip Wayne Shorten; is that correct?-- Correct.

You are a miner employed at Moura No 2 Mine?-- That's correct.

You started in the mining industry on 4 May 1982 at Moura No 4 as a miner; is that right?-- That's right.

You were transferred to No 2 Mine some time during '83/'84?-- That's correct.

And you worked there ever since; is that right?-- Yes.

You have been a regular continuous minor driver in the 512 Panel since it was about half-way developed, according to your statement?-- That's correct.

I wonder if you could just move your chair in, if you like, and get a little bit closer to the microphone. As long as you are comfortable there, Mr Shorten, you don't have to lean forward every time, but it would be good if you can speak into the mike. Now, you then, of course, were the continuous miner driver during the extraction process?-- That's correct.

The method that was used for extraction, how would you describe that?-- At first I was against it, but after we finished the extraction I had - reckon it was a lot better than the old way we used to do it.

What is a good term to describe the method? You use the term "cut and flit" method of extraction in your statement?-- No,

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WIT: SHORTEN P W

the cut and flit method was in development.

In development, I see. Right. Well, then, in extraction what process did you adopt?-- Well, when you started your bottom row of pillars on your right hand punch we used to take three lifts off into your 9 metres and then come back and take your bottoms out. You done that sequentially all the way back until you left a stook on the corner. You take your intersection bottoms and then you come and took that stook and then left another one on the top side of that road and then went in and started the left-hand punch.

Now, in taking the bottoms out did you create ramps?-- Yes, we did.

And were those ramps shorter or longer than might have happened in other panels when you are taking panels?-- Oh, sometimes they were a bit shorter, sometimes they were longer depends on the height of the roof.

As a result of the method that you were using in taking the bottoms, was there an amount of loose coal left on the floor of the extracted area?-- In some places there were because we were having trouble getting the miner back up the ramp and when we bogged it more than twice we wouldn't go back down.

Right. So, was it the case that there was more loose coal that was left than would have occurred in using other methods in other panels?-- Not to my knowledge, no.

Much the same, you would say?-- Pretty well.

At one point early in the extraction process was there some difficulty because too much coal was taken out?-- Yeah, on the bottom end of the panel was supposed to be staple punching, and as me statement says, we all got put in the office because there was too much coal taken out.

You all got -----?-- Put in the office, in the -----

Were put in the office?-- Yeah.

Just explain what happened, if you would?-- Well, we were put in there to - how do I say it -----

Was there more coal stripped out than should have been stripped out according to the laid down extraction plan?-- Yes, there was.

Were all three shifts involved in the extraction asked to go to the training room?-- To my knowledge, yes.

What happened there?-- We just had a very stern talking to from the management.

Who was that?-- George Mason and Albert Schaus.

What did they tell you?-- That it was against the extraction plan and told us not to push our luck by doing it again.

That is, when you say it was against the extraction plan, taking too much coal, stripping too much coal?-- That's right.

As you've explained. Tell me - it might sound like a trite question, but I would like you to answer it - what was the temptation to take out more coal than should have been taken out according to the plan?-- I'd say just your production bonus.

Now, you were obviously one of the members of the shifts that were summoned to the training room but were you there when the extra stripping was done? Were you on the shift responsible for taking out too much?-- No, I wasn't there. I was in - doing the 512 risk assessment at that period of time.

How many people were on the team doing the risk assessment?-- From memory about six.

Do you recall now who they were?-- Not all of them.

If you can, do your best?-- There was Bob Newton, Bruce Hinton.

What was he? A deputy?-- Yeah - no, Bruce was another miner driver, and Dave Smith, he was a fitter, and Graham Simpson, a surveyor and the bloke who was running the show. I can't remember his name.

And yourself?-- And myself.

The bloke who was running the show, where did he come from?-- I have no idea. I don't remember.

He wasn't a deputy at the mine?-- No, he was brought in.

He came in from outside. What process did you go through to do that risk assessment?-- It was mainly a course on assessing the mine and the risks that we take on our day-to-day jobs and consequences that could happen, how serious they could be, and putting our controls in place to try and stop those.

Was there any result then from this risk assessment being done in terms of your day-to-day practice?-- Well, we brought up a few measures and a few safer ways to - like one for pulling the miner out of a bog. Instead of the whole crew doing it, it was usually the miner driver, the car driver and the deputy. The other rest of the crew had to stand back otherwise you just have too many people in the road.

Anything else you can recall?-- No, I'm sorry.

Now, after that risk assessment was done, or at least at some stage, was the practice established that there was no sequence to follow unless you had an approved and up-to-date sequence extraction plan?-- Yes, that's right.

Was that a result of the dressing down, as it were, in the manager's office, or a result of the risk assessment?-- I can't remember.

Anyway, that was put into place, was it?-- Yes, that was.

Was that practice adopted then?-- Pretty well on our shift it was. I think the other shifts adopted it pretty well.

Was there also some change in procedure in terms of ensuring that the roof and ribs were secure?-- Yeah, we were doing back bolting in areas where if the rib was fretting a bit more we put more bolts in, and before even I started driving the miner you just done your own visual inspection.

To make sure that the ribs were holding?-- Ribs were holding, and if the bottoms were taken out on the other side of the road you knew how far to take the miner in without letting it go over the canch.

Was there any difference in the kind of coal that you were extracting at the bottom of the panel and that which you started to extract as you came further back up?-- The bottom end of the panel, from what I remember, is - when you took your bottoms, when you ramped in, when you got down near the stone floor, about the last two foot of it used to just spew out under the weight of the miner. It seemed to be a lot softer than other parts of the mine.

Did that cause some problems with machines?-- It did for a while until we learnt to break our ramps down a little bit lower, bring them over, not so much of an angle.

To ensure the machines didn't get bogged?-- That's correct.

Did that in turn present some problem with the amount of loose coal?-- In some places it would have, yes.

The floor got harder then as you came further back up?-- Yes, it did.

Now, what about the ventilation in the panel? Did you encounter any particular problems in relation to that?-- Yeah, when we were near completion of the panel, about the last three or four pillars, I had - I don't know what they call it - it just circles around. It was coming back out on the top road, on the No 2 road there for a while. One deputy stopped us producing one day to put segregation stoppings up.

Where were they put up?-- Between the top supply road and the belt road between 2 and 3.

The idea being to force more of the ventilation air down that No 2 heading?-- That's correct.

Did that deprive you of any significant amount of air across the miner?-- No.

Now, the segregation stoppings then were left up for some time?-- To my knowledge, yes, they were.

Are you able to say just how long yourself?-- No, I'm sorry.

You didn't have a lot to do with the arrangements in respect to ventilation?-- No.

Now, you worked on the Friday day shift, 5 August?-- Yes.

And in fact you were pulling the miner and the feeder out at that point?-- Yes.

With a view to the panel being sealed at some stage?-- Yes.

Was there any production on 5 August that you were involved with?-- Not on the day shift when I was in there. I don't know whether night shift finished off or not.

Certainly when you were there production had finished?-- Yes.

Now, you mention in your statement that between nine and 10 that morning there was a fall somewhere in the goaf?-- Yes, I remember that.

What indicated that to you?-- It was like a concussion of air. When you get a roof fall you get a vast amount of air come back at you and it stops the ventilation from going, and to my recollection, every time I have a roof fall it just hurts me ears.

Whereabouts were you?-- At the crib table.

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At that stage where was the crib table located?-- Just outbye the seals.

In which road?-- It would be 510 return road.

510 return road between 2 and 3 headings in 512?-- No, when you come up into the 512 on to the top supply road and the crib tables were back in between the belt road in 510 and the old return road.

There is a plan just up there. You might recognise it. Can you just point to it? There is a laser pointer there on the table if you want to use that. If you need to have a closer look at that, step up?-- That's your top supply road there, crib tables were back up in here.

Okay. Well, you were up there and you felt that compression of air?-- Yes.

You didn't see anything?-- No.

Now, you worked the following day, Saturday day shift, 6 August?-- Yes, I did.

On that day you moved the miner and the feeder to the top side of that 510 supply road; is that right?-- Yes, we did.

And then after that yourself and Norm Cross took some Tecrete supplies to the belt road in the top supply road seal sites?-- Yes.

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Did you notice anything abnormal during that shift?-- Oh,

only when I went in the return to check out how much supplies we needed in the top return seal, just the difference in the temperatures between the two roads.

Between the supply road and the return?-- Yes.

Whereabouts did you go to, inbye the seal site in that top return?-- No, where the crib table was, after you come out of there before you go into the 512 you walk back up to your left and there was a door in the stopping.

Just indicate it there, if you would?-- There was a door in that stopping there. You just walked up around into there to that seal there.

So it was just outbye that seal site in the No 1 top return?-- Yeah.

Okay. You say that it was warmer there. Was it unusually warm given the state that things were at at that point of extraction?-- Well, no, I don't think so. I have been in a few other extraction panels and you go in the return with the undermanagers and deputies and there is always a difference in temperature.

Well, the difference in temperature you noted this day between the supply road and the top return, was it much the same as you had noticed on other occasions or was it significantly different?-- That's something I really couldn't say because it's been a while since I was in a bottoms section or punching section.

I have no further questions, Your Worship.

CROSS-EXAMINATION:

MR MacSPORRAN: Mr Shorten, you worked in 512 from about the time it was half developed; is that so?-- Yes.

And the last time you worked there was on Saturday, 6 August?-- Yes.

Now, you mention an occasion during the course of extraction when you noticed a ventilation problem in the No 2 heading?-- Yes, we did.

I think you said the deputy stopped production and segregation stoppings were put up between Nos 2 and 3 roadways?-- That's right.

Do you know when that was in relation to the weekend of 6 August?-- No, I'm sorry, I can't remember.

Do you know who the deputy was who stopped production on that

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shift?-- Mr Bentham.

Mr Bentham, was it?-- Yes.

Was that the first occasion that you had been on shift when there had been that problem encountered with the re-circulation of ventilation?-- Yes, it was.

Had you heard of any other deputies or miners referring to similar problems in No 2 heading in 512?-- No.

You didn't hear anything about any of that?-- No.

What exactly did you observe on that occasion when you referred to reversal of ventilation?-- Well, he had his Minder and he was picking up some gas up around the transformer.

Where was the transformer in terms of the cross-cuts?-- It would have been about two pillars from the goaf edge.

Again, you don't know what date that was?-- No, sorry.

You don't know how far back it was from the end of the panel which is 13 cross-cut?-- No.

You have no idea?-- No idea. We just go in and work.

All right. You can tell us further then, he found some gas a little back from the goaf?-- He found the gas - a bit of gas around the transformers and he just stopped us from producing coal and told us we had to put segregation stoppings up before we could go back to producing.

Now, that was the deputy who stopped production?-- Yes, it was.

Was there any undermanager who came down during the course of the segregation stoppings being erected?-- No.

Do you remember or know who was the undermanager on shift on that occasion?-- My undermanager of that shift was Terry Atkinson but I can't remember if he was there that day or not.

This is the day of the reversal of ventilation?-- That's right.

You say he was your undermanager on shift that day but you are not sure whether he was there?-- Yeah, well, he was my undermanager in charge of my shift, and that particular day that that happened, I don't know whether he was there or not.

Were you permanent day shift, were you?-- No, day/afternoon rotating.

He was the undermanager on the same sort of rotational day/afternoon basis?-- Yes.

So whenever you worked, he was your undermanager on shift?--

XXN: MR MacSPORRAN

WIT: SHORTEN P W

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Yes.

But you don't remember seeing him that particular shift?--
No.

On that occasion did you notice any difference in the
temperature in the No 2 heading?-- No.

Now, the method of extraction in that panel, as you say in
your statement, resulted in more loose coal being left
behind?-- Only when we had problems with the miner getting
stuck.

And that was where the bottom coal was a lot softer and the
miner would get bogged?-- Yeah, that's correct.

Whereabouts was that happening do you know? You start at
13 cross-cut and you were retreating. How far back did that
problem persist?-- It would have only been a couple of
pillars.

And thereafter did the bottom become firmer?-- Well, I don't
know whether the bottoms become firmer, but we didn't put so
much grade on our ramps going in.

So the ramps were initially steeper at the back of the panel
and not quite as steep as you retreated out?-- That's
correct.

So the most coal you left behind with the ramping was at the
back of the panel down around 13, 12 cross-cut?-- That would
be correct.

Did you observe or learn about falls having occurred also as
you retreated?-- We had one situation there where we had to
go down and pull a miner out. They got a puller from another
mine to pull it up.

Did you know approximately where that was in terms of the
length of the panel?-- I'm sorry, no.

Do you know when it was in terms of the weekend of 6 August?--
Oh, way before then.

On that Saturday, 6 August did you notice any unusual smell
inside or about 512?-- No, not from memory.

Did you notice any haze in the panel?-- No.

Did you hear of any discussion about such a haze or smell on
that day?-- No. Well, there was a lot of machines around
and Norm and I was - I was on one machine, he was on the
other. He was unloading pallets, so you couldn't virtually
hear anybody talking.

Well, after that day, after that shift, did you hear any
discussion about what had been observed underground that
day?-- No, I wasn't in town after that shift.

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Did you go on holidays, did you?-- No, I went out to a mate's property.

For the weekend?-- That's correct.

So when did you come back?-- On the Sunday afternoon.

On the Sunday afternoon did you have any contact with any of the people who had been on shift on the weekend after you?-- No.

So you knew nothing more about what had happened in the panel until after the incident on Sunday night?-- That's right.

Thank you, Your Worship.

CROSS-EXAMINATION:

MR MARTIN: I just might ask you this: the occasion when Mr Mason addressed the men early in the extraction process about the excess coal being taken contrary to the plan, do you recall saying that?-- Yes.

All right. He said words to the effect, "Don't push your luck by doing it again." Do you recall saying that?-- Yes.

I suggest to you that you were left in no doubt whatever by him that there would be a penalty in consequence of doing that, repeating it?-- That's right.

So he was ordering the people there not to repeat that process?-- That's correct.

And apparently that was obeyed?-- To my knowledge, yes, it was.

Do you know a man called Mr Grubb, G-R-U-B-B?-- I met him once.

Was he the man who was the fifth person on this risk assessment?-- No, he wasn't in the assessment with us.

Well, the person, the fifth unidentified person on the assessment, was he a management person or not?-- He come from outside. He was actually conducting us on how to do it.

All right. Can you put a time to this? Can you identify a time, whether it was April, May, June or July that this took place?-- No, I'm sorry.

But during the extraction process or before the extraction process started?-- It was when we first started.

Did you ever see any consequential document produced from that risk assessment?-- We all had copies of it.

XXN: MR MARTIN

WIT: SHORTEN P W

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Would you just look, please, at Exhibit 70? Do you recall that as the document which you received in consequence?--
Yes, that's the one.

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WIT: SHORTEN P W

And I haven't yet received, Your Worship, a copy of that other document that Mr Morrison said copies would be made of.

In the course of this risk assessment - how long did it last?-- For four days.

Was spontaneous combustion discussed at all?-- Only in - I think in one part of it where we -----

In the document are you talking about or in the actual process of assessing the risk?-- Like, I can't remember if it is in the document, but I remember we talked about leaving too much loose coal on the floor.

In what terms?-- That it could spon com.

Was that in consequence of there being too much loose coal on the floor?-- That's correct.

I think you have told Mr MacSporran that the - your statement says sugary coal was up towards 13 cut-through and back a couple of cut-throughs from there; is that the case?-- Yes.

You were not suggesting in your evidence, when Mr MacSporran was questioning you, are you, that all of the loose coal was cleaned up out of the ramps or from the canches retiring outbye, say, cut-through 11 or 10?-- No, not all coal was always cleaned up.

It was just impossible, wasn't it?-- In some cases the roofs, they used to start talking to you and we would pull out.

Have you ever heard the saying underground coal mining is the gentlemen's art of removing the coal before the roof finds out?-- No, I have never heard that.

I couldn't resist. Just turning to a couple of other things. You went to school to age 16, Grade 10?-- Yes.

And following - you didn't do any science subjects, as I understand?-- No.

And for three years after school you had a variety of manual type occupations?-- Yes.

And then, I think, your induction as a miner?-- Yes.

How long was your induction?-- We had a two week one at the main gate where the contractors' camp is.

And what induction information were you given in relation to spontaneous combustion, if any?-- That's too far back to remember. I couldn't tell you.

Did you ever receive a red book or a blue book on that subject?-- I don't recall.

Without taking you laboriously through a lot of things, can I suggest to you that your knowledge of spontaneous combustion

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is of the most basic kind?-- You could say that, yes.

Do you know of the organisation SIMTARS?-- Yes.

Do you have any more than the most basic knowledge of the facilities it provides to mine operations?-- I wouldn't even know what they provide.

Or of probeyes?-- No.

I won't lead us through that. When you were talking - responding to my learned friend Mr MacSporran, I think it was - my friend Mr MacSporran, when you were mining the bottom side was there any consequential problem that you recall in relation to ventilation on the top side?-- Not to my knowledge.

Or in relation to the recirculation problem which you referred to?-- Well, when we had the recirculation problem, when we put the stoppings up it cleared the problem.

I was just asking whether that was occurring particularly when you were mining the bottom side?-- I couldn't - I don't remember that.

All right. Just one more thing: since your induction as a miner have you ever been given any course of instruction, lectures or courses of any kind by management at Moura No 2 in relation to spontaneous combustion?-- We could have done. I don't remember.

Thank you. I have nothing further.

WARDEN: We are going to be a while longer with this witness, but not today. The panel have some questions for him also. Could we adjourn till about 9.15 tomorrow morning? Thank you.

THE COURT ADJOURNED AT 4.56 P.M. TILL 9.15 A.M. THE FOLLOWING DAY

