

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 23/02/95

..DAY 31

THE COURT RESUMED AT 9.18 A.M.

MICHAEL ANDREW SQUIRES, CONTINUING:

WARDEN: Witness, you are on the former oath you took yesterday; do you understand that?-- I understand.

Thank you.

MR CLAIR: Mr Squires, when we finished yesterday afternoon we were talking about events during the afternoon shift on Friday, 5 August, and I want to take you through now with the further things that occurred during that shift. Now, I know you've done quite a detailed statement there as to events that occurred during the various shifts, and it may be, if there is no objection to this, it may be useful if you were to have regard to the point in the statement that I'm looking at and perhaps in terms of the detail we can move along more quickly. As I say, in the absence of any objection to this, if you can keep an eye on your statement, you see?-- Sure.

I'm looking at the point that's just towards the top of page 5 of your statement. You say there at the end of the shift you spoke to all the work groups to find out the status of the jobs. Do you see that point towards the top of page 5?-- Yeah, I'm just getting this -----

The context?-- Yep, okay.

You go on to say there that in the course of Eimco training the groups had completed some preparation works towards the planned weekend stonedusting, that 6 South Proram had been set up to commence number 5 hole, and in 5 South the miner hydraulic repair was still to be completed. That was the position at the end of the shift; is that right?-- That's correct, yes.

Now, in 512 the continuous miner and the breaker feeder had been moved out to the 512 man and supply road, one pillar out from the seal?-- Yeah, that's the approximate position.

And you go on to say, "Following the rerouting of the miner cable from the section tranny to the 512 belt tranny the machine was inoperative. The Eimco was stuck behind the machines with a gate-end box cable loaded in its bucket.", and there was a report by Wayne McCoombes that there were three courses of wire baskets still to be put on the belt road seal?-- That's correct.

So that was the picture at that stage. The night shift men began to arrive at that time and you registered their names and assigned them their tasks for the shift; is that right?-- That's correct.

You set out in some detail there just what tasks people were

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assigned to. I won't go through all of that, but there were 11 miners scheduled to work, but only six arrived, together with a Tecrete contractor; is that so?-- That's correct.

Did you have to take some steps then to get extra men or did you decide to go ahead with just that number of men?-- No, well, with the overtime on the weekend what you got is what you got.

Then you go on to say that when production finished on the afternoon shift the belt system was shut down between 6 p.m. and 8 p.m. that night; is that right?-- Yeah, some time during that time it was shut down.

I suppose I should make mention of the fact that there had been a report that the cable was faulty, the trailing cable to the 512 miner. That didn't pose any problems though at that stage; is that so? There were no particular problems or dangers arising out of that?-- No.

Now, Michael Caddell was to continue as one of the night shift deputies?-- That's right.

The other night shift deputy was Robert Newton; is that so?-- That's correct.

And you had some conversation with them at the beginning of night shift?-- Yes.

Can you remember what that conversation was?-- I would have told them where the blokes were working and what their tasks were, and I also told Mick just to keep an eye on the 512 section.

Okay. Now, had you at that stage told anyone else about this strong tar smell that had been reported by Mick Caddell?-- Told anyone else - anybody?

Yes, well, that's right?-- Not that I can remember telling anybody.

He'd mentioned it to you and he had put it into his deputy's report?-- Yes.

You didn't mention that to Bob Newton at all?-- I can't remember saying it to Bob, no.

You filled out a shift report for that shift. Just have a look at this document here, if you would. I do have copies for the panel and the parties, Your Worship. Now, that's your shift report for the afternoon shift, Friday, 5 August?-- Yes.

You filled out some details in respect of the panels including 512 Panel. In relation to your comments on the 512 Panel you simply have a reference to the belt end being removed; is that right?-- Boot end.

Sorry?-- The boot end.

The boot end being removed, okay, and that the continuous miner was trammed out; is that right?-- That's right.

Now, there is nothing else in there by way of any comments, certainly no reference to the report of this strong tar smell?-- No.

Again can I ask you, do you think that's the sort of thing that should be put into a shift report so that there is first of all some record of it, and secondly so that anybody who wants to inform themselves as to what has happened would have a note there of it?-- On hindsight -----

Some way to inform themselves?-- On hindsight, yes.

Can I ask you why you wouldn't have put it in on that night?-- Probably because I've already given a verbal communique, if you like, to the deputy who was going to be on night shift.

When you say you had given a verbal communique, in fact Mick Caddell was the one who told you about it and you asked him to keep an eye on the 512 section?-- That's right.

But, of course, the deputies in these circumstances tend to work out between themselves what duties they will carry out?-- Yeah, but on this occasion I actually asked Mick to look after 512.

Well, you asked him to keep an eye on 512?-- Yes.

Did you say that he was to be the deputy in charge of 512 that night?-- I can't remember specifically saying to him that he would be in charge of 512.

In any event, Bob Newton was the other deputy that was on that night. You certainly hadn't given him any oral report about this smell that had been reported?-- Not that I can remember, no.

Anyway, you left the mine at about 11.20. I will tender that shift report, Your Worship.

WARDEN: Admitted and marked Exhibit 180.

ADMITTED AND MARKED "EXHIBIT 180"

MR CLAIR: You left the mine at about 11.20 that night?-- That's correct.

You came back about 6.30 the following morning?-- That's right.

And what did you do after you arrived?-- Well, after I arrived I had just come into the undermanager's office. Bob

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Newton come around and seen me and just said that things were all right and he had left his deputy's report on me desk. I went out and caught the fellas who had finished from night shift and - just get an idea of where they got up to with their work.

Did you read Bob Newton's report?-- Yes.

What did you notice when you read his report?-- Well, I noticed that he had actually done the 512 and that he had got a reading of seven to eight CO.

Just have a look at this document here, if you would. I've copies for the panel and the parties, Your Worship. That's Bob Newton's report for the Friday night shift, 5 August 1994; is that so? It's number 3772?-- No, this is - Friday night shift -----

Sorry, the Saturday night shift in fact is the one that I want. I'll get you to - it's 3775. That's the one you've got there now?-- Yes.

That's for Saturday night shift, 6 August?-- That's correct.

That's the one that Bob Newton gave you that morning?-- Yeah, it was on my desk, yeah.

You say seven to 8 ppm CO?-- Yes.

Just before I ask you about your response to that reading, of course the first thing you noticed is that Bob Newton had in fact looked after 512?-- That's right.

Did you realise that when he was speaking with you that morning?-- No. I didn't realise that until I came back and read his report.

So, there wasn't any conversation between you and Bob Newton about what he had done?-- I specifically - I can remember him saying that things were all right and he said something else, but I didn't pick it all up, no.

Well, it was only after he had gone then that you realised that he had done the 512 Panel that night?-- That's right.

You looked at his report. The 7 to 8 ppm, did that - what was your response to that?-- I didn't have any concern.

That didn't strike you as being at a level that could indicate any problems in the panel?-- No.

It didn't strike you that you should calculate the CO make to see just how things were actually going?-- As I said before, I don't really - I never really had CO make in my mind.

Well, you had done it back in 1987 when you were a technical assistant, you had realised the significance of it and you had calculated it for all the panels in the mine?-- It wasn't really a realising of the significance of it, it was just that it was a new thing at the time and I decided to do it.

Could the witness see Exhibit 152 please, Your Worship? Go to the second last page again, if you would. If you look at the fifth entry up from the bottom, that's the entry in relation to Bob Newton's deputy's report for that 6 August night shift, and it shows that a calculation on the basis of the 8 ppm would have calculated through to 18.94 lpm given the velocity that was measured at the same time and which was recorded in Bob Newton's report. 18.94 lpm. Would you have had any response to that at all if you had calculated that?-- Well, no.

You wouldn't have done?-- No.

Would you have reported that to anybody, 18.94 lpm?-- 18.94 lpm doesn't mean anything to me in CO make. I would have just looked at the trend, the position of where it was.

If you looked at the trend, then the previous calculation that is shown on that sheet there which was for the Friday day shift - I might say that on the Friday afternoon shift there was no velocity measured, so there wasn't any calculation able to be made, but for the Friday day shift the litre per minute make was 14.27 and between the Friday day shift and the Saturday night shift, that's the following morning, it had gone from 14.27 to 18.94. Now, let me ask you this: would that trend - would that trend have been enough to shake you out of complacency about what was happening in this panel, a litre per minute make that went from 14.27 to 18.94?-- Well, I am dealing with hindsight information here. I'm not sure where exactly you are coming from.

I am sorry?-- I don't know where you are coming from trying to get -----

Well, I am asking you if, on that Saturday morning, you had

been inspired by a reading of 8 ppm to calculate the CO make and you found a make of 18.94 which, in turn, then inspired you to look for the trend and you found that on the Friday day shift there was a litre per minute make of 14.27 which had increased to 18.94, then on that Saturday morning, if you were aware of that information, would that have been enough to shake you out of your complacency about what was happening in 512?-----

MR HARRISON: Your Worship, I object to this. "Shake you out of your complacency", in my submission, is not a fair way to put a question such as this. If it could be put to him on the basis, "Would that cause you concern?", I submit that that would be a fairer way of doing it, but, in my submission, it's not fair to presuppose the question with this notion of complacency.

WARDEN: Yes, it appears to be validly based. We are going around a bit in circles because he said the litres per minute meant nothing to him, so you asked him to comment on something which meant nothing to him.

MR CLAIR: That's so, Your Worship. I am putting it to him as a hypothetical situation, as I think the witness has said himself. Well, let me ask you then: would that have caused you any concern if you saw that trend, because you said the thing you looked for was the trend?-- That's correct.

If you saw that trend on that Saturday morning, would that have caused you any concern?-- I find it difficult to answer the question, sir. I'm not trying to give you a hard time, but I just wouldn't have seen the trend because I don't know how to make it, I don't know how to work it out.

I tender that production deputies report 3775, Your Worship.

WARDEN: Exhibit 181.

ADMITTED AND MARKED "EXHIBIT 181"

MR CLAIR: Now, you go on to say in your statement that you began to register the miners arriving for the Saturday day shift; is that right?-- Yes.

There were 15 miners expected to arrive, plus a Tecrete contractor, three deputies, three electricians, a fitter, a boilermaker and an apprentice. 10 miners only arrived?-- That's correct.

Were you able to do anything about that?-- No, no, you can't do anything about that.

Again, you set out there in your statement the way in which the various miners and others were deployed that morning; is that right?-- That's correct.

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Now, you go on to say that after deploying the men and while they were getting their machines ready, you went and informed the day shift deputies, Rod Helander, Peter Rose and Cole Klease, as to the deployment of the workforce?-- Yes.

Did you tell any of them about this report of the strong tar smell the previous afternoon?-- I can't recall saying anything to them.

The deputies, again in these circumstances on the weekend there, would organise amongst themselves how to cover the work?-- That's correct.

Did you suggest that Cole Klease include the 4 South level prep seals as part of his duties?-- That's correct.

And was he also then to be the deputy in 512?-- No, I didn't assign 512 to him, he must have picked it up - when they talked about it he must have decided to do it.

And you discovered that subsequently; is that right?-- That's correct.

Now, what did you do after you spoke with the deputies?-- Well, there was a lot of - start of shift on the weekends is a bit busy from the point of view of machines getting started up and having organised things that didn't quite turn out right and things like that, and sort of after you sort of fix it up so you know the fellas have got all their jobs and are on their way, sort of thing, I go and start doing the time sheets and the listing of blokes and where they are in the undermanager's shift report.

What time would it have been when you went to the undermanager's office that morning, do you remember?-- Well, the nature of the job dictates you tend to go in and out the office quite a lot. For example, I would have gone in there at 6.30 and then I would have gone out from there, and before the deputies would have even come I would have gone back in there again and did a tick sheet for the fellas who I am expecting to come, and then I would have gone out and checked them and had to make sort of arrangements and change things a little bit because maybe extra people didn't come, all that sort of thing.

Well, when you went out of the office, where would you go to and how far would you go?-- Well, normally you were either going from the undermanager's office to the lamp room, to the deputies' cabin, to the store, to the workshop, and then back and forward like that.

Basically all in that one area -----?-- Yes.

----- there at the mine. Well, you say you arrived at 6.30. You are not sure when you went to the undermanager's office and started on the paperwork after speaking with the deputies, but you do mention you went underground at about 10.45 -----?-- Yes.

----- that morning. Now, up until 10.45 then you had stayed generally in the area of the offices and the out buildings around there?-- Yes.

Could the witness see Exhibit 127, please, Your Worship? That's that log of Unor alarms that you saw yesterday?-- Yes.

If you go down to the ninth entry, I think it is, you will see there Saturday, 6 August, an alarm for point 16, being in the 512 top return, at 7.49 and 31 seconds; do you see that?-- I see that.

Now, it was an alarm for a breach of the alarm level for carbon monoxide in that 512 top return?-- Yes.

Being a reading of 8.33 that breached a set point value of 8. Do you recall that alarm sounding that morning?-- I can't remember an alarm sounding, no.

If the siren sounded, you certainly would have been close enough to hear it?-- Yeah, it splits your ears, yeah.

But you can't recall it at all?-- No.

Did you go and look at the Unor screen at any time during that morning?-- I can't remember looking at the Unor screen. I'm not saying I didn't, but I can't remember looking at the Unor screen in the morning.

It was your practice, though?-- Yeah. Like I said, during the shift I would normally look at it once a shift, but it wasn't any set time.

Now, if we look at that entry, we find that that alarm was not acknowledged at the Unor system until 21 minutes past 2 in the afternoon?-- Yes, I see that.

Are you able to explain how it was that that alarm could be registered at 10 to 8 in the morning and remained there with the Unor in alarm mode right through until 20 past 2 in the afternoon or thereabouts?-- No.

Are you able to explain if in fact the system is working correctly, how the siren could have sounded at 10 to 8 in the morning without your being aware of it?-- Well, I could have been somewhere when it went off and it just didn't register to me, or I could have been working with something and someone has cancelled the siren and -----

You were the most senior member of management at the mine at the time?-- I was the undermanager in charge of the shift.

If an alarm did go off and somebody at least deactivated the siren, you would expect them to inform you?-- Well, yeah. If it exceeds a set point, yeah, I thought someone would have told me.

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Now, you were still at the mine at 20 past 2 in the afternoon?-- Yes.

Did you do the acknowledgement?-- No, my number is not there.

You see the number that is there is 16?-- That is correct.

Does that mean anything to you?-- Well, I don't know whose - which numbers are which.

Did anybody report to you that they had acknowledged the alarm at the Unor?-- No.

Did anybody raise with you during the morning at any time that they had looked at the Unor screen and saw that the point 16 was in alarm mode?-- No.

Nothing ever said to you? Okay. Now, of course, that siren is very loud, isn't it?-- It's loud.

If you were anywhere on the surface that morning in the area that you have described, you would hear that?-- You should be able to hear it, yes.

You mention in your statement that you went underground at about 10.45 a.m. to commence your underground inspection?-- That's correct.

Can you tell the Inquiry what you did in the course of that inspection?-- Well, first of all I went down to 4 South level prep seals and wanted to see how the fellows were going on with them. I passed Cole Klease on the way. I was walking in as he was walking out, said, "G'day.", and I was peering around the corner, because I was really getting an idea of how far it was up to the roof - to get an idea of how close they were to finishing off the job, and then I drove from there and drove down to 5 South and I had a look at the face there and just walked around the pillar and had a bit of a look around the joint to see what it looked like, so I knew what it looked like on the afternoon shift, the previous shift I was on, and then I drove up into 512 and I parked sort of outbye 512 and just walked in for a look.

What did you see there?-- Well, when I walked into 512 I went into the tranny road and I just - as I walked in through the prep seal and walked into the No 1 cross-cut, I sort of noticed a goaf smell - there is a goaf smell there, and I noticed a slow migration of air coming out of the goaf and going down between 2 and 3.

Perhaps if you take up that pointer there, just turn around and indicate on that plan?-- Would you mind - could I just stand?

Yes, certainly?-- I walked up under here-----

If you can keep your voice up if you want to describe it from over there?-- Yeah. I walked up under here-----

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Can you describe where you are walking?-- That was the 512 section belt, then I walked through the prep seal to No 1 cross-cut.

That's through No 2 heading?-- That's correct, and then I looked down there and noticed that the - you could smell the goaf, and I noticed that the ventilation was creeping back up No 2 heading outbye. It would hit No 1 cross-cut and flow back down No 1 cross-cut, the same time I noticed that there was a slight haze in the air.

Whereabouts did you see that, and if you can describe it as you point it would be very helpful?-- Well, when I was standing right on the edge, you could sort of look ahead, a really slight - you could see probably - I could see down to just past 3 cross-cut.

Looking down No 2 heading?-- Yeah, and I noticed it sort of in the No 2 heading. I walked down 1 cross-cut to number 3 heading. I can't specifically remember what I saw down in these here.

That's number 3 heading or looking further along No 1 cross-cut?-- Yes.

Further down 1 cross-cut?-- Yes, so then after that I walked back out through the prep seal and through the man door.

In No 2 heading - sorry, through the prep seal in No 2 heading and you are indicating that man door in 0 cross-cut just outbye of 2 heading?-- That's correct. I walked up into the return itself and had a look down the return and there was sort of a slight haze there and the smell wasn't so strong as what it was in 1 cross-cut, No 2 heading.

Well, just to catch up with what you have indicated there, you are talking about looking down the top return-----?-- That's correct.

-----of 512. And you still saw a slight haze there, you say?-- A real slight haze, yeah.

You said something about the smell?-- Yeah, the smell in the return wasn't as strong - was not as strong as what I smelt when I was standing in the intersection in 1 cross-cut.

1 cross-cut in 2 heading?-- That's correct.

What sort of smell had you smelt at that point?-- It was just a goaf smell - just a musty smell - like what I smelt when I was walking down, just going through the bag and having a look down below.

Just sit down again, if you would. How did that compare with what you had seen when you were there on the Friday afternoon?-- Well, in the afternoon, the intake air was flowing into the waste and, so, the difference was that I could - instead of sort of intake air flowing into the waste on No 2 heading, I was getting this waste air coming out on

No 2 heading and I could see a slight haze.

Well, what was your view at that stage as to the cause of the smell and the haze that you mentioned?-- Well, I had two fellows prepping the section, getting pallets of Tecrete and that sort of stuff down. They had to move a little bit of other gear out of the section - an Einco and MPV. When I walked in, the first thing I thought was that it is just like a combination of dust and diesel fumes that have swept into the waste, and because the air was coming back out, it was just mixing up in the waste, sort of not clearing, if you know what I mean.

What did you do?-- Well, I phoned Cole Klease because I didn't want to just assume that that's what it was.

Now, you phoned from the panel?-- Yes, there was a telephone - the telephone should be marked.

If you pick up that pointer, you can press the button to see a red light there?-- The telephone was just on that corner there, I think - yeah, there it is.

On the inbye side of the intersection of 0 cross-cut and 2 heading?-- Yeah, it is on the outbye side - bottom outbye side, 0 cross-cut.

Yes, outbye from 512?-- Yeah.

Inbye 510; is that right?-- Yeah, inbye 510.

Anyway, you telephoned from there. Cole Klease was up on the surface, was he?-- That's correct. I rung the deputies' cabin.

And what conversation did you have with him?-- I rung up - at this stage I still hadn't known that Cole was doing 512. I just wanted to get a deputy. I rung up Cole and asked him - I told him what I had seen - I saw a slight haze and a goaf smell in the cross-cut and that it hadn't been there yesterday, and I asked him whether he would be able to come down and do a CO reading for me.

You say you said to him that it hadn't been there yesterday. At that stage did you make any mention of the report of the strong tar smell the previous afternoon?-- No, I can't remember saying that, no.

What did you do then?-- As far as I can remember, once I'd contacted Cole and asked him to come down, I decided to go over and just check the 4 South level prep seal fellows because I didn't want to - because I didn't want to just think that the haze might have been diesel stuff, and because of what I had been told about 5 North - in my mind, how quickly it took off - I wanted to make sure I would get this stuff over, just in case Cole come back to me with a reading of 25 or something like that, you know, so that's what I did.

One of the people at 4 South prep seals was George Ziebell?--

That's correct.

Did you have some conversation with him?-- Yes, I talked to George and I explained to him what I had seen in 512 - about the slight haze and the goaf smell in 1 cross-cut - and I said that after they had finished that batch that they were doing, whether they would be able to move the gear over there, because it was always planned to move it over there on - at the end of the shift anyway, because we were due to seal on Sunday, but I had asked him whether when he finished that batch he would be able to take it over.

Was there any discussion about your intention for 512 and your labour requirements?-- I talked to him. I said that I was going to ring George Mason about it, and I said that we may be needing blokes on this afternoon, because I had realised the overtime limit had been completed.

What did you do after you went there?-- After that I drove back out the mine and on the way - as I was driving out, Cole Klease was going on the way down so we sort of stopped there and I said - just confirmed with Cole that he was going down to do the CO reading, he said he was, "yeah".

After you got to the surface, what did you do?-- I rung George Mason.

And can you recount as best you can the conversation you had with him?-- I rung George and I just explained to him - I said to him - I detailed what I had done. I walked into 512; I noticed a goaf smell and a haze in the 1 cross-cut in 2 heading. I said that I had sent Cole down to do a CO check on it, but I did other talking as well, but I'm not really clear - I can't remember the total conversation.

Well, was there anything more you can remember?-- During that conversation - Cole Klease rung up during that conversation because George asked me - he said, "What's the CO?" I said Klease had just gone down to check it, and Cole rung up virtually right then and so Cole was talking to me and I asked him what the CO reading was and he said 8 to 9, and so - Cole said other stuff as well, which I can't remember either because I was - sort of had two phones-----

Just pause for a moment. Did Cole say anything to you at that stage about his detecting a smell that hadn't been there earlier?-- I can't remember Cole saying a smell to me.

You can't remember that. Could he have said that to you?-- He could have said that, but because I was sort of concentrating on what the CO was from him, that's what sort of stuck in my mind.

You still had George Mason on the phone?-- That's correct.

Continue your conversation with him then?-- I told George that it was 8 to 9, and George thought about it, and said, "Righto, we will seal this afternoon."

Did you discuss with George Mason at that stage anything about Mick Caddell's report the previous afternoon?-- Yeah. I said to him that Mick had picked up a benzeney type smell in the cross-cut - down one of the cross-cuts during his return walk.

So, George agreed that the panel would be sealed. Did he come out?-- Yeah, he said he would come out and look after the afternoon shift for me.

Did you then have to make some arrangements to get people there to do the sealing?-- Well, with the miners, they are roster runners. They look after it. You just sort of ask them how many you would like.

Who did you speak with?-- Ken Selff - Ken Selff I spoke to, and George Ziebell when he come up for crib, he authorised him to be able to waive the overtime limits so they could get the men.

Did you then have some conversation with Gavin Paterson, an electrician in the workshop, about the plans associated with sealing 512?-- Yes, I said that 512 would be sealed on the afternoon shift and that we would have to finalise the position of the monitor points on the day shift.

Where were the monitor points at that stage? Describe the positions as you indicate them, if you would?-- 1 monitor point was just inbye the top prep seal in the 512 return and the other monitor point was down in what used to be the bottom return in 512, but was not a return anymore. That's 0 cross-cut intersection.

What discussions then did you have with Paterson?-- Well, it was mainly just to establish just - custom practice when we seal off is we always - most of the sections in No 2 Mine have twin returns, and custom practice is when you seal off, you always leave one monitor inside and you leave one monitor monitoring the air on the active return, so we were just establishing just exactly which would be the best way to go about doing that.

And did you go ahead and make a decision then as to where they were to be put?-- Yes, yes.

Did you consult anybody else about that apart from your discussion with Gavin Pattison?-- No, no, I'm pretty sure just me and Gavin talked about it.

You didn't feel any need to speak with George Mason or anybody else in relation to where the monitor point should go inside the seal for a start?-- Not really. I mean that was sort of a standard sort of thing we used to do.

And where did you decide to put it?-- We decided to monitor the top return just by moving that outbye the prep seal.

And where was it moved to or was it to be moved to?-- Well, I just asked him to move it just outbye the prep seal.

That's right, on the intersection of the top return and 0 cross-cut?-- Yeah, just to move it back, yeah. And the number 5 which wasn't being used was going to be brought up and run - well, I gave them the option, but they could work out for themselves, "We want it in the belt road in the middle just there", and where it had to be routed back that way or routed straight through the belt road.

That's in 3 heading at 12 cross-cut?-- Yeah.

In fact that's the point that's marked on the plan there?-- That's correct, yeah. I asked him to move it in as far as they could, but when they got back obviously they said they could only move it into where the ramp started which was fine.

When you discussed with them moving it in as far as they could did you nominate any particular cross-cut or -----?-- Well, I can't remember. I wouldn't have said sort of more than 2 cross-cut, but I probably wasn't thinking about the height, see.

I mean in fact where was the waste edge at that point?-- As far as I can remember the waste edge was just there, just there.

Just inbye where the monitor point is marked?-- I would say that the waste edge was probably just virtually where the monitor point was, yeah.

So realistically you couldn't have expected it to go any further in than 1 cross-cut?-- No, no.

In that No 3 heading?-- No.

Was there ever any thought of putting a monitor point much further into the panel by, say, putting it down the top return?-- Well, that's just the normal way that we used to do things.

So you just did it the normal way?-- Yeah.

Was there at any time as far as you were aware discussion amongst management or deputies and management about the need to try to get monitor points further into a panel after sealing? Was that a matter that was ever -----?-- No.

----- a topic of discussion?-- Not that I can remember, no.

In any event, you just proceeded in what you would regard to be the normal way?-- Yes.

Then after that you spoke with the two men who were carting Tecrete to the 512 seals; is that right? They were up on the surface at that stage?-- This would have been during crib time?

Yes?-- Yes.

And then at that stage, after that at the end of the shift, did you have some discussions with the men to find out the final status of the various jobs?-- That's right.

Cole Klease reported to you on the status of the 512 prep seal sites?-- Yeah, yeah.

The men started to arrive for afternoon shift at about 2.45 p.m.?-- That's correct.

And you were to stay on at that stage - you were intending to stay on for a while at that stage to register the men?-- Yeah, yeah. George hadn't arrived so I was just sort of picking it all up and keeping on going.

George Mason arrived at about 2.55 p.m., you mention in your statement?-- That's right.

With Robert Parker who is one of the Tecrete men?-- Yes.

The arrangement was that both of the Tecrete contractors would be working on that final sealing?-- That was my understanding, yes.

Now, what happened after George Mason arrived and before you left?-- Well, I remember that - I think the deputies - there is one or two deputies arrived first and then I went in and just sort of told them - I think it might have been Lenny and George, I can't remember - I don't think they arrived together, but at some stage they were in the deputies' cabin.

Len Graham and George McCrohon?-- That's correct, and they would have - unless - they would have thought it was just them two on that afternoon. So I told them we were going to be sealing 512 due to a haze that I had noticed - slight haze that I had noticed and a goaf smell from my inspection.

Have you got a clear memory of mentioning to Graham and McCrohon about the haze and the goaf smell?-- Yeah, I'm sure that I would have said that to them, yes.

Go on?-- And then I said that I was going to address the

fellas in corporate, if you like, just out at the start point because it's a lot easier to do it that way. That's just the way I normally did things, was to let the fellas know and then let the deputies know separately, but I had plans of actually getting them all together but that's not how it worked out. The deps were sort of in the process of just getting their gear ready and walking through the meeting itself and that sort of thing, but what it is - I got the guys together and sat them down, and because George had arrived just previous I decided - I asked George whether he would just come out and listen to it, so rather than have to do two individual - up to three information transfers, if you like, that they could all be together. So George was standing at the start point when I sort of told the blokes that and the reason why they were going to be sealing 512.

Now, you say George Mason was there?-- Yes.

You refer to the blokes; that is the people that were on the shift apart from the deputies who were coming and going?-- Yeah, they were sort of walking between the deputies' cabin and the hot water urn, yeah.

Can you recall now what it was that you said to that gathering?-- I remember that - well, I explained to them that the - my observations on the Saturday day shift, that we had had a slight haze and that there was a goaf smell. I mentioned the CO concentration, but I can't remember whether I said 8 to 10 or 8 to 9, but I had mentioned that - the readings that I had got reported to me from Cole, and I haven't got a real clear recollection, but I might have actually mentioned that - what Michael Caddell had reported to me as well, the benzeney smell in one of the cross-cuts.

A number of people have said that they were at that gathering but that there was no mention made of a haze or a smell. Have you got a clear recollection yourself that you did mention -----?-- Yeah -----

Just let me finished?-- Sorry.

That you had observed a haze and that you made reference to a smell of some kind?-- Yeah, I'm sure I said that. That was the primary descriptive way I was relating to each person what I saw.

It's been said that what in fact they were told was that there had been a decision to seal 512 and that they were told, in effect, that they would have to stay on until the sealing was complete. Do you remember saying anything along those lines?-- I didn't say anything about staying on. It had already been organised for night shift, people on night shift to look after anything that wasn't finished.

Well, did you say anything else about the sequence in which the seals were -----?-- Yeah, after I explained the observations I explained to them where exactly the gear was in relation to it, how many pallets of Tecrete at each side. I explained to them that because we had to finish the belt road

from inbye - so obviously the belt road had to be complete first, and then I just explained to them the fact that you had to finish 1 and 2 at the same rates.

What happened after that?-- After that I just talked to George for a little while and sort of - I think I might have did a bit of paperwork like maybe booked the blokes in for the afternoon shift, talked to George. I said to George about the monitor points being changed and where they were and I just mentioned about the regulator.

About the regulator?-- Yeah, well, we had to drive down through the regulator to get the Tecrete to the top seal.

Did he have any comments about the location of the monitor points?-- No.

Did you subsequently then fill out your shift report for this shift?-- For the -----

For the Saturday shift?-- For the day shift?

Yes?-- Yeah, well, I - a lot of that shift report, like all the names and that would have been done in the morning but any catch up stuff would have been done at the end, yes.

Just have a look at this document. That's in fact an underground shift report that relates to all shifts on Saturday, 6 August, and it seems to be filled out in two different hands?-- Yeah, well, the bottom - the top two - the Saturday night shift and Saturday day shift, that's my handwriting, and the bottom one is George's.

Okay. Again in the areas that you've filled out there there is no reference to your smelling a smell or seeing a haze?-- No.

Or the fact that you had discussed with George Mason the need to seal 512 -----?-- No.

----- ahead of time. What would be your explanation for that?-- Well, I suppose I haven't got an explanation.

I tender that sheet, Your Worship.

WARDEN: Exhibit 182.

ADMITTED AND MARKED "EXHIBIT 182"

MR CLAIR: You left the mine at approximately 3.50 p.m.?-- Did I put three - about three - it was after 3.30. Probably 3.40 something, 3.50, something.

You came back again the following morning, Sunday, 7 August at 6.30 a.m.?-- That's correct.

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What happened after you arrived?-- Well, as I arrived I noticed the guys had showered, going home and I walked into the undermanager's office and Cole and George come in and I just asked them how things went and they said everything went fine, and Lenny walked in then a little bit later while the other two fellas were still there, and he just said that I'd have to book in the guys on afternoon shift an extra half hour because they did a hot seat change because that's how they normally do it when they seal.

Any discussion about when the seal had been finished and -----?-- Well, I think on George's report it mentioned 1.15. I think Cole would have told me they finished about 1.15 and that sort of thing. Cole did tell me that they had finished the sealing, that they had moved the section tranny out, they had moved the HT and they had put up the stopping in the - I might show it on the plan. Cole told me they had put that stopping up there.

That's in number -----?-- It's like the tranny road outbye the prep seal.

Yes. Right. Now you read the deputies' reports?-- Yeah, I can remember - as far as I'm aware I read them, yes.

What did you do then?-- Then I would have started ticking the guys - I went around first and just looked at the Unor screen and had a look at the figures on the Unor screen.

And did those figures have any significance for you?-- No, they just - what I would expect.

You made a note in your statement as to what readings you actually saw. Were you relying on a record of some kind when you looked at that, when you made out your statement?-- I think I just sort of tried to remember - I think this was only taken a couple of weeks after the events.

In any event, what you saw on the Unor screen didn't cause you any concern of any kind?-- No.

You registered the men in for day shift?-- Yes.

On that occasion you were expecting 16 miners but only 11 turned up; is that so?-- I will just find the place.

I'm just looking at the top of page 11 on your statement?-- Yes.

Again you've set out the areas to which the men were deployed?-- Yes.

Amongst other things one deputy and one electrician were deployed to do the scheduled test on the Maihak Unor mine monitoring system?-- That's correct.

That's the span gas tests?-- Yes.

And that had been scheduled at some stage earlier during the week, that test?-- Well, it was on the weekend work list to be done, yes.

Was there any question in your mind as to whether it was wise to go ahead and do those span gas tests on the Sunday morning given that 512 had just been sealed and you might need to keep an eye on what was happening there?-- Well, at that time when I organised that work I wasn't fully up with just what they did when they did the span gas tests.

How do you mean?-- Well, I wasn't aware they took the whole screen off - monitor points off the screen when I organised that work at seven o'clock or whatever it was.

So you weren't familiar with the way in which they did the tests you mean?-- No.

So you saw no reason not to go ahead with the scheduled test; is that what I understand you to say?-- Sorry, could you repeat that?

You saw no reason not to go ahead -----?-- No.

----- with the scheduled test?-- No.

You spoke to the three deputies who were on that morning, that's Mick Caddell, Robert Newton and Lex Henderson?-- Yes.

Can you remember what conversation you had with them?-- Well, I walked in and I would have told them that - what I always did is go in and say, "This is the guys I got for this job. This is the guys I got for this job. Someone is going to have to do the Unor test.", and Mick said he'd do them because I think he liked doing them. So he picked that, and I also explained, "There is going to be a bit of mucking around first of all. We got a lot of machines out of the mine."

Okay. Did you make some arrangement with Bob Newton to do an inspection?-- Bobby had to go down and do an inspection. I didn't have to tell him to do it because he already saw it. He said he'd have to go down with the blokes because of the time; is that what you are referring to.

Did you know what panel he was going to be looking after? Did you know what he was going to be doing?-- Not at that time, no.

You mention in your statement you arranged with him to do an inspection together after smoko?-- Yeah.

An inspection of all of the underground?-- Yeah, it wasn't sort of a routine thing you do, sort of, go down with a deputy, but it's just I asked Bob, "Do you want to come around with me?", and he said, "Yes."

In the meantime what did you do?-- Well, sort of a mixture of filling out time sheets and undermanager's reports as in that I had to correct those ones from night shift, attendance book,

and also just watching the absolute chaos trying to get the machines out of the mine and machines started, and it's something like - at the start of the weekend you didn't have machines ready and it could be an hour and a half sometimes before you'd have all things going.

You say this was because of the sealing that this position was created or -----?-- No, it was a common event on the weekends. You know you go to start a machine up, it doesn't go and all that sort of thing, and we had a lot of - we wanted to use Eimcos and MPVs and they were left down the mine so we had to go down and get them and bring them up and service them, just normal stuff that you would expect for a weekend.

Was there anything special that you did given that 512 had just been sealed?-- I was keeping an eye on the Unor screen.

What were you looking for on the Unor screen?-- I was just looking at the CO, getting an idea of just, you know - like what its increase was.

Well, what were you looking for in relation to the increase? There must have been something that you had in mind when you looked at the Unor screen?-- I was just getting an idea of what the rate of increase of CO was.

The men came to surface for smoko and you had some conversation with them; is that right?-- Yeah, I would have just caught up with how they were going.

And what did you do after that?-- Well, after that I went down the pit, went for an inspection.

Before you went down the pit did you have any conversation with George Mason?-- Yeah, I rung up George.

Do you remember what time that was?-- Well, I can't say positively, but I'd say it would have had to have been, say, between nine and 10, I suppose.

Anyway, go on. What conversation did you have with him?-- I just rung up George and he was on afternoon shift and I knew he would have gone down to look at the seals, and I wanted to know, sort of, what he saw.

What did he tell you?-- He told me that they had - that there was no haze, the ventilation was running as normal, you know, the air going into the waste, and he didn't - there was no smell and that the maximum CO he got was seven parts.

Did he mention anything about a conversation with the deputy Tuffs who was concerned about a tarry smell?-- No.

Did you have some discussion with George Mason about what you were seeing on the Unor screen?-- Yeah, well, at that stage I was just looking at how it was just increasing and working out what - by time what sort of rate it was doing, and I think I told him about 6 parts per hour, and it looked like that even later on in the day, and later on in the day I had actually called up a time graph of that, but at that stage I was only going by - well, I mean, timing and seeing what the increase was on the screen.

Did you have any particular knowledge as to what the Unor readings should do after the sealing of a panel? I mean, had you carried out any research yourself to find out how the readings should behave, what sort of increase there should be in CO or even what might happen with the Graham's Ratio, that sort of thing?-- Normally with the Graham's Ratio, normally from experience with other panels, CO sort of goes up in a linear fashion.

Did you know at what rate it was supposed to go up in a linear fashion?-- Well, I think the rate would depend on the type of extraction. Moura No 2 has had really different sorts of ways of extracting, and it really depends on the type of extraction you are using. That's what I would imagine.

I am talking about after sealing?-- Yes.

Well, you say that the rate might vary, but did you know in which way it might vary? Did you know what the tolerances were here? Did you know when you might expect - put it this way: did you know at what rate it might be increasing without having any concern about it, or at what point you might be concerned, at what rate of increase you might be concerned? Did you have any figures in your mind?-- No, only a sort of a profile. I was sort of just looking to see if it was linear or if it was starting to show a sign of any exponential sort of look.

Well, any further conversation with George Mason that you can recall?-- No.

During that telephone call?-- No.

Then you did go underground with Bob Newton at about 9.50, you mention in your statement?-- Yeah, somewhere around there.

What did you do when you went underground?-- Well, Bob and I, we walked right around - walked - we drove right around the pit, parked in 1 North-west had a good old look at 1 North-west. Bob sort of - being a deputy, he was sort of looking at lots of things, I suppose. I think Bob probably decided to come around with me because of the fact he was at 512 a fair bit and he doesn't get a chance to have a look at a lot of other stuff, so he was just taking it all in. We went down to 1 North-west and we had a look at the position of the miner, the roof. We borrowed a bar, barred some roof down,

that sort of thing. While we were going around looking at where the shuttle cars were, we noticed that both the shuttle cars weren't anchored correctly. There was a tag on one of them indicating the anchorage wasn't right, so we took a note of that. So, after our inspection of 1 North-west we drove down to 5 South and same sort of thing, Bob did a full inspection there. I sort of was more interested in seeing where the shuttle car was, the replacement shuttle car that was in the section, so Bob went down the face with me, had a look there, checked behind the bag, sort of thing, and he went down behind the face area. He walked down - I think the last cross-cut was 37. He walked down 37 cross-cut and did an inspection right down the bottom while I went back and checked where the shuttle cars were parked. After that inspection we drove to 512 and checked up on the work there, 'cause we had fellas working on machines for maintenance there, as well as I had two guys working on some ventilation work there. We did an inspection of the seals starting from No 1 down to No 5, and after that inspection Bobby said he wanted to go down the return, which I assume that he wanted to check the gas range, so I dropped him off at - I'm not exactly sure what cross-cut, somewhere between 10 and 13.

This was in 510?-- That's correct, and I drove down to the crib table, parked the PJB there and walked down to the drill and had a look at the drill site itself and just waited for Bob to walk inbye the return.

Just pause a moment there. Did you notice anything in particular in respect of the 512 seals when you were there?-- When we were there we sort of had a look at each seal. I noticed that it had gone sort of like a - you know, like Tecrete is like a dark green when it's wet? Well, it's sort of gone like a light grey. You could knock it. We noticed there was positive pressure on the seals. In the belt road, for example, we opened the tap and checked that, and we checked the gurgle traps for water.

And was there any - did you take any readings there at all?-- Bobby took some methane readings with his methanometer, but we didn't take any CO readings.

Was there any sign of leakage?-- All seals that I have ever come across have a little - you can hear this little hiss, you know, and from what I heard, each seal had a little bit of that hissing just on each seal, yeah.

Did you have a look at the regulator which was just outbye of the top return?-- Yeah, when you walk through that man door there, you can look straight up there. I didn't actually walk up to the regulator itself. All I remember is when I went through, I sort of walked around the corner and looked up and I saw the regulator, and I haven't got a good recollection, but I thought that it might have had brattice bag up where they must have drove through the previous day, but I couldn't say for sure.

Where you indicated there was that regulator that's just outbye of the 512 top return in the -----?-- That one.

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----- No 1 heading of 510. I think you indicated that you could see it from the man door?-- Well, we walked - obviously you have got to go through the man door right to the seal and so you are sort of walking through the intersection, just looked up the road to where it was.

Do I understand you to say that while it appeared that part of the regulator might have been removed, that had been covered then by some brattice?-- Well -----

I mean, was there still a hole in it?-- I can't remember seeing a hole. I just can't remember any - it looked like there had been brattice put there, yes.

Did you have some discussions with Bob Newton about the ventilation arrangements to get air across the seals?-- Yeah, well, part of the setting up is to make sure that we can - you have all the seals in the same return with no changes of pressure between one and the other, and at this time we still had that door there. It was open but it still wasn't - we had the air splitting that way and that way.

Can you just describe where you are pointing to there?-- Sure. On the Sunday day shift we had the air coming in along the No 3 heading and it was splitting. Some of it was going down to the right and then over to the 510 north return, and the other air was splitting going left through the man door and then up through the regulator. That was only a temporary arrangement because ultimately it was - well, you had to organise that and - say we were putting stoppings across there, get rid of that stopping there, seal it that up so the air would flow straight past all them seals.

Did you suggest to Bob Newton that that would have to be done -----?-- Yeah, well, you -----

----- at some later stage?-- That's correct, yeah.

Now, you say you dropped Bob Newton off at 13 cross-cut. He was going to walk along the gas range?-- Yeah.

Was that to check it?-- He didn't actually - I can't remember him actually saying he was going to walk the gas range, but that's - it was a common thing that if a deputy went in there, that's what he was doing.

Do you know if he was going to do anything down there with the drainage holes that might involve any release of methane into that area?-- Well, he didn't specifically say he was going to de-water - they got water traps on them and they fill up with water, and part of the inspection is that they de-water them. He didn't specifically say he was going to do that, but any deputy that normally does the gas range normally de-waters them.

You say that was at 12 noon once you dropped him off -----?-- Approximately, yeah.

----- you went to the drill and Bob Newton joined you there?--
That's correct.

Where was the drill? You can indicate it on that model over there?-- Sure. The drill was located in No 1 heading, and it was just drilling a flanking hole out to the left.

No 1 heading at the bottom of 510; is that right?-- That's correct.

The furthest inbye?-- Yes.

Well, then did you and Bob Newton go back up to the surface again?-- That's correct.

What happened after you got up there?-- After I got up there I would have checked the Unor screen again because I had been down for a few hours. I did write the figures down somewhere at the times I checked, but I also had to chase up some gear for night shift because there was no store person on on afternoon shift or night shift, so I was chasing up, oh, stuff like finding out things like where the bolts, half-inch bolts and that sort of stuff that - I had got a list off Robert Parker, it was gear he needed.

Now, you say that you had a look at the Unor screen. That was just showing the readings, first of all; is that right?-- Yes.

Did you also have a look at the Ellicott Diagram at that stage?-- Yeah, sometime in the afternoon I did two things, I raised the Ellicott Diagram and I also raised time graph diagrams of CO.

What did you find when you looked at each of those?-- Well, the Ellicott Diagram was showing a progression and it was - well, obviously it started off in the left-hand top quadrant and it was showing a progression across to the Y axis, the intersection between the non-explosive and the explosive.

What about the time graph?-- The time graph - I was principally interested in CO, and it was showing like just a linear sort of increase, yeah.

Well, at least what you saw there, with your state of knowledge, didn't cause you any concern -----?-- No.

----- is that what you are saying? At the end of - just before I go on, have you got that multi-coloured exhibit there, 127? Have a look at that again. You will see that during the morning of the 7th from - I think you said you arrived at 6.30, was it?-- Yeah, I arrived at roughly 6.30, yes.

From 7.15 on, can you pick that one up?-- Yeah, I have -----

The 512 seals, 7.15 and 34 seconds?-- Yes.

First of all, at that time there was an alarm registered at

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the Unor for a breach of the methane levels behind the 512 seals?-- Yes.

It was a breach of a level of two at that stage, do you see that over there? The second last column tells you the set point value?-- Yeah, I see that.

It was acknowledged very shortly after the alarm was registered?-- Yes.

Certainly within a minute. Oh, no, just over a minute, about a minute and a half. Do you recall that alarm going off?-- I can't.

That is a siren sounding?-- Yeah, I know. A siren would have gone off. I can't remember, but if the siren went off, well, I suppose everyone would have heard it at that time.

And you would have been in the area still?-- Well, I should have been in an area around that area somewhere, yes.

But you don't remember particularly -----?-- Not particularly, no.

----- the siren going off?-- Not specifically, no.

Did you accept that alarm?-- No.

Because your number is not there?-- That's right.

And you always use your number?-- Yeah, 67.

Did anybody consult you about that alarm having sounded and advise you that they had acknowledged it?-- No.

You would have been the most senior person there at the time?-- Yes.

Did anybody consult you about changing the set point level from two to two and a half?-- No.

Again, if they were going to change the set point value for an alarm level, would you expect that they would consult you as the undermanager on duty?-- Yes.

Do you remember who was there at that stage who might have been familiar with the system sufficiently to acknowledge an alarm? I am not just talking about deactivating the siren at the Con Log, but to acknowledge an alarm on the Unor and to reset the set point value?-- I don't think there was too many people that can do changes - you are saying changing the set point value. Most of the leckies knew how to do set point values. I don't really think that a deputy would have done that.

In terms of the people who were there that morning -----?-- I would just imagine one - well, that's strange. I really don't know. I know the electricians know how to do set points, but I'm really not familiar with if any of the

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deputies or whatever know how to do it.

In any event, no-one consulted you about it, and you have no memory at least -----?-- No, I can't remember anyone seeing me about methane set points.

Well, just to follow that one through, if you go down about eight levels, eight entries there, to the entry at 9:49:21; do you see that one?-- Yes.

You will see that that again is a breach of the methane set point level or alarm level -----?-- Yes.

----- for point 5, and that the value that's breached there is 2.5?-- Yes.

So, it does seem that that level was reset in the intervening time?-- Yes.

Are you able to say where you were at 9.49? I think you said that you went underground with Bob Newton?-- Yeah, if I wouldn't have been underground right at that time, I probably would have been in the PJB, servicing it up or getting it ready.

In your statement you mentioned 9.50, but you envisaged this morning it might have been a bit before that?-- Yeah, it's pretty hard to -----

In any event, did anybody make you aware of the fact that there had been that alarm at 9.49?-- Not that I can remember, no.

You will see that that was acknowledged very quickly?-- Yes.

Within the minute, and in fact if you go down to the entry for 12:47:58 that day you will see that the set point value was again changed from 2.5, or had been changed in the intervening time from 2.5 to 3?-- Right. Yeah, I've got -----

Sorry?-- I've got no knowledge of being asked about that.

No-one consulted you about changing that?-- No. There is one circumstance on the Sunday day shift where Bunny come in and he said that the CO had gone over the set point and I asked him to raise it - I think I asked him to raise it about 20 parts, I think, but that was the only time that anyone approached me as far as that sort of stuff went.

I see. That was the CO. Well, if you go back to the entry at 8.25 and 50 seconds, you will see that there was a breach of the CO level there being a set point value of 60?-- Yeah, I can see that.

And then if you go down to the entry at 11.26, you will see that there was a further alarm there being a breach of a set point value of 80?-- Yes.

Could you have been consulted about that change?-- Not at

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11.26, no.

No, but the change was made some time between 8.25 and 11.26?-- Yeah, that could have been a change. 8.25 - yes, yeah, that probably would have been the -----

You would have been consulted about that?-- Yeah, I remember Bunny definitely come and saw me once and he said the CO had gone over the set point, he said it was alarming.

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At 11.26 - do you remember the actual alarm going off at that stage - the siren sounding?-- I was underground.

You were underground at 11.26?-- Yes.

And then you will see that there are quite a number of other alarms that are shown on the log there, which would appear to be associated with the span gas tests. You see, they go from 8.48 and there are a number of them before that time of 9.40 or so that you said you may have gone underground - 8.48 through to 9.29. Do you see those?-- Yeah, I see those.

You were on the surface during the time that that was going on. Do you remember the siren going off?-- Yeah, well, I remember the siren going off for at least one of those, because when I looked through the window Bunny was sitting there in front of the monitor.

But with the siren in your memory, would the siren have gone off all of those times?-- I can't remember whether they went off all them times.

Just put that to one side. At the end of your shift that Sunday morning, you saw the work groups again. You found out the status of the various jobs?-- Yes.

Somebody had told you that the span gas tests had been completed?-- Yes, I saw Mick and he told me that.

Did anybody tell you about any problems that were shown by the span gas testing?-- No.

No mention of difficulties with point 18?-- No.

Was there any mention to you there had been consistent alarms as a result of methane levels on point 18 in the 510 north return?-- No.

Nobody mentioned that to you? These were in the course of the morning: 10.04, 10.47, 11.58, 12.22?-- No.

I mean, if somebody had told you that, would you remember it?-- Oh, yeah - 510 return?

510?-- Oh, yeah.

North return?-- Yeah.

At the end of your morning shift, you read the deputies' reports and you registered the men arriving for the afternoon shifts?-- Yes.

Did Albert Schaus come to the mine at some stage?-- Yeah, Albert was there about 2.30.

Did you have some conversation with him?-- Yeah, I walked into - Albert was in the undermanagers' and fellows were just knocking off. That's how I knew the time. We knocked off about 2.30. The fellows would go in the shower about 2.30. I

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went to Albert and the first thing I wanted to ask him was about the shuttle car - I think I have detailed it in here - but it has to do with the fact if you change a shuttle car's anchor points to get rib anchors, you have to ask either George or Albert, which I did, and he said it would be all right, and then I also raised the subject about the trend that I noticed on the Ellicott going from the non-explosive to the explosive quadrant.

Well, what did you say to him about that?-- Well, I said to him that - first of all, I told him my observation - well, first of all, I asked him whether he knew 512 was sealed. I was assuming that he did. Then I asked him - I told him that the rate of increase of CO was about 6 ppm per hour and that by the trend of the Ellicott, that the sealed area would be passing into the explosive range some time on night shift.

Did he show any concern at all about, first of all, the rate of increase of the CO that you mentioned to him?-- No.

And what about when you mentioned about the Ellicott trend? What did he say to that?-- Well, it was sort of - he didn't really say anything to it as such, because I was sort of making a query as to - if any concerns were raised about the sealed area being in the explosive range, how I was to go about handling those concerns.

If any concerns were raised by whom?-- By anyone on shift - on night shift.

What sort of concerns?-- Well, about the sealed area being in the explosive range. From my experience, I have heard on the grapevine over the years that occasionally you might get someone who would be concerned about going underground whenever a sealed area went through an explosive range. It is a bit sketchy for me because it didn't really - you just hear on the grapevine - you know, one of the miners on your shift might say such and such was, you know, saying something like that, and whenever I have sort of come to work, there has never been a problem. I have always gone down.

Now, can you relate as best you can the conversation that you had with Mr Schaus about this?-- Yeah, I said to Albert that - as I said, the - it looked like the projection for the sealed area would be that it would be passing the explosive range some time on night shift, and I said that if fellows had any concern, what did we want to do, and he said that, first of all, if there was a concern, ring George, but he also said that - obviously you can't force anyone to go down the mine, but he said just to ring George.

Well, what happened after that? Was that the extent of your conversation with Mr Schaus?-- To the best of my knowledge, yes.

What did you do then?-- Well, I just looked after afternoon shift and I told - I had - there was certain jobs I had to do. I was short of a couple of blokes, so it was pretty tight. What I had to do was - I really needed three blokes to do a

bit of EBG work to set up the 1 North-west as far as cable work went for the shuttle cars and to take all the Tecrete sheets - because those Tecrete sheets we had stored in 512 in case we had a rapid seal - they had to be taken over to the 4 South prep seal area, and that sort of stuff; so I just checked to see how many blokes I had. I went and saw the depts, told them what was on. I mentioned to John Blyton that it looked like we were short of blokes and wondering whether he would be able to help with the cars, and he said to ask Brian French if he could do away with a TA - do away with a TA till 5 o'clock - so, in the end, I would get back to John so he didn't have to worry about doing that. So, it was a TA for the leckies, a TA for the fitters and two guys just doing a bit of tidy-up work, run the belt, all that sort of thing.

The two deputies you had were John Blyton and Rod Helander?-- That's correct.

Now, did you tell the deputies where everybody was to be working?-- Yes.

And then did you make some arrangements with Maurie McPherson, who was one of the manpower planners?-- Yes, roster runner, yeah.

Roster runner. And then did you leave the mine?-- Yes.

You told the deputies you would be back for the night shift; is that right?-- That's right.

You left at about 3.20 p.m.?-- Yeah, about that time.

You came back to the mine again that night?-- That's right, 9.30.

Now, let me ask you this: after you left the mine and before you came back that night, did you have some conversation with George Mason?-- Yeah, I rung up George.

That was from your home, or at least while you were away from the mine?-- Yes, that's correct.

About what time was that?-- I'd say 6.30 or 7.30, somewhere around that time.

And what conversation did you have with him?-- Well, I just sort of wanted to go over the information about 512 seals just with George. I preferred a - to get things - rather than when Albert suggested to me to ring George if there was a concern, I preferred to know the plans of action beforehand, rather than wait until things crop up, so I just ran through with George what I had sort of not told Albert, but I told him the same things about the CO, 6 parts per hour and the Ellicott trend going to explosive, and what his plans were if there was any concerns raised.

Well, if you could just go on and-----?-- Yeah, well, as far as - both of us were concerned the characteristics that the sealed section were showing was no different to any other

sealed section, and as far as the concerns went, George said not to raise it with anyone on the shift because they would - if they had a concern, they would raise it with me. He stated that, you know, it was known you can't - if anyone has got a concern, you can't force them down the mine, and he said that there was other jobs that we could give them over at No 4 underground - just tidy up work over there - but he said that if there was any concerns, to ring him, and he asked whether I was willing to go underground. I said, "yeah", I didn't have a problem with it. He said to make sure as a matter of principle that if they stayed out of the mine to make sure I went down.

Was there some mention of the shift check inspector?-- Yeah, well, when I sort of was asking George if a concern was raised - he said - I said, "Did you want me to raise it with the shift check inspector and the deputies?", and he said, "No, don't raise it with them. They'll raise it with you if they have got a concern."

You went back there at 9.30 that night, you have told us. What happened after you arrived?-- Well, the first thing is that the fellows were finished their work and they just gave me a detailed rundown on what had happened and the - you know, Bucko was there with Ernie Steele and they told us about the miner in 1 North-west. I was told the electrical work was finished. I was told that the outbye stuff had been completed. Bony Helander gave me his reports at the start point there. Maurie Mac told me that the only overtime that he could get back to front was Darren Young, so I said that was no problem. He told me that Kenny Mills wouldn't be coming in. He had rung up sick. So, I took Bony's reports in to the undermanagers' office and then I - obviously I checked the Unor, and then I walked around and I saw John Blyton in the shower.

You say you saw John Blyton?-- Yes.

Whereabouts?-- In the shower.

Was this before or after you had read the reports - you had read the deputies' reports, did you say? Bony?-- Yeah, Bony gave me his reports and I noticed John left his reports on my-----

Yes. At some stage, did you have a look at the Unor screen?-- Yes.

Was that before or after you were talking to or you saw John Blyton?-- That would have been before John. Probably - because the fellows were waiting to give me the reports to go home, I got the reports off them and I would have looked at the screen and I would have seen John.

Now, when you looked at the screen, what did you see?-- Well, I looked at the Unor screen first with all the points on, and just looked at the readings, and then I raised the Ellicott, just to have a look at that, see how it progressed since day shift, and then I just turned it back to the readings and

walked around. I think probably the reason I sort of saw John was the fact that I could hear the shower was still running, so I figured he was still there.

Coming back to the readings, was there anything unusual about the readings on the Unor screen?-- Nothing that I wouldn't have expected.

I mean, you probably don't remember the readings now, but the readings weren't such as to give you any concern?-- No, I wasn't concerned.

Have you got that multi-coloured exhibit there again - Exhibit 127? Clearly from you say there was no siren sounding at the time?-- No.

And you had gone back there at 9.30 that night; is that right?-- That's right.

Just have a look at the entry for 20.15:39 - that's about quarter past 8 that night?-- 20.15?

You see there is an alarm registered at the Unor at quarter past 8?-- Mmm.

In respect of the 512 seals, being a breach of the methane level?-- Right.

A breach of that level of 4.5; do you see that?-- Yes, I see that.

Now, that was before you got there, of course; is that right?-- Yeah, the actual time of the alarm was before I got there.

But, in fact, if you look at the next column, you will see that that alarm wasn't acknowledged until 23 minutes past midnight?-- Yes.

So, at the time that you arrived there and looked at the Unor screen the 512 seals point would have been alarming - would have been flashing red, and one would have thought that you would notice that, at least?-- Like I said, I looked at the screen and I looked at the readings. I didn't have any concern, but I really can't remember any figures, whether they were red or green at that stage.

You can't remember whether, when you looked at the Unor screen specifically to look at the 512 seal's readings at point 5 - you can't remember whether it was in alarm, or you may not have noticed whether it was in alarm; is that what you are saying?-- Yeah.

Is the Unor screen when you have got a point in alarm mode-----?-- Yes.

-----is it noticeable that it is in alarm mode?-- I thought the figures changed from green to red if it tripped a certain set point value, yes.

And there is a red flashing rectangle up in one corner, is that right, that indicates that it is in alarm?-- Yeah, I think so. I mean, you sort of - before the screen - you would actually get the numbers flash on red.

Yes, but you-----?-- I didn't notice any numbers flashing.

You are quite sure you did look at that Unor screen after you got back that night?-- Positive. I looked at it several times.

Well, on any occasion when you looked at it, did you notice whether it was - that point 5 was in alarm mode?-- No.

That might be an appropriate point, if Your Worship is intending to break at 11.

WARDEN: Yes. Thank you, gentlemen. I will have the morning adjournment and resume at 11.15 sharp.

THE COURT ADJOURNED AT 10.57 A.M.

THE COURT RESUMED AT 11.15 A.M.

MICHAEL ANDREW SQUIRES, CONTINUING:

MR CLAIR: Mr Squires, we were dealing with your observations when you came on to the night shift that night. Now, you say that you looked at the Unor, you then went around and you were talking to John Blyton, I think you mentioned?-- Yeah.

Around at the showers?-- Yes.

What conversation did you have with him?-- First of all I just asked John what he thought of the - he would have inspected 1 North West and I wanted to know whether in his opinion the anchor points were completed, you know, to his satisfaction, and he said they were.

Okay. You spoke with Cole Klease and Mick Caddell at some stage to try to get coverage for the night shift. You were short a deputy, were you?-- That's correct.

You couldn't get any assistance from them. Did you continue to try to get another deputy or did you just leave it at -----?-- Yeah, well, it's sort of a combination of - to ring Cole you can't ring from the undermanager's office because of the STD block, so I had to open Jacques' office up the end, and it was sort of a combination of running between the two offices, but, yeah, after the third attempt I managed to get a hold of Ken Guest's number. Like I rung him, but it was busy and on the third attempt it was ringing.

He was going to come in later?-- Yes.

You then commenced registering the names of the employees who were arriving to work on the night shift?-- That's correct.

At some stage you noticed that there were several of the men looking at the Unor screen?-- Yes, I saw a few standing in front of the Unor screen, yes.

And what did you do at that stage?-- Well, I noticed that some of the blokes standing there - or at least one anyway, had worked on the sealing and that's what I presumed they were looking at, the figures on the screen, and at about five past 10 I raised the Ellicott Graph on the screen and turned it around so that you could see it from the start point.

At that time did you make any observations about the point that things were at with the Ellicott Graph?-- At that time it was just an extension of what I had noticed before, migrating towards the explosive range, and it was just slightly to the left of the Y axis.

Again when you looked at the Unor on that occasion did you notice point 5 in alarm mode?-- I can't recall that, no.

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Now, you spoke then with the two deputies who were on duty for the night shift, that's Len Graham and Bob Newton?-- Yes.

And you assigned men to the two production crews; is that right?-- That's correct, yes.

You've set those out in your statement. The 1 North West crew was Len Graham, Peter Hutchinson, Greg Young, John Owens, Jim Parsons and Peter Ein; is that right? It's at page 15?-- That's correct.

And the 5 South crew was Bob Newton, Darryl Hogarth, Chris Ritchie, Dave King, Mark Nelson, Mick Ryan, Mick Shaw and the electrician Geoff Mazzer; is that so?-- That's correct.

The crews boarded their PJBs and went down below at about 10.20; is that so?-- Yeah, the 5 South crew assembled first. They went down about 20 past 10 and the other crew was just after them.

Greg Bennedick, the transport driver, went down with the 5 South crew to recover the PJB?-- That's correct.

John Dullahide had been organised to go down with the 1 North West crew to recover the PJB but he had missed its departure; is that so?-- That's correct.

You were left then with John Dullahide and then Terry Vivian at the start point and Robert Parker the Tecrete contractor?-- That's right.

Before you assigned them to tasks did you have some further conversation with George Mason?-- Yeah, well, I rung up George, indicated - because it was a maintenance RDO day and because of the absenteeism we had a lot of fellas away, and even though I had Darren Young coming in it resulted in that if I sent Darren down to the crew I'd still be one short, and I didn't have enough fellas to do all the duties that you would if you wanted to go to the plan which would have been to cut two ways, to do 4 South Level prep seals and TAs and everything else. So I rung up George just to ask him - I was sort of favoured to cancelling one crew to pick up the other jobs, but I rung up George to find out what he wanted me to do.

And what did you discuss with him?-- Well, I sort of explained that 1 North West was going to be slow with just a short crew because you'd be running one car and I thought it would be pointless to mine like that, and that I could use the labour in 4 South Level and 512 to finish off that ventilation work and TAs for the machines, but George said it would be better if we just kept two crews and put one fella with the Tecrete bloke.

On that occasion when you spoke with George Mason did you have any discussions with him then about any concerns over 512 Panel or anything about readings in respect of 512 Panel?-- There were no concerns about 512 Panel and I didn't discuss

any readings.

After you spoke with George Mason then did you assign John Dullahide to the belt patrol?-- That's correct.

And Terry Vivian was asked to assist Robert Parker with the 4 South Level prep seal construction?-- That's right.

You had some conversation with both of them, Terry Vivian and Rob Parker, before they went down; is that so?-- Yeah.

Did you talk also to George McCrohon, the roadways deputy?-- Yeah, I saw George when he come in. George was sort of - even though he is an 11 o'clock deputy he's a bit conshy and tended to come in 20 minutes earlier or something.

You told him where everybody was and the overtime deputy arrangements, did you?-- That's correct.

Did you have some conversation with him about the inspection that he had made with George Mason of the 512 waste the previous night?-- Yeah, I just asked him, you know, from his perspective what he noticed, that's all.

What did he say about it?-- Well, he said that as far as he's concerned there was nothing wrong with it.

You spent some time then in the undermanager's office?-- Yeah.

And at about quarter to 11 that night did you receive a call from 1 North West section?-- Yes.

And who was that?-- Peter Ein.

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And what did he tell you?-- They had blown a major water hose that ran through the body of the continuous miner.

Did he say they needed a fitter down there?-- That's correct.

Did you make some arrangements in relation to that?-- Yes, I rung Bucko over in the workshop.

That's Rodney Buckton?-- That's correct, and told him that I needed a fitter down in 1 North-west, and he asked me about the TA's because at the start of shift he had sort of wanted to know whether I had any TA's for him and at that stage when I said that the 1 North-west machine was broken, I said I haven't got any TA's for him, so he said what they would do is they would go down and repair the 1 North-west miner and then him and Turbo -----

Jeff Taylor?-- That's him, yeah, they would go over to 512 and they would just - together they would work on some of the machines over there.

Darren Young arrived?-- Yeah, Darren Young arrived and I think it was Davo - when Darren arrived I said that he would be going into 1 North-west, and I think Davo organised him to just go down with the fitters on the same run.

And they left to go down. That was about 11 p.m.; is that right?-- Approximately, yes.

The three of them?-- Yes.

Then did you advise Len Graham that Darren Young was on his way down?-- Yeah, I rung up Len and told him that another fella was coming down to the crew. The fellas were aware of the fact that they had a short crew there. With the numbers that they had when they went down it wouldn't have been possible to produce as it was, so Darren was really - they kicked in, but Darren was the first one where we could run one car.

The miner was down in any event?-- In any event, yes, that's right.

Because of the water leak?-- The water hose, that's right.

But you expected that once that was fixed, you would have enough for a production crew; is that what you are saying?-- I would have enough for a partial - enough to produce with one car, yes.

Now, you continued on your paperwork in your office; is that so?-- That's right.

Did you notice something in relation to the tonnage metre in the undermanager's office?-- Yeah, between 11 and 11.30 I noticed that the tonnes weren't what you would normally get for that time of day, even though 1 North-west was broken down. I think - I can't remember exactly, but we had a

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carry-over from Friday. We didn't cancel it on Friday because it was a lousy day, I think it was about 74 tonne or something, and when I had a look at it, it was only at 80, so we only got about one or two cars, so I sort of left it go a little while and then I decided to ring 5 South because I knew 1 North-west was down, and I rang 5 South to find out how they were going.

What time did you ring there?-- Roughly 11.30.

Who did you speak with?-- Geoffrey Mazzer.

What conversation did you have?-- Well, I asked Maz, first of all - just to introduce the conversation I sort of said to him how things were and did the shuttle car swap - we swapped the shuttle cars on Sunday day shift and I asked him how the new car was going, whether it was playing up or anything, and he said no, both shuttle cars were going, and then he sort of come in and said that - my understanding is that he said that the miner was - had a noisy - a noise around the pump, pump motor area, and that they had stopped and had a look at it and he said it was okay but it might be wise to get a fitter down to have a look at it later.

So, there had been some delay in production at the commencement of shift?-- Yes.

For them to investigate that problem?-- Yes.

Did he describe the problem in any more detail to you?-- No, no, that was it.

Did he say what sort of noise it was?-- No, he just said a noise.

But as you understood it, when you were speaking with him then, the miner was operating again?-- Yes.

Well now, did he suggest that a fitter might need to look at it later?-- Yeah, he said that as far as he was concerned it was okay to run, but he just said it would be nice if a fitter went and had a look at it later just to look over things.

You were still on the phone to him?-- That's correct.

What happened at that point?-- The phone went dead.

What else happened?-- At the same time the siren went off and there was a big static sort of noise come through the underground two-way set.

That was in your office, was it?-- Yes. I acknowledged the siren and looked in on the little panel of lights up on the wall and there was two lights up there. There was the Unor light showing and there was a 5 South 1 BM1 alarm light up. I pushed the bottom button and the 5 South 1 BM1 light went off.

What was the significance to you of the 5 South 1 BM1 button?-- Well, the BM1 button is a - it's a methane - it's a

pre-set methane level alarm for the 5 South return so that in the event that a gas range ruptured, there was a monitoring point there that would pick it up, and the thing is because it worked on electrical sort of thing rather than a tube bundle, it was instantaneous.

You didn't have this delay period while samples came up the tube?-- Correct, yes.

Can you indicate the location of that BM1 alarm, or at least the BM1 monitor? Perhaps if you want to turn that plan up there over, you may be able to do it so everyone can see. If it's more convenient on the model, by all means do it?-- I am not familiar with the exact location, but my understanding is it was somewhere around this area here.

Can you describe the position you are indicating there?-- Somewhere between 3 and 5 cross-cuts, 5 South bottom return.

Now, you say that you deactivated the siren at the Con Log, I gather, from what you say, the panel of lights?-- No, I pushed the bottom button - there is a little box just next to the doorway and you have got two buttons. I pushed the top one and that stops the siren. I've pushed the bottom one-----

Well, is that the Con Log? Is that what you understand to be the Con Log?-- I don't know what a Con Log is.

It's a box on the wall, what, in the undermanager's room or in the Unor room?-- Yeah, just as you walk into the Unor, but it's still in the undermanager's office, that thing.

It's got two buttons on it?-- Yes, two buttons.

Does it have a series of lights on it? Is there provision for a series of lights to come up on that panel at all?-- In the Unor room? Yeah, there's a panel with windows so the lights can come up, yeah.

That's in the Unor room?-- That's correct.

But there is also this set of buttons in the undermanager's room as you go into the Unor room, two buttons?-- Yeah, that's right, yeah.

Are there lights in association with the two buttons on the panel in the undermanager's room?-- Not that I'm aware of, no.

No lights?-- No.

Just two buttons?-- Yeah.

You have pressed the bottom button?-- Yes.

And what did that do?-- It took away the 5 South 1 BM1 light.

On that panel?-- On the panel - window panel, yeah.

In the undermanager's room?-- No, no.

In the Unor room?-- In the Unor room, yeah.

So, you could see - when you pressed the bottom button, could you see into the panel in the Unor room?-- Yes, yes, that's right.

Now I understand. So that you press the bottom button, you could see the light disappear for the BM1 alarm?-- That's right.

Did the siren continue?-- No.

The siren deactivated at that point?-- Yeah, the siren stopped, yes.

Now, was there still a light on the panel in the Unor room relating to the Unor alarm?-- Yeah, I saw two lights there.

And one light went off when you pressed the button?-- That's right.

So, there was still a light on the panel in the Unor room?-- Yes.

Did you know what that light was?-- I think it's a visual indication of a Unor alarm.

So, the Unor alarm was still live. The light was still on?-- Yes, the light was still on.

But the siren went off?-- Yeah, the siren went off.

When you eliminated, as it were, the BM1 alarm?-- Yes.

What did you do after that, after you deactivated the siren?-- Well, first of all, I went back over to the screen - just as a backtrack, I said that I had brought the Ellicott up at 5 past 10. I had redone that screen about half past 10, I suppose, and brought back up the normal figures. I went back and had a look at the screen and everything just looked like it was last time, so Bob Davo come around then and he said, "What's going on?", and I said, "I don't know." I said - I can't remember whether I said 5 South 1 cut out while I was talking to them, but just then the lamp room phone rang and Bob went around to answer that, and I sort of followed him around, and he said that Lenny Graham had rung up and said they had experienced something like a fall and there was sort of like a dust in the air - I think he might have said windblast - dust and - I don't know, I will have to refer to this, but he might have said his ears popped or something like that, and he said they're coming out. So, they sort of, like, hung up on him after they said that. So, I went back around because I was a bit confused then because I lost my phone in 5 South and I got a crew from 1 North-west ringing up about things, so I rung up 1 North-west, and I don't know who answered the phone, but I said, "Is Lenny there?", and I could hear Lenny in the

background, "Just tell him we're coming out.", and so I rung back up 5 South and it was still busy, or the engaged signal was there, and then I thought we might have lost power. I must have looked at the belt monitoring box there because Dip 2 wasn't running. None of the belts except Dip 1 was running, and I went down so I could look down the ramp into the cut and that's when I noticed there was dust all around the portals.

What did you do then?-- Well, I raced in and rung George Mason up.

Do you know what time it was at that stage?-- Well, if I lost contact with Geoffrey at about half past 11, it wouldn't have been more than 11.40.

What conversation did you have with George Mason?-- I told George that I thought something serious had happened. I gave him the - what exactly happened as far as the telephone, the 5 South 1 BM1 and the static and I said that there was dust all around the portals.

What did he say?-- I will have to refer to this.

That's all right; page 18?-- I know that he - I told him that 1 North-west crew was coming out, so he instructed me to make sure that I got the blokes' names and whoever was coming out, we had to make sure that they were recorded. I said to him that - did he want me to go down and see if I could find Terry Vivian, and he said he didn't want anyone going down the pit, and he said too that - I'm not quite sure whether he said he was going to ring Albert, but I think he did, but I know that he told me to make sure I rung David Kerr.

Did you ring David Kerr?-- Yes, I did.

And you gave him all the information?-- Yes.

You told Bob Davidson to record the names of the men who were coming out of the mine?-- Yes, yes, George told me to tell him that.

Did you also tell him to keep -----?-- Keep trying 5 South, yeah.

A little while after that did the 1 North-west crew arrive?-- That's correct.

And with them were the fitters?-- Yes. There was two Rovers that come up.

And George McCrohon, the roadways deputy?-- Yeah, George was there too, yes.

Were they wearing their self-rescuers?-- Yes, they were, yes.

What instructions did you give them?-- I told them to go and see Bobby, Davo, and to acknowledge the fact that they were on

the surface and to record their names and just to hang around together in the locale, don't go wandering off. I saw Lenny and said that we are going to have to - because by that stage when they had got up on the surface I had already rung David Kerr, and Dave had told me to make sure we get the Mines Rescue opened up and get the suits down. I saw Lenny and I said, "I have to get you to go over and start" - and Jimmy, Peter Ein.

That's Pud?-- Yes, to start servicing the suits up.

George Mason arrived?-- Yes.

That was about 5 to 12?-- Yes.

He asked you to contact the underground mechanical and electrical supervisors and ask them to report to the mine?-- That's correct.

Did you contact George Ziebell, or did somebody contact him?-- Yeah, George Mason asked me to ring George Ziebell.

And you say in your statement that George Mason instigated the Moura Underground Emergency Organisation?-- Yeah.

Appointed you the surface controller?-- That's correct.

Just explain that?-- It is a folder that was kept at the mine that gives - it is a principle of emergency management by keeping duty cards and every person who is given a position has a duty card which explains the role that they are to be doing and any sort of extraneous matters towards that, and it is sort of an easy way to start up a chain of command without having to go through a lot of stuff, because it is up to the person - they read what they have got to do.

Now, you were the person who, in effect, was co-ordinating the activities before the explosion that night. As far as you knew, what were the positions of the - or what was the position in relation to the activities being carried out underground - just prior to that explosion?-- We had a production crew in 5 South cutting coal. We had a partial production crew with two fitters in 1 North-west with a breakdown. I had one beltman in the location of - which I did not know - I thought he might have been somewhere along 5 South 1. I had Robert Parker and Terry Vivian working on 4 South level prep seals. The plan for them was that they were to go down and pick up some gear from 512 and then progress over to 4 South level, so their location exactly I don't know, and we had George McCrohon walking the belts on his normal roadway inspection.

And Greg Bennedick?-- He was up on the surface.

You had been keeping an eye on these monitor levels during the day for the 512 seals; is that right?-- That's right.

You knew that the span gas testing was going on?-- Yes.

And you'd - well, at some stage did you speak with Ian Pearse, who was monitoring those levels?-- Yeah, well, what happened was I must have looked at the screen a few times before Ian got into the room to start their testing and when I - when they started their testing I must have walked in, I had a look at the screen and I noticed that they had moved most of the points from the screen, so I told him that I wanted 512 kept up on the screen the whole day whilst they did them other ones, because I wasn't aware of their procedure.

Are you able to say what time it was you went and spoke with him?-- Oh, I can't remember.

As far as you knew, did he keep 512 up on the screen then throughout the rest of the span gas testing period?-- Yeah, well, whenever I was there and walked in I could see the monitoring point, yes.

When these span gas tests were being carried out, of course levels were being breached all the time; isn't that right?-- Yes.

As each sample comes in from a monitor point?-- Yeah, the span gas, yes.

If the siren was still set at the Con Log to alarm when a level was breached, the siren would be going off with some regularity?-- Yes.

Do you know if there was a practice whereby the siren was disconnected while the span gas - when I say "disconnected", not reset during the time that span gas testing was being carried out?-- No, I don't know.

You are not aware of that?-- No.

Had you been there on other occasions when span gas testing was being carried out?-- Yeah, on other occasions I've seen - I haven't actually seen the screen, but I've seen the leckie in there and I've noticed the siren going off.

With some regularity?-- Yeah.

9, 10, 11, 12, 13, 14 times, that sort of thing?-- I couldn't say how many times, though.

Anyway, your memory is on this occasion you remember it going off once, anyway?-- Yes.

Now, you had kept an eye on the levels throughout the day?-- Yes.

You were basically looking at the CO?-- That's right.

And what you were looking for was simply to see whether it was going up at what you regarded as a steady linear increase?-- That's right.

But you, in terms of the actual rate or slope of that increase - you didn't have any point of comparison to tell you whether it was too high or too low or anything else?-- No.

You had never been trained, for instance, to ascertain what might be an appropriate level of increase?-- No, I haven't got any training on that, no.

You hadn't done any particular research yourself?-- No.

Or comparison with other graphs?-- No.

In relation to increases during other sealings?-- No.

The Graham's Ratio, were you aware of what that should be doing after sealing?-- No - all I sort of - Graham's Ratio - I thought there would be a limit there and it would change colour or something if it went over whatever it was.

You didn't know whether you should be looking for a particular level or anything?-- No, I didn't know anything about levels.

On the Graham's Ratio?-- No.

Now, from what you have said and what you say in your statement, it was your view that the signs that you saw at any time in the mine, right up to the time of the explosion, were not such as to give any evidence of a heating?-- That's correct.

I think you have said that, in effect, in the course of your evidence, and in your statement you say that it was understanding that, based on all of the data that was available, that a heating was not evident in the mine. Now, was there any point of time at all when the signs that you had either seen yourself or become aware of prior to the explosion even made you suspect that there might have been a heating in 512 panel?-- The time between the time when I walked in and I saw the haze on Sunday day shift - I beg your pardon, on Saturday day shift until the time Cole Klease gave me the CO reading was the time that was an uncertain time for me.

And when Cole Klease gave you the CO reading-----?-- I wasn't concerned.

You weren't?-- No.

But you didn't calculate that CO reading through to any litre per minute make, you have told us?-- Well, I didn't know anything about that.

The CO reading in itself, that wasn't a matter of concern for you?-- No.

Cole Klease's reading on the Saturday was a reading of 9 to 10?-- That's right.

That, you say, was sufficient to allay any concern you had about a heating?-- Yeah, I didn't have a concern about that.

You see, if you look back over your involvement with that panel, and what, in fact, you were aware of, or at least it would appear on the evidence that you would have been aware of, you get on 24 June this report from Reece Robertson about a smell - I think it was described as a strong benzene smell - I think it was - Reece Robertson; is that right? I don't want to put it to you incorrectly. I will look at Reece Robertson's report. Just bear with me a moment. "A strong benzene type smell" are the words - "a strong benzene type smell" are the words that appear in Exhibit 45, his production deputy's report that you have seen there?-- Yes.

It was 24 June. Then, on Friday, 5 August, there was a report to you by Mick Caddell of a strong tar smell and a reading of 10 ppm CO?-- Yeah, that 10 parts was in the cross-cut.

In the cross-cut, yes, that's right. On Saturday, the 6th, you saw a haze and you experienced a smell yourself?-- Yeah, but that was a goaf smell.

A goaf smell. And there was this report to you of 9 to 10 ppm?-- He rung up 8 to 9 parts on the phone.

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8 to 9 ppm, okay. 8 to 9 ppm is what he told you on the phone?-- That's right.

Did you receive a report of 10 ppm on that day at all?-- On his deputy's report - I think on his first inspection he had 9 to 10.

That's right. Now, we know from your evidence that you were aware of all those things, or as far as you can say you would have been aware of those things. Those signs just by themselves - I mean, they didn't indicate to you that there was, in fact, a real danger of a heating in 512 panel?-- No.

Mr Barraclough, for instance, has expressed the view that he wouldn't know anything more dangerous in a mine than smells and hazes, and that, in his view, would certainly have prompted somebody to make a thorough investigation as to how those things might come about. Now, was there ever any information imparted to you along those lines to suggest that if there was a smell or a haze, it ought to be thoroughly investigated?-- No.

Did you ever have a belief that if there was a smell or a haze in a panel that it ought to be thoroughly investigated?-- I would take a consideration of CO readings that I was getting from that.

Well, you have told us about your response to the CO readings. Now, what about if you did have those signs, would you consider it appropriate to perhaps arrange for some samples to be taken to be tested through the gas chromatograph?-- Like I said, I sort of go by CO, and anything under 10 parts I wouldn't do that, no.

Had you ever been told what use might be made of a gas chromatograph?-- I beg your pardon?

Had you ever been told what use might be made of a gas chromatograph?-- What use might be made of a gas chromatograph?

Yes?-- I know that gas chromatographs are used for being able to pick up hydrocarbons, if that's what you are getting at.

Yes?-- It gives a detailed analysis of an atmosphere that you sample.

And if there was any suspicion that there might be a heating, examination of a sample by a gas chromatograph might, at least, get you a better picture; is that right?-- It may, yes.

Well, were you trained in the use of the gas chromatograph?-- No.

You knew that there was one there at the mine and available?-- Yes.

Did it ever occur to you that it should be used in these circumstances?-- No.

Thank you, Mr Squires. Thank you, Your Worship. I have no further questions.

CROSS-EXAMINATION:

MR HARRISON: Mr Squires, I would just like to talk to you briefly about your background. You have told us yesterday how you became an undermanager - I think in August, was it, of 1987?-- That's correct.

Now, up until then, your experience had been as a cadet manager in Ipswich; later on as a technical assistant in Moura?-- That's correct.

When you were questioned about practices generally yesterday involving the undermanager's duties, you mentioned - or referred back a couple of times to a Mr Bob Suddle?-- That's correct.

Now, was he a person who gave you some assistance at the time you first became an undermanager?-- Yes.

In what sense? Was it some sort of on-site training provided by him?-- Well, Bob was in the process of retiring from the coal industry and his shift was the one that I was going to be looking after, and I had worked on his shift for some time, so Bob sort of - I was sort of like going along with Bob and Bob was showing me the ropes, so to speak.

He was an undermanager himself?-- That's correct, yes.

When you answered Mr Clair yesterday in terms of shift reports, you were asked about any instructions you had received in terms of filling out shift reports, and you answered to this effect: "The only instructions I ever received about filling out a shift report was what I received in 1987", and it went on, "from Bob Suddle."?-- That's right.

What instructions did you get at that stage, can you recall?-- Yeah, Bob just sort of sat down - it was sort of a process where, first of all, one day - a couple of days he showed me how to write a report out and then he would slowly pass some of the work on to me. So, he sort of showed me that the most important thing is to put down where each section starts, the down-time involved and where each section finishes.

Now, did he give you any specific instructions in terms of what, if anything, relative to safety matters had to be included in the shift undermanager's report?-- No.

Was there any practice in terms of where, in either the shift undermanager's report or the deputy's shift report or

elsewhere, any matters of a safety nature were recorded throughout the time you were there?-- Well, normally the shift undermanager's report sort of - they put down all the production stuff and the deputy's report would put down any associated safety business.

Now, was that something you were told, or was that something that developed?-- That was just something I observed and went along with.

Comparing the shift undermanager's report to the production deputy's report, did they appear to have different emphases to you in practice?-- Yeah, well, the deputy's report was the various aspects of what's required by the Act for the deputy to do for his inspections, with regards to observations of ventilation, gas, and various other things. The undermanager's production report is tabled around actual specific sections and entries of tonnage and things like that.

Were you ever specifically told, for instance, to include safety matters in the shift undermanager's report?-- Not specifically, no.

You mentioned yesterday that there may be a number of ways that safety matters could be passed - or something that had happened relative to safety could be passed from undermanager to undermanager, and your evidence yesterday was that the principal source of information came from the changeover and what you described as face-on-face talking?-- That's right.

Face-to-face talking, it may have been?-- That's correct.

Was that a fairly regular occurrence?-- That happened every time you had a change of shift. You sort of - there's a period where there is an overlap in the shifts and the undermanagers - both undermanagers from the two shifts that were connected, or back-to-back, if you like, were there together. So, during the week - during the normal production week, that would occur every shift change.

Can you give the tribunal some sorts of examples of matters that may have been passed on in these face-to-face discussions? Relative to safety I'm interested in?-- Things like, you know, like if ventilation was slow or if the regulators had been changed, if you had gutters running through the roof, conditions like that.

Were there any other means of communication from undermanager to undermanager other than the report itself or the face-to-face discussions that you've described?-- Yeah, well, sometimes you'd write a brief note on a piece of paper and clip it to his tick sheet so that he could read that.

Are we talking about some official document or a note on a piece of paper?-- No, just a blank piece of paper.

Is that something you did from time to time?-- Yes.

In what circumstances would you have passed on notes along those lines relative to safety?-- Probably the same thing as what face-to-face was where, you know, if you change regulators or roof conditions -----

The same areas you mentioned before?-- That's right, yes.

Was that a practice other people at that level adopted from time to time when you were there, to pass the notes on?-- Yeah, well, that was sort of in existence for a long time. Since I've become an undermanager that's sort of a characteristic that's been displayed.

I would like to talk to you now about deputies' reports generally. You told Mr Clair, and I don't have the passage in front of me, but yesterday something to the effect that you certainly didn't always sign the deputy's shift report?-- Yes, I said that, yes.

Production deputy's report I should have said?-- That's right.

In fact in preparation for your evidence have I pointed out to you a number of them in June and July of 1994 which have been referred to in the evidence where you haven't signed it?-- That's right, yes.

Now, was there ever any instruction given to you that you had to sign these?-- On hindsight I found out that it was actually detailed on the work procedures sheet, but I didn't - I must have read it, but I must have forgot it.

Were you ever brought to task over any apparent non-compliance with those procedures?-- Not the signing. Once George said that I had to make sure I put the sheets out on the noticeboard, but that's all I can remember, yeah.

When you talk of sheets on the noticeboard are you talking about serious matters or are we just talking about routine matters or what?-- No, just routine putting them up on the noticeboard.

Would it be the case that at times for whatever reason you may sign a production deputy's report but not physically the one that you would expect in normal circumstances to sign?-- Yeah, well, it comes in this hot seat change where you've got two undermanagers on and there are situations where you'll have a crew come up and the undermanager that would normally sign it is out attending to something and the other undermanager would sign it.

In other words signing one from a previous shift?-- That's correct, yes.

And in fact were there a number of examples of that in that area that I took you to the other day in June and July?-- Yes.

With the receipt of the production deputy's report, in normal circumstances it would be handed to you at the end of the deputy's shift; is that the case?-- That's right.

What exceptions were there to that?-- Occasionally some deputies' sheets would be left in the book or left behind. Sometimes they would just be thrown on your desk, yeah.

Were there ever occasions where they may have accidentally been taken away from the mine for whatever reason?-- Yeah, I remember a few instances where I have actually had to ring a deputy up at home after he went home with the deputy's report in his pocket.

In the normal course was there much verbal communication with the outgoing deputy at the end of shift?-- And the undermanager?

And yourself, yes?-- Yeah, yeah, the production deputies normally rung up. They sort of knew what time the next undermanager was coming in and they tended to ring up from the section they were working and give you the latest update on how things were, and this is where you could put the information and either give it to him face-to-face or write it on a piece of paper for him.

As a matter of practice, how far back did you read in relation to firstly undermanagers' reports and secondly production deputies' reports?-- As a matter of practice the undermanager reports I read two back, deputy reports I read the report that was handed in the previous shift.

Were you ever given any instructions in terms of how far you were required or you should read back relative to both of those reports?-- I can't remember any specific instruction, no.

The practice that you've just described, was that one that appeared to be adopted by other undermanagers or aren't you in a position to comment?-- Well, I know the undermanagers would read back the two on the shift report previous because you could just watch them. I can't really comment on the deputies

ones, but my knowledge was that they were only reading the one on that shift.

If some problem occurred, what was in place to see that information did get from undermanager to undermanager, say a problem in a particular panel?-- Well, we would always see each other.

Throughout June there were four of you basically undertaking the position; is that the case?-- Yeah, there was three shift undermanagers and there was Mark McCamley.

With him leaving that left the three shift undermanagers in July?-- That's correct.

With Mr Mason doing shifts from time to time?-- Yeah, where someone was away sick or annual leave George would have to do the day shift.

Yesterday there was some talk about events of 17 June and particularly about a problem of air backing up the tranny road and also perhaps some layering of methane in the tranny road in 512. Do you recall those questions?-- Yes, I recall those questions.

As I understood what you said yesterday you did say that you found out about the fact that there had been air backing up in that road some time after you came back from holidays?-- That's right.

How did you find that out?-- I can't remember exactly who told me. I think it might have been one of the undermanagers, but I can't quite remember what time it was.

Was that the normal means of communication in circumstances where a problem may have developed in a panel?-- Yeah, well, normally that's what would happen. You would come into work and if there was a problem the undermanager on the shift previous would tell you what the problem was.

Being alerted to a problem, would that ever prompt you to perhaps go back further into reports? Not necessarily that problem, but -----?-- No, that wouldn't have prompted me to do that.

Could you envisage problems that would?-- Back into deputies' reports or -----

Deputies' reports, undermanagers' reports?-- No, we tended to just take the problem on as it was reported.

Now, again was it the case that you were ever required in any special circumstances to go back to any specific reports? Were you ever told, for instance, that "You should go and look at this. You should familiarise yourself with that problem."?-- No.

Now, just following on in relation to your experience, you mentioned yesterday that you had been involved in Mines

Rescue?-- That's correct.

That involvement started in 1984?-- That's right.

Have you been actively involved since then?-- I was involved in two competition involvements. I think it was '84 and '87. Since '87 I've only been going to Mines Rescue to get my oxy time up.

Have you ever had any active involvement through your Mines Rescue?-- Yes, in - we had to get the machines out of 5 North in 1986 which required breaching the seals, and I was one of the Mines Rescue teams at No 4 disaster.

In terms of knowledge of spontaneous combustion, you said yesterday you may have encountered something in relation to it in your original studies?-- That's correct.

And beyond that the only other information you've learned basically was through your involvement with Mines Rescue?-- That's right.

You can recall it being touched on to some extent in your induction for Mines Rescue?-- Yes, I think so.

Did you, in the course of Mines Rescue, receive what I might term the old volume of Strang and Mackenzie-Wood?-- Yes, I did.

That was given to you through your involvement?-- That's right.

In relation to CO make, when was the first that you heard of the method of calculation, CO make - the existence of it, I should say?-- I think it was either at the end of '86 or the beginning of '87.

Was that relative to something Phil Reed had told you?-- Well, it might have been Phil. Someone passed a piece of paper on to me about it.

You mentioned yesterday that you did of your own volition go back and prepare a graph in relation to 5 North in 1986?-- That's correct.

How long after the event was that?-- I believe it was at the - it was either - probably the beginning of 1987 I revisited some data.

You were a technical assistant at that stage?-- That's correct.

Did that position involve some of the duties of what we now know as the ventilation officer?-- Yes.

You were familiar with the formula at that stage?-- Yes.

You are not readily familiar with it now, I take it?-- No, I can't tell you what it is now.

How long since you've ever done a calculation?-- Well, calculation - the last time I would have done one was when I was a technical assistant.

You mentioned yesterday that when you did go back and do the one for 5 North there may have been some mistake or some error in it?-- Yeah, that wasn't shown to me until after the disaster, but what I had done was I only calculated the CO make on one return in 5 North and 5 North had two returns. So the effective CO make that I had plotted wasn't correct for the whole section.

I take it you now know the relevance of a reading of 10 lpm CO make as expressed in the literature?-- Yeah, I found out information after the disaster toward that.

10 meaning a need to investigate?-- Yes.

20, to summarise it, being big trouble?-- Yes.

Were you not aware of that before the -----?-- I was not aware of that before.

Are you now aware that there was some reference to that in the older volume of Strang and Mackenzie-Wood?-- Not really.

Have you had a look at it since, recently?-- Yes.

Were you able to find that there was a reference in that particular publication to what I've just discussed with you?-- Yes.

I will just get you to have a look at this volume. I think it's the 1985 publication of Strang and Mackenzie-Wood and I've got a copy of the page marked 8.34. Just have a look at these. Firstly does that book represent the publication of the type that you had?-- Yes.

Is it your now understanding that the reference to the matters I've just discussed with you is contained in that particular page at 8.34?-- Yes.

Under a reference, it would seem, to Graham's Ratio?-- That's right.

Have I given you there a copy of that same page?-- You have, yes.

I tender that copied page, Your Worship. I've got copies here for the panel and for the parties as well.

WARDEN: Exhibit 183.

ADMITTED AND MARKED "EXHIBIT 183"

MR HARRISON: Just to finalise that particular point, you, as at 7 August last year, did you have any recollection at all of reading that particular passage I've referred you to, those few lines relative to the relevance of 10 lpm and 20 lpm?-- No.

With the publication, you are aware that there is a more recent publication of Strang and Mackenzie-Wood?-- No.

Are you now aware of that?-- I'm now aware of that.

You weren't as at -----?-- No, I wasn't.

----- 7 August. You've never had access to the more recent volume?-- No.

If I can take you back to 5 North in 1986 you had some active involvement there, did you?-- That's correct, yes.

Were you involved in the taking of any readings at all?-- Not in the taking of the readings, no.

Were you involved in any way in assisting in relation to the readings?-- Yes. My involvement with 5 North was that on the Saturday I took tubes over to Rockhampton and on Sunday the acting manager picked me up from home and took me out to the mine so that I could correlate the readings that were taken the previous day and put them in a graph form.

At about the time of the incident did you familiarise yourself with the types of CO ppm readings that were obtained both before and after the sealing of 5 North?-- Yes, I remember even talking to me specifically about the readings before.

And furthermore, when you went back to prepare that graph, did you then have access to the material which showed you what the readings were in CO parts per million leading up to the sealing, on the day of the sealing and again after the sealing?-- Yes, I had access to the information before the sealing, but some of the information after the sealing was still in transit.

Could the witness be shown the document marked "D" for identification, Your Worship? It's a report of Mr Kerr from Mines Rescue. I've got a spare one here, Your Worship. I could give your clerk.

Just have a quick look at that and tell me if what's contained in there reflects your understanding of what the readings in CO parts per million were both before and after the sealing?-- Yeah, well, this is what Ian - I remember Ian telling me about it in the fact that they had jumped to 13 - I think before it was even resting on about 9 parts and then in the morning on that particular day it jumped to 13 and he got a ring from the undermanager on shift saying it jumped to 13 and then shortly afterwards, about an hour or so afterwards, it jumped higher to 20 and then it kept on progressing very high, and I heard figures of 90 like is listed here, 90, it went up to 150 within - this is talking within the same shift.

And on the same day of the sealing?-- Yes.

You mentioned Ian. Who is that?-- Ian Kramer. He was the acting manager.

Can you just look at what it says relative to the post-sealing readings in CO parts per million?-- I can't specifically remember the individual numbers, but I was aware of the fact that it had a dramatic change of atmosphere to the point where oxygen depressed and a big rise in CO.

You knew that this was regarded as a known heating?-- Yes.

Did you have any other personal experience with a known heating from 1986 through to 1994?-- No.

Yesterday with Mr Clair you explained the relevance of trends to you, both in relation to CO parts per million and CO litres per minute?-- Yes.

You also answered a number of questions today about whether you believed, or whether you suspected there was a heating in 512?-- Yes.

To what extent, if any, did your experience of 5 North in 1986 play a part?-- Well, that's where I was drawing upon for my information. 5 North I knew was a heating and it had a rapid increase of CO, and that's what I was comparing the information I was receiving prior to the disaster on.

Did you have any matters in your own experience to compare with beyond that?-- No.

Were any other matters ever brought to your attention in terms of the behaviour relative to CO parts per million readings at the time of the heating?-- No.

I tender that report there, Your Worship. I would just like to discuss now with you - sorry, Your Worship.

WARDEN: Exhibit 184.

MR MARTIN: I think it's Exhibit 115 already, Your Worship. I'm not certain, but I think so.

MR HARRISON: I concede defeat there, Your Worship, by looking

at the note on the exhibit list and I won't tender it.

WARDEN: All right then, we will withdraw that.

MR HARRISON: Certainly the record suggests that it was 115 or part of 115, so I won't push that. If there is any problem, I will raise it again later, Your Worship.

WARDEN: Thank you.

MR HARRISON: Getting back to the CO make graph generally, you were familiar with the fact that there was one displayed?-- Yes, it was on the noticeboard in the undermanager's office.

Was it, to your knowledge, ever discussed among undermanagers or undermanagers and other levels of management or undermanagers and deputies as to what the relevance of that particular graph was?-- I can't remember any discussion or hearing of any discussion on it.

Have you ever heard anyone there at the mine at any level indicate to you the relevance, not of trends, but of any particular figures as depicted on that graph?-- No.

Was it something that you looked at from time to time?-- Yeah, it was in a place where you could see it.

And looked at for what reason?-- Just to have a glance at it.

You told Mr Clair yesterday - perhaps if I just follow on from that. A glance at it for what reason?-- Well, just to see what it's doing in sort of a trend sort of thing, you know, just where the line was going.

To see whether there was any linear change as opposed to any exponential rise?-- Yeah, well, just to see - if it, like, suddenly showed a vertical increase, it would tend to - for me it would equate to what the CO parts do in the situation of a heating.

You mentioned earlier events of the Saturday morning, 6 August last year, and in response to Mr Clair you said that you did have some concern on the Saturday morning prior to receiving the readings from Cole Klease in the phone call?-- Yeah, there was a time between the time when I saw the haze and the goaf smell to the time of getting the CO readings that was, for me, just uncertain.

Now, in that context you made a comment to the effect this morning to see whether or not Cole came back with 25 or something like that?-- Yes.

What did you mean by that?-- Well, that would have indicated exactly what the experience was in 5 North in the fact that there was a definite increase showing there is a heating starting up.

Was it the case that your knowledge of spontaneous combustion

was such that you felt for there to be a heating, there had to be this rapid exponential rise or something approaching those proportions?-- Yes.

Beyond that, was it your understanding that there could have been a heating? If, for instance, the rise was - there was a rise but not an exponential rise?-- No, you would have to have an exponential rise to show a heating.

You have been questioned at length about the signs of spontaneous combustion by Mr Clair yesterday, and I won't repeat any of that, but I will just ask you this: what was your knowledge of the relevance of a benzene smell prior to 7 August last year?-- I didn't - I wasn't familiar with the term or the indications given by a benzene smell.

To that stage did you relate a benzene smell to a possible heating?-- No.

Have you made further inquiries relative to that since then?-- Well, after the disaster I have noticed that people tend to use benzene and tarrish in almost a sort of an interconnected way.

To you were they different?-- Well, I couldn't understand benzene. I have never smelt benzene before. I don't really understand what benzene means.

Tar, what did you understand that signified, a tar smell?-- Tar, to me, indicated the same smell you get when you drive past the old No 1 workings, sort of a - well, it was where they had - I think it was almost an active fire in the mine or something and you could smell it when you passed by.

Now, with the old No 1, as you have described it, you are quite familiar with that smell?-- Yeah, you can smell - especially in wintertime you used - well, you can smell it when you drive on the highway.

At any time in 512 prior to its sealing did you smell that particular smell?-- No.

Was that a smell you would have related to a heating or possible heating?-- Yes - well, yes.

Were you aware that the goaf in 512 had been flushed on 10 June or thereabouts?-- No, I wasn't aware of that.

Where were you at that stage?-- 10 June? I was probably on holidays, or getting ready to go on holidays.

I would just like to clarify with you, if I could, all of the holidays you took throughout the relevant times and, more particularly, when you came back to work after those holidays. Are you familiar with those dates?-- I have them written here.

Just tell us in June when you were away and when you actually restarted work?-- Well, I was away on 11 June through to

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19 June, so I would have started on 20 June.

You told us yesterday you had a rostered day off on 15 July?--
That's correct.

You were away on sick leave again you said yesterday in July.
When was that?-- Yeah, that was from the 21st, which was a
Thursday, through to the 31st, which was a Sunday.

And you started again on 1 August?-- That's correct.

Were you ever made aware that on or about 11 June there was
some problems in terms of the stoppings being down in 512?--
No.

Is that something you have discovered since this particular
incident?-- I think I have heard various discussions on
stoppings in relation to the waste after the disaster.

I touched earlier on events of 17 June, again a time when you
would have been away?-- Yes.

You did indicate, however, that you believe, probably through
another undermanager, that you had found out that there had
been some problems in terms of air backing up in the tranny
road in the 512 Panel?-- That's correct.

Do you know just what you did find out relative to that
particular problem?-- Well, I found out that air could back
up out of the tranny road and it just - I was told what to do
if that occurred, just to check the segregation stoppings they
had erected between the tranny road and the belt road and the
other stoppings on the belt road prep seal and the supply
road.

Were you given any information to indicate whether or not that
particular problem had been resolved?-- Not particularly.

Well, were you given any information as to what was done to
resolve the problem?-- Yes.

What information were you given, and if you can recall from
whom?-- Well, I'm pretty sure Mark McCamley told me about
just the segregation stoppings which we used to force air down
the No 2 heading, sort of restrict the air in the intakes of
3 and 4 and force it down No 4 - force it down No 1 - No 2
heading.

Did you examine 512 yourself after you got back on the 20th?--
Yes.

Did it appear to you that there was any recurrence of that
problem on your return?-- No, not on that day, no.

Was it something that surfaced again at some later stage?--
At a later stage it surfaced again.

When was that?-- I can't remember the exact date, but I was
on a different crew of blokes on afternoon shift and the

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section deputy rung up and said that they had had that experience where the air was coming out the waste again.

Before I leave 17 June, did Mark McCamley ever tell you after you came back on the 20th that he had detected a slight or very slight tarry smell -----?-- No.

----- in 512 Panel?-- No, he didn't.

Did anyone else bring that to your attention?-- No.

Did anyone give you any information to the effect that Mark McCamley had passed that particular information onto George Mason or to Albert Schaus?-- That's news to me. I don't know of anything like that.

Did you ever see any note, be it an official document or an unofficial note of the type you have described before, telling you something to that effect?-- No.

Did you have any knowledge at all on your return, or shortly after your return, of any problem other than the backing up of air in the tranny road?-- No, not backing up of air, no.

I would like now to turn to 24 June. Do you have any particular recall of that day?-- Not really, no.

You have been made familiar, both before and during giving evidence, with the contents of the report from Reece Robertson which is Exhibit 45 in these proceedings, haven't you?-- Yes.

You have studied that at some length before you came here?-- Yes.

And if I understood your evidence yesterday, you have no recollection at all of the phone call he has referred to?-- No.

What is your first recollection of reading that particular report?-- My first recollection of reading Reece's report?

Yes?-- Would have been after the disaster.

It was suggested to you yesterday that he may, in the course of a phone call, have said to you something about a strong benzene smell. His evidence in these proceedings is that he did ring you that day telling you he had a strange smell down at 7 cross-cut between 1 and 2 heading and that it smelt a bit benzeney or something like that. Do you have any recollection of him bringing any information like that to your attention?-- No.

With your knowledge as at 24 June, what would the following information have indicated to you: a phone call saying that there was a strange smell that was a bit benzeney or something like that and a report referring to a strong benzene smell? What would that have indicated to you?-- Well, I wouldn't have really known how to take it. I would have just had a

look at the CO reading.

You worked the - before I go further, do you know whether or not you did refer to the CO reading?-- Yeah, I would have looked at the CO readings.

And to have done that, I take it, that would have been to the Unor?-- Yes.

Are you now aware whether or not there was anything untoward in the CO readings as they appeared on the Unor at that stage?-- I can't remember what the readings are now.

Has it been brought to your attention that there was any alarming increase in the Unor readings as at that stage?-- No.

Do you have any recollection at all of going to the Unor for any particular reason at or about that stage to check on the CO parts per million in 512?-- No. If he would have rung me up with that, then I would have asked him what he got on the CO and I would have checked the Unor, but I can't specifically remember the incident.

Do you know if you had any conversations with Mark McCamley about the 512 panel at or about 24 June?-- No, other than he might have been the one that told me about the air backing up, that's all.

This was after your return to work on the 20th of June?-- Yes.

Did Reece Robertson ever tell you in the week after the 24th of June that there had been any follow-up in terms of monitoring the 512 panel after the 24th of June?-- No, I can't remember Reece approaching me on that.

Did you ever have any discussion with Mark McCamley at that stage about any reports of any strange smells in 512?-- No.

Going back to what you have told us about your holidays earlier, it was the case that you were away on 22 July?-- That's correct.

You are now familiar, I take it, from what you have read and what you have heard in relation to these proceedings, as to the events that took place on 22 July-----?-- Yes.

-----at No 2. On your return, did anyone brief you on what had happened on the 22nd of July?-- No.

Your return being, I think you said, before 1 August?-- 1 August.

Were you ever made aware of the existence of a log which was kept showing certain readings which were used for CO make calculations?-- No.

A log that was kept apparently at the crib room?-- No.

Were you ever aware of any document along those lines ever being kept at any stage?-- No.

I take it you have seen since a copy of one showing various readings taken by various deputies?-- The log?

Yes?-- No.

Haven't been shown the log? I'll just get one turned up for you, but I'll ask you some more questions in the meantime. If the witness could be shown Exhibit 94, thank you, Your Worship? You have got a copy of it there now, have you?-- Yes.

Have you ever seen a document like that before-----?-- No.

-----the explosion?-- No, I didn't.

Just familiarise yourself with the readings that appear in there, would you, please? Not the actual figures, but the types of readings: velocity, wet and dry bulb temperature, methane, oxygen?-- Yes.

Now, are there any matters there that - or entries there which show readings which were not, in the normal course of events, previously taken?-- In the deputy's report?

Yes, well, just from what you knew of what was being taken generally at the mine?-- Yeah, well, the velocity and the wet and dry bulb are there. They normally don't take them. The CO litres per minute calculation is not normally shown.

Putting aside the calculated figure at the moment, was it apparent to you when you got back on the 1st that that basic data, setting aside the calculation, was included in various shift - in various deputies' reports that you saw?-- I remember seeing some deputies' reports.

Was it ever brought to your attention why that was the case?-- No.

Which ones did you see that you hadn't seen previously?-- The wet and dry bulb and the velocity.

You understand the relevance of the velocity readings and what they can be used for?-- I can understand what - I understand now what velocity readings can be used for, but velocity readings can be used to work out quantity, and quantity is one of the factors used in working out the CO litres make.

Was it ever brought to your attention why the velocity readings were now being taken and why they were appearing in the deputies' reports?-- No.

Did you notice them?-- I did notice them.

Similarly, the wet and dry bulb readings, what did you understand they were taken for?-- Humidity.

Did you see that in terms of some safety factor, or more of a comfort level?-- Oh, I didn't really see it as a sort of a - they're taken once a month in the ventilation report and I've seen with other wastes they are readings that are taken from time to time.

Was it brought to your attention prior to the explosion that Dave Kerr had been involved in the events of 22 July 1994?-- Yeah, well, after the disaster, I had heard that David Kerr had been involved, yes.

You didn't know that beforehand?-- No.

You knew him, I take it?-- Yeah, David, yes.

And you knew him as someone who was certainly very well respected in the area generally?-- Oh, yeah, for sure.

Someone who was very well-respected in terms of matters of safety?-- For sure, yeah.

Was he involved in any training relative to you at different times?-- He was the one that put me through the Mines Rescue

induction and he has been Mines Rescue superintendent since I've lived in Moura.

I would just like to turn to your knowledge of certain items of equipment. Did you, prior to 7 August, have any knowledge of the equipment known as the probeye?-- I've seen the probeye. I remember looking through it on the surface back in 1986 before the breaching of the 5 North seals, but since then I don't know. I haven't seen it used for anything.

Did you have some knowledge then as to what it could be used for and in what circumstances it could be used?-- Yeah, it's an infrared camera, so to speak. It is able to pick up differences of heat radiation from surfaces and, as an example, when we looked through it on the surface in the - before we went into 5 North, we were looking at a spoil heap heating and you could see the difference.

Did you know off-hand whether or not one was available in Moura generally?-- I knew that there was one around the mine somewhere, but I didn't know whether it was serviceable or not.

Had you been involved in the use of it?-- No, I don't know how to use it, no.

Had you ever received any instruction at all during the time you worked at No 2, in terms of what circumstances, if any, you should have resort to one?-- No. I don't really understand the operating procedures or the parameters that you are supposed to use it for.

To finalise that, you have certainly got no skill in terms of operating it?-- No.

You have been questioned today about the gas chromatograph?-- Yes.

You have indicated you weren't trained on the use of one?-- No.

You were aware, however, that one was kept at the mine?-- That's right.

Aware that it was calibrated daily?-- Well, I remember seeing the lamp room bloke going in there. Ken Selff was the fellow looking after it and he would walk in and do something with it.

Now, as at 7 August did you have any knowledge at all as to the limitations of the effectiveness of the gas chromatograph in any circumstances?-- Well, I was - during the No 4 disaster, as well as being on the Mines Rescue teams, I had to help out the government chromatograph blokes that come up and Stewart Bell was there and they had a special meter they used to stick the CO through for any readings under 10 parts, because the gas chromatograph didn't give an accurate reading for under 10 parts.

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Didn't give an accurate reading of CO, you are talking about?-- That's right.

Was that a view that you held after that?-- Yes.

When were you told that?-- That was in 1986.

Do you know off-hand if that was a view generally held by people at the mine?-- I don't know what the general view on it was, but that was my view.

Were you ever given any instructions as to when to use the gas chromatograph?-- No.

Was it your experience that there were visits from time to time from people from SIMTARS to the mine?-- No.

Did you know, firstly, that they came?-- Not really. I don't know anything about SIMTARS.

Did you have any dealings with the SIMTARS people?-- No.

I take it you were aware, also, that the inspectorate used to visit on a regular basis?-- Yeah, the inspectors, yeah.

Did anyone from the inspectorate ever raise with you any questions about the use or appropriately the lack of use of the gas chromatograph?-- No.

Are you familiar with what's called the Sifor II?-- Post-disaster I saw one. Pre-disaster if you asked me that question, I wouldn't be able to answer it, no.

You had no knowledge of it at the time of the disaster?-- No.

You have been asked some questions yesterday by Mr Clair in relation to the Drager, and you mentioned that different people may interpret the Drager differently?-- That's right.

You mentioned also problems with the operations in terms of the pumps or number of pumps and such like?-- That's right.

What was your practice in terms of how you operated the Drager?-- Well, you would pick the-----

Or how you read it, I should have said?-- Sorry?

How you read the Drager?-- I would read the stain on the tube at the furthest length on the stain.

Was that a practice adopted by everyone that you could see?-- I don't know whether it was a practice of everybody, but that's the way I was told to do it when I was a technical assistant.

Were you familiar with the types of hydrocarbons that the gas chromatograph may have been able to indicate the existence of?-- I knew hydrogen could be picked up, ethylene, those sorts of things.

XXN: MR HARRISON

WIT: SQUIRES M A

Prior to the explosion did you have any knowledge of the temperatures at which coal could give off various products that could be detected on the gas chromatograph?-- Not the specific temperatures, no.

I was about to go on to the Unor, Your Worship. I won't do that in five minutes.

WARDEN: I don't think so either. We will take the lunch adjournment and resume at 2.15.

THE COURT ADJOURNED AT 12.55 P.M. TILL 2.15 P.M.

THE COURT RESUMED AT 2.15 P.M.

MICHAEL ANDREW SQUIRES, CONTINUING:

MR HARRISON: Mr Squires, I think we got to the stage before lunch where I indicated I was going to ask you some questions about the Unor?-- Yes.

Now, you do have some knowledge of the operation of the Unor?-- Yes, I do understand some things of the Unor.

Can you just indicate what you can do relative to the Unor?-- My actions on the Unor?

What are you capable of doing in terms of accepting an alarm at a switch, acknowledging the alarm at the machine, bringing up any information or resetting the machine? Just concentrate on those areas?-- Okay. To acknowledge an alarm - you would go in and hit the alarm accept button on the screen, then you would put your number in - first of all, if the alarm went off the siren would go off in which case there is a little box as you go through the door between the undermanager's office and the Unor room, and you would push the top button there. That silences the siren. Then you go in and you push the alarm accept on the screen and enter your cap lamp number. In my case I deleted the first number because the number could only take two digits. So in my case it was 67. Then you would go back and push the bottom button on that little box just next to the door. Apart from looking at the main screen you could also bring up graphs, and so I was able to bring up, you know, Ellicott Graph or a time graph of CO or CH4 from any selected monitor point.

Could you reset the points in relation to any particular gas?-- No, no.

You did not know how to do that?-- You are talking about the alarm set points?

The alarm set points, yes?-- No.

I take it you've never done that?-- No.

Have you ever received any formal training at all in relation to the Unor?-- With an instructor or something like that?

Yes?-- No.

What you have got to know, is that something you've picked up along the way?-- Yes.

What has been your experience in terms of who generally resets the set points of the gases?-- The electricians, normally under a direction, reset the set points.

Are you familiar with people other than the electricians who have been capable of doing that from time to time?-- I don't know. I'm not sure if anyone else - whether they would know how to do it, no.

Are you aware, for instance, of whether or not any of the particular deputies are capable of doing it?-- Some deputies might be able to. It just depends on whether anyone showed them, I suppose.

Did you know prior to the explosion that Len Graham may have reset the machine at some stages in the early hours of the Sunday morning?-- I wasn't aware of it, no.

You are not aware of any other deputies that had that capability?-- No.

Has it been your experience that all cases where the machine alarms - and I'll talk about the Unor screen itself at this stage -----?-- Yes.

----- because a pre-set point for a particular gas has been exceeded?-- Yes.

Is it always the case that that's brought to your attention, to your knowledge if you are the undermanager on shift at the time? In other words, if we exceed the level for methane or exceed the level for carbon monoxide or go under the level for oxygen?-- Yes, well, normally on my shift I got Maurie Mac - Maurie McPherson who was my lamp room man, and if something went like that and no other deputy was around, for example, he would always let me know when I come up.

You've been questioned about the span gas testing of the Unor on 7 August; were you aware for some days prior to the Sunday that it was going to be done on the Sunday?-- I knew on Friday from the work sheet that it wanted to be done on Sunday.

Did any of the developments over the weekend cause you to consider whether or not it would be inadvisable to continue on with the span gas testing on the Sunday?-- No, not really. The emphasis on the weekend work tended toward where you had low labour levels. You tended to have to fulfil the mechanical and electrical jobs first.

At the times you were on the surface on the Sunday, 7 August, would you say that you monitored the levels of gases in 512 on a regular basis?-- Yes, I went in there regularly, before and after my trip underground.

Did the fact that there was span gas testing appear to you to interfere in any way with your capacity to monitor the readings on the Unor machine that day?-- No, when I went in and I saw exactly what the span gas testing did and how they had removed the point I told them to put the point back up and make sure they kept the point there on the screen.

There has been evidence here that the screen of the Unor is

often turned out towards the starting point?-- Yeah, that's how it's normally positioned.

Was it positioned that way on the Sunday evening?-- That's correct.

From your experience, in situations after there has been a sealing did the men normally take some interest in the readings coming up via the Unor from a sealed section?-- Yeah, you get - a few fellas on each shift will normally come over and have a look at it and get an idea of what's going on, yes.

You've seen that happen on earlier occasions involving -----?-- Yeah, every sealing that I've known I've always had a look at the screen.

From your experience on those occasions, what is it that you see that the men normally look for? Do they place emphasis on methane, emphasis on carbon monoxide or something else?-- I would say they would be looking probably at all the gases, but carbon monoxide probably, and probably oxygen, the oxygen level.

And has it to your knowledge been something that's been discussed by the men generally on occasions where there have been sealings?-- I think that a few of them do take an interest in it every time there is a sealing, yes.

On the Sunday evening at the change of shift or thereabouts, did you ensure that that screen was facing out at all times?-- Yeah, the screen was facing out at all times, yes.

Did it appear to you from time to time that men were looking at it?-- Yeah, well, when I was ticking the blokes in on the sheet and walking around the start point and around the deputies' cabin there is always someone next to it, yes.

There has been quite a deal of attention in the course of this inquiry as to whether or not sirens relative to the Unor alarmed on that particular day. I take it you are certainly not familiar with any on Sunday evening or Sunday afternoon?-- When I come to work for the dog-watch?

Yes?-- No.

Did you have some idea of what you believed would be the normal progression of CO parts per million readings on the Unor after the section had been sealed?-- Well, I would imagine that the progression of CO - my impression of CO would be that it would be a linear increase.

Is that what you were looking for when you were monitoring that particular machine in the course of that day?-- Yes.

As opposed to an exponential increase?-- Yes, that's right. That's why I got on to the machine in the afternoon, just to bring up the time graph just to have a look at the profile.

When you say the time graph, are you talking about CO readings going back?-- Yeah, you put in for a day - with the monitor point 5, or any other monitor point for that matter, you can put in for what time span you are after, and so I just put in for the day and it showed from point of sealing to the present time that I was looking at the screen.

Just tell me what you put in for on this occasion and what you noticed?-- Well, I put in for CO, I think it was methane and oxygen, and after I had looked - well, what I noticed with that was just a steady decrease in oxygen. I can't remember the methane, but I know the CO was just a steady linear increase.

From that print-out did you take it back, for instance, to the time of sealing and see what the progression was from there?-- Yes, it showed from the point of sealing on, yes.

Could the witness be shown Exhibit 127, thank you, Your Worship? You've already seen this a few times?-- Yes.

I just want to take you through a few of the matters that have been brought to your attention. Firstly it was pointed out to you today that there was an alarm on 3 August; do you recall that?-- Yes.

An alarm in the 512 top return sample point 16?-- Yes.

I take it that you had no direct knowledge of that now ----?-- No.

---- in terms of that level having been breached?-- No.

You will see from that that the actual breaching - I'm talking about the line marked - the only one for 3 August, the actual breaching was a set point value of 8 ppm CO having been breached with a recording of 8.8?-- Yes, that's right.

From what you knew of the levels in the 512 Panel at that stage would that reading of itself have concerned you?-- No.

We have a similar situation for 5 August. Do you see that?-- Yes.

Set point value eight, breached with a reading of 8.33. Again from what you knew of that particular panel and of the readings generally, would that of itself have concerned you?-- No.

Bearing in mind your knowledge of what you knew in terms of CO parts per million readings and the relevance of them prior to sealing, did any of the information contained on the Unor in terms of CO parts per million on the Saturday, 6 August, concern you?-- No, it didn't.

You've already been referred to a number of entries on that alarm log for Sunday the 7th, and I won't take you through what was discussed this morning with those. You may recall Mr Clair took you through them one at a time?-- Mmm.

I would ask you this: if every one of those, both in relation to carbon monoxide and methane, were brought to your attention immediately would they have indicated to you that what was happening in 512 Panel was any different than what you had anticipated would happen?-- No.

What did you anticipate would happen from your own experience, your own knowledge, in terms of the carbon monoxide readings and the methane readings on the Sunday?-- Well, the carbon monoxide readings on Sunday, I anticipated to come up in a linear fashion due to normal oxidation. Due to the fact that methane was a seam gas I would expect the methane level to rise slowly as well and the oxygen level would be depressed gradually.

If in fact there had been a siren or bells or any indicator of that type would that have alerted you to anything, bearing in mind these readings, that you didn't expect to happen in any event?-- No.

If I can just turn to another subject, the 512 Panel generally and the design of the 512 Panel, were you familiar with what was the generally accepted incubation period for 512 - sorry, for the No 2 Mine, I should say?-- Well, most of our extraction sections went for over six months. Some of them went over 12 months, so I sort of got around - sort of the idea that it was six months plus.

Was it your understanding that the extraction commenced in 512 Panel on 29 April?-- Yeah, well, I knew it wasn't a very long period, about that time, yes.

Slightly in excess of three months at the time of the incident?-- That is correct.

If we were to assume that the explosion originated in 512 Panel would that, in terms of your knowledge of incubation generally, surprise you?-- Well, that would throw all the information about Moura coal right out the window, wouldn't it?

You say "all the information about Moura coal"; can you just indicate how you gleaned that information? Was it from experience generally or one particular source?-- It's just the amount of sealings, you know, the amount of sections that get extracted over the years and just the length of time of extraction.

You've mentioned that that was your understanding; did that appear to be the understanding generally of those associated with the mine?-- I'd say so, yes.

In terms of the design of 512 were there any features of that particular design and the way 512 was mined that suggested to you that it may be more likely to spontaneously combust earlier than the accepted incubation period?-- It was a different layout to some other sections, and down the bottom there was - where they were ramping, and that there was sort

of cut coal on the ground, but that was sort of getting cleaned up and it was becoming a lot cleaner the further they progressed out, but apart from that it was the same as everywhere else.

Did you see any potential problems associated with greater areas of coal being exposed in view of the way it was mined?-- Yeah, well, if you got cut coal on the ground then you've got more surface area so the rate of oxidation in the waste would be higher.

There were some similarities with 401/402; is that correct?-- With - well, the similarity that I found with 401/402 is just - I think it was more 4 South Level, was the air coming out along the top intake road.

Perhaps what I meant was some similarities in terms of the design and in terms of how the coal was extracted?-- Yeah, with the rib strip method, yeah.

Although in that case - firstly, was the three metre rule in force at that stage?-- In -----

401/402?-- No.

The ramping that was done in 512, was that in some way to do with the three metre rule?-- Yeah, well, the whole idea of the ramping was to - for that specific purpose, so that people wouldn't be operating machines in the bottoms and stripping the ribs off.

Was it your experience that the necessity to ramp or the decision to ramp meant that there was a lot of loose coal being left around?-- Yeah, particularly down the bottom there was, yeah.

Did you see that as presenting any potential problems in terms of the likelihood of spontaneous combustion at an earlier period than the accepted period?-- Any coal left in the waste would have to be viewed with the possibility of getting a spon com earlier, but the length of the panel was very short.

Were you aware of any problems with stagnant air or dead air in 512, particularly behind the two rows of larger pillars?-- No, I can't remember anyone saying anything to me about it.

Firstly, were you aware yourself personally that that was a problem?-- No.

Did anybody ever bring to your attention that there may have been a problem in that regard either in development or extraction?-- No, I can't remember anyone coming with that problem to me.

Is it your experience at any time, particularly in extraction, that it was very warm in parts of 512?-- Yeah, there was - you could walk - if you walked through - particularly if they were working on the right-hand side and you walked through the stoppings that segregated the waste from the intake air you

could walk in there and it could be warm.

Did that cause you any concerns in terms of the possibility of a heating?-- No, well, every waste I've ever walked in is warm.

Did it appear to you that there was anything exceptional about this as opposed to other panels in terms of warmth?-- No, no.

Did you ever consider that you would expect higher CO parts per million readings in the extraction of 512 than you would elsewhere because of the design of the panel?-- Yeah, well, most of the other panels that we had we weren't limited to a three metre rule. So for example, 511 we were taking bottoms along the entire length of the pillar, so all of the bottom area was clean so that the amount of cut coal left behind was minimal. Whereas with 512, I explained before, particularly in the first few rows of pillars there was quite a lot of cut coal left behind. So, yes, you would expect that the rate of oxidation could be higher leading to higher CO readings.

Was that something you took into account at the time when you considered the relevance of the readings leading up to the sealing?-- Yeah, well, it didn't surprise me that you can get readings of, you know, six, seven, eight in that panel, no.

Were you aware as to whether or not ACIRL had any input into the design of the 512 Panel?-- I know that ACIRL - that George and Albert and Jacques were sort of working with ACIRL toward panel design and that they were monitoring it with extensometers et cetera for the measurement of stresses in the roof and where they were going during extraction.

Did you have any involvement in relation to that?-- No.

Did you have any involvement in the mine's risk assessment for 512?-- No.

Allan Morieson was the ventilation officer for the bulk of the time with the exception of the period when Steve Bryon filled in. Did either of them at any stage ever mention any concerns to you about gas levels generally in 512?-- No, no.

More particularly the levels of carbon monoxide?-- No.

Either parts per million or make?-- No.

Did you ever become aware of any recirculation problems in the man and supply road in 512?-- You mean the tranny road at the top?

In particular did Kleasey, Cole Klease, ever mention any problems to you?-- In the 512?

Yes, in 512 I am talking about?-- No, I knew that there - from time to time that they had this waste air migrating out into the tranny road in the section.

You have already told us about what you learnt of the problem on 17 June. What I am interested in is whether you were aware of similar problems either before or after that?-- What with - was 17 June - you mean the inspection -----

That's the incident we discussed before lunch when you had been away, you came back on the 20th?-- Yeah, Mark McCamley.

You think it may have been McCamley that told you?-- Yeah.

Were you aware of that problem on any other occasions, is what I am asking you?-- No.

Were you aware of any particular problems in relation to roof falls in 512?-- Yes, I knew that there was a few roof falls that were occurring down the bottom and in the middle, and even on Saturday when I walked in I noticed that there was a minor one just inbye of 1 cross-cut.

When you say "down the bottom", you are talking down towards cross-cut 13?-- Yeah, down towards 10, 11, somewhere like that, yeah.

You mentioned one in the middle?-- Yeah, there was one near the barrier pillar there.

And you mentioned a third area?-- Yeah, the third area was just one cross-cut inbye of 1 cross-cut, if you like 2 cross-cut, where there was just some minor falls that had happened - must have been very recently, within a few shifts of when I saw it.

Now, to your knowledge, have representatives from ACIRL come there and investigated any problems with roof falls in 512?-- No, I don't know anything about investigation. I know that they took some photos of some.

Can you actually remember someone being there, or is this what you were told?-- No, well, David Hill - I think his name is - me and him went in and took a photo of a big fall in the second row of barrier pillars, I think it was, on one afternoon shift.

One matter that has been canvassed in the course of this Inquiry is the possibility of there having been a roof fall well into the 512 Panel in circumstances where there has been loose coal trapped under substantial areas of the roof, of the sandstone roof, and whether or not that of itself could

potentially lead to problems with heating. Is that something you had ever turned your mind to before 7 August?-- No, well, if a heating was going to take place like that, I would reason that you would have to have significant carbon monoxide levels in a return and you would know what was happening.

In any event, was is something you turned your mind to?-- No.

Getting back to what you said earlier, from your experience if there was a heating in an area of that panel, it is something, you are saying, you would have expected to have received some indication of in the CO readings?-- That's right, yeah, you would see a definite jump in the CO readings, yes.

What do you base that opinion on?-- Just on what I have been told about the '86 when Ian Kramer talked to me and I heard about what happened then.

If I can just turn to the position of the monitor point behind the seal in 512; this is point 5. From what you have said earlier, did you give the electricians general instructions as to where roughly that should be placed?-- Yeah, yeah, I went over and saw Gav Pattison and talked to him about where we were going to put them, and it was just normal practice that we had - well, our sections had twin returns with twin monitoring points, and whenever we sealed it was normal practice to pull one out to monitor the active return that was going to ventilate the seals and the other one would be left just inbye of the seals.

Now, was there a normal practice in terms of where behind the seals that particular point would be placed?-- Yeah, well, normally we would run it either in the man and supply road or in the belt road in the middle of the section.

Do you know why that was done?-- Well, I presume it was just because it was sort of like equally distant from each side and you sort of get an average of the overall sampling area.

You say you presume that. Was it the case that you were specifically told that, or is that just something that you -----?-- That's just the way - my observations of the way we have done the other ones.

With panels prior to 512 where there wasn't the ramping out, was it the policy to in fact place them further into the panel, further inbye the panel than where this particular one was placed on this occasion?-- No, most of the ones that I have seen before sealed up hadn't been any more than two pillars inbye.

As at the time you turned your mind to where point 5 should be placed - again I stress as at that time - did you have any concerns as to whether or not placing it in that particular position might leave you in a position whereby you are not getting readings which are truly indicative of what's happening in that panel behind the seal?-- No, I thought that would be the best position for it to give a true

indication of what was going on.

Why was it that you had that opinion?-- Well, because it just happened to be located centrally across the width of the panel.

Do you know who eventually put it in there?-- I'm not sure which electrician actually did it. Probably - I think it was Brian French and John Hearne were the two leckies working on that job.

Were you ever aware of any occasions prior to the sealing of 512 where more than one Unor monitoring point had been placed behind a seal?-- No.

Was one the normal practice?-- Yeah, like I said before, we had only one in the seal and one to monitor the return outbye the seal.

Were you ever informed as to when point 5 was finally put in place behind the seals?-- Yeah, I asked when the TA's come up with the leckies and dropped the leckies over to the workshop and they come back over - I asked whether they had got the job done and they said they had.

When was that?-- Somewhere between 2 and 2.30 Saturday day shift.

Now, I would like to turn just to some questions about sealing practices generally and policies in relation to sealing of the mine. Firstly, were you ever made aware of a policy at the No 4 Mine at Moura to the effect that the men would not be down the mine after the sealing of a panel until that panel had gone through the explosive range?-- No. Well, I never had anything to do with No 4 when it was running.

I appreciate you weren't involved, but had you ever heard, either on the grapevine or elsewhere, that there had been such a policy?-- No.

Were you aware as to whether or not there had been what's called a 48 hour rule instituted by Mr Brady after the 1986 incident in 5 North?-- No, I'm not aware of that.

You mentioned today in your evidence that you had heard certain things on the grapevine about men being underground after a sealing?-- Yes.

What had you heard?-- Well, just sometimes you would be - particularly at change of shift where there would be two undermanagers on, you would hear a rumour from the other shift or something, someone might not be happy about going underground while it goes through the explosive range. I don't remember anyone approaching me personally about it, but whenever I come back to work the next day there wouldn't be a problem and people would just be going down the mine.

Are you aware of any occasions at all where the men weren't down the mine after a sealing in No 2?-- In '86 I noticed

there wasn't anyone out at the mine, just me and Ian on Sunday. I can't remember any others, although after the disaster I heard that during - I think it was '91 they stayed out in 5 North.

Just to clear that up, in relation to 5 North, or what's been called sometimes 5 North-west, in 1991, you didn't have any actual knowledge prior to the explosion as to what had happened ----?-- No, I couldn't remember that before the explosion, no.

How many times had you been involved in sealings of panels prior to the sealing of 512 at No 2?-- Maybe just a dozen or so.

Was this the first occasion that you were aware that Flexicrete was being used - Tcrete, sorry?-- Tcrete. Yeah, this was the first time we were using Tcrete seals.

Did you have any knowledge prior to the explosion of the curing period of Tcrete?-- No, I didn't know what the curing time was.

Did you have any knowledge at all about the effectiveness of Tcrete as a seal?-- Well, I was told that the rating of it was 60 MPa and I thought that was pretty good.

Where did you glean that information?-- I think Jacques told me it was 60 MPa.

Was it the case that there was or there were stand-by emergency sealing procedures which could be called upon in urgent situations?-- Yeah, there were Tcrete sheets and there was extra baskets and that kept down - a lot of the sheets were kept between 1 and 2 headings just outbye of the prep seals, and they were put there in response to being able to seal a section off very rapidly, the concern being, of course, that you mightn't be able to finish Tcrete seals off in three hours using the normal method of sealing.

Now, when were these sheets put in place in the 512 Panel, to your knowledge?-- Well, they were - I was privy to a conversation between George Ziebell and George Mason where George Ziebell raised the issue with George Mason over the inability to quickly seal the section off, and so George Mason gave George Ziebell that specific job to take all that gear down on site, and that was done within the - probably the second - probably the second week, I would say, of when extraction commenced.

These sheets were there and available, if required, when 512 was sealed on the Saturday?-- Yeah, they were there, yeah.

There has been discussion about the sealing of 512 having been brought forward, and you have already told us about that, I won't repeat it. What I want to ask you is this: did you at any time, in view of what you observed, what you smelt, what you were told in relation to the 512 Panel on the Saturday, consider using those sheets and adopting that emergency

sealing procedure?-- No.

In what circumstances would you have considered doing so or recommending that that be done?-- Well, as I have said, if you get a sudden jump in carbon monoxide - for example, if Cole had rung me up and told me that he had 16 or 20 parts, then in that situation you would use sheets and just spray it and ----

You say in that type of situation. Are you talking about something analogous to 1986?-- Yes.

Or with similarities to 1986?-- Yes.

If, in your opinion, it became necessary to seal quickly using the sheets, would that, in your opinion, have affected the advisability of whether or not men should be down in the mine after sealing?-- Well, those indications where you get a jump in CO and you rapid seal the place, you wouldn't let anyone go down the pit.

And nothing that occurred leading up to the Saturday or on the Saturday, to your mind, required you to even consider taking that course of action?-- No.

What did you see as the advantage in bringing forward the sealing of 512?-- Well, my observation on Saturday day shift was that you had air migrating out the tranny road, and so the situation that you had was that you had some air going into the waste and coming back out of the waste, and so, in effect, you had sort of a circling of air, if you like, and the advantage of sealing up, of course, is that you don't have to muck around with - I wouldn't leave a section like that indefinitely because, in effect, you are not ventilating the waste properly.

Did you see the problem as one of ventilation as opposed to one of any potential heating?-- Well, you just can't leave air coming back out like that. I mean, it's easy to seal a section when you have got recirculation of air in the waste than try and muck around with some other ways of trying to divert air down and get it running right.

Did you have any particular attitude to the sealing of panels generally once extraction was completed?-- Well, I always thought it was good mining practice to seal up a waste when you finished; just as soon as you get the machines out, just finish it off.

Mick Caddell has been mentioned in relation to conversations with you. To your knowledge, did he have a particular view about the sealing of panels once extraction was completed?-- Yeah, I remember Mick going off his tree once because 511, when we finished that one, it was left open for about a week and he wasn't happy with that at all. He would have preferred just to see it finished off. Even though there wasn't anything wrong, he thought it would be best just to seal it off as soon as you get the machines and everything out of there.

At the time you first discussed with George Mason the advisability of sealing 512 earlier, did you have any concerns whatsoever for the safety of the men in the sense that there would be some dangers to men down the mine after sealing before it passed through the explosive range?-- I can't specifically remember talking to George about bringing it forward, like sealing it just after the machines got out, but if I would have, that would have been the reason why, just because I feel it's good mining practice to seal a section off when you get the machines out.

Just clearing that up, what was your original understanding of when it was going to be sealed?-- Sunday day shift.

And were you of the view on Saturday at some stage that it may be better to do it on Saturday afternoon?-- That's correct.

When you formed that view, did you have any concerns about the safety of the men at a later stage?-- No.

Has it been your experience that panels in No 2 Mine invariably pass through the explosive range after sealing?-- Yeah, nearly - ever since we moved deeper than 2 North section, the seam gas being methane, they all pass through the explosive range.

Has there been some average in terms of how long that takes?-- I don't know. I can't recall how long it would take.

Are we talking about months as opposed to days in some cases?-- No, normally it would be a day or so at the most.

I would just like to ask you some questions about Len Graham. You have known him ever since you started work at No 2?-- No, well, Lenny didn't come over till '86.

Since then anyway?-- Yes.

At different times have you worked together in the sense that he has been part of one of the crews involved on your shifts?-- Yeah, he was on my shift for quite a while.

Did that change at some stage?-- Yeah, he got - he elected to do dog-watch.

How long before August of last year was it that that changed?-- I'd say - well, I know that he was on dog-watch at the end of 1993, so it would have been over six months, probably 12 months.

Had you much to do with him in that 6 to 12 month period?-- No, well, he was on doggie and I was on day/afternoon.

Did you come across him occasionally in the course of your work?-- Occasionally you would see him at the change of shift.

To your knowledge, has he ever expressed any concerns to you

prior to 7 August about the advisability or otherwise of men being underground after the sealing of a panel before that panel went through the explosive range?-- I can't remember Lenny raising any concerns with me over that, no.

Are you familiar with any circumstances where he has been suspended after raising concerns in relation to whether or not men should be underground in those circumstances?-- No, I can't imagine anyone would get suspended over an issue like that.

Are you aware of any circumstances where he has been suspended after raising safety concerns generally?-- No, I have never heard of Lenny getting suspended at all.

Have you been involved in any incident where you have stood him down?-- I have stood Lenny down on full - not stood him down - I have stood him aside on full pay once for verbal abuse that he gave me.

How long ago was that?-- That was while we were still on seven day roster, so possibly around 1990/1991.

Now, was there any issue of safety whatsoever involved in that?-- No, he was just verbally abusing me.

I would like to turn to the events of Friday, 5 August of last year just generally. You have mentioned today both in relation to the Friday and again at other times on the weekend the fact that the number of men who appeared for work appeared to be far less than what was rostered?-- That's correct.

You recall that got mentioned a number of times?-- Yes.

Was that regularly a problem at weekends?-- It's more a problem on - the miners' overtime roster works on a monthly or a four weekly basis, and this particular weekend was the final weekend of their roster cycle, so it was sort of like a major problem every fourth week.

Was it the case that the men were limited to a number of days per four week period of overtime?-- Yeah, they couldn't do any more than four overtime shifts for four weeks.

So, every fourth week that problem became - sorry, did it become as serious as appears in terms of the shortfalls of men here?-- Well, normally by the fourth week - all it was was in a four week period they could do four overtime shifts and, of course, like everybody, I suppose, you would want to try and get them done early up, so by the fourth week most of the fellas had exhausted the four overtime shifts they were allotted.

As undermanager in charge of that particular weekend, bearing in mind how you operated for the weekend, did that place more demands on your time?-- Yeah, well, it can be very hard manning because of the fact that you are not - being overtime you are not bound to come to work, and so you can write out a basic structure of what you are going to be doing for the

weekend, but you have got to be flexible because you have got to keep changing plans all the time due to numbers.

Did that affect your time, for instance, on the Sunday evening, the 7th?-- Well, Sunday evening was a little bit different in the fact that it was a production - it was a production shift. We had - the maintenance crew had an RDO and I think I had approximately four absentees as well, plus a deputy missing. In those circumstances, it was a time where I had to try and - firstly, had to get deputy coverage and that involved numerous phone calls, and also it involved numerous phone calls trying to contact people from day shift to find out whether they could come in for overtime so I could get the numbers.

With the sealing on the Saturday, it was the case that there was an exception to that rule; is that the case?-- Yeah, George Ziebell waived that rule for that particular case, yes.

Now, did that waiver go to the Saturday itself as opposed to the rest of the weekend?-- That waiver just went to that actual shift.

The shift that did the sealing?-- That's correct.

Was that ever a problem for you, that shortage of manpower, particularly at the end of those four week periods?-- Well, it made organisation harder. It was more a problem for George and Albert who were trying to work out what they were going to do for the weekend.

Just turning to 5 August generally, you have already dealt with in detail yesterday your conversations with Mick Caddell on that day. I'm just being reminded about the time. Are you considering - we have only been going 50 minutes.

WARDEN: Yes, you can cover a bit more.

MR HARRISON: Would 3.15 be appropriate?

WARDEN: Yes.

MR HARRISON: Mick Caddell was not a regular 512 deputy?-- No.

Who, basically, were the deputies that you worked with on a regular basis in 512?-- Reece was my 512 deputy, and you come into contact occasionally with the other shifts' deputies who were in 512, and that was Bob Newton and Eddie Bentham.

Did you have fairly extensive dealings with them in relation to 512?-- You get to see - like, for example, because I got shifted on to afternoon shift for one week, I saw Eddie a fair bit, but with a shift change you get to bump into them and say "G'day" and talk about a few things, yes.

Would you have expected them, for instance, to be far more familiar with the 512 panel than Mick Caddell?-- Yes.

You told us yesterday that at the end of the Friday afternoon shift you asked Mick to keep an eye on the 512 panel?-- That's right.

And you believed that he would be the one that would follow it up throughout the course of the following shift?-- That's correct.

That's the Sunday night shift?-- That's right, yes.

It wasn't until you received Bob Newton's report the following morning that you realised that he had had a look at it?-- That's right.

And you had a brief discussion with him before you saw his report?-- That's right, yeah. Bobby come in, because Bobby was like that; he would always pop in and say if there is anything wrong, or even if it was right, he would always come in and say "G'day" to you and pass on some information.

XXN: MR HARRISON

WIT: SQUIRES M A

What did he say relative to the 512 panel that morning?-- I can't specifically remember all his conversation. He sort of came in and say "G'day" and I sort of said everything was all right and he said something else and then he left.

Then you read the deputy's report?-- That's right.

Was there anything in there that concerned you?-- No.

When you were questioned about this yesterday, you mentioned that from time to time certain things had been "dumped", I think was the word you may have used, into the waste. Do you remember telling Mr Clair about that?-- Yes.

Tell me briefly what you were talking about?-- It just had to do with - years ago we had a problem with - well, not years ago, it was an ongoing problem that - something to do with Quality Assurance or something; we had to make sure we didn't have any rubbish in the coal. So, with extraction panels, if you had any rubbish, like an old bag or grease drums, or whatever, it would all get turfed into the waste before you started extracting particular sequences. Like, if you had to extract a series of sequences, you would go through there and do a bit of an emu parade and put everything into the waste so it doesn't go up into the stock pile.

Why did you mention that yesterday in the context of being questioned about 512 panel and Mick Caddell's observations?-- It is just that at the time when Mick mentioned that smell, I took into consideration that, first of all, he wasn't a regular 512 deputy and, second of all, I queried would it have been - like, you know, when he said it was a No 4 benzeney smell, I know that grease drums and things like that were thrown in the waste and I was wondering whether he picked up a smell from something like that.

Did anything that you saw by way of readings or otherwise in the report that Bob Newton gave you on the Saturday have any bearing on what you thought about what Mick Caddell had told you?-- Well, his readings just showed to me that they were just normal CO readings.

Normal in terms of, what, being consistent with what had been obtained earlier?-- That's right, yeah. Bob was the sort of bloke - Bob was a very - a really sort of efficient deputy and if he had any concerns, he was the sort of fellow I know even during normal production cycle he would - some blokes were probably hanging out to get to the shower, but I know Bob, he would sort of - it wasn't a problem for him to come in and talk to any of the undermanagers or the manager on day shift when he came through, and he would normally do that as a matter of course.

You can think of occasions where, in other circumstances, he has done that with you?-- Oh, yeah. I've been on day shift sometimes - for example, he might report something about the miner, "Do you want to do something about that?" You know, he is pretty observant.

Did you have any discussions with Mick Caddell at the end of the shift on the Saturday morning?-- No, well, Mick wasn't around the No 2 bathroom area. I assumed that he was in the No 4 bathroom, because his car was still in the carpark.

Did you see him?-- No.

When did you see him again after that?-- I saw him Sunday day shift.

Did he on Sunday make any inquiries of you in relation to 512?-- No.

Did he express any concerns in relation to 512 when you saw him on the Sunday?-- No, he expressed no concerns at all.

There has been some suggestion that Neil Tuffs made a decision as early as the Friday that he would not allow his men to be underground after the 512 panel was sealed and before it went through the explosive range. Was it ever communicated to you by him or anyone else that he formed that view?-- No.

Mason never suggested that to you?-- No.

Dick Stafford ever suggest that to you?-- No.

Never came to your attention that he may have told other people that?-- No, I didn't know that.

Did you see him at all on the Saturday?-- Neil Tuffs?

Yes?-- Yes, he was one of the deputies that come in on the afternoon shift, but he come in a bit later than Lennie and George - probably about 10 minutes later.

Did he express any concerns to you as undermanager in charge that particular weekend? Did he express any concerns at all about the 512 panel and the advisability of the people being in the mine after it was sealed?-- No, he didn't say anything to me.

When you saw Bob Newton on the Saturday morning, did he indicate to you that Mick Caddell had told him the previous evening about Mick's expressed concerns about 512?-- No, I can't remember him saying anything to me about that.

Did Bob Newton indicate that to you at any other stage at the weekend - that Mick had told him certain things about Mick's concerns for 512 panel?-- No.

Would that be convenient, Your Worship?

WARDEN: Yes, thank you. We will take 10 minutes.

THE COURT ADJOURNED AT 3.13 P.M.

XXN: MR HARRISON

WIT: SQUIRES M A

THE COURT RESUMED AT 3.28 P.M.

MICHAEL ANDREW SQUIRES, CONTINUING:

MR HARRISON: Mr Squires, before I get back to the Saturday, I would like to ask you a few things about the 5 South panel?-- Yes.

There has been some evidence - and I won't go into it in detail - but some evidence that from time to time in the 5 South panel it has been necessary to pipe away methane emanating from the predrilled drainage holes which run roughly parallel with the panel and ahead of the panel. Have you ever been made familiar with any such problem?-- Well, I know that if you have the brattice bag on the offside to where you intersect the hole, then that hole would be letting methane into your general body. So, the practice was to put a FRAS hose into the in-seam bore hole and pipe it across into the brattice line.

Now, just taking you back one step further, are you - or have you ever been made aware of situations where deputies, or whoever, have deemed it necessary to actually pipe away some of the methane from the edge of one of those predrilled drainage holes?-- In 5 South?

In 5 South?-- Yeah, I think I remember Ken Mills having to do that, yes.

And in the course of preparing for your evidence today, did I bring to your attention an incident involving Allan Morieson on 5 August?-- With regards to the methane coming out of the hole?

Yes?-- Yes.

In your position as undermanager, were you familiar with the stage that had been reached in production at 5 South?-- Yes.

From what you know of that panel, was it your understanding that it was anticipated that one of the predrilled drainage holes would be intersected on the shift - on the Sunday night shift - sorry, it would be the Monday night shift, it was called?-- They were breaking off from 3 heading to 4 heading and the break-off would be virtually completed and the hole - there were two holes between 3 and 4 - like, every pillar had two holes, but the nearest one to 3 heading, I imagine, they would have intersected early in night shift, yes.

And what are you able to say in terms of the hole that was due to be intersected and the hole referred to in the deputy's report of Allan Morieson on 5 August?-- Well, that was the most active hole of the rest of them.

XXN: MR HARRISON

WIT: SQUIRES M A

Well, was the one that you've referred to as "the one that was due to be intersected" one-and-the-same hole as the one that Allan Morieson was dealing with, to your knowledge?-- Yes.

Now, from what you knew of production in 5 South, what would the positioning of the Trolex have been if, in fact, that drainage hole had been intersected early on the Monday night shift?-- The Trolex sensing head is on the driver's side. The direction of cutting was from 3 to 4 which meant the driver's side was on the outbye side of the cross-cut being formed. When you intersect the borehole, therefore the - if you like, the - you would be getting it so the open hole would be on the right where the Trolex is, but where the gas would be coming out would be on the left-hand side.

From your experience, can that potentially cause problems?-- Potentially you can get a - you can get methane building up on the off-driver's side of the miner and it can be there a little while before the Trolex would drop it off, because methane has to migrate to the right-hand side and get the Trolex sensing head.

What should be done to try and minimise that risk, from your experience?-- This is from a hindsight, sort of technical question?

Well, from your own knowledge?-- Well, the best way to minimise that is - would be to keep your bag up as close as possible to the face, although that still doesn't get rid of the problem if you are sumping down the middle, but to get rid of the problem completely would be to have two sensing heads on the miner.

You have given evidence today, not in terms of specific levels, but you have given evidence that you did have some regard to the tonnage that was coming out of the mine on the Monday night shift?-- Yes.

And I take it there was some concern that that was less than expected?-- That's right.

Effectively, there was no production coming from 1 North-west?-- That's right.

You mentioned just then the possibility of "sumping out"?-- Yes.

Can you just explain what you mean by that?-- Well, normally in areas where you don't have a lot of methane, particularly in areas where we have drained, the normal tendency was to cut the centre of the bord out first, then cut the bag side out or trim the bag side up and then trim the other side up to form your bord before you bolt it with the Gopher. So, sumping means the initial cuts that you would do would be down the centre of the bord.

From what you know of the tonnage, from what you know of the stage it had been reached and from what you know of the positioning of that drainage hole, would it have been possible for that to have been reached on the Monday afternoon shift?-- It could have been possible, yes.

Sumping out -----?-- Monday night shift, you mean?

The Monday night shift, sorry. Sumping out, is that a practice that you've seen followed from time to time?-- Well, that's just the normal way you do cut coal.

Now, at the face itself have you ever seen situations where there may have been sparks because of contact between the picks on the continuous miner and the overhead sandstone?-- Yeah, well, when you trim your roof, get rid of any flakey roof or anything and you are scoring your roof as you tram your miner back, you can get sparking.

That's something you've seen happen from time to time yourself?-- Yes.

And I take it something you are aware of that does happen?-- That's right, yes.

Just dealing with the incident generally, and perhaps 512 in particular, did you have any view as to whether or not frictional ignition was possible in terms of what I might say rock on rock associated with the roof fall?-- Well, frictional ignition - as far as I know what come out of the No 4 inquiry, I haven't seen the findings from that, but my understanding from what I was told by my check inspector and that, apparently when they were working out that theory that - they were using some sort of - like they would make a grinding wheel made up of rock and hold it against another piece of rock and that's how they managed to get sparks. So from that description I didn't think that frictional ignition was anything to think about.

Did you think it had been ruled out there and you had ruled it out yourself?-- Yeah.

Were you aware of incidents from time to time of cable flash in No 2?-- Yeah.

Was it something that was regarded, to your knowledge, as a serious problem?-- Yeah, it was addressed as a serious problem. A lot of safety meetings spent a lot of time addressing cable flashes and a lot of time went into accident investigation, reporting of the actual cables, even taking down things like serial numbers. Even with a report that the undermanager would have to make, they made a special form where you'd have to get a fitter and electrician to check out the machine as far as the rewind went, as far as any electrical components, before you could use that machine again.

Were you aware of any incidents where cable flash was particularly a problem at the face or near the face?-- Well,

yeah, I've had experiences of, you know, mechanical failure of a rewind pulling a car cable in half close to the miner, and when I was describing before about being on shift with Bob Suddle, it was around about that time that in 5 North they had an ignition of methane at the face when a miner cable got pinched between the back of the miner and the shuttle car.

Were these matters you had personal knowledge of or matters you merely heard about?-- Well, I heard about - I knew about the ignition of methane in the face because it was the shift that I was on.

If I can take you back to the Saturday morning, 6 August, what deputies did you have available for the day shift?-- Saturday, 6 August there was Cole Klease - I'll just have to refer -----

What I'm interested in while you are looking is whether or not you discussed anything at all with the deputies as a group at the start of the shift or whether or not you spoke to them individually?-- No, my practice was whenever I went in I would find out how many blokes I got and let the blokes know what they were doing, and my practice was always to go in and speak to the deputies as a group of men.

From your looking up was it Cole Klease, Mr Rose and Mr Helander that you had that morning?-- That's right, yes.

Did you have a general discussion with them at the start of the day?-- Yeah, at the start of the day I went in there, yes.

Can you remember what that was about?-- Well, it had to do with just letting the deputies know what jobs were on, where the blokes were working and who they were.

As it turned out did one of those deputies, Cole Klease, have some dealings with the 512 Panel in the course of that day shift?-- Yes, yes, he was the one I called down to 512.

What I'm interested in firstly, if you can outline the number of times you had contact with him during the course of that day shift?-- Okay. Well -----

You've already told me firstly was the contact at the deputies' cabin?-- Yes.

Are you able to say where and when you next saw him?-- Well, the next time I contacted him was by the telephone from 512 and rung him up and asked him to come down and do a CO reading. The next time I saw him was when - I had just seen George Ziebell about moving the gear over and I was on my way up to ring George Mason, and Cole Klease was coming down in the PJB and on that occasion we both stopped and - I was on my way out and he was on the way down - and we stopped and I said to him - because we were both seated in the Rover, different Rovers - I said, "You are just going down to do that CO reading now?", and he said, "Yes.", and I said, "I'm just going to go up and ring George Mason now.", and I think I told

him that I had already seen George Ziebell about moving the gear over.

I will just take you back on that. Was he initially assigned to do 512 to your knowledge?-- No, well, they worked out who was going to look after each section.

When did you find out that he was the one assigned to do 512?-- Not until much later in the shift virtually, and after he sort of got involved with taking the CO readings.

Had you requested him to do something in relation to the 4 South Level seals?-- At the beginning I had asked him to look after 4 South Level seals because that's the section that - after he sort of got back into the workforce after work model stuff he would be looking after that particular section.

Did you actually see him down there?-- That's right, yes, I did.

When was that?-- That was before I went to 512. So just to get this right, the sequence was I saw him in the deputies' cabin first. On my inspection I went down and I saw him - we just passed each other, we just said giddy to each other when I went and had a look at the 4 South Level prep seal. Then I went over to 512 and that was when I noticed the haze and the smell so I rung up Cole and contacted him in the deputies' cabin. The next time I saw Cole was when he was going down in the Rover as I just said before.

Do you know whether or not he had inspected 512 before you did?-- No.

When you did that inspection at 512 that morning, what was it that led you to have that concern you told us about earlier?-- Well, it was just that when I walked in, to my knowledge no-one else had brought up any sort of thing. I saw a haze and a smell there. The smell was a normal smell, but it's just not - like the haze was there and I didn't have any CO measurement stuff with me, so I just wanted to get an idea what the CO was.

You told me earlier this afternoon that you thought it may have been a ventilation problem?-- Yeah.

Did you consider any ventilation options?-- Well, I just thought that since the panel was ready to seal up that to start standing up stoppings everywhere to try and improve the air down that tranny road wasn't - it just would have been more - would have been easier to seal the section off.

Had you made up your mind at that stage that it would have been visible or preferable to seal the section off?-- Well, I just thought it would be a good idea to seal it off, yeah.

That led to your phone call to the surface; is that right?-- That's right.

Where did you find Cole Klease? Where did you meet?-- I rang

the deputies' cabin. That's where he was.

Was any suggestion of an early sealing discussed at that stage?-- I can't remember the conversation with Cole. All I remember is I did ring him up and I said, "I'd like him to come down and do a CO reading.", and he said, "That's all right, I'll come down." He was just going to finish off his smoko, I think it was.

Was that, however, something that was discussed when you met in the main dips later on?-- All I can remember of the Main Dip conversation was that I asked him whether he was going to go down and do the CO readings and he said yes, and I detailed him that I was going to go up and ring George Mason and I think I told him that I had gone over and seen George Ziebell at the prep seal sites.

You've said that when you rang him you asked him to come down and do some readings?-- That's right.

I take it you never had the necessary equipment to do a reading yourself at that stage?-- Not on me, no.

Is that something you would have done yourself if you had the equipment there and then?-- If I would have known that there was a Drager and a tube I could have done it myself, yes.

In that period of time that you said you were concerned, what were you looking for to confirm any fears in relation to 512 or to confirm your concerns in relation to 512?-- I was just looking for any - if there was any jump of CO at all.

Was there anything else you considered besides a jump in CO?-- As far as a concern goes?

Yes?-- I didn't like the air coming out of the waste the way it was.

But the way the air was coming out of the waste the way it was, did that cause you any concerns relative to a heating or potential heating?-- No, no, just the fact that it was going around in circles.

You've mentioned in the phone call that he rang you back and said that the reading was eight to 9 ppm?-- Yes.

Of what you knew of the history of the panel and of the readings in the panel up until then, did that ease your concerns from earlier?-- Yes.

After that point in time did you have any safety concerns as such about the 512 Panel?-- No.

Can I just ask you a few questions about Cole Klease generally that morning? Did he ever say to you that he had smelled a benzeney/tarry type smell -----?-- I can't remember Cole saying that.

----- in 512?-- No, I can't remember Cole saying that to me.

Did he ever mention to you that he could feel heat coming off the goaf?-- No, he didn't mention anything about heat to me either. I know that when I walked in it was warm, but like I said before, it was just the same sort of temperature that I experienced in other wastes.

When you say "warm", did that warmth in any way alert you to any dangers?-- No, just like any other waste.

Did he contact you and indicate that there was a heat shimmy in 512 Panel?-- No, I can't remember him ever saying heat shimmy to me.

More importantly between cross-cut 2 and cross-cut 3?-- No - well, I can't remember him ever saying heat shimmy to me and I certainly didn't notice anything during my inspection.

Were you ever made aware of a fall in that particular area that I've just mentioned?-- Between 2 and 3 cross-cut?

Yes?-- You could see it from the ramp and as you walk in you can see a minor fall there.

Did he ever indicate to you that he noticed anything untoward in that particular area?-- No.

Did he, in the course of the phone call, say anything at all about a reading of 7 ppm carbon monoxide?-- No, I'm sure when he rung me up he said eight to nine.

Would a reading of seven have concerned you?-- No, well, the reading of seven is just the same as what Bob Newton got on night shift.

For instance, would that have affected the advisability as you saw it of sealing the panel on the Saturday as opposed to the Sunday, the fact that the reading was seven as opposed to eight or nine?-- I still would have preferred to seal it anyway because of the fact the air was going around in circles.

Did you ever have a conversation with Kleasey on the Saturday at any time when Mr Cross was present?-- No, no Norm and Phil Shorten were on the diesel machines and I never bumped into Cole around that area and the diesel machines weren't there when I was there.

Did Kleasey ever say to you in Cross' presence something to the effect that he had found a benzene smell in the return of 512?-- No.

And that the CO reading was between about 6 and 7 ppm?-- No.

Did you ever have a conversation on your own with Mr Cross?-- I can remember talking to Norm at the start of shift and letting him know what had to be taken down on each site but -----

Well - sorry to cut you off?-- But when I went into 512 I was by myself.

More importantly, did you ever have a conversation with him on his own where you said to him that there had been a real benzeney smell in 512?-- No, I wouldn't have said that because I'm not familiar with that term and I wouldn't use that term.

Did you indicate to him at all that there was any problem in 512?-- No.

I would just like to get back in sequence, if I can, the conversation that you had with Mr Klease and where that fitted in with contact you had with Mr Ziebell, Mr Stampa and your phone call to George Mason. Now, you mentioned that you saw Klease briefly at 4 South level?-- That's correct.

You then went around to 512 yourself and you rang him?-- Yes.

Roughly what time would that have been?-- I'd say around about 11, quarter past 11.

Where did you go to after the phone call? Did you immediately start to head out or did you go elsewhere?-- No, after the phone call to Cole I went over to see George and Brad Richards, Doug Stampa at the 4 South level prep seals.

So, you are talking about George Ziebell?-- That's correct.

Where was George?-- They were all at - doing the prep seal at 4 South level, just like a Tecretre seal, just building it. When I arrived there they were all on the same side and I went up and talked to George and let him know that I had seen a haze and I had noticed a goaf smell.

Where was George, inbye of the seal?-- He was, yeah, inbye, if you like, that's right, and when I started talking to George they had a blow-out in the seal and Doug Stampa had to run around the pillar and chock up the back of the seal so that the Tecretre wouldn't run on the ground.

Did you talk to George before or after you spoke to Doug Stampa?-- I talked to George before I talked to Doug Stampa.

Were you talking to George for very long?-- I don't think it was very long. I sort of virtually told him what I had seen

and that - I told him that I might be - that I would be ringing George Mason, that we might be sealing on the afternoon, I just needed his approval, if we needed men in the afternoon to seal, whether we would be able to get it.

Did you then talk to Stampa shortly after you had spoken to George?-- Yes, I did. I walked around the other side, because of the fact I knew that two Tecrete blokes were required to be there during the sealing, so I walked around and asked Doug whether he would mind staying and doing the afternoon shift as well and that would mean then they wouldn't have to work Sunday. He said that wasn't a problem, but he told me that we would have to get a hold of Rob Parker before 2 o'clock because he was going to go down the pub, so he told me that they had a mobile phone but it was in Stampa's room, so he gave me the number to ring up Rob Parker.

In the course of that conversation did you tell him why it may be necessary to move elsewhere?-- Well, I said that we might be - we may be sealing 512 because there was a haze and a goaf smell that I had noticed over there.

Did you specify the type of goaf smell?-- No.

How many times did you talk to him when he was working in that particular area at 4 South level?-- I only talked to him once.

Was it the case that you talked to him once and then came back and spoke to him a half-hour later?-- No.

Did you, in the course of that conversation with him, say anything to him to this effect: "Get your gear out of there, it's heating up."?-- No, I didn't say that at all.

Did you at any stage refer to a heating when you spoke to him?-- No.

As at the time you spoke to him -----?-- No.

----- did you - just let me finish - did you, in your own mind, believe that there was a heating?-- No.

Did you give George Ziebell any reasons as to why it was necessary to, or why it may be necessary to move?-- Yeah, I told him that there had been a change of conditions from the time I had been there on Friday afternoon shift to when I just walked in previous to when I saw him. I just said that there was a slight haze and that there was a goaf smell evident in No 2 heading.

Did you indicate to him at that stage that you had spoken to George Mason or that you were going to speak to George Mason?-- No, well, I said I was going to go up and talk to George Mason.

When roughly would that conversation have taken place with George?-- I would say approximately - probably about 25 past, half past 11.

Did you discuss particular readings with George on that occasion?-- No. Well, Cole hadn't got back to me on the CO readings.

Do you know offhand whether or not you mentioned other readings that may have been taken, whether by way of Drager or Unor in 512?-- No, I wouldn't have mentioned them.

At the time you spoke to George did you - were you anxious, I should say, in terms of wanting to seal 512?-- No, I was just conveying that I had noticed a change in that section.

Where did you go to after you had spoken to those two?-- I drove up out the pit.

Was it on the way out that you ran into Cole Klease?-- That's right, yeah, he was on his way down to do the CO check in 512.

Did you have much of a conversation at this stage?-- No, just a virtual brief, "Oh, you are going down to check the CO now?" I think Kleasey said something else that I didn't quite catch and we kept on going. I did mention to him that I had been over to see George and that I had sort of told them after they had finished that batch to move the gear over to 512.

Do you know whether or not George Ziebell and Stampa finished what they were doing with a particular seal they were working on at 4 South level?-- Well, when I was around with Stampa I noticed that the Tecrete was - I thought it was finished, the way it was blowing out from just at the top there. To my mind it looked like the seal had been finished, yes.

Did you indicate to Stampa in the course of the conversation that he had to basically drop what he was doing and go immediately around there?-- No, I didn't say that to him.

Did you indicate to him that there was any urgency at all about the sealing of 512?-- No, well, see, when I was talking to George, you know, I said, "After the batch is finished we'll move the gear over."

I have taken you to the point where you ran into Cole Klease on the way out. Did you then proceed back to your office?-- That's right.

And you rang George Mason shortly after you got there?-- That's correct.

Roughly what time was that?-- About 12 o'clock.

And Klease rang you at that stage?-- Yeah, when I was on the phone to George, that's when Cole rung through.

That's when he gave you the readings you have said of 8 to 9 ppm CO?-- That's right.

Did he at that stage express any other concerns about 512

Panel generally?-- Well, when I was talking to George on the phone Cole rung up and so I asked Cole what the CO was, because George had just asked me that on his phone, and Cole gave me it, said it's 8 to 9, but Cole sort of kept on talking for a sec, but I wasn't really listening to whatever he said, so I don't know whatever he said then, but then we hung up and I kept on talking to George.

Did you see Cole again later?-- Yeah, Cole come up after the inspection and then he had his crib and then he went back down with George Ziebell and Brad Richards and Doug Stampa, and he was with them while they went and moved the gear on site in 512.

Did he talk to you when he came up?-- Yeah, he came up at the end of shift and he talked to me, yeah.

In the course of that conversation did he express any concerns at all about 512?-- No, I can't remember him expressing any concerns.

Was there anything about him that particular day to suggest to you that he had any - that he was anxious in any way about any conditions in the 512 Panel?-- No. Well, no, there wasn't.

Now, did you see him again after that?-- After he come up?

Well, he has gone up and gone down again, you have told me?-- Yeah.

Did you see him again after that?-- Yeah, he come up at the end of shift.

When was that?-- About 2.30.

Did you have any discussions with him at that stage?-- He sort of come up and said they had got all the gear on site. He told me virtually that they had got it all set up.

Do you know offhand whether or not at any stage that day you had a discussion with Cole Klease and Peter Rose, the deputy, about whether or not it was advisable for 512 to be sealed that day as opposed to having it left to the following day or later?-- No, all the decision making for 512 was - like, George and I decided to seal 512 on the Saturday while Cole was still underground, so that wouldn't have been possible.

I am not talking necessarily specifically about the decision making. What I am asking you is whether or not there was any discussion with you later after that decision was made on the phone with George Mason about the advisability or otherwise of that decision?-- Yeah, well, I can't specifically recall, but I do know that, you know, often I went around to the deputies' cabin later and so Peter could have been there, Kleasey could have been there, we could have talked about maybe anything about 512 like that.

You can't specifically recall any conversation?-- No.

When you saw Cole at the end of the shift, did he have any concerns, or did he express to you any concerns at that stage about 512?-- No.

I would like to turn to the meeting which was held on Saturday afternoon at 3 p.m. You have told us a bit about it already?-- Mmm.

How many men roughly were present for that meeting?-- There were the two Tecrete contractors, I think there was a total of about six miners, I think, and, as I said before, the deputies were sort of coming and going through the time.

Was Lenny Graham one of those?-- Yeah, he wasn't actually there while I was addressing the blokes. He was sort of in the depts' cabin and he come back through the meeting and went to the urn and things like that.

Just on the subject of Lenny Graham, did he at any time that weekend indicate any concerns to you at all about the 512 Panel?-- No.

Did he ever indicate to you that, in his opinion, there was no need to seal the panel early?-- No, he didn't say anything to me.

Did you notice George McCrohon in the area of that meeting?-- Yeah, well, George and Lenny arrived first and so I had actually seen them in the deputies' cabin before I had held the meeting, so they had some idea of - because they were the two deputies that originally were just going to be looking after the shift as a coverage, so I saw them before I had the meeting. George wasn't there. I think he was still in the deputies' cabin when I had the general meeting.

Did you see Doug Stampa or Robert Parker in the area of the meeting?-- Yeah, well, after George Mason brought Robert Parker out, Robert sat next to Doug Stampa in the assembly area, but just as I started giving the blokes a description of what had to be done, etc, they got up and walked into the carpark to have a bit of a chat.

They weren't there for the entire meeting?-- No.

When I say "meeting", how long did this go for?-- Not even about five minutes, I suppose.

Was Greg Young at the meeting?-- Yeah, he was there.

It was suggested to you this morning that a number of men had no recollection of your having said anything about haze and goaf smell at that particular meeting. I can indicate to you that Greg Young has given evidence to this effect: that he was at the meeting, that you mentioned that the sealing was being done as a precautionary measure. Do you know if you said that?-- I can't remember whether I actually used the word "precautionary", but -----

Well, was it your understanding that it was being done as a

precautionary measure?-- Yes.

Precautionary of what?-- Just to - you know, you had the air going around in circles, so we were just going to seal it up.

He also said that at that meeting you did mention that there had been a slight haze in 512?-- That's right.

He also said that you mentioned a smell and that you said a benzene smell?-- Well, I don't use the term "benzene smell", but I could have related to them what Mick had told me the previous day where Mick had said that he picked up a benzeney smell in the cross-cut.

Taking you back on the Saturday, were you approached as to how machinery could be taken into 512 to assist with the sealing in terms of how access was to be gained?-- Yeah, well, we didn't want to disrupt that stopping between 1 and 2 headings because if you bowled that stopping over you would effectively drop the ventilation off to the waste entirely, which was just not a desirable situation to have, so we decided to go in through the 5 South return and go -----

Sorry to stop you there, but why was it necessary to go in?-- Well, we had to get the Tecretre on site and also the batcher. Because of the nature of mixing up the Tecretre and that, the batcher is fairly large, and to locate the batcher you had to use an Eimco, and if you are going to locate the batcher, you may as well get the Tecretre right up to it because you'd break your back having to carry all them bags of Tecretre through a man door.

Did that necessitate some action being taken in relation to a regulator?-- Yeah, well, that was the - out of all the ways to get the Tecretre there, that was probably the less of all the other evils, to go in through the regulator.

I might get you to illustrate this point, if you could, by way of the second plan which is on the board there. If you can tip the first one over. Again, it might be easier if you stay in the chair and use the laser pointer so we can hear you?-- If we took up the Tecretre and the batcher back through this route here, it would mean we would have to knock this stopping down here.

Just describe where you are for the record?-- We were driving up 0 cross-cut 512 and we have just driven up from No 4 heading and we are approaching No 2 heading. Now, between No 2 and No 1 heading there is a Tecretre stopping with a man door in it. Now, if you bowled that stopping over, then you have effectively short-circuited the air to the entire waste. So, it would be a much better idea to actually keep that stopping intact at all times and to come in through this regulator here and drop it there, so - even though by going through the regulator you are increasing the air, and increasing the air is more desirable than having a complete short-circuit.

Now, you said "we". Did you discuss that with someone or was

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that your decision?-- No, I must have talked to either -
with Cole or maybe with Cole and Peter Rose, or somebody like
that anyway. It would have been with the deps.

XXN: MR HARRISON

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WIT: SQUIRES M A

Did you yourself arrive at a decision that something should be done in relation to that regulator?-- Yeah, I decided that would be the best way to get the Tecrete on site.

What did you authorise in terms of the dismantling or partial dismantling of the regulator?-- I told them, "When you go down", just to, "take the left-hand side as you are going through, just so you can get your machines through there to get your gear on site."

And roughly what sort of width are we talking about?-- Just virtually the width to get an Eimco and MPV through. Oh, it wouldn't be much - oh, it's been a while since I've seen an Eimco bucket - probably the width of the machine - wouldn't be more than a third of the roadway.

Now, I appreciate you said before that you didn't know much about CO make, but did it occur to you at that time that doing something such as that may affect the velocity and may affect any CO make calculations later?-- I wasn't thinking along - all I was concentrating on when we decided to do it that way was to make sure we didn't disrupt the air flow to the waste.

To your knowledge, was that done?-- Yes.

Was it taken down along the lines of what you suggested?-- Yes.

Do you know when anything was done to repair that regulator, if I can describe it that way?-- No.

But you noticed that there had been some brattice, it seems, in place the following morning when you were down there; is that the case?-- When I went down there on the Sunday with Bob, I'm sure I saw a sheet of brattice on the side.

Did you discuss that with George Ziebell at any stage as to what should be done relative to the regulator to get the access to the sealing of 512?-- I'm not sure whether I would have discussed it with George or whether - George Ziebell, you said?

Yes?-- I'm not sure whether I would have discussed it with George, or Cole would have told him what was going to happen.

A change of that magnitude, is that one of a type you would normally expect input - sorry, normally expect to be made on the decision of an undermanager?-- Yeah, changing a regulator, yeah, had to be reported to an undermanager.

Just digressing briefly; ventilation changes generally - what was your understanding of what needed to be reported to an undermanager and what didn't?-- It was mainly just the actual overall flow to a section. If, for example, a deputy rung up and he needed more air in a section, then - which required a change to the regulator - then he would have to contact - well, he would be talking to the undermanager and the undermanager would then approve or send someone down to change the setting of the regulator. Just for general face work -

for maybe clearing of an accumulation, maybe - the deputies could do that without having to refer to an undermanager.

Now, changes of the type that you heard were made on 17 June - we won't repeat what happened there - but you recall changes to overcome the problem of the air backing up the tranny road in 512?-- Yes.

Changes of that type, were they ones that you would expect normally would need the input of an undermanager in terms of decision making?-- No, well, that was just a redistribution of air within the section itself.

Were they changes of the type that you would expect an undermanager to be advised of?-- Well, normally if the deputy had a problem with air like that, he would - say, take 512 for example - he would say, "I've got a problem with the air.", and he would stop the production section - he would have stopped the production and actually gone out and just rectified the problem.

In those circumstances, was the undermanager normally called in or was something done and the undermanager advised later?-- Well, the time it happened when I was on that other shift, all that happened was that Eddie Bentham called up and said that he had shut the production down because the air was migrating out and that he deployed the crew to repair the seg stoppings between the tranny road and the belt road, and that he had also reduced the air going down the belt road. That's all that happened. I didn't have to physically go down there and look at that job being done.

To resolve a problem like that, it is quite in order for deputies at their level to take some action and let you know later what had been done?-- Yes.

Particularly where production was affected?-- Yes.

What role did Allan Morieson play in terms of any ventilation changes that you could see?-- Because Cocky was the ventilation officer, if we had a ventilation problem occur, particularly on a day shift, then often the undermanager would ask Allan to go down and see if he could rectify the problem, and he would normally take an anemometer with him and actually balance the air from one section to another, rather than maybe just alter a regulator.

Is that normally done in consultation with the undermanager?-- Yeah, well, Cocky was - he would sort of go down there, and if he had to change anything, he would normally let the undermanager know that he had to change this, and he has got this much flow here, etc, etc, and give you a bit of feedback, and tell what he has to do or what he has done.

Would there be in place any written material that you could refer to at any time to give you an up-to-date picture of the ventilation situation in a panel such as 512?-- The ventilation situation?

Well, how it was being ventilated - what was in place and where?-- With regards to stoppings and holes in stoppings?

Say, any particular time, if you, for instance, wanted to know what the position was, would it be necessary for you to go down and inspect to see which way the air was travelling, or would you have at your disposal some documentation that you could refer to?-- Well, Allan Morieson had a monthly ventilation chart, if you like, that detailed the amount of air flows into each section. So, you could determine from the last vent survey what quantity you had going into the section.

How often would you get the vent surveys?-- Once a month.

Where were they kept, or where was your copy kept?-- They were normally pinned up on the notice board in the undermanager's office.

Was it ever brought to your attention that there may have been any changes in ventilation quantities in 512 between the 15th of July and 5 August?-- No.

If I can just turn to that last weekend generally, just to clear it up - we probably dealt with this in bits and pieces - but I would just like you to set out the times you spent at the mine that particular weekend?-- Starting from the Friday afternoon shift?

If you could do the Friday afternoon shift, yes, and what time did you leave after you had some input with the on-coming shift?-- About 20 past 11, and then I came back to work at 6.30 Saturday morning.

Did the day shift?-- Yes, and then I left at about - between 3.30 and maybe 3.40 Saturday afternoon, and then I came in on Sunday day shift at about 6.30 in the morning, and I left roughly about 20 past 3 Sunday afternoon, and then I came in at 9.30 on Sunday evening to do the Monday dog-watch.

You were there from then until the time of the incident?-- That's correct.

At any time after you came in Sunday did you find out anything at all about any reports of a tarry smell having been detected by Neil Tuffs?-- No, I don't know anything about that.

Or about him having done a CO make calculation late on the previous evening of 16.25?-- No.

Would that have meant anything to you in any event?-- No.

When you came in on the Sunday morning, did anyone at all express to you any concerns about safety relative to the 512 panel which had been sealed earlier that morning?-- No.

At any stage throughout that day was anything said or did anything happen which led you to have any such concerns?-- No.

When you spoke to George Mason - sorry, I should take it back one step further. When you spoke to Albert Schaus that afternoon and you raised with him the question of what would happen if the men did not want to go down that evening, you said shortly before being questioned about that by Mr Clair this morning that you had some regard to what you had heard on the grapevine around the mine?-- Yeah, well, I sort of detailed before the occasion I've heard of sort of people saying things about the explosive range and not wanting to go down and do the explosive range when a place had been sealed off, but it'd sort of only been on the grapevine, and when I've come out to work there has never been a problem and they've just gone down and worked.

Was it what you had heard on the grapevine that prompted you to ask that question of Albert and also to ask the question that you told us about in the later phone call to George Mason?-- Yeah, well, because I was dealing with an unfamiliar crew, I wasn't sure whether it might have been an occasion where someone might bring up a concern like that, and I wanted to make sure that I had my bases covered as far as organisation goes, so if there was a concern expressed by someone, I needed to know what to do about it.

Did you at any time during your inspection on the Sunday morning notice whether or not it appeared that an area of the seals on 512 did not appear to have been completed?-- No, that wouldn't have been possible, because Bob Newton and myself did an inspection of all five seals and what we noticed was there was a slight hissing on 1, 2 and 3, but you could expect that from any seal that had just been formed. I don't think I have ever seen a seal that doesn't leak partially, but there was no holes or anything like that where it was blowing out.

Did anyone complain to you that there may have been one section in the top corner of one of the seals that had broken away or had not been completed properly?-- No, that's not possible because we would have noticed that.

I wasn't asking whether it was possible, I was asking you whether anyone told you that?-- No.

It had come to your attention that there had been a union meeting on the Sunday morning?-- No, I didn't know there was a union meeting on the Sunday morning.

You now know there was?-- I know now.

Did you on the Sunday at any stage hear any feedback in terms of there having been any concerns expressed at the union meeting about the 512 panel?-- No.

What contact did you have in the course of the afternoon shift with John Blyton?-- John - I saw him at the start of shift in the deputies' cabin and just told him, you know, like, where the jobs were, where the blokes were working, and I saw him at the end of shift in the shower.

Any concerns expressed by him about 512 panel and the safety of the men generally?-- No.

It would seem from what you have told me earlier about times that there would have been a period in the afternoon shift where there was no undermanager present?-- That's correct.

From your experience and your knowledge of the mine, who would have been in charge at that period?-- Well, normally the depts take over and look after any work at the mine.

Yes. You say "normally the depts take over and look after the work". Is there any practice or any system whereby the most senior of them or one of them is responsible for a particular area - actually assumes charge?-- Yeah, well, normally they have got sections of inspection they are looking after and a deputy - where men are working in that particular section where he is inspecting, that deputy normally looks after the fellows in that section.

When you came back that evening, would you say you were busy in terms of what inquiries you had to make about the - what I might term "the short-staffing of men"?-- Yeah, it was a very busy time.

Did that take some time for you to make the inquiries that you did make?-- Yeah, well, I probably would have made about 10 phone calls for a start just to try and organise labour, plus you had to - obviously there was a change from afternoon shift - you had to get the information off the blokes from afternoon shift, so I had a combination of getting information from afternoon shift, checking things on the Unor, ringing up people to try and organise some sort of sufficient labour to do the jobs, ticking blokes in, seeing the deputies, all that sort of stuff.

What did you notice about the positioning of the men who were due to start on the Monday night shift?-- Waiting around?

Before they went down? Did they assemble in any particular area?-- Yeah, well, I suppose it is like going to church. Everyone sort of has different seats to sit in and some blokes like sitting around the start point in the assembly area, some blokes like sitting in the lamp room, some blokes like sitting around between the assembly area and the deputies' cabin, up against the water tanks. They have got favourite spots.

Was there much movement? People were basically seated in the area?-- No, they come in and get dressed and go over and fill up their thermoses and walk around and have a smoke or a chat, or whatever, so it is a bit like a shopping mall, if you like, sort of feeling.

Just dealing with the Unor on the Sunday; you have mentioned that you did authorise Mr Pearse at one stage to reset?-- Yes.

Do you have any recollection of authorising him on any other occasions to reset any of the levels for any particular

gases?-- No, that was the only time I authorised an increase in CO.

Did you know of anyone else on the day shift who had the capacity to reset the Unor machine that was there that day?-- You mean the technical capacity to reset it?

People that you knew that were capable of doing it?-- I knew the leckies were capable of doing it.

Was there only the one on the day shift?-- On Sunday there was Bunny and - I'm not sure who the other leckie was. I can't remember.

Was Brian French the only one on the afternoon shift?-- Yes.

And was there one rostered again - was anyone rostered to work on the surface, I should say, on the night shift?-- Electrician-wise?

Yes?-- Maz and Frenchy tended to do their normal practice because they were on my shift for years - they tended to go down with the crews and come out with the crews and if there was a breakdown they would go down and handle it. So, on this occasion Brian didn't go down and Jeffrey did.

Would that be a convenient point, Your Worship? I'm just about finished, but I might have some brainwave overnight; I might not, too. Would that be a convenient time?

WARDEN: I'm in your hands. If you think that's okay?

MR HARRISON: I was thinking more of the witness.

WARDEN: Yes, he has had a long day. Tomorrow is a short day, gentlemen. Can we resume at 9 a.m.? Thank you. Adjourn the Court till 9 a.m.

THE COURT ADJOURNED AT 4.30 P.M. TILL 9 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 24/02/95

..DAY 32

THE COURT RESUMED AT 9.05 A.M.

MICHAEL ANDREW SQUIRES, CONTINUING:

WARDEN: Thank you, witness, you are on your former oath of yesterday; do you understand that?-- Yes.

MR HARRISON: Your Worship, just before I continue with Mr Squires, I do seek to raise a matter of some concern with the Tribunal and that's the reporting of yesterday's events on the front page of this morning's Courier-Mail. I have taken the liberty of obtaining some copies of the article concerned for the panel. I can hand up five copies. What I am interested in is actually in the second paragraph of the report, so it may not be that you would have to read the lot.

Your Worship, what my concern is that there is something contained in that second paragraph which is blatantly inaccurate and in no way related to yesterday's proceedings. There is reference there to the conversation that Michael Squires had with George Mason on the Sunday, and just reading that second paragraph, "...that he had asked a senior manager if the issue of sealed panel 512 passing through 'its explosive range' should be raised with the miners on shift, because he was concerned about industrial action." There was just no reference whatsoever to industrial action in the course of these proceedings yesterday. There was Michael Squires' explanation given on two occasions, once with Mr Clair and once with myself later in the day, about certain things he had heard from different people on the grapevine and his concerns that something may be raised. That is as far as it went, but we now have the press on the front page of the Courier-Mail introducing a whole new element to these proceedings, one of some concern, a threat of industrial action leading up to the event, and all it does is just totally distort the real picture of what's been going on in these proceedings. For reasons that defy logic, the public of Queensland seem to believe what's printed in this publication, and we now have the perception outside of this industrial action component being part of these proceedings.

I would merely ask Your Worship to remind the representatives of the Courier-Mail that it is important that what is reported here is reported accurately. Time and time again throughout these proceedings we have had a situation where what we see in here is in no way reflective of what we see and hear in the newspapers and on some of the media - I say some, not all, but some of the media outlets. John Blyton's evidence was a classic example late last year when we were confronted with television news after television news saying he predicted the explosion when in fact he predicted two-thirds of the triangle and not the third, and the real worry about that is the perception outside in the community generally is going to be a totally different one to what really was said here in these proceedings. I accept that it's only proper that these

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proceedings should be open and the public should know about it, but I would ask Your Worship to remind the representatives of the media that they do have a very real responsibility here in reporting accurately what was said. Thank you, Your Worship.

WARDEN: Thank you, Mr Harrison. I will check the transcript later. I should assure you that the report will be written by the members of the review panel solely on the evidence we find acceptable and not on the basis of what's reported in the press. It is a matter you could re-clarify with the witness while you still have him, if you so desire.

MR HARRISON: I am not going to go through the evidence again. The evidence is clear from the transcript, if someone had bothered to read it, and I am certainly not casting any aspersions on the panel. I have no doubt you will act purely and simply on what's said here. I am concerned about the public perception because, quite simply, this is an emotive matter and, in my submission, the concern for my client is the reporting of this Inquiry is going to lead to an impression elsewhere which can reflect adversely on him, or, for that matter, on other people. I merely wanted to raise it, Your Worship, and I thank you for your attention to the matter.

WARDEN: Thank you.

MR HARRISON: Mr Squires, I just want to cover one matter with you -----

MR CLAIR: Your Worship, I hesitate to interrupt Mr Harrison, but just while he has made mention of that article, I should say that just on reading through it I see also that there is reference to a discussion that is described as a discussion between this witness and Mr Schaus. It's at the bottom of the second column and the top of the third, and it refers to this witness raising the issue with Underground Superintendent Albert Schaus who said if miners refused to enter the mine that he, Squires, should go down as a matter of principle. It's my recollection that the witness was in fact describing a conversation that he had with Mr Mason at that stage and not Mr Schaus. I see Mr Morrison is nodding his head, so it's clearly his recollection too. Perhaps that's another matter that could be corrected, Your Worship.

WARDEN: Yes, thank you.

MR HARRISON: Obviously my anger never extended past the second paragraph. Putting anger to one side, Mr Squires, the one matter I did overlook dealing with you yesterday on was your conversations with George Blyton shortly after the start of shift on the Sunday afternoon. I don't intend to go through with you the full detail of the conversations, but I can indicate to you that he has given evidence that you did tell him of a conversation you had with Mr Schaus earlier that day and that you said to him that if a problem arose, there was going to be a reporting to Mr Mason who would take it from there. Now, was there a conversation along those lines that you can recall?-- I can't specifically remember talking

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about it, but I may have.

Well, what he has said, does that appear to you to be consistent with what you did discuss with Mr Schaus?-- Yes, that would be consistent, yes.

He then went on to say that you made a comment to him to this effect: that you hoped you didn't have to do safety meetings for nine hours?-- I can't remember saying that.

Just on that point, would that, or could that have been one of the duties that you would have undertaken had in fact the men remained aboveground that evening?-- Well, on several occasions there has been situations where you have fan-outs and things like that and the fans haven't got going in half an hour and that sort of thing and the fellas come out. That's one of the jobs that could be done where you could give safety meetings to the fellas while that sort of problem was worked out.

At the time you spoke to John Blyton, did you at that stage have any concerns at all about the safety of the men in view of your understanding of the 512 Panel?-- No.

Thank you, I have nothing further, Your Worship.

CROSS-EXAMINATION:

MR MACSPORRAN: Mr Squires, can I take you back to what you knew of spontaneous combustion, and is it the case that your knowledge of that came initially from your theory as part of your cadetship?-- That's correct, yes.

And then you got some extra information about it in your Mines Rescue induction in '84; is that so?-- Yeah, well, I can't specifically remember it in '84, but I know it probably would have been covered there somewhere.

What did that include specifically in '84 at Mines Rescue, what sort of things were you told about spontaneous combustion and the signs of it?-- I - as an event or sort of being able to remember something, I can't actually remember anything from that, but I can only assume what maybe would have been told to us.

All right. Well, can we assume then that your state of knowledge at about that time was that one of the signs of spontaneous combustion or a heating was a rise in carbon monoxide levels?-- Yeah, I would say you could say that, yes.

And at that stage, that's about '84, it would be parts per million?-- That's correct.

That would be the significant thing you would look for, or one

of the significant things would be a rise in parts per million of CO?-- That's right.

I think you also made mention in your evidence that another sign would be sweating on the roof?-- Yeah, I've never seen what that looks like, but it's been a term that's been used, yes.

Again, we are talking about a period around about 1984?-- That's right.

Another sign would be a haze associated with the heating?-- Yeah, I would say that would have been covered, yes.

And again, I think you told us, you hadn't seen one of those, a haze at that stage, about 1984?-- No, no.

But you were aware that a haze can be a sign of a heating?-- Yes.

A further indication was smell; is that so?-- Yes, that can be a further indication.

What was your information about the kind of smell you would associate with a heating?-- Well, my information was that the type of smell associated with a heating was like a tarrish smell.

Was there any other way that it was described to you in literature or instruction?-- No, I can only remember tarrish.

So, your state of knowledge as at about 1984 was that a tarrish smell would be a sign of a heating?-- Well, it's one characteristic, or one example of a heating.

It can be an indication of a heating?-- Yes.

What else would a tarrish smell relate to underground in a mine other than a heating?-- Smells are a perceptive sort of thing. I suppose if people aren't subjected to it, you can get different sorts of smell, a smell very similar to tarrish, if you know what I mean. I know that I have walked through areas where you can - in intakes, you know, where there might be slow air moving or something and you sort of smell a real different sort of smell and you are not quite sure what it is.

Certainly detection of a smell that resembled, in a person's opinion, a tarrish smell would be cause for concern?-- It would be a change.

A change requiring investigation?-- Some sort of investigation, yes.

To ascertain whether the tarrish smell related to some quite innocent factor in the panel or possibly related to a heating?-- Yes.

And until you have satisfied yourself of that fact, it would

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be a matter for concern, wouldn't it?-- Yes, well, it would be a good idea to - for someone to report something like that.

And track it down?-- Yeah.

You certainly wouldn't ignore it?-- No.

That's 1984. Then I think you told us that in 1987 someone gave you a formula for CO make?-- Yeah -----

In litres per minute?-- Yeah, someone - a sheet of paper from somewhere, photocopy paper or something.

And at that stage you were at Moura?-- That's correct.

As a technical assistant?-- That's right.

You can't tell us who it was that gave you the information?-- No, I really can't remember who it was. I would really be guessing. I couldn't say with any accuracy.

Before I move on, I take it it's clear from your evidence that at no stage while you were employed at Moura did you ever receive any training about spontaneous combustion?-- No.

Not a word?-- No.

At no stage when you were appointed undermanager were you ever instructed about spontaneous combustion?-- You are talking about some sort of course or -----

Or anything. Did anyone provide you with any instruction, training, literature, information generally about spontaneous combustion at Moura No 2?-- No.

Or anywhere at Moura?-- No. The only training I have got is from my cadetship in '84.

And Mines Rescue?-- And whatever I read in that Mines Rescue book, yeah.

So, it's clear there was no assistance given to you by the management at Moura in respect of spontaneous combustion?-- No.

Despite that, in 1987 you became aware of this new method of calculating CO make?-- That's right.

And you understood, no doubt, that that related to the use of that formula and its result in detecting a heating, spontaneous combustion?-- No, it's more a - I understood that it was a more modern way of monitoring CO make from an extraction section.

Well, prior to that time, which is about 1987, the emphasis had been on CO parts per million, hadn't it?-- Yes, that's the way we used to monitor it.

And that was the traditional way of looking to monitor carbon

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monoxide, to see if it went up in parts per million, or whatever fashion?-- Yes.

And that itself could be a sign of a heating?-- Yes.

In '87 the emphasis seems to have changed from parts per million to litres per minute or CO make?-- That emphasis changed only while I did it. After I went into the undermanager role it reverted back to CO.

We will come to that?-- Okay.

But in '87 before you were appointed an undermanager, you became aware that there was a more accurate way of looking to see if a heating was occurring?-- Well, I was just told it was a more modern way.

More reliable?-- Well, I wasn't told that either. I was just told this is a standard they are adopting.

What you said yesterday, and I may be wrong, but it was a more reliable way because you took into account velocity of the air flow?-- Yeah, well, I didn't actually - I don't remember using the word "reliable", but that's exactly - yeah, it takes into consideration any air flow change to the section.

Now, that makes it, doesn't it, a far more reliable indication of what's going on than parts per million?-- Probably make it more quantitative, yes.

And reliable?-- I suppose so.

Well, it is obvious, isn't it? If you had a changing air flow of a panel, you need to take account of those changes to see what the CO is doing?-- Yes.

And the only way you can take account of those changes is to use the CO make calculation?-- Yeah, well, CO make is the quantity of CO being produced.

So, if velocity goes up and down, the CO make takes that factor into account?-- If the quantity goes up and down, the CO make-----

So, you can more accurately measure what the CO is doing inside a panel?-- Yeah, well it gives you a baseline comparative, I suppose.

You knew that in 1987, I suggest?-- Yes.

Because you started to use that formula and the CO make figures in the districts where you worked?-- That's correct.

As a technical assistant, you were calculating those figures out?-- That's right.

Why?-- Because I just chose to do it that way.

But why? Why did you choose to do it that way?-- Because it was just the more modern way of doing it. That's what I was told was going to be a standard that was going to be adopted.

What did you understand about the standard?-- Well, it is just - that's all I was told - was that it's just a modern way of recording CO from an extraction panel.

And it was a totally new way, was it, in 1987?-- To my knowledge it was, yes.

Did you ever inquire about its origins - what it meant?-- I didn't inquire about its origins, no.

You weren't interested in why you were doing this calculation?-- Well, you are doing the calculation because it was giving probably a better reading than what the old way was.

A better reading of CO activity?-- Yes.

Well, that would only have meaning, wouldn't it, if you had some guideline as to what the levels were that you were looking for. I mean, if you are doing the calculation, the end result doesn't mean a thing unless you know what you are looking for, does it?-- I was looking at the CO make of the plot. I didn't have any CO guidelines.

Who told you to plot CO make in 1987?-- No-one did.

So, you had a formula-----?-- I got a piece of paper describing how to do it. Someone said to me, "This is a more modern way of doing it." The mine manager didn't tell me I had to do it, but being a technical assistant I took it on my own to go back and get some information for 5 North and plot that and see what it looks like and get a feel for how you do it and that sort of thing. It wasn't a specific instruction for me that I had to do it.

Back in 1987 you went to the trouble of revisiting the information from 5 North?-- Yeah, because it was of an interest, just to look at it.

Because in 5 North at the time that occurred - the heating - in 1986, the emphasis was still on parts per million, wasn't it?-- Yes.

So, at that stage there was no calculation of CO make in litres per minute?-- No, at that stage, there wasn't, no.

You went back in 1987 and looked at that data to calculate the CO makes, did you?-- Yeah, for 1 return.

Did you discuss the results of that with anyone?-- Yeah, I'm pretty sure I showed it to the manager at that time and said, "This is what I've sort of done.", as an example.

Who was the manager at that time?-- Phil Reed.

Did you discuss with Phil Reed the significance of the CO make in litres per minute as it related to the heating in 1986?-- The significance of it?

The levels?-- Well, I did - I showed him how it went along, up and down, and then it shot straight up in the air on the day that it started heating.

Well, when you say it went "up and down", it was level, virtually, for quite some time, wasn't it, the 5 North CO make, before shooting up?-- Well, no, it had peaks and troughs, peaks and troughs, and then shot straight up in the air. That was the profile.

Well, you deduced from that, did you, that that was what significance of CO make was - that it would have to shoot up as 5 North had done?-- Yeah, well, to me, a CO make and the CO graph show the same thing, in the fact that you have got a point where it just shoots straight up, so you know that spon com's on.

You had done this work on your own initiative - revisiting the 5 North information; is that so?-- Yes.

Well, did you ever discuss with anyone - any expert, any literature - what that meant - the levels of CO make - what they meant?-- No, I was just - no, I just looked at the

profile and looked at change.

Why?-- Because it was just interesting to see how it went up and down in troughs and then took off, straight up.

The Strang and Mackenzie-Wood book was available to you in 1987; is that so?-- Well, it was at home, yes.

At your home?-- Yeah.

How long had you had a copy of that?-- Since '84.

Well, surely you would have looked at that book when you were doing these exercises on CO make?-- No, no, because that book was at home. I was just doing it at work.

You went home every night, didn't you?-- Yeah, but I just don't go home - I didn't go home and read a Mines Rescue book every day, or anything like that.

I'm not suggesting you should, Mr Squires, but you're the one that has told us on your own initiative you started calculating CO make data from 5 North heating in '86?-- Yes, I did.

You're the one that went to the trouble of looking into data for CO make for that panel?-- Yes.

But you would have us believe, would you, that you had no idea of what levels were significant other than a general trend?-- That's right.

That's your explanation, is it?-- Yeah, I'm sorry, but that's right.

You, of course, concede here that in that very book you had at home in 1987 there were the figures clearly mentioned of 10 to 20 lpm?-- That's right. That was mentioned yesterday, I think.

It is as clear as you like, isn't it, in Strang and Mackenzie-Wood's book?-- Well, it is mentioned in that book, yes.

Are you seriously suggesting that you, prior to August last year, had never read that?-- No, I'm not saying that. I'm saying I probably read it at some stage in 1984 - in 1984 - but I have no recollection of even reading it. I'm not saying that I didn't, but I've got no recollection of reading that.

Well, are you saying that you probably would have read it some time in 1984, but had no recollection of it when you started doing these CO make calculations in 1987?-- That's a possibility, yes.

And yet you still had the book in 1987?-- Yes, I would have had it at home.

You see, the same book refers to the significance of Graham's

Ratio, doesn't it?-- Yes, I think - well, from my observation yesterday, it was just above it.

Same page?-- That's correct.

Same extract from the book contains information on Graham's Ratio?-- That's right.

Now, you're saying here that Graham's Ratio was known to you as a way of indicating a heating?-- Yeah, it is a CO/O2 deficiency ratio.

You had no idea what figures you would be looking for?-- No.

Are you seriously suggesting that you had some appreciation of what Graham's Ratio meant but didn't know what the figures would reveal?-- Yes, that's right.

Well, what use to you is information about Graham's Ratio if you have no idea about the figures to look for?-- It is of no use.

No use at all?-- That's right.

Well, didn't you ever ask?-- About Graham's Ratio? No.

You know, you are there saying, "Well, I know what Graham's Ratio is and it may indicate a heating, but I have no idea what figure of Graham's Ratio is significant."?-- That's right.

That's your explanation, is it?-- I'm sorry, but that's exactly right.

Was that your state of knowledge right up to the time of the incident in August last year?-- Yes.

So, your looking at the Unor screen, as you tell us you did, would never have had any significance to you in the Graham's Ratio figure plotted or printed?-- No.

So, it being on the screen wouldn't have meant a thing to you, other than the name, "Graham's Ratio"?-- "Graham's Ratio" at the top, and my belief was that if there was a figure that showed any danger, it would turn red.

The Graham's Ratio figure would turn red?-- Yes.

Who told you that?-- That was just my assumption, because all the other figures on the screen worked the same way.

So, you would be looking for a change of colour without having any idea what the figure would mean?-- That's right.

And you are the undermanager?-- Yes.

So, there is no point my showing you any figures relating to Graham's Ratio for that period 6, 7 August last year because you wouldn't understand anything about the levels indicated?--

That's right.

Well, you were doing these CO make calculations for some time in 1987?-- Yeah, for a few months I think it might have been.

Did you give the information that you calculated to anyone?-- It was just kept in a graph book.

Did you show anyone that graph book?-- I can't specifically remember. I probably would have shown the manager, but it was - I don't even think we were on extraction at that time, and so all the graph books were just showing baseline figures for development sections.

Well, that was for some months, was it?-- Yes.

In 1987?-- Yes.

And you kept the record of the plottings of those figures in a graph book?-- Yes.

Well, did you bring them to anyone's attention - anyone in management's attention - that you were doing this and the reasons for it?-- I can't specifically remember pulling the manager aside and saying, "Hey, look what I've started up.", but I might have.

Who was the ventilation officer at that time if there was one?-- There wasn't a ventilation officer.

Was there anyone assigned to ventilation?-- Yeah, a technical assistant entailed doing the ventilation surveys and, you know, gas samples and things like that.

Was that your job?-- Yes.

So, as part of that, part of your ventilation duties for the panels you were involved with, you kept this record of CO make in litres per minute?-- Yes.

Again, without understanding anything about the figures that were coming out of that calculation?-- Well, not understanding any levels, no. I was just plotting what I was calculating.

You do I agree, I think, that there was a change of emphasis to litres per minute in 1987; is that so?-- I wasn't told to go and start CO make calculations.

There was a general change of emphasis from parts per million to litres per minute?-- Well, I'm sorry, I can't really agree with that if I wasn't told. I would assume that a general change of emphasis would mean that someone has come up to me and said, "Do it this way.", and that didn't occur.

In any event, whether you were told or not, it appears you yourself were doing it in 1987 for some months?-- Yes.

What panels were you involved with at that stage?-- I would

say that the 2 North area would still be going. I'm really not sure if 5 South had kicked in at that stage yet.

So, were they the only two that you remember? Were there more than two?-- The 2 North sections would have had the possibility of having 2 North-east and 3 North-east running at that stage.

You were the person charged with the role of looking after the ventilation the way you have described for that period?-- Yeah, I was monitoring that at that period.

Can I ask you - perhaps if I can see Exhibit 21 - just 21, first, please? Look at Exhibit 21, if you wouldn't mind, at the page I'm showing you. Now, do you see that that page of part of Exhibit 21 I am showing you deals with the tabulation of the CO make in 5 North?-- Yes.

And you will see it goes on to a second page - that is a table?-- Yes.

And you see the third page, the next page over, deals with the CO make graph?-- Yes.

In relation to 5 North?-- Yes.

Now, do I understand you to be saying that at some stage you plotted a graph similar to that one depicted in the exhibit for 5 North?-- No. No, as I stated yesterday, the graph that I made was incorrect. This is a graph that was made post the disaster.

Yes, very well. I think you said you made an error in not taking into account the bottom return figures?-- The bottom return figures I took into account but the top return figures I hadn't done.

I see. So, that would mean, wouldn't it, looking at that table or the graph, the figures of CO make in litres per minute would have been much less?-- Yes, that's right.

Can you tell us - was the bottom return vent station 15?-- No, 14.

14 is the one you didn't take into account?-- I beg your pardon, 14 is the one I did take into account, 15 is the one that I didn't.

So, if you read down the page - well, it starts at a figure of 4.55 litres per minute?-- Yes.

On 1 November, and goes through to - it gets up around 10, 11, 13 - I beg your pardon - 11 on the 14th of March 1986; is that so - bottom of the first page?-- Yeah, 11 there, yes.

Back to 7 on the 20th of March?-- Yes.

And then up to 10 again, 13, then 10?-- Yes.

10 on the 18th of April?-- Yes.

And then takes off, as you've said, on the day of sealing, 19 April, when it goes up to 30?-- That's right.

Now, you will see the plot that contains the top and bottom return - which is on the third page there; is that so?-- Yes.

That indicates a rise to - close to, I suppose, 19, 20 lpm, then a levelling out?-- Yes.

For a substantial period before it takes off on the day of sealing?-- That's right.

Did your graph take into account the return only reflected something similar to that?-- It was a bit more troughy - up like that, sort of thing, and then it took off.

When you say "troughy", you mean up and down, peaks and troughs?-- Yes.

Which I suppose, in one sense, cancel each other out. You get high and low readings, up and down?-- I think on my graph - I've seen it since the thing, but I'm pretty sure I did an average. Sort of like, you do your trough reading and then you join every second point to get more of an average of the thing.

That would have the trend being reasonably level for quite some time before taking off?-- I can't remember it being level. I can still remember it going up and down, but there is a reference - if someone wanted to see what it looked like-----

That might be it?-- I think it has been tendered.

MR MORRISON: I think it is part of Exhibit 21.

MR MacSPORRAN: I beg your pardon. That's the handwritten document, is it?-- That's this one?

That's the ----?-- That one there. That's my handwriting.

Can I see that for a moment, please? So the dotted line through the graph in your writing is the way you've averaged it out, is it? Is that so?-- Just to smooth some of the peaks out.

You can have that back. Do you agree that that shows a very slight rise up until the day of sealing when it takes off?-- Yes.

Very slight rise indeed?-- Yeah, just a steady rise, yeah.

And you still say that that was the trend you were looking for as opposed to any figures associated with it?-- That's right.

You've never looked at that document and looked at the litres per minute display as being of any significance?-- Only for the sake of being able to put the points on.

And on your own graph there averaging it out it only just creeps over 10 lpm at that vent station before the day of sealing?-- Yeah, for that particular return.

Well, again I suggest to you the graph of both returns shows a higher make but a levelling out up to the point of sealing when it increased rapidly?-- Can I just ----

Yes, it's one you were looking at before; is that so? Do you have that?-- Yes, I have it now.

Do you agree the general trend shown is very similar to the one for the return you plotted over its life? I mean generally similar?-- I suppose if you drew average lines through it it would be similar, yes.

So a higher make, up near 20 - just below 20 perhaps to be more accurate, right along until the day of sealing when the trend increased rapidly?-- Yeah, it shot right up, yeah.

That would show, wouldn't it, it was a confirmed heating inside 5 North, wasn't it?-- My understanding was it it was a confirmed heating, yes.

Confirmed after the event there had in fact been a heating in 5 North?-- Yes.

Isn't that the clearest evidence of the need to very carefully watch any increases in CO make?-- Well, my understanding of a confirmed heating of 5 North, of when it started, was when it actually went straight up.

You would say on that evidence there was no heating inside 5 North until the day of sealing?-- Well, my understanding of when the heating starts is when it goes straight up, yes.

Apart from the data from 5 North, who told you that?-- It's just, I suppose, just the way I've assimilated the information from what I was told about the section itself how the CO had

jumped up just real quick.

Well, did you just look at that or plot that yourself and conclude that was the case or did you discuss it with anyone who might have known something about it?-- I suppose I was just plotting it and just comparing the CO make with what I knew about the parts per million that I was told.

You didn't discuss it with Mr Kerr, Mines Rescue?-- I can't remember talking to David about 5 North.

Would he have been a person that might have been worthwhile talking to about this about?-- Yeah, well, David had a lot of experience with mine fires, mine explosions, that sort of thing.

And some experience with CO make perhaps?-- Well, I'd say that he would have been right up with it, yeah.

But you didn't ever raise it with him?-- No.

Despite the fact that you were going ahead and plotting data from 5 North which hadn't been done before?-- That's right.

You can hand that back, thank you. Well, that's 1987, is it? That was your state of knowledge at 1987?-- That's right.

And then you became an undermanager at No 2?-- That's correct, yeah.

And you remained an undermanager up until the time of the explosion?-- That's right.

That was your role at No 2, undermanager in charge of the various shifts when you worked?-- As shift undermanager, yes.

At any stage between '87 and '94 did you read anything about CO make and litres per minute?-- No.

Never?-- No.

You didn't ever look at Strang and Mackenzie-Wood's book?-- Like I said -----

Respect of CO make, I mean?-- I remember in '87 was the last Mines Rescue competition we went to and part of the competition is that you've got to be able to - I think one of the questions we sort of filled in that we would probably have to know was how to calculate CO make. I've got a vague recollection of John Brady being at Cook Colliery that year when we were doing it and knowing the formula, how to do it, but since that I haven't been involved in Mines Rescue competitions so I haven't read anything.

Even then as part of the Mines Rescue competition in calculating CO make what was said to be the significance of CO make?-- I can't remember. All I remember is just how to use a formula to work it out.

To get a figure which you didn't understand?-- It was just a figure so you could plot what it was.

Knew nothing about 10 or 20 lpm?-- No.

Despite taking part in Mines Rescue competitions?-- Well, all I can remember of the question that was asked of us at the competition was, you know, what your velocity was, "this is your area, this is what your CO is. You tell us what the make is."

No question about whether that would indicate a dangerous situation or an issue of concern?-- No, I can't remember any question on that.

Just a straightforward exercise of doing the mathematical calculation to get a figure?-- That's all I can remember, yes.

It's all a bit pointless, isn't it, if you don't know what the significance of the figure is?-- I didn't think so. I thought if you could watch the trend - to me it was just getting the same information as what you do from CO parts per million.

That's the last involvement you had with doing the calculation; is that so, '87?-- '87, yes.

Mines Rescue competition?-- Yes.

You didn't read any literature at all between '87 and '94 that might have informed you about the significance of a level of CO make?-- No.

But you still had your book, the Strang Mackenzie-Wood book?-- Yeah, it was somewhere at home.

Was there documentation at the mine relating to SIMTARS seminar material?-- I don't remember seeing any documentation.

You never saw that? Never saw any papers, literature dealing with CO make and heating?-- I'm not saying it wasn't there, but I never saw anything.

You never saw it. No-one ever discussed with you prior to 7 August last year the significance of any CO make in 512 Panel?-- No.

Just didn't arise as an issue?-- No, it was just - the only thing I know about the CO make in 512 Panel was it was on a piece of paper up on our noticeboard next to the table.

What did you think that was there for?-- Just to show you a trend of what it was doing.

Well, you obviously knew that such a trend of CO make was being recorded at No 2; is that right?-- Yeah, well, it was there, it was on the board.

And had been used for previous panels?-- Well, hindsight - yes, I've seen the things.

What do you mean in hindsight?-- Well, it's just that at that specific time if you had asked me how many panels they would do it for I couldn't tell you.

But you knew at the time, that is prior to August last year, that No 2, Moura No 2, had a practice of calculating the CO make with respect to panels being extracted?-- Yeah, well, I've seen that on the noticeboard, yes.

That's been a regular practice over the years before 1994?-- Yes.

And are you seriously suggesting you didn't know anything about the significance of the levels of CO make being recorded other than a trend?-- Yes. I'm not suggesting that, I'm saying that.

You are saying that is the truth, are you?-- I am under oath, sir.

That's the situation between 1987 and 1994?-- Yes.

Your state of knowledge remained the same about the significance of CO make?-- That's correct.

That what you would look for would be a trend and not a particular figure?-- That's correct.

How is it then that when the events started to occur inside 512 you reverted to an assessment of parts per million of carbon monoxide?-- Because that's what I'm familiar with.

You had been familiar with, as early as 1987, CO make?-- But I hadn't practised CO make since '87.

And you had been aware that CO make was being used as a tool, a calculation, a tool to detect spontaneous combustion at Moura No 2 over the years prior to '94?-- Yes, but I knew from my experience of the 5 North, what I've been told about it, that there was a definite jump in CO. So I sort of tended to stick with something I knew about.

Mr Squires, you were the one in respect of the 5 North data who started calculating CO make?-- That's right, but what I'm trying to get across to you is that my level of knowledge of CO make is just parallel to what the CO parts per million was showing you anyway.

That's only true, isn't it, if the velocity remains constant?-- I'm talking about the trend of the thing when you come into a spontaneous combustion and it goes vertical.

That's your explanation for reverting back to parts per million at relevant times when things started happening inside 512?-- Well, I'm more familiar with parts per million, the

experience of a heating.

But you knew every week there was a graph of CO make being posted on the deputies' cabin wall in respect of 512?-- Well, it was in the undermanager's -----

There as well?-- Yeah.

In your office?-- Yeah.

In front of you?-- Well, to the side.

To the side of you?-- Yes.

Every week on the board?-- Yeah, on the noticeboard.

Well, whenever you had a concern about anything in 512 why wouldn't you make reference to the CO make trend? It's there on the wall to your side?-- I've tried to explain that if I don't understand something or if I think - why try and use something if you haven't used it? Why not stick to something that you know about it?

You understood CO make, you had been calculating it?-- That's seven years ago.

The mine had been calculating it every week in 512?-- That's right.

The mine hadn't been relying upon parts per million, had they, except to use it to calculate the CO make?-- The mine has been calculating CO make but I had nothing to do with calculation of CO make since I was a technical assistant.

Mr Morieson, the ventilation officer at 512 during this period, he was the one that looked after that, wasn't he?-- Yeah, he took the readings.

He and Jacques?-- That's right.

Well, did you ever raise the issue with them of what the CO make at a particular time may have meant?-- No.

Why?-- Because I was just - I knew that - if it come to a point where there was any danger it would shoot vertical, and that same characteristic comes from CO.

Did you ever ask Allan Morieson or Jacques Abrahamse whether that belief of yours was right?-- No.

Why?-- Because I thought it was right.

On what basis?-- Because of the experience from 5 North. It comes up, CO comes up, parts per million hits a point where spontaneous combustion starts and then you've got the sign that it starts, that within a few hours it jumps up and it's just so noticeable.

That was the sole basis, was it, the sole basis for your

belief about the way a CO make trend or a parts per million trend should behave if there was a heating?-- That was my sole basis for determining if a heating was starting.

And that remained the sole basis until the time of the incident in August last year?-- That's right.

You agree now, of course, I take it, that that's not necessarily the case?-- No, well, hindsight knowledge, sir, it's been brought to my attention about the 10 to 20.

The 10 and the 20, as you've conceded yourself, was in literature available to you and in your possession as early as 1987?-- Yeah, well, that was brought forward yesterday.

You didn't use any of that, did you?-- I beg your pardon?

You didn't use any of that data?-- That was in my book?

Yes?-- No, the book was at home, sir, I didn't read it.

Well, we come then to June of last year when the panel, 512 was being extracted. Now, you told us you were there for some of the time; is that so?-- Yeah, some of the time in June.

You had holidays, I think you told us, between 11 and 19 June?-- That's correct.

So you returned to work on the 20th?-- That's right.

You now know, if you didn't know before, that there was a report made by an undermanager that he had detected a very slight tarry smell inside 512 - when I say a report, a verbal report of that occurring?-- Well, from - since the disaster and from evidence given in this Court I know that occurred, yes.

And obviously by that response you are saying you had no idea that that had been detected inside 512 before the explosion?-- Of the report of the tarry smell?

Yes?-- No.

You just hadn't heard of that at all?-- No.

Before 7 August last year?-- No.

When you returned to work on the 20th did you seek to find out what had been happening inside the panel while you had been away?-- Well, I just come to work and got information on how the whole mine had been developed and whatever while I was away, just to get an update.

Well, you had come to work but you had come to work as undermanager in charge of a shift?-- Yeah, shift undermanager, yes.

With the obviously onerous responsibilities that go with that?-- Yes.

In charge of the shift?-- Yes.

Well, wouldn't you want to know what had been going on inside the panel, if anything, in your absence?-- Yeah, well, I did. I come in and they told me which sequence we are up to and

And no-one told you anything about the report of a slight tarry smell inside 512?-- No.

That's 17 June. You now know there was some activity reported inside 512. You came back on the 20th and on the 24th there was a deputy, as you now know, Reece Robertson -----?-- Yes.

----- who also made a report of some activity inside 512?-- Yes, I've seen it from the report, yeah.

And indeed, as I understand your evidence, you concede that you most likely would have read Reece Robertson's report?-- Well, I either would have - yeah, a combination of reading his report and/or getting a report from him. I can't specifically remember him ringing.

Could the witness see Exhibit 45, please, Your Worship? You were shown, I think yesterday, and you recognise that as being a copy of the report made by Reece Robertson, the deputy on afternoon shift on Friday, 24 June last year?-- Yes.

And you agreed, I think a couple of times, in all probability you would have read that as was your practice to read the deputies' reports when you came on shift?-- Yeah, well, Reece - well, no, this would have been at end of shift.

But you would have read it in all probability, this report?-- This is a production shift and I know that when Reece comes up he would have given it to me, yes.

You've been referred to the entry that Reece has made on the report that talks of a strong benzene type smell; is that so?-- That's right, yes.

And a reference to informing the undermanager which was yourself?-- That's correct.

Is it correct to say that you have no recollection firstly of speaking to Reece Robertson about that matter?-- That's correct.

It's a fairly significant incident, isn't it, a deputy coming to you or phoning you and telling you there was a strong smell inside a panel?-- Well, I can't explain because I can't remember it. I can only maybe - I can't really explain it.

Robertson's evidence, I think, was to the effect that he told you there was a strange smell, a bit benzeney. That's what he said in evidence here, I think, about a conversation with you?-- Right.

I'm not quoting the exact words, something to that effect, a strange smell, a bit benzeney. Well, wouldn't that - if you had been told that wouldn't that have put you on guard that something was amiss possibly?-- Well, I think I've explained to the Court before that I'm not really familiar with benzene smell, and the only other thing that I can think of is maybe the way he approached me might not have been sort of a way that triggered anything in my mind.

Well, you are not familiar with benzene type smells?-- No.

But if a deputy said it was a strange smell, a bit benzeney, that would put you on alert, wouldn't it?-- Well, first of all I'd have a look at the CO just to see what the CO was.

Forget the CO just for a moment. The smell, the report of a strange smell inside a panel, wouldn't that put you on guard that something may be happening inside 512?-- No, I cannot accept that you get something happening in 512 Panel with just a smell. You've got to have a change in CO. You've got to have that.

Why would a deputy report a strange smell if it wasn't

significant? What would be the purpose of anyone putting on their report about a smell being detected inside a panel? Why would they do that?-- Well, he might be just noting a change that he has noted that he can't explain.

Why would you want to make a note about a change that dealt with a smell?-- Well, because, as we have gone through before, there is a list of factors involved that describe or can possibly point toward a heating, and smell is one of them.

So, the significance of a smell would be it's a possible indication of a heating?-- It's one factor that's a possible indication of a heating.

And that's why you would expect a deputy to report a strange smell in a panel where he worked?-- Yes.

Because it's a matter that should be investigated?-- Well, in hindsight, yes, I think you can look at smell and say that.

Well, Reece Robertson went to the trouble of putting on his deputy's report that he detected a strong benzene-type smell, had told the undermanager, and the advice Robertson gave was to keep a check on it?-- Yes.

Now, you are not continuing to suggest, are you, that you can't remember this because a benzene smell would have had no significance to you?-- I'm not suggesting that I can't remember it because a benzene smell has no significance to me, I am just saying that I can't remember it.

It's one of the more significant events in the lead-up to the event on 7 August, isn't it?-- Well, from the description I have heard from Court, yes.

I mean, it's a report of a smell not inconsistent with a heating occurring inside 512 as early as 24 June last year?-- Well, a smell is not inconsistent with factors that can indicate a heating, no.

Reported to you, Robertson says?-- Yes, well, he said that he reported it to me.

And you can't remember it?-- I can't specifically remember it. I'm not saying that he didn't report it to me, I'm just saying that I can't remember it specifically.

Put it in his report and you can't remember reading it?-- I can't specifically remember seeing that report, no.

Because if you had, you would surely have carried out some thorough investigation?-- Well, I think I've explained that I can only explain to you the way that I did things, and the characteristic way I would have handled that would have been to, first of all, establish what the CO was and if there had been any change.

Well, you are talking about what you would have done, but you

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have no memory of even being told or reading about this event on 24 June; is that so?-- That's correct.

No memory at all?-- No.

But if you had been told, you would have checked the CO parts per million?-- Yes.

As opposed to any litres per minute or any other investigations you could have carried out?-- I would have asked him what the CO was in parts per million, that's right.

And it seems that you didn't alert anyone else to the fact of a smell being detected inside that panel at that stage; you didn't tell anyone else?-- Well, I believe that if that - well, while I can't remember the specific incident, it was also a custom that if some deputy brought something to me, that I would pass that information onto the following shift.

Again, you simply have no memory of doing that?-- No.

Well, that's 24 June. I think you went on holidays - what was the date in July, the 21st?-- The 21st - no, it wasn't holidays, I was sick. The 21st to the 31st, that's correct.

You came back to work on 1 August, the Monday?-- That's right.

Now, again you apparently tell us that you had no knowledge of any change in procedure to monitor CO make daily?-- No. It was confusing when I come back to work that particular day.

Well, you were back at work on the 1st?-- That's correct.

And you were there the whole week until the - well, the whole week and the weekend before the explosion?-- That's correct.

At no stage between the 1st and the 7th inclusive did you discover anything about steps that had been taken to monitor CO make litres per minute daily?-- No.

You heard no talk about that at the mine?-- No.

You made no inquiries yourself as to what had been happening in your absence between 21 and 31 July?-- Well, I come to work and I asked - I think it was Joe was the undermanager when I come - Joe was in the undermanager's, Terry was down the pit when I come to work - just to find out where the section was up to, where the whole mine was up to.

No-one told you there had been somewhat of a scare on the Friday, 22 July with a high CO parts per million reading?-- No.

You didn't ever hear about that?-- No.

Didn't ever hear that an investigation had been carried out into that reading?-- No, I heard about that investigation after the disaster, but I didn't have any knowledge at all

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about it before.

Well, as an undermanager in charge of shifts inside 512, do you think it would have been appropriate for you to have been told about that, those events?-- Of course.

But no-one did?-- No.

Then you came on on the Friday shift, 5 August?-- Yes, afternoon shift.

And that's when Mick Caddell told you, you agree, about some unusual signs inside 512?-- Yeah.

What did he tell you?-- Well, I walked into the deputies' cabin and he said that when he was doing his inspection he noticed that there was a benzeney No 4 type smell that was coming through one of the cross-cuts.

Well, that must have been extremely important information to you?-- Well, it surprised me because I sort of didn't have any - I hadn't heard from anyone else about any sort of reports like that.

Well, you had some doubt about what benzene meant, you told us that; is that so?-- Yes.

But you couldn't have had a doubt about what he meant referring to a No 4 type smell?-- No, no, well, Mick was a No 4 bloke, he would have been - I knew exactly what he was talking about No 4.

He was talking about burning coal, wasn't he?-- Well, I assumed he was talking about the smell of an afterdamp gas.

The smell of products of combustion?-- Yes.

So, what he was telling you on Friday, 5 August, was he detected a smell consistent with some form of combustion inside No 2?-- Yes, he was detecting a smell of - yeah.

Now, you know his report, his deputy's report, refers to a strong tarry smell or a strong tar smell at 10 cross-cut?-- Mmm.

And 10 ppm CO?-- In the cross-cut, yes.

You would have read that report?-- I can't specifically remember reading it, but I believe I would have read it, yes.

And you can't remember reading "strong tar smell"?-- I can't remember actually seeing the tar smell, no.

But regardless of that, he'd told you something that meant the same thing, hadn't he?-- Yes, well, like we talked about it before, that is a factor - one of the factors that could be an indication of a heating.

And a reference to a smell like No 4 which had exploded in

1986, a smell like that was the clearest reference to the possibility of a heating inside 512?-- It was a reference to - well, a characteristic of a heating.

And furthermore, on your own criteria, 10 ppm on his report was another sign in the same way?-- Yeah, but from seeing his report, the 10 parts was in the cross-cut. What he was getting in the return was 8, and, to my mind, I would not see 10 as being a concern because I remember him saying he stuck his head through the hole in the stopping, and you got - I would expect that your parts per million in your waste would be higher than what it would be just in your return where you got sort of more air, sort of thing; do you follow me?

Well, you then discounted, did you, the 10 ppm? You would have expected that for the reasons you have given?-- Yes.

What about the smell?-- Well, I still thought that - I know Mick is an experienced deputy, but because he hadn't been exposed to 512, I still thought that - I just couldn't believe that we would be getting a tarry smell there or -----

Well, Mick Caddell had told you he detected such a smell?-- Yes, I recognise that.

Whether he described it as tarry, benzeney or a No 4 type smell all meant the same thing, didn't it?-- Well, in hindsight it does, yes, of course.

Well, you were told; you agree you were told?-- I am not trying to say I didn't understand what he was saying, sir.

Well, did you just discount it because Mick Caddell was not experienced inside 512?-- No, well, see, when Mick told me about this, this was about crib time, and he went down and did another inspection after that, and the CO readings from the first inspection and the CO readings for the second inspection were the same.

But what did you do about the smell?-- Well, I just found it unusual that the CO readings were the same and there was a smell there, and I thought the possibility was that it could have been due to grease drums or something, just something unusual that he picked up like that in the waste.

Grease drums in the waste?-- Well, I am just saying that is an example which gives off a different sort of smell that smells like not a goaf smell, but I thought it could have been something like that, and that's why I sort of asked him to keep an eye on it.

Did you say to Mick Caddell, "Look, Mick, what you are smelling, could it possibly be grease drums that we have left in the waste?"?-- No, I didn't ask him that.

Why?-- Well, because when I - when Mick was telling me, he didn't seem to be concerned over it all.

Well, why was he telling you?-- He wasn't telling me. He

didn't approach me, I just walked in halfway through the conversation.

So, despite on your own evidence having been told about a smell consistent with combustion, you discounted it entirely?-- After looking at the CO readings I didn't discount it entirely, I just said that I looked at the CO readings and saw there was no change and then as a back-up I told him to keep an eye on it during the night shift.

And you yourself told no-one else about it at that stage; you didn't bring it to anyone's attention, did you?-- Well, I can't remember bringing it to anyone's attention.

See, wouldn't that have been a fairly basic thing for you to do, to make sure that these factors were brought to someone's attention, these signs of things happening inside 512, wouldn't it?-- Sorry, could you repeat the question?

Wouldn't it have been a fairly basic precaution for you to take as undermanager in charge of a shift to bring it to someone's attention that these things had been reported inside 512?-- Well, in hindsight I should have reported it to somebody, yes.

Wasn't that your job as the undermanager in charge of the shift?-- To report things?

Report things like a smell inside the panel you are in charge of?-- Well, I suppose normally the safety stuff was reported in the deputy's report.

Left it to the deputy's report?-- That's how we seemed to go.

Anyway, you went home at about 11.20 or so that night?-- That's correct.

And you came back the next morning at 6?-- 6.30.

6.30 on Saturday morning, and you told no-one there about what Caddell had reported to you the night before?-- At the start of day shift?

Yes?-- I can't remember saying anything to anybody.

And there were deputies Newton, Rose, Helander and Klease, and you didn't tell any of them about what Caddell had told you the previous day?-- As far as a tarry smell, no, I can't remember saying that.

You see, did you ever think at that stage that it was even remotely possible that you had some form of heating going on inside the panel?-- No.

You had no suspicion at all about that?-- No.

Did you contact George Mason on the Friday before you finished your shift?-- On Friday?

Yes, the 5th?-- I can't remember. What, by phone?

Well, whether it be by phone or in person or however, did you speak to George Mason on the Friday about 512?-- I can't specifically remember talking to George about 512.

Can you remember any conversation you had with George Mason on the Friday about sealing 512?-- No, I can't specifically remember any conversation with George on sealing. I'm not saying that I mightn't have, but I just can't remember.

Well, would you have possibly had a conversation with George Mason on the Friday asking him or telling him your opinion was it should be sealed, 512, that weekend?-- Well, it might have been that I might have said to him that I thought that 512 should be sealed as soon as we get the machines out, just as good mining practice.

But you can't remember such a conversation?-- No.

Might you have been concerned about what had been reported to you about what was going on in 512 and that you thought it should be sealed?-- No.

You had no concerns about what was happening inside 512 as at Friday the 5th?-- No, well, just to maybe clarify it for you, I've already detailed that I can't specifically remember at all the events of - I think it's June 24th, and you have just gone through my interaction with Michael Caddell and that was at approximately 8 o'clock and George wasn't at the mine at that time, and I can't remember making a phone call to George, so -----

So, you are saying that if you did speak to George, it was before you had the report from Caddell about the smell?-- That's correct.

So, any conversation with George before that time would have been about sealing, it would have just been in the ordinary course of a sealing once the machinery was out?-- Yeah, I think I already said to you yesterday that, you know, Mick's been on my shift for a while and he was one of the fellas that kicked up a bit of a stink about 512 being open for a long time, and I just feel it's good mining practice to seal up a section when you get the machines out.

In any event, on the Saturday morning when you did your inspection, you found something unusual in 512, didn't you, yourself?-- Yes, I walked into the section, I noticed there was a slight haze in the air in No 2 heading and that the waste smell was evident in the cross-cut, whereas that's a change from the previous afternoon when I was in there.

Well, what was the significance of a smell to you?-- It was just a musty smell, it was just a goaf smell.

Did it have any significance?-- No. The only significance is that you are not supposed to have a goaf smell in the

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intake, the intake is supposed to be flowing into your waste.

So, it wasn't a smell associated with any sort of heating?--
Oh, no, no.

See, why would you even refer to a smell?-- On Saturday?

Yes?-- Because I just said that you just don't normally get
a goaf smell in your intake.

So, it was just an ordinary goaf smell?-- Yes.

Associated with a haze?-- Yes.

And air backing up the No 2 heading against the flow of intake
air?-- Well, it's sort of a bit strange. Like, when I say
"air backing up", it seemed to be migrating slowly out almost
as if it was getting sucked out by the rush of air going down
the cross-cut.

Did you hear any other reports that morning from Klease about
what he discovered inside 512?-- I can't remember Kleasey
getting back to me at all. The first thing I can remember of
Kleasey is - well, apart from just talking to him in the
deputies' cabin - is ringing him on the phone.

That was you reporting to him that you had found something?--
Yes.

And asking him to take a reading?-- That's right.

But at no stage - am I correct in saying at no stage do you
acknowledge anything said to you by Klease about what he
found?-- I can't remember Kleasey seeing me at all about
anything that he found.

This is Saturday, 6 August?-- Yes.

In any event, you then rang at some stage George Mason; is
that so?-- Yeah, I rang George about noon time.

And you rang him with some concerns you had?-- Yes, well,
this is before Cole rung back about the CO readings, yes.

And the concerns you had at that stage were the smell that
Caddell had reported to you?-- Yeah, that was sort of -
yeah, I detailed - when I rung up George I said my
observations, I told him what my observations were from the
Saturday day shift compared with Friday afternoon shift, and
that was the fact that I could see a slight haze in the air
and that there was a goaf smell evident in the cross-cut. I
had said that we had had diesel machines because we had diesel
machines working down there taking down Tecret and setting up
the place for when the sealing was on Sunday, so I detailed
that we had diesel machines there, and I said that I had sent
Cole down to take a CO reading.

And you rang George Mason at home?-- Yes.

Is that so?-- Yes, that's correct.

Does that indicate something about your level of concern about the situation?-- I was just referring to my supervisor on a subject that I just wanted to clarify.

But you hadn't contacted George about the report of Caddell's earlier, had you?-- I can't remember contacting him, no.

Anyway, you told George that Caddell had reported a tarry smell in the top return airway; is that so?-- No, I said that Mick had reported a benzeney No 4 type smell.

You don't concede you may have said to George Mason a tarry smell in the top return?-- No, I didn't say "tarry" to George.

You told him you noticed a reversal in the ventilation in No 2 heading?-- Yes, I said the air was coming up No 2 heading.

And the odour in the top return was stronger?-- No.

You didn't say that?-- No. No, I said-----

What would you have said then?-- I was just giving him an overall descriptive of what I observed, and I'd said that the goaf smell in the return was - seemed to me to be less than what it was in the tranny road.

I suggest that what you said to George Mason was that Mick Caddell had reported a tarry smell in the top return roadway?-- Sir, could I just - am I allowed to comment on each topic as you go through?

Yes?-- When I told George about Mick Caddell's report I told him he found it in the cross-cut, not the top return and it was a benzeney No 4, not a tarry shell.

You noticed a haze in the air?-- I noticed a slight haze in the No 2 road, yes.

You noticed there was some reversal of ventilation flow in No 2 heading?-- Yes, it was migrating out.

And the odour in the top return was stronger?-- No, I didn't say that.

That would indicate, wouldn't it, a statement that there was a reversal of ventilation in No 2 heading, and the odour in the top return was stronger would be a reference to the tar smell of Caddell, wouldn't it?-- I didn't say the odour in the top return-----

I know you say you didn't say it, but that would be the way one could interpret such a statement; is that so?-- I suppose one could interpret it, but that's not what I was trying to-----

You didn't say that to George Mason. You didn't tell him the odour in the top return was stronger?-- No.

So, all you reported to George Mason about a smell was an ordinary type goaf smell?-- I just said "goaf smell".

Not any smell associated with a heating?-- No, only what Mick Caddell had told me, which I conveyed to George.

Well, then there was a - you say a conversation about the reading that Cole Klease gave you?-- Yeah, when I was talking to George - Cole had actually called up while I was talking to George.

That completely satisfied your concerns about the reports you had to that date - that is, CO was 8 to 9 ppm. You say that didn't concern you?-- Yes, Cole rang through and told me it was 8 to 9 parts.

That put to rest your concerns about what was happening in 512?-- Yes, I felt deflated when he told me what was happening in 512.

Deflated?-- Yes.

What do you mean by that?-- Well, if there was any sign of a spon com, I was expecting he would come back with something like 15 or 20.

In fact, he came back with 8 or 9 and completely put to rest any concerns you had in relation to 512?-- We still had air coming up the No 2 heading.

What did that signify to you?-- First of all, I thought we might have had a fall somewhere which blocked off some roads, or something or other, and the significance of the air coming out No 2 heading is the fact that it is not showing that somewhere in that waste the air is not flowing all sort of into the back and then coming up the return. Somewhere it is coming around and coming back out.

Somewhere it is short-circuiting?-- Yes.

And, of course, if you had that happening, you potentially have areas in the waste that aren't being ventilated at all?-- Well, I can't comment on that, but my understanding is that where you have got air going around in circles, it doesn't allow the ventilation to actually cool the waste, because as the waste oxidises, it produces heat, and if you don't cool it, then you could actually bring on a potential heating.

So, the signs you saw - that is, the air flowing back up No 2 - a potential concern about that was that you could end up having a heating in the waste if that continued?-- Yeah, well, you have got to deal with that. Yeah, you couldn't just walk away from that and just-----

Well, did you explain to George Mason that that's a concern

you had and you thought that the panel should be sealed for that reason?-- No.

Why not?-- Well, I just gave him that information.

Well, weren't you ringing him to discuss your concerns about 512?-- I was just ringing him up and telling him the changes that I had observed.

Well, how did the question of sealing arise in that phone call, if at all?-- Well, I can't specifically remember - I've sort of detailed to you the stuff that I've told George. I don't know how long the conversation went on after that and I can't remember anything else of that conversation.

Well, you see, that's the conversation, isn't it, where the decision is made to seal this panel?-- Yeah, well, to bring forward the sealing from Sunday to Saturday.

Certainly, to be accurate, the decision is made to bring forward the sealing?-- Yes.

The reasons for that are important, aren't they? The reason for bringing forward the sealing, that's an important matter?-- Yes.

It is an important matter to this Inquiry?-- Yes.

Well, what was the discussion about why the sealing should be brought forward?-- I'm just trying to explain to you that I can't remember all the specifics of that discussion. I can remember telling him about the observations I made - about the air coming out.

You just can't remember that either - that conversation? You can't remember that part of that conversation either?-- No.

Did you tell George Mason that your view was it should be sealed as some sort of precautionary measure?-- I might have. I'm not saying I wouldn't have, but I just can't specifically remember.

Did you tell George Mason you thought it was prudent to seal the panel because of the re-circulation problem in No 2 heading?-- I can't remember saying that.

You can't remember that either?-- No.

But you can remember that George Mason said it should be sealed straightaway?-- No, he didn't say that.

Well, what did he say? I'm simply asking-----?-- I remember that George said, "Okay, we will seal on afternoon shift."

Which was that day?-- That's right.

The very next shift it was to be sealed?-- Yeah.

Well, can you remember anything about why it should be done

straightaway - the next shift? Wasn't that discussed?--
Sorry, I'm just trying to - I think I've explained that I
can't remember the rest of the conversation.

There is just no recollection at all about that detail?--
Sir, there is a lot of things I can't remember.

Well, then, the arrangements were put into place to actually
seal the panel - manpower was organised, all that sort of
thing?-- Yeah, the manpower was organised. The actual
preparation to seal the panel was actually in existence from
the start of day shift as part of one of the prep jobs.

The procedure for sealing this panel, was that a standard
procedure at No 2 in terms of the way the seals progressed?--
Well, if I could just clarify - these Tecretse seals - it was
the first time we were using the Tecretse seals to seal.

Perhaps I can put it this way: was the procedure to seal in
sequence a standard sealing procedure with all panels at
No 2?-- There wasn't anything written, but it was under the
understanding that when you seal a section off, you always
have one intake and one return left open, and you do it - is
that what you are getting at?

Yes, that was done each time, was it?-- Yes.

512 was simply another example of that procedure?-- That's
right.

So, that was done - or commenced to be done and at some stage
you went down to the 4 South-----?-- Sorry. Sorry, sir. We
didn't start sealing on Saturday day shift.

No, afternoon shift?-- Yeah, but I wasn't there on afternoon
shift.

Just bear with me. At some stage you went down to 4 South
level prep seal site to speak to, as it turned out, George
Ziebell?-- Yeah, well, the sequence of events is that after I
rang Cole Klease from 512, that I drove back over to see
George Ziebell in 4 South.

You had a conversation with George Ziebell you have told us
about?-- Yes.

You also had a conversation with Mr Stampa?-- That's right.

This has been canvassed with you yesterday by Mr Harrison, I
think. As I understand, you deny categorically ever saying to
Stampa anything about a heating occurring at 512?-- That's
correct.

No suggestion to Stampa at all about the reason it was being
sealed - that is, 512 - was because of a heating?-- That's
correct.

So, if Stampa said that in evidence - that's what you said to
him - he would be wrong - mistaken?-- I can't speak for Doug

Stampa. All I can say is if he construed something I said as maybe relating to a heating, that I did not use that term.

Well, did you tell him anything about a tarry smell?-- No.

Did you tell him anything that could have led him to believe that there was a heating going on inside 512?-- Well, I might have told him what I told George - that I noticed a slight haze and a goaf smell, and that I was going to go up and talk to George Mason and there was a possibility we might be sealing 512 in the afternoon shift.

Nothing about there being a possibility that there was a heating in 512?-- No.

The goaf smell wasn't related to a heating; you told us that?-- That's right.

The haze may have been diesels, I think you said?-- That's right.

So, nothing you said to Stampa could in any way have misled him to thinking that there was a heating in 512?-- Not unless he construed that haze or something like that meant something to him.

Well, there was nothing said between the two of you at any stage to give him that belief as far as you could tell?-- Yes.

Furthermore, at no stage did you tell George Mason anything about you suspecting a heating inside 512?-- No, I didn't use that term at all.

And at no stage did George Mason say anything to you about him suspecting a heating inside 512?-- No.

And what you tell us, there was just no suspicion at all between yourself and George Mason about a heating in 512?-- That term was not used between either of us.

Neither was there the belief that it was a possibility that 512 was heating?-- I don't believe so - not with the CO readings that we were getting.

So, the manpower that were organised - the people that were organised to come and seal 512 would not have been under the impression, anyway, that there was a heating going on in 512 from anything said by you or George?-- Would you like details of that conversation I had with the men?

Well, any details that reflect any belief that there may have been a heating going on in 512. Were there any such conversations?-- Well, we had a meeting at the start of afternoon shift where the fellows were there.

Any mention there of a heating in 512?-- Not a mention of a heating, but I'm pretty sure I mentioned Mick Caddell's report about the cross-cut.

You think you would have said Benzene No 4 smell?-- Benzene No 4 smell, yes.

And a haze?-- I said I noticed a haze and a goaf smell in the intake.

Did you mention to the men anything about the significance in your mind of the smells and so on?-- No, I didn't go into any detail.

What did those signs - what significance did those signs have to you as at the time you were briefing the men for the afternoon shift? This is the whole reason you are sealing the panel - the smell, the haze-----?-- Well, it was just a normal goaf smell.

A normal goaf smell. That's nothing to do with heating; is that right?-- That's right.

The haze?-- The haze I was - I still thought it was diesel fumes and dust.

You still thought it was diesel fumes and dust?-- Well, it was actually - it looks exactly like - I have walked into situations before where you walk into places where diesel machines are working and it looked exactly like that.

Well, this is a reason - or the reasons you are giving the men for why this place is being sealed is because there is a diesel haze in the panel?-- But, you had the air coming up No 2 heading. You can't leave it-----

You didn't mention that to the men - that there was some haze-----?-- Can you be allowed to get a word in? I said that the - that the air was-----

To the men?-- Well, I can't specifically - I can't specifically remember whether I said the air was migrating out or not.

Well, on your story, Mr Squires, the main reason this panel is being sealed is because of this re-circulation or circulating air coming back up No 2; isn't that right? That's your reason for sealing this panel, isn't it?-- I'm just stating what my observations were - that I got 8 to 9 - that the 8 to 9 was probably 1 part or 2 parts above what we had been getting, and to me that didn't sort of indicate any concern, but the smell wasn't indicating any concern to me. The fact that we had all the gear there ready to seal - but we had air coming up No 2 heading, and we were going to seal it on Sunday anyway.

So, the CO parts per million was of no concern?-- No.

The smell was an ordinary goaf smell of no concern?-- No.

And the only concern was this recirculation problem in No 2 heading?-- Yeah, but I can't see how you can just say that the only concern - I mean, like, you have got to do something

with that. You can't just leave it.

You couldn't have just left it until the Sunday? You had to do it on Saturday afternoon shift?-- Well, sir, I would have not left it until Sunday. It is finished. The section is finished.

The section had been finished since the early hours of Friday morning, hadn't it, 5 August?-- Yeah, but we had machines and everything still in there.

It had been planned to be sealed on the Sunday?-- My understanding was it was to seal on Sunday.

Why did you need to seal it on Saturday afternoon?-- It had air coming up the No 2 heading.

That was the reason it was sealed?-- You had to do something.

Because of the air coming back up No 2?-- Yeah, well, you can't allow that to occur.

So, you brought forward the sealing, or the sealing was brought forward to the Saturday afternoon shift because of air coming back up No 2; that's your view of it?-- But, that's my whole recollection of it.

Why, then, did you need to tell the men on the surface before afternoon shift that the reason that it was being sealed was that there was a haze and a smell? Why did you need to mention that if you were sealing because of the air coming back up No 2?-- It just seemed to be just a - just a number of factors that just didn't seem to make sense, but all together they just looked more like you are better off sealing the section.

All those factors together - smell, haze, air coming back up No 2 - all had significance, didn't they - that Saturday? All of those factors had significance about what was happening inside 512, didn't they?-- Well, in hindsight, I suppose you could look at it that way-----

I am not talking about hindsight, I'm talking about on the day?-- No, no. Well, I've come in - I'm trying to explain that the haze just looked like a normal thing you get when diesel machines are operating.

So, not even worth talking about. It is diesel fumes?-- For goodness sake, if it was in a normal section, I wouldn't even have bothered, but it was still in a waste of a - in a completed waste of a return.

Diesel haze in a waste, what's the significance of that if there have been diesel machines in the section?-- Because you can't just assume that, "Oh, it's just diesels."

That's why you have got to look carefully at what the haze represents?-- That's why I asked Cole Klease to go down and do a CO reading.

Well, after he gave you the reading of 8 to 9 parts per million, did you satisfy yourself it was diesel haze?-- I believed that if you got a haze coming out of a waste, it would indicate high CO readings, and that's not what Cole reported.

You thought it was diesel?-- I thought it was diesel fumes.

Why did you tell the men on the surface, before afternoon shift, that you were sealing because of a haze and smell?-- I told the men that a decision had been made to seal and I gave just the changes of conditions that I observed.

Look, Mr Squires, I don't want to spend any more time on this, but the only reason you told the men about a haze was because it had some significance in terms of sealing the panel; isn't that so?-- I just told the men the observations I had made - the change in observations from Friday to Saturday.

In any event, Mr Parker was one of the ones who was brought in on the afternoon shift to seal the panel?-- Yes.

He was brought in because he was a Tecrete representative?-- That's correct.

And had to be there because this was the first Tecrete seal being put up inside a panel?-- Yeah.

There was nothing said to Mr Parker in your presence to indicate a heating was occurring inside 512?-- Sorry, could you repeat that?

There was nothing said to Mr Parker in your presence to indicate that a heating was taking place inside 512?-- No.

There was nothing said in your presence to give Mr Parker the belief that that was the reason why this panel was being sealed?-- Not in my presence. I remember when I was talking to the blokes that Rob Parker and Doug Stampa walked in the carpark for a while, but, no -----

Could the witness see Exhibit 18, please, Your Worship? Mr Squires, is that an exhibit containing some information from Tecrete Industries; is that so? I don't need you to look at that particularly, but that's the front cover, is it?-- Yes.

You will see there what appear to be photocopies of diary entries as part of that exhibit. Just flick through the pages and you will find some handwritten notes. That's it. Keep going and you will find Saturday, 6 August 1994. We are told, you see, this is Mr Parker's diary for that period?-- Yeah, I've got Saturday the 6th.

Do you see the entry that presumably Mr Parker has made for Saturday the 6th?-- Yes, I see that.

What does it say?-- Well, it says, "George Mason requested I -----

"... requested 1 p.m."-----?-- "... that I go in because of concern over heating."

So Mr Parker, it seems, was of the belief that he was coming in on Saturday, 6 August, because of concern over a heating?-- Yeah, well, I don't know where he got that information from.

It would be totally incorrect from what you tell us?-- Yeah, well, I didn't see Rob Parker.

At all?-- No, I saw him - he sort of come to work and he sat down with Doug Stampa for a bit, started talking, and then he walked off into the carpark.

The reason he came in - he wasn't scheduled to come in, was he?-- No, they were both scheduled to come in Sunday.

To seal. They were both scheduled to come in Sunday to seal

the panel?-- That's correct.

But he came in - he was brought in on the Saturday afternoon shift to seal?-- Yeah, George picked him up and brang them out to work.

There was nothing said to him, as far as you can explain, that gave him the belief apparently that he was being brought in to seal because of a heating?-- No.

And nothing said by you to Doug Stampa that he needed to seal 512 because of a heating?-- No.

So Stampa and Parker were both totally wrong about -----

MR MORRISON: I object -----

MR HARRISON: I object to that. It's crazy.

MR MORRISON: He has just crossed the line. Really he should know better. A man of his experience should know better. This is intimidatory. Up to now it's just been hectoring and you can let that go, I suppose, because that's the style of an old prosecutor, but it's gone beyond hectoring and it's intimidatory and it should be stopped. It is unprofessional and discourteous to this inquiry to actually intimidate a witness by proffering this document of all documents, this one of all documents, and then confront the witness by saying, you know, in the face of that, this witness must have been wrong, and how could that be? It's tantamount to saying, "Well, he's a liar, is he?", and that's just an improper way to go about it. For starters we don't know when this was written. This came in through Stampa naturally enough. We have no idea when this was written, although on the face of it it's well after the event because over time records are recorded on it. So it could have been the next day or any day - or the next day at least. So it's now just crossed the line. It is quite unprofessional and should cease here.

MR HARRISON: I just join in this objection also. In my submission it's disgraceful to suggest to people that other people must be liars. No-one else has resorted to that in relation to any credit issues in this inquiry to date, and I would submit that it shouldn't be done that way.

MR MACSPORRAN: If the speeches are over Your Worship, I will respond to those remarks.

MR MORRISON: I object to that. I don't need editorial comment and I do ask the courtesies be observed, please, as they were observed just a couple of days ago.

MR MACSPORRAN: If we are talking about courtesies I'll wait for you to get on with it.

MR MORRISON: Thank you very much. Now, we do not need editorial comment here. I've raised the objection. I have told you the basis of it. It is an objection good in law. It is an objection good in terms of evidentiary practice and that

can be responded to without the editorial comment.

MR MACSPORRAN: Your Worship, I'm quite entitled, in my submission, to cross-examine this witness about matters of credit. Matters of credit include this witness' recollections of what he said and did that may or may not have given any other witness an impression about what was going on inside the panel 512. Part of that is asking him to indicate any knowledge he has of things said in his presence or that came to his knowledge about Mr Parker's involvement with sealing of 512. It's quite an appropriate question for me to ask this witness what he knew about all of those factors, and the inquiry can, at the end of that procedure, draw their own conclusions about where the truth lies in this matter, but I'm quite entitled to explore those issues in my submission.

MR MORRISON: May I respond to that, because with respect, I apprehend our learned friend hasn't answered the objection I made. I did not object to him testing those parts of the evidence about what was said by or in his presence to Parker. That's why I did not raise to my feet until he crossed the line by then confronting the witness with the evidence of someone else. I didn't object to the line that our learned friend has just referred to. I specifically did not. It was when he crossed the line that it became improper.

MR MACSPORRAN: Your Worship, I'm entitled to ask this witness, with respect, whether he has any knowledge of a reason why Parker would make a comment in his diary that he was coming in because of a heating. He is entitled to be given the opportunity to say what knowledge if any he has of why Parker may have said that and for him to then conclude that Parker, if he said that, must be wrong. There is nothing improper in that, in my submission.

MR HARRISON: If I might have my two bob's worth, Your Worship, that's blatantly wrong. It assumes - just because he hasn't told Parker something or he hasn't said something to Parker of itself doesn't mean what Parker said is wrong. Who knows that someone else didn't tell Parker something, someone else didn't misinterpret something somebody else said and pass it on. It doesn't follow logically. It is unfair, in my submission, to suggest to a witness that someone else has to be wrong because of what he says. There could be other reasons for his being wrong, if he was wrong, and that's the basis that I have taken to this, the basis of my objection to it.

WARDEN: We will take the break shortly, but -----

MR MACSPORRAN: I was finished the topic in any event.

WARDEN: I rather thought it was unfair to ask him to comment on what somebody else had written in their diary. He had no knowledge or control over that.

MR MACSPORRAN: I wasn't suggesting he had any control over it, simply asking him whether he had any knowledge of anything that may have spurred such an entry, but I have finished the

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topic and I won't take it further.

WARDEN: Thank you. Do you have any more to go?

MR MACSPORRAN: Yes, but I won't be long.

WITNESS: Could I possibly have a break now?

WARDEN: We will adjourn now.

THE COURT ADJOURNED AT 10.48 A.M.

THE COURT RESUMED AT 11.15 A.M.

MICHAEL ANDREW SQUIRES, CONTINUING:

MR MACSPORRAN: Mr Squires, I was asking you before the break about the period of time on the Saturday afternoon shift where you were talking to the men before they went down to finish the seals in 512?-- Yes.

Do you recall that point? Well, the fact was that you stayed on shift for how long that Saturday, the 6th?-- Probably till around between 3.30, 3.40.

And at that time the men or the crews had gone underground, had they, to commence sealing?-- Well, I can't specifically remember seeing the Rover go down, but I stayed back until that time.

When did you return to the mine after that?-- 6.30 Sunday morning.

And you received reports about how the sealing had progressed overnight?-- Yeah, when I was - when I walked into the undermanager's, Cole Klease and George McCrohon come and met me and then Lenny Graham come in later and I asked them how the sealing went and -----

And you discovered it had been sealed in the early hours of that Sunday morning?-- Yeah, about 1.15 was on the undermanager's shift report.

As I understand what you have told us before today, you realised the importance of monitoring what was happening behind the seals in 512 from that point on?-- Yes.

And it had been a practice at No 2 to place usually one monitor point behind the seals?-- That's correct.

That was done in this case?-- That's right.

And the monitor point chosen was, I think, ultimately point 5 which was moved into the No 3 roadway about 20 metres or so inbye the seals?-- Yeah, it was originally down the bottom return which wasn't being used for anything and it was re-routed back down into the belt road.

Now, I think you have said that you made an effort that Sunday to keep an eye on the gas trends, as it were, behind the seals?-- That's correct.

But again, I don't want to go over all this ground again, but did you think at that stage, that is, after the panel had been sealed in the early hours of your shift that Sunday, that it would have been wise to keep an eye on the Graham's Ratio?-- Well, as I've said before, I don't - I would not have looked

at the Graham's Ratio.

You wouldn't have. Again, was that because you simply wouldn't have known what figures to look for?-- That's correct.

But you were expecting them to tell some sort of red signal from the Graham's Ratio figures to indicate some alarm level or whatever?-- Yeah, well, I expected that whatever level indicated a concern, it would turn red and you would see it on the screen.

So, again, your method of monitoring the situation after the panel was sealed was purely and simply to rely upon the parts per million of carbon monoxide concentration?-- That's what I was looking at, yes.

Again, no attempt at all to look at the trend of a CO make for the panel leading up to the sealing and at that time?-- No, only the CO parts per million, and I also looked at the Ellicott Diagram.

And the Ellicott Diagram would simply tell you when the atmosphere behind the seals was going to pass through the explosive range?-- That's right, it has a - yeah, those are the two - what I am saying is I was - on the Sunday I was looking at the CO trend and the other thing that I was looking at was the Ellicott graph.

And from your knowledge of what was happening at the mine on that Sunday, was that the general method of keeping an eye on the situation, that is, to monitor the CO parts per million behind the seals?-- Well, that's the way we've always done it, that's the way I've always done it, all the sealings, just looked at the CO.

Was there ever a belief that you held that there may have been a heating but the situation was resolved once the panel was sealed?-- No. The situation can't be resolved if there is a heating and you seal the panel because you - the practice was that the section, you know, is going to go through an explosive range. So, in effect, what you are saying is you have got a heat source there and - you have got three sides to a triangle. You've got the oxygen, you've got the explosive gas in an explosive quantity and you have got a heat source.

And if you seal a panel where there is a heat source, there is a very real prospect, isn't there, that the ignition source, the heating inside the panel, will trigger an ignition of the explosive mixture?-- Well, yes, that's right, you have got the three sides of the triangle. I'm not sure during 5 North because it was apparently - I don't know whether it exploded inside because it was, you know - but, yeah, you just - if there is a known heating, it's just not resolved by sealing it off.

No, and then if you do resolve or attempt to resolve it by sealing off, you run the very real risk that it will ignite the mixture at some stage?-- Well, you don't run the risk by

allowing blokes to go down the mine.

That's right. If you suspected you had a heating and sealed it, sealed the panel, the very obvious precaution you would take would be to keep the men out of the mine until the mixture passed through the explosive range?-- That's correct.

Was there any calculation or calculation done or belief held about how long that panel 512 would be within the explosive range?-- There is no calculation done, but just from observations of other panels it was sort of like a couple of shifts or a day, you know, that's sort of - like, most of the panels that have gone through the explosive range take about that time.

And that belief can be gained by the sort of methane make coming out of the panel, you know, roughly how long the goaf area, waste is going to fill with methane and go through the explosive range?-- Oh, no, I just gained that from experience of just watching other places going through. It was nothing to do with working out what the displacement of oxygen was and all that sort of stuff.

I am not suggesting you did the calculation, but the period it remains in the explosive range is a product of how much methane is coming out of the seam, what the make is?-- That's right, it's a combination of the development of methane, what your consumption of oxygen is, obviously because you've got - as the methane increases, the explosability thing changes as your oxygen decreases.

And the experience at No 2 with other panels had been that the general trend with coal in that area was that once you sealed a panel, it would go through the explosive range in a couple of shifts. Roughly - we are not talking exactly - but that was the general belief?-- I don't know - I just want to make myself clear, that the time that's spent in the explosive range was normally a couple of shifts, but I'm really not sure of - I can't quote exactly how long from the time you sealed because there is just so many parameters. You would be looking at the size of the panel, the depth of it, things like that.

In any event, I suppose the important thing is the time it actually spends in the explosive range, isn't it?-- Yes, from recollection, I think it's a couple of shifts, yes.

And that would be calculated by the - or can be observed by the use of the Ellicott Diagram?-- That's correct.

Which can be brought up as it was here on the Unor screen?-- That's right.

So, after you sealed, the mixture builds up, it goes through the explosive range and then becomes inert?-- Yeah, the inertisation gas is actually the seam gas, methane.

If you have any concerns about the state of the panel, you can

obviously keep the men out of the pit whilst the mixture goes through the explosive range?-- Well, the Ellicott graph, in conjunction with the Unor apparatus, enables you to determine at any stage when a sealed area is going through the explosive range or not.

Now, on that Sunday you spoke to George Mason?-- That's correct.

About what was happening and whether everything inside 512 was all right?-- Yeah, well, I just asked him about the sealing, because this was the first time we had had a Tecretite sealing, and I knew that he had gone down.

Was there any further discussion about the events leading up to the sealing on that day, the 7th?-- No. My recollection of talking to George was just the actual observations he had made on that afternoon.

There was no general discussion about, "Well, you know, it's all sealed now and everything should be okay.", nothing like that?-- Not - I can't remember. I do know that I told George that my observations on that morning were, you know, that CO was going up about 6 parts per hour.

At any stage did George Mason say anything to you about a CO make for the panel at any time?-- No.

He didn't mention that at all?-- No.

And no-one did to you?-- No.

And you didn't obviously to anyone else?-- No.

So, CO make just didn't become an issue at any stage leading up to the sealing?-- No, not for me, no.

And that was one of the main tools that No 2 had in place to monitor such a situation?-- That's what the ventilation officer was working out, yes.

But no-one talked about that in the period leading up to the sealing of 512?-- No.

And there was no discussion of graphs of it, no mention of that at all?-- No.

Looking back on it now, do you think that's odd - that a CO make didn't assume any importance at this time we are talking about?-- Well, it is hard for me to comment even in hindsight because of the fact that I didn't know about that other incident. With that incident in mind, it is odd, yes. You monitor the CO make all the time.

And to summarise what your involvement was, 17 June you weren't even at work?-- No.

And whilst you learnt something at some stage about air backing up in No 2, or some problem with that, you don't know who told you that or when?-- No, I can't recall specifically who told me.

You didn't ever hear anything from McCamley or anyone else about a slight tarry smell on the 17th?-- No.

You were at work on the 24th?-- That's correct.

You think you did read Robertson's report and you may have spoken to him, but you have no recollection of a strong Benzene smell or a strange smell or anything like that?-- That's correct.

5 August you did concede that Caddell told you about a - you say a No 4 benzene smell?-- That's right.

What you understood to mean combustion?-- Well, yes, I associate that with that.

But, as you say, your concerns were put to rest the next day when more CO readings were taken?-- Yes.

You can't remember Klease ever telling you that he had discovered a haze or anything else?-- No, like I said, to my recollection I noticed it first before I rung up Cole.

And ultimately the same day, the 6th, you discovered unusual signs yourself in 512?-- I noticed a change from the previous shift, yes.

After you had spoken that same day to Mr Mason, the panel was sealed?-- That's right.

Ahead of schedule?-- Yes, it was brought forward.

Now, could I ask you to look behind you, if you would, and if you would flick that map over the back of the board, if you would. I want to ask you just some brief questions about machinery that was inside 512 and was to be moved out on that Sunday night. Do you know what I'm referring to? Did you have some men going underground on Sunday night to remove some machinery or equipment?-- I think they were going down to get some C clips and that sort of thing.

Was there any proposal to get men down there to move machinery away from the 512 sealed area?-- I think Rob Parker and Terry Vivian were going to down and get some C clips, or something.

C clips?-- Yeah, because there was only one, really - I think the agreement was that they were supposed to have two miners with the contractor - that's what the union agreement was. I talked to Terry about it and he was quite happy just to go with Rob Parker by himself, so that they were going to assemble some baskets, and all that sort of stuff, over at 4 South level. The gear that I chased up on Sunday - Rob Parker - you know, he had it all, but he said he didn't have any C clips, but he knew - he said, "I think there is a whole bag of them down in 512."

So, you sent them down. What time would they have left the surface, do you recall?-- I can't remember seeing them leaving the surface.

It would have been some time after they started their shift, obviously?-- Of course. See, what happened was that - when I was working out the plan, when I rung up George about work priorities and that, that would have been about 10.30, and then they would have had to go up and get 8 foot bolts and stuff from the compound, so I could - you know, some time between maybe quarter to 11, quarter past 11. I didn't see them pass when Bucko and them fellows were up in the Rover at 11 o'clock.

As you understood it, how were they to gain access to the 512 area?-- My understanding is that they would drive in.

If you could bear in mind it has to go down on the record what you are describing, so speak of where you are pointing to?-- Well, the access into 512 - we had built a ventilation stopping there with a machine door that was rolled up, so they were to drive in there-----

What roadway is that?-- I beg your pardon, that is No 4 heading between - I would call that 1 and 2 headings 510, if you like, and then they would turn around and then come up and just park there.

Which is?-- Which is virtually 0 cross-cut, No 2 heading, and then they would access - I think Parker said that the C clips were on that MPV tray just there.

So, would the MPV tray - was it proposed to take that out that night?-- No.

It was to be left there, was it?-- Yes.

And just the clips removed from it?-- I just didn't have the fellows to do any other work.

There is a regulator there, too, that would need to be breached to do that?-- Oh, no, no. The regulator is here. That's the regulator, and the tray is just there in No 1 heading. The regulator is virtually between 512 and 5 South. All that's happened is the tray is there, they would have parked there and walked up just through that door and to the tray.

The tray would have been left. Were there Tecrete batches in that area as well?-- Yes, well, that's right, there would have been.

And what sort of dimensions are those, just roughly?-- What's that, about three feet or something?

What, three feet square, roughly, or-----?-- Yeah, probably about my height, I suppose, 5 feet.

They are indicated on the plan, are they, the location of two of those batches?-- Yeah, it is marked on the plan there.

Were they to be left there or moved that night, do you know?-- See, with only one fellow helping the Tecrete fellow, you couldn't do any mixing. We were just going to leave it there.

Was it the case that you discussed that with the men who were going to move some equipment that the batches and tray were to be left there, given the shortage of manpower, or was it just left to their discretion as to what they moved?-- No, we discussed it at the start of shift and Rob said, you know, "If you haven't got enough blokes" - he said, "All I need is one bloke just to go and do some clipping together of the baskets."

So, in the end result, you would have expected that at the time of the explosion, late that Sunday night, the MPV tray and the two batches would have been still in place in that area, as far as you know?-- Yes.

There was no proposal to move them, and in the ordinary course they wouldn't have been moved, given the manpower situation?-- On that night, that's right.

Now, just for the record again, can you identify the positions of each of those batches on the map?-- Well, I'm not sure whether that's correct.

I was going to ask you that. The next question was can you remember whether that's where you saw them?-- No, because, see, I was on the surface from crib time on on Saturday when they were setting up to position them, so I don't know exactly where they were actually positioned.

Knowing what you know of the sealing procedure, would you have expected them to be roughly in the position indicated on that plan?-- Oh, not precisely, but within a few metres, yeah.

I'm certainly not talking about a few metres, just generally in the area where they are depicted?-- For sure, yeah. The 1 and 2 seals would have been what they finished last, yeah.

So, you would expect them to have remained there up until the time of the incident?-- Yes.

Can I ask you - referring again to the same plan, there is some evidence here that there was a methane layering problem on the Friday morning, I think it was, in 520, which is the stub end of 5 South?-- Right.

Firstly, did you know anything about that yourself?-- No.

Would you have expected to be told about something such as layering in 520 on the morning of Friday, the 5th?-- Morning of Friday the 5th?

Yes?-- Would I have been told about it?

Would you have expected to have been told?-- No, if there was remedial action or something like that, I wouldn't have expected to be told.

It was said that was dealt with - the layering problem inside 520 was dealt with by opening the regulator in 5 South, which is between cut-throughs 19 and 20. Do you see that on the map?-- That would be that one just there.

Do you remember yourself at any stage seeing that regulator?-- At any stage?

Yes?-- Yes, I've seen that regulator before.

And when was the last time you saw it before 7 August?-- I can't honestly say. I know that I would have seen it when I walked down this return just to have a look at the - we had that instrumentation there for measuring stresses and that sort of thing and I would have seen it then, but I can't-----

Some months before August?-- Yeah - I can't say - I don't think I would have seen it a week before.

In any event, can you describe the general nature of that regulator - what sort of regulator it was?-- From what I remember, it was a brattice and prop regulator.

It could be opened or closed simply by removing a sheet of brattice?-- You simply roll the brattice up, yes.

In any event, you knew nothing about any event of the 5th of August - any action that was taken in an attempt to clear methane layering in 520?-- No.

Would you expect if that brattice regulator was lifted or

opened that it would affect the air flow inside or past 512?--
Yes.

And how would you expect that would affect the air flow in
512?-- What you are, in effect, doing is you are - that -
both returns come together-----

Just identify what you are pointing to, please?-- The return
from 512 actually joins with the bottom return of 5 South at
that intersection and-----

The intersection is - that's the bottom return of 5 South, is
it, and-----?-- Well, it is the intersection - it is the
bottom return of - the bottom return of 5 South and - the
junction between the 512 top return and the 5 South return,
I'd call it.

All right. So, if you opened the regulator in the bottom
return of 5 South, what effect does that have on the air
coming-----?-- Well, I would imagine that it would drop the
air going into 512, or reduce the air going into 512.

And as soon you closed the regulator, you would expect the air
flow in 512 to return to normal?-- Yeah, if you hadn't made
any other changes around anywhere else.

Thank you, I have no further questions.

CROSS-EXAMINATION:

MR MARTIN: You have a familiar history of coal mining?-- No.

In any case, you set out at age 19 into the coal mining
industry with that in mind as a career?-- I set out in coal
mining because it was a career that enabled you to study and
work at the same time, because I couldn't afford to be put
through university.

But with coal mining as a career, for your future?-- Yes.

By 7 August 1994 what did you remember about spontaneous
combustion, if anything?-- Well, could you be a little bit
more specific?

No. I will just repeat the question. By 7 August 1994 what did you remember from the past about spontaneous combustion?-- Well, that some coal seams are more liable to spontaneous combustion than others, that there is an incubation time involved, that there are several factors that can increase or decrease the chances of spontaneous combustion, that CO is the indicator gas for spontaneous combustion.

And you knew that the Moura seam was gassy?-- Yeah, it had a - CH4 was the seam gas.

And you knew that it had a propensity for spontaneous combustion?-- Yes, well, in 1986.

And Box Flat you would have learned about when you were a cadet, the Box Flat disaster near Ipswich?-- I've got sketchy things about Box Flat. I know that Mines Rescue teams went down and they got blown up when they went down.

But that was a spontaneous combustion, wasn't it?-- Well, sir, unless - that's - I can't remember that.

How long have you worked for BHP Australia Coal?-- I've worked at Moura since 1984, but BHP Australia Coal has only come in the last few years. When I got there it was TDM.

But that was a subsidiary, wasn't it, of BHP?-- I think the Dampier was BHP.

You know because you were present at Moura on 16 July 1986, No 4 mine blew up?-- Yeah, I was there.

And subsequent to the explosion one of the things considered as a possible ignition source was spontaneous combustion, wasn't it?-- Well, I suppose so. I think the major ignition source for both No 4 and No 2 was an accumulation of gas.

Certainly, but the ignition source - one of the ignition sources considered as a possibility was spontaneous combustion, wasn't it?-- Only if you sealed up and had a

No, just answer the question?-- Well, I am.

In consequence of the explosion there was an investigation, No 4?-- Yes.

And I'm suggesting to you that one of the considered possibilities as a cause of the ignition was spontaneous combustion?-- For No 4?

Yes?-- I didn't see anything from No 4, recommendations, anything like that.

Why not? You are a budding undermanager? Why didn't you inquire?-- Well, no-one gave anything to me.

Why didn't you inquire yourself?-- I just heard rumours and when it was on you heard about, you know, fellas that come

back from it and tell you, "They were doing this, and they were testing that, and they were saying this and saying that."

And you wanted to be an undermanager-in-charge at times, solely in charge at times, of coal operation?-- Yeah, well, I wanted to become an undermanager, yeah.

Just turning briefly, which you will come back to later, to Saturday, 6 August. You asked Ken Selff to give some assistance in getting men, didn't you?-- Yeah, well, Ken is the roster runner.

You in fact asked him to contact John Dullahide?-- No, I wouldn't have asked him to contact, Ken would have had a list of blokes that he would get a hold of.

Well, I suggest to you that you said to Ken Selff to contact Dullahide because of his experience with sealings?-- That's incorrect.

Is it?-- Yes.

Well, I'll just suggest it a bit further, and that the reason being that there was a suspected heating?-- No, that's not correct at all.

No? Turning to another point, if you as undermanager found a serious defect or a matter of safety, where would you have reported it? Where would you have reported it?-- Well, I probably would have told somebody about it.

Why wouldn't you write it in the undermanager's shift report?-- I think it's already been brought forward that there was just deficiencies, if you like, if you want to highlight that.

I do?-- Of the way undermanagers reported things like that, and I think it's already been brought forward that the undermanager's report was a production report and that's how we had approached that. There wasn't any specific safety book that we had to put things in or something like that.

What would have prevented you from writing a serious matter into your undermanager's shift report?-- Probably just custom and practice.

There was an electronic noticeboard there, wasn't there, in the general assembly area?-- Yeah, there was one hung up just at the top of the mining room.

And we have heard from Mr Barraclough that it was rarely used except for safety notices?-- Safety notices that come across it.

And you could operate this machine?-- No.

Who could?-- John Eccles used to be the one that used to log the stuff on.

It would have been easy enough for management on that night to put a sign on to the electronic noticeboard, wouldn't it, to the effect that 512 panel had been sealed because of a goaf smell, tar smell and a haze?-- I'm not disputing that it would be - well, actually I don't know who else besides Eccles could enter it. There is probably other people that could.

Just management. Management could have caused that to be done?-- To advertise it?

Yes, on the electronic noticeboard?-- That is a possibility. It could have done, but a lot of people knew that 512 was sealed already.

Yes, but we have heard evidence here that some didn't know at all?-- Yes, I'm not disputing maybe some people didn't.

What would you have expected the men to have done had such a notice been put up?-- About what?

Going underground?-- With respect to - what are you saying the notice is?

Yes?-- No, I'm -----

I told you what the notice was?-- Well, could you repeat it, please?

"512 Panel sealed last night because of goaf smell, tar smell, haze."?-- If the sign said, "512 sealed last night due to tar smell, goaf smell and haze", then someone from there would have inquired about whether they should go down.

Who would they have inquired of? Of you?-- No, well, it wouldn't have been so much inquire, they would have sat on their dig and said, "I don't think I'm going to go down."

You said yesterday, I think, that after sealing a few men looked at the screen?-- Yes.

Terry Vivian, what would you have expected him to have done if he had known the circumstances you've outlined to Mr MacSporran which existed by the Sunday night and the fact that it was about to go into the explosive range? What do you think he would have done?-- Well, I'm not familiar - I don't work with Terry. This shift that I was looking after was night shift and I'm not really familiar with the characteristics of every bloke on night shift.

He was a check inspector, wasn't he?-- That's right.

One of the men you were told not to communicate to by Mr Mason?-- Well, I would like to say that George asked me not to broach it or bring it - bring the attention to anybody, but he didn't actually specifically tell me certain people not to go and see.

He certainly told you check inspectors?-- I had raised with George and asked me whether - I had asked George whether he

wanted me to raise it with the check inspector and the deputies on shift and he said that if they had a concern they would see me.

But he said not to communicate to them?-- Yes, he said to me, "Don't raise it with them if they don't raise it with you."

Why do you think he told you that? What did you think about it at the time?-- Well, I just thought that he was just looking at it from the point of view that - I don't know what phrase to describe it - don't raise concerns that aren't there.

You know of the oxygen measurement on the screen?-- The percentile reading?

Yes?-- Yes.

All right. Before the sealing did you look at that at all?-- Yes.

If you did you would have observed there was something less than it ought to have been?-- The oxygen?

Yes?-- Well, that's obvious because your CO is going up.

You say that?-- Yes.

Before the sealing?-- Sorry?

Before the sealing?-- No, no, after the sealing.

I said before the sealing?-- Before the sealing?

Yes?-- No, I didn't see the oxygen level, what it was before the sealing.

Not at all?-- Well, it wouldn't have been highlighted with anything otherwise I probably would have seen it.

Do you recall seeing it at any time during the week commencing 1 August before the sealing?-- Well, as I've described to the Court, my habit was I would look at the Unor screen at least once a shift, but oxygen -----

Wouldn't concern you?-- It does concern me, oxygen, but you've got an alarm limit, I think, of 19. That's what the Act says, you couldn't go below 19, and in my experience I've never noticed fluctuations in oxygen except if an analyser goes on the blink.

You observed nothing to suggest - that's in the week commencing the first - that oxygen was about half a per cent less than it should have been?-- I didn't observe that change, no.

We have talked here often about the Strang Mackenzie-Wood 1985 edition, or the glossy coloured one, haven't we?-- Yeah, the one with the bloke on his belly, yeah.

You know there is a subsequent edition of that, don't you?-- I didn't know it before the disaster, but I've found out since.

Have you ever heard this statement contained in any publication: "Final sealing. 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."?-- Is that in context with describing a sealing of a section that has undergone spon com?

No?-- Just any section?

Final sealing?-- I can't say that I've read that.

In the context, however, of spontaneous combustion?-- Well, that's what I asked before.

I know it is, but just in the context of a possibility or a probability of spontaneous combustion?-- Yeah, what you are saying is that - do I have the knowledge that if you got a spontaneous combustion that when you seal up you do them all at the same time and then after that move the blokes from the mine whilst it goes through the explosive range?

Yes?-- Yes. I think everyone knew that.

And that's something that was contained in Mr Mackenzie-Wood's book -----?-- Well, I -----

----- that you had, isn't it?-- Yeah, I had that at home, yeah.

But it's contained, I suggest, what I just read to you, in that book?-- Well, I haven't personally actually seen it, but I mean that's just common knowledge from Mines Rescue that that's how you would do it.

And you never read that in Mr Mackenzie-Wood's book?-- Well, you are trying to ask me to remember a text that I got handed in '84 and read. I think I've already detailed to Mr MacSporran that it's been years since I've read that book so I can't say with clarity that I read it or remembered it, but I'm just telling you that it is common knowledge from Mines Rescue that that would be the case.

When you became a cadet - when was that? About 1980 or '81?-- '81.

You received a blue book called "Spontaneous Combustion in Underground Coal Mines"?-- Yeah, at some stage, I think, in the block release of the first year we got that.

And you studied that, didn't you?-- I would have looked through it, yeah.

No, you studied it. It was part of your curriculum, wasn't it, to study?-- Well, it was part of one subject, yes.

You had to study that book for the exam that you sat?-- We had to have a knowledge of spontaneous combustion for one subject, yes.

Turn to page 4. It refers there, doesn't it, to Box Flat and Kianga in terms of spontaneous combustion?-- Yes.

Turn to page 17?-- Yes.

That refers to Coward's Triangle, doesn't it - sorry, Graham's Ratio?-- 17 is Graham's Ratio.

So you had to study Graham's Ratio?-- At some stage, yes.

Yet you've told the inquiry you forgot all that you learned about it?-- Well, that's right, because this is probably 1981 or '82. I didn't refer to it since then.

Why not? You are an undermanager?-- In hindsight, Mr Martin, I understand that as an undermanager there could have been a lot of things I could have kept reading about.

Well, you should have?-- I'm not challenging you on that point.

The Unor system or the Maihak system, did that have the capacity to produce Coward's Triangle?-- I think so.

Turn to page 27, if you would. What does that refer to?-- It's talking about Coward's Triangle.

And if you would turn to the last flag in the book -----?-- Last - sorry?

Flag, marker?-- Yes.

That's the very paragraph I read out to you before, isn't it, about withdrawal of the men from the mine? It's the same exactly?-- Which page are you referring to?

I forgot to mark the page. If I could see it quickly I will identify it for you. "Final sealing" is the heading. "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."?-- Right, yes.

That's in the blue book?-- Yes.

That you had and you had to study for an examination?-- Yes, well, it would have been part of the books that we got to study for.

You can just return that, thank you. Had you forgotten about all of that? Had you forgotten that?-- No, no, part of Mines

- I think I've already stated what I said about Mines Rescue and common knowledge about the subject on that. Coward's Triangle was a - I just thought that Coward's Triangle was too hard to understand. The Ellicott Graph was much clearer and distinct.

Yet the machine, you think, Unor, that is, had that capacity?-- I think it did, but I mean if you got something that shows things a lot clearer why go through something complicated for the same information?

We have talked a lot about CO make and I don't intend to dwell on it, but if you saw a graph of CO make commencing on 16 June 1994 ending on 15 July 1994 and that trend doubled in the make between those two dates, what would you have thought if the make doubled on the graph?-- Well, I'd look at the overall graph and just have a look at what its profile was. I think I've gone through this about 100 times.

Well, you can do it 101 times?-- That's all right, I don't mind doing it, but doubled?

Yes, more specifically from 7.32 lpm to 14.5 lpm over the period of time in a month. What would you have done about that?-- I would have just looked at the trend.

That's a trend, isn't it?-- Of the graph itself, take it in the overall context of the whole period of time.

Would that not alarm you?-- No.

We have talked very briefly about production. Production was high priority, I suggest to you, at Moura No 2, particularly after January 1994?-- No.

Because in January 1992 coal prices fell by \$3.85 per ton, or tonne; did you know that?-- Yeah, I knew there was a drop, yeah.

And there was a meeting in fact, wasn't there, called by management and the men were told that the future of the mine was in doubt and production had to increase?-- I can't remember that meeting at all.

Did you generally work the weekend shifts?-- Well, the weekend work was rostered on a - what would you say - a sequential basis where we had - well, we used to have four undermanagers and it went down to three and George stepped in to make four, and so once every four weeks you would have to do a weekend job.

Well, you would have to?-- No, everyone.

I am only talking about you. You worked -----?-- Yeah, once in every four, yeah.

The signature of the undermanager on the production deputies reports - I think you said that there was a requirement laid down in writing for you and others to sign it?-- Yeah, it was a work procedures thing drawn up by BHP. I think it had to do with Quality Assurance, I think.

But you forgot it, I think you said?-- Yeah, I - it's already been brought into evidence that I must have seen it - well, I would have seen it and I've signed it saying I would have seen it, but at a later date I've forgotten it, yes.

Why do you think the requirement existed?-- Probably as a positive ID that the undermanager has read the deputies' reports.

Exactly. When you came back, I think it was - was it the 31st - sorry, it was 1 August, wasn't it -----?-- Yes.

----- that you were first back. You noticed a change in practice about daily shift readings, didn't you? It wasn't done before you went away, before 22 July, and it was in place when you came back?-- Daily shift readings of CO?

And wet bulb/dry bulb temperature?-- I didn't notice that change.

And velocity?-- No. The first - I think I've indicated that the first time I noticed that the readings were taken was on the Friday day shift deputy's report.

Did you not inquire why the change had come about?-- No, well, I just thought they were being conshy because any other

time that they have done waste levels they have always reported things like that.

Are you saying that in the closing stages of other panel sealings, or towards the closing stage of the life of a panel this same procedure was adopted?-- No, I'm not saying that. I'm just saying that from my recollection of other wastes in other panels, that they have done their readings.

What did you have to do with the Unor on 7 August when you brought up Ellicott Diagram? What physically did you have to do to the machine?-- Well, you got to go and you got to pick graphs.

What did you do?-- Well, you go up and you click on the box for graphs. I think you got to use a mouse. It was really easy when you had a touch screen. The mouse was not the best as far as picking things. You go into graphs and then it brings up - to the best of my memory it brings up - it asks you what point do you want to pick, what time span you want to pick.

Yes, all right. I just wanted to know whether you knew something. The mouse that you talk about, when did that come into existence?-- I'm not sure of the exact date that come in.

Had you seen it before you went on holidays - I'm sorry, before you went on sick leave?-- Yeah, I got a suspicion that it might have been brought in while I was away, yeah.

I just might ask you to look at Exhibit 127 briefly, particularly about two-thirds of the way down the page, on the evening of 7 August at 8.15 and those four entries commencing 8:15:39, can you see that?-- Yeah, that's listed as "20:15", in other words -----

Yes, I am sorry, 20 hours, 20:15:39. This is the case, isn't it: that when you arrived there at half past 9 or thereabouts and on any occasion that you went into that Unor room or past the screen, you must have seen those points in alarm in red - not in green, in red?-- I've always - I've already detailed to Mr Clair this and I said that my memory - I cannot recall seeing them in alarm.

But the fact of the matter is when you look at that document, there was an alarm at 8.15 by the time you got to work?-- Well, an alarm had gone off at 8.15, yes.

And it necessarily follows, because of the operation of the machine, that that point was red across the board, wasn't it? It must follow?-- Well, because it's CH4 alarming, then it - in all probability it might have been just the actual figure for CH4.

I am not suggesting anything else other than CH4 in relation to the 8.15 alarm. That line for point 5 would have been red?-- That's what I'm trying to describe, that my understanding and recollection of the way the alarm comes up

on the screen is that the whole line for point 5 would not be red, it would be just the CH4 reading.

You would have a red flashing rectangle at the top left-hand side of the screen?-- Yeah, my understanding is that there is a little flashing rectangle up the top.

And also on the screen you would have a red alarm showing the word "active"?-- Well, I've seen information after the disaster, but I can't actually specifically remember.

I'm suggesting to you that if the operation of the machine is as I suggest, point 5 clearly would have shown red alarm to an observer, as you were?-- Yeah, well - I'm not trying to make your life difficult - I will agree with you that if it alarms on a gas level, then that gas level is highlighted for a particular point, yes.

And just taking you down the other relevant ones, more particularly 512 seal, point 5, the same situation at 28 minutes past 10 that night and at 55 minutes past 10 that night would exist?-- Yeah.

And you have told this Inquiry that you were in and out of that room several times that night?-- Yes.

What did you do about accepting the alarm, or alarms?-- I can't remember.

Well, you did nothing?-- There was no siren going and I can't remember accepting an alarm. I can just remember looking at the screen and seeing the difference.

Seeing the alarm, seeing it in red?-- Well, I'm sorry, but I really can't remember which bits were green and which were red.

But you saw some red on that night?-- If I would have been looking at the screen and these alarms are like this, then there would have been red there, so I would have probably seen it.

What I am asking you to tell the Inquiry is, having seen it, why didn't you do something about it?-- Well, then I would have to try and explain -----

Do you have an explanation?-- Well -----

There is no explanation, is there? You are the undermanager?-- No, well, I'm not - I'm saying that yes, I could have accepted the alarm, I suppose, but the fact that I was rushing around - it's not an excuse - but the fact that I was rushing around, it probably just didn't come to mind.

You could have accepted it, as you should, I suggest, and cause it to be reset at a higher level?-- I reckon that during the shift later that I would have probably got around to that, but to organise a reset of an alarm at the beginning of shift is just - you have got to get leckies over and

everything like that. The characteristic - the gas levels that this seal were showing were characteristic of just a normal sealing, and the fact is that various people were watching it, and I was continually monitoring it as well.

Just going back to earlier in the day on that same document, a little above where we were talking about, can you see 12:47:58, point 5?-- Yes.

Two above?-- Yes.

Was the electrician still there in the Unor room when that alarm occurred?-- I really don't know.

When you walked in - I am sorry, you gave evidence to the effect that you walked in to the Unor room. What notice or attention did you pay when you first came on shift, or indeed at any time on your shift before the explosion, to whether the siren was set? It's easy to see, isn't it, whether the siren is set by looking at the Con Log light?-- The windows, yes.

What attention did you give to see that the siren was operative or set?-- Well, my understanding is a siren can go off any time.

But you can tell, can't you, by looking at the Con Log, whether the siren has been reset because of the light on the Con Log which will tell you that it hasn't?-- No, my understanding is it doesn't matter whether that Unor lights up or not, the siren will still go.

But the siren didn't go, did it, on your shift that night?-- No.

Well, do you not know that the Con Log, when the siren is not reset, it will remain giving off a light, showing a light?-- I thought the Unor light up on the Con Log -----

That's the way I am talking about?-- Yeah, I thought that was just like a draw of attention to an alarm, but it didn't matter whether it was up or not, the siren would still go off.

But it didn't go off, did it? It didn't go off that night when you were on shift?-- No.

There has been evidence given to this Inquiry that Mr Graham sat in the Unor room - I have forgotten the precise time, but it was perhaps 2 o'clock or so on the morning until he finished shift in the evening - I am sorry, early in the morning on the 7th. Do you know whether that was so or not?-- No.

And the electricians, or electrician, more particularly, was in the Unor room span gas testing for most of the morning?-- Yeah, I saw Bunny, yeah.

Why, as undermanager, did you not insist that a close eye be kept on this Unor room for the entire day and your shift that night?-- For the watching of the CO?

Yes, or watching the gases?-- I was watching it all through the day except for my underground inspection.

But that night why wasn't it monitored?-- I can't explain that.

There must be an explanation?-- Well -----

You are the undermanager?-- Yes, but I didn't actually issue any specific instruction to look at it or to keep monitoring it.

It's the case, isn't it, that an electrician never reset a gas level except under the direction of usually an undermanager?-- Well, yeah - well, gas levels - I haven't heard of a case where someone would be - you have got to divide that into two things. First of all, with your normal alarm levels for your development sections, I think that anyone who tampered with those without the manager's consent could get in a lot of strife, because that's the sense they have. For a sealing I would expect that there has to be some directive given by someone in authority before an electrician would do it.

Just talking briefly about rubbish in the goaf, did that happen with all goafs?-- Mainly since the quality - the coal quality thing come in they tended to do that, yeah.

Is it a desirable practice? Surely not?-- Well, I think a lot of it come down to the fact that they were looking at - when you got to move a lot of rubbish, props and bins and everything - they were looking from the point of view of the blokes not having to pick up all this stuff and continually transfer it from one thing to another just to get it out of the mine. I couldn't really comment on whether it was desirable or not.

Well, a significant roof fall creating a windblast would throw that sort of stuff around, wouldn't it, endanger men?-- I've never experienced -----

"Could" would be a better word?-- Well, I have never thought about it.

Well, you are now?-- Yeah. The roof falls that I have experienced have just blown up a lot of dust, and occasionally it will blow bag.

Just talking about the electricians once again, in relation to the final monitor point, it's no part of their function, is it, other than to put it where they are told to put it by some superior such as an undermanager or undermanager in charge?-- When I was talking to Gavin - I wasn't implicating Gavin in the decision as far as the placement - I was talking to him from the point of view of he being able to - it's just - you know, because these fellas deal with tubes, you are dealing with someone who deals with tubes, why wouldn't -----

I just wanted to make it plain that you weren't because you

used the word "we"?-- No, sorry, ultimately the decision of where the monitor point goes rests with an undermanager or a senior undermanager or whatever, yeah.

Did George Mason know where this final monitor point went?-- Yeah, I believe I told George on Saturday afternoon.

And that was a practice to put it, as you said, I think, equidistant between the sides of the panel?-- Yes.

But CH4 rises, doesn't it?-- Well, each individual gas has different densities.

CH4 is about half the density of air?-- CH4 rises, yes.

And it would be most likely to first collect at the top end of - I'm sorry, the outbye end of No 1 heading?-- No, I would say that because the panel was on a lean - it was descensional that way, and you had this row of stoppings here - then I would say the CH4 would build up in No 2 heading and build its way back down there first. You would get some CH4 from whatever made out of here, but the majority of your well of CH4, if you like, from the section would float up along the roof and then congregate around here, and if my memory serves me correct, these stoppings are still intact, so that you would get a build-up against No 2 and then back out - No 2 seal that is - and then back out and work its way back down that way.

Well, I don't want to dwell on this, but I suggest to you that the stoppings, that is, at the cross-cuts on No 1 heading, shouldn't have been intact, they should have been knocked down in the process - at sealing?-- We have never knocked stoppings out before.

I didn't say that Moura No 2 did. I am just saying - suggesting that would be the proper practice?-- I can't see the need for that.

You have probably sufficiently covered this, but I think you had said in your evidence and your statement as well that Mr Mason told you that you were not to raise it with the men or the deputies or the check inspectors. What does the "it" mean? What were you told not to raise?-- It's taken in a context with me asking George about the 512 Panel that had just been sealed going through the explosive range, and during that conversation I had suggested that did he - well, I asked did he want me to raise it with the deputies and the check inspector, and he said that if they had any concerns that they would raise it with me and not to raise it with them.

Can I just ask you this: you have told the Inquiry about going around expecting Mr Blyton to be in the shower or shower room - that's on the Sunday evening; do you recall that?-- Yeah, John was in the shower, yes.

All right. And you saw him there, and I suggest that he raised with you that he expected the panel to go into the explosive range some time soon after - I have forgotten the length of time - it might have been a couple of hours, or something. Do you recall that conversation?-- I can't specifically recall, but that wouldn't be out of line with what John would do.

I suggest that you responded that - well, you knew because you had just come from the Unor room?-- Yeah, well, I can remember looking at the Ellicott graph sort of - after I saw the fellows there - met them - I would have gone in and had a look, yes.

Just satisfy me about this: your statement makes reference to the presence of a graduate engineer on Friday being underground working on a machine?-- Yeah, that's - it didn't come out right.

I'm just curious?-- Okay. He was a graduate engineer that was getting underground experience and when the section went down, I left two miners at the miner - the continuous miner - to assist the fitter, and because I wanted them to do a bit of stone dusting at the face as well, I just left the graduate engineer to help them with that, but he wasn't an engineer in the process of fixing anything, or anything like that.

What I want to know is who was he? What was his name and where is he now?-- You've got me. I can't remember his name.

That's all right?-- David is his first name, I know that.

Somebody else to give evidence will be able to tell me that?-- Yeah. It's just that it has been a long time since I've seen him.

Don't worry. Mr Graham's verbal abuse of you, if not a work related matter, what did it relate to?-- I was walking fast down the roadway and he called me a few unpleasantries.

Why would he do that? What sparked it?-- Well, Lennie - sometimes me and him just must have got each other's bristles up, and on that particular occasion maybe he rolled out of bed the wrong way.

Just look at this, please. Just study it. What I suggest to you is that it is a graph of the deputy's parts per million readings, and along the bottom - 30 July, 31 July, 1, 2, 3, 4, 5, 6 August to sealing, and then the Unor readings - I'm assuming that's so. 5.44 on the evening of 7 August. What does it tell you if it is correctly graphed on the information?-- I can't follow this-----

I'm suggesting-----?-- I would like to know what you want me

to comment on. You want me to comment on the overall, or any specific area?

I want you to comment on it overall?-- Where does the Unor readings take over from the deputies' readings?

On 7 August at 12.43 p.m.?-- So, that's-----

Sorry, that's 12.43 ppm after sealing at 8 p.m., I think - 8 a.m. on 7 August. What does that tell you? It tells you, doesn't it, that you have an exponential rise, if it is correct?-- Yeah, but 12.43-----

No, it is 12.43 ppm?-- It is 12 and a half parts per million.

Yes, approximately, at 8 a.m. on 7 August?-- That would have been - was that a Unor reading?

Yes?-- At 8 p.m.?

8 a.m. on 7 August?-- 8 a.m.?

I'm sorry about this Your Worship, I haven't seen this before myself. It is 8 minutes past midnight on 7 August?-- That would still be a normal feature of sealing off the place.

Mmm?-- It is still a normal feature of sealing off a place. In the process of sealing, you are reducing the air quantity to the waste. If you reduce the air quantity flowing through the waste, in effect, what you are doing is reducing the ability for the ventilation system to cool the waste, so you would expect the CO to go like that.

You say it doesn't show you an exponential rise?-- Well, I'm just a bit confused because the next point is listed - you are comparing a graph of CO looking at a waste that's open and you have tacked on to the end CO of a waste that's closed or sealed. I can't see-----

You say it is of no value to you?-- No.

All right. I still tender it for identification.

WARDEN: That's Exhibit I for identification.

MARKED "I" FOR IDENTIFICATION

WARDEN: Are you going to be much longer, Mr Martin?

MR MARTIN: I will finish in about 10 minutes, probably, or less.

WARDEN: Okay, we will try for the less, thanks.

MR MARTIN: See, I suggest the regulator was knocked down in

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connection with the sealing on 6 August because there wasn't the time to take the product in through the man door?-- The reason the regulator was knocked down was to get the Tecrete to the top seal so that we wouldn't demolish the stopping between 2 and 1. If I would have asked anybody - any of the miners that they had to load four pallets of Tecrete through a man door, they would have told me to do it myself.

That you wouldn't have been able to do?-- It would have taken me a long time, I think.

I also suggest that there was an urgency about this sealing because the men were brought in on overtime to do it?--
Sorry?

There was an urgency, I suggest, about this sealing because the men were brought on on overtime rates to do it?-- Well, it didn't matter what time the men worked during the weekend. They were on overtime rates.

I have nothing further, thank you, Your Worship.

WARDEN: Thank you. It is a short afternoon this afternoon. Could we have one hour for lunch? Thank you. Resume at 1.30.

THE COURT ADJOURNED AT 12.31 P.M. TILL 1.30 P.M.

THE COURT RESUMED AT 1.32 P.M.

MICHAEL ANDREW SQUIRES, CONTINUING:

CROSS-EXAMINATION:

MR MORRISON: Mr Squires, can I just ask you about firstly the Saturday when you rang Mr Mason and mentioned to him your observations with the comparison between those and the Friday?-- Yes.

And you've been taken over that conversation a number of times. Now, at that point in time had anyone at the mine expressed concerns to you in the context of, "I think this panel should be sealed."?-- No, I can't remember anyone saying that.

You didn't hold those concerns yourself?-- No.

You mentioned that the primary factor that you couldn't let go in terms of the observations is that air migrating up the No 2 road?-- That's right.

From a mining point of view you wouldn't tolerate that to just go on and on and on, would you?-- No, not in a waste that hadn't been sealed.

In your conversations with either Mr Mason or Mr Schaus when you spoke to him over that weekend, did anyone - I'm sorry, in the time leading up to the sealing, did either Mr Mason or Mr Schaus raise with you concerns that they had that the panel should be sealed?-- No.

So from what you could gather from their conversations with you they did not have that in mind or have any concerns about early sealing?-- No.

Now, when you saw Mick Caddell on the Friday and you heard him mention a smell, where was he when that happened?-- He was in the deputies' cabin.

Can you just tell me what he was doing at that time? Was he sitting, standing, doing what?-- Yeah, well, he was just - he was standing just peeling an orange and throwing his orange peel into the bin and then he sat down talking to Bony.

That's Rod Helander?-- That's right.

The conversation you overheard him having with Helander, at least what he was saying to Helander, included the mention of this smell?-- That's right.

So as far as you were aware certainly Rod Helander was aware

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of what Caddell had found?-- Yeah, well, he was talking to Rod and I walked in, just sat down and listened to the conversation.

Was Helander saying anything about that?-- I can't remember Rod saying anything about it, no.

Now, that was at the end of Caddell's first inspection?-- Yeah, that was about - around about eight o'clock, crib time, which would have been after his first inspection, that's right.

And he went down and did a second inspection?-- That's right.

Did he come back to see you at any stage after the second inspection?-- No.

If he had got a smell again down there would you have expected him to come back?-- Well, Mick was a sort of thorough deputy, yes.

The report that you were asked to look at, Mr Caddell's report, doesn't show any smell on the occasion of the second inspection; do you remember that?-- Yeah, I remember the report now and - yeah, his smell is mentioned under the general comments for the first inspection.

First inspection?-- That's right.

If he had got it on the second inspection you would normally expect him to note that in some way?-- Yes.

Now, when you were dealing with the end of that shift and the oncoming deputies, they included Mr Newton, didn't they?-- That's right.

And Mr Newton was in fact the regular 512 deputy?-- That's correct.

And Caddell wasn't?-- That's right.

And that seems to have played some part in Newton then taking 512 rather than Caddell as you had asked him to?-- Yeah, I would assume that Mick would have seen Bob and because it was his section that he would have asked him to do it, yeah.

We in fact know from Mr Caddell's evidence that he did speak to Newton and outline his concerns to Newton and ask Newton to do 512. When Newton came back at the end of that next shift having done 512, did he say anything to you to indicate that he had got a smell?-- No, he didn't mention smell to me.

Mr Newton was a very experienced deputy, wasn't he?-- Yes, he was.

And you had a good rapport with him?-- I did.

Was he one of your regular shift deputies?-- He went on my shift, but over the time that I've worked at No 2 I've had a

lot to do with Bob.

And was he the sort of person - or deputy perhaps I should say, who would speak up about things like safety matters and smells or whatever?-- Yes, he was that - yes, he was.

He wasn't a retiring person?-- No, no, he was very active in the safety area.

If he had got a smell like Caddell's you would have expected to hear about it?-- He would have told me, yes.

You did in fact speak to him, didn't you?-- Yes, I spoke to him in the undermanager's office.

And he gave you some comments about what had happened in 512 or what he had found?-- Yeah, he spoke to me briefly, yes.

What did he tell you about that?-- He said that everything was all right and then the conversation continued, but I didn't pick up the rest of it. I can't remember the rest of it, sorry.

Certainly the overall comment was that everything in relation to 512 was all right, that was the essence of it?-- I can't remember him actually saying 512, he just said that everything was all right.

I understand he didn't say 512, but the topic of conversation obviously at that point is you asking him to give you a verbal summation of his inspections?-- Yes.

And he was doing 512, not that you knew it at the time, but that's in fact the case?-- That's correct.

He said everything was all right?-- That's right.

In relation to the reporting procedure at No 2 Mine we have heard evidence from others and from yourself that there was the formal documentary form, that is production reports, shift reports, and in addition to that people exchanged information verbally?-- That's right.

Particularly on hot seat changes?-- Yes, that's correct.

You mentioned, I think yesterday, that in relation to undermanagers and their reports there were occasions, perhaps frequently, where an undermanager would actually give you a piece of paper with information on it?-- That's right.

That's not his report?-- No, that's just a separate piece of paper.

And did that happen with some frequency?-- Yeah, well, that's how - it's a combination of verbal, and often there was a piece of paper there or the oncoming undermanager would pick a piece of paper and clip it and write the information verbally that the other undermanager was telling him.

So in addition to reports and verbal reports is it fair to say it was a common practice amongst all undermanagers to provide these pieces of paper or to create pieces of paper?-- Yes.

And they would contain the nuts and bolts of the verbal part?-- That's correct, yes.

Do I understand correctly that undermanagers would then obviously respond to whatever was written on the paper?-- That's right.

What sort of things would you put on paper for the next undermanager?-- Just similar to what was in the report but updated. Like you would say - well, the situation would be normally the deputy from the section would ring the undermanager up and he would write information down, like where they were, what sort of meterage. They might indicate things like the roof conditions, ventilation, then they would put down sort of - like if they were going to hole through somewhere or whether it needed dust, supplies, all that sort of stuff was put down on that.

So a fair deal of information about status of sections in terms of where work ended and what was next?-- That's correct, yes.

As well as other comments to do with the general conditions of sections?-- That's right.

Was that practice followed by a lot of the undermanagers?-- Yeah, all the undermanagers did that.

And with some frequency?-- Yes, yes, of course.

As an undermanager were you by custom - custom and practice, were you expecting then to get this sort of report?-- Yes.

Now, in terms of some of the undermanagers, perhaps not yourself, was it also the case that a number of the undermanagers went to and from work together?-- On day shift you would tend to go home together. Like, for example, Joe was the safety training undermanager and so normally if you were on day shift you would share a lift home with Joe and something like that. On the way to work on day shift George would come and pick you up, and so a classic example would be if I was working day shift George would come and pick me up and he would also have Joe in the car as well.

Mr Mason then routinely picked up undermanagers who were also going in on shift?-- Yes, on day shift, yes.

And took them home?-- Normally George and Albert stayed back a fair while on afternoon shift and so they would - they normally either got - normally the undermanager on day shift plus Joe would go either in the work ute or they would get dropped into town by a miner.

But certainly there was, quite apart from meetings or occasions to meet at the mine, there were routinely occasions

for exchanging information between undermanagers and the undermanager-in-charge?-- Yeah, well, normally when George would pick you up in the morning, for example, and you were on day shift, George would be giving you verbal information about what he expected to happen today, what was to be done and things like that.

Would the undermanagers, at least yourself, also be exchanging information about what you had found in the mine and what had happened on the last shift and that sort of thing?-- Yeah, well, if there is anything that was out of the ordinary or unusual we would mention it to George.

That sort of exchange was a regular feature?-- Yeah, during the week it was, yeah.

Can I go back to the Friday when Caddell was there? At the start of that shift you asked him to keep an eye on 512?-- Yeah, when he come to work I said that he could look after 512, yes.

Now, we have heard some evidence from people that in miners' parlance, certainly as between undermanagers and deputies or deputy to deputy, when someone is asked to keep an eye on a section it means they are to go and deal with it, be the deputy for that section?-- That's correct, yes.

Monitor whatever it is?-- That's right, monitor.

And that's an accepted way of phrasing that request, "Go and keep an eye on that."?-- Yeah.

Now, Caddell volunteered or said that he would do a particular sort of inspection on that trip?-- Yeah, a waste inspection.

And what would that routinely involve, a waste inspection?-- Well, a waste inspection of 512 would involve walking down the No 1 heading which was the top return, down to the corner of 13 cross-cut and across the faces.

A waste inspection would not normally include going into the face or into the goaf on the intake side?-- No, it was a bit hairy to do that.

On that afternoon you in fact went to 512 twice as I understand it?-- Yes, I did go there twice.

And on each occasion did you move into the section somewhat as far as you could safely go?-- The first time I went in and I inspected down each ramp in No 2 and No 3 headings. The second time I only went in and just saw where the miner was broken down.

Now, on either occasion when you were in 512 yourself did you discern any abnormal feature of 512 in the nature of smells or hazes or abnormal heat or anything else?-- No.

On your inspections then 512 at that point was normal?-- Oh, yes.

Now, when you heard Caddell talking about the smell to Helander, that was in the deputies' cabin?-- That's correct.

Did you then quiz Caddell about what he meant or what he had found with greater detail?-- I can remember saying to him, "Oh, really?". He sort of said that he had been down in one of the cross-cuts - I'm not sure whether he actually stated which cross-cut, but that he had walked down one of the cross-cuts with a hole in the stopping and then smelled that smell just there.

And did he interrupt his crib time activities in order to deliver this report or did he just continue on with eating or whatever it was he was doing?-- Well, he was talking to Bony and I sort of sat down and listened to him talk while he kept eating.

And what was Caddell's apparent attitude? Was he very serious and knitting his brow and delivering some solemn dissertation about smells or was he off-hand about it or fairly casual?-- He was casual, off-hand.

He didn't sort of get up and do some table thumping about the need to investigate or what it all meant?-- No.

And neither did Helander?-- No.

At that point did Caddell say anything about any other feature of 512 apart from the smell that he had said he had detected down at 10 cross-cut?-- I can't specifically remember. He might have mentioned CO readings, but I can't say for sure at that stage.

Now, next morning when you spoke to Newton who came off the next shift, he didn't say anything to you about a smell in 512, did he?-- No, no, he didn't.

In terms of assessing a report like Caddell gave you would it matter that Caddell wasn't familiar with 512 but Newton was the regular deputy?-- Yeah, well, because Bob does waste inspections frequently I would tend to take that into consideration.

Now, on Newton's shift, the one that ended the following morning, was he due to do waste inspections?-- Bobby Newton? Yes?-- On the night shift?

On the night shift?-- I don't think so.

Now, just going back to Caddell, Caddell went down for that inspection. Can you remember when he left to go down on that inspection, approximately?-- Well, he was still in the lamp room at 20 past 4, because it just so happened that I was there too and I was waiting for some belt patrol men to come up to the top, so I know that time is correct. So, any time from, I suppose, half past 4, because before you go down you have got to service the Rover up and everything like that, so it could have been anything from half past 4 on.

And that would take some time to do that, to service the Rover?-- Yeah, well, if you sort of want to look at a time and motion study, you would probably look at maybe - the earliest time of departure would be, say, 4.30 and, say, a time of 10 minutes or so to reach the section, so -----

Then some time to do the inspection itself?-- Yes, then you would have to walk down the return, across the faces, yes.

When he gave you the report at the end of the first inspection, you asked him - or at least at the end of the shift you asked him to keep an eye on 512?-- That's right.

Did he demur to that?-- No.

Now, at the end of that shift, that's about half past 10, 11 o'clock Friday night, isn't it?-- That's correct.

Now, at that stage there had been some wire baskets being moved or constructed?-- That's correct.

Just tell me about that, where were they?-- That was in the No 3 heading in the belt road. What happened was that because of my understanding that the place was going to be sealed on Sunday, I was making sure that the place would be actually ready to go, so Saturday, in my mind, was a time to get the Tcrete on site, and because 5 South crashed and so I had extra fellas and there was a fella on my crew, Wayne McCoombes, who could and has worked on wire baskets, I decided to put some wire baskets up in the belt road seal.

So, the preparation work for sealing was already happening before Caddell told you about his report?-- Yes.

And on the basis, as you understood it, that sealing was scheduled for Sunday anyway?-- That's correct.

Now, at the end of the shift did you get some information from Edelman about how many baskets were left to be done or what the status of those were in the belt road?-- Yeah, I'm pretty sure Wayne McCoombes come and saw me and told me that there was three rows of wire baskets still to be constructed

in the belt road.

So, they had gone up a significant way?-- Yeah, they had gone up a significant way. Obviously we hadn't filled them or anything, it was just the wire baskets themselves.

And when you got that report were Caddell and Newton there at the end of the shift?-- No, I don't think Bob would have been there just then, and I'm sure that - I'm sure Mick was around the deputies' cabin.

Now, I just want to touch on one area that you were talking about yesterday, and that is if Caddell had said to you - you were asked yesterday, I think, if Caddell had said he wanted the panel sealed as soon as possible or his opinion was that should happen, what would your reaction have been to that, and I think you said if you had time you would have gone down there yourself to check it out?-- Yeah, well, Mick's an expressive sort of person, and I know that when something is pressing, then you can read it pretty well. He used to be on the Union Executive and because he's on my shift, there's been several occasions where there has been some concern of his over maybe manning or whatever and he's - well, you know when Mick has got a concern, like he's - just the body language that goes with the concern.

I mean, is he demonstrative in terms of his physical attitude as well as verbal attitude?-- Yeah, well - yeah, he tends to gesticulate a lot, and you know when he's serious, yes.

Jab a finger in your chest, that sort of thing?-- No, I don't think he would do that with me. We got on pretty good, but he was definitely - he had definite features about it when he had a concern that he would sort of show.

He was doing none of that when he got this report about this smell?-- No.

Now, if he had said that and expressed a concern about it, would you have gone down yourself and checked things out?-- Yeah, well, see, because it was crib time, if he would have - yeah, if he was being demonstrative on that thing, I think Mick probably would have told me to get in with him. He is that sort of fella, he could lead me around. I didn't have any problem with him saying, "Get in, I want to show you something."

You certainly would have expected him to have that attitude rather than the one he did if he was really worried?-- Yes.

In relation to some of the signs that you have been asked about, that is, the signs of spon com, can I just ask you about that for a moment? One of them you mentioned was a haze on the roof, as I made the note of it. Do you recall saying that, a haze on the roof?-- Yeah, well, I heard a description of a spon com haze being one that layers on the roof, yeah.

And did you have any understanding about whether it's

transitory or hangs around, the spon com haze?-- Not really, no.

Now, when you say it layers, are you indicating then that it is more to the roof than the general body?-- Yeah, well, that was my understanding, yes.

Now, when you got the haze yourself on the inspection, that was on Saturday?-- That's correct.

There were some diesels operating in the section that day, I think?-- That's right, there was an Eimco loader and an MPV.

And are they terribly clean, those machines, or are they smokey?-- You can get fumes coming off those machines, yes.

Did you form a view about the haze at the time you saw it as to what it was?-- Well, because I've seen or been in areas where particularly Eimcos and MPV's work, the hazes that I've seen from them looked the same as the one that I was seeing in 512.

Did it have any particular visual features about it?-- It had a very light - really almost like a transparent light blue with sort of like dust as well, or particulate matter, if you like, dust, but it was really sort of slight. Like, you could see right into the waste, you know.

Was it from floor to roof?-- Yeah, it was right over the whole area of the roadway.

And moving floor to roof?-- That's correct, yes.

So, there was no layering at all?-- No, no, it was from floor to roof.

Was there any smell to this haze?-- No.

Any discernible smell?-- No. Just all I could smell was the goaf smell coming out.

Now, when you get a report of a smell, if I can stay with that topic for just a moment, you mentioned that you take into account just who the deputy is, whether he is familiar with the panel or not, things of that nature. What about if ordinary miners tell you about a smell, picking a smell in a return. Do you take some matters into account there as well?-- Yeah, well, most of the time you don't have miners working in a return unless a deputy is with them, so in the normal course of mining operations the miners tend not to go into the returns unless it's a specific example where you might be stone dusting a return or something like that.

So, you could get a miner not used to return smells at all and giving you misleading information?-- Well, if they haven't been in that return or something or other, they could be smelling what is just a normal return smell.

Now, can I just ask you to look at one document, either

document 119 or part of document 119 in the Inspectorate's documents? Perhaps we will come back to that. We will keep going. On the Saturday, Newton had been doing 512 as it turned out, and who were the other deputies that night?-- Michael Caddell.

That's on Friday night through to Saturday morning?-- That's correct.

Then who were the oncoming deputies?-- There was Cole Klease, Peter Rose and, I think, Rod Helander.

So, the deputy starting day shift Saturday, or one of them at least, Rod Helander, had been present when Caddell had referred to this smell?-- Yes.

And Peter Rose and Cole Klease were the others?-- That's correct.

Now, at the end of that shift, that is, afternoon Saturday, Klease had told you something about 512?-- Yes, he come up with George Ziebell and them fellas after they had positioned all the stuff and just gave me information on that.

Did he say anything unusual about 512?-- No, I can't remember Cole saying anything unusual to me.

What about Helander?-- No, Rod Helander didn't say anything about -----

Or Rose?-- No.

So, none of those deputies raised any matters with you that would suggest that there was anything abnormal or unusual in 512?-- No.

I will just have you look at this document, please. It's document 119 from the Inspectorate's documents. You mentioned that you were under the view that the sealing was going to occur on the Sunday?-- Yes.

Were there, on Thursdays, meetings to allocate tasks for the weekend?-- Yeah, the overtime - the weekend overtime thing was done on Thursday.

And would the weekend shift undermanager receive routinely from Mr Mason a sheet detailing the tasks to be done?-- Yes, normally on Friday we would receive this, yes.

Do you recognise that document there?-- Yeah, this is the sheet for that weekend.

This is the work allocation for the weekend of the 6th and 7th?-- That's correct.

Now, as you look at that document, can you point out to me the section that deals with sealing 512?-- Yes, that's on the second sheet under the day shift list.

240295 D.32 Turn 13 mkg (Warden's Crt)

What is the entry?-- You've got "four" there with "seals" written next to it.

Does that mean four men?-- Four men, that's correct.

Four men detailed for seals?-- That is correct.

Is that the thing that led you to understand that it was sealing on Sunday?-- That's correct, yes.

I tender that document, the weekend work sheet for 6 and 7 August.

WARDEN: Exhibit 184.

ADMITTED AND MARKED "EXHIBIT 184"

MR MORRISON: Now, Mr Klease did not tell you anything about a smell, from what you say?-- No.

There were occasions, though, where you spoke to him during the day on a number of occasions?-- That's correct.

And you yourself were down at 512 at one stage?-- That's right.

Did you perceive on that occasion any smell, haze, anything else?-- No, well, as I said, I noticed a slight haze migrating out No 2 heading, and the goaf smell that I smelt was just a normal 512 waste smell.

Now, you have been the undermanager through a fair bit of the extraction of 512?-- That's right.

I take it on those occasions when you were shift undermanager you have been down to 512?-- That's right.

With some regularity?-- That's correct.

So, are you familiar with, or were you then familiar with the goaf smell of 512?-- Yes, well, part of our inspections were things like you go up in the return, have a look up there, but also, although I never walked right down to the bottom of the waste because I just didn't really want to risk getting hit by a bit of rock, often we would have to - as part of the checks that Albert wanted us to do to make sure the fellas weren't sort of exceeding that three metre rule, we would often walk past the machine, past the cars and go around the corner, and particularly when they were working down the bottom side of the panel you would walk in the top side - when you are inspecting the - what would you say - that's the west side - when they were working down the west side you could enter into the waste on the east side and just have a look at how the extraction had gone around there, and that's where you would pick up your waste smell.

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So, you have had, or had at the time, a number of opportunities to actually be in 512 and at the face or the edge of the goaf?-- Yes.

Was anything you smelled on this weekend untoward in terms of the normal goaf smell?-- No, it was just a normal goaf smell.

Now, you mentioned the haze and we have discussed that. Have you ever heard of methane coming out of a goaf and itself creating a haze?-- No.

You are not familiar with that?-- No, not a methane haze, no.

Now, the next occasion - that is the next shift you worked after the one which ended Saturday afternoon - now, at that point Mr Mason was coming out to take over as undermanager?-- Yes.

For the sealing shift?-- That's right.

You conducted the meeting?-- Yes.

Now, do I understand it correctly that there would be a dissemination of information to shift workers by an undermanager at start of shift?-- Yeah, it was - because of the weekend you could fill them in or - that was the way it was normally done, you would get the group of blokes together. In a case where we had a lot of men, obviously you would have a lot of tasks as well, so you would pick the fellas that were doing a particular task, get them together and inform them of the peculiarities of the task they had to do.

Now, that was a routine feature of a weekend start of shift?-- Yeah, well, that was - yeah, you did that all the time on the weekend work. That's the way - you always did that. You always had to get your groups together. Rather than just tell a deputy and say, "You tell them.", it was a lot more informative to actually get the groups of fellas together who were actually doing the job and inform them of all the intricacies of the job, relay that information to the deputy as well, so you didn't have a situation where the blokes might go down to a job with just a fundamental knowledge and the deputy not go down with them straight away and then maybe having them ring you up saying, "We are not quite clear on this.", or, "What are we supposed to do here?"

The following morning you spoke to all three deputies who had been involved in the sealing, hadn't you?-- That's right.

That was George McCrohon, Cole Klease and Len Graham?-- That's correct.

Did any of those three men say anything to you about abnormal or unusual activity in 512?-- No.

Did all three of those men indicate to you that everything was

normal?-- Yes.

And yet this is the same Mr Klease who - this is the same Mr Klease who says he got a smell?-- I don't remember Cole telling me that he got a smell.

No, no, I understand you say he didn't tell you, but this is Mr Klease - well, I won't go on with that. He worked on the seals, so did McCrohon?-- That's correct.

And so did Len Graham?-- That's right.

Did any of those three men say anything to you about the necessity or wisdom of men being out of the pit because the panel had been sealed?-- No.

Not raised at all?-- No.

Now, Mr Klease gave you some information about when the seals had finished?-- Yes. When I come in George had information on the undermanager's report saying what time it finished, and there was a discrepancy of five minutes, but Kleasey, yeah, told me they had finished about 10 past 1.

And he also mentioned that he had let George Mason know?-- Yes.

And that they had pulled out some cables and erected some stoppings and so forth?-- Yeah, they pulled out the HT and the section transformer and erected a stopping in the tranny road outbye the seal.

Think of those three; bearing in mind their experience, if any of those three had perceived a difficulty with 512 or an abnormal feature, would you expect them to raise it with you?-- Yeah, they would have raised it with me.

Now, who were the on-coming deputies then for day shift Sunday?-- There was Michael Caddell, Lex Henderson and Bob Newton.

So, Caddell and Newton are back?-- Yes.

And Henderson is the new one?-- That's correct.

At the end of that shift, did any of those three men say anything to you about 512 seals or abnormal features of 512?-- No.

Did any of those three men say anything to you about the necessity for, or wisdom of men being out of the pit because the section had been sealed?-- No.

So, if we look at matters at that time, can we - see, if I have got it correct - at that time you had received, as it were, the all-clear in respect of 512 - that is to say, normal - a normal report from Caddell?-- Yes.

The deputy who reported, so he says, the tar smell, or the benzeney No 4 smell, as you say?-- Yes.

You had received the all-clear from the deputy to whom Caddell had expressed his concerns, namely Newton?-- Yes.

You had received the all-clear from the deputies who worked on the seals - that's Klease and Graham and McCrohon?-- That's correct.

Now, you spoke to George Mason on the Sunday?-- That's right.

And received a report from him about the sealing procedure as well?-- That's correct.

What did he tell you?-- He just told me that when he was down there there was no haze and that the maximum CO found was 7 parts.

He didn't indicate anything abnormal about 512, or abnormal features of it during sealing?-- No.

So, by this time that we are talking about, that's Sunday, end of day shift, or on day shift, you had received an all-clear, as it were, or a normal report for 512 from the undermanager

in charge as well?-- That's correct.

Did any of the miners who worked on the seals when you came in on Sunday morning - did any of them say anything to you about unusual features of 512 - smells, hazes, anything else?-- No - well, they were all showered and getting in their cars.

So, none of them raised that?-- No.

Did you get any adverse comment in relation to 512 or its features from any of the check inspectors?-- No.

Or from George Ziebell, the union representative?-- No.

During that day, you, in fact - that is Sunday day shift - you went down to the seals yourself?-- Yeah, with Bob.

Bob Newton?-- That's correct.

And you inspected the seals, all five of them?-- That's right.

Did you actually touch them or do anything to them to see what they were like?-- Yeah, we went right up, and I was having a look at the seals because I was interested in seeing how they were going because it was the first time we had used them. All No 4 and 5 were like a visual inspection, because they were there for some time, but on each seal, Bob was - yeah, you could hear a slight hissing - I think I've already detailed that - but Bob was doing a methane reading and that at each seal and we were checking the gurgle traps as well. I think I have already detailed that the colour wasn't sort of like a-----

I think you said it had gone a light grey?-- Tecrete when it is wet is sort of like a greeny, dove dropping sort of colour, you know what I mean, and this had gone like a light grey, and we were thumping it with our hands - you know, bang, bang - and then with the belt road we also - we opened the tap and you could feel the flow coming out of the sample point.

So, that indicated, what, the seal was under positive pressure from behind?-- Positive pressure from behind, yes.

Before you went down with Newton to do that inspection, that was when you had the conversation with Mr Mason about-----?-- Yeah, before that, yes.

-----what had happened on the sealing?-- That's correct.

At this stage, when you went down the pit on Sunday, the day shift, was when Mason had told you about some details of the sealing?-- That's right.

Told you about CO levels?-- That's right.

And what did he say about that?-- He said that they couldn't find anything more than 7 parts.

And how did that affect you? Did you take some comfort from that, or-----?-- Well, 7 parts is exactly what we were getting during the week, so to me it was just normal.

Did you and he, in fact, express to one another whether or not there was a problem there, or a concern?-- Well, as far as I was concerned - as far as - in my mind there was no concern, and I'm sure that George said that he had no concern over it.

Now, on that inspection, did Newton raise with you anything about smells that he had experienced in 512?-- No.

You were down some hours, I take it?-- Yeah, we were together for a few hours, yeah.

And the inspection - quite apart from 512 - the inspection of other areas, from what you have said, was fairly detailed?-- Yeah, we had a good old look around, sure.

Particularly down in 5 South?-- Yeah, Bob had a really good look around there because, as I've said before, he was a 512 extraction deputy and he wouldn't have got a chance much on his shift to go down to 5 south, so he did a good look around there.

Now, on that 5 South inspection, did Newton check a particular feature of the 5 South equipment?-- Yeah, well, when we were down there we noticed that the laser - I think the laser was still on, so he sort of got a ladder - I've got a bit of a height problem - and he got the ladder and reached up and managed to turn the laser off because it was something we would need for the night shift.

This is a directional laser to tell you where the miner is to go?-- It is a laser aligned with the sights so it gives you a positive indication of where the centre of the bord is.

And you mentioned that during the inspection you gave Newton details of the ventilation changes that would have to be made?-- Yeah, well, Bobby was going to be the spare deputy that night and the plan was to complete the ventilation sweep across the seals, and because of the fact that the 512 is his section, then he would obviously get the job of finishing that job off. So, I schooled him in on what had to be done there, so that he would save a little bit of time on night shift.

And this was for Sunday night?-- Yeah, this was for the Monday dog-watch, that's correct.

And, in fact, he ended up not doing that, as we know?-- That's right.

But, in the discussion with him about what he was to do on Sunday night, did he raise with you the slightest concern about whether he should be going down or not?-- No.

Notwithstanding that you had been at the seals at 512 and felt positive pressure coming out?-- Yes, that's right. We were both there and we watched that.

Now, you mentioned that you - during that day - pulled up some graphs on the machine - the Unor machine?-- That's correct.

A CO trend graph, I think you said?-- That's right.

How would you describe what it showed you?-- Well, it is just a log of the CO readings done by the Unor and on the Y axis it shows CO in parts per million, and on the X axis it shows time.

Sorry, I didn't mean so much a description of what the graph is, but what was its appearance to you? Was it going up fast, medium, slow?-- It was just a linear - a steady linear increase.

Could I ask you to look at this document, please? Now, that document is a print-out of what the Maihak screen would show for each of those graphs on that day with CH4 at the top, CO in the middle and CO2 at the bottom?-- That would be O2 at the bottom.

Sorry, you are right, it is O2. Now, is that the graph or part of the graph you saw?-- Yes, it is, yeah, although obviously when I looked at it it wasn't up to the 24 hour period, but that's exactly the same thing that I was looking at on the screen, yes.

And we can see the dips in the graph which seem to correspond, would you agree, with the span test?-- Yes.

I tender that document.

WARDEN: Exhibit 185.

ADMITTED AND MARKED "EXHIBIT 185"

MR MORRISON: When you pulled up a graph, that's what you saw?-- That's right. When I pulled up the time graphs, that's what I saw.

And were you caused any concern by anything you saw on those graphs?-- No.

You mentioned earlier in evidence that there was a steady linear increase of CO and a corresponding steady linear decrease of CO2; is that how you would describe those graphs?-- Yes.

Mr Schaus came out in the afternoon on Sunday to the mine?-- That's correct.

You mentioned that you had a conversation with him at that stage whereby he told you to ring George Mason if there were any concerns?-- That's correct.

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You related to him something about the rates of CO make - not make, parts per million increase?-- Yeah.

And did you tell him anything about whether you considered 512 to be a problem or normal or routine?-- I can't specifically remember saying anything, but it wouldn't have gone against what I held as a view.

So, if you expressed any comment to him, it would have been consistent with what you have been telling us?-- Yes.

Now, in terms of what men might raise with you - that is, whatever concerns they might raise with you - were the miners at No 2 a bunch of timid little people, or afraid of raising things with undermanagers like you?-- No, well, a lot of fellows - some of the younger blokes wouldn't - if they had a concern they wouldn't raise it with you; so, if they did have a concern, they would tend to go to the more senior fellows, but the more senior blokes wouldn't - they are not intimidated by undermanagers.

What about the check inspectors? Are they backward in coming forward?-- No.

In particular, someone like Terry Vivian?-- No, neither Terry nor Mouse were backward in coming forward.

If you had been on the night shift - if it had happened on the night shift someone had come to you and said they were worried about going down, how would you deal with that?-- I would have rung George. If someone expresses a concern, then you would have to address that concern. You can't ignore it and you can't expect to put someone aside and send other people down the mine, because that's just not the way it works.

Would you involve the check inspectors in what you are doing?-- Yeah, well, you would - I would involve the check inspectors and the deputies.

And George Mason?-- Yeah, I would get George out as well.

Now, you spoke to Mr Mason that evening, I think, about the same topic - what to do if the men raised concern?-- That's correct.

Now, did you have any impression in your mind that what was being discussed was some sort of industrial confrontation?-- No, it had nothing to do with industrial conflict, or anything.

Was the context really that the men would know what was going on?-- Yeah, well, George was saying that they would know because there was blokes on the sealing job that were there on the night shift that night.

Mason raised that?-- Yes.

So, even if you didn't know yourself, you were certainly told

at that stage by the undermanager in charge that some of the men on the night shift were, in fact, men who had worked on the seals?-- Both George and I knew that there were blokes on the night shift that had worked on the sealing.

Len Graham was an obvious one?-- George McCrohon is another one.

Exactly. Now, were you aware that there had been a union meeting on the Sunday morning?-- No, I didn't know anything about a union meeting.

Where the question of the sealing of 512 was raised; were you aware of that?-- No.

I won't go into what was said and how it impacted on people, but there were a number of people who went down that night - down the pit, that is - who were also at the union meeting, namely Dullahide, Mark Nelson, Michael Shaw - those three men. Now, from what you know of those three men, if they had been told that there was a problem with 512 being sealed because of a heating or a suspected sealing, are they the sort of blokes that would come up and raise that with you?-- I viewed myself as someone who was approachable, and I think that if that would have been raised, I would have thought that they would have come and talked to me about it.

You would expect them to come and raise it with you?-- Yeah. I'm not the sort of person that would bite someone's head off over that, no.

Now, when you spoke to Mr Mason that evening, you told him that the panel would go through the explosive range some time on the night shift?-- Yes.

Was there a discussion or a statement by each of you, one to the other, or agreement between you as to whether there was any concern arising because of 512?-- Yeah, well, I'd told George that personally I had not a problem with 512 whatsoever, and from what I can recall of the conversation, too, George didn't have any concern with it either.

Did he, in fact, ask you your view - what do you think about 512?-- Yeah, he did. He asked me what I thought of it.

What did you tell him?-- I told him that I didn't have a problem with 512 at all.

And was it apparent to you that that was his view as well?-- Yes.

Did you tell him the CO was going up in a linear way?-- Yes.

A steady linear increase?-- Yes.

Did you tell him anything about whether there was an exponential increase?-- Well, there wasn't an exponential increase.

Did you say anything about that to him?-- Yeah, I would have said that it was going up in a linear fashion and not showing any exponential increase.

Now, when it came to the topic of whether men would raise concerns or what to do about men if they raised concerns about going down, was there any suggestion from Mr Mason that people would be forced down the pit?-- No, because you can't force people down the pit.

That would just never happen, would it?-- You can't - because you just can't push people down the mine. If they - if you tried to - there is two reasons for that: first of all, because of the aspect of the company trying to go towards a safe sort of - or conveying a safety policy, that would be viewed in bad terms from that respect; secondly, you can't physically force anyone down the mine. If you tried to do that, there would be a strike.

I nearly interrupted you and I should learn lessons from the ones I have dished out, as Mr Clair nods.

MR CLAIR: I was about to be discourteous and stand up, Your Worship.

MR MORRISON: If you wish, I will be courteous and sit down.

The men just wouldn't wear anything like that, would they?-- No.

You just couldn't possibly pull it off?-- The culture of the place wouldn't allow that to happen.

Now, Mr Mason said to you that you had the conversation, or at least the words exchanged about the fact that there were men on the night shift who had been on the sealing and there were men who would know the situation?-- Yes.

Therefore you could expect them to raise it if there was any concern?-- That's right.

And that's the context of that comment about, "You don't need to raise it. They'll raise it if there is one."?-- Yes.

That's the way you understood it?-- Yes.

Now, did you, in fact, discuss alternative jobs if that situation arose?-- Yeah. George said to me that if the situation arose, there was alternatives like getting No 4 underground inspected and going down and doing a lot of housekeeping down there. Lots of pipes had to be brought out of the mine and-----

This is at No 4 Mine?-- Yes, and also on the surface we had a lot of old belting that had to be reeled up and all that sort of thing.

Making up a belt?-- Yeah, I think there was a belt had to be made up for 5 South. There was a belt extension due in there in the next week.

And maintenance and cleaning of belts?-- On the C belts, yeah, they could be done.

And another alternative was training or operator training?-- Yeah, if you had machines on the surface you could do something like that.

So there were in fact a range of alternative tasks if that happened?-- That's correct.

Did you get some comment made to you by him if the men didn't go down but you thought it was safe what you should do?-- Yeah, well, he told me that if the men decided that it wasn't safe and wouldn't go down, he asked me whether I felt it was safe and I said, "Of course.", and he said, "Well, make sure you go down as a matter of principle."

And did you have any problem with that?-- I didn't have a problem at all. I told him I would go down and kiss the seals.

You were serious about that?-- I'm serious about that.

I don't mean the kiss the seals part, serious about the fact that you had no problem if the men stayed up but you thought it was safe, you were going to go down?-- I didn't have a problem at all.

Now, you met John Blyton who was the outgoing day shift - outgoing afternoon shift deputy?-- That's right.

And you met him in the showers. Now, you've known John Blyton some time?-- Yeah.

He's a very thorough, very experienced deputy, isn't he?-- Yeah, well, he's the prime - whenever Moura has a Mines Rescue competition he's normally the captain of that team.

Not only is he captain of the Mines Rescue team, he has in fact been the acting manager or superintendent of the Mines Rescue station while Dave Kerr has been away?-- That's correct.

If he had any concerns about being down the pit at 512 there would be no doubt he would raise them with you?-- No, no. If he had a concern he would raise it in no uncertain terms.

Did he mention any such thing at the end of his shift, that's the end of the afternoon shift, commencement of the evening shift?-- No.

Did he mention anything like that?-- No.

Did he say to you anything like, "The men shouldn't be down" either as a matter of policy or principle or necessity or

wisdom?-- No, he didn't say that.

Now, you mentioned that from time to time that night you checked the Unor screen and watched the figures?-- That's correct.

And that's interspersed with your activities trying to get enough men to the pit to work?-- That's right.

In respect of which there was some difficulty?-- Yeah.

And you brought up the Ellicott Diagram at one stage for people who were looking at the screen?-- That's right.

Could you remember who those people were?-- I'm sure one of them was Jimmy Parsons and the other one was Johnny Owens.

Were there others as well?-- Yeah, there were fellas sort of walking out of the lamp - out of the bathroom, and because of the location of the screen - the screen is between the doorway of the bathroom and where the hot water urn is that everyone fills up their thermos.

Was it an unusual thing to see miners checking out the Unor screen?-- No, especially not after a sealing.

Is it like a topic of conversation or activity after a sealing?-- Yeah, it's different. You've sort of got different readings on the screen.

Now, you mentioned that you couldn't recall if the Unor data was red or green or whatever it was when you looked at the screen that night?-- No, I can't specify what was in any particular thing.

Did you in fact make some notes of the readings from time to time?-- Yeah, well, from the time I arrived at work on Sunday morning I - on the back page of the previous undermanager report there I just scribbled some stuff as far as readings went and approximate times of those readings.

Can I just ask you to look at this document, please? I want you to pay attention to the yellow sheet. Turn it over and check the front page, and you might confirm for me that it's the shift report - your shift report for that Sunday night?-- It's on the back page of the Sunday shift reports for night shift, day shift and afternoon shift.

Does it contain your writing?-- Yeah, that's my handwriting, yes.

And on that page there are a number of matters written which were after the explosion, aren't there?-- That's correct.

If we look at it can we deal with the words "dust coming up"?-- Yeah, well, I suppose - I don't know why I did it, but when I was talking to George and to David Kerr my hand must have been just writing my thoughts.

That's something put in afterwards, "dust coming up"?-- Yeah, that would have been while I was on the phone to either George or David.

Directly under that "ring D Kerr"?-- That would have been when George told me to ring Dave Kerr.

"02 suits - get out"?-- Yeah, "02 suits" means just to get the Mines Rescue room open and to get them out and get them checked.

And "man phone" means keep someone on the phone?-- That's correct.

Directly under that "instructed not to let men down the mine", and what's the next -----?-- That's "11.40".

11.40?-- Yeah.

Then under that is that "G Mason arrival 11.55"?-- That's correct.

To the left of that "testing suits 11" - is that -----?-- "50".

Is it "11.50"?-- Yeah, it's 11.50.

Now, directly to the left of "ring Dave Kerr" does that read "alarm 5 South return"?-- Yeah, that's reference to the BM1 alarm.

What is the line under that? "U/G", underground -----?-- That's "U/G two-way", that was just my reference to the buzzing nose that come through the two-way.

That's the static you told us about?-- That's correct.

Above the "alarm 5 South return" is a time written "11.30"?-- Yeah.

What does that signify?-- I can't specifically remember, but I believe that's the time that the phone went dead and the alarms went off.

Now, left again is a bracketed line or two that reads "first men out 11.50 p.m."?-- That's correct.

And above that and upside down is an 015 telephone number and a list of initials; are they people you were trying to ring?-- No, what they were is - that's Cole Klease, Bobby Stewart, Greg Edelman and Reece Robertson. They'd called us - he called me on a mobile phone because they had been contacted by Mines Rescue to go to the mine and they were just calling me up to let me know that they were going to arrive in - I think it was approximately 20 minutes or something.

Back to the middle of the page there are three figures written which appear to be "15900", "18.302" and "10.89" -----?-- That double zero is a "CO".

I'm sorry, yes. What do they relate to?-- I would say that that would have been maybe the last readings I looked at on the screen.

Directly below that -----?-- I think what it was was when George rung me, up the first thing he asked me was, "Give me some readings.", and that's what I gave him.

Directly under that you will see the word "Ellicott" then some figures?-- Yeah, "2.30".

Is that a time?-- I'm sure that's a time, yeah, and that X and Y were my recording of the approximate position of the - well, what would you say, the line, I suppose, the leading edge of the line at 2.30 and then again later.

There are figures under the "X"; 10?-- Yeah.

Then under that again "8"?-- That's right.

Are they both the X axis?-- Yes, they are both the X axis, but different times.

Under the "Y" is "3.5" and then "1.8"?-- That's right.

And to the right of that is what appears to be "1340"; is that the time or is that something else?-- No, no, that's 13 hours.

13 hours?-- That's right.

13 hours from what? From something -----?-- I can't really remember, but it's probably just a comparison of that point has moved that far in 13 hours.

And then directly under that we have a number - like a table of figures with times to the right-hand side?-- Yes.

Is the first column carbon monoxide readings?-- That's correct, yes.

The second methane?-- That's right.

And the third oxygen?-- That's right.

And are they notations of readings which you made looking at the Unor screen that night?-- They were notations taken from the time I arrived at work on Sunday morning right through until the night-time. I think the last entry there is "10.30".

At that stage "1.59, methane 10.9 and oxygen 18.3"; is that right?-- Yeah, 18.3, that's right.

Can you remember something happening when the methane went to a figure of around 10?-- Yeah, well, I can't explain it, but for some reason the methane - I think when I looked at the screen as part of just checking on the screen during the night it was about 4.8 or 4.9, and then all of a sudden it jumped

straight to 10 and -----

You saw that rise?-- Well, I didn't actually see it - like it wasn't -----

It didn't flick over while you were watching?-- I didn't see it flicking while I was there, but I came back and saw it was 10.

What did you think about that?-- I couldn't for the life of me work out what it could have been. The only thing I thought was maybe that was where the location of the monitoring point was, it's possible that maybe the methane had stratified, hit the seal and started coming back, like - if you know what I mean. Like it's sticking to the roof and as it builds up against the seals and starts to move back down below and it got to a point where the filter - where it hit the filter and it was starting to suck up a methane accumulation.

Suddenly picked up an extra bit?-- Yeah.

Did you at the same time check out the CO parts?-- Yeah, I looked at the CO at the same time.

And at the time you noticed this sudden jump in methane had there been a sudden jump in CO?-- No.

Had it gone up by what?-- The CO was still going up the same as what it always had been, just -----

So even at that point there was not this sudden rise of methane that you had referred to as being the signature in your experience of, say, a heating?-- No, no, just - I just thought that it was an accumulation, it's working its way back down and it had immersed the head of the Unor line.

But there was nothing to match it on the CO at that time?-- No.

I tender that document, Your Worship. I will tender the large copy rather than the page in the book might be best. I will provide one now.

WARDEN: Thank you. I will allow the photocopy to go in as the exhibit, the original to stay in the book. Admitted and marked Exhibit 186.

ADMITTED AND MARKED "EXHIBIT 186"

MR MORRISON: On that night you had a conversation that you told us about which was to do with manning requirements with Terry Vivian, that was whether Parker as a contractor needed to be accompanied by two people?-- Yeah, well, I didn't - because I knew that the union ruling was two guys to go with Terry I didn't want to - I wouldn't tell Terry that "I'm just

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going to put you", I would prefer to check if it's all right just to put one bloke. If he would have turned around and said, "No", it wasn't, then I probably would have sent Robert Parker home I'd say.

Terry Vivian said it was all right?-- Yes.

Did you have a reasonable relationship with Terry?-- Yeah, I could get along with him fine. Often he was the one that got to drive me home from afternoon shift.

While you were having this conversation about whether it would be all right or whether he was prepared to go down with just one man, was he doing something in relation to you?-- Yeah, he put his arm around me and we walked across the start point.

Was he telling you something about whether it was okay or not?-- Yes.

Well, what did he say to you?-- He just said - I said to him, "Could I talk to you a little bit?", because every shift runs - they got different custom practices as far as numbers go. For example, with my crew, they want two on belts whereas, say night shift and the other crew, they put up with, say, one on belts, it doesn't really - but me and Mauri Machad a bit of a run-in over that and I sort of ended up apologising to Maurie - this is on my shift - and said that I would maintain two, but on other shifts they would let you get by with one. So what I was doing, in effect, was asking what the custom practice was, with Terry being a union delegate, whether I could just run one fellow on belts.

And his response?-- Yes.

He said, "Yes."?-- Yes.

George McCrohon arrived later than the others?-- George is an eight hour deputy so like his official time to start is 11 o'clock, but he normally rolls in earlier than that.

He was a deputy who worked on the seals?-- That's right.

when he arrived - or at any stage until he went down did he say anything to you about the men shouldn't be down or that he wouldn't go down because of any feature to do with 512?-- No.

You in fact asked him about how the sealing process had gone, this being the first time you had seen him since then?-- That's right.

And what did he tell you about that?-- He said there wasn't a problem there at all.

Can I just take you back a moment to that time when you saw the sudden jump in methane? Did you also raise the Ellicott Graph at that time?-- Yes.

And can you tell me about that?-- Well, I raised the Ellicott Graph because the previous time I looked at the Ellicott Graph

the methane was around 4.8, and normally with atmospheric air 4.8, it should be in the explosive range, but because of the depressed oxygen that wasn't the case. When I raised the Ellicott Graph after the 10 per cent or so, I think it was, on the screen, I was expecting to see it in the explosive range.

And?-- I can't remember seeing a point there.

When you looked at the graph you couldn't see a point in the explosive range?-- Yeah. I know it sounds impossible, but I can't remember seeing a point there.

Could it have been perhaps obscured on the axis?-- Well, just to my mind I would have thought that 10 per cent methane would have put it somewhere within the quadrant where you could see it.

You thought that was unusual?-- Yeah, well, I just doesn't believe it.

Can I ask the witness to see Exhibit 24, the blue book? You were asked some questions by Mr MacSporran about why you had gone back to parts and CO make and the like; do you recall those?-- Yes.

Could you turn to page 22 of the blue book? Is there a section there dealing with carbon monoxide?-- Yes, there is.

Does it say in the first sentence that generally less than 20 parts per million can be considered harmless?-- Yes.

And does it also then go on to talk about threshold limits of 100 ppm?-- Yes.

And on the right-hand side of that page, on page 23, under the table of percentages does it also then go on to say in relation to accumulations of CO that "The possibility of such accumulations does exist if a spontaneous heating is occurring in a coal mine..."?-- Yes.

"...particularly in the main return serving an affected district when final sealing is being undertaken"?-- Yes.

Do you understand that to be referring to the accumulations generated by an active spontaneous combustion fire?-- That's correct, yes.

And if you turn over to page 58 - in fact 57 and 58, the section Mr Martin took you to, do you understand the book there to be discussing also what to do if there is an active spontaneous combustion fire and you are sealing?-- Yeah, 57 - whereabouts are you looking at on 57?

Top of 58 is the passage Mr Martin took you to?-- Yes.

Is that the context? In the context of an active spontaneous combustion?-- That's right.

That's what you were saying before is just common knowledge?--

Yes.

In other words, if you have the ignition you would know you have an ignition?-- Yeah, you would know you've got a heat source, yes.

You wouldn't count on much doing anything but this?-- Yes.

That's a different matter from where you don't think you have got it?-- That's right.

And if you talk generally about No 2 and your experience as a miner, have you ever had any suggestion made to you that you should evacuate other than in this circumstance?-- No.

Well, if we turn over a couple of pages to page 64, do we there see on page 64 a discussion of the Graham's Ratio, the CO/O2 ratio?-- Yes.

And does that book say that - at least at the time it was published and promulgated - that the Graham's Ratio still constitutes the best method of determining the heating trends?-- Yes, it says here that it is accepted that the use of CO/O2 ratio still constitutes the best method of determining the heating trends.

Now, if someone was being given this book as being a text of sorts to read about spontaneous combustion, they couldn't help but think that it was - they were being told that the Graham's Ratio was the thing to look at?-- That's right.

And that the parts per million you needed to be wary of was 20 and plus?-- Yes.

Now, I won't take you through all the pages in the book, but can I just let you know there is nothing in that book about CO make. Does that surprise you?-- Well, I think this book is pretty old, isn't it?

But if it's still being given out, people are being educated on the basis that CO make doesn't matter; is that right?-- Yeah, well, it shouldn't be given out.

Well, Mines Rescue have been giving it out for years?-- Yes.

And if CO make was truly the brave new world, the frontier of monitoring, wouldn't you think the Inspectorate would do something about updating this basic text?-- Yes, well, this shouldn't even be given out at all.

Does it surprise you to find out that that thing is being handed out and nothing is being done to update it to include CO make rather than CO parts and Graham's Ratio?-- I'm surprised - all it does is confuse the matter, doesn't it?

I have nothing further, Your Worship.

MR CLAIR: Your Worship, I do have some more questions and it may be appropriate if I do my re-examination before Mr Harrison does his.

WARDEN: I will just indicate that we have a short afternoon.

MR CLAIR: What time did Your Worship propose to finish?

WARDEN: 3.15 at the latest.

MR CLAIR: Well, I would prefer to start rather than to abandon it at this stage, Your Worship.

WARDEN: Thank you.

RE-EXAMINATION:

MR CLAIR: Now, Mr Squires, you made some reference in the course of one of your answers to the fact that you had taken an oath when you were sworn in here to give your evidence; do you remember that?-- Yes.

And that oath, of course, was to tell the truth, the whole truth and nothing but the truth about these matters, wasn't it?-- That's correct.

Well now, you have, in effect, given at least most of the evidence that you will be giving before this Inquiry at this point, you have been questioned by everybody at the Bar table at least, and I want to suggest to you that in fact you haven't told the Inquiry the truth, the whole truth and nothing but the truth at all. Now, what do you say to that?-- Well, sir, I come to this Inquiry with the thought that it didn't matter what deficiencies of mine were displayed; that if I could just walk out with integrity of being able to give information that I had, then it really didn't matter the shortcomings that I had or that under the examination of everybody here that I was shown to fall short, and for that reason all I wanted to do was to be able to go out and to be seen to be giving the right information.

Well, I am going to suggest to you that there are in fact a number of areas in which you have been far less than truthful, and I have to take you to them out of fairness, and indeed I am obliged to take you to them?-- Yes, sir.

To see what your explanation is in relation to them. The first of those relates to the events on 24 June, and that's the day on which Reece Robertson reported to you that he had smelt a strong benzene-type smell and that it was necessary to watch the panel. Now, did that happen or didn't it?-- Sir, I can't remember that.

Well, surely if that happened, you would remember it, Mr Squires. I mean, we have had evidence from a number of witnesses about the effect that it would have on them to be told that there was a smell in a panel, and particularly if it was a description of a strong benzene-type smell. Now, surely if that happened, Mr Squires, you would have remembered it. Now, did it happen or didn't it?-- Sir, I can stand here now and I don't have to live with what you think what I've said, I can live with my own conscience.

Well, you see, there is by way of what I might call moot evidence on this point, of course, the report that Mr Robertson submitted that day which records that he smelt a strong benzene-type smell, and that was Exhibit 45 - you saw it in the course of your evidence - which records that he informed the undermanager that at this point there was a strong benzene-type smell and to keep a check on it?-- Yes.

So that we do, as I say, have some moot evidence on this point, and I am going to suggest to you that that did in fact happen and that it's the sort of thing that you couldn't possibly have forgotten?-- Well, I'm sorry, but I have got to disagree with that.

Well, you see, I'm going to suggest to you, Mr Squires, that the difficulty you face in respect of that report is that you didn't do anything about it, that you did receive it and you didn't do anything about it, and that's why you are not prepared to now tell this Inquiry that you did receive that report?-- No, no, I'll be quite honest and I've got no - as far as any outcome toward me, I've got no fear toward that, and I'm telling the truth when I said that I've never denied that Reece might have given me that report. I think I've detailed to the Inquiry that Reece, on production days, would hand me the report personally. I've not denied that Reece would not give me that report. I've never denied that Reece would have rung me up. I've tried to explain that my characteristics - I've tried to explain from a hindsight point of view that, in my belief, I would have seen a deputy on the dog-watch and passed that information to him, but I will not accept or be bullied into saying that I'm lying when I've said that I can't recall that situation.

Look, understand this, Mr Squires: I am not seeking to bully you, it's just that there will come a time when there need to be submissions made in this matter, and I don't propose to make submissions on matters without giving you some opportunity to comment on these things that I am about to put to you; do you understand that?-- I recognise, sir, that you are not trying to bully me.

I am not trying to bully you at all. Can I move to another point? I suggest to you that in fact you are not being honest with the Inquiry when you say that you didn't realise the significance of calculating the CO make and that you weren't aware of the significance of levels of CO make in terms of whether they demonstrated a danger of spontaneous combustion. Now, what do you say to that?-- Well, I've just - I've taken great pains to try and explain that that's correct and that is the truth.

You see, you had calculated them in the mid-80's, or '87, I think you told us?-- That's right.

You knew how to go about those calculations and you must have known what was the significance of the levels of CO make that you were calculating at that time, isn't that so?-- No. It was just I knew the formula to calculate CO make in 1987.

Yes, and you simply abandoned that after 1987; is that what you are saying?-- That's right.

And are you telling me or telling the Inquiry that in the years following 1987 you didn't regard the calculation of CO make as being a valuable tool in ascertaining whether there was spontaneous combustion?-- Well, I've tried to make it clear to the Inquiry that my understanding of CO make and my understanding of the plotting of CO parts per million, I couldn't see a difference between the two, other than that CO make does take into consideration quantity. So, I found just to relate to the experience that I have had from 5 North and my understanding of CO from that, that that was a good indication of what the start of a spontaneous combustion was.

The difference in quantity, Mr Squires, difference in quantity of air being a significant difference which could lead to a significant adjustment in the CO make if you calculated it through from your CO measurement, isn't that so?-- Yes.

There is a difference?-- There is a difference but -----

And an important one?-- It is an important one, sir, but as I've explained, I didn't know the numbers and I just had that experience from that 5 North.

Well, let me put this to you: that if you didn't appreciate - knowing what you did about calculation of CO make in 1987, if you didn't appreciate the difference between CO measurement and CO make to the extent that you realised that it was an important tool in trying to gauge any dangers from spontaneous combustion, well then you simply weren't acting competently as an undermanager in the mine. Now, what do you say about that?-- As far as my competency as an undermanager goes, I never received any feedback from either the people I worked with on a shift basis or by my superiors who would, once a year, give a performance review. Nothing indicated that - otherwise.

Well, let me move to another point. I suggest to you that learning at least what you have told us that you have learned about Graham's Ratio, I suggest that you did appreciate the significance of the Graham's Ratio and that you could not have been aware of what you have told us you were aware of without being aware also of the figures at which the Graham's Ratio indicated a danger. Now, what do you say to that?-- No, well, see, I understood the Graham's Ratio as being a CO/O2 deficiency ratio because often that's how it was written rather than Graham's Ratio, and so I knew the description of it, but I honestly didn't know what values to assign and what meant what.

Well, again, let me suggest to you that if you at least had learned what you did about the Graham's Ratio and you didn't take further steps to ascertain what were danger levels or what levels indicated danger, then again that simply indicates that you were not acting competently as an undermanager. Now, what do you say to that?-- Well, I'll accept any failing that I have that I didn't instruct myself in that.

Now, I want to suggest to you - moving on - that when you returned to the mine on 1 August that, first of all, you did become aware that there was this practice of figures being taken on a shiftly basis, and I think you have already accepted that; is that right?-- No.

You haven't?-- No.

You did see the deputies' reports?-- Yeah, I saw -----

Showing - sorry?-- The first one that I can remember seeing it on a deputy's report was the Friday day shift, and all that was was I noticed that they had put in CO, the wet and dry bulb readings and a velocity reading. To me that didn't indicate anything abnormal. It didn't indicate to me that they were keeping a log of the readings. To me it was like occasionally people would do that as a velocity reading.

I suggest to you that seeing that, you must have appreciated that there was an intention that there be a calculation of CO make with those figures?-- No.

You say not?-- No, I'm sorry, sir, I can't agree with that.

Well, let me move on again. Let me suggest to you that when you came in as undermanager on the afternoon shift on 3 August, that you must have become aware of the fact that there was an alarm registered on the Unor at that time. You will remember I took you to the document that showed there was an alarm registered sometime around 11 o'clock in the morning before you came which remained unacknowledged until 7.05 p.m.?-- Yes, I remember you taking me through that.

Now, I am putting it to you that you must have become aware in the course of your duties - as undermanager on that shift you must have become aware of the existence of that alarm on the Unor. Now, what do you say to that?-- Well, unless the person who acknowledged the alarm told me, it's possible that I wasn't.

Well, you had a practice of consulting the Unor. It was in fact in the next room to your deputies room, isn't that so - to your undermanager's room?-- That's right, but, as I said, it wasn't a set practice of either checking at the beginning of shift or anything. It was sort of very flexible, the time I looked at it.

Well, I put it to you that you couldn't really have looked at that screen if there was an alarm showing on it without being conscious of the alarm. Now, what do you say about that? It defies commonsense that you could, as an undermanager, look at that screen showing the readings in relation -----

MR HARRISON: I would object to the comment, Your Worship. That's really comment we are getting at the moment, not a question, in my submission.

MR CLAIR: I'm sorry, what part of the comment?

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MR HARRISON: It defies logic as an undermanager. It defies commonsense as an undermanager is the suggestion. In my submission, that's comment. Mr Clair is quite entitled to put questions to him, but, in my submission, he is not entitled to stand up and make comments.

MR CLAIR: I was actually putting it to the witness as a proposition for him to make some comment on, Your Worship, but if it troubles Mr Harrison, I will put it another way. I would suggest to you that any competent undermanager who looked at that Unor screen when one of the points was in alarm could not have failed to miss that there was a point in alarm. What do you say about that?-- I would agree with you.

Well, in that case, if you did look at that Unor screen during that shift and you failed to notice that it was in alarm, then that certainly indicates that you weren't acting competently as an undermanager, doesn't it?-- If it means that I checked - if I checked that screen during that time and not after someone had accepted that alarm, then I would agree with you.

And it wasn't accepted until 5 past 7 that evening; is that right?-- That's correct.

Now, on the Friday afternoon shift, I'm suggesting to you that what happened, in fact, is not that you simply arrived into the deputies' cabin and overheard or at least stumbled in on a conversation where Caddell was talking about this smell in 512 panel, but rather that Mick Caddell phoned you at about 5 in the afternoon and told you about the strong tar smell and he expressed the view to you that the panel ought to be sealed as soon as possible?-- No, sir, I maintain that I can't remember that phone call at all.

I'm suggesting to you that's the way it occurred and not by way of some casual conversation that was going on in the deputies' room?-- No, well, I'm telling you that I cannot remember that phone call and the first thing I knew about that report was when I walked into the deputies' cabin.

Well, again, in this connection, what we have is the mute witness that - the piece of paper - the production deputy's report, Exhibit 81, that records on it what Mr Caddell found, and it records it in relation to the first inspection, and he records there, "A strong tar smell was evident at 10 cross-cut with the above reading taken.", and the above reading being the 10 ppm at number 10 cross-cut. Now, in the circumstances, where Mick Caddell - and I think you have agreed that he was a careful deputy - a thorough deputy, to use your words - a thorough deputy; is that right - to use your words?-- Yes, I would agree with that assessment.

If Mick Caddell, as a thorough deputy, found that situation, which some, at least, might say was alarming - a strong tar smell - and a reading of 10 ppm, wouldn't you agree that as a thorough deputy he would make the phone call that he has spoken of?-- I have never denied that Mick wouldn't have made a phone call.

Let me put it to you that if he had made that phone call that afternoon, then there is really no way in the world that you could forget that-----?-- I'm sorry-----

Let me finish - given, particularly, the subsequent events - the explosion only two days after that?-- I can't remember that, sorry.

Now, can I move to the Saturday morning? You arrived at 6.30 on the Saturday morning?-- That's correct.

And, again, by way of a mute witness, we have the document, Exhibit 127, which shows that there was an alarm at 7.49 on that Saturday morning which was not accepted until 2.20 in the afternoon. Now, do you remember that, or not?-- I can't remember that alarm going off.

You see, I would suggest to you that if that alarm did go off showing an excess of - I think it was an excess above 8 parts per million CO in the 512 top return on that Saturday, if that alarm went off, then you couldn't possibly, given the subsequent events - you couldn't possibly now not remember it; what do you say to that? Do you understand what I'm suggesting to you?-- Not really.

That if that alarm went off, and as I say the document indicates that it did at 7.49 that morning, showing an excess of CO in the top return in 512, what I'm putting to you is you couldn't have possibly forgotten that, given that this was the day before the explosion; now, what do you say?-- It's just - what time was that again, sorry?

This is at 10 to 8 in the morning, basically - on the Saturday morning. You had started shift at 6.30?-- Yeah.

The alarm remained unacknowledged until 2 o'clock in the afternoon - 20 past 2 in the afternoon?-- Yeah, so what you are saying is you want to know whether I could remember it.

I'm saying that it is the sort of thing you couldn't forget, given, particularly, subsequent events?-- Well, I'll try and explain to you just - the situation of what it's like at a shift change, particularly in the morning, on a weekend and with a lot of rushing around and that sort of thing, and organising, and machines starting up and that sort of thing, it's - especially if someone would have acknowledged the alarm siren, it's possible that - well, I can't remember it at all, no.

You see, I'm suggesting to you that that happened, and that either you are aware of it, or - and you say that you weren't aware of it, or at least you can't remember it - if you weren't aware of it, then what I'm putting to you is that, simply, you were not acting on that day as a competent undermanager. If an alarm could go off on your shift in relation to one of the panels and remain unacknowledged until 2.20 in the afternoon and you didn't become aware of it, what I'm putting to you is you simply weren't acting competently as an undermanager; now, what's your comment on that?-- Well, in hindsight, I should have picked that up at some stage in the day, yes.

That might be an appropriate point, Your Worship.

MR MORRISON: Your Worship, I want to make a comment about what has been happening for the last 15 minutes. Now, it is one thing to confront a witness with evidence and then later on make the submission that his evidence should be rejected for some reason; it is quite another, whilst eschewing any suggestion of bullying, to confront the witness with the fact that he is a liar - according to you - and not put the evidence to him, and on two occasions now Mr Clair has chosen in this, what I would submit, clearly deliberately dramatic fashion to adopt this course, and yet on two occasions has chosen, I would suggest, not to put the evidence to the witness. Now, it is the fact that Mr Robertson did not give evidence that he related in the phone conversation to Mr Squires what is reflected in his report. I will read it to you. It is page 494 line 26: "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 was a bit benzeney, or something like that." In other words, he has not given evidence that matches that

report, yet the only evidence that is put to this witness is the report, as though that were the only evidence. Now, in fact, Mr Caddell, on the second occasion, did not give evidence that in the phone call he had that he relayed the smell in the terms in which his report records it. To start with, his statement says no such thing; secondly, when he gave evidence being adduced by Mr Clair at page 28 of the transcript, he said no such thing, and then when I asked him at page 96, he agreed with the proposition that he had said, "It is a tar smell. You know, it is a bit of a smell like No 4 was." Now, if we are going to have the testing of witnesses, obviously it has to be done on the evidence; that's the first point, but particularly so when one chooses to do it in this dramatic and quite unnecessary fashion. It is absolutely unnecessary to follow this course. Secondly, it is unnecessary to this Inquiry's determinations, under the statute, to have suggestions put to witnesses that they were or were not acting competently when they approached some task. It forms no part of this Inquiry's deliberations, those questions. It is as bad as suggesting negligence. Now, I raise these matters in the hope that when we resume we can proceed on a proper basis, and not on the basis that we have just seen demonstrated for the last 20 minutes.

MR MARTIN: I've been intending all week to direct the Inquiry's attention to section 75 of the Coal Mining Act, 1925, which expressly raises a presumption of negligence against the coal owner.

MR CLAIR: Does Your Worship wish to hear from me at this stage?

WARDEN: Only if it is brief.

MR CLAIR: Can I make a brief reply?

WARDEN: Yes.

MR CLAIR: Quite contrary to what Mr Morrison suggests, it is necessary to put these matters. If submissions are going to be made about the reliability or the truthfulness, at least, of this witness' evidence, then the material that is alleged to be untruthful should be isolated, and, ordinarily in the course of proceedings, it would be. It wasn't appropriate to do it until the witness at least had reached this stage in his evidence and, Your Worship, I'll say this: that it certainly wouldn't be fair to be making submissions about this witness being untruthful in certain respects unless the matters that are alleged to be untruthful were put to him and he had an opportunity to comment on them. I believe I've done so fairly. If I have been inaccurate in any way in terms of the evidence which I have put to him, or the matters that I have put to him, then most certainly I'm prepared to be corrected on that, and there will be an opportunity in submissions to deal with competing matters within the evidence. If they are matters that are quite clearly wrong, well, then, I'm prepared to be corrected at this stage, but, Your Worship, I'm not prepared to be curtailed in the exercise of putting to this witness matters which I will subsequently be submitting

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untruthful, because he is entitled to know what's going to be pointed out and is entitled to comment on it. Secondly, Your Worship, it is proper to put to this witness any allegations that he has been incompetent in some way, and again I reject the notion that I should be curtailed in that exercise.

WARDEN: Thank you, gentlemen. I will rule on that Monday morning. Please adjourn to 11 a.m. Monday morning.

THE COURT ADJOURNED AT 3.20 P.M. TILL 11 A.M. MONDAY, 27
FEBRUARY 1995

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 27/02/95

..DAY 33

THE COURT RESUMED AT 11.50 A.M.

MR CLAIR: Your Worship, I had made a brief submission on Friday, but, of course, at that stage, under the circumstances, I didn't have time to deal with the matters that Mr Morrison raised and I would like to deal with those now.

WARDEN: Yes.

MR CLAIR: Thank you, Your Worship. There are, in fact, a number of matters that were raised in the dying stages. They appear at pages 3292 and 3293 of the transcript, and the first matter that Mr Morrison complained about was what I put to the witness Squires who was then in the box. I think he still is in fact, Your Worship.

WARDEN: I stood him down while we deal with this.

MR CLAIR: Thank you, Your Worship. The first complaint was that in respect of two matters that I put to the witness Squires, that I had put the evidence either inaccurately or, as he put it at a later stage in his submission, that I hadn't tested the witness on the evidence. Can I deal with that first, Your Worship? The first area of complaint about that appears at page 3292 at about line 54 where Mr Morrison says:

"Now, it is the fact that Mr Robertson did not give evidence that he related in the phone conversation to Mr Squires what is reflected in his report. I will read it to you. It is page 494 line 26: '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 was a bit benzeney, or something like that.' In other words, he has not given evidence that matches that report, yet the only evidence that is put to this witness is the report, as though that were the only evidence."

Now, Your Worship, it's relevant to look to what in fact was put to the witness Squires, and that appears at page 3286 of the transcript at line 44 where, having said that I was going to suggest a number of areas to the witness in which he had been far less than truthful and to take him to each one of them to see what was his explanation in relation to them, I went on to say:

"The first of those relates to the events on 24 June, and that's the day on which Reece Robertson reported to you that he had smelt a strong benzene-type smell and that it was necessary to watch the panel. Now, did that happen or didn't it?-- Sir, I can't remember that."

Now, that's what was put to the witness, Your Worship. It's my submission that that reflects entirely the evidence, and in

fact I'm concerned sufficiently about the nature of this allegation that I have been putting evidence inaccurately that I propose to take the Tribunal to the evidence. The evidence appears, first of all, at page 494 which was the portion that was referred to by Mr Morrison where the witness Robertson spoke about having carried out his inspection on 24 June, and at about line 24 he went on to say:

"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?'"

and he went on with the balance of that answer about his not being there until Tuesday or whatever, as he says, and then at line 40 I said:

"You did put it in your deputy's report, that report in front of you; is that right?-- Yes."

Then at the bottom of the page at line 57:

"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."

Over the page:

"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."

is what the witness said. Now, Your Worship, it's quite clear that in fact what I put to the witness was correct, that is, that there was a report to Squires on that day of a strong tar smell - and I don't want to be accused of misquoting - that is, that Reece Robertson reported to Squires that he had smelt a strong benzene-type smell, I should say, a strong benzene-type smell, and that it was necessary to watch the panel. That's precisely what I put to the witness. It was confirmed again in questioning at page 572/573 when the witness Robertson was being questioned by a member of the panel. Line 28:

"Can I take you to Exhibit 45 which is your report, number 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."

Now, it simply cannot be said, Your Worship, that what I put to the witness was incorrect, and I would ask for a finding accordingly because it's not a proper way, nor a fair way to proceed, for counsel to get up and to suggest that something has been put improperly to a witness without ensuring that he has confirmed that on the evidence. Nor is it proper to simply take one part of the evidence which perhaps raises an opposing view, depending on how one might interpret the question that was put to Mr Squires, and deal with it as though that's the complete answer. Now, Your Worship, can I deal with the other aspect that Mr Morrison complained about? Again, the complaint is at 3293, and he says - line 2 -

"Now, in fact, Mr Caddell, on the second occasion, did not give evidence that in the phone call he had that he relayed the smell in terms in which his report records it. To start with, his statement says no such thing; secondly, when he gave evidence being adduced by Mr Clair at page 28 of the transcript, he said no such thing, and then when I asked him at page 96, he agreed with the proposition that he had said, 'It is a tar smell. You know, it is a bit of a smell like No 4 was.'"

Now, Your Worship, this again is an example of one small part of the evidence being taken and a broad sweeping statement being made which asserts that I put something incorrectly to the witness. Can I take the Inquiry, first of all, to what I put to the witness, which appears at page 3291 when I said to him - line 1 on that page -

"Now, on the Friday afternoon shift, I'm suggesting to you that what happened, in fact, is not that you simply arrived into the deputies' cabin and overheard or at least stumbled in on a conversation where Caddell was talking about this smell in 512 Panel, but rather that Mick Caddell phoned you at about 5 in the afternoon and told you about the strong tar smell and he expressed the view to you that the panel ought to be sealed as soon as possible? No, sir, I maintain that I can't remember that phone call at all.

I'm suggesting to you that's the way it occurred and not by way of some casual conversation that was going on in the deputies' room?-- No, well, I'm telling you that I cannot remember that phone call and the first thing I knew about that report was when I walked into the deputies' cabin."

Now, I would like to take the Tribunal to the evidence on this which occurs initially at page 27 of the transcript where on that page at line 8 he mentioned about getting to 10 cross-cut in the course of this inspection - this is Caddell on the 5th - getting to 10 cross-cut. He says:

"And we got to 10 cross-cut and I noticed a strong tar smell."

On page 28 at line 8 I said to him:

"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."

Then in the course of the next answer he mentions getting a CO reading of 10 ppm CO and his other readings. So, he has described his inspection and the things that he found, including the strong tar smell and the 10 ppm of CO. At line 33 I asked him this:

"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 emphasise those words, "gave him the results of my inspection".

In fact, that's basically what he said in his statement also, and I pause to mention that Mr Morrison alleges that there was nothing in the witness' statement along the lines of what you have put - nothing in Caddell's statement along the lines of what I have put to Squires. Now, just pausing there - "gave him the results of my inspection" - bearing in mind that he has described his inspection as having involved his noticing a strong tar smell and getting a reading of 10 ppm at 10 cross-cut, the answer goes on:

"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 the 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."

Over at page 29 at line 34 he dealt with the report, and I said to him:

"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 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."

On this occasion, Your Worship, what I was putting to the witness was what had occurred during the conversation - that's when the witness phoned Mr Squires - and the state of the evidence at that point was that he phoned Mr Squires and gave him the results of his inspection, and went on to say that the section should be sealed as soon as possible. That evidence was modified to some extent. There was reference to it at page 39, which didn't particularly modify it. That's at line 13. Mr MacSporran's questioning:

"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."

So, there is no particular modification there. And then we come to Mr Morrison's questioning of the witness at page 95, first of all. Mr Morrison is asking the witness about his being in the deputy's cabin after the end of the shift, line 12, he said - or line 8, first of all:

"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."

There are a couple of questions, and then Mr Morrison went on:

"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."

No specification there as to what Mr Morrison is referring to when he says "you describe it as a strong smell of tar", but the witness says "yes".

"What do you mean by 'strong'? It wasn't obviously overpowering?-- No.

You simply meant not so slight as to just be 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."

So, we have Mr Morrison actually putting to the witness - or questioning the witness about his description of this as a strong tar smell, it seems, although not specifying just whether he is asking about what he said in his evidence, or whether he is asking about what he said when he was speaking with Squires; but over the page, top of page 96, Mr Morrison goes on:

"And would you have described it in those terms to Helander?-- Yes, I think so.

And Squires?-- Yes."

So, we actually have Mr Morrison asking the witness whether he would have described it in those terms, and the terms he has asked him about are "strong" and "tar", although he has elicited his now present view of what "strong" might mean and what "tar" might mean, but they are the terms that he puts to him, and then puts to the witness: "And would you have described it in those terms to Helander?" "And Squires?"

Now, in all the circumstances there, Your Worship, what we have is Caddell quite plainly staying with his evidence that he described this smell to Squires as a strong tar smell, but what do we have then? The next question is:

"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."

So, there is this question that slipped in at the end that is then adopted by Mr Morrison and put forward as this witness' evidence as to what he said to Squires.

Now, Your Worship, the fact is that that doesn't modify Squires' basic evidence on this point, and, in fact, if anything - if anything - a question like that, without anything further being put to the witness, has its dangers, and this is precisely why, when counsel are questioning a witness and they challenge a witness' recollection, or challenge the truthfulness of his evidence, counsel is obliged to put plainly to the witness what it is that he is saying. If Mr Morrison wanted to put to this witness that he at no time said to Squires that it was a strong tar smell, then he should have done so. Instead, what we have is just this little after-thought question that comes after another sequence of questions that reinforces the witness' evidence - an after-thought question when Mr Morrison says:

"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."

Then in the absence of anything being put to Caddell that he had never said that it was a strong tar smell, Mr Morrison stands up and says that I put something incorrect to the witness, because this, in fact, is the witness' evidence. Well, then, Your Worship, that - first of all, that assertion that that is the witness' evidence should be rejected, and secondly it should be made plain that if a counsel wants to allege that a witness hasn't said or done something, or if he wants to allege that a witness is not telling the truth, then he should say so in so many words. It is really a very important step, otherwise - otherwise - gross unfairness arises.

Your Worship, there is a little bit more evidence on this point. As I say, there might be some modification of this witness' evidence. I take the Inquiry to the bottom of page 99, line 57 or 58, Mr Morrison questioning Caddell:

"Now, could I 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 the section should be sealed as soon as possible, you didn't actually say that to him?"

Now, pausing there, if Mr Morrison is going to be saying that Caddell hadn't said to Squires that the section should be sealed as soon as possible, then he should put that to the witness and give the witness an opportunity to answer. What the witness said is this:

"I said that to him on the phone. I said I - actually the words were I said the sealing should be brought forward."

So, the witness did modify that aspect of his evidence at that point. Question:

"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."

Then at page 104, at line 43, Mr Morrison said:

"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."

So, we have this situation where the witness appears to agree with what Mr Morrison put to him - that he didn't actually say "sealed as soon as possible", but the witness then said, "Well, what he probably said was that it should be brought forward", and then only four pages later on, we actually have Mr Morrison putting to the witness:

"...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."

So, even Mr Morrison reverts to the witness' first version on this question of what he said about when it should be sealed.

In respect of this second point, then, I'm prepared to say that the witness is not clear, ultimately, on the point as to whether he said to Squires that the panel should be sealed as soon as possible, or whether he said to him that the panel should be brought forward. That's the only - that's the only aspect of it, I would submit, in respect of which there was any inaccuracy in what I have put to the witness, Squires, and in so far as that is inaccurate, it ended up in a rather equivocal situation, given the sequence of questioning that I have just taken the Tribunal through - taken the Inquiry through.

Now, turning then to Mr Morrison's first complaint on Friday that witnesses should be tested on the evidence; I would submit that there is no ground at all for that complaint, because, in fact, the witness was tested on the evidence. His second complaint was that he says that it was unnecessary to follow the course that I was following on Friday. Now, it is my submission that the course that I followed on Friday at the stage of re-examination was not only necessary, but indeed the only proper course to follow. In fact, I've read again the transcript of the way that I dealt with the witness in re-examination, and I would submit, Your Worship, that, in fact, the way in which I questioned the witness was really quite mild, given the scope that counsel assisting an Inquiry does have. I gave him a full opportunity, quite apart from being mild, and I would think I was - I would submit clear in what I was putting to him. I gave him the full opportunity to answer, and no complaint could be made about that.

Could I just deal briefly with this matter by referring to the duties of counsel assisting, at least as I would perceive them - broadly, at least - and those duties include - apart from organising the assembling of the evidence with assistance from my instructing solicitor - those duties would include to present the evidence; to explore the evidence with a view to assisting the Inquiry to ascertain the truth of the matter.

That is probably the most important duty of counsel assisting, because every other one of these counsel at the Bar table have a brief for a particular client. Counsel assisting doesn't have a brief for a client. Counsel assisting has a brief to bring out as much relevant evidence as can be brought out and to bring it out in a way that enables this Inquiry to arrive at the truth of the matter, and it is unfortunate, but in the context of the activities of this Inquiry, there may well - in fact, it seems highly likely that there will be some questions of fact to determine. The Inquiry can't close its eyes to its obligation to make findings which enable the Inquiry in turn to make recommendations, so the Inquiry can't close its eyes to the resolution of facts in conflict, and, in doing that, it needs to have the assistance of sometimes robust questioning, sometimes thorough questioning, but at all times, of course, fair questioning.

That brings me to another duty of counsel assisting, and that's a duty to be fair, and it is my submission that if the counsel assisting - to allow a witness to get into the witness-box and give comprehensive evidence and then at some later stage to turn around and to make submissions that that witness' evidence was untruthful in certain respects and therefore unreliable in those respects - on matters of moment, matters that are relevant to issues to be determined by the Inquiry - that to do that is unfair and improper. If counsel is going to make a submission that a witness' evidence ought to be rejected on certain points, then he is obliged - he is obliged to put to the witness the fact that - or the assertion that the witness is not being truthful in those respects. It is an obligation that, in my experience, in terms of the number of Inquiries that I've been involved in, and also the number of inquiries in which I have had occasion to read transcript - I won't say that they are a great number of inquiries, but I will say that in some respects I have read a great deal of transcript of a number of inquiries, and that course is one that has invariably and properly been followed.

Part of adopting the role of counsel assisting is sometimes, where circumstances require, to adopt a cross-examination mode. That may not always arise, and, in fact, I think it is fair to say that in this Inquiry I haven't been - I haven't been forced to adopt a strong cross-examination mode very often, but there are times when I have been, and there are times when it has been fair to do so. However, there is that further overriding consideration of fairness, and in this case, in questioning the witness in the way I did, one of the motives - one of the motives - apart from seeking to isolate those areas in which I would be asserting that he was being untruthful - one of the motives in doing so was to give him an opportunity to make comment on it at this stage, because once he is gone, he is gone. It wouldn't be envisaged from my side as counsel assisting that at some later stage, if the Tribunal saw some conflict of fact that it had to resolve, that the witness should be then brought back for certain matters to be put to him and for his explanation to be sought.

Now, I would submit, Your Worship, that it would be a novel proposition to suggest, as Mr Morrison seems to be suggesting, that counsel assisting a Warden's Inquiry of this kind should have that role that I've just described curtailed in some way. This Tribunal has just as much an obligation to ascertain the truth, ascertain the facts and proper circumstances to determine the truth of evidence given before it just as much as any other inquiry may need to carry such an obligation. Certainly in transcripts that I have most recently read of inquiry matters, and I'm referring here to the Fitzgerald Inquiry, counsel when confronted with a witness who was alleged to be untruthful, counsel assisting that is, when confronted with a witness who was alleged to be untruthful in his evidence was far more robust on many occasions, far more robust, than I've been in this matter. Of course the degree to which a robust approach might need to be taken is often dependent on the circumstances, but that doesn't mean that counsel should be prevented from at least using an approach that is appropriate to the circumstances.

Now, there is a third matter that Mr Morrison raised apart from saying that witnesses should be tested on the evidence and that it was unnecessary for me to question, he went on to say that it was also unnecessary for me to question this witness, Squires, as to his view of what might or might not be done by a competent undermanager. Well, it's my submission that it's highly relevant for this Tribunal to know whether what the witness did or didn't do on a given occasion accorded with his view of what a competent undermanager would do. In fact I would submit that that consideration is relevant to the whole question of training, whether he was trained in terms of his role as an undermanager, and if he concedes that he was told that things needed to be done in a certain way, well, then it's relevant to the question as to whether he was living up to that training. That is, being competent, being competent in carrying out his role as an undermanager when he did or didn't do certain things. Thank you, Your Worship.

MR MORRISON: Your Worship, I intend to respond to what has just come from counsel assisting, and may I do so in this way, by reminding - perhaps he doesn't need reminding, but I may do so anyway if I may. It's a very old debating trick, it's a trite trick, to ascribe to someone an argument that he hasn't in fact made, demonstrate that that argument is false and then announce that the argument that you put forward must succeed. That is what has happened here. Mr Clair suggests, though on no fair reading is this view open, that one of my arguments was that it was unnecessary for him to confront this witness with evidence. Now, that's quite contrary to the express basis upon which I voiced my objection. In fact it's perfectly clear in the transcript that my objection proceeded on the basis that we accept, and necessarily accept, that witnesses are to be confronted with contrary evidence.

My point was about it being unnecessary. It was unnecessary to adopt what was in my view, and I submitted so and I still do, a deliberately dramatic fashion confronting the witness in a way which was provocative and intimidatory whilst eschewing any bullying, to stand there and say to a man, "Now you are on

oath, but in fact you've lied to us. What do you say about that?" Well, you know, other Courts might suffer that sort of stuff, and other jurisdictions, but this one shouldn't. I did not advance any argument that it was unnecessary to confront witnesses with their contrary evidence. Of course its proper to do so. My argument proceeded on that basis, and to ascribe to me some argument that it was unnecessary to do so is to indulge in the trick that I just talked about. I'm sure our learned friend did that unconsciously. I would not like to think that was done deliberately.

Now, let me just go back a step to demonstrate that in fact my submission to you was correct and to demonstrate why. The point that I made about the evidence that was being put about Reece Robertson was this: there are two pieces to that evidence. One is Exhibit 45, the report. Now, can I just pause to make one reminder about that? Mr Squires has never denied, so far as I've read his evidence, that he may have got that report or got that report and read it. Not going to deny it, he simply says he doesn't remember it. I want you to remember here also, in case anyone thinks I'm being partisan, of course I don't act for him. In a sense the strength of what I put to him is that he is not even my witness, but I'm asking out of an elementary sense of fairness for this Inquiry to proceed on a proper basis.

There are two elements of that. One is what was in the report and did it get handed to an undermanager. That's one. A completely separate element is what was said in the phone call, quite separate. Now, when I raised this matter, the matter that I raised was that what was being put about the phone call was incorrect and did not correspond with the evidence. What has been responded to by Mr Clair is not so much the phone call, but the report. Now, can I demonstrate to you the point that I was making? Our learned friend took you to three bits of evidence, page 494 to 495, which is the passage that I first referred you to. Now, I notice none of the members of the panel have that available to them, I suspect, at the moment, but in any event, it has been read to you, and what Mr Clair read to you made it clear that in so far as the phone call is concerned - we are not talking about handing the report over. I was not doing that either. I was talking about the way in which the contents of that phone call had been put to the witness was incorrect.

In respect of that element Reece Robertson has not given evidence that matches what is in his report and it's the part at 494, smelled a bit benzeney or something like that, "...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." That's what he said there, a bit of a strange smell down there. Then at 495, the second bit that our learned friend took you to, he is no longer talking about the phone call, he is then talking about the handing over of the report. I said nothing about that part of the evidence as put to Mr Squires obviously, because Mr Squires could be confronted with the report, clearly enough.

Now, let me take you back to what was actually said, put to

him, to a passage in fact Mr Clair did not take you to. At 3286 he there put, after his dramatic opening:

"That's the day on which Reece Robertson reported to you that he had smelt a strong benzene-type smell and that it was necessary to watch the panel. Now, did that happen or didn't it?"

Mr Squires gave the answer, he couldn't remember it.

"Well, surely if it happened you would remember it...", and so he went on with that passage. Now what he did not refer you to was the passage at 3,287 at the top of the page which is when he went on with the questioning. So far he has put that Robertson reported that he got a strong benzene-type smell. Now, of course, you could read that two ways. It's either in the physical report or it's in an oral report. Up to that point there is no objection to it and that's not what I was talking about.

Now read page 3,287. "Well, you see, there is by way of what I call" - it's called moot here, but -

"...mute evidence on this point, of course, the report that Mr Robertson submitted that day which records that he smelt a strong benzene-type smell" -

talking about the production report, no qualms with that -

"...and that was Exhibit 45. You saw it in the course of your evidence - which records that he informed the undermanager that at this point there was a strong benzene-type smell and keep a check on it?"

"Yes.", says Squires, acknowledging that that's the topic.

"So that we do, as I say, have some mute evidence on this point, and I am going to suggest to you that that did in fact happen.", says Mr Clair.

In other words, "I am suggesting to you, Squires, that it did happen as was recorded in this report." In other words, "The phone call that is recorded in the report happened in these terms." That's page 3,287 line 10, "And I am going to suggest to you that that did in fact happen."

Now, that's the point at which there was a departure from the evidence as being put to Squires and as given by the man. The man did not give evidence that the phone call matched the report. That's as simple as that, and it's unfortunate to have the response which is designed obviously to demonstrate complete fairness by going to the evidence, ignore the critical passage. Now, on that basis what was being put to Squires did not match the evidence and that was the point of the objection.

Now we come to Caddell. Page 27 line 8 was the first time - I should mention one other thing just in case it gets left out. At page 528 line 50 Mr Robertson in fact gave evidence that he

wasn't sure which undermanager was on shift anyway, which one he gave the oral report to - or the report to when he came up. He wasn't sure which undermanager it was. That's another point. We come to Caddell, page 27 line 8. Now I drew attention to the fact that his statement says nothing in the terms in which it was put, that's true. It says what he said at page 27 line 8 and that's because Caddell was reading from his statement at that point, "Gave him the results of my inspection." Now, you could make a great leap of faith there and say that that statement in it's generality obviously means that he said everything that's recorded in his inspection all the way through, but that's not what Caddell says. You can't elevate that into the sort of proposition Mr Clair does.

Then at page 28 line 33 Caddell does exactly the same thing. When he is given the opportunity to talk about what he actually said, does he say, "I told him it was a strong tar smell and the section ought to be sealed as soon as possible."? He doesn't say that. He starts talking about having given CO readings to - in the phone call. Page 27 line 8 was the first one and then on from there. The critical section is down at line 37 on page 28. Page 27 line 8 was the first part, nothing there about what he reported, only about what he saw. Page 28 line 37, "Rang him and gave him the results of my inspection." He didn't adopt anything.

Then at 95/96 - this is the passage that seems curious of all and shows the selectivity of what was being put. We have in fact in examination at that page, page 95 half-way down the page, line 30 and at line 18, on those two occasions, line 18 and line 30, what Caddell says he related on the phone was "my readings" using those words. "I told him the readings on the phone." "I'm sure I am going to tell him what the CO readings are. That's exactly what I did." Nothing about strong tar smell. At that point all that Caddell is talking about is readings, CO parts per million.

MR CLAIR: What page?

MR MORRISON: Page 95 line 18 and 30. Then we go on and I ask him about his evidence. "Now, you describe it as a strong smell of tar." He has just been in the box with his statement. I was talking about his evidence. Nobody could really be in any doubt about that and it's disingenuous to suggest it, it really is. Then I asked him about what does he mean about "strong" just like Reece Robertson when Reece Robertson said, "Strong; it was there and gone.", "Is that what you were talking about, Caddell? Let's find out what you mean by 'strong'. When you say 'strong' in your statement, in your report, in your evidence, what do you mean by that?" That's all I was doing and he knew it and we all knew it.

So we go over the page, "And you would have described in those terms" - in other words "a tar" and "strong" in a qualified sense - "described it to Helander?" "Yes." "And Squires?" "Yes." And then I actually put to him, having taken him to it and looked at the words, actually put to him what Mr Clair chooses to call just a throw away question at the end. Now, in reality it's a qualification of everything that has gone

before. I actually put to him some words and he agrees, and Mr Clair says, "Well, I can just disregard that, don't have to worry about that. That's just some other evidence. That doesn't really qualify." No, not at all.

Well, that's a very selective way to approach the evidence, and nothing at 99 and 104 has anything to do with this. It's a completely different topic. So in fact once you actually look at what was being said in the evidence, the submission I made on Friday was correct. It's much clearer in the case of Robertson, and I've taken you to what was actually put. It's clear in the case of Caddell too and that's the point at which I was making the submission. I was not suggesting that some witness or indeed every witness does not have to be confronted with the contrary evidence that's against him and be given a chance to explain. Of course that can be done, and counsel assisting should do it. Of course he should, but he shouldn't be selective about who he does it to.

Now, this sense of fairness, this duty of fairness as it's called, can I remind, you has only just recently arrived in this Inquiry. I don't seem to remember Mr Robertson having anything put to him that maybe a different version of that conversation might be correct by counsel assisting. I don't remember it ever being suggested to Caddell that anything any other witness said might be so and that these people might not be telling the truth. I don't remember that. The only persons that counsel assisting has attacked, if I can use the term in the nicest possible sense - and I will stand to be corrected on this, but I'm going only from memory - was poor old Mr Atkinson, and to a lesser extent but terribly, terribly gentle, Mr McCamley, Mr McCamley, the man whose tar smell didn't even make it into the report and so far every person to whom he said he said it has denied it. Did we get any testing of McCamley about that? No, no. So I agree there is a duty of fairness, but it seems to have arisen late and in a very selective way and in a way which is compounded by the evidence which was chosen to be put. Now, that should be enough to dispose of those, with respect.

Our learned friend then refers to the last point which, in our submission, is an equally serious point and that is the one you do not question and it is no part of this Tribunal's function to have questions directed to the ultimate issue of negligence. Now, there is no distinction to be made between the way in which Mr Clair chose the words "and negligence". To suggest someone is incompetent is to suggest they are negligent and it's thus that we are discussing here. It is equally bad to be informed and not do something as it is to be not informed when you should be informed. There is no difference. To say, "When you were doing your job you were incompetent.", that's to suggest negligence. It is not wrong to approach it the proper way. In the proper way you can do effectively a similar job. If it's truthful, if it's true that what we need to look at is what do competent undermanagers do then for that matter we should widen the net and look not just at undermanagers. Let's also look at competent miners. They have a statutory obligation to report danger too. Let's not leave it with the managers and

undermanagers if this is to be the process. If we are looking at that let's find out what undermanagers do and then let's find out what individuals actually did and then later on the panel will be making up their minds. They will go from the expert evidence on what an undermanager does or should do which is one factual question, and they will compare it with what people actually did.

It is wrong to cross the line and to say to someone, "You were negligent in what you did." No Judge will allow that to proceed. It's swearing the ultimate issue. It's an issue with which you are not concerned.

Under the Statute, the concern of this Inquiry is the nature and cause - and it's trite to refer to section 74 - it's an inquiry into the nature and cause. Let's look at the nature. Is it a fire? Is it an explosion? Is it rib spall? Is it a crash of vehicles? Is it some fellow falling down a hole? Did he drown in a sump? Is it an arc? Is it a cable flash? Is it something else? Is it a fist fight? That's nature. What's the cause: ignition, cable break, rib spall, roof fall, faulty brakes on vehicles? That's cause.

Negligence has got nothing to do with what this Tribunal is investigating. That's been recognised from a long time ago, and you will see it prefaced in the reports. You can see it demonstrated in the section as well. 74(1) is an inquiry into the nature and cause of the accident. That's it, nature and cause. Then you are obliged to report your findings and opinions. Your findings are as to the nature and cause. That's the job of the four panel members, not the Warden as such - and in no disrespect, Your Worship - and you also have to give your opinion about recommendations for the future. The Warden himself has to report on the nature and cause, but ultimately that often follows the event of saying, "I agree with those findings.", or, "To the extent that I don't, here I record them." That's what you have to find; that's what you have to give your opinion about. Questions of negligence exist for other people. You can see that in the sections in the Statute, because if the Minister decides - if and when he ever decides to refer this on, there are avenues for him to refer it on, but it's up to them, not up to this Inquiry. You can even see it reflected in theory behind the sections that our learned friend, Mr Martin, referred to so succinctly on Friday by referring to section 75.

Now, in fact what it says is the occurrence of an accident is prima facie evidence of negligence on the part of the owner and manager. It's not actually a presumption, it's prima facie evidence of negligence on the part of the owner and manager. If that's true, it obviously is of no concern here, is it? The section already provides that whatever evidence you hear of an accident is prima facie evidence of negligence. How can you be concerned with it? It's just not right.

With respect - and I do mean with respect - we adopt as being a correct statement that which Mr Neilson made on the previous day, and my note of it as he said it was that negligence might be for other jurisdictions, might be the result of another jurisdiction, that's fine. It's not our purpose. We would submit that's an accurate statement, a complete and proper statement. In my submission, Your Worship, the objections I made on Friday were well founded. The answer to them has not really gone to meet the true objection.

MR CLAIR: Your Worship, a brief reply. I take on board Mr Morrison's allegation that in some way my approach until

just recently in this Inquiry has lacked fairness. I take it on board against the background of what I said before that every other counsel at this Bar table has a brief and no doubt, in carrying out the terms of their brief, they do need to come at things from a certain point of view, and whilst I am sure he is not seeking a ruling from the Inquiry or from Your Worship on his allegation of unfairness, I would like it placed on the record that from my own point of view at least, I view his allegation against the background that he is acting for a party, and I reject any suggestion - any suggestion - that I have approached any of my duties in an unfair fashion.

Now, can I move to his submission that incompetence - an allegation of incompetence equals an allegation of negligence? Well, put aside any question of whether witnesses should be asked whether they are negligent or whether, in their view, a particular set of activities was negligent. That's simply not relevant for consideration at this point. The reality is that incompetence in this context doesn't equal negligence. The obligation of this Inquiry is to investigate the nature and cause of the accident and to make recommendations that will avoid any further occurrence of such an accident in the future.

Now, in determining the nature and cause, it may well be that this Inquiry reaches a view that the cause of an accident - I'm not saying that this view should be reached or even that I would be making these submissions, but I say this for the purpose of the present submission - it may well be that the cause of an accident in a mine is that staff who were employed in certain positions did not act competently. That may reflect, in turn, a lack of appropriate training. Now, it would be a nonsense, an absolute nonsense, for Mr Morrison to submit that it is not appropriate for this Tribunal to look to see whether a higher level of training is required so that officers or mining officials achieve a certain level of competence, and it would be a nonsense if this Tribunal tied its hands in the way he suggests, an absolute nonsense, with all due respect to Mr Morrison. I have no further submissions, Your Worship.

WARDEN: Do you have any submissions, Mr Harrison?

MR HARRISON: I am not making any formal submissions as such, Your Worship. I would support Mr Morrison in his submissions. I will just perhaps make one comment on what Mr Clair has just said, that to justify the approach that was taken on Friday in terms of a lack of training is very much an after-the-event argument on his part. Certainly nothing was couched along those lines. The way it was done, in my submission, was totally unfair to the witness, and I would support and adopt what Mr Morrison has said about that. Had it been in fact it was put to him along the lines, "The training was inadequate for this reason or that reason.", or whatever, I would accept that, but it's all very well to come along and argue that this morning when in actual fact it was not put to the witness along those lines. I have nothing further, Your Worship.

WARDEN: Do you wish to say anything, Mr Martin?

MR MARTIN: Only so far as it affects me, that I adopt Mr Clair's submissions.

WARDEN: And Mr MacSporran?

MR MACSPORRAN: I have no further submissions, Your Worship.

WARDEN: Thank you. I wanted to give you that opportunity. I will hand down my ruling, and nothing you have said has changed it. Now, to our unfinished business from Friday -----

MR CLAIR: I am sorry, is Your Worship handing down a ruling, did Your Worship say?

WARDEN: Yes.

MR CLAIR: Is that being handed down now, Your Worship?

WARDEN: Yes, before lunch.

MR CLAIR: I see.

WARDEN: We have some unfinished business from last Friday, and the only surprise is that this situation took so long to arise. I did expect it last October.

As I informed you on Day 1, this is an Inquiry conducted pursuant to section 74 of the Coal Mining Act, that is, an Inquiry into the nature and cause of such accident before the Warden and four persons having practical knowledge and skill in the mining industry.

Section 74(3) provides that the evidence, findings as to the nature and cause of the accident and their recommendations as appear to them necessary for the prevention of similar accidents shall be forwarded to the Attorney-General with a copy to the Minister.

Subsection 6 of section 74 provides that the Minister may submit the evidence taken to the Board of Examiners. The Board may issue show cause proceedings, and the person called upon shall show cause and appear before the Warden.

The Warden is empowered to take certain action in relation to any certificate, licence or permit held by any person under section 74(6).

Charges may only be brought upon the complaint of an Inspector or officer authorised by the Minister.

The purpose of these proceedings is to determine the nature and cause of the accident and to make recommendations to prevent similar accidents, and nothing more.

To assist the Warden and the Reviewers, the Inspectorate conduct an investigation. This traditionally takes the form of an interview which is reduced to writing in the form of a statement. There is no requirement to give a statement, and

indeed the only person required to give a written report is the Registered Mine Manager under section 74(1).

This Inquiry has been long and tiring, and extremely stressful to a number of people. A large number of witnesses have given evidence to date. We have had a deal of repetition and duplication of evidence. However, at the outset and in consultation with Mr Boiston, it was determined that it would be preferable to call an abundance of witnesses rather than be accused of calling too few witnesses. I consider you have been given adequate access to all witnesses.

The Inspectorate, after compilation of the reports and statements, presents such statements to the Inquiry for the purpose of determining nature and cause and making recommendations.

This Inquiry does not, and cannot, bring charges against any person. Only the Inspectorate, or authorised person, can bring a complaint, as per section 107.

The Board of Examiners have limited powers in relation to the suspension or cancellation of any licence or permit.

This Inquiry is not a Commission of Inquiry and there are no Terms of Reference. The Act is deficient and has needed amendment for some time. I am informed that draft amendments are circulating. It would be a very brave or a very foolish person who proposes amendments to the Act before this Inquiry is finalised, as there may be a number of recommendations from this Inquiry which will affect the operation of the Act as it currently stands.

There is no protection for any person who comes forward to give a statement. The Inspectorate and the Court rely on voluntary statements in order to determine the nature and cause of the accident. Without these statements, the Inquiry cannot function.

I should add that we are about to commence another Inquiry at Mt Isa next week. Two crucial eyewitnesses have declined to give written statements. A finding as to nature and cause will be rendered more difficult - not impossible but more difficult. I think you see our problem. We rely heavily on a forthright and factual statement to determine nature and cause. If any person feels he is going to be seriously disadvantaged by the giving of a statement, then I would suggest that there may be considerable difficulty in completing our duties under section 74 of the Act in the future.

There are, or were, a number of witnesses who hold certificates. Squires, and some others who will follow, are at risk because of any follow-up action that the Board of Examiners may take. There is no record of any warning or caution administered in relation to the interview. In fact, given the circumstances and the presence of other persons, there is a real issue of coercion.

In my opinion, if you dared to go to the Supreme Court with one of these statements, the Judge would throw it out so far you wouldn't even see the splash. As a document on which a prosecution could be launched, the statements fail and would be rejected in any other proceedings on the grounds of denial of natural justice.

But, in effect, the statements were never intended for action in relation to a prosecution, and I will have more to say in relation to the manner in which this action was investigated at a later date. But at this stage I am unable to see any authority for witnesses to be gang interviewed in front of a panel of persons who have vested interests in the outcome of the interview. I feel that in some instances we have ended up with a sanitised statement which may be leaning more to the protection of individuals than getting to the heart of the matter.

There have been a number of Inquiries conducted in this State in the past four or five years, but I want to remind you that this is not a Royal Commission or Commission of Inquiry with all the attendant powers and purposes. There are no prostitute rings to break up and there are no corrupt police to pursue and prosecute.

What I am determined to get, with you or without you, is a working document that those involved in the industry can take cognisance of and work with. I may be wrong, but I have a suspicion that some parties have a hidden agenda, or an ulterior motive, in pursuing certain areas of interest. I have no interest in that approach, but I will not allow it to distract this Court from arriving at a finding as to nature and cause.

If any party wishes to exercise their option and withdraw, then you may do so now. The Inquiry will continue with the Inspectorate, Union representatives and the Registered Mine Manager. We have done it before.

What I will not do is stand by and see any witness crucified because he has come forward and is prepared to take any criticism of his shortcomings. Whatever your attitude to the veracity of any witness - and I include Squires - you are not going to shoot the messenger. That is not the purpose of this Inquiry. The purpose is to determine nature and cause and formulate recommendations to prevent a recurrence.

I am not sure how many parties took the trouble to look at the last Inquiry I conducted which involved a coal mine. Some parties may have a copy of the findings in their files because the accident was at the Moura Open-cut. However, I will arrange for a copy of those findings in relation to that Inquiry to be handed to you to reinforce to you that I am only interested in nature and cause and nothing else.

Mr Martin mentioned the presumption of negligence in section 75. Of course, that presumption of negligence can be rebutted, and the second paragraph will not give any comfort either.

Section 77 is relative, but, again, he who alleges negligence must prove negligence to the required standard.

I really do not want to hear that word again in these proceedings. It is a distraction which we do not need, and it is not a consideration in these proceedings.

I mentioned the Board of Examiners before. I will tell you more about the Board of Examiners at a later stage in these proceedings, but as not all of the representatives have locus standi with the Board, I would direct my comments only to the appropriate parties at the appropriate time.

I, therefore, uphold the objection of Mr Morrison.

This Tribunal is not interested in any conclusion about the competence or otherwise of the holder of a licence or permit. That is for the Board of Examiners, not this Tribunal. Any submission along those lines will not be considered as we have no power to act on any licence or permit, so it is a waste of time to even consider it.

Thank you, gentlemen. We will take the lunch adjournment. Resume at 2.15.

MR CLAIR: Just before Your Worship goes, Your Worship mentioned the submission of Mr Morrison in respect of competence. Is that the only submission that Your Worship is dealing with in this decision?

WARDEN: I rather thought I dealt with everything there because nothing you have said this morning changes my attitude.

MR CLAIR: I am not suggesting that - that's not the point I am addressing, Your Worship. I am just looking really at what is the result of what Your Worship has said. I understand from that that Your Worship doesn't regard the question of competence of any individual as being a relevant issue, but I think Mr Morrison did raise other matters, and I certainly addressed other matters.

WARDEN: Well, I don't wish to comment on them. It's been a grave fear of mine that in the past four years these Inquiries bog down in arguments over legal matters which are really not relevant to a finding as to nature and cause. Now -----

MR CLAIR: Your Worship, I am not wishing to cross-examine Your Worship about the terms of the finding; I simply was just trying to clear up that point.

WARDEN: We will take the lunch adjournment and resume at 2.15. Thank you.

THE COURT ADJOURNED AT 12.59 P.M. TILL 2.15 P.M.

THE COURT RESUMED AT 2.37 P.M.

MR MORRISON: Your Worship, can I raise one matter very quickly and with no intention of taking any time over it, may I assure you, and that is to make the application, which I think properly follows from Your Worship's ruling, and that is that the re-examination to the point of conclusion on Friday be struck from the transcript. The first part up to page 3288, which is only a couple of pages, consists of the attack on the witness which Your Worship has really ruled on, and then the next part from 3288 half-way down the page to the end consists of the approach to the four areas where incompetence was put to the witness. With respect, it seems to follow from your ruling that something should be done about that.

MR HARRISON: I would formally join in that application, Your Worship. I have nothing to add.

MR CLAIR: Your Worship, my difficulty is that I'm really not at this stage perhaps fully aware of just what effect Your Worship's ruling might have. I think Your Worship's basic ruling ultimately is that this Inquiry is not interested in the competence of the individual. That seemed to me to be what followed from what Your Worship ruled just before lunch. So, any question of striking out any part of the record would involve looking at the record in terms of each question and answer to see whether, in some way, that particular question was not a permissible question in light of what Your Worship has ruled.

WARDEN: Just a couple of matters before I address that, and I would point out to you that there is, in my opinion, a vast difference between negligence and incompetence, although some people may see those terms has having similar effect. The question raised by Mr Clair before the adjournment was in relation to incompetence. A question of training and knowledge can be raised, but not in the direct context of competence. It is for another Tribunal to pursue whether there was competence or incompetence in any particular case. Now, I certainly don't exclude that competence doesn't come into it if you are raising the question of training, and the tribunal may well address the question of training. That's as far as I think it should go. I would prefer to leave the matter and continue on with the evidence because we are not making very much progress at all - going backwards, some might say. The question of striking from the record, I will reserve my decision in relation to that and have a look at the individual transcripts. Thank you. At this stage, we will recall Mr Squires.

MICHAEL ANDREW SQUIRES, CONTINUING:

WARDEN: Mr Squires, it is some time since we finished on Friday, but you are under your former oath; do you understand that?-- I understand that, sir.

MR CLAIR: Mr Squires, you will be pleased to hear I have only got one matter to ask you further about. You have mentioned, I think, that you did have some training in spontaneous combustion back in the early days - 1984-----?-- Between '81 and '83.

'81 and '83. In 1991, or since 1991, have you ever received any training in respect of spontaneous combustion?-- No.

From Mr Phil Reed at all?-- No.

Nothing at all?-- No.

Anything to do with the significance of CO make?-- No.

Thank you, Your Worship.

WARDEN: Thank you.

MR HARRISON: I don't have any matters in re-examination.

WARDEN: Mr Parkin will take-up some matters with you.

EXAMINATION:

MR PARKIN: Mr Squires, just a few questions: what time did you start work on Friday afternoon, 5 August?-- Friday afternoon I started at approximately quarter to 2.

What time did you finish?-- On Friday, at about 20 past 11.

And you worked Saturday from 6.30 to 3.40?-- That's correct.

And Sunday 6.30 to 3.20?-- That's correct.

And you started work at 9.30 on the evening of the 7th?-- That's correct.

Are they normal hours required by an undermanager over a weekend at Moura?-- When you are working a weekend - not necessarily. The reason I started on the night shift was because the night shift undermanager was on annual leave, so normally the undermanager - because we were sort of - we didn't have any replacement undermanager, George Mason had to do day shift, so whoever was on the back shift ended up doing whichever other one was empty, if you know what I mean? So,

the night shift undermanager was away, so I was on night shift.

In relation to a question from Mr Harrison regarding being told or trained to read deputies' or undermanagers' reports, I guess if you do not read reports or have discussions, is it possible to do your job?-- If you don't read reports and have discussions?

Yes?-- Well, you wouldn't have a proper communication base for being able to carry out your job correctly, I suppose.

Do you think you should have proper training on how to fill out reports and how to communicate?-- I think it would be good to have a training program where it is made clear the types of information that has to be put on the reports. Most of the undermanagers - well, I can speak from my experience - as you start off with an undermanager - it was way back in the days where inductions and that weren't done, and so you sort of picked up the ropes from various things, and I think what needs to be done from that point of view is to have sort of it properly explained - the various things that you have to put in a report - and even one would think that you would have to examine the way that you record the reports. For example, you might have a separate book for - you know, a statutory book for an undermanager to fill out, besides just production, for example.

Okay. You mentioned during cross-examination that you do not understand what a benzene type smell is?-- No, I have never smelled benzene before.

Are you suggesting that during your Mines Rescue training that no-one ever mentioned a benzene type smell associated with spontaneous combustion to you?-- No, I'm just - if someone mentioned benzene smell to me, I wouldn't really understand what benzene smelled like. I have never experienced it as such. I can't really specifically remember anyone saying to me, "Well, this smells like benzene." I'm sort of more familiar with the tarry smell because that's what I've sort of smelled from burning coal.

The benzene type smell is a different smell. I guess if you smelt a benzene type smell, you would be concerned about it, anyway?-- Well, a different smell would - like I said, I have sort of explained before that a different smell might just indicate that someone is not experienced in a particular smell that they have already smelled before; does that answer your question?

What you are saying is that you are not familiar with a benzene type smell?-- No.

Can I just ask about the Unor alarm system? I think you said in cross-examination that electricians under direction reset the set point values; is that correct?-- I didn't know how to do it.

Under whose direction are those values reset?-- Under whose

direction?

Yes?-- I have never seen a - any procedure written up for the change of the set points. I would presume that the minimum would be who would be responsible under the Act to run the shift, but as far as actually a procedure for changing set points, I'm not aware of that. I do know that just under your normal circumstance where you have just got development sections, there would be - it would be questionable whether anyone would do that.

I guess the question is, well, what about weekends? I mean, during weekends if you have an alarm, it is accepted, and you have to reset the set point values, who authorises the control of that?-- I'm not sure who would authorise the control of that.

But you are the undermanager in charge over a weekend period. You are not sure. Why's that?-- I would take it under that circumstance where you have got a change in alarm - there is only two reasons for a change in alarm: one is because you have got a change all the time in a sealed situation, and the other is you have had something occur under a normal return roadway which might indicate some sort of burning or something in a return. In the case of a sealed area - in the case of a return that's normally reading a set amount and you are getting a higher thing, you would have to do an investigation to find out what was causing that - from a machine, or, you know, it might be a scrubber tank has failed and it is causing a belching of CO, but in a sealed area, traditionally, they have just been increased as they have gone over the set levels.

For instance, the weekend in question before the incident-----?-- Yes.

-----I mean, who would be responsible for the set point - changing the set point values? Somebody would have to be responsible?-- I haven't seen a form or anything stating any responsibility for that.

So, there is no procedure at all?-- Well, I haven't seen any written form saying that somebody is supposed to be authorised, or whatever.

If we can move to the graph, and we've spoken about the graph enough at this Inquiry, but we talk about the graph CO make in litres per minute. It was put on the notice board. You were aware of that?-- Yes, next to the table.

You said that you did not understand, other than a trend?-- That's correct.

Did anyone in management ever explain to you why the graph was being posted?-- Well, before we used to just keep a record of the CO itself in graph form, and so I just presumed that it was just sort of more an information thing rather than anything else.

But how can you presume anything when you are an undermanager with statutory responsibilities? You should know, shouldn't you?-- About what, sir?

You should know what the graph means. If there is a weekly graph posted in the undermanager's office - I mean, surely as an undermanager you should know what it means?-- Yes, well, I can't disagree with you.

Nobody in management ever explained to you what it meant?-- No, no-one sat down with me and explained to me what the full content of what a CO make graph meant, what the numbers meant as far as the levels went and what is construed as being normal, what's construed as being abnormal.

Did you ask anyone?-- No, I can't remember asking anybody.

Why not?-- Well, I suppose it's just - I sort of looked at it and I really - in my mind I couldn't see that it was going to be any more different than - except for the fact it takes into account quantity, it was no different than what I had experienced with CO.

I find that hard to understand because you were previously a ventilation - you were in charge of ventilation, so -----?-- Well, I wouldn't regard myself as being entitled - in charge of ventilation. I was responsible for doing the stat duties as far as measuring ventilation.

I guess I put this question: why put a graph on the noticeboard if people like yourself don't understand the significance of the graph? Why do it in the first place? Could you answer that question?-- Well, I can't answer that question, no.

What is your main responsibility or what were your main responsibilities as an undermanager at Moura No 2?-- Well, towards the safe running of the mine and with regards to that, that included things like having weekly safety contacts with the men on prescribed subjects. Joe Barraclough, for example, would get down with Albert and give us a prescribed subject that we'd have to talk about. Also part of that would be if we had any sort of incident, for example, you would have to fill out an incident report on that and submit that report whether it be for cable damage or damage to machinery. Also we were in charge of coordinating the production at the mine, designating - finding out from George, for example, where he wished to mine at various sections and being able to coordinate activities towards that and also we would work in with the maintenance fellas. Normally on the back shifts, particularly, you didn't have any staff people in the maintenance area so we were working with the leading hands, leading hand fitter, leading hand electrician as far as maintenance went.

So essentially you are responsible for the safety, the health and the welfare of all the people that report to you?-- Yes.

During cross-examination by Mr Martin you were asked what you do if you had to report a safety issue; did you say that the undermanager report was used for production type issues and not safety issues?-- Well, just by custom practice I can't remember seeing any safety issues written in it. We didn't write - I didn't write any safety issues in the production report.

Because the next question, of course, is where did you report safety issues if you didn't put them on your undermanager's

reports?-- Normally it was a verbal report to the next undermanager, or if you were on day shift you could talk to George or Albert about it.

Why did you telephone George Mason at 12 noon on Saturday, 6/8?-- Saturday, 6/8? Because I had observed the change in conditions from that of Friday afternoon shift when I was in there and at that stage when I called George the change in conditions that I had noticed were a slight haze and a migrating of the ventilation back outbye No 2 heading and that the goaf smell, which normally you wouldn't smell in the intake, was apparent in that cross-cut. When I had actually rung George I hadn't actually received the CO readings from Cole Klease. So all I was doing was passing information to George that I had noticed.

Why was it so important that George came out to the mine on the Saturday afternoon?-- Because we had had a change in ventilation in that waste and I wanted to address that.

So it was just the change in ventilation?-- It was - as I just explained, there was a change from Friday afternoon shift. Now, when the CO readings come through from Cole Klease to me they indicated there wasn't anything abnormal, but we still had that ventilation coming back out and that was a problem because what was happening was air was going into the waste and coming back out again and going around in circles and it's just not a desirable situation to have in a waste.

Because you know people were scheduled to work on that Saturday afternoon?-- That's correct, there was only two deputies to go.

It's usually fairly difficult to get people to work at short notice?-- Particularly if you have a shortage in your overtime roster, yes.

So why was it so important to bring the sealing forward?-- Well, I couldn't see any other way of dealing with the problem that we had.

Because I think you said in evidence earlier that the last panel to be sealed at Moura No 2 was approximately a week or something like that before it was sealed?-- That's right. I think - no, that wasn't the last panel to be sealed. 511 was open a week, but we have had, I think, 401, 402, 403 and 4 South B were sealed after 511.

Could the witness be shown Exhibit 115, please? Can you turn to page 2, please, on that exhibit? Have you got page 2?-- Yes, sir.

You can see that 5 North was sealed at 5.10 p.m. on Saturday, 19/4/86; is that correct?-- I can't see the date - yes, I see, yes.

And it was being sealed because of a heating?-- That's correct.

And at 3.20 p.m. that same afternoon the readings were CO 110 ppm, CO₂ .12 per cent and CH₄ 1.65 in the roof and 1 per cent in the general body; is that correct?-- I can't see any reference to the actual levels on this page.

Is it not ----?-- Not on the inspector's - you are talking about the first page?

Page 2?-- ----

MR MORRISON: Mr Parkin, 115 contains two pages of handwritten record as well. I think it's actually the fourth page you wish ----

MR PARKIN: Thank you for that. It must be the fourth page down?-- At 4 p.m. did you say, sorry?

Well, you can see at 3.20 p.m. on that same afternoon the readings - I've just quoted three readings to you?-- Yes, CO 110, and CO₂ .12, 1.65 CH₄ in the roof and 1 per cent general body.

Can the witness be shown these graphs, please? There are copies there for the parties. Now, there is a series of graphs in front of you and this is 512 seals and you will see that it's - it goes from zero to the time of the explosion?-- Right.

Do you see that?-- Yeah, zero, that's meaning midnight.

If you look at the first sheet you will see that - I think you mentioned earlier that you know nothing about Graham's Ratio?-- No.

But if we assume that if you take a reading approximately at 10 o'clock that evening and you arrived at work at 9.30, what reading on the Graham's Ratio would you get there approximately?-- Roughly about .75 or something.

That's fair enough. Then if you look at the next one on CO, and at the same time if you just give a rough approximation of what the reading would be?-- Looks like - say 150 or so, 149.

150 would be right, thank you. Then if you look at the CH₄ for the same time, and this is the sample time at the surface and CH₄ is on the left-hand side axis, what do you get?-- Yeah, about 4.7.

Just under 5 per cent. Now, the CO graph is sample time at the surface, the CO is the sample time at the surface - beg your pardon, the methane is the sample time at the surface, that's just under 5 per cent?-- Right.

And also the CO is sample time at the surface?-- Right.

The Graham's Ratio, that's the sample time underground, so possibly that ratio had come back to possibly about .65. Now, the three readings that have been quoted are all in excess of

the readings obtained for 5 North just before it was sealed. The CH4 is practically in the explosive range, would you agree?-- Yeah, yeah.

The CO has increased from approximately 12 ppm according to the alarm log to 150 ppm in approximately 22 hours?-- Yes.

Now, you said previously that you would be more concerned about the increase in parts per million -----?-- The CO.

The CO than anything else?-- Yeah.

Now wouldn't an increase from 12 to 150 in 22 hours - and if you work that out that's over 1,000 per cent increase - would that increase cause you any concern?-- No, well, the CO I expected to increase once you sealed off because you haven't got any ventilation cooling that waste.

Well, I guess I should clarify the fact also that we - of course we are comparing readings in a panel in 5 North just prior to sealing with readings on a panel that's been sealed for 22 hours?-- That's right.

Or approximately. So there is a difference, but I guess the point I'm trying to make is that didn't it cause you some concern?-- No.

The increase in CO?-- No.

You see, the 150 ppm is not a problem over time, it's a problem over 22 hours?-- Well, to my observations of that time graph it was just showing just a linear increase. There was no exponential increase behind the seals so to me it was just a normal increase of CO.

What I'm saying is if people had been monitoring the situation after the sealing would it have caused any concern?-- But I was monitoring the situation after sealing and I wasn't concerned.

So you are telling me you weren't concerned about 5 per cent CH4 and 150 ppm in 22 hours?-- No.

Tell me why the gas chromatograph was not used after sealing?-- I don't think we have ever used it after sealing.

Why not?-- Because we have got the Unor tubes in there. That's what we traditionally used to monitor behind seals.

Do you know what the gas chromatograph is used for?-- What it's capable of being used for?

Yes?-- Yes.

What is it used for?-- A detailed analysis of a mine atmosphere, and it gives you normals, like your CO and your CO2 and your oxygen, and then it has the capability of being able to pick up ethylene, ethane, hydrogen and - what do you call them - hydrocarbons.

So if you had been monitoring the sealed area with a gas chromatograph do you think it might have given you some early detection of what was going on behind the sealed area?-- It would give you a greater analysis of the atmosphere, yes.

Would it have been good mining practice to have used the gas chromatograph for analysis after sealing?-- On hindsight I think the gas chromatograph should be used every time after sealing.

Why wasn't it?-- Well, because there was no system in place and every other time we have sealed we have only used the Unor.

I mean one could ask the question why have this sophisticated equipment readily available if no-one is going to use it?-- Well, that's right, I've -----

You had a meeting with the men on the Saturday afternoon shift to inform them of the status of the mine; is that correct?-- Yes.

Why didn't you have a meeting with the men on Sunday evening before they were deployed underground?-- Because it's two different things. You are comparing two different things. For example - I'll give you an example. On Sunday night I did have a meeting with Rob Parker and Terry Vivian, for example, because they are an outbye crew and they are working somewhere where there might not be a deputy organising them straight away. On the Saturday I've got a prep crew. There is no production, so I organised with the prep crew the jobs that they have to do. At the beginning of night shift it's like any other start of any production shift, all you need to do is tell the fellas where they are working and the deputy knows the overall status of the place.

Let me suggest this to you: you knew the panel was to go through the explosive range that evening, didn't you?-- Yes, I could see it was going to go through the explosive range.

A strong tarry smell had been reported by Caddell on the Saturday; is that correct?-- On Saturday?

Yes?-- No, he had talked about a benzeney smell on the Friday afternoon.

Just excuse me a second. Regardless of that there have been numerous reports of smells of benzene tarry smells for some weeks before the incident and certainly the weekend that the incident occurred -----

MR HARRISON: Your Worship, I do have an objection here. Perhaps if it could be put in terms of what he has known relative to that as opposed to a sweeping general statement. I can understand what Mr Parkin is trying to do and I don't want to be a nuisance, but in my submission it's perhaps unfair to hit him with a sweeping generality such as that and expect him to answer that because he has at length in the

course of these proceedings given us his evidence of what he knows of all of the matters that have been raised. That's McCamley's evidence of smell, the Reece Robertson matter, the Caddell matter and Klease. They have all been dealt with in detail, and in my submission it's unfair just to put to him as one sweeping generality that there have been numerous reports of a benzeney-type or benzeney/tarry smells.

MR PARKIN: I guess the point of the question was there have been reported smells - Caddell did report a smell over that weekend, did he not?-- Yes, on the Friday afternoon shift.

What did he say?-- He said that he smelled a benzeney/No 4 sort of smell in the cross-cut.

Now, I guess the point I'm trying to make to you is this: on that evening before the men went to work you knew about the discussion you just had. You knew that the panel was to go through the explosive range. You knew that the CO had increased quite dramatically over 22 hours to 150 ppm, and I stress the time factor, and yet you never told the men?-- No, with the CO, I'd been monitoring it, as I've said before, all Sunday and it was showing no change of what I would expect for the panel to be sealed. I was looking for an exponential rise. When you cut the ventilation off at that waste, if there was a heating there it would be exponential in its consumption of oxygen producing CO so you get massive volumes of CO and it wouldn't stay on a steady linear increase at all.

But the idea of quoting to you - and I am not trying to trick you at all - the idea of quoting to you the 5 North situation was that you knew for a fact that you had got a definite heating?-- Yes.

And I just quoted the figures to you, and yet here we are on Sunday evening with a panel where there was some suspicion about what was going on behind the seals, and yet we don't regard that as being significant?-- Well, sir, I believe that after the disaster I did have a look at that 5 North information behind the seal where there was a positive spon com and the CO was of the order of over a thousand parts.

Well, I guess the fact is you did not inform the men on the Sunday evening before they went down the mine as to what the circumstances were at that time?-- No, there was no general addressing of the men on the Sunday evening, although there was - all three deputies were aware of the situation, and there was about between four and - four and six blokes on the shift itself that actually were involved in the sealing itself.

I have no further questions, thank you.

EXAMINATION:

MR NEILSON: Mr Squires, in your evidence you have stated that what you would look for in terms of an indication of spontaneous combustion would be an exponential rise in carbon monoxide parts per million?-- Yes, sir.

Can you tell me where you would have learnt that?-- Well, as I said before, because of the fact that I was a technical assistant during 1986 and that I was called to take some gas samples over to Rocky on Saturday of this particular event documented here and I was picked up by Ian Kramer, who was then the acting manager, on Sunday to correlate them figures, that's where I learnt of where there was a jump up and big rise in CO at that stage.

Yes, but you are talking about an incident - I am talking about your teachings, your education in terms of spontaneous combustion?-- Right. With reference to my cadetship?

Well, cadetship, Mines Rescue, your readings, anything at all. What I am asking you is: where did you learn that you needed to have an exponential rise in carbon monoxide before you had a problem with spontaneous combustion?-- Probably just from textbooks I read in my cadetship. I can't specifically recall the text itself back when I was doing my study.

Are you sure that you read that?-- Well, I can't - I'm having great difficulty in trying to remember anything from my cadetship as such. I think it comes down to - a lot of it is that - and I don't want to break up the questioning - but a

lot of it comes down to the fact that when you do learning, theory learning or whatever, if you don't get it - put that into practice, then - whether it be, you know, a few times a year or whatever, after a while you tend to forget it or you tend to not use it, and I've sort of tried to explain that the information as far as spon com goes, from my experience, is whatever was taught to me in 1981 to '83, whatever I read in '84 and experienced in '86, but as far as specifically being able to refer to any particular text, I wouldn't be able to do so.

Working in a mine has a high propensity for spontaneous combustion which, I am sure you would agree, Moura No 2 Mine did, or has a propensity -----?-- It has a propensity but -----

Well, I haven't finished the question?-- Sorry.

And given that the inherent seam gas is methane - I mean, really that's the sort of circumstances that - probably the worst that you could have in terms of a natural inherent problem in a coal mine?-- Yeah, having various factors that can come together, yeah.

Well, would it not be fair to assume, or to suggest to you that in your position as undermanager, that you would have taken the steps necessary to ensure that you were, you know, up to date and knew exactly how to react and what to look for in terms of spontaneous combustion?-- I've never actually received any sort of advice or something along them lines to do that. I know what you are getting at. I'm just finding it sort of -----

I'm not asking if you received any advice. I think those questions have been put to you sufficiently?-- Maybe it's because of the fact that there was other things that looked - stood out more from a safety point of view; for example, high ribs and that sort of thing. We have had a few deaths at Moura from people getting squashed by high ribs, and also the fact that because methane is a seam gas and we do get accumulations of methane where there is low ventilation, it was sort of more concentrating on the areas that are more common. See, the actual sealing, or the actual extraction at Moura wasn't a regular feature. We didn't always have an extraction panel on the run, and so the actual amount of seals - I think I did quote it as about 10 or 12 seals since I have been there, and I've been there for 10-odd years, so it's not a sort of a common occurrence.

Well, one would certainly hope that it wasn't a common occurrence, Mr Squires, I agree with you there. The thing is that when we talk about things like high ribs or bad roof or things that are of a physical nature that you can readily identify with vision, sure, they have to be dealt with as well, no question about that, but don't we have - and I will put it in my terms - a more dangerous, or a more potentially dangerous situation when we are dealing with things that we are never going to be able to actually see and we have to look for indicators and we have to know what those indicators are,

and, you know, is it not reasonable to assume that the qualified people who would know what to look for in terms of indicators would then know how to react to those indicators?-- Yeah, I would agree with you there.

Now, we have talked a lot about smell. If I was to suggest to you that it's possible to have a heating without a smell, or without detecting a smell, what would you say to that?-- I'd just ----

It's not a trick question?-- No.

All I am saying to you is ----?-- I wouldn't believe you could get a situation like that. If you got a ----

Well, I mean, if you have a look at 512 Panel and the way it was situated - and I mean particularly when the panel was nearly finished - I mean, it's not possible to get down into that goaf area close to a set of circumstances where you may have a small heating?-- Right.

So, it would be fair to say - and it's not a trick question - that you could have a small heating in the bottom of that panel where it's not being ventilated and not detect a smell for some period of time?-- Yeah, but that's - I've never really thought about it that way, but I might be jumping the gun ----

No, I am not suggesting you should have?-- I'm not jumping the gun, but I've just got a real problem with trying to identify with a heating in a waste that you are not picking CO up in the return.

No, we are going to come to that. I am trying to deal with the question of smell first, because what I am putting to you is it would be possible under some circumstances to get a heating without detecting a smell, at least for some time?-- I don't necessarily know whether I've got the experience or qualifications to comment on the question. I'm not trying to avoid your question, but I find it a bit difficult to answer. I really don't know.

Well, give it your best shot. You are an undermanager?-- Yeah, I still think that if you have got a heating, you still smell something in the return.

Okay, so you would smell something. Well, look at it from the other side of the coin. If you have got a smell that indicates a heating, or a heating-type smell, then you must have a heating. You can't have a smell without a heating, if the smell represents a heating-type smell - and it's not a trick question?-- No, I realise again you are not trying to trick me.

So, if your understanding was that - okay, you suggested that you don't understand the benzeney-type smell, but you would look for a tarry smell or something like that?-- Yeah.

And you knew that a tarry-type smell had been detected - if

you knew that - wouldn't that then tell you that there must be a heating of some description in some stage?-- I was always under the understanding that there is several factors or descriptions of - characteristics, if you like, of a heating that, in a combination, can determine whether you have got one. I just - I can't go by smell alone. I've got to have something quantitative. You have got to have something quantitative, something like CO or something like that.

Okay. So, what you are saying is that if there were a number of indicators and only one was detected, then you wouldn't draw the conclusion that, okay, there is a heating?-- That's right.

Okay, but do you think that it would warrant thorough investigation just to see if the other indicators are present?-- Yeah, you would have to have an investigation, I think. If you had one factor there, you would have to check.

Are you satisfied, with everything that you now know, that that was done properly?-- On hindsight knowledge, I believe that probably a better investigation could have been carried out.

Can I ask that the witness be shown Exhibit 127, if you don't already have it? It's the Moura No 2 alarm log. I know you have been referred to this document a number of times, Mr Squires, and I don't really want to go into the detail of what it contains, but I want to, more or less, follow on from a question put to you by Mr Parkin in relation to the fact that there was a substantial rise in the carbon monoxide parts per million from 08 hours through to 22.28 hours. It went from 12.43 ppm; then, I think, 45.07; then at 11.26, 80.17 ppm, and then at 22.28, 152 ppm?-- Yes.

Now, we accept the fact that that's after the panel was sealed?-- Yes.

So, there was no ventilation?-- Yes.

Do I understand that you have said that you wouldn't consider that to be an exponential rise?-- No, no, that was a steady linear increase. I think if - it's a bit hard to look at just figures, but if you have a look at the graph on the time log, it shows just a steady sloping rise. An exponential rise, or my understanding of an exponential rise is where it's like a reverse parabola curve.

I won't debate that with you, but you are suggesting that that's not a significant rise in that period of time?-- No, no.

And you are saying that because it was behind the - in the sealed area?-- It's in the sealed area, yes.

Do you know what - can you tell us anyway what your knowledge is of what produces carbon monoxide?-- Oxidisation of coal.

Why then is it necessary, or would you expect, I guess, is

more to the point, because you have said that that's what you would expect?-- Mmm.

Why would you expect such a sharp increase, or a significant increase - you have already said you don't think it's sharp - in that period of time simply because you have taken the ventilation away?-- Well, because when you take the ventilation away - the ventilation going through the waste is what cools the coal, if you like, or it keeps the temperature of the waste at a controlled temperature. When you take that ventilation away, that - if you like - well, my understanding is the oxidisation of coal is an exothermic reaction which produces heat, so the idea of ventilating a waste is that fresh intake air which flows through the waste carries that heat away. When you seal off a panel, the ventilation to the waste is no longer there, so the heat has got nowhere to go, so it builds up. When the heat builds up, it actually sort of is a factor which helps more oxidisation, if you like.

Okay. So, where did you learn that you could put values on and what those values would relate to in terms of increased production of carbon monoxide?-- Are you talking about the actual specific -----

Can I suggest this to you?-- Yeah, sure.

That if there was any problem there with heat to begin with and you sealed an area off, it's fair to say that what you would expect is a very sharp increase in the inherent seam gas, or a gradual build-up of the inherent seam gas because that's going to come out naturally in any case?-- That's right.

A reduction in oxygen and it would be replaced?-- That's right.

And there is nothing to say that just because you seal an area off that you are going to get an increase in carbon monoxide?-- Well, we got an increase in every other sealed area.

Yes, you certainly had one in 5 North?-- Yeah, but what I am saying is on other sealed areas the carbon monoxide has peaked out, you know. I have seen peaks of 190, 200 parts.

Okay. So, you don't see that there is anything abnormal - I guess you have already said it - with that increase in carbon monoxide in such a short period after you seal the area, and with the full knowledge that carbon monoxide is the product of oxidisation or of an active heating?-- No, well, I just viewed this - like I said, it's a bit hard to look at it with figures, but when you look at the graph form, that's - it goes up in a sort of slope, and to me that would just indicate a normal oxidisation.

Well, that's the very reason that I want you to tell us where you learnt what you have told the Inquiry, and that is that you need to have an exponential rise, because I would be interested to know, particularly from the Inquiry's point of

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view, where any teachings actually say that?-- Yeah. That's just what I understood from things that I got, but, like I said, I can't really even specifically refer to any text or anything that I read during that time.

Okay. Thank you.

EXAMINATION:

PROF ROXBOROUGH: Mr Squires, you obtained your Second Class Certificate of competency in 1987; is that correct?-- That's correct.

I think you said that you were made undermanager - appointed undermanager shortly thereafter?-- Yeah.

So, at the time you became undermanager, how many years underground experience did you have?-- Well, I started in the mines in '81, and those three years as a cadet were actually underground - it was a correspondence course - so, what's that, seven years, I think.

Six perhaps?-- Yeah.

You say that you did your study by correspondence course?-- Yes.

Through whom?-- It used to be called TCS, but they call it TAFE now.

The examinations that you took for your undermanager's certificate were examinations set by the Queensland Mines Department?-- The way that our qualifications went was that, first of all, we had to pass the certificate CN653. I will go into a little bit of detail so you know. The course was a correspondence course. We did various subjects through the year. They were full year subjects. At approximately October/November, around that period, we were usually given a block release where we went to college full-time, and straight after that block release we sat down for exams. The nominal time was three hours for those exams. After the three years, we were issued a certificate. Once getting that certificate, that entitled you to sit down for a law exam to get your undermanager's ticket from the Board of Examiners. Once you'd passed that, then you had to go and do a flame safety lamp test and also an oral examination with three senior people from the mines area.

Was it your intention to proceed to become a colliery manager - to take your First Class Certificate?-- No. The higher you go up, the less time you spend at home, sort of thing. I had a family, so I didn't want to sort of get into a situation where I would be at work all the time.

Tell me, would you consider yourself in the position of colliery manager to be a professional person?-- Like an engineer or something?

Yes?-- No.

You wouldn't?-- No. No, we were just like a foreman.

Are you a member of any professional body or association?-- No.

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Were you ever encouraged to join as a student by anyone in the industry?-- No. Well, you mean something like the engineers' thing?

Yes, the Institution of Mining and Metallurgy?-- I don't think they'd let an undermanager in.

Do you subscribe to any mining journals?-- No.

Have you ever attended a mining conference or seminar?-- No.

Have your employers ever offered you the opportunity to attend a conference or seminar or workshop on any mining matter?-- No.

Do you have any opportunities to meet with other mining officials in a similar capacity to yourself from other mines?-- Sometimes when you go away for a Mines Rescue comp you might bump into a few old mates, and I know - was it a year ago or two years ago - I went for a trip for three days and you go into other pits and you bump into other cadets that were a year or two above or below you, and have a bit of a chat, but apart from that, no.

There are no forums you can get together to talk about mining matters?-- No.

It is a casual, occasional meeting up?-- Yeah. There is no forum, no.

If we can get back to the issue of the 512 panel? Now, during the week you returned from sick leave, during 1 August up to the time of the explosion, how many times did you visit panel 512?-- I would have gone there every day as part of my inspection, yes.

On how many of those visits did you personally take carbon monoxide readings?-- I didn't take a carbon monoxide reading on any particular day.

You never took a carbon monoxide reading on any of your visits?-- No.

How many times did you take a methane reading?-- I didn't take a methane reading on any particular occasion.

During your inspections, did you normally carry a Drager apparatus or minder?-- Not a Drager. With the minders, normally there was just enough for the deps, but you still had an AFD you could take if you wanted to. I found them pretty cumbersome, so unless I was going in a specific area where I knew a deputy had been, then I wouldn't.

On your routine visits underground, I take it there are many different things for you to consider, people to see and people to talk to?-- Yeah, it is a jumble of coordination.

A lot of things to remember?-- Yeah, well, you have got

different panels operating on different systems, different blokes, different things to do. Yeah, sometimes you might even give them a bit of a hand with something.

We have heard many times of the deficiencies of the human memory through this Inquiry. Tell me, do you carry a personal notebook in your pocket to take account of things you need to remember?-- Yeah, but not all the time. Sometimes I'd have it in my pocket and then it would go through the wash and things like this, but, yeah, I sort of - sometimes yes, sometimes no. It wasn't a sort of constant thing.

You don't have a notebook that you carry in your top pocket when you go around the mine as an aide-memoire on your visits?-- I know what you're saying. I am saying I had a notebook, but it wasn't in there every day, if you know what I mean.

Does the Inquiry have possession of that notebook?-- No, I just - I don't even know where they are now. It wasn't sort of like something - it was like a notebook - stuff, you know, you might write down. Like, a dep might say - if I'm walking around checking the supplies and that sort of stuff, I might write that stuff down, so when I got up top or a dep told me about down-time, I would write it down to make it a bit easier when you get up.

Did you carry a notebook when you were a technical assistant?-- No. As a technical assistant doing stone dust samples I would have a notebook with tags filled out - but, no.

I don't know if this is a fair question, but I'll ask it anyway: do you know if other officials in the mine - other undermanagers and managers in charge - carry notebooks?-- Some folk carry notebooks. As to exactly who - I know, for example, some deputies have a notebook. I'm not sure whether all the undermanagers had notebooks. I know some of them had. But as far as the manager and undermanager and senior undermanager, I really couldn't say.

Of course, you will realise that if you did have a notebook, the contents could be of considerable interest to this Inquiry?-- Yeah, well, if - there - like I said, what I mainly used to do in the notebook was things like supplies and down-times and late cribs for fellows, and things like that, you know.

Thank you.

EXAMINATION:

MR ELLICOTT: We have heard some mention of what I think has been described as the "backing up" of air in 2 heading of 512 on Saturday, the 6th of the 8th; is that right?-- Right.

I think you expressed that as being an undesirable situation?-- That's correct.

A cause for some concern?-- Well, it is mainly because it indicates to me that there isn't a proper flow through the waste.

And I think you described it as the air going around in circles?-- Yeah, I would have said that.

As another term for that recirculation?-- Yes.

Would that situation be just as undesirable if it occurred earlier in the life of the panel?-- Yes, as part of the Act, you can't allow recirculation to occur.

Can the witness be shown Exhibit 29? I think it is the folder from the SIMTARS seminar in 1988. Did you ever see that volume at the mine?-- No.

Were you aware that Phil Reed was an attendee at that seminar?-- Oh, not really. I mean, like, I didn't sort of - I didn't really keep a check on what other-----

Was he the manager of the mine at that time when you were at the mine in the capacity of undermanager?-- Which year was this, sorry?

1988, I believe?-- Yeah, he would have been the manager, yes.

And you can take it from me that he attended that seminar, yet you have never seen that volume?-- I have never seen this volume or read it.

Have you heard it discussed at the mine?-- No.

With regard to CO make, would you agree that a potential problem with CO make is that it may be very sensitive if you have very high air velocities. As an example, I think at around 40 cubic metres per second, a change of 1 ppm really means a change of CO make of over 2 litres per minute. Can you accept that?-- Well, I'd accept it coming from you.

Without having to calculate it?-- Yes.

Can you also accept, then, that what may seem an insignificant change of 2 ppm at a ventilation volume of 38 cubic metres per second is equivalent to approximately 4 and a half lpm?-- Yeah, I'm understanding where you are coming from, yeah.

So, can you accept that although the 2 ppm may seem insignificant, 4 and a half lpm may not if you were working with CO make in litres per minute?-- Yeah.

I'm not suggesting that you should have been; I'm passing this by you?-- Yeah, okay. One thing that might be helpful in this is - I think it has been sort of observed the differences in the way people take stuff - I have always found that if you sort of use one instrument and one person, or if you can use something where you can get a comparison from one time to the next, it would probably be a lot more helpful in a situation like this.

Something like consistency?-- Yeah, that's what I was trying to get at, yeah.

On 7 August, the Sunday, you produced the - I think it was trend graphs from the Unor system?-- Yes.

Can you tell me when you did that-----?-- Yeah.

-----during the day?-- Yeah, I think it was - I'm sure it was after Bunny got out of there. Bunny was still - I'm sure he was still through there at crib time, and so it probably would be some time between about 12.30 to 2.30, somewhere along there.

And that's when you produced the graph?-- Yes.

Did you produce the graph at any other time on that day, or just that once?-- No, just that once. I tried to print it but the printer wasn't working, so I just - it all spat out-----

Printers are like that?-- Yeah.

Could the witness be shown Exhibit 186? I think this is a copy of your etchings on the back page of the undermanager's shift report; is that correct?-- That's right.

I draw your attention to the figures on - towards the bottom left - those near the unlikely name of "Ellicott" there?-- Yeah.

Ignoring the Ellicott figures, are the other figures four sets of readings from the Unor?-- That's right.

And they are arranged in columns. The first column is the carbon monoxide reading?-- That's correct.

The second one the methane reading?-- That's right.

The third, the oxygen?-- That's right.

And the fourth column, the time?-- Yeah, the time - yeah, the time mightn't be actually spot-on, because I think I was going by the undermanager's clock, I think, or my watch.

Is the first time there shown 7 o'clock, which I take to be

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7 o'clock in the morning?-- That's right.

The second time 3.25 p.m.?-- That's right.

The third time 9.45?-- That's correct.

And the last time 10.30?-- That's right.

That's 10.30 in the evening?-- That's right.

Now, moving to the CO figures, the first figure I believe is 49?-- That's right.

The second figure in the column I take to be 104?-- Yeah, that's what I take it as.

Producing a difference of 55?-- Yeah.

Which is that-----?-- Scribble.

-----slightly removed figure in the enter?-- Yes.

I think you have indicated in your statement that you had calculated the CO rise in parts per million per hour?-- Mmm.

Which you estimated to be of the order of 6?-- Mmm. That wasn't from that, though.

What was that from?-- That was from my observations of it changing over on the screen.

So it wasn't from these written figures?-- No.

But you have written down the difference here and the times?-- Yes. I actually didn't - yeah, like I said, I was watching the changes to the screen - you could actually - you could actually go by your watch and walk in there and you could see the figure jump to the next one every 10 minutes.

Okay. After the 104 CO figure, I believe the next one is 147?-- Yes.

With a difference of 43?-- Right.

Now, the figure after the 147 is 159?-- Yes.

Now, I would suggest that the difference in time between those readings is three quarters of an hour - that is 9.45 to 10.30?-- Yes.

Now, that, by my reckoning, corresponds to an increase of 16 ppm per hour. That didn't come to your attention on the evening?-- No.

And I think you have indicated that that was the start of shift and things got busy?-- Yeah, well, 9.30 is what time I arrived, and I'd say that 9.45 time would have been when I was just zipping in between seeing the fellows from afternoon shift to get my tick sheet and that ready for dog-watch and

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that.

Would you agree, though, your earlier estimate of 6 ppm per hour increase is not really supported all the way by these figures, especially the last couple of rows?-- Yeah, well, if the times and everything are right. If everything is right there, then that's correct.

Had you worked that out, may it have caused you some alarm?-- Yeah, well, especially if you have got 6 ppm and it went up to something like 16, it would show a definite change in profile, yes.

Do you think there may be some case for persons other than undermanagers trying to get shifts away trying to keep an eye on this sort of thing?-- Yeah, well, it would be nice to - I was actually thinking earlier on in the week about the possibility of having - trying to break the undermanager being responsible for the overall safety and overall production. As the mines get bigger and that, maybe you could break it up a little bit so someone could spend a bit more time on observation.

One final point: the front page of your statement indicates an address in Rockhampton?-- That's correct.

Does that mean you were commuting to and from the mine that weekend?-- No, my wife and children for about 10 months before the disaster moved over to Rocky to live and I was commuting to and from Rocky on the weekends that I wasn't working, but in this situation, where I'm working on the weekend, I would stay in Moura.

So, you didn't have that travel time on top of what were probably fairly long shift times?-- No.

Did you find that tiring - working that amount over the weekend?-- It is not so much the weekend work, it was a real dog working 12 days straight.

Nothing further, thanks.

MR CLAIR: Just one matter, Your Worship.

FURTHER RE-EXAMINATION:

MR CLAIR: Mr Squires, those figures to which Mr Ellicott referred you indicate that somewhere around 10.30 at least - you say that notation of the time may not be spot on - but somewhere around 10.30 at least you worked out - or you had those figures that showed an increase of 12 ppm over 45 minutes, which, as Mr Ellicott pointed out, calculates to 16 ppm over an hour?-- It appears that way, yes.

You have mentioned in your evidence that about 10.30 that

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night you contacted Mr Mason?-- That's right.

Did you discuss these figures with him at all?-- I can't recall discussing them figures with him, no.

Did you calculate that there was, in fact, a difference of 12? I see on the sheet there is a "12" written down a bit lower there?-- Yeah, well, I know that - what I did is I went - with my initial information, when I was getting six parts - that's why I wanted to make clear I was looking at the screen, watching it click over every 10 minutes - that was in the morning - and in the - just before the end of the day shift on the Sunday, I actually looked at the time graph, but the actual - I don't think I actually calculated - as in wrote down the figures until after the disaster itself - you know, like, worked out the actual rates from there, if you know what I mean. Like, actually get the figures and divide it by the hours and work out what your rate it is.

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Those figures that Mr Ellicott referred you to on that sheet?-- Yes.

The ones with the times beside them?-- That's right.

Were they written down at the time that's noted -----?-- Yeah, they were written down through the day, yeah.

And right through until 10.30 at night?-- That's right, yes.

The figures beside the 10.30 were written down at 10.30?-- These ones here, the bottom line?

Yes, the last entry, the bottom line of the table?-- I'd say so, yes.

It's got 10.30 beside it?-- Yes.

The entry before that and that table, 9.45, if you come down below that you will see there is a 12 written there?-- Yes, I see that.

Which seems to at least accord with the difference between the 147 and the 159; do you see that? Do you remember writing that there?-- No, no.

Then underneath that is some figure which I can't decipher, but underneath that is 9.45?-- Yeah, I don't know what that is.

You don't remember -----?-- I don't even know what that scribble is there, no.

But do you remember whether you calculated that there was that rise of 12 over 45 minutes?-- No, like I said, the actual - my observations - I can't remember calculating the six parts from these figures.

Okay. You have explained that. In any event, you can't recall whether you mentioned these figures to Mr Mason when you contacted him at 10.30 -----?-- No, I can't remember him saying that, no.

Thank you, Your Worship.

MR MORRISON: Your Worship there are a couple of questions I would like to ask Mr Squires, if I may, arising out of questions by the panel.

WARDEN: By leave.

FURTHER CROSS-EXAMINATION:

MR MORRISON: Mr Squires, Mr Parkin asked you a question which was along the lines of why did Mr Mason come out for the sealing?-- Right.

Was it the case that you needed - or the union wanted extra deputies on that sealing, three instead of two?-- Yeah, well, they need - I didn't know about the union rule, but there is a rule that they want three deputies when they seal up.

Was there also a practice at Moura for a management person to be present when a panel was sealed?-- Yeah, that was the practice.

And you were going off shift?-- That's right, yes.

And Mr Mason was coming on to effectively be the management person while you were away?-- That's right. Just the hours I was working during the weekend I couldn't cover it all, so George come in and did the afternoon shift, yes.

You were mentioning the sort of rise that you anticipated in CO if there was a problem and you had at one stage that exhibit that relates to 5 North. Do you still have that with the figures? 115 it is?-- Yeah, I've got it.

You were being directed to the figures which start at 3.20 p.m. at the top of the page. If you could find that page again, I think it's the fourth one over?-- Yes, I've got that.

If we look down to about the middle of the page we see a paragraph starting, "On site chromatograph analysis", do you see that?-- Yes, I see that.

Shows within 24 hours after the sealing the CO had gone up to 1,300 ppm roughly?-- Yes, that's what it's got written.

If you started from a base of 110 that's a rise of over 1,000 parts in 24 hours?-- That's correct.

Is that the sort of rise you were talking about?-- Yes.

Professor Roxborough asked you whether you had taken readings down the pit yourself of CO and methane?-- Yes.

And you mentioned that you hadn't. Were they normally done by deputies, those sort of readings, is that why you didn't do them?-- Deputies normally did those readings.

If you went to a section where a deputy hadn't been you might take something and take a reading, but if a deputy had been there you would rely on the deputy?-- That's correct.

Can I ask you what you used to did with your notebooks? Did you chuck them away?-- Well, I never used to - it's a bit of

a funny one that one. I sort of - they either went through the wash or I'd stick them in top of the - my locker top, but I had a habit of just going through a few pages. I never used to fill one up or anything like that.

You don't know what has happened to them?-- No.

Mr Ellicott was asking you about those rates between the readings you've got written down on Exhibit 186?-- Right.

You mentioned that its times might not be right?-- Yeah, I wasn't quite sure about the times, no.

If the times aren't right then the rates aren't right either?-- That's right, yes.

If we actually look at the recorded data to see what time those figures fell, that is the recorded values off the Unor system, we can pick up exactly when those - the time when those figures fell and work out a rate from that?-- That's right, yes.

We might see 6.7 parts per hour if we do that and my mathematics is right - or at least that of my junior. It's been suggested I might do it, and why not. Volume 1, please, of the SIMTARS material. I just want to identify some times. I've opened that volume which is Volume 1 of the appendices of SIMTARS at Appendix 2.1.7(D). Will you confirm that for me?-- That's correct.

It's page 23 of 26?-- That's right.

Recording point 5, 512 seals and the entries on that page start at 7 August and go on to the eighth?-- That's correct.

Can we look down the CO column which is the fourth column in?-- Right.

Tell me when you hit 147 which is the second last one you've recorded?-- 147.5 is listed on the seventh at 2100 hours and 48 minutes.

The one just before that is 146 and a half?-- That's correct.

It's about 9.35 to 9.48?-- Yes.

Then if we look down can you tell me when you hit 159?-- 159 is 2300 hours and 22 minutes.

We can work out the rate from that. Thanks very much. I have nothing further, Your Worship.

WARDEN: Thank you. We will take a five minute break and have the next witness on standby. I do want to start him this afternoon. This witness is excused. Thank you.

WITNESS EXCUSED

FXXN: MR MORRISON

WIT: SQUIRES M A

270295 D.33 Turn 9 dfc (Warden's Crt)

THE COURT ADJOURNED AT 3.58 P.M.

THE COURT RESUMED AT 4.09 P.M.

MR CLAIR: I call Edwin George Long.

FXXN: MR MORRISON

3346

WIT: SQUIRES M A

EDWIN GEORGE LONG, SWORN AND EXAMINED:

MR CLAIR: Your full name is Edwin George Long; is that correct?-- That's correct.

Mr Long, you are the mechanical engineer in charge underground at the BHP Australia Coal mine at Moura No 2; is that right?-- Correct.

You've worked at Moura for 23 years underground; is that so?-- That's correct, yeah, nearly 24.

Initially as a fitter then you effectively rose through the various positions there until you were appointed as mechanical engineer in charge in 1987; is that so?-- That's correct.

In that position you have the supervisory responsibility in respect of the maintenance system?-- Correct.

And the system that you presided over was undergoing change, I suppose is the best way to put it, at the time -----?-- Of it being formalised.

Ask you just explain briefly what the nature of the changes were? If I can just finish that last question, at the time of the explosion I was about to say and I think you came in over the top?-- We were about half-way through the development of a maintenance system whereby we'd have defect report and the - can't think of a word for it - to be formalised in the system of maintenance we were doing already so it would be set down on paperwork, we'd have recordings systems and -----

I see. There were records kept, I take it, previously?-- There was records kept previously, but not in a work order type system that the system we were implementing was.

And what you were doing was setting up a system where the records were kept in a more orderly fashion; is that what you are saying?-- Correct.

And was that also designed to enhance the allocation of priorities for maintenance jobs?-- That's correct.

So that you could more readily recognise the jobs that needed more urgent attention?-- That's correct.

The maintenance system was designed to deal with routine or regular repetitive maintenance work together with maintenance jobs that arose from time to time?-- That's correct.

Was it also part of the system that you were developing to, as it were, integrate those two types of jobs so as to better determine priorities?-- That's correct.

You were interviewed in relation to this matter in August of 1994; is that so?-- Yep.

You were asked a number of questions and you gave answers to those questions that were incorporated in a statement?-- Yes.

You've read that statement and signed it as being correct?-- Yes.

The other matters that you were asked about and which might be relevant to this matter are all set out in that statement; is that so?-- Yes.

Thank you, Your Worship, I've got no further questions.

WARDEN: Mr MacSporran?

CROSS-EXAMINATION:

MR MACSPORRAN: Mr Long, you've been at Moura No 2 since 1972; is that so?-- That's correct, yep.

And what are your qualifications in this field?-- I trained in the Navy as a mechanical engineer and since then just progressively different management courses since I've been working for the mine.

So you mention management courses; have you done those since you've been employed at Moura No 2, have you?-- That's correct, yeah.

And what has been the nature of those courses and when did you do them?-- It was about eight courses altogether, time management, interpersonal relations. I can't think of the name of all of them.

Have they all been in latter years or were they spread over the whole period you've been at Moura No 2?-- Spread from 1983 onwards.

'83 onwards?-- Yeah.

In 1983 were you workshop engineer?-- That's right.

So it was after you attained the status of workshop engineer that these courses started to be offered to you?-- That's correct.

And not before then?-- There were two-day courses at the mine before that, but there wasn't all that many.

All right. Have you ever had any opportunity to visit other mines or mix with personnel from other mines as to the procedures they have in place at their mechanical engineering side of things?-- Not too much of it, but I have been to visit other mines, either through the company visits or through my own.

Is there a program that encourages that at No 2, or has that been more on your own initiative from time to time?-- I would say just as it crops up. I would have a chance of going somewhere for a visit, but it wasn't always practical.

Would that be a visit designed to look at the procedures another mine would have in place or what -----?-- To go around and see what type of maintenance systems they were using and what other procedures they had as well.

And that would be undertaken by you when the opportunity arose?-- That's correct.

Would that be a rarity most often or -----?-- It wasn't all that often.

There was no planned scheduling of your visits to other mines, it was just whenever the opportunity might have come up you were able to take it?-- That's correct.

Can you tell us anything about the frequency of that? Were there any records of those visits that you kept, or someone else might have kept?-- I don't say there was any formal records kept of it, no.

Were you required to submit any report or record of the visits once you had taken part in them?-- Not always.

At all, ever?-- Not so much the visits to mines, but when we visited a manufacturer of some sort to look at machines that would be required by the company, then, yes, you used to write a report out.

Was there any other form of training offered to you during the course of your years at No 2?-- Basically computer training and the other management course type things that come along.

And you have been mechanical engineer in charge, I think you said, since -----?-- '87.

----- 1987. As you have indicated in your statement, there is no - there wasn't in August 1994 a system in terms of maintenance which would establish a planned ratio, or a ratio of planned maintenance?-- No, we hadn't got to that stage. It was only started in the early part of the year. There was maintenance being carried out before that, but it wasn't a formalised maintenance system.

There was a program in place that ultimately would lead to - ideally would lead to a ratio of planned to unplanned maintenance?-- That's right.

The purpose of that being - what was the idea of that, that program?-- Better organisation.

And would the ultimate outcome be to have more planned maintenance than unplanned maintenance?-- That would be the idea, and to increase the availability of the machines.

Thank you. Thank you, Your Worship.

CROSS-EXAMINATION:

MR MARTIN: A couple of matters, Mr Long. Speaking about the underground operation and only about that, by August 1994 how do you describe the condition generally of the underground mining machinery, and in that respect I refer to continuous miner or miner, shuttle car, personnel carriers and equipment carriers?-- It was fairly reasonable if you look at the availability figures of the machinery, and it wasn't too bad for the age of the machines.

How old were they?-- The oldest continuous miner was 15 years old.

What was the newest?-- Nine.

What about the other equipment; the shuttle cars, for instance?-- Four of the shuttle cars were nine years old and two had only just been overhauled converting 415 to 1,000 volts, and the other two cars were '83/'84, I think were the vintage.

Were there plans to replace or renew these vehicles, or this equipment?-- There was plans in the future budgets to send away two more cars to be overhauled and also to replace some of the other machinery, continuous miners.

Thank you.

CROSS-EXAMINATION:

MR MORRISON: Mr Long, can I just ask you a couple of things? Mr MacSporran was asking you about the maintenance system that was on its way to full implementation at the time of the explosion. Was that under the MIMS system?-- MIMS, yes.

Prior to that, though, there had been not the same system but a perfectly effective card index system, hadn't there?-- Yes.

And that was a system with which you were very familiar?-- Yes.

In fact, I think you had introduced it?-- I initiated it.

And that was back in 1983?-- That's right.

And that was an historical system which gave you descriptions of work for machinery?-- It gave you descriptions of repairs on the machinery so that you could plan your work away from that.

And using that card index system, you could keep quite a good track on the maintenance planning?-- Yes.

And I suppose what we might see is the MIMS is sort of a fancy computer controlled way to do the same thing?-- More or less the same thing, yes.

But it's doing exactly the same sort of job that the card index system did?-- Yeah.

Basically the maintenance quality under the MIMS system as it was being introduced, would you say that was much the same as had been under the card index system?-- At the area we were of the system, yes, but it would have improved as we went along.

But no reason to think that maintenance had been bad originally?-- No, no, no. When I say it would improve, the paperwork side of it would improve.

But the quality of the maintenance work itself had always been good, hadn't it?-- Yeah. As I say, the availability of the machines is pretty good.

The availability - I think you had got a bit better than 90 per cent for continuous miners, which is a pretty good result, isn't it?-- With the age of them, yeah.

I have nothing further, Your Worship.

MR HARRISON: I have no questions, Your Worship.

EXAMINATION:

PROF ROXBOROUGH: Mr Long, would you know what the consumption of cutter picks were on continuous miners at Moura No 2? You wouldn't have anything to do with that?-- Well, I had control of the stocks of them, but I wouldn't have kept a perfect check on how many we used, but at any time when we had broken pick blocks or things that were causing those problems on the drums, we used to bring them out and weld new blocks on it. So, if there wasn't a defect report went in saying it was defective blocks, then they would have all been okay.

Are you saying you had charge of the supply of cutter picks?--

270295 D.33 Turn 10 mkg (Warden's Crt)

No, I had charge of the supply - I was in direct control of the stocks that we were carrying.

So, it would be fairly easy to find out, would it, what the consumption of cutter picks were?-- Yeah.

Could we get that information from you?-- Right at this moment, no.

Not right at this moment, but eventually?-- Yes.

Okay. I would ask you for that information, please?-- Yeah, all right.

MR ELLICOTT: No questions.

WITNESS: Just to elaborate on that, that might be the usage of the four machines, because a lot of the times that the picks were taken down the mine they wouldn't be booked out to exactly the right machine they were taken down to, so it would be an overall usage.

PROF ROXBOROUGH: I understand that?-- Yeah.

MR CLAIR: I have no further questions, Your Worship.

MR MORRISON: Can I just -----

WARDEN: By leave.

MR MORRISON: I don't want to ask him a question, I just want to say as I understand it, Mr Long is retiring, so if we produce that information, could we excuse him from coming back? He may not wish to.

WITNESS: I am heading for Western Australia.

WARDEN: I don't propose to fly you back from there. If you could give that information to somebody else, please, just to pass on?-- I will do that tomorrow.

Thank you. You may stand down, you are excused.

WITNESS EXCUSED

MR CLAIR: Your Worship, Mr Reed is there. I am quite prepared to call him.

WARDEN: Yes, you can call him, thanks. I think I have been outvoted up here. We will start on him.

MR CLAIR: I call Philip John Reed. I was told a short time ago he was there, Your Worship, but there might have been some contrary indications.

XN: PANEL

WIT: LONG E G

PHILIP JOHN REED, SWORN AND EXAMINED:

MR CLAIR: Your full name is Philip John Reed; is that correct?-- That's correct.

Mr Reed, you are the Quality and Improvement Superintendent of the Moura operations employed there by BHP Australia Coal; is that right?-- That's right.

You were interviewed in relation to this matter on 24 August of last year and you made a statement; is that right?-- That's right.

And you signed that statement as being correct; is that so?-- Yes.

That's document 70/14, Your Worship. Now, Mr Reed, you graduated from Queensland University in 1975 and started at Moura Open-cut in 1976?-- Yes.

And you have set out in your statement the details of your employment history since then; is that right?-- Yes.

You were appointed to your current position in October 1992?-- That's correct.

Now, that position really relates to the whole of the Moura BHP Australia Coal operations; is that right?-- Yes.

Which, of course, includes the No 2 Underground Mine?-- Yes.

In so far as - well, in fact the whole of the operations are concerned, you have two basic functions, is that right, looking after Quality Assurance and also Continuous Improvement?-- That's correct.

On the Quality Assurance side, was the aim to establish an accreditation to Australian standard 3902 which involved establishing quality systems and associated documentation for all elements of the operation except maintenance?-- That's correct.

As far as Continuous Improvement was concerned, did you have the aim of seeking, what you have termed in your statement, a culture change across the Moura mine to have all the employees, management and workforce, adopt the principles of what is referred to as Total Quality Management?-- That's correct.

Now, you refer in your statement to work instructions which have a particular role in the system; is that right?-- Yes.

You mention also in your statement that there have been some areas where emphasis has been placed, for instance, methane drainage installation procedures and monitoring?-- Yes.

XN: MR CLAIR

WIT: REED P J

That's one of them. Now, tell me, in respect of Quality Assurance and continuous improvement, does the feature of safety in the mine play a role?-- Safety as such as a department of the mine has not been included in the Quality Assurance system as such. That's being done right now, but in respect to procedures that do mention safety, they will be - they are included. The safety system as a whole in the mine has not been at the moment.

Has not been included at the moment?-- I need to add there are procedures on the statutory line which are included and, as such, can be ordered at any time.

You say they are included now. I suppose that the time this Inquiry is interested in is back in August of last year prior to the explosion. What was the position as far as safety at that stage playing a role in this Quality Assurance and Continuous Improvement?-- Just referring to the underground, ventilation and stone dusting, there were procedures written for that. They are safety related and they are also statutory related, and they were included in the first draft of the quality system at the Moura Underground Mine.

You say they were included?-- They were included, ventilation and stone dusting in particular.

Ventilation and stone dusting. Did I understand you to say a little while ago that safety as a whole wasn't part of the Quality Assurance system?-- No, safety in the context of what safety systems are in place on the mine site in regard to accident investigation, housekeeping inspections, safety audit inspections, those sort of things have not been added as such, but they will be. The other procedures have been.

Now, as part of the aspects that were addressed in this process of seeking a certain level of Quality Assurance and trying to achieve this continuous improvement, was it necessary to address the question of what risks existed at the mine as part of this safety aspect?-- The risks would be treated under the banner of the work instructions, which are documents that specify the detail and how certain tasks are to be done. Now, part of the process of drawing up work instructions is to conduct job safety analysis type work, which primarily involves safety and the steps in doing the task.

Did that involve you at some point?-- I have been involved in some, but I was certainly not involved in all of them.

It might be wise if you wait until I finish asking the question, because that lady has a lot of difficulty taking down both of us at the same time?-- Okay. Sorry.

Now, were you involved, as part of this system, in determining what you perceived to be the risks for the underground mine?-- I could offer some advice in some areas where work instructions or job safety analysis needed to be carried out, but that was primarily the function of the management at the underground mine.

You weren't part of any process that was designed to, as it were, identify the risks that existed?-- No.

Was there discussion at any time, in terms of the process you were involved in, of difficulties with spontaneous combustion as a risk at the mine?-- Not in my present capacity as a quality superintendent.

Now, in previous years, you were involved in the day-to-day activities of the No 2 Mine - that's back around 1992 and before that; is that so?-- That's correct.

What position did you have there in 1992?-- I was the underground superintendent, which was also the registered manager of No 2 Mine.

And you had been in that role since 1984; is that right?-- That's correct.

January 1984. Now, over the course of that time, did you have some involvement, then, with the problems of spontaneous combustion?-- Yes, we did, and then again in 1986.

You mention 1986. Was that the sealing of 5 North?-- That's correct.

And you were, of course, as the registered manager, involved in that?-- Yes.

You have set out the details of that in your statement. Just let me pick up this aspect. In respect of 5 North in '86, the way you put it is that it was treated as a definite heating?-- Yes, the need to add the actual time of determining the

heating and the sealing of the operation was not on site, but there were reports after I came back it was treated definitely as a heating.

Now, was that the only occasion during your period of underground superintendent/registered manager where there was a definite heating-----?-- Yes.

-----that's identified in that mine?-- Yes.

You were, of course, still in the position when 5 North-west was sealed?-- That's correct.

And perhaps - I should say again you have set out the details of that in your statement; is that right?-- Yes.

Now, in the case of 5 North-west, that wasn't dealt with as any case of being a definite heating?-- That was a precautionary sealing. It wasn't treated as a heating.

Was there any evidence of a heating at all or suspected heating?-- There was evidence of trends towards a possible heating at some time in the future and there was other aspects of the panel which also made up my decision to seal it at that time.

Now, after the decision there to seal, and after the sealing, the men were kept out of the mine?-- Two days later they were, yes.

Whilst the panel went through the explosive range?-- That's correct.

Can you just explain briefly the circumstances that led to that?-- We sealed the panel two days before as a precaution and it took two days for the atmosphere behind the seals to reach explosive levels. At that point, the - there were points raised about people not wanting to go underground because of a chance of a major roof fall in an explosive mixture. After considering that request, and due to the known uncertainties at that point in time with frictional ignition, I went along with that concern and the men stayed out of the mine until it passed through the explosive range.

So, they were out for some two to four days?-- Yes, two days, I think, from memory.

When that panel was sealed, there were two Unor monitoring points located behind the seals?-- That's correct.

Are you able to say why there were two points put in?-- It was custom that we always put two monitoring points behind the seals after the '86 sealing. The reason being in '86, the ones put behind the seals didn't function, so we put two behind the seals after that point to get that insurance, but also to give a better spread across the panel.

Are you able to say how far into the panel each of those monitoring points were placed?-- Usually about two pillars in

behind the seals.

Both of them?-- Yes.

One a roadway at one end and the other-----?-- Yeah, one at 5 road and one at 2 road.

Okay. Now, you say that it was customary to have two monitoring points behind the seals. Have you become aware of any change in that custom yourself?-- No.

At any time prior to August of last year?-- No.

I just want to ask you briefly about the practice with the Unor monitoring system when you were there. Do you recall whether there was any training of anyone in respect of the use of the Unor monitoring system?-- When we upgraded the Unor from two gases to four, Maihak, which is the manufacturer of the unit, came up and ran an on-site course for a couple of days, and there was a number of us who attended that course. From that point on, it was just us people that were trained up training other people in the use of that equipment.

I am interested, first of all, in this aspect of people being able to accept alarms. Was there a wide range of people who were authorised to accept alarms, or only a narrow group?-- Authorisation in writing - there was no-one authorised in writing to accept alarms. Anyone who knew how to accept an alarm was able to do that. The Unor was accessible by anyone at any time and there was no password control for people to be able to get in and accept alarms.

No password control, you say?-- No.

Were there any identification numbers issued to people-----?-- When you accept-----

Can I finish - issued to people so that they could use those particular numbers when they did acknowledge an alarm at the Unor system itself?-- To accept the alarm you had to input two digits as part of the accepting process.

Any two digits?-- The general was the cap lamp number. Why it was, I couldn't tell you, but that was certainly my interpretation, and anyone I taught how to accept an alarm, I advised to put the cap lamp number in.

Did you always use your cap lamp number in when you accepted an alarm?-- Yes.

Your cap lamp number was two digits?-- No, mine was three, which made it a bit difficult, so I used the last two, and mine was 100, so mine was 00.

What did you instruct other people to do where they had three digits? Was there any specific instruction about that?-- No, there was no specific instruction.

So, to what extent was this system of using cap lamp numbers

actually formally established as part of an alarm acceptance procedure?-- There was no formal system as such; it was just "put in two numbers", usually your cap lamp number.

Usually your cap lamp. From what you say, there was never any attempt to set up a system where, when you looked at the alarm log and saw the numbers used, you were able to identify who it was that accepted the alarm?-- There were times you could and times you couldn't.

It was on a haphazard basis. You are not saying for two years it was done one way and then changed?-- No.

It was just haphazard?-- Yes.

Now, what about the setting of the alarm points for the Unor? What was the practice when you were there in respect of that?-- In normal operating areas of the mine we'd have some predetermined set point levels - 5 ppm and 10 ppm for CO, 1 per cent and 2 per cent for methane, and then down to 19 and 18 per cent for oxygen. CO₂, probably about 0.2, 0.3.

Right. Now, somebody had to actually put those set point levels into the Unor system?-- Yes.

And no doubt in certain circumstances from time to time there was a need to change the set point levels?-- That's correct.

What procedure was adopted for that?-- I usually changed the alarm levels myself as a rule. The electricians could - certainly could - because they needed to when they calibrated the system, but I had a fair bit of input into what alarm levels were set on the Unor system.

You say in your statement, when you were asked - this is page 4 - who would have the authority to change the alarm set points, your reply was, "Myself and anyone I authorised.", which would normally be an undermanager, and then you said electricians did the calibration of the system. Now, when you refer there to "anyone I authorised", did you issue any formal authorisation?-- Nothing in writing, no, but undermanagers could do it. I wouldn't expect anyone below undermanager to play with alarm settings.

Did you keep any record of who was authorised to do that?-- Not in writing, no.

Have you ever become aware of any change in the system in terms of who would be involved in altering alarm levels?-- No, I know of no change.

I might just ask you this, too: have you had any refresher training, or other training, for that matter, in any aspects of mine fires and heatings during the last five years?-- Not since 1989.

1989. And what were the circumstances of that?-- It was the training for mine officials in mine fires and explosions, one of the recommendations from the No 4 Inquiry.

And you were at that stage the-----?-- Registered manager.

You were the registered manager/underground superintendent; is that right?-- Yes.

How many people - you attended the course, obviously?-- Yes.

How many other people from the mine attended that course?-- No-one from Moura mine. The attendance at the course was limited to registered manager, Mines Rescue superintendents, mines inspectors and district union officials.

And this was which year?-- I think it was 1989, from memory.

Whereabouts did you do that?-- That was held at SIMTARS in Brisbane.

When you came back to the mine after the course, did you set up any process whereby other people at the mine would be instructed on this question of mine fires?-- No, the manuals were available, and I think from memory that Allan Morieson, the ventilation officer, took those books to study as a result of the content in them and the changes we made as a result of attending the course.

So the manuals were available, Allan Morieson took those?--
Yes.

Did you take any steps to ensure that other people also were given some training in this matter of mine fires and heatings?-- No, they were available. I didn't actually go out and promote those manuals, but they were available.

When Allan Morieson took them, where did he take them?--
Whether he took them into his office or took them home, I couldn't answer you.

Do you know if they came back?-- No.

When you say they were available, where were they available?--
Allan Morieson.

At his home?-- Could be. If they wanted them - people asked me for them I would go and ask him for them back.

Did that ever occur?-- No, it didn't.

People asked you for them?-- No.

There was no positive step to instruct other people in the information that you had gained when you did this course in 1989?-- That's correct.

Did you do any further training or even attend a seminar in respect of this kind of problem in mines in 1991 at all?-- No, I don't think so.

Seminar in New South Wales?-- No.

Not at all?-- No.

Have you ever attended a seminar in New South Wales in relation to this sort of problem, fires and heatings?-- Only through Mines Rescue seminar at Wollongong.

When was that?-- That was in the late 80s from memory.

After you had done the course at SIMTARS or before?--
Couldn't be sure, couldn't be sure.

On that occasion was there part of the course that dealt with spontaneous combustion?-- It was mentioned as a topic.

Was there much said about it?-- Not a great deal, no.

Are you able to explain in a nutshell what - this is after you had been to that course and also to the one at SIMTARS, are you able to explain in a nutshell what you would have regarded as the signs that you would look for in order to ascertain whether there was a heating in a panel?-- Well, what I got from that course in '89 is the concept of using CO make in determining or helping to determine whether a spontaneous combustion event was occurring or trending towards occurring, and I obtained that from the course and implemented that at

the mine as part of the course. The other signs you look for is smells. In the later stages you've got your haze, sweating of the coal maybe, and then you've got your propagation of the hydrocarbons - hydrocarbon and ethylene.

The Graham's Ratio -----?-- It was mentioned in the course. That was already being used at the mine prior to that course anyway.

The course you are speaking of is -----?-- '89.

The New South Wales course or the -----?-- No, SIMTARS.

When you came back to the mine did you take any steps to instruct other people in the value of calculating the CO make?-- Because I introduced a system to use in the mine then people immediately around me became aware of the requirements of CO make, how to calculate it and what it meant. So people who virtually worked around me like the ventilation officer, undermanager-in-charge and some of the undermanagers.

Are you able to recall which people were involved in this new learning, that is the value of the CO make?-- If you are asking me did we have sit down, formal training in the CO make the answer was no. It was introduction and learning by association over a period of time. So the ventilation officer, Allan Morieson, George Mason, undermanager-in-charge, Mark McCamley, the undermanager also acted as a relief for me when I was away, and the Mines Rescue people themselves at the mine which predominantly were deputies and some undermanagers as well also were aware of CO make through their own training.

Do you remember which undermanagers became aware of it?-- Mark McCamley certainly did.

You mentioned him?-- Michael Squires was aware of the need - was aware of what CO make was through supplying graphs for me the previous time on the '86 heating and I imagine he would have had some basic training through rescue as well.

Anyone else?-- No, Terry Atkinson I couldn't say for sure, and Bruce Danvers was the safety and training undermanager. He was aware of what we were doing. What's the extent of his knowledge I couldn't say.

The Quality Assurance system that you had established, did that address in any way a system for the operation of the Unor monitoring system at all?-- No, that's - the areas - as the system grew in time you would take all those areas into account but you must imagine that to gain accreditation you are putting a basic system in, and the use of the system is as it grows in the future so you don't encompass everything in the initial stages of a quality system.

Thank you, Your Worship.

WARDEN: How long do you think you will be?

MR MACSPORRAN: Difficult to say, Your Worship, but I will be

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certainly not a very brief time.

WARDEN: I'm in your hands. We can have an early start tomorrow morning if you like, a 9 a.m. start, and call it a day now. Thank you then. We will stand you down, witness. We will adjourn the proceedings until 9 a.m. tomorrow morning, thank you.

THE COURT ADJOURNED AT 4.51 P.M. UNTIL 9 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 28/02/95

..DAY 34

280295 D.34 Turn 1 sbd (Warden's Crt)

THE COURT RESUMED AT 10.45 A.M.

WARDEN: Gentlemen, the members of the panel aren't with me. They are considering a certain matter which has arisen and with their consent I am adjourning these proceedings until 9.15 a.m. tomorrow morning. Would the instructing solicitors hold themselves available for consultation later in the day? Thank you.

THE COURT ADJOURNED AT 10.46 A.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
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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 01/03/95

..DAY 35

THE COURT RESUMED AT 9.15 A.M.

PHILIP JOHN REED, CONTINUING:

WARDEN: Thank you, gentlemen. There is a matter which I wish to deal with at the outset before we continue with this witness. In response to the application on the part of Mr Morrison to strike out part of the re-examination of Mr Squires, and in particular that part described around page 3,288 of the transcript, I have examined the transcript and can see no reason to strike out that part from the record. Particulars were properly put to Mr Squires and Mr Squires gave an answer in all instances. Further clarification was not sought by Mr Clair in any instance. The series of questions was prefaced by Mr Clair to the effect that he may be making a submission contrary to the answers given by the witness on certain points.

Having so ruled on that application I feel it may be appropriate to clarify some aspects surrounding my ruling of Monday, 27 February.

Although delivered in response to an objection raised by Mr Morrison on 24 February the ruling sought also to provide some reinforcement of the purpose of this Inquiry. In that respect the events of the 24th provided a trigger for the redress of certain other matters. The dual purpose of that response may have given rise to some ambiguity and potential for misinterpretation.

As indicated at the time, the ruling incorporated some redress of concerns which have been developing since near the start of the Inquiry.

The ruling was prepared prior to the submissions of Mr Clair and Mr Morrison of Monday, 27 February and was delivered unaltered.

Particulars of those submissions were not taken into account in the ruling. The ruling should, therefore, not be seen as supportive of the content of those submissions.

In particular, the ruling in no way supports the observations of Mr Morrison relating to the impartiality of counsel assisting the Inquiry, nor does it support the narrow interpretation of nature and cause put forward by Mr Morrison. Parties may rest assured that the panel will pursue the issue of cause in as broad a sense as deemed necessary in order to fully assess relevant background to the events of 7 August 1994.

As indicated earlier, Mr Morrison's objection regarding direct questions of competence is upheld. Such questions properly remain a potential subject for another tribunal.

My upholding of Mr Morrison's objection is, however, constrained to the extent indicated by my observation around line 20 at page 3,317 of the transcript, to the effect that this Inquiry is not, as a direct matter, interested in any conclusion about the competence of individuals or otherwise.

However, where an individual's capabilities may have had an impact on events then that issue should be pursued.

It is considered appropriate that questions continue to be put to witnesses concerning training, knowledge, experience and particular skills in relation to matters leading up to and surrounding the events of 7 August 1994.

It is also considered appropriate that the veracity of witnesses continues to be tested where this is considered necessary by counsel to further the aims of the Inquiry.

Having had an opportunity to study the submissions of Mr Clair and Mr Morrison of Monday morning, 27 February, I do not support Mr Morrison's criticism of the manner in which counsel assisting has put matters for comment by the witness in question.

The ruling of the 24th alluded to the different nature of this type of inquiry to other inquiries and, arising from that, the different status of witnesses and in particular the voluntary aspect of their participation. Notwithstanding this, these proceedings are of a serious nature resulting as they do from a multiple fatality. In line with this witnesses must expect to be asked some questions which they may find difficult to answer and for there to be some robust examination by counsel from time to time.

Indeed, there has been a degree of vigorous examination on the part of a number of counsel since the Inquiry began. My observations regarding shooting the messenger should be interpreted as cautionary and identifying a situation which I would not like to see emerge. This is primarily with a view to protect the integrity of not only the current but also future inquiries.

Witnesses having come forward should not be made to suffer for it. However, they should not expect not to be challenged and faced with searching and penetrating questions intended to ascertain the true situation. It is only by ascertaining the true situation that the reviewers may arrive at a valid position regarding nature and cause.

There is one other aspect of my ruling of 24 February which may be misinterpreted. The comments contained in the ruling were not directed at any individual party or counsel but were an attempt to maintain the focus of the Inquiry on nature and cause as fundamentals.

That's all I wish to say in relation to that. I think we are in a position to continue with this witness. I think you hadn't started Mr MacSporran. Before you do, witness, you are on the former oath you took the other day; do you understand

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that?-- I understand that.

You are still sworn and still bound by it. Thank you.

CROSS-EXAMINATION:

MR MACSPORRAN: Mr Reed, you graduated in 1975?-- Correct.

Started at Moura open-cut in '76?-- Yes.

And then left the company for a short period in '78 and '79?--
Yes.

And then returned to Moura at No 2 underground in 1979?--
Yes.

Appointed undermanager there in 1981?-- Correct.

Wash plant manager in '83?-- Yes.

And then from January 1984 until October 1992 you were the
manager at No 2?-- That's correct.

Your current status is as Quality and Improvement
Superintendent with respect to all the Moura operations?--
That's correct.

As I understood your evidence, and correct me if I am wrong,
but during the period you were at Moura No 2 in whatever
capacity you didn't receive directly from the company training
in respect of spontaneous combustion?-- Not directly from the
company.

I think at one stage, and you've told us about this and I will
come back to it, in 1989 you attended a seminar in Brisbane
conducted by the SIMTARS organisation?-- Yes.

And that was with respect principally to the issue of
spontaneous combustion?-- To do with mine fires and
explosions which included spontaneous combustion.

Included spon com, but apart from that exercise there was no
training offered by the company itself to you in aspects of
spontaneous combustion?-- The company made available for me
to go away to various courses through my career as manager at
the underground including one - I'm not sure what the exact
date in '87 was - in Brisbane, spontaneous combustion workshop
held in Bardon. That was purely to do with spontaneous
combustion and the company made myself available to go to do
that.

Can you recall now who it was that conducted that seminar or
course?-- It was conducted by various people. I know John
Brady was involved as inspector for central Queensland at the
time. There were presentations at the end by Dr Golledge

purely to talk about flame safety lamp which was an issue overflowing from the No 4 inquiry, and there were various other experts from the industry attended as well.

Perhaps we can come back to it, but was that about the time that there seems to have been a change in emphasis in respect of detection of spon com from parts per million CO to litres per minute?-- Not sure if that was the exact time, but I think the trigger mechanism was the heating we had in No 2 in '86 because as it was a workshop theory - a practical exercise, and the practical exercise was all devoted to the heating of '86 in No 2.

Was there any literature produced as a result of the '87 exercise?-- I can't recall.

Were you the only staff member from No 2 that attended the exercise?-- No, there was a group of us and I can name them if you wish.

Would you mind?-- There was myself, Don Fowler was the manager of No 4, Graham Smith who was the operations manager for the whole of Moura mine, George Mason, and there was two deputies, Newton and Stafford.

The 1986 incident involving 5 North, was that your first experience with an actual heating in a mine?-- Yeah, first and only.

At that time I think you would agree that the emphasis seems to have been on concentration of carbon monoxide and parts per million?-- That and Graham's Ratio as well.

Do you know who it was that actually decided that there was in fact a heating inside 5 North and it needed to be sealed?-- My answer to that is based on what I heard after I came back. I was away at the time, but it was involving discussions with the inspector, John Brady, and decisions were made on the telephone of what action too take at that time.

So you think from what you heard at least John Brady, the inspector at the time, when given the information believed there was a heating and that the panel should be sealed immediately?-- I think that consensus was reached to do that.

As you know the sealing operation started and finished in the one day?-- Yes.

And the panel ultimately became inert?-- Yes.

I think you told us that in '87, the year after, apart from this course you attended or seminar there was a reassessment, as it were, of the information that came out of the 5 North incident?-- Not sure whether a year later, but some time after that we revisited the data and plotted some CO make graphs.

I think you told us yesterday - not yesterday, the last occasion you were in the witness-box, that those graphs had

been plotted for you by Mr Squires?-- That's correct.

Was that because he was a technical assistant at that stage?-- Yes, he was.

Did you understand him to have any knowledge of the graphing process and CO generally?-- Probably didn't know a lot at that stage because it was a new concept anyway, but as far as calculating and plotting the graph he would have had the ability to do that.

You are not sure when that was?-- No.

Whether it was the year after the event or when, but can you say whether or not it was before the occasion you attended this seminar or course in Brisbane?-- I would say it would be certainly after it.

After that?-- Yes.

So can we say that at the time you asked Mr Squires to plot those graphs of 5 North you were aware of the significance of CO make?-- Yes, that's why I made a request to plot the graph.

And further more were you aware at that stage of the significance of a level of CO make in terms of the detection of a spon com?-- Only on the quoted German standard.

I'm sorry?-- The German standard, it was the reference points we were advised on.

Was the German standard you were advised on the basic figures of 10 to 20 lpm?-- Yes.

10 lpm of make indicating cause possibly for concern requiring investigation?-- 10 to 20, I think, was the figure for investigation, 20 was serious and over 30 was active fire.

So over 30 you would have an open fire?-- Open fire.

Could the witness see Exhibit 21, I think it is, Your Worship, please? Perhaps I could ask you firstly, Mr Reed, if you could start at the back of that document and count in - I think it's four pages. Do you see that's appears to be a hand-drawn graph - series of graphs? Beg your pardon. Can I have the exhibit? I might be able to help you. It's one ----?-- That one?

Yes, that's it, yes. That refers to 5 North East return, vent station 14, plotting of dates on the bottom axis and litres per minute of CO on the vertical axis; is that so?-- That's correct.

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Do you recognise that graph as being one of the ones that was produced for you by Mr Squires?-- Yes, it was.

And that appears to plot, as it indicates, only the carbon monoxide volumetric emission from one of the returns in 5 North?-- That's correct. That's what I asked him to do.

Do you agree generally - we will go to a table shortly - but generally what that shows is an increasing trend initially, then a somewhat flattening or levelling out of the appearance of the litres per minute?-- Yes.

And then on the day of sealing a significant rise in litres per minute?-- That's correct.

Is that a fair way to describe generally the appearance of that graph?-- Yes.

Now, if you go from there, you will see amongst that compilation of documents there is a table dealing with the CO make for 5 North. On my copy it's page 18; it might not be in yours?-- 5 North.

Yes, 5 North, CO make 5 North?-- Yes.

And it's drawn up in tabulated form similar to the procedure, I think, you instituted after the SIMTARS seminar in 1989; is that so?-- Yeah, could well be.

Anyway, that gives the dates in the left-hand column and various other particulars, including in the far right-hand column the total CO in litres per minute taking into account both the bottom and top returns in 5 North?-- Correct.

It starts 1 November 1985 and goes through to the day of sealing which was 19 April 1986?-- That's correct.

Now, again, can we just - do you agree that the trend shown in that tabulation, firstly, is a start figure in November '85 of 9.94 lpm?-- Yes.

Then a drop a week later to 6.52?-- Yes.

A rise another week later to 13.84?-- Yes.

Then a rise another week later to 16.14?-- Yes.

A drop the following week to 8.46?-- Yes.

And a rise to 18.15 on 6 December?-- Yes.

And then without going through each individual figure from that point on, it really levels out substantially from 6 December '85 right through until basically the day before the sealing where it's 19.94?-- That's correct.

There is a couple of hiccups, if you like, some drops to 17 and a drop to 14 in March, 20 March '86, a rise to 23 on 4 April, but generally there is a levelling out between

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6 December and the day before the sealing, 18 April?-- Yes.

So, apart from the initial rise to achieve a significantly higher level, the CO make in 5 North really levelled out substantially, didn't it, for some significant period before the heating was detected?-- That's correct, yes.

And then the heating was detected and dealt with on that last day, 19 April, that's a Saturday?-- Yes.

And the CO parts per million escalated rapidly, as did the litres per minute?-- That's correct.

And, of course, the panel was then sealed in an emergency situation, wasn't it?-- Yes, it was.

And there were fears held by probably all concerned, you learned later, that it was quite a dangerous situation, sealing in those circumstances?-- Very stressful.

And, in fact, not dissimilar to the Kianga experience where the sealing was taking place at the time the explosion occurred?-- I did hear that that was mentioned at the time.

One of the deputies involved in 5 North had been involved in Kianga, Mr Stafford?-- Yes.

And he had expressed some concerns about the situation in sealing 5 North in '86 because of his concerns for what had happened in Kianga in '75?-- Yes, so I believe.

In any event, the panel was sealed, fortunately successfully, on that day?-- That's correct.

Now, the graph, which is, I think, the next page after the tabulation, the graph of 5 North, really just shows the same trend, doesn't it?-- Yes.

A rise to a significantly higher level, just under 20, a levelling out for a substantial period, and then on the day of the sealing a significant escalation?-- That's correct.

Now, from that exercise, you say the information was revisited and you had Mr Squires draw the graph, or one of the graphs that's depicted in that exhibit. Was there discussion at the time that was done about the significance of litres per minute of CO make in detecting spon com?-- The reason was that we became aware of the theory of CO make and the German standard and we had an incidence of an actual spon com heating and we wanted to see what sort of trends and whether we can learn anything like that and how it stood up against the theory.

Certainly. That's certainly good mining practice, to learn from previous incidents and take on board knowledge gained worldwide?-- Yes.

When you say "we" learned of the German figures and the significance of CO make in litres per minute, who do you refer to when you say "we"?-- The management team and any people

that worked around directly in with the monitoring of ventilation in CO parts per million.

That would include, no doubt, Mr Squires?-- He was involved in the initial set-up.

And the initial set-up of using CO make in litres per minute to detect spon com?-- He was involved in drawing the graphs up. I don't know whether he was involved in actually utilising and making assumptions of CO make after that event.

I take it at the time he set up the graphs for you in respect of 5 North - and they are one of the ones you have seen there - was he made aware, or did he note, from what he said to you, the German figures of 10 to 20 lpm?-- I can't recall whether he did or he didn't, but I certainly did.

You did, and others on the management team did?-- I don't know; I really don't know.

I suppose the whole purpose of drawing a graph with respect to 5 North of litres per minute would have been to compare that graph trend with the known parameters of 10 to 20 lpm?-- That's correct.

Otherwise there is just no point drawing the graph, is there?-- That's why we drew that graph.

And you had Mr Squires draw the graph?-- I asked him to draw the graph, calculate the figures.

Did you explain to him why, why you wanted the graph drawn?-- I probably said that we wanted to see how the CO make stood up against the German standard, but I can't recall the exact instructions I gave him, no.

It would have been a sensible thing, even out of courtesy, to explain to him what you were doing?-- I may have done, I don't know.

Well, that was sometime obviously after the 5 North heating in '86; you are not sure exactly when, though?-- No. It was before the '89 SIMTARS seminar.

Was there any formal debriefing of employees at the mine in respect of what had happened in 5 North in 1986?-- No.

Was there any documentation produced for circulation to educate employees at the mine from the experience of 5 North in 1986?-- Not at that time there wasn't, no.

At that time, that's '86, after the 5 North heating, it must have been known, of course, that spontaneous combustion in that seam was a very real risk?-- Once you have a heating, then it's always liable in the future. Some people always assume that sometimes their seams aren't liable to spontaneous combustion. If you ever have a heating, then that argument is out the window.

And as from April 1986, any argument that the seam for Moura No 2 was not liable to spontaneous combustion was, as you say, out the window?-- As far as I'm concerned, yes.

And that would have been generally appreciated at the mine?-- I think so, yeah, after the events of '86 everyone would have been aware of that.

By the way, do you agree that the method of working 5 North left a greater area of exposed coal than in 512?-- 5 North was predominantly a total extraction section. Now, we experienced problems with roof caving due to various reasons, so there was a fair amount of coal left behind, but as far as total waste area exposed to ventilation, then the answer would be no.

You would think 512 would have a greater amount?-- Any partial extraction area where you have to ventilate the waste, you are going to expose a greater area of extracted workings to ventilation than you ever will in a total extraction panel.

Now, I suppose one of the lessons to be learnt from the 5 North experience in 1986 would have been that the CO make in litres per minute has to be extremely carefully monitored to detect heatings?-- That's correct.

And one lesson may be that a CO make can be going quite steadily and then take off?-- That was the indications of '86, that if you reach a certain point it will take off and you are in a lot of trouble.

And you are in a lot of trouble because you are fighting against time to seal and make it safe before there is potentially an explosion?-- That's correct.

Ideally you would want to seal before it got to that stage?-- Yes.

Because the time factor is crucial, isn't it?-- That's correct.

If you have a heating in a panel, a known heating, and you seal it at some stage, it's going to go through the explosive range?-- Yes.

And that's where the danger is?-- That's correct.

So, if you monitor a CO trend, a CO make trend, any gradual increase is a matter of concern, isn't it, a continuing gradual increase?-- My experience is that CO make in extraction areas, there always is a gradual increase because of the nature of mining, the amount of ventilation in the waste. I haven't seen an extraction panel where there is not increase in CO make over a period of time.

Well, is it a question of degree then, is it, the level of increase?-- As you can see, some of these graphs fluctuate. What you are looking for is upward trend and maybe change, as well as the absolute figure that the make is.

And, of course, that's not the only signal you would be looking for, but that's one of the ones, isn't it, an increasing trend?-- Yes.

There is evidence here from various people that you would wait until you saw an exponential rise before you acted and determined there was a heating?-- My answer to that is we had an exponential rise in '86, and, as we know, that's too late.

Certainly if you are looking to detect a heating and control it, you would not be waiting to see an exponential rise?-- Certainly not.

With respect to 5 North - and I know you weren't there at the time - but did you hear of any reports from those that were there conducting the sealing operation of any smell or haze associated with the known heating?-- There was a smell on the top - on the right-hand return, which is the vent station 4 return.

How was the smell described to you at the time?-- A musty smell.

Musty smell. Did you recognise that to be a smell ascribed to spontaneous combustion or a heating?-- I smelt that myself before I went away. It was there for a period of time before that, before that Saturday.

Well, you smelt it before going away. Did it cause you concern in terms of a possible heating being present?-- Yes. Well, it caused me concern because I had never smelt that before, or a smell in that area. What I instigated - because in those days we were taking GFG tube samples to send away to ACIRL for their analysis. Then we started to take tube samples on the goaf edge as well as at the vent station to see if there was any further indications. The parts per million wasn't changing and neither was Graham's Ratio. The smell was just an added thing. It was of concern, but all the other indicators said there was no change, but it was a change to the norm.

And the smell you described as being a musty smell was a different smell, a strange smell, for the panel?-- Yes.

And a smell being a strange smell or different smell for the panel would be something you would want to investigate?-- Yes.

Because it was different, it hadn't been there before?-- Yes.

So, again, the experience of 5 North would indicate that even though you had a Graham's Ratio that, upon investigation, seemed to indicate nothing of concern, and indeed the overall picture indicated nothing of concern, you now know there was something happening inside 5 North at the time?-- The litres make graph indicated that a lot clearer than the Graham's

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Ratio and parts per million anyway.

Again, it would be possibly another reason why you, as manager, upon your return from the SIMTARS seminar in 1989, instigated a system of plotting CO make graphs as the best indicator of a presence of a heating?-- That's correct.

Was there any report of a haze associated or smoke associated with the 5 North sealing that you know of?-- The only reports of haze was on the day of the sealing, I think.

Again, at a time when it was getting to the stage where it was too late. The first sign of haze was on the very day it was detected?-- So I hear, yeah.

That is, a heating was detected?-- Yes.

Well, that was '86, and then not long after that there was the No 4 incident in, I think, July or so of 1986; is that so?-- That's correct.

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And arising out of the Inquiry into the No 4 incident, the SIMTARS seminar came about; is that so?-- That's it.

That seminar produced three volumes of material with an aim to train officials who worked in underground coal mines?-- That's correct.

Seminars conducted in 1989 in Brisbane?-- Yes.

And attended by - was it all registered mine managers?-- All from Queensland, yes.

And a host of other associated parties who were involved in the industry?-- Yes.

The seminar went for some days?-- Five from memory.

Various experts presented papers and answered questions?-- Yes.

Generally it was a very worthwhile learning experience, would you agree?-- Yeah, I thought so at the time, yes.

As part of that exercise, each of the parties that attended were given the manuals that constituted that content of the seminar?-- Yes.

And allowed to take them away and bring them back to the various mines where they worked?-- That's correct.

You did as much?-- Yes.

Could the witness see Exhibit 29, please, Your Worship?

Mr Reed, do you recognise that as being volume 1 of the three volume collection that you took away with you from the seminar in 1989?-- Yes.

And that volume, in particular, deals with mine fires and spontaneous combustion; is that so?-- Yes.

And, in particular, it, too, deals with spontaneous combustion?-- That's correct.

I want to refer you to certain parts of that to confirm this is the material that actually constituted the seminar you attended in 1989. Firstly the index to unit 2, does it cover these topics in respect of spontaneous combustion: the mechanics of it, firstly, up the top there - point 2?-- Yes.

"Factors Affecting Susceptibility" - that's point 3?-- Yes.

"Susceptibility Testing" is No 4?-- Yes.

"Geological Factors", number 5?-- Yes.

"Mining Factors", number 6?-- Yes.

"Detection of Heatings", number 7?-- Yes.

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"Monitoring of Heatings", number 8?-- Yes.

"Interpretation of Gas Analysis", number 9?-- Yes.

Number 10, "Combating Active Heating"?-- Yes.

No 11, "Sealing Off"?-- Yes.

Number 12, "Inerting Systems"?-- Yes.

And then finally the "Conclusion" section of that particular unit in the module?-- Yes.

I would ask you to turn to the introduction section, which is No 1.0 - the second paragraph there. Does that indicate - I'll just summarise it basically - that there have been "several incidents of spontaneous combustion leading to serious mine fires in Queensland"?-- Yes.

"Increasing realisation that almost any coal may cause spontaneous combustion under certain circumstances"?-- Yes.

"The need for all mine staff to be aware of its symptoms and hazards and of techniques for the detection and control of heatings."?-- Yes.

That's again in line with your knowledge of the situation in Queensland?-- Yes.

And the need to be aware of it and be trained in the detection and control of that hazard?-- Yes.

If I then turn to page 6-13 - the page is in the bottom there. 6-13. You will see section 6-12?-- Yes.

Which deals with prevention in bord and pillar sections, and that's in the context of mining factors that relate to the risk, if you like, of spontaneous combustion?-- Yes.

It says, "The principles of preventing the formation of masses of broken coal, prevention of air flow through the goaf, maintaining adequate caving and rapid rates of retreat can be readily applied in bord and pillar working - either in extraction areas, or in partial extraction where pillars are left. In all cases, however, adequate plans should be prepared for sealing off part of a panel or a section in the event of a heating. Continuous monitoring should be maintained in the return from each district and any indications of a heating should be investigated immediately and fully." That's what it says?-- Yes.

Again, you would agree, I would take it, with the sentiment expressed in that extract?-- Yes.

And, indeed, when you came back from the seminar, you instigated procedures to follow these guidelines - continuous monitoring?-- That was already being carried out anyway. The only addition was CO make.

If you turn then to page 7-11?-- Sorry, what was that?

7-11?-- Yes.

And the section there, 7-6 deals with location of heatings?-- Yes.

"Even when sophisticated gas analysis equipment is available for detection of carbon monoxide or other gases, it can be extremely difficult to pinpoint the source of gases in order to locate a heating and to enable remedial action to be initiated. Most heatings develop deep in broken coal where air flows are low, and where barometric and thermal effects may be significant. Often a heating is first detected by an examining official detecting a faint smell for a fleeting instant. Further detailed examination of the area reveals no detectable CO or any further smell or other indication. This process may be repeated on several occasions until detectable concentrations of CO begin to appear on a continuous basis, and these can be traced to the source and action taken to control the heating." That's what it says, and you agree with the sentiment expressed there?-- Yes.

But often the first sign detected is a fleeting or faint smell for an instant, which isn't readily ascertained on later inspections?-- Yeah, I have had no personal experience of that, but that's what the theory says, yes.

And the theory was outlined in some detail, as it indicates here, in '89?-- Yes.

At the bottom of that page, "Fluctuations in the ventilating pressure and flow caused by factors such as rapid barometric pressure changes, opening of doors, starting up of conveyers, movement of machinery, etc, may cause small quantities of CO (and smell) to flow back to the intake, and this is the cause of intermittent signs of a heating in this area." Do you agree with that?-- Again, no experience, but, yes.

Next page, 7-12, the second last paragraph, bottom of the page there, "Other techniques which may be useful in locating suspected heatings are the thermal image scanner (Probeye and others), the scanning thermometer, and photography using infrared films."?-- Yes.

The probeye, we were told - there was one at No 2?-- That's correct.

When was that first purchased - the one at No 2, do you know?-- I'm not sure exactly, but it was available in 1986.

And was there in 1994, presumably?-- Yes.

The next paragraph: "The significance of carbon monoxide readings varies between different locations, depending upon the air flow through the area. A reading of 10 ppm in an inbye section may be considerably less significant than a similar reading from a sample in the main return. A

convenient means of assessing samples is to convert them to an equivalent make of pure carbon monoxide in litres per minute. This removes the effect of dilution and the dependence on air flow and provides a good indicator both for initial detection and assessment of heatings and for monitoring the progress of a heating. The make of carbon monoxide will increase as the temperature rises or the area of heating increases. These are the main parameters governing the development of a heating."?-- I agree with that.

Indeed, that's why you added to the already existing detection systems at No 2 this CO make in litres per minute system?-- Yes.

But as the material indicates, it is a reliable way of assessing the development of a heating; is that so?-- Yes.

If you turn to page 8-1 which deals with monitoring of heatings-----?-- Yes.

-----the second major paragraph there - "Because of the large number of gas analyses from a wide range of sources it is essential that a systematic approach be taken to recording and analysing data during an active heating or fire. The purpose of monitoring is to detect changes in the behaviour of the heating. Change will be detected by continuous analysis from fire gases from points which are likely to be representative of a fire, and where changes in analysis will be due to changes in heating, rather than to external influences. The emphasis must be on frequent and consistent sampling from these selected points and the analysis of all results in order to establish trends. Trends and changes in trends are considerably more useful in interpreting and managing a heating than spot readings taken in isolation."; is that so?-- Yes.

The last paragraph: "This information" - which refers to close monitoring - "This information is all used to establish the effect of various attempts to control or extinguish the heating. It is therefore essential to record and present the information in such a way that significant changes can be readily identified, that anomalous results can be identified and the sample re-analysed, and that significant changes can be related directly to measures taken."; is that so?-- Yes.

Again, that's one of the aspects to show the usefulness of CO make because the graph readily shows trends, doesn't it?-- Yes.

Page 8-2, the next page over, which deals with 8-3, "Support", and that outlines, as at 1989, support in the detection and interpretation of gas analysis as available through an ACIRL facility located then at Rockhampton; is that so?-- Yes.

And, furthermore, refers to SIMTARS having then recently developed a computer system, the CAMGAS system?-- It would be about that time, I think, yes.

It is referred to in the documents as being available to

assist mine managers and owners to have a ready, quick, reliable source to examine data from their mine monitoring systems?-- Yes.

In the context of ascertaining whether a heating is present or not, and to institute measures to control it?-- Yes.

Of course, that system did operate at No 2 from about this time or shortly after - shortly before, I should say - through until the time of the incident in 1994?-- Yes.

If you look then to page 9-1, which deals with the interpretation of gas analysis - see 9-2 deals with carbon monoxide analysis?-- Yes.

"The concentration of carbon monoxide is a function of the temperature and extent of the heating mass of coal and of the air flow available to dilute the emissions. The concentration of carbon monoxide will therefore be affected if the ventilation flow through an area is changed during a heating, with concentrations falling if the air flow is increased, and rising as an area is sealed off or the air flow is reduced. In most cases, the first analysis and interpretation of the heating or fire involves plotting of carbon monoxide samples against time." It goes on to indicate that with respect to each such data point, there should be a series of items taken into account, including ventilation quantities; is that so?-- Yes.

It talks about the carbon monoxide readings being standardised as parts per million for accuracy purposes?-- Yes.

It goes on over the page, 9-2, to refer to carbon monoxide make; is that so?-- Yes.

"A useful indicator in these situations is the total CO emission.", and then gives in the material the formula for calculating the CO make in litres per minute?-- Yes.

And then gives a simplified version of that calculation, being CO in per cent by air in cubic metres per second by 600?-- Yes.

"Experience in Australia indicates that carbon monoxide makes of more than 10 lpm require investigation, and more than 20 lpm indicates that a heating is well developed and that urgent action must be taken."?-- Yes.

And the source for that statement is said to be Mackenzie-Wood, "Fire Gases and Their Interpretation", Mine Gas Seminar, Rockhampton, 1988?-- Yes.

Did you know anything of that particular seminar in Rockhampton in 1988?-- I may have gone, but I just can't recall.

In any event, those figures quoted in this material properly reflect your knowledge even before this seminar of the general standard of 10 to 20 lpm?-- Yes.

So, this information was nothing new to you in 1989?-- It convinced me to use it in 1989.

"The CO make provides a very good indicator of the state of the heating as the emissions of carbon monoxide from coal heated in an oxygen deficient atmosphere is related to the volume of coal in the reaction and the rate of the reaction. As the severity of an occurrence is dependent to a large extent to these two factors, the indicator is more correct than some indices. Because this indicator makes full allowance for changes in air flow to a heating, it is suitable for monitoring the effects of oxygen deprivation on a heating."; is that so?-- Yes.

It goes on to qualify the usefulness of the CO make in areas where the heating has spread to parts of the mine where excessive air is present and the heating producing substantial quantities of carbon monoxide, and says in those cases you must look to other indications as well?-- Yes.

On the next page, 9-3, it goes on to the CO/02 deficiency ratio or the Graham's Ratio?-- Yes.

Can I summarise that area this way: it speaks of figures of 0.5 of the Graham's Ratio where no heating exists to ratios of 1 to 20 percents as recorded fires. That's about the middle of the page, I think, Mr Reed?-- Yeah, I've found it.

"The main application of Graham's Ratio is in the detection of heatings or fires which may otherwise be disguised by changes in ventilation and for monitoring their progress. The trend of readings is more important than absolute value with an increasing trend indicating increasing temperature within the fire."?-- Yes.

Again your experience would agree with that proposition? It's the trend of the Graham's Ratio more than the absolute values as such?-- That's what it says. I didn't necessarily agree with it at the time.

After the seminar did you agree with the proposition in the sense of bowing to the experience and knowledge of the -----?-- Yes.

----- presenters?-- Up until then my experience in '86 lost a lot of faith in Graham's Ratio.

Can you turn then to page 10-2 which deals with general methods of combating heatings?-- Yes.

That lists a number of them; digging out, flooding with water, ventilation techniques, sealing off and inertisation; is that so?-- Yes.

The evidence here indicates that the 512 Panel risk analysis identifies spontaneous combustion as a risk or a hazard and the control measure was said to be flooding of water - or one of the control measures was said to be flooding with water. Were you aware of that firstly?-- I wasn't involved in the risk analysis for 512.

And therefore you weren't aware of that proposal?-- No.

Would it have been - in your experience at No 2 and knowledge of the operations would it have been a realistic possibility to control a spon com inside 512 by flooding the panel?-- It's an option if the grade and dip of the seam in that panel is suitable to flooding. Some areas you can't flood, other areas you can. If it was possible then it certainly always was an option.

You say "if it was possible" -----?-- If it was possible to flood then it's always an option.

Do you know enough about the grade and dip in 512 to see -----?-- I've never seen 512 Panel at all. That started after I left.

In any event, one of the controls for a known heating is

obviously sealing off and that's what happened in the 5 North section in 1986?-- Yes.

And the material, if you turn to page 11-1, deals with that topic and goes through what I suppose is obvious, that it's imperative the way the seals are constructive, ventilation be maintained until the seals are complete?-- Whereabouts is that on? 11-1?

11-1, if we start - that's where the sealing procedures are outlined?-- Yes.

Bottom paragraph, "Effective control of construction work is essential and the site should be under the supervision of a senior mine official. Sampling procedures should be maintained, and the frequency of sampling, and plotting of sample trends and calculation of explosibility should be increased in trends plotted frequently. Contingency plans must be prepared to cover the procedure to be adopted should the gases in the sealed area begin to migrate towards their explosive range. 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. Obviously this situation should be avoided if at all possible, as the heating may deteriorate further if men must withdraw without completing the seals." Is that so?-- Yes.

Now, this is obviously dealing with a situation where you know you have a heating and you are sealing to combat it?-- Yes.

As in 5 North in 1986?-- That's correct.

So the wisdom is to very carefully monitor the trend, especially as it approaches the explosive range, and if the seals haven't been completed, to withdraw the men and wait to see what happens?-- Yes.

As a safety issue?-- Yes.

I suppose the same principle applies, if you like, whenever you seal a panel you would be conscious of the trend upon sealing of the atmosphere through the explosive range?-- Yes.

If you had any suspicion or doubt about whether there might be an ignition source behind the seals you would certainly withdraw the men pending the panel entering the inert phase?-- If you had a suspected ignition source you would be very careful, yes.

The next page, 11-2 says, "The final phase of any sealing operation is to monitor the change in atmosphere behind the seals by air sampling." The last sentence of that paragraph, "The sealing off can be considered finalised when the air analyses show that heating has ceased and an extinctive atmosphere has been established."?-- I agree with that.

That's again what happened in 5 North. Once it was sealed it was monitored closely until the atmosphere became inert and then men went underground?-- Yes.

With 5 North, before I move to this next topic, there were two monitoring points or sample points behind the seals, weren't there?-- No, there was only one. From the reports I've read there was only one put through the seals at the time.

I'm sorry, one in 5 North in '86 and then you put two in place in 5 North West in '91?-- Yes, it was usual to run two in all panels after '86.

The '86 one was found not to be working so you weren't able to monitor behind the sealings with a remote sample?-- That's correct.

In fact that resulted in an inspector and a miner going down as volunteers to take samples from the seal area?-- That's correct.

If I then take you quickly to page 12-1 which deals with inerting systems, and there are various ones of those detailed in terms of using a jet engine to produce gases that can be delivered to a panel to inert the atmosphere. It deals with nitrogen, carbon dioxide and other gas mixtures; is that so?-- Yes.

In fact in the No 4 experience nitrogen was used, wasn't it, to inert the atmosphere?-- Yes.

Were you aware that after the No 4 matter a committee was formed upon the Inquiry's recommendations to investigate the prospect of having equipment available on site to inertise a mine atmosphere?-- I did hear there was one, yes.

Were you aware that a report was delivered to registered mine managers in 1993 dealing with the findings of that committee?-- No.

I take it therefore, you've never seen any report that deals with that topic?-- No.

Are you able to offer an opinion as to whether it's worthwhile or not in your opinion to have on site, in case of incidents like this, some equipment that can inertise a panel?-- Experiences from No 4 was that the inertisation, even though it was eventually successful, it was a very long, drawn-out, mistake ridden process which actually involved men going underground to erect brattice seals to contain the nitrogen. So it may be possible to put nitrogen in remote in the surface, but the experience from No 4 says it was very clumsy and ineffective at times.

Certainly. The No 4 experience was the use of a nitrogen facility from New South Wales?-- That's correct.

Which was the Mineshield facility, wasn't it?-- Yes.

That took some time to arrive on site?-- Yes.

And then there were difficulties because people on site at

Moura were not trained in the use of the equipment or helping others who were?-- New South Wales supplied operators for that equipment with equipment.

Certainly, but there was no-one at Moura who had the expertise or knowledge to adequately assist the New South Wales personnel to operate it, did they?-- No.

That was a complicating factor?-- It was one of the factors, yes.

Which could be overcome with on-site equipment and trained personnel on site to deal with it?-- It can always help, yes. It's just the - I was aware of another attempt to inertise a long wall goaf area somewhere in New South Wales, and I believe that was a total failure as well.

In any event, you have no knowledge of any report that may have come to Moura No 2 -----?-- No.

----- in relation to a committee formed after No 4?-- No.

If I can then turn, finally with respect to this, to the conclusion section, 13-1 and 2; do you have that?-- Yes.

The first paragraph there, "A significant risk of spontaneous combustion does exist in all Queensland mines and in many other mines in Australia. There have been sufficient occurrences of heatings to demonstrate the risk, and to establish the very great difficulties and dangers in handling these situations." At the middle of the page there is this paragraph, "Where prevention fails, and spontaneous combustion develops, early detection offers the only hope of a satisfactory outcome. Detection is by monitoring for low concentrations of carbon monoxide and by monitoring of trends including total CO make and CO/O2 deficiency ratio."?-- Yes.

Final page, 13-2, about the middle of the second paragraph, "Rapid and effective action is not possible unless all mine staff are adequately trained, equipment and materials are purchased and held in a state of readiness, and techniques are developed which are suitable for use in the local mining conditions." Is that so?-- Yes.

Again you would agree with the sentiments expressed in those conclusion pages?-- Yes.

And in particular the need to ensure that all mine staff are adequately trained in these matters?-- Yes.

It's fairly important, isn't it?-- Yes.

There were two other volumes, as you've indicated to us earlier, as part of the material you left that seminar with. Can you recall Volume 2 of the series involving information outlining specific past incidents of spontaneous combustion and explosions?-- It's been a while since I looked at it, but I think from memory there was something like that in there, yes.

Indeed dealing with such relevant ones perhaps as Box Flat, Kianga and of course Moura No 4?-- Yes.

Do you recall that?-- Yes.

There being a section in the volume that dealt with what had happened in those incidents and the outcome of them?-- Yes.

And perhaps by that process highlighting the need for an awareness of this very real risk of spontaneous combustion?-- Yes. Not all those disasters was as a result of spontaneous combustion either.

No, certainly. There were ones detailed there that had other causes certainly, but perhaps the most relevant one for present purposes would have been Kianga that dealt with a panel explosion occurring inside a panel at the time of sealing?-- Yes.

Due to a spontaneous combustion?-- Yes.

Or a heating. Now, that material is from 1989; is that so?-- Yes.

We've heard in evidence here details of publications called the red and blue books that dealt with the same sort of topics. Were you aware of those books, the red and blue books?-- I have seen them, yes.

Could the witness see quickly Exhibits 23 and 24, please, Your Worship? Mr Reed, firstly, have you seen those before?-- Yes.

They were available at No 2 at some stage, were they?-- Yes.

I don't particularly want you to read each of them through, but can you confirm for us generally as a proposition that the material from the SIMTARS seminar in 1989 clearly seems to have been thorough enough to include anything that might have been printed in the red and/or blue books?-- It certainly would not have mentioned CO.

The red and blue books don't, no?-- No.

Generally in terms of the ways in which you might detect spontaneous combustion or heatings and how you would control them, the SIMTARS material in 1989 is certainly a comprehensive document, isn't it?-- Yes.

You certainly wouldn't expect, if you had access to the '89 material, to necessarily have to refer back to the red and/or blue books to update your knowledge about spontaneous combustion?-- If they are readily available, yes.

You can hand those back, thank you. Could I take you then to the period when you returned to the mine after the seminar? I think you've told Mr Clair already that there were no steps actively taken by you to put in place through anyone in authority at the mine a training program dealing with

important matters raised at the seminar?-- No, no formal training program.

Was there discussion at all about the prospect that such a training program should be instigated?-- Not in a formal sense, no.

Informal sense?-- As I said the other day, the learning process was just by association and working with it and people learning by association.

At that time in 1989 was Mr Squires still a technical assistant, do you know?-- I think he was an undermanager by that stage.

Yes, I think he became an undermanager in '87. Did you have any dealings with him in respect of what you learnt at the seminar in '89?-- He wouldn't have been - being a shift undermanager he wouldn't have been working closely in regard to monitoring the spon com in the group working around me. He was a shift undermanager and as such his role wasn't in that close circle around me working on spon com.

I suppose - would it be correct to say that shift undermanagers were the very sort of people that needed to know about the material that SIMTARS put out in '89?-- Yes.

Because they were the people that were in charge of shifts at the mine?-- Yes.

And people you would expect to be able to assist miners and/or deputies to interpret signs underground and report them?-- Yes.

And without that knowledge you would have potentially a very serious risk, wouldn't you, to the mine?-- You could well do, yes.

In any event, there was no formal - as far as you are aware, no formal attempt to put in place any training procedures to deal with the material from this seminar?-- No.

Although you yourself were fully aware of the ramifications of the information given to you in '89?-- Yes. I would also like to say that it was my responsibility to monitor the CO make as the registered - at the mine. I see it as my responsibility to make decisions on sealing with regard to withdrawing from panels.

How did you actually put in place a system that would thereafter require the CO make to be monitored? Did you draw up any documents or -----?-- Nothing documented, but the system was there and so far as - the ventilation officer usually on a Friday would do the weekly CO make calculations by measurements underground, calculate on the surface and then tabulate and draw the graph on the Friday for me to look at.

That was Mr Morieson at that stage?-- When he took over, yeah, '91 on, I think - or '90.

Do you remember who you dealt with before him in terms of putting in place the CO make or wasn't it before him?-- Fire officer before Morieson was Reece Robertson. I can't recall whether he did those or not, but the system was in place. I imagine he would have done some calculations, but I can't be sure. But certainly from Morieson on it was done by him.

Was that topic raised with anyone else at the mine?-- In what context?

What about Mr Mason? Did you have a discussion with Mr Mason about the reason why you were putting in place a system to monitor CO make as opposed to parts per million?-- I can't recall any exact conversations, but I imagine I would have stated all the reasons why I thought it was a better indicator for plotting potential spon com rather than Graham's Ratio only and parts per million only because it took into account ventilation quantities.

So that you could have fluctuations in the air flow into and out of a panel but still have an accurate reading of what the CO production was from that panel?-- That's my understanding of it, yes.

The advantage of that is you always expect, don't you, fluctuations in ventilation?-- Yes.

They are a fact of life inside these panels?-- Particularly when you are working two returns and you are changing from one return to the other.

In 1991 you were still the manager and there was the incident involving 5 North West, that was in about September that year?-- Yes.

Could the witness see, Your Worship - I think it's document 121B which is part of Exhibit 9, all of the documents. I don't think it's been isolated earlier.

I think it may still be outside, Your Worship, in one of the boxes. I think box 8, from memory, Exhibit 9, document 121(b). I can hand up a copy. It might be a bit quicker. Could the witness just look at this copy, please, Your Worship? Mr Reed, do you see that it appears to be a photocopy of an extract of the report book, manager's report book - record book at the mine?-- Yes.

And the front page starts with what appears to be February/March of '86 and your signature?-- Yes.

If you turn then through that document to - I think it's the fifth page in - you will see that page deals with entries relating to 29 August 1991 and 6 - I think it's September 1991?-- Yes.

And those entries are made by you?-- Yes.

Do you see the entry with respect to 6 September 1991 dealing with 5 North has this entry: "Partial extraction proceeding as per plan. Areas of coal not mined in supply, belt and top return between 11 and 12 cross-cuts due to geological conditions and height of" - something - "area."?-- "Working area".

"Working area. Ventilation good. CO make no change."?-- Yes.

And that's an indication, I suppose, that you were closely monitoring the CO make in that panel, 5 North?-- Yes.

And the next page deals with 13 September and the 20th; is that so?-- Yes.

The first entry relating to 13 September with respect to 5 North: "Roof working all week in waste area. Appears to be working high up in strata. Signs of weight in waste. No waste inspection carried out for this reason. Belt and transformer moved back. CO make has increased to 6 lpm in top return and 3 lpm in bottom return. This is to be constantly monitored. Deputies to conduct waste edge Drager readings." Then it goes on; is that so?-- Yes.

Now, your concern with respect to that panel in September 1991 and with respect to the CO make was an increase to a total of 9 lpm in 5 North; is that so?-- That's correct.

Now, what was the background to that concern? You had been monitoring the CO make closely, I assume, from the start of the panel's life?-- Yes.

And was a figure of 9 lpm an increasing trend, was it?-- Yes.

And that gave you some concern?-- Yes, it was also approaching the 10 figure.

Yes. As your record book entry indicates, you were closely monitoring it -----?-- Yes.

----- for those reasons. There was no hint of an exponential rise, was there, in the CO make?-- No.

The next entry on 20 ~February with respect to 5 North is this: "Decision made on Monday, 16 September 1991, to withdraw all machines and seal 5 North panel. This was because CO make had risen to a total of 12 lpm on 16/9. Although the trend was not a rapid rise, the trend was still upward, and based on previous history, the rise in CO could become extremely rapid at some point. The decision to seal was only a precautionary one and not one based that a active heating was taking place. Inspectors notified and section sealed at approximately 8 p.m. on 17/9/91. Two sample lines ran into sealed area", or, "run into sealed area indicate a linear rise, not rapid. Men withdrawn from mine on 19/20, due to concern of major roof fall in an explosive" -----?-- "Mixture".

----- "mixture." That's dated 20 ~February. Now, again, your concern was that there had been a rise in CO make from 13 September to the 16th, was it?-- Yes.

From 9 to 12 lpm?-- Yes.

A rise that you saw as being significant?-- It was to me, yes.

Although not exponential?-- No.

But gave you sufficient concern to decide to seal the panel before it rose further?-- Yes.

And indeed at 12 it had passed the benchmark, the lower benchmark figure of 10 and was trending towards, as it appeared, 20?-- Yes. What's not in there was also the inability to inspect the waste that was mentioned in the previous week's report, so being unable to get into the waste to see if there was a problem or if there was - whether we could deal with it. It was a combination of both things, not just purely on the CO make.

No, certainly. You were looking at the trend closely to keep an eye on it, and because you couldn't get in far enough or adequately enough to physically inspect the panel, out of an abundance of caution you sealed it?-- Yes.

Now, in 512 - you may not be aware - but the waste in 512, you could get access apparently down to the top return throughout the life of the panel and across the back, I think, the last cross-cut. Were you aware of that?-- Only after the event.

But the general waste as it progressed could not be inspected very adequately because of the danger of roof falls, I suppose, and other considerations. Were you aware of that?-- Not at the time, no.

In any event, it would be a relevant factor as far as you were concerned, certainly with 5 North in '91. If you couldn't get

in there and physically inspect every corner of the panel with a rising CO make, you would have concerns enough to seal it?-- That's what I did in '91.

And you would do again?-- In similar situations I would, yeah.

Because it's wise and good mining practice; is that so?-- Yes.

Again I suppose your entry reflects the fact of your 5 North experience in '86, that even if you have a gradual rise in CO make, you can't relax and forget about it?-- No.

Because, as '86 showed, you can at any stage have a situation that becomes dangerous very quickly?-- That's at some point, of which no-one knows what that point is.

And because no-one knows that point, the object is to treat rises in CO make that continue to go up - treat them very seriously and take a conservative approach to them?-- If I can add something to this? The experience in 5 North, if you can take that as indicative to how the Moura seam would react to spon com, being the only heatings the mine had, that graph you showed me indicated total make of the panel was running at 20 litres for quite a period of time, which was around about the 20 which was the upper limit of the German standard. So, if that was indicative of the Moura seam, people could assume they can run to 20. I took the lower benchmark.

I mean, you certainly weren't prepared to be - you weren't prepared to ignore the - what's said to be the German standard of 10 to 20 based upon one heating where the level had been running at just under 20 for some time?-- No.

It would be irresponsible, wouldn't it, to take that as being your benchmark for 512, for instance?-- That was my decision.

And again, you stick by that decision as being good mining practice even today?-- Yes.

And perhaps especially since you have been made aware of material in the '89 seminar that shows how difficult it can be to adequately predict a heating going on inside a panel?-- Yes.

You have got to be cautious and take a conservative approach; that's clear, isn't it?-- Yes.

And you did so in 1991 with 5 North-west?-- Yes.

Now, the men were kept out of the mine there for two days, the 19th and the 20th, because of their concern that the roof was unstable and that if there was a fall after sealing there could possibly be an event of frictional ignition?-- Yes.

That was the reason they were kept out in '91?-- Yes.

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Not as a matter of general caution, it was a specific concern over a roof fall possibility?-- Yes.

Could I take you then quickly to - I should tender, Your Worship, that extract from the documents. It's 121(b) dealing with the mine record book entries for March through to October, it seems, 1991.

WARDEN: Thank you.

MR MACSPORRAN: I beg your pardon. There is four pages on the front dealing with March and April '86, then it moves to September '91 for the balance. That's how it can be described, extracts of both of those sections of the mine record book stapled together.

WARDEN: Thank you. Can we make that Exhibit 187.

ADMITTED AND MARKED "EXHIBIT 187"

MR MACSPORRAN: Could I move then, Mr Reed, quickly to the issue of Quality Assurance? That really is your current role; is that so?-- That's correct.

And it has been your role since October 1992?-- Yes.

Now, with respect to that, I think - is it true to say it's the case that as part of the Quality Assurance program at Moura, as yet there is no Mine Safety Management system that forms part of that Quality Assurance system?-- There is a Mine Safety system. It's just a lot of it hasn't been included into the Quality system yet.

All right. Well, the Mine Safety system, part of that would be to identify known hazards or risks with respect to each panel or mine?-- Any task.

Any task?-- Yeah.

We know from evidence here that spontaneous combustion was identified as a potential risk during the course of the planning for 512 second workings. Was that any part of a Quality Assurance program; that is, the risk was identified and measures put in place to control it as part of the Quality Assurance?-- No.

Was there any reason for that, as far as you are aware?-- I can't answer that because I wasn't part of the risk analysis. I am unaware of it.

But you were part of the Quality Assurance system?-- Yes.

Was it proposed as part of that system that you were dealing with to make things like risks being identified at individual mines or panels to be part of your Quality Assurance system?--

XXN: MR MACSPORRAN

WIT: REED P J

There was at the time, and still is, a substantial amount of job safety analysis, risk analysis type work being done. Due to the varied number of tasks across the whole mine site, it is going to take quite a period of time to get anywhere near a substantial percentage of these tasks documented. So, work had already started prior to this incident at No 2 and some work was done at No 2 in regard to job safety analysis, but not in that field you are referring to.

Not in that period or respect?-- In that topic you are talking about.

So, we can safely say that whilst the system was advancing, the Quality Assurance system was advancing, there was no procedure in place as at August 1994 to have the risk of spontaneous combustion and its control as part of a Quality Assurance program?-- That's correct.

One of the advantages of a Quality Assurance program is that it documents - can document known risks; is that so?-- Yes.

It can put in place measures to control and eliminate such risks?-- You are documenting your systems. You can have systems and not document them. Quality Assurance is just a formalisation process of those systems. So, it's quite possible to have systems, or many tasks that are not actually documented.

Well, the purpose of documenting those systems is to make sure they are being complied with and addressed; is that so? That's one of the reasons you document them?-- And also to maintain the system.

Unless it's documented by way of such a Quality Assurance program, there is a real risk that it will not be carried through, not be taken notice of?-- That's one of the reasons why you put a Quality system in.

And with a Quality system you have procedures in place to, firstly, internally audit the system?-- Yes.

And that's a check to enable you to ensure that the systems as documented are in fact being complied with?-- Yes.

And furthermore, if they are not being complied with, they can be addressed and remedied?-- That's correct.

Or improved?-- Yes.

And again that's part of your role as Improvement Officer?-- Yes.

Now, part of the Quality Assurance system involved writing work instructions; is that so?-- Yes.

Did one of those deal with the topic of Moura Mine Underground procedures and work instructions; do you recall that?-- The underground had procedures and work instructions, yes.

And they were part of the procedure, the Quality Assurance system?-- Yes.

Would you look at this document, please? This is document 81, I believe, again part of Exhibit 9. Perhaps I can hand a copy over to save time. I don't think this has been flagged anywhere else, Your Worship, but I may be wrong about that. That's the document that deals with underground procedures and work instructions for Moura?-- That's one underground procedure, one of several, or many.

And this, in particular, deals with coal mining procedures?-- Yes.

It's got a Quality Assurance number in the top left-hand corner of the second page?-- Yes.

And the issue date being 30 October 1993?-- Yes.

And the purpose is outlined as being, "To outline the requirements to ensure coal mining is carried out safely and efficiently."?-- Yes.

Turn then to the next page of the document. Do you see some details of procedures for start of shift, 5.3?-- Yes.

And, "Prior to start of each shift the oncoming undermanager shall communicate with the offgoing undermanager to obtain the following information.", and amongst those items outlined there is this one: "Conditions prevailing in mining sections."?-- Yes.

Further down: "The undermanager shall then communicate with the oncoming deputies areas to be discussed include.", and the last one: "Other relevant information gathered from undermanagers' discussions, conditions, etc."?-- Yes.

Further down: "The mining crews shall then travel to their nominated mining sections where they should communicate with the offgoing mining crew. Discussions should include: update of mining conditions and equipment, any other relevant information including safety."?-- Yes.

Turn to the next page and you will see 5.5 which deals with end of shift. "Approximately 15 minutes to 30 minutes prior to the start of the next shift, the section deputy shall communicate by telephone with the undermanager and update the following information.", and then amongst those there is, "Mining conditions, for example, roof, ribs, methane levels; any other relevant information. The offgoing undermanager shall then communicate with the oncoming undermanager as in 5.3 of this procedure."; is that so?-- Yes.

And finally that page, 5.6, which deals with reporting, "The deputy is responsible to complete the Production Deputies Shift Report F B700 003 and shall deliver the white copy to the shift undermanager who signs and posts it on the board provided at the Starting Point."; is that so?-- Yes.

Now, do you agree that generally the sections I have referred to would have been designed to facilitate a communication between undermanagers and deputies and, indeed, miners?-- Yes.

And one of the purposes in part spelt out, it appears, in the document would be to deal with safety issues that arise during any given shift?-- Yes.

The obvious principle being that whatever is discovered of concern should be communicated to the on-coming shift; not only those in charge, but the miners themselves as well?-- That's correct.

That was 30 October 1993 that was issued?-- Yes.

And does that issue date indicate that that procedure in all probability would have been put in place from that date forward?-- Yes.

There is then a procedure, is there not, as I think you have agreed, that all of these aspects to the system - the Quality Assurance system - would be internally audited?-- Yes.

In fact, you carried out internal audits of the QA system?-- Yes.

Did you have assistance to do that, or did you do that on your own, can you recall?-- Depending on the area of the mine to be audited, but the underground I did it myself.

The information seems to indicate you carried out an audit in November 1993?-- Could well be, yes.

Which would have been after this procedure was put in place?-- Yes.

Can you tell us whether your internal audit covered the topics raised in the instruction?-- I did do audits on this procedure, yes.

What audits did you do on this procedure? I suppose I should - to save time, perhaps I can narrow it down to the issue of communication between undermanagers, deputies and miners as I have referred you to in the instruction. Was that aspect audited as part of your November-----?-- The only way you can audit communication - it is a bit difficult. There is no documented evidence of verbal communication. You can only audit shift reports and deputies' reports.

In that respect you would be auditing things as to whether the shift reports were signed, for instance, as they should be?-- Yes.

Wouldn't you also be able to audit the communication question by speaking to a selection of deputies and undermanagers?-- I only spoke to the undermanager that time on communications.

You did speak to them?-- Yes, but from personal experience this procedure was to reflect what was currently the system in operation at the mine, and I also know from my own experience what was said in that communication was readily practised.

It was practised?-- Yes.

Practised adequately as far as you were concerned, according to Quality Assurance documents we are looking at?-- One of the reasons why we had hot seat change at the face was to improve communication - not the only reason, but one of them.

In any event, as you have said, the document you are looking at - part of the coal mining procedure Quality Assurance document was designed to formalise in documentation form a practice that was already in place?-- Yes. If there was any major deficiencies in there, that would be rectified.

Well, you have probably answered the next question. The idea of the documents was to audit core areas for compliance?-- Yes.

A breach of compliance would be raised in a non-performance report?-- Yes, you would raise it in a non-performance report.

You think, anyway, in the November 1993 audit you addressed this question of communication between undermanagers by way of speaking to undermanagers?-- Yes, and looking at documented reports.

Is that audit documented somewhere?-- Yes.

And, again, would you have access to that particular document - or I may even have it myself, but-----?-- I haven't got it with me, no.

In any event, it wouldn't be difficult for you to turn it up at some stage? I can perhaps turn it up today?-- Yes.

It certainly exists and will reflect the audit procedure you conducted in late 1993?-- Yes.

How did you decide which areas of the whole system to audit, or did you audit the whole system?-- It is a random snapshot of what's in place and how the systems are operating at the time of the audit. You pick what procedures and working substance you think is important, but the aim over a period of several audits is to make sure you do cover all procedures, so that - the theory is all procedures to be audited within the year.

Within the year?-- Yes.

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That's the schedule - a year?-- Yes.

How many audits per year?-- Two.

Two per year?-- Yes.

I think, as you say in your statement - I think that the next one you did was May/June 1994 - thereabouts, I think?--
Excuse me, could you go back to that first audit and say the date, because that's the one I thought you were referring to?

I think the date was somewhere around November 1993?-- That was carried out, but not by me. That was a corporate audit with people from outside Moura mine but within BHP Australia Coal.

Well, that audit-----?-- Yes.

Would that have dealt with-----?-- Should have dealt with that, and it would be documented as well.

It would be documented. The one you dealt with was-----?-- May/June.

1994?-- Yes.

Did it deal with this document?-- Yes, so the same applies.

Same applies?-- Yes.

Again documented?-- Yes.

I think we have that document. There is reference to safety in the document, as I read and you confirmed, but would it normally be that sort of reference or would normally you would expect to have the procedure spell out more clearly any safety concerns that should be communicated in a document such as this?-- It would be several procedures of reference to safety, which may all end up on the one report, but you wouldn't put everything in the one procedure, unless it was purely a safety communication type procedure. So, to get the full picture, you would probably have to read all the procedures.

Can I just show you this document, please? I don't yet have copies of this, but can I show you this? Do you recognise that document?-- Yes.

The dates don't seem to match, but is that the audit we are referring to that you conducted in-----?-- No, this audit is the actual systems audit carried out by Standards Australia for Moura mine to achieve accreditation for a Quality Endorsed Company.

So, that's the outside one that was carried out. Is your own audit of May/June - and you think there is another one as well that deals with an outside audit; is that so?-- Yeah, that would be the one in November 1993.

I will see if I can turn that up for you shortly. In terms of - I have it now, I think. Have a look at this document. It is said to be an Internal Quality Audit Report for Moura Mine; is that the one?-- That's mine.

If you just want to look through that quickly, if you wouldn't mind, and isolate the area where you say it was raised or the audit concerned this communication question as detailed in the underground mining procedure document?-- If you look on the internal check list sheets in the document column, it tells you which procedures are being audited. So, you can see that clause 5.2, 5.6, 5.11 refers to checking elements of this procedure here.

And does it say what was done to check those-----?-- Yeah, it's-----

What does it say?-- I've got: sequence plans authorised, check the distribution, underground shift report, the information on there, production information, and we have got some dates of reports that I checked.

So, they are actual undermanagers' shift reports or deputies' reports?-- Yes, and point 4 is checking deputies' reports, and the date on which I check the deputies' reports, and one of the questions is were they signed by the undermanager and were they posted on the board as required.

Was there any further check or any check done in respect of speaking to actual undermanagers or deputies as to oral communication carried through?-- No, there wasn't.

Again, that would be a fairly important part of the auditing procedure, wouldn't it, potentially, to see whether oral communications were matters of concern?-- Yes.

Because the format of the deputies' and undermanagers' shift reports are not conducive to lengthy explanations or reports, are they?-- Sure. If there is anything important, it should be documented anyway.

Certainly, but you would expect there to be some - and the whole purpose of the underground procedures for coal mining were to deal with oral communications between the parties, on-coming and off-going shifts, to fully inform each other of what had gone on before?-- Yes. It is very difficult to audit oral communications. That could change - the success or how good it was carried out can vary from shift to shift, people to people and also the day of the week, depending on what's going on. You can ask someone what the system is and they can tell you what the system is, but it is very difficult to actually audit that and see whether it is being carried out effectively across the whole mine.

Doesn't that make the document virtually impossible to audit - or the procedure virtually impossible to audit?-- The procedure spells out what the system should be. What you are auditing is how successful that is, and part of the audit process is difficult on verbal communication, apart from just

asking people what they did.

That's a good start, isn't it?-- Yes.

Because you would have then some information - you would have to pick up - if it was, in fact, a regular non-compliance with the verbal communication, you would have people saying, "I wasn't told. I didn't communicate with him going off shift. He just bypassed me.", and things like that. You would find out, wouldn't you?-- You may do, you may not, depending on who you talk to.

If you were seriously wanting to audit that communication procedure, you would hope to find out by talking to people?-- That still doesn't guarantee whether you are going to find out there is a problem in the system or not, because you're only randomly sampling.

It goes a long way to finding out as opposed to doing nothing about it?-- You could find out about it.

Your Worship, I tender those underground procedures and work instructions, so far as they apply to coal mining procedure, as a separate exhibit.

WARDEN: Exhibit 188.

ADMITTED AND MARKED "EXHIBIT 188"

MR MacSPORRAN: Could you look at this instruction? Is that another such procedure as part of the Quality Assurance program?-- Yes.

And does that deal with underground ventilation procedure?-- Yes.

It has a Quality Assurance procedure number, an issue, and a date, the same as, I think, the last one, 30 October 1993?-- Yes.

The purpose is "to outline the requirements to provide and maintain sufficient ventilation so as to allow the safe and efficient mining of coal at Moura No 2 Underground Mine."?-- Yes.

Scope: "...applicable to the ventilation requirements to all underground workings at Moura No 2 Mine, with the exception of sealed areas."?-- Yes.

Can I just ask you, firstly, was there a separate procedure as part of the Quality Assurance that dealt with ventilation, or procedures for sealing and for closing off panels?-- No, not documented.

Was it proposed to be part of this system?-- In time it

probably would. That's not to say there wasn't a system.

Certainly, but it wasn't documented?-- That's correct.

And therefore not audited?-- No.

If you turn to page 3, it indicates the underground superintendent is the person responsible for the ventilation?-- Yes.

And 5.2, which deals with planning, "The planning of all ventilation requirements for Moura No 2 underground Mine shall be carried out by, but not limited to: Underground Superintendent, Undermanager-in-Charge, Underground Mining Engineer, Ventilation Officer."?-- Correct.

Was there any procedure in place to take care of the situation when a party went sick or on holidays; for instance, a ventilation officer?-- We only refer to position descriptions where it was said - their duties and responsibilities would be allocated by the underground superintendent or undermanager in charge. I forget the exact wording.

You would expect if the ventilation officer was sick or on holidays, the underground superintendent would replace him with someone who was suitably qualified to carry out the task?-- Yes.

And the task of ventilation officer is an important role?-- Carries out statutory functions; yes, it is important.

But it is important, also - it is rather important - the safety of men underground?-- The role of ventilation officer is to gather the information, not to interpret it.

All right. So, the interpretation of what he gathers is carried out by those above him?-- That's correct.

And some of those are named in the planning provisions there?-- Yes.

But certainly you would want to have a ventilation officer, whether he be acting or permanent, who understood how to take readings and the processes involved?-- Yes.

Because the whole interpretation would depend upon the accuracy of the readings obtained?-- Yes.

If you turn to the next page, it refers to 5.4, which is monitoring, and deals with the types of monitoring: the Unor system, ventilation fans, the deputies' shift inspections, shift undermanager inspections; is that so?-- Yes.

And they are said to be as per QCMA, which is Queensland Coal Mining Act, I presume?-- It should be in the definitions, I hope - yes.

Does that reflect that the monitoring - which was to be carried out by the inspections from deputies and shift

undermanager - was to simply comply with the requirements of the Act?-- That's to say that the - that's the inspections of ventilation that were carried out in the mine because of the requirements of the Act, so that's documenting the system that's in place.

Documenting the system was in compliance with legislative requirement?-- Yes.

But it doesn't appear to have gone any further to spell out what the inspections should have achieved?-- No, that would be the next stage.

Next stage?-- What's expected of those inspections.

"The next stage" - do you mean by that the next document stage?-- Yeah, as the system grew it would take that into account - if you needed better control over those processes.

And, again, it is a fairly important part of the process - the deputies' and shift undermanagers' inspections underground, isn't it?-- Yes. They are trained and authorised people so they have had some training in that regard anyway.

Is that a convenient time?

WARDEN: Have you finished with this document?

MR MacSPORRAN: Not quite. I will be a little bit longer with that.

WARDEN: Okay. Thank you, gentlemen, we will take a short break.

THE COURT ADJOURNED AT 10.58 A.M.

THE COURT RESUMED AT 11.28 A.M.

PHILIP JOHN REED, CONTINUING:

MR MACSPORRAN: Mr Reed, just a couple of more matters. You were talking about the documents put in place to regulate procedures at the mine. Once those documents were put in place, was there a procedure to train undermanagers and deputies in the use of the procedures?-- Part of the implementation of the Quality system into the underground operations of Moura Mine was to have awareness sessions with all people explaining basically what a Quality system was about, briefly showing them the manual with procedures and work instructions in, and also stating where to find them, and suggesting that people read them, become familiar with what's in them.

Was there any schedule drawn up for the implementation of that program, that is, to make sure that everyone was familiarised with the procedure?-- No, I kept names of who attended those awareness sessions. That's the extent of it.

And that's a separate record, is it, somewhere?-- Yes.

Again, would it be possible for you to locate that if necessary?-- I should be able to, yes.

Now, the ventilation procedure document you have in front of you, I think, goes on after it deals with the deputies and shift undermanagers' inspections to the last type of monitoring, or the second last, I should say, to deal with weekly carbon monoxide make; is that so?-- Yes.

It is said on the procedure document, "This is used to determine the rate at which spontaneous combustion of the coal is occurring. This is carried out by the ventilation officer. This determination only applies to those areas of the Moura No 2 Underground Mine that are undergoing extraction of coal; that is to say, second workings."?-- That's correct.

Now, again, that's the procedure that was proposed to be put in place as the next stage of this QA program, an outlining of the significance of monitoring by carbon monoxide make?-- I can only answer that on assumption, so it would be in time, but there was nothing formally planned.

But as far as you can recall now, there would have been a proposal to go the next stage and fully explain in the documented form the significance of CO make and its measurement?-- And how to calculate it.

This document has some details that it's used to determine the rate at which spontaneous combustion is occurring, but perhaps the next stage would have been a fuller account of how to use that?-- If the underground operation perceived the need for

it, and it's their decision, then that would have occurred.

I take it that you had no direct knowledge of how the CO make from 512 was posted each week, or did you? Did you know a graph went up each week, each Friday?-- A graph went up when I was there, and I presume that system was maintained after I left.

When you were there, was there any steps taken to educate or familiarise the ordinary miner with the significance of the graph and the trend it was showing?-- No. The graphs were only posted in the mining engineer's ventilation office and it was there for management's benefit. It wasn't posted in the deputies' cabin or -----

In your time?-- No. So, it was a management tool only.

Again, relying upon the management to keep an eye on it and adequately and accurately assess the significance of the graph trends?-- That's correct.

Now, this procedure, so far as it deals with CO make, has nothing about occasions when men should be withdrawn from the mine?-- That's correct.

Again, was that a procedure or proposal to be put in place as the next stage to couple -----?-- There was no discussion in regard to that.

Was that simply left to the management discretion on a case-by-case basis?-- Any procedure or work instruction after the system was in place, it really becomes on an as-needs basis by the department of the mine in question, so they would ultimately decide what procedures and work instruction went in in time, unless there was a requirement for additional procedures because of the changes to any Australian standard.

Can I take you over the page then finally to page 5? Can I just draw to your attention on page 5 - my copy has a different date, 1 July '94?-- That's correct.

Does that mean that was an updating, if you like, of the procedure for ventilation?-- That page was revised and that's why it's called issue 2.

And that was a procedure that was adopted as part of the QA system?-- Yes.

To continually update?-- Yes.

Now, how do we know which part of that page or those topics would have been updated in July '94?-- It's signified by a vertical line in the left-hand margin.

So, the updating relates to the filing of the original copy of the monthly ventilation survey results?-- Yes.

Otherwise, the procedures outlined on that page were as per

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the original issue 1 in October '93?-- That's correct.

The last entry on that page, 5.5, relates to alterations to ventilation?-- Yes.

To summarise that, it requires alterations to No 2 Underground Mine ventilation system appliances, firstly, to be authorised?-- Yes.

By either the underground superintendent, undermanager in charge or the shift undermanager?-- Yes.

And, secondly, once authorised and carried out, to be recorded in the underground shift report book?-- That's correct.

Which is identified by number; is that so?-- Yes.

Well, with respect to this work instruction procedure, was it audited in - by you, I should say, internally?-- Yes.

When?-- May/June.

May/June '94?-- Yes.

Can you tell us briefly, if you would, what aspects of this procedure were audited by you in May/June '94?-- 5.4, 5.5 are the main areas. I am just referring to my checklist.

So, 5.4 is monitoring generally?-- Yes.

Dealing with that, what aspects of 5.4 did you audit? There are several categories under "Monitoring"?-- Yes.

Did you audit them all?-- I am just referring to my checklist again. Monthly vent surveys, were they carried out, and then sighted results for the last six months, just confirmation that they were being done and filed in the correct place. I got checking results on form FB700008. I can't recall what that form is. Here it is. That's the vent survey form. So, the results were on the correct documents. Was it authorised? Whoever completed the vent survey, did they sign or initial as confirmation of results? Checked the distribution of that, see if it was in the correct location, the correct people had that information. In 5.5 I've got, "Check undermanager's report for examples of changes to the ventilation."

Did the audit of both of those areas reveal compliance or non-compliance?-- My comments state that 5.4 was all up to date apart from the vent survey, didn't actually nominate a distribution list. As far as 5.5 goes, I could find no evidence in the shift report book of any changes to ventilation.

Which would, in the ordinary course, have indicated non-compliance with the procedure?-- Or change in that ventilation in that book. Don't forget you have just taken random samples.

XXN: MR MACSPORRAN

WIT: REED P J

Certainly. Was there a way you could go and check if the areas you chose to look at revealed no recorded changes to ventilation, whether that was accurate, or whether in fact there had been changes not recorded?-- I could only ask the ventilation officer was he aware of any changes, and if he was, then I could try and reference those in the shift report book. I also checked some deputies' reports to see if there was any mention in there where it might be recorded in the deputies' shift report but not recorded in the undermanager's book.

Did you say you did carry that out in your audit?-- Yes.

Did you find any evidence of non-compliance?-- I found no evidence of ventilation being changed.

So, in respect of 5.4, the audit you conducted of all of those areas was limited to the monthly ventilation survey data?-- Yes.

You didn't cover the weekly carbon monoxide make?-- I looked at the graphs.

Is that on the list?-- It's not on here, no, but I did.

Wouldn't you record it on there and enter it as a part of your internal audit?-- I will just check elsewhere. No, no evidence on the checklist of my checking that.

But you think you remember actually looking at the graphs, do you?-- The process says it was not documented, and there is no proof I have done it.

In any event, if you were looking at the graphs, or did look at the graphs, all you would be looking at is the format of them?-- And whether it was up to date.

Up to date on the correct form, signed by the apparently authorised officer and dated?-- Yes.

And its location and distribution to the various parties?-- Yes.

You wouldn't be looking at interpreting the trend on it or anything like that?-- No, certainly not.

That may have been something that would have been covered in a subsequent document dealing with carbon monoxide make?-- May have.

The deputies and undermanagers' shift inspections, did you audit anything in respect of those other than to check whether there had been ventilation changes reported?-- As part of auditing the coal mining one I have checked the shift reports for information on there, production type data or any other information, and I have listed a number of shift reports that I checked.

What about any audit of the Unor continuous gas monitoring

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requirements?-- No.

Would that be a topic that would be audited in the 12 month period?-- The Unor?

Yes?-- That would probably come under the maintenance function which wasn't included yet, looking at the calibration records and the six monthly check of the Maihak.

So, the maintenance side of things was to be part of the QA system but at that stage hadn't -----?-- Hopefully it will be next week.

Your Worship, I tender that Underground Ventilation Procedure as a separate exhibit.

WARDEN: 189.

ADMITTED AND MARKED "EXHIBIT 189"

MR MACSPORRAN: I have nothing further, thank you.

CROSS-EXAMINATION:

MR MARTIN: Mr Reed, a few things, please. Did you lay down any procedure in relation to the usage of the gas chromatograph?-- In what capacity, as manager or -----

In relation to this Quality Assurance documentation?-- No.

Were you going to come to that at some time?-- As far as determining what procedures were put in place after the system is accredited, that is really the function of the department themselves. My initial role -----

The function of what?-- Of the department of the mine, be it the underground or prep plant or the open-cut. My role was to set up the system to cover the basic elements of the standard.

And just going back to your period as manager, had you laid down any procedure for usage of the gas chromatograph - that is for No 2 underground?-- No.

But, it is a most important facility, isn't it?-- Yes.

Can you explain why you didn't?-- We had an operating manual with the chromatograph and we had two people trained up in its use, and I thought that was sufficient.

Where was the operating manual?-- I couldn't tell you. It came with the machine. Probably under the control of the electrical department, but I can't be sure.

Do I understand you correctly - or your evidence, that is - is it the case that BHP and its operation at No 2 Moura laid down the minimum standard - that is the statutory requirement?-- No.

Is that what you are saying?-- No.

You say that standards were laid down in excess of that minimum standard?-- The minimum standard was applied and where we thought to go beyond the standard, that was put in place as well, and I can quote numerous examples of that.

Because BHP Australia Coal had every possible financial resource and every piece of technical assistance available to it, didn't it?-- BHP itself is a big company.

Of course it is. Just dealing with that point for the moment, in the four years before August 1994, how many underground coal mines in Australia did BHP conduct?-- How many did it conduct.

Yes?-- It had Moura No 2, and it had two or three New South Wales ones in the Wollongong area, to my knowledge.

And those in New South Wales had known spontaneous combustion propensity, didn't they?-- Any mine is liable to spontaneous combustion.

Taking that a step further, what instructions, if any, or information, if any, do you recall flowing out from BHP, to use a broad term - from the upper echelon, the undermanagement - that is, of BHP - say, Sydney or Melbourne - in terms of spontaneous combustion?-- I can't recall seeing any, no.

I'd just like to take you back briefly, if I could, to 5 North. It is the case, isn't it, that heating in 5 North had been quite a problem for some time before sealing?-- The evidence today suggests it was there for a period of time, but people available at the time thought there wasn't heating in progress for a period of time.

But it was a real concern, wasn't it, for some time, such that on retreat the panel was progressively flooded?-- It was a precaution that was taken due to the fact - I presume you are referring to the 5 North-west '91 panel, not the '86 panel in

5 North. '86 we had a confirmed heating. '91 we were working back in the 5 North-west panel which was parallel and very close to the '86 panel, in which we had a confirmed heating - it had only done some crude form of methane drainage and, as such, it was very dry and dusty in the goaf and also the size of the panel dictated it being a long-term extraction panel.

Tell the Inquiry, if you would, was 5 North-west or 5 North progressively flooded on retreat?-- 5 North-west was.

Just tell the Inquiry is there a statutory requirement to notify the inspectorate on sealing?-- I'm not aware that there is, but in the change of a situation, then you should.

In accordance with your view-----?-- I am not aware of any in the Act itself or rules where you have to, but in a dangerous situation or whatever, it spells out which are dangerous situations and you would notify-----

Good mining practice?-- Yes.

In the years - say, the two years before you ceased being manager of No 2 underground - that was 1992, I think it was?-- That's correct.

What system did you have in place in relation to monitoring of the underground conditions or atmosphere, say in the last stage of a panel - in the last week?-- We would have a monitor on each return for the life of the panel, both on development and retreat.

In the Unor room, what system existed to read the monitor?-- Just displayed on the screen-----

Who looked at it? What system was there for anybody to look at it?-- It was positioned in a place where anyone could look at it; that's the first thing. I certainly looked at it many times during the day from inside the room as well as outside, and so did a lot of other people - undermanagers. You had to keep looking at it because that's your monitoring of the mine. If you are asking whether it was a documented system who needs to look at it, when and where, we didn't have that.

I suppose the same position exactly applies in the after-sealing whilst it went through the explosive range?-- That's correct.

Anybody at all could look at it?-- Yes.

Informed or not?-- Yes.

Can I just take you briefly to the knowledge you gained of the importance of the CO litres per minute make? We've spoken about that today, haven't we?-- Yes.

You recognised the grave significance of CO litres per minute make, I suggest, because you tried to introduce a system into the Unor, I suggest; do you recall that - that is, by having placed in a panel a velocity - permanent velocity meter -

transmitted to the surface into the Unor, so that the Unor could produce a CO litres per minute make - you did that, didn't you - or you tried to do that?-- It was in the budget in the year I left.

You initiated it?-- I put it in the-----

And properly so, I suggest?-- I asked to get it put in the budget.

And the year you left was, what, 1992?-- Yes.

But it was vetoed, wasn't it, that proposal of yours, by Brecknell, the overall manager?-- I'm not aware of that. As far as I'm aware, that budget was approved when I left.

All right. But it hadn't happened?-- They hadn't implemented it when I left, no.

Do you recall a meeting at No 2 when the future of the mine - that is No 2 - was discussed because it of fallen coal prices?-- I remember numerous meetings in regard to that subject over the years.

One quite proximate to August 1994?-- Can you be more specific on times?

Yes, well, in the six months before August 1994, was there a meeting when the men were told that coal prices were down and "the future of the mine is in doubt and we must have more production"?-- If there was, I certainly wasn't there, so I have no knowledge of that.

I just asked you whether you knew. When you were manager of No 2, how did you - or what did you authorise in relation to the material for final seals?-- It was all brick seals.

All right. Do you know of any approval for Tecrete issued by the inspectorate to be used as a final seal - you, yourself?-- No, well, Tecrete was extensively used underground when I left, anyway, and as such was an approved substance for use in underground coal mines.

Approved, I suggest, only for crossovers?-- I don't think I have ever seen that-----

In prep seals?-- The only material itself for use in underground coal mines. How it was used was up to the manager of the mine. I don't think there was any stipulation it had to be used on stoppings or seals.

It was only used, I suggest, for stoppings and crossovers?-- Okay. I'm unaware of that.

Did you attempt to introduce into No 2 a Multiwarn?-- I can't recall. I know what a Multiwarn is a multi-gas detector, but whether it actually was applied for in the budget, I'm not sure.

Do you know about an instance when a probeye - or the probeye was used to detect a heating - actually detected a heating?-- I can recall three instances where we used the probeye to look around the waste area to look for evidence of a heating, but never actually successfully detected one.

And what were those instances?-- It was the - it was used in 5 North during recovery operations of the machinery after the '86 heating, and it was used in the 3 North-east panel in the waste area and the 3 North-east subpanel - those three occasions come to mind. There may have been others, but I can't recall.

Just dealing with the last two instances, why was it used?-- As a check of what was going on in the waste area.

What, was there some suspicion of a heating there?-- Well, you want to look around, so that's what it was used for - to confirm or otherwise what's in the waste.

Just dealing very briefly with 5 North-west again, that was sealed and properly so - we have heard that - and safely. You used the gas chromatograph on that occasion, didn't you?-- I don't think we did, but I can't really remember whether we did or didn't. It was certainly available to be used. Because it was a routine sealing in 1991, we probably did not need to because it was a precautionary sealing - pulling out early - so it's probably a good chance we didn't.

I am suggesting to you that you did, and perhaps if I outline the conversation with Mr Allison, who was the inspector. Do you recall speaking to Mr Allison in relation to 5 North-west?-- By telephone some time - days later, I think.

Well, does that help you to recall about the use-----?-- I remember the conversation, but - to answer your question honestly, I can't recall whether we used a chromatograph or not.

Can you tell the Inquiry when it was that you first learned of the importance of CO litres per minute make - in terms of time - about 1987?-- I become aware of it in '87 approximately, but only really adopted from '89 on.

And what about the Strang Mackenzie-Wood book?-- Mines Rescue book?

Strang Mackenzie-Wood book; do you know that?-- Yes, I've seen that. I had a copy.

When did you get that?-- That would have been after '89.

After?-- Yeah, after '89, I think.

Just tell us if you would - Mr Mason went to a seminar, I understood you to say, with you and others?-- As far as my memory serves, he was there, yes.

When was that?-- Again, I think it was the '87 area. I know

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it was fairly soon after the '86 heating.

And where was it?-- It was in Brisbane.

Conducted by whom?-- Probably something to do with DME. I know John Brady was heavily involved in that.

I suggest-----?-- But I can't say exactly who organised it.

I suggest that CO litres per minute make was outlined there?-- May have done.

Don't you remember?-- No.

What literature were you given?-- Sorry?

What literature were you given?-- I can't produce any literature from that course.

Did you ever see the new edition of Strang Mackenzie-Wood's book 1990?-- No, unless the one I got was the issue 2, not issue 1. I'm not sure.

I don't remember the exhibits, but I'll have a look at the book. Could I hold that up?-- No, that's not the one I had.

The glossy covered one with the miner on it-----?-- That's correct.

With the respiratory material on his back?-- Mmm.

Just talking about the Moura No 2 management offices, if I might loosely call it that, the SIMTARS three volumes you have told us about that you brought back from the 1989 conference-----?-- Yes.

-----where were they?-- Allan Morieson had them.

Whereabouts?-- As I said the other day, I don't know whether he had them in the office or at home - I'm not sure - but they were under his possession.

You see, I suggest there was more than one set of those at the mine?-- Those three volumes?

Yes?-- I only brought one set back and I was the only person that attended from the mine.

Can you explain why it was - I think you had a system of two monitors after 1986 - that's what you said?-- Into sealed areas?

Yes?-- Yes.

Can you explain why that changed, if it changed, or do you know it changed?-- It didn't change in my time.

And the Unor had a capacity for analysis of four gases, didn't it: CO2, CH4 and O2?-- That's correct.

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It also had the capacity for H2, didn't it?-- Might have been on the screen.

Had the capacity for it?-- Yes.

But no analyser?-- No.

Why not?-- It's not the sort of gas you constantly monitor. The system was set up for four gases and four gases only and I know of no coal mine - I'm not saying there isn't any - that does monitor H2 on a regular basis.

But surely it is a gas that comes off at about 80 or 90 degrees Celsius?-- I thought it was over 100, but you could be right.

Say it is 100, depending upon circumstances?-- Yes.

And therefore very important, I suggest, in relation to the determination of a heating?-- Yeah, after you - the early signs should be from the CO make. Hydrogen only confirms a stage of it.

But, in any case, did the gas chromatograph have that capacity?-- Yes. By that I wouldn't be relying on the determination of the H2 whether you've got a heating or not. You should be getting the signs before that.

You were speaking to Mr MacSporran about Exhibit 21 and the graph that that Mr Squires did?-- Yes.

Did he only do that one document, or did he prepare a log as well?-- I know he drew the graph. I have seen it here, but whether there was a table of figures that went with it-----

Yes?-- He was doing the ventilation officer's job at the time, so there would have been many monthly ventilation charts he drew up at that time.

That log contains litres per minute, doesn't it?-- Yes.

And Mr Mason was the undermanager-in-charge by 1989, was he?--
Something like that, yes.

Well, before you went to the SIMTARS seminar in Brisbane?-- I
can't be sure whether it was before or after. I can't tell
you when he was actually appointed undermanager-in-charge. I
would have to look at the record.

But he was one of the persons who frequently worked around
you, in close proximity to you?-- Yes.

And I suggest that you acquainted him precisely with CO make
and its importance?-- He would be one of the people that
worked around me and understood my interpretations of the CO
make, I would imagine.

And no doubt you communicated with him the parameters of 10 to
20 lpm and danger above 20?-- I would imagine that would be
the case, yes.

I suggest to you you would have made sure he knew. In the
proper discharge of your office you would have made sure he
would -----?-- The fact that we were working closely together
says I did say that. I've no record of saying that, of
course.

I suggest to you there is absolutely no warrant at all for
anybody at No 2 assuming that you could safely run to 20 lpm
because that's quite contrary to the scientific literature?--
That's the upper range of the German standard, 20 litres.

And no warrant, I suggest, for making any such assumption?--
I did say earlier that when you look at both returns CO make
for '86, that panel was running at 20 for many weeks prior to
the heating.

I would just like to remind you very briefly of the
publication you received from SIMTARS which says expressly,
"Experience in Australia indicates that carbon monoxide makes
of more than 10 lpm require investigation and more than 20 lpm
indicates that a heating is well developed and that urgent
action must be taken."?-- Yes, I agree with that.

And no warrant, I suggest, for anybody making the assumption
that you could safely run to 20 lpm?-- Well, I certainly
wouldn't go to 20 lpm.

Thank you.

CROSS-EXAMINATION:

MR MORRISON: Mr Reed, it is the fact though that 5 North ran at that sort of level for quite some time?-- Yes.

And you can tell that by the graph that was done later?-- That's correct.

And that during that time that it ran at that level, as we now know it, it wasn't in fact considered by anybody to have a heating in it?-- That's correct.

And that was for quite some considerable time, wasn't it?-- Yes.

It was really only - the signs of the heating were only detected at about the time it took off?-- That's correct.

And in so far as anyone drew any lessons from that experience, the lessons they might draw is that you get the signs of the heating when the CO make takes off?-- Yes.

Now, you mentioned the smell associated with that panel. You had experienced that smell yourself?-- That's correct.

Would you describe it as a thunderbox-type smell?-- Yes.

Had that smell been persisting for quite some time?-- As I said, I left on about the Thursday before and it was evident then, before that.

And it had been there for some time?-- Yes.

So it wasn't a smell that came and went?-- No, it was consistent.

And was what you would describe as thunderbox?-- Musty, thunderbox, yes.

Like an old toilet?-- Yes.

Now, can I just ask you something else? You mentioned your experience with Moura No 2. You haven't been confined in terms of your experience to Moura No 2, have you? You visited other coal mines?-- Yes.

Have you visited quite a large number of underground coal mines in Central Queensland?-- I think I've visited them all in Central Queensland.

Are you able to make some comparison of No 2 with those mines?-- In what respect?

Whether their standards are reflected in the other mines or not?-- I think the stonedusting at Moura is - was equal to anywhere else in Central Queensland.

What about the ventilation quantities?-- Ventilation quantities tended to be a lot higher than most mines. You know, it wasn't uncommon to have up to 40 cubic metres a second in a return in a production panel.

You've made not only visits to other mines, but obviously on those visits you've had discussions with managers of the mines?-- Yes, and we also had regular mine managers' meetings for Queensland managers.

Ventilation at No 2 was running at something like - if we take a figure - 40 cubic metres a second?-- That was fairly typical for one panel.

Other mines?-- 20 or 30.

So the ventilation quantities at No 2, certainly in your experience, were significantly above those of other mines?-- Yes.

Was there an imposition put in place in about 1988 about road heights at No 2?-- Yes, there was.

Tell me about that?-- We had a fatality in '88 and one of the recommendations that we had was to reduce the mining height, and we put that in place before the actual inquiry. It was agreed on by all parties that - we were mining up to four metres in height on development and we decided we would restrict mining height to three metres maximum from that point on.

Even though in fact the machinery can do better than that?-- Yes.

And had done better than that in the past?-- Yes.

Do other mines restrict themselves to three metre heights or do they go higher?-- A lot of coal mines in Central Queensland, that's probably the extent of their seam, but there are mines in Queensland that do go beyond that, particularly on second workings.

What about the roof conditions at Moura No 2 compared to other areas? Good roof at No 2?-- Yeah, on an average very strong and mainly massive sandstone, and comparing the other mines, probably a stronger roof on average than most mines.

Does that let Moura have some benefit in terms of road width?-- It allowed us to mine fairly wider than some other mines would.

For instance, by comparison to long walls?-- Long walls by nature develop their roadways narrow anyway, and as such there is no need for those to mine roadways, but it is different to a bord and pillar mine.

What would be standard for a bord and pillar mine?-- Six metres.

And Moura had?-- Up to seven and a half.

Is that largely a product of the roof?-- Yes, but the roof allowed us to mine that wide.

What about comparing safety record at No 2 with other mines that you visited and experienced?-- Moura No 2 safety record was improving all the time up to the point I left, and I believe it continued and was better than the state average for most of that period.

And the lost time injury frequency had been consistently falling, hadn't it?-- That's correct.

What about methane drainage? How did Moura No 2 compare to other coal mines in relation to that area?-- Not a lot of mines in Queensland particularly do underground methane drainage, but Moura would have been up there with the technology and expertise as anyone else in Central Queensland.

Do you know in fact of some other collieries that do do methane drainage but not to the extent of No 2?-- I believe German Creek practice methane drainage for their longwall blocks, mainly done by contract. Their method of drainage and drilling holes are usually different to the purposes we require. They are draining blocks of coal. We are trying to develop panels for drainage.

What about training? There was a big jump in training requirements after the No 4 incident in 1986, wasn't there?-- That's correct.

Because the legislation changed?-- Yes.

What about training then? How does Moura 2 compare with other mines for training?-- Training systems put in at Moura underground were the same as the training schemes put in the all other mines, the reason being, the underground managers as a group decided at that time to have a standard system of training throughout the state so in the event of people moving from one mine to another it would be consistent. So the training modules and manuals at Moura underground were exactly the same standards as any other underground mine in Queensland.

Obviously there might be variations in terms of the safety officers as to who - variations between them as to the extent to which they train and the intensity and so forth?-- Yes.

All the modules are the same?-- Contents the same, yes.

In terms of people getting handouts, information and literature, Moura No 2 is pretty much standard with all others?-- Should be, yes.

And the legislative changes that came in required everybody to be upgraded over a five year period; do you remember that?-- Yeah, refresher training.

Was that under way and being done when you were there?-- Yes.

It's the sort of thing that can't be done overnight obviously?-- No, certainly not.

But is ongoing and was ongoing when you were there?-- Yes.

Were there some emergency procedures developed after the No 4 mine inquiry?-- Yeah, the legislation required there would be emergency procedures and we drafted that in 1990.

In fact was Mr Mike Walker involved in that?-- Yes.

Along with Dave Kerr, the Mines Rescue superintendent?-- Yes.

And Bruce Danvers, the safety training undermanager at No 2 at the time?-- That's correct.

And yourself, of course?-- Yes.

Did you use the legislation as a guideline?-- Yes.

But only a guideline?-- Yes.

You didn't restrict yourself to just exactly what the statute said?-- No.

Did that involve the concept of duty cards?-- Yes.

Where did you get that idea from? Was that the legislation?-- Mines Rescue.

From Mines Rescue?-- Yes.

It wasn't in the legislation or was it?-- I don't think - I can't recall. I don't think it did stipulate duty cards in the legislation.

Were there a couple of check inspectors involved in developing those emergency procedures too?-- They could have added their piece to it, but I can't recall who and if that was actually done, but I would imagine we would have just passed that by them anyway.

They are, as it were, union representatives elected by the men but their job is on behalf of the unions to check out safety matters?-- If required.

They are not appointed by the mine?-- No.

And they form an interface between management and the men often?-- If there is a need, yes.

Now, after the 1990 emergency procedures were developed did you do something about informing people about them?-- Yeah, we held briefing sessions for all shifts and I personally conducted those myself where we went through the procedures on overhead transparencies and at the end of the session we handed out a copy of the procedures to all people.

Did you pretty much cover all the people in the mine?-- I think we did, yes.

Did you post the procedures somewhere?-- Yes, there would have been a copy in my office, undermanager-in-charge's office, the undermanager's office, some documentation in the lamp room and a full copy in the Mines Rescue station.

And was there any shortage of copies around the mine?-- No.

Were there some duties that the lamp room attendant - that were detailed as well?-- Yes, what to do in the event of receiving an emergency phone call.

Were they posted or -----?-- Yeah, I think from memory that relevant section was actually blown up to a larger scale, laminated and posted on the wall.

Now, we have heard in the Inquiry from time to time reference to sirens going off?-- Yes.

Was that system in place when you were there?-- There was a system for a siren to sound in the event of a fan failure or - and low compressed air.

But nothing else?-- Nothing else.

So it's one stage - during your period as manager you didn't have the sirens that would go off for Unor alarms and so forth?-- No.

Was that brought in by you or was that subsequent to your time?-- Subsequent.

Can you recall a time when there was actually an emergency procedure exercise conducted?-- There was one conducted on a particular shift, yes.

Can you tell me about that?-- Undermanager held a mock evacuation of the mine for a simulated event, i.e. a fire, and monitored the success or otherwise of the surface operations and the action of the people underground. After the event that crew had a bit of a debrief to determine the success or otherwise and I was given a brief but concise report on that.

And did you identify some problems that arose out of that mock evacuation?-- A major problem that arose was some people had some difficulty putting rescuers on because we had some simulated rescuers available at the time - not a great deal, but some - and probably the most important was we couldn't communicate with all people at the mine to advise them to evacuate.

Was there some difficulty locating people underground?-- Yes, particularly on the belt road, people walking roads.

Was something done about that?-- We addressed the self-rescuer training, and as far as the communications around

the mine, one of the justifications we used to improve communication along belt roads and at the face was for the - we implemented the DAC communication system. One of the justifications, not the only one, was the ability to contact people when there is a need.

The DAC system has communication points along underground?-- Yes.

At what sort of distance apart?-- 50 or 100 metres, I'm not sure exactly what it was.

At every interval there is a handset, is there?-- Yes, a PA system, and you can press the button to communicate to the surface.

The emergency procedures were revised in 1993, weren't they?-- Yeah, after I left I became aware they were revised, yes.

And you were involved in doing some of the flowcharts?-- I assisted in the drafting of those procedures in certain aspects of it, but not really on the content.

So far as you were involved in it did you consider that the upgrading and what was being done was appropriate?-- Yes.

Now, you referred to what happened in 5 North in 1986. That's the only time, I think I'm right in saying, that there has been - until this event, and maybe not even this event - the only time there has been a spon com incident?-- That's correct.

In Moura No 2?-- Yes.

It was obviously a risk at the mine as it is in all mines where you have coal, it can spontaneously combust?-- Yes.

In saying that it was the only time up to last year that it had happened, how long had the mine been running?-- Started in 1971.

So we are talking in 23, 24 years up to this last occasion there had only been the one occasion where there had actually been an incident?-- One confirmed, yes.

How many panels and seals had been involved roughly?-- I'd say it would have to be over 20.

20 panels?-- Yes, at least.

And at least four or more seals on each occasion for every panel?-- Yeah, minimum of three, up to five and possibly more.

On a day-to-day basis in running the mine how would you rate the main risks to personnel if you enumerated them?-- Day-to-day?

Day-to-day matters?-- I could probably answer that by saying

that Moura No 2 prior to this event in question here today is the most - had two fatalities and several serious injuries all predominantly caused through rib failure and rib falls of some nature. So if you are talking about potential danger to people on a day-by-day basis I would have to answer that by saying ribs, roof and gas, but don't be complacent about the monitoring of spon com.

Quite. Ribs, roof and gas, cable flash?-- Yes.

In your experience was there a perception or a view of the Moura coal in relation to its incubation period?-- Passed down through word of mouth was six months. I actually found documentary evidence of that mentioned during the transcript of the Kianga Inquiry. How long it had been in operation prior to that I don't know, and even why six months was picked I don't know why, but that was just the general rule of thumb handed down over the years.

So far as you could tell from the actual operation of the mine did that rule of thumb stand you in good stead?-- We didn't take it a lot into account. We took each panel on its merits as we worked it.

But it was a factor taken into account?-- Yes, it could be, particularly on the design of a panel when you are looking at retreat, but what we wouldn't do is immediately pull out of a panel after six months of extraction if all the gas readings indicated a normal situation.

No. So it was - six months was taken as an effective minimum, maybe longer?-- Yes.

And that was part of what might be described as the received wisdom around the mine?-- Yes.

From what point did the six months commence to run from? Was it when you started developing or extraction?-- Start of extraction.

There were in fact some panels here that went well over the six months without any problem from spon com?-- That's correct.

Can you give an example of one of those?-- 4 South A.

How long did it go?-- Over nine months.

Over nine months?-- Yes.

Certainly if an extraction panel was designed with extraction at three months you would have considered that to be well within the incubation period?-- Yeah, my experience I'd have to agree with that.

And that short panel life was something that was taken into account in assessing the susceptibility for spon com; is that right?-- Yes.

So that if you had a panel of three months, that would be a factor weighing heavily in your mind about whether you could cope with any spon com?-- Yes.

At 5 North-west you had mentioned that that was a long panel. Was it always going to be a long-term panel, I should say?-- Long-term extraction panel, yes.

And is that how you came to make up your mind about flooding the panel?-- Because - well, the options we had, because it was long-term and it was dry and dusty and it was adjacent to a panel that had a heating, we had to make a decision whether we sealed or compartmentised the panel as we went back, which meant erecting seals up for a certain period, which would result in loss of coal on the pillars you are not allowed to mine, or the option that was available to us there was to flood as we came back, so, yes, we did, and that decision was made because of the length of the panel.

And, no doubt, the angle of the dip would have mattered as well?-- Conditions were suitable, it was available.

And for an extraction panel that was only going to take three months, would you bother with considering flooding?-- I wouldn't expect that you would get a heating in three months. I wouldn't consider flooding from day one, no.

Now, you were involved, in your time as manager from 1984 on, in panel design at the mine?-- Yes.

Did you have a group which included the undermanager in charge and the geologist and yourself?-- Yes.

Was that basically the core of the design panel?-- That's all we had, yes.

After the 1986 incident at No 4 Mine, was there a general change in system at No 2?-- Yes, we got additional resources to carry out certain functions.

Additional resources in terms of men?-- Men.

As well in terms of extraction, did you move away from any suggestion of total extraction to be confined -----?-- Yes, we come to a decision that after '86 and due to the ongoing research into frictional ignition and also due to the methane content of Moura seams, not only the one that is currently being mined but the seams above and below, that Moura would not practice total extraction again until those issues were satisfactorily resolved.

Some work was done on assessing some of the outcomes from the 1986 Inquiry in terms of frictional ignition and so forth?-- Yes, I believe there were studies carried out.

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Now, was it after that 1986 incident that the Part 60 requirements of the General Rules came in?-- Yes, as a result of the recommendations from that Inquiry.

Before that time had it been the case that you really didn't need to do much by way of informing the Inspectorate about what you intended for an extraction panel?-- Not to the detail you have today, no.

Once that requirement came in, did the planning group get larger?-- Yes.

And did it include the mining engineer?-- Yes.

The geologist, yourself?-- Yes.

Who else? Surveyor?-- Undermanager in charge. Surveyors were called in when required to explain the layout of the panel.

Did you later on in time, that is, towards 1991, start to involve ACIRL in your panel designs as well?-- Yes, in particular areas of the mine.

I don't mean generally but -----?-- Yes.

In particular they were involved in 401/402?-- 4 South level.

4 South level, 511?-- Yes.

And 512 as we know it?-- Yes.

ACIRL were involved not only in the planning stage but also in monitoring the extraction?-- That's correct.

Now, the method of ventilation that we have heard about in 512 was to have on development two flanking returns and then on extraction one as a main return with stoppings across the headings between the second and - the most inbye and next most inbye cross-cut?-- That's pretty standard.

I was going to ask that question. Is that a standard method of ventilation at No 2?-- Yes.

For a panel the size of 512, 400 metres long, five or six headings across, in your experience is that a reasonable way to ventilate that panel?-- Yes.

Now, prior to this incident did you hear of discussions about the loose coal in 512?-- No.

Did no-one raise that with you as an issue?-- No.

Not even deputies or men or anyone else?-- No, I was working up the other end of the mine, and I can't recall any specific conversations in that regard.

If I can turn to 5 North again for a moment, if I may? That's

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WIT: REED P J

the sealing in '86?-- Yes.

You were actually away at the time the sealing was done but no doubt looked into it when you got back and was involved in reporting on it?-- Yes.

Was there continuous monitoring in that panel with the Unor system?-- Yes, there was.

Was that an earlier version of the one that was here in 1994?-- Yes, there was only two gases.

What were they?-- Carbon monoxide and methane.

Were there some problems with roof control in 5 North?-- Yes, it wasn't a very successful total extraction panel at all.

Well, was the roof not caving in as it should?-- No, as we said earlier, the roof is very strong at Moura, that was a very narrow panel, and we weren't recovering anywhere near the amount of coal from pillars that we should have been, and as such we were getting a lot of weight thrown back behind us.

That's like abutment pressure behind the face?-- Yes.

And was that a continuing problem in 5 North?-- Yes. The longer it went, the worse it got.

And were you effectively chased out of 5 North by the roof?-- We were getting chased out of individual pillars on a regular basis, yes.

In 5 North can you remember about the level of CO that was routinely there in the returns?-- From memory, about 5 to 7 parts continual.

Fairly constantly?-- Reached up to that point and then stayed there for a long time.

Was there any significant change in that level until the day it took off?-- No, not on the information I have seen, no.

Did you send away air to be analysed by ACIRL from time to time?-- Yes, it was a requirement that we do both monthly and weekly air analysis as a requirement of the legislation, and as we were only monitoring two gases, yeah, they were regularly sent to ACIRL for analysis.

And that involved driving down to ACIRL?-- Usually sent through the mail. You would only drive down if you had a problem.

Did any of these analyses by ACIRL show any significant change in the gas?-- No, it verified what the Unor was telling us in regard to consistent - reasonably consistent levels of carbon monoxide and very low Graham's Ratio readings.

Did you know what services ACIRL had available to them to

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analyse gas?-- Using the gas chromatograph.

Even with their services you were getting very standard readings?-- Yes.

Until the day it took off?-- Yes.

Now, I asked you about that smell which you described as a thunderbox smell. That was there some weeks before the sealing, wasn't it?-- Yeah, for a period of time, yes.

Now, the day of the sealing, so far as you could ascertain once you investigated it and reported on it, were the CO and methane increasing even at the time of sealing?-- Yes, CO extremely rapidly and methane was rising as well.

And it was that that convinced you, or the persons there, that there was a heating?-- Yes.

And that was the reason why - having been satisfied there was a heating - that's why the men came out?-- Yes.

If you weren't satisfied there was a heating going on in a sealed panel, would you see any necessity to pull the men out?-- If there is no evidence of having an ignition source, then the answer is no.

So, the decision about that is something that a manager has to make, isn't it?-- Yes.

And when a manager makes that decision, no doubt he takes into account a lot of factors?-- Yes.

Not just one or two?-- Yes.

If you got a report of a smell from someone, would you take steps to investigate it?-- Yes.

Identify its location?-- If possible.

Try and perhaps identify the veracity of the report in the first place?-- I would certainly follow up on it, investigate it, yes.

You wouldn't necessarily take that report at face value, you would want to know something more about it?-- Yes.

Likewise, if you were getting changes in CO, you would investigate why you were getting the changes?-- If it was concerning, I would recheck the readings and then investigate.

And you might try and find out, for instance, whether a sudden jump in parts had been created by someone opening another regulator in another panel?-- Whatever the reason, yes.

So, again, there would be a variety of factors to take into account?-- Yes.

You would go and get facts from people, people who were

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there?-- Yes.

And in some cases you would probably go and make a physical inspection yourself?-- That's for sure.

If you did make a physical inspection yourself to check something out, would your own experiences weigh heavily with you?-- Yes.

You would trust your own judgment?-- Yes.

In your view, given the length of time you have been a manager, is that a reasonable thing for a manager to do?-- If you are making decisions, you must put a lot of emphasis on your own investigations. It's not to say you discount anything else, but your own findings and investigations, it's certainly going to influence the way you act, yes.

If you had conflicting information about a particular event or a sign, conflicting information from a number of people, would you balance how you treated it according to how you regarded the people who were reporting to you? In other words, two fellows who didn't know much about what they were talking about telling you they had seen or heard or felt something, two fellows who are very experienced telling you they didn't think that was there, you would weigh that up in your judgment?-- Yes, they're some of the decisions you have to make, but you still go and investigate it anyway.

I am not suggesting you don't, but it's one of those myriad of factors that makes it very hard to make a judgment, isn't it?-- Yes.

You really have - in assessing those sort of things, you really have to be there, don't you?-- I believe so, yes. You need to investigate yourself.

Now, if we can go back to 5 North for a moment? The men came out, I think, for 24 hours; is that right?-- Yeah, it was a minimum of 24 hours, yeah.

And then some men went down and took samples?-- Yes.

And that's when people went back down the mine after that?-- When it was deemed to be inert, yeah, they went down.

In 5 North-west in '91, that panel was a little different to 5 North, both in terms of its physical signs but also its geological features?-- And the method of mining was different as well.

Can we deal with them in turn? The geological features, how were they different?-- They were close together, so general roof conditions were very similar. The problem with one certain area of the mine, it was heavily faulted and, as such, it would eventually cause a major problem while we were working the panel, but there was an area in that panel that was very badly disturbed.

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Were you approaching that area when you had to cease mining?--
Yeah, we were just in the middle of it.

Is it the roof condition that made it hard to get into the
goaf?-- It made it impossible to get into the waste area.

So, it wasn't that you could go and look at a bit of the
waste; you couldn't go into the waste at all?-- No.

Couldn't look at any part of it?-- No.

And that's a quite different feature from 5 North, isn't it?--
Yes, 5 North was total extraction, so your accessible waste
was what you could see anyway.

Now, in 5 North-west, you mentioned the method of mining.
What was different about that?-- 5 North was total
extraction where you cave in the roof and try and take as much
coal as you can out of the pillars to allow the roof to cave.
5 North-west was partial where you are leaving sufficient coal
behind to ensure the roof doesn't cave.

Notwithstanding the method of extraction, this faulted area
was a real problem?-- That's correct.

Now, you were taken to some of the mine record book but not
all of it in relation to the CO make, and perhaps you might
have that back. I think it's Exhibit 187. You were taken to,
in particular, the entries that showed the rise in the CO make
and the entry for 6 September showing that there was no change
in CO make. Have you found that?-- Yeah.

Now, you haven't been given the entry for 23 August, but if
you accept from me for the moment that 23 August shows 2 lpm
as the CO make, can we then move forward? 2 lpm and then on
the 6th there is no change, so still 2 litres?-- Yes.

The jump then is from there to 6 a week later?-- Yes.

And then on the 16th a jump to - the 13th a jump to 9; is that
right?-- Yes.

So, it went 2 to 6 to 9 in two weeks?-- Yes.

Just a bit over two weeks. Then to 12 a couple of days
later?-- Yeah, the weekend, yeah.

So, in fact within the space of only a few weeks that CO make
jumped from 2 to 12 plus; is that right?-- Two to 12, yeah.

That's the situation you had to confront at that time?--
That's correct.

Two you would regard as obviously insignificant?-- Yes.

Twelve you would regard quite differently?-- Yes.

A six-fold increase within a few weeks?-- That's correct.

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Now, at that stage you took the decision, or made the decision to seal as a precautionary measure?-- Yes.

You didn't want a repeat of '86, obviously?-- That's correct.

Would it be fair to say you were in the mode of once bitten twice shy?-- Yes.

That decision was very much governed by the fact that you had been - albeit not there on the day - you had been closely involved in what happened in '86?-- Yeah, I was fully aware how serious it was that weekend.

Now, after you pulled out of 5 North-west, did you have meetings with the men on every shift?-- We made a decision to seal the panel and decided to have meetings with all shifts to explain why we were pulling out of the panel early. That was carried out at the start of each shift as the men would come in, the purpose being to allay any fears and stop any rumours going around about why that panel was finishing early.

You didn't have the view that there was a heating going on, did you?-- No.

You didn't even suspect one going on, did you?-- We were getting out before we had one.

You didn't suspect there was one?-- No.

So, the jump from 2 to 12-plus didn't raise that view in your mind?-- It was a trend.

Sure?-- But I didn't think we were at the stage where we had one.

And the reason that you gave the men was that there was an increase in CO and you couldn't get in to inspect the waste?-- Yes, there was a combination of the two. There was the rate of change and the rise in CO make, together with the inability to inspect the waste to have a good look around and investigate whether there were any obvious reasons for the change in the CO make.

At that point in time, you did not form the view that the men should stay out, did you?-- No.

You had fully intended that they would go on and work down the pit in various areas as normal?-- Yes.

And was that, in fact, the case for a couple of days after that sealing?-- Yes.

And after a couple of days and after you had gone around all the shifts, did you find out that men were coming out of the pit?-- Yes.

And is that when you had a discussion with, amongst others, Ken Mills?-- Yes.

And the question was raised about the possibility or the risk of a large roof fall and frictional ignition?-- That's when it was first raised, yes.

Up to that point, that hadn't been raised?-- No.

And you hadn't included that in your considerations?-- No, I did not.

When it was raised, did you accede to the possibility that it might occur and pull the men out?-- After consideration I did, yes.

But for that fact, there was nothing in the CO make trend, nor any other signs in 5 North-west that satisfied you it was necessary to pull the men out?-- No.

Once you had made the decision to keep the men out, did you speak to them and tell them why?-- Yes. Once the decision was made to keep all people out of the mine until it became inert - safe - then we had another round of meetings with all shifts to explain the reasons for that.

Did you make them understand that this was something out of the ordinary - a special case?-- Yes, I said that on routine sealings with no incidence - or evidence of a possible ignition source, then we would continue to work the mine with sections after they were sealed. If there was ever any incidence of potential danger with the ignition source, then that's a situation that's totally different.

That's a decision that has been made by whoever was managing at the time?-- Yes.

To assess all those factors and make some sort of decision about what it means?-- Yes.

And the sort of factors we are talking about are many and varied?-- Yes.

And it is very difficult to make those decisions - to weigh up all the factors, isn't it?-- It's not easy.

And a lot of the signs that have been discussed, not only with you, but others here, can be potentially confusing, can't they?-- You can get many signs and indicators that can lead you in different paths.

Part of the problems with part of the signs is that they are so subjective - what is one man's benzene is another man's thunderbox and another man's chemical roof bolts?-- We had that discussion in 5 North - people with different descriptions of it.

Of the same smell?-- Yes.

Who was involved in that? Can you recall who was taking a different stance?-- I can't recall any specific names, but everyone's description of it is not necessarily the same.

Another thing is the difficulty with assessing precisely what a jump in the CO parts means - you know, whether it is due to a regulator being opened and closed or something else?-- You have got to be careful taking spot readings and making on-the-spot decisions with one spot readings, and that's why you need to look at trends and changes over-----

There would be considerable danger in relying on spot readings which were, as it were, brumby readings - abnormally high?-- I think you would go and double-check them.

If you got an abnormally high reading, say, on a Drager tube,

that couldn't be verified by any of the other information, couldn't be verified by the Unor, couldn't be verified by anyone checking it out, and it certainly isn't reflected in any Unor reading that day, you would treat that with some circumspection, wouldn't you?-- If you were satisfied - depending on where the sample was taken, if you were satisfied that - in your own mind - the Unor was fairly representative, and your follow-up check of that reading in the same spot is completely different, and you are confident that the second check was done accurately with good equipment, you may suspect the first test wasn't correct, due to whatever reason.

That would be a reasonable assessment to make in your experience?-- Yes.

Can I ask you about the method of sealing for a moment? It is the case, isn't it, that seals were done in most panels at No 2 on the basis that entries would be sealed down to the stage where you had one intake and one return left and then they would be done simultaneously?-- That's correct.

And that's very much standard?-- Yes.

Everybody knew that?-- Yes.

No need for that to be written down, was there?-- No.

Is that pretty much indicative of a lot of the systems - perhaps not just this mine, perhaps a lot of mines - their systems are so well ingrained-----?-- I would say that's fairly typical in most operations where a lot of your systems are not actually documented, but they are still in operation and working well.

And they work perfectly satisfactorily, don't they?-- Yes.

We have heard a lot of things about people putting written procedures in place for QA and auditing and doing all that sort of stuff, but the systems at No 2 had been operating well in your time, hadn't they?-- Yes.

And people know them?-- I thought they knew them.

You didn't need to go around reminding people about how to do things. Most people did their job?-- Yeah. You get problems on a day-to-day basis, but that's part of a coal mine.

In terms of the seals, if we can get back to that, none of these seals were explosion-proof seals - that is to say, the huge monolithic things that were used in the UK?-- No.

Do you know of anywhere that uses those in Australia?-- No, I don't.

In terms of the gas chromatograph, you were asked about that. When it came up, were there some SIMTARS people that came up and dealt with it?-- SIMTARS installed the chromatograph and then conducted a training course on site.

Was Max Robertson and Bruce Danvers - were they two of the people that were trained-----?-- Yes.

-----in how to operate and how to maintain it and so forth?-- Yes.

And were they the two that you mentioned earlier when you said to someone that there was an operator's manual and two people were trained-----?-- I said I assumed it was an operator's manual. I couldn't imagine someone supplying a piece of gear that sophisticated and not having any manual with it. I never actually sighted one myself, but I would be highly surprised if there wasn't.

You would expect SIMTARS in the performance of their duty to have provided a manual?-- Yes.

Was it planned to train other people in the use of the chromatograph?-- Yes, we viewed there was a need to train up others - not a large number of people, but, yes, back-up people to what we already had.

Why was that exactly?-- People leave, people are away, and we thought that there was a need to have two or three or four people maximum.

You didn't think you needed more than that?-- No.

And exactly why? Why did you come to that view?-- It's a specialised piece of equipment; not the sort of gear - not the sort of piece of equipment - if you are not using it on a regular basis, then you probably won't be able to use it very well at all anyway, so more specialised people, more specialised tasks and need to be using it on a fairly regular basis to maintain their competency.

You wouldn't see any benefit in training the general body of the men-----?-- Not in the use of the chromatograph, no.

If you got the general body trained - ordinary miners - I imagine there is a much higher risk of someone damaging it?-- It is like anything; the more people that use something, the more things can happen to it.

In your term as manager, was the chromatograph used on a regular basis?-- It was tested weekly on a testing machine and also tested the land link to SIMTARS.

And what about putting through bag samples and that sort of thing from various panels in the pit? Was that done?-- That might have been done at times - certainly not on a systematic basis, no.

Why exactly was that? Did you perceive the use of the gas chromatograph was restricted in some other way?-- Probably the way to explain it is that we had a monitoring system in the mine - it was only monitoring four gases. I know some mines use a chromatograph to do their monthly air surveys and air quality analysis. So as far as they - a piece of

apparatus for monthly air qualities, we were already monitoring four gases fairly well anyway. The other thing is that the legislation - or the recommendation for No 4 said that was to be located in the Mines Rescue stations and was to be used - to be available in the event of an emergency, and, quite frankly, that's the way I treated it when it came to the mine site. It was there to be ready and to be used if and when there was a need.

Well, you remember in '86 there was - one of the problems in '86 was that there was no chromatograph there at the mine?-- That's right.

And there was a considerable delay in getting one up from Brisbane?-- Yes.

And when it arrived, it was so badly knocked around in its journey that it took ages to be recalibrated?-- Yes, it did.

And as you understood it, the requirements out of the No 4 Inquiry were really directed to remedy that situation - to make sure there would be one there on site and operating if an emergency arose?-- My memory of the recommendation said at the rescue station.

Now, so far as you could tell, is that a view that was restricted to you and No 2, or did other mines seem to treat it that way too?-- All I can say is discussions with mine managers at meetings at the time when mines were putting them in, generally the comments were that they were only going to have a select few people to use a chromatograph anyway, and some mines were talking about putting them in the lab area, where your technical people are. I don't know whether they did or how many people they got trained up, that was just discussions at the time.

Were there discussions with other mine managers at the time that indicated that they were thinking it was restricted to emergency use too?-- I think that was a general consensus, due to legislation.

Could I turn to another topic for a moment - about safety and training? During your time as manager, were there safety meetings from time to time?-- Yes, every month.

Every month. And just tell me about those. How many people would attend and how would they be conducted?-- They were run on a shift basis with all people attending on the shift, and they were held on the surface in an office - safety training office.

And was the intention to cover all of the people at the mine, across shifts?-- Every month.

And would you wait until a safety meeting was organised in order to deal with a safety issue?-- No, we tried to reinforce it to the people that safety issues as such shouldn't be left to monthly meetings, they should be raised at the time with the appropriate people, not wait for a month

to raise what they perceived as a safety problem.

And did you conduct some of the meetings yourself?-- At that time, yes.

And how did you see them operating? Were they successful? Unsuccessful? Did people get benefit out of them?-- I think the standard of the meetings was improving all the time. We made a conscious effort to improve the standard of safety meetings so people would get more involvement and more out of them, and I think we were fairly successful there, yes.

In your experience of the men at No 2, were they backward in coming forward to management with safety issues?-- Some of them certainly weren't, no.

Some of them weren't or were?-- They weren't.

Weren't?-- No.

There were quite a number, weren't there, that were willing to and did speak up?-- Yes.

And some, indeed, that were quite vociferous in that way?-- Yes.

Stand management on their ear about those things?-- Yes.

Were there also, apart from the safety meetings, tool box meetings?-- Tool box meetings when there was a need. If you had an issue important enough to discuss, you know, as soon as you can, rather than wait for a monthly meeting, then you would hold those. Probably a good example of that is discussion of an extraction plan before the panel started extraction. You would actually have a meeting with each shift, explain the extraction method and explain the requirements and so forth.

Would those meetings be topic specific?-- Yes, topic specific.

A topic would be identified?-- Yes.

But there was no reason why people couldn't raise safety matters generally at such a meeting?-- Yes.

Was a safety committee established in your time also?-- No.

Was that something after that?-- That came in after I left, yes.

So, at the time when you were involved in the mine as manager - that is to say, there wasn't a safety committee that involved miners as well as management?-- No.

What about the other network of committees - the consultative committee and the training committee-----?-- Yes, that all came in after I left the underground. That's the general system throughout Moura underground, now.

In your view, a decided improvement?-- If you get the management and workforce working together on safety issues or any issues, then it has got to be an improvement.

In your time at No 2, are you able to give me a comment about the attitude towards safety? Was it low profile, ordinary, high profile?-- My opinion was people had a high regard for safety.

Are you talking about people right across the spectrum at the mine?-- All levels.

And did you ever perceive that to change or drop away after you left?-- No.

And what about the deputies and the undermanagers that were at No 2 when you were there? Were they safety-conscious?-- I believe so, yes.

Seriously minded people when it came to safety issues?-- That's my experience, yes.

What about the communication that went on? You were asked questions about whether you had gone and audited the oral interaction between deputies and undermanagers. In your experience, was that oral communication frequent?-- The oral communication certainly improved out of sight by the introduction of the hot seat change. That's not the only reason, but that's certainly an added benefit of it. We had communication both underground - people on the job - and on the surface.

So, tell me about the hot seat change. How did that help?-- People communicate together on the job underground.

So, you have got one shift meeting another underground?-- Yes. Prior to that, the on-coming shift received all the information from his own shift undermanager and no-one else. The introduction to the hot seat change - they were still getting information from the undermanager at start of shift, but then again they were also talking to their opposite numbers at the end of shift prior to them leaving.

This improved communication, but there was existing communication already?-- Yes.

Well, on the hot seat change, then, was it routine to get quite a deal of information exchanged from deputy to deputy?-- Yes.

And men to men?-- Yes.

And then that's down the pit. What about above the pit?-- Well, usually your outbye deputies - your production deputies would be talking down the mine. Your outbye deputies or the deputies around the other part of the mine would talk together on the surface and on the surface your undermanager would talk to his deputies before they went down the mine and also talk

to the undermanager on the shift that was just finished.

Was this sort of interaction that you are talking about, was that pretty much universal in your time?-- Yes, every day, every shift.

Did it need to be - did people need to be told that they needed to talk to the outgoing shift or the on-coming undermanager?-- When we talked about the introduction of the hot seat change, we said that was one of the pluses, and so it was mentioned at that time. Again, how successful it was actually underground, you would have to ask those people, but certainly the opportunity was there for - for people to communicate.

It depends on the individuals, doesn't it?-- And probably what they have got to say to each other at the time.

Unless you compel everybody to write everything down and only communicate in writing to one to the other, you are always going to depend on individuals as to how they communicate?-- That's correct.

Because, obviously, unless it is written down, there is no record of it?-- No.

And that's always, in your estimation, going to be a feature of a mine, isn't it?-- That's correct.

Do you think any mine is going to get to the stage where we just write everything down and communicate only in writing?-- I imagine it would be very difficult.

It wouldn't be very wise, would it?-- No.

And in terms of auditing such a system, it would be very, very hard to audit the oral communications?-- Yes, I believe that's true.

And how would you go about it? You would have to go to the guy and say, "Listen, can you remember back 10 days, please, on a particular shift and just tell me what you said to him?" Having found that out, you would have to go to the other guy and say, "Can you remember back 10 days on night shift and remember what he told you?", and then compare the two and work out for yourself if there was anything deficient?-- It is very difficult.

More than difficult, it would be very hard, wouldn't it?-- Yes.

I'm about to move onto another topic, Your Worship.

WARDEN: Thank you. I will make an oral communication of my own. We will take the lunch adjournment and resume at 2.15, thank you.

THE COURT ADJOURNED AT 12.59 P.M. TILL 2.15 P.M.

THE COURT RESUMED AT 2.18 P.M.

PHILIP JOHN REED, CONTINUING:

MR MORRISON: Mr Reed, you were asked a number of questions about the QA system earlier today, and I don't want to take you through the audit trails and things like that, but you were asked about whether the risk of spontaneous combustion and methods for its control were part of the QA system; do you recall that?-- Yes.

In fact the question that you were asked - I'm not sure if you were actually listening to it closely enough - was there a system to have the risk of spon com and its control brought into the QA system. Now, what's the position in relation to that? Had it simply not yet got into the QA system like the other things that were destined to, that hadn't yet done it?-- What I meant is there were a number of things that may be added to the Quality system in time and that would be included as one, but it wasn't officially discussed as one of the ones to be included because it's one of a number.

But there was a system in place whereby on a needs basis according to the mining people matters would be brought within the QA fold?-- Yes.

And put through the whole QA system and documented accordingly?-- Yes.

And this may well have been one in due course?-- May well have been one in due course.

Did I understand you to say when you were being asked about the underground procedures and work instructions documents - you recall those?-- Yes.

In relation to one in particular you said that the procedures were drawn in a way that reflected what was going on anyway?-- That's correct.

Is that comment applicable to most of those procedures?-- Yes.

They largely reflect the practice in fact?-- That's correct. As I stated, if there was deficiencies in the system as we analysed it then we correct them at the time.

You were asked also in relation to that graph that Mr Squires did after the event, the handwritten one of 5 North?-- Yes.

You were asked whether there was a table that went with it?-- Yes.

Can you recall if there was a table that went with it?-- I can't recall actually seeing one.

We know for other graphs, the formal CO make graphs, they have tables that go with them?-- Yes.

But there doesn't seem to be one for the handwritten 5 North graph?-- There is not one in his documents here, no.

If it existed it would be with that graph?-- I would imagine so.

I think it might have been called a log by somebody at one stage. You don't recall any such log, do you?-- I can't recall seeing one, no.

Now, can I ask you to turn your mind to the question of training again which is what we were dealing with before we finished at lunchtime? Spontaneous combustion as a topic was dealt with in inductions, wasn't it?-- Yes.

And there is a module that was developed - was used primarily in inductions which encompassed spon com as a topic and there is an exam on it?-- That's correct.

I'm going to ask the witness to see Exhibit 39. Would you have a look at that document? Is that the module to which you've just been referred?-- Yes.

In fact that module was used as part of the refresher training at the mine as well, wasn't it?-- This one was, yes.

Dealing with refresher training and training generally and talking about spon com, deputies in their course get some training in spon com, don't they?-- As far as I know they do, yes.

And people who don't become deputies fall into a couple of categories; either they are ordinary miners or they are undermanagers and above or - I'm leaving aside tradespeople for the moment?-- Yes.

Now, if you are an undermanager and above you undergo some sort of certification procedure to get your ticket?-- That's correct.

And in all likelihood you undergo some course of education which would include spon com?-- Yes.

Certainly if you go through engineering degrees and things like that at universities you get some education at that level?-- Some, yes.

Depending on the university. Some may be better than others. In relation to the men, they really cop refresher training, don't they, that's the place where they get their training?-- Yes.

If it's not Mines Rescue?-- That's correct.

At Moura No 2 it's the case, isn't it, that a lot of the men

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if not most of the men underwent refresher training using that module in front of you?-- That's correct.

That was done by Mr Danvers in 1990 and 1991?-- Predominantly by Mr Danvers, but I think Mr Morieson helped him in that context.

Can I just ask you this question as I send this document to you? You know that a schedule has been produced by reference to all the training files of the men at No 2 going back through that period?-- Yes.

To identify from those training files all those people who underwent the course where that was used by way of refresher training?-- Yes.

And those who sat for the exam?-- Yes.

And this is the schedule of those figures, isn't it?-- Yes.

On this schedule we can see by name and designation who a person is. For instance, Abrahamse, mining engineer, or another fellow down at No 15, Breitzkreutz, limited to the surface?-- Yes.

In some cases a number of these people never went underground?-- That's correct.

And so people who are limited to the surface wouldn't need spon com training, would they?-- If they were permanently on the surface with no chance of going underground I would agree with you.

Tradespeople might fall into the same category if they were tradespeople who stayed on the surface and didn't go underground?-- If that was the case, yeah.

In fact we can see through that the date of assessment as well as the date, which is on the major spread sheet, the training spread sheet; is that right?-- Yes.

I tender that schedule.

WARDEN: Exhibit 190.

ADMITTED AND MARKED "EXHIBIT 190"

MR MORRISON: You may not have done the mathematics, Mr Reed, but - in fact you may have done. From that schedule we can ascertain without doubt that definitely - with absolutely no shadow of a doubt - definitely 71 out of 158 did refresher training using that module and were examined and so had some refresher training in spon com; isn't that right?-- Yes.

And as to the balance you can't tell from the actual training

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file, but a number of the balance may well have done it, it's just the training file doesn't indicate it?-- My information at the time was that the percentage of people that went through this module was a lot higher than that.

The 71 we can definitely track by record, but your understanding at the time was that training encompassed significantly higher than half the workforce?-- Yes.

And in fact as I understand it, your information at the time was that it encompassed 80 to 90 per cent of the men at the mine?-- That's about correct, yeah.

And this was unquestionably refresher training on spon com?-- Refresher training on fire fighting and explosions which incorporated spon com.

You can hand back Exhibit 39, thanks. You mentioned in '89 going to a SIMTARS course and you were shown - you may still have - one of the volumes from that course?-- Yes.

Now, that was directed to managers?-- Yes.

Inspectors?-- Yes.

District union inspectors?-- Yes.

And Mines Rescue superintendents?-- That's correct.

The invitation was not extended to ordinary miners?-- No.

Or undermanagers or deputies?-- No.

And that was the course that dealt with CO make?-- Part of the course was on CO make.

Beg your pardon, I've put it wrongly. Part of the course dealt with CO make, and did you understand during that course - and was there some discussion at that course - that it was intended to repeat the course for lower levels of workforce?-- Discussions that were talked around during the course was the need to repeat the same course at a certain frequency as you get new people coming into the industry in those positions that were represented at that course, and due to the fact that we had experts from overseas and so forth they videotaped the whole course which I assumed which was part - to replay that course in the future. There was also talk at the time, and I think it was mentioned from the floor in a couple of discussion sessions, of the need to do a smaller version of the course for undermanagers and deputies, being the frontline, in that same topic as it was discussed.

As far as you are aware none of those things have happened, have they? No course has been run for deputies and undermanagers and the course hasn't been repeated?-- I'm not aware of any, no.

This was a DME course at the time?-- Yes, courses on recommendations of No 4.

So far as you are aware has the video ever been made available to anyone, the video of the course?-- Not to my knowledge.

Now, you mentioned that having come back from that you brought back several volumes of information, but it seems you didn't disseminate the volumes to the workforce generally or indeed to anyone?-- Allan Morieson.

Only to Allan Morieson?-- Yes.

So unless he gave the volumes to someone or they took them it's no reason to think that anyone but you and Allan Morieson read that information at No 2?-- That's correct.

No reason for you to think that either Mason or Schaus or Barraclough read that information, or Abrahamse for that matter?-- I've got no knowledge of them looking at them, no.

And you put in place the CO make system and in an informal way informed those around you -----?-- Yes -----

----- of what CO make was and how you were going to use it?-- That's correct.

There was no formal training of those people either?-- No.

It would be reasonable to say that depending on how they paid attention to you and your contact they would have differing familiarity with CO make?-- It's possible.

The reason for that at the time was a simple one; CO make was a tool for you really, wasn't it?-- That's the way I treated it. Mainly as a tool, but primarily for me.

And in fact the original lots of graphs that were done of panels weren't posted around the mine, were they? They were in fact just given to you?-- During my time as manager they were only posted in the end office for my benefit and nowhere else, but they were available for other people to look at. It's not as if they were hidden or anything, it's just that they weren't for public display.

I'm not meaning to suggest they were hidden, but they were certainly not circulated and put on notice the way they were just recently before this incident?-- That's correct.

That was simply a product of the fact that it was a tool for you in your analysis of what was going on?-- Yes.

Now, in terms of your analysis of what was going on in a panel you had some knowledge of the Graham's Ratio, didn't you?-- Yes.

You mentioned earlier that after '86 you lost a lot of faith in the Graham's Ratio?-- Yes.

Was it also your view then as a result of your experience that the Graham's Ratio was pretty much useless once you have a

sealed panel?-- That would be my opinion, yes, particularly at Moura because of the rate at which methane builds up behind the seals.

That's not a view that was confined to you, that was a view held by others as well to your knowledge?-- To my knowledge, yes.

Can I just ask you one other thing just on a point not related to that at all? In terms of the systems for alarms, by which I don't mean the Unor alarms specifically at No 2, in your time there was an alarm system whereby people would be rung on the telephone from the mine, the Elpro system?-- That's when the mine was unattended the system was put in.

Tell me basically how that worked?-- Depending on the alarm, if it was a fan failure or something in that regard there were some pre-set numbers installed where it would ring first the mine electrician then electrical foreman and then a pre-determined list. If it was a gas alarm then it would ring whoever was on that list on the top down, which would usually be me, and then through the undermanagers and so forth.

Is it a computerised system?-- Yes.

You would get a ring on your home phone and a computerised voice would tell you something about the alarm status?-- Yes.

That was a system that worked reasonably well with one or two hiccups?-- Yeah, we refined it because of those hiccups.

That was in the days when the mine might be completely unattended; is that what you mean?-- Yeah, particularly on the back shifts on the weekends. That's when it was initiated.

So the absence of someone up at the monitoring point would not be a problem because the alarm would generate a computer controlled system which would ring designated numbers?-- Yeah, when the mine was unattended, yes.

You've still got that volume of the SIMTARS stuff there, I think, haven't you?-- Yes.

Can I just ask you to have a look at a couple of things? You had a large number of paragraphs read to you, and by and large I think you were agreeing that those paragraphs appeared in the documents, not so much that you necessarily agreed with them; is that a fair summary?-- I agree with a lot of them, yes.

If you read through that you won't find any solutions to - ready solutions to what to do with a suspected heating, will you? There is nothing in there that says, "When you get this, do that. When you get something else, do something else."?-- No.

So even this supposedly sophisticated piece of information doesn't hand out solutions, does it?-- No, it leaves a lot to

your own interpretation.

We can see that if we go to the conclusions section. Perhaps you would, page 13-1 and 13-2?-- Yes.

If we look down 13-1, about the middle of the page they are there talking about prevention failing and a spon com developing, early detection offering the only hope of a satisfactory outcome?-- Yes.

Then in the next paragraph, "When a heating is suspected it must be located..."; that obviously means some sort of investigation, doesn't it?-- Yes.

Any investigations you carry out in a mining atmosphere is going to involve judgmental matters, aren't they?-- Yes.

Judgment about where to go, judgment as to what you see, judgment as to what you experience?-- That's correct.

Judgment as to what readings mean and so forth?-- Yes.

It goes on, "... located as quickly and as accurately as possible, and the extent of the heating area and its temperature estimated."; again judgmental areas?-- Yes.

"Countermeasures can then be planned to deal with the situation..."; again judgmental matters, something on which decisions might differ man to man?-- Could well do, yes.

"...subsequent monitoring and interpretation will be greatly enhanced by knowledge...", it says, and that's the key, isn't it? If you don't know, then you can't make an informed decision, can you?-- That's correct.

So if one is denied the facts then one could hardly be criticised for the decision one makes?-- Yes.

And this is, "...knowledge of the position, type and extent of the heating."; all again judgmental sort of matters, aren't they?-- Yes.

Then it goes on, "Control of a heating is complex..."; would you agree detection of a heating is complex too?-- Yes.

"... requires a reasoned and logical approach. The problem must be established, contributory factors analysed..."; again judgmental factors?-- Yes.

It might be the contributing factors I was talking about before whether the ventilation is down because someone has opened the 5 South regulator, for instance, or alternatively your ventilation is up because someone has throttled back some regulators elsewhere. All of these sort of factors are involved in the judgment, aren't they?-- Yes.

It goes on in that paragraph that I just commenced, the last sentence, "No quick or universal solutions are available..."; would you agree with that?-- Yes.

It's a difficult topic, it's a difficult thing to assess on the ground, isn't it?-- Yes.

If we go over the page to 13-2 where it talks about in the major paragraph at the top of the page the situation once a heating has developed and gets to a temperature of about 70 degrees Celsius, it talks about the rapid and effective action not being possible until mine staff are trained and so forth, and then down the bottom, the last sentence, "These difficulties..." - that is difficulties with training techniques - "...will be greatly compounded by the working environment and the complex situation surrounding a heating." That's an accurate comment, isn't it?-- Yes.

The situation in a mine in an extraction panel, even at the end of its life, is a complex one with a myriad of things going on?-- And in other areas in the mine as well.

I accept other areas too, I'm concentrating at the moment on extraction panel at the end of its life. It's a complex thing, isn't it?-- Yes.

And solutions, it says, maybe neither obvious nor practicable under emergency situations. You would agree with that?-- Yes, at times, yeah.

And it goes on in the next paragraph, "As with all other aspects of mining, knowledge is the key to success." This is where it tells you, I suppose, as best it ever does in this document, what you are supposed to do. "...knowledge is the key to success.", it says. Clearly enough if you don't have knowledge of facts, then you can't make an informed decision, can you?-- No.

"A heating is a challenging technical problem; the solution to the problem exists and can be discovered by a process of analysis, action and reaction."; again all judgmental matters involving judgment about levels of gas, temperatures of heating, veracity of smells, significance of signs, trends, things of that nature?-- That's correct.

All matters about which equally qualified managers or undermanagers, equally qualified ones, may come to different conclusions quite reasonably?-- That's possible.

"It cannot generally be discovered in an instant, and solutions to past problems may not be directly applicable. First principles of combustion, ventilation and mining science are the key to developing solutions which are logical, efficient and likely to prove successful." That last sentence is really just a motherhood statement, isn't it?-- Yes.

It tells the manager or the undermanager or the person in charge he's just got to go back to first principles, develop his own solutions according to what he is facing. That's all it tells you, doesn't it?-- Yes.

That's the way you would read that?-- Yep.

So this thing, it doesn't actually give you any answers to how to go about coping with either the detection or combating a heating. It gives you a lot of advice and then tells you, "Go back to first principles, my boy."?-- Gives you some guidelines, but not solutions.

Just tell me this: can you flick back in that to page 7-11?

Top of the page, "Artificial intelligence...", next sentence, "The analysis of alarm conditions can be presented as a complex decision tree, and a computer program to assess early indications of heating or fire and to act on the basis of structured decisions could further improve early recognition of heatings and fires...". Do you know if anyone has ever developed a complex decision tree or that computer program? I am sorry, are you only just finding it?-- I just found it.

I beg your pardon, I am going much too fast for you. The second paragraph, the one starting, "Artificial intelligence"?-- Yeah, I've got it.

Complex decision tree and then how wonderful a computer program would be. Do you know of anyone who has actually developed that decision tree or embarked on developing that computer program?-- Not a refined version. I think people have tried it, but what the conclusion is I don't know. So far as I know there is nothing available to do that.

This was the view of the authors of this document at least five years ago. You don't know of any successful work in that area?-- No.

Can I just ask you to look at a couple of other things? Page 8-1, do you see that?-- Yes.

This section, to which you were taken earlier, is all directed to once a heating has in fact been detected, isn't that right?-- That is correct.

But if we look at the second paragraph, "Monitoring of active heatings is carried out...", you see the second sentence, "Where a major heating persists, a gas chromatograph should be used to enable hydrogen concentrations to be analysed...", and so forth. Now, if you were reading that, you would understand from that that a chromatograph was recommended once a heating had been detected and established, wouldn't you?-- That's the way it reads.

Or where it's persisting. If you look two pages over to 8-3, do we see a summary on the right-hand side?-- 8-3?

To the right of 8-3. I am sorry, the next page to 8-3. Is that, as it were, a point summary page?-- Not on my document.

All right. We might have differing documents. I will move on. Now, can I ask you to look at one other thing? If you can turn to page 4-3. If one was looking at this document and looking to see what sort of shape graphs might be - and I am talking now about someone who peruses it not even just casually but is reading with some attention, but perhaps not a scientific analysis of the document - if you look at page 4-3 there is a graph shown there of typical self-heating curves for Australian coals, isn't there?-- Yes.

In other words, typical Australian combustion curves; is that

right?-- Yes.

On the right-hand side are some that might be said to show exponential shape, the two on the right-hand side; is that right?-- Yes.

Those are for coals which have a designation R70 at .4 or .3?-- Yes.

Can we turn over a couple of pages to 4-5 to see where the Moura D seam falls according to this document? If you are reading this document, thought to yourself, "Where does Moura D seam fall?" Do we see a table there, figure 4.2, that shows you?-- It's less than .5.

Yes, less than .5, and if one had a reasonable assessment of it, it would be about .25 to about .4 something or other, wouldn't it?-- Yes.

If we turn back to 4-3, it falls right within that range, doesn't it, on the right-hand side?-- Yes.

So, a reading of this document would give the impression that a typical self-heating curve for Moura D seam might have an exponential shape, wouldn't that be right?-- I suppose you could assume that, yeah.

And if one read on from that table at least and thought, "Well, what does that mean?", and turned the page to 4-4, you would get a summation of where the propensity of this coal to spon com was assessed to lie at the end of that first paragraph at the top, "...rates of self-heating below .5 are taken to indicate coals with a moderate to low propensity to spontaneous combustion."?-- That's what it says.

So, a reader of this document would assess Moura D seam at low to moderate?-- Yes.

You can hand that document back. I have nothing further, Your Worship.

CROSS-EXAMINATION:

MR HARRISON: Mr Reed, do you still have Exhibit 190 with you? That's the document that deals with the training of various people?-- No.

You have got it there now. I would just like you to have a look at the first page, third entry. That's Terry Atkinson, an undermanager?-- Yes.

There is no information suggesting that he has had any training of the type that's been referred to; is that correct?-- It says, "No Assessment Sheet."

Is that what you understand, there is nothing available to suggest he has had any such training?-- Not on this document, no.

And similarly, if you turn to page 7, would that also be the case for Danny Sim, item 124, and Michael Squires, item 130?-- Yeah, the same comment.

If I could just turn to something else. Correct me if I am wrong here in a summary of your evidence about CO make and your knowledge of it. Did I understand you to say that you gained some knowledge in 1987 after attendance at a conference or seminar?-- I became aware of the concept.

First became aware of the concept which involved some understanding of what we might term the German standards?-- Yes.

And also, I take it, some understanding as to how it was calculated?-- Yes.

Now, it was that, you say, which prompted you to get Michael Squires, the then technical officer, to prepare the graph that's part of Exhibit 21 that you saw before?-- Yeah, I'm not sure of the exact time, but it was sometime after '87.

Sometime after you returned from that conference or seminar, or whatever it was?-- Yes.

The evidence here suggests that in August of 1987 he became an undermanager, so presumably it was sometime before then?-- Yeah. Well, I can't recall.

Could the witness be shown Exhibit 121, please, Your Worship? It's there, is it? You have still got it there in front of you?-- 121?

This is the series of graphs and tables that you have looked at earlier?-- Yes.

If you can turn to that particular graph that you have identified as being prepared by Michael Squires, which is towards the end of the document?-- Yes.

If it's in the same order as mine. Now, that graph, in a sense, doesn't accurately reflect what the CO make was in the 5 North panel, does it?-- It's only on the one return.

For that very reason, that to accurately reflect the make you would need the data from both returns, wouldn't you?-- Yes. The reason I picked this return is because that's the one the smell was on.

Would it be fair to say that looking back on it, if you knew then what you know now, you would probably have looked more at the overall picture than just one return?-- I would include the total make of the panel, but I would still want to look at the individual returns as well.

Now, at the time there was no system in place whereby graphs were prepared individually for each panel along the lines of some of the others that appear in that document?-- No.

That was something that came in, was it not, after 1989 when you attended the SIMTARS seminar?-- When we implemented the CO make, that's when the graphs appeared.

Now, the implementation came after your better understanding, if I can put it that way, after the 1989 SIMTARS conference?-- Yes.

At that stage you developed a far better idea of what was entailed in CO make and the use and relevance of CO make; is that right?-- Yes.

So much so that you decided that there should be some sort of system introduced?-- Yes.

Now, one thing that you decided to do was to have graphs prepared for each panel; is that right, at extraction stage?-- Yes.

Not at production stage?-- No.

And did you also decide to ensure that the CO make information went onto tables of the type that appear throughout that document, Exhibit 21?-- Yes, they were added to the monthly vent survey results.

So, prior to that, am I correct in saying that you had that particular form but that form wasn't as encompassing as it became in 1989 in that it never previously had the CO make calculations in it?-- That's correct.

Those columns were added in 1989?-- Yes.

So, if, for instance, there appears a table of that type showing information for 5 North - and if your document is the same as mine, you might be able to turn to one. It's headed "Page 2" at the top. It's got "CO Make 5 North" and it's got a series of dates from 20 March to 19 April?-- Yes.

You see that one?-- Yes.

Now, certainly in view of what you have just told me, that document could not have been prepared in 1986 or 1987, could it?-- This one certainly wasn't.

Would I be correct in saying that that particular document would have to have been prepared sometime after you brought in the new system in 1989?-- This document would, yes.

Now, quite obviously if Michael Squires ceased being technical assistant in August of 1987, it could not have been him that prepared that table to the extent that it included the CO make figures?-- Not the table, no.

He may have prepared some of the other information that got

itself onto this document in the sense that he may have done readings or may have provided other data, but he could not have provided the data in relation to CO make; is that right?-- That's correct.

Now, did you say this morning that from 1989 onwards the only two people who have held the job of ventilation officer are Reece Robertson and Allan Morieson?-- Yes.

So, unless it was done by someone filling in for them, more likely it was one of those two that would have prepared that particular table, including the actual CO make calculations in the extreme right-hand column?-- May have done, I'm not sure.

Well, would it be more likely that one of those two would have done it?-- It may have even been done in recent times. I don't know, I have never seen this document before.

Are you saying it may have been done after the particular disaster?-- May have been, yes.

Now, this morning - and again correct me if I am wrong here - but I understood you to say that when you introduced your system in 1989, your attitude was that the ventilation officers merely collated the information and it was not up to them to interpret the information?-- That's correct.

That's always been your attitude ever since you have had an organised system?-- That's my attitude. They could offer advice or suggestions, but ultimately they are only data collecting positions.

So, that's been the case ever since you have brought in this system of calculation and recording of CO make in about 1989?-- That's correct.

So, certainly is it the case that you have not expected those particular ventilation officers to have developed a sufficient understanding to properly interpret the information contained in those tables or in those graphs?-- No, because one of the reasons I gave Allan Morieson all those manuals from the '89 course was to increase his knowledge of ventilation in general, including CO make, so he understood what he was doing.

But certainly you weren't, as I understood what you said before, putting the responsibility to interpret onto him?-- No.

And back in 1987 when Michael Squires may have, or did do something in relation to a graph or graphs, there was no such system in place at all?-- No.

Turning to 1987, would I be fair in saying that you have no recollection of what you did or didn't tell Michael Squires at about the time of the preparation of that graph or any other graphs -----?-- That's correct.

----- that may have been prepared? In 1989 - again, I am going on what I heard you say this morning - did you say you had an inner circle of people working with you in relation to this - what I might term the CO make situation?-- One of many things including CO, yes.

I am not suggesting it was something that was targeted individually, but it was something that was touched on generally with a group of people?-- Yes.

Now, that group of people did not include the shift undermanagers, did it?-- No.

But it did include some deputies, you have said?-- Some of the deputies were aware of CO make through Mines Rescue training. I said the decision in '91 was brought to the attention of check inspectors at the mine and they would keep an eye on the CO make graph as well because they understood it, but primarily deputies and so forth weren't included in that discussion.

Check inspectors were?-- I'm not saying that they officially were, but they may have become aware of it.

If people generally in the mine - and I might speak of people from the level of third class mine manager upwards - if they didn't have that knowledge of the accepted parameters for CO make, the 10, the 20, for example, would you see how people may fall into the trap of using or trying to interpret a CO make graph more on a trends basis than in terms of the relevance of any particular readings as such?-- CO make is only one tool to help to identify spontaneous combustion, there is other signs as well.

Yes, I accept that?-- But, yeah, you have still got to look at trends anyway on the graph, upwards or how quick it rises. So, if people want to look at a graph that's continually rising, then, sure, that might bring some concern.

Now, with the Quality Assurance program, I take it from what you have said before that there was no real check in terms of whether people did have regard to the CO make graphs that were published in the deputies' room, in the undermanager's office and whether or not they were able to interpret what was contained on those particular graphs?-- They weren't posted in the deputies' cabin at all in my time.

You are not aware of a practice where they have been posted in the deputies' cabin recently?-- I have heard since, but that was after I left.

I am interested more when you were perhaps being involved in terms of audits or when you were being involved in terms of Quality Assurance, as to whether or not there was any inbuilt check within the system to see whether (1) people did have regard to the graphs, and (2) whether they had proper regard in the sense that there are certain parameters which mean certain things?-- No, that wasn't part of the audit process.

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I have nothing further, Your Worship.

MR CLAIR: I have some questions, Your Worship.

WARDEN: Yes. The panel want to have a quick meeting outside, Mr Clair, before you start. We will take a short break.

THE COURT ADJOURNED AT 3 P.M.

THE COURT RESUMED AT 3.12 P.M.

PHILIP JOHN REED, CONTINUING:

RE-EXAMINATION:

MR CLAIR: Mr Reed, there are a number of matters I wanted to clear up with you. Going back briefly to 5 North in 1986?-- Yes.

I think you mentioned you left on the Thursday-----?-- I think so, yes.

-----prior to the explosion, which was on the weekend - the Saturday?-- The heating.

The heating I should say, and the sealing?-- Yes.

Which was on the Saturday?-- Yes.

Are you able to say just how long before that this smell had existed that you have spoken of?-- I think it was several weeks.

Several weeks?-- Yes.

And did it increase in intensity, or was it there sometimes and not at others, or there constantly but at a low intensity?-- I think it was there all the time. I wouldn't say it got stronger, it was just there all the time.

You described it as a thunderbox type smell?-- Yes.

And when you say that, would you relate it to a tar smell? I mean, I think the old thunderbox - they painted the inside of the cans with tar. Is that the sort of smell you are referring to?-- I wouldn't describe it as a petrol/chemical type smell, but that's the closest thing I could compare it to. Musty, I suppose, is another word you could use.

You have lived in the country. You have had something to do with thunderboxes, by the sound of it?-- I've even used a couple, yes.

You haven't been well-sewered all your life, put it that way?-- No.

Okay. Now, it was suggested to you by Mr Morrison that you, if you got a report of a smell - this is just as a matter of practice, I think he was taking you through, not specifically relating it to the incident at 5 North - if you got a report of a smell, you would take steps to investigate it - you would try to locate it - I think that's what he was saying to you?--

RXN: MR CLAIR

WIT: REED P J

That's correct.

And what he was putting to you was that, in effect, in the end result, what would be important would be your own assessment of what was going on in the panel. You would go there yourself and you'd have a smell and see whether you could locate the smell?-- Yes.

What other steps would you carry out yourself, if somebody reported to you, for instance, a slight tar smell or a benzene smell or a musty smell or thunderbox type smell?-- I would go down with that person, together, and look around.

And that person may or may not be able to detect it again, of course. That might be one situation?-- That's possible.

But I think what Mr Morrison was suggesting to you is that ultimately it would depend on what you found yourself; is that right?-- Like I said, I wouldn't discount what anyone else found, and you would still have to investigate, but I would still put a great importance on what I found myself.

You have gone down yourself and you haven't been able to detect any smell. What would you do at that stage?-- Monitor - look at the monitoring of it; probably pay more attention to the monitoring than before - looking at trends or rates of change.

Well, what aspects of the monitoring?-- CO make.

The CO make. And that's the thing that would assume the greatest importance for you?-- At that time, yes.

At that time?-- In the absence of finding nothing under investigation.

But you wouldn't just go down there yourself and if you didn't detect a smell, then, in effect, relax about it and say, "Well, I can't smell anything down here.", and that's it?-- No, wouldn't discount the monitor.

And I suppose one thing that would be in your mind is that these smells may come and go?-- That's possible, yes.

Which is reflected in that area of the SIMTARS document that was drawn to your attention, and that's at page 7-11 of that document, and you recall it being read to you this morning: "Often a heating is first detected by an examining official detecting a faint smell for a fleeting instant."?-- That's correct.

"Further detailed examination of the area reveals no detectable CO or any further smell or other indication.", and it goes on to say: "This process may be repeated on several occasions until detectable concentrations of CO begin to appear on a continuous basis, and these can be traced to the source and action taken to control the heating." So that a report of a smell, then, even if you weren't able to detect it yourself, would lead - you say, would lead you, at least, to

pay much closer monitoring to the carbon monoxide?-- I'd pay much more attention to the monitoring of carbon monoxide, yes.

You were asked some questions about the features of a panel with a high velocity?-- Yes.

In the order, you say, of 40-odd cubic metres per second?-- That's correct.

That would be regarded as a high velocity panel?-- Pretty normal for Moura; high for other mines, though.

Now, the high velocity in a sense could make spontaneous combustion a bit harder to detect, is that so, because it may well tend to dilute, particularly in the case of a heating in its early stages - dilute whatever might be coming off that heating before it reaches any monitor point?-- Depends how far your monitoring point is back and what sort of dilution you are getting in between, but you'd still pick up some percentage change in parts per million as time went on.

If it is a case that, like the smell that comes and goes, you have got CO that's coming off the heating which, in turn, tends to come and go, then perhaps that problem of dilution with the high velocity might be a greater problem than if there was some constant rate of production of CO coming from the heating; is that so?-- That's possible. I think if you look at any of those CO make graphs you will see there is troughs and peaks all the way along and if you have got the trend or the rolling average, that gives you an indication of where it is going.

Now, on that same page of the SIMTARS document - you have got that Exhibit 29 there - it is page 7-11 - it is the thick Volume 1 there - page 7-11, the second last paragraph on the page there?-- Yes.

There is reference to techniques of - whereby heating which may be known to exist but can't be located is then examined - investigated - and it goes on in that paragraph to say, "These techniques normally rely on reducing the airflow through the heating so that products of oxidation may flow out to the intake airway in significant concentrations, where they can be detected, detection of airflows to locate high risk areas in order to concentrate detection efforts, and use of heat detection equipment. Heatings developing within pillars as a result of air leakage along a roadway or between roadways are often difficult to detect because the carbon monoxide may be diluted by leakage along other active flow paths, or diffused and emitted over a wide area." Would that tend to support that kind of problem that I was referring to a moment ago that your high velocity may well dilute what's coming off that heating, but slowing the velocity down may give some greater chance of detecting it?-- It may be true in the early stages, yeah.

In the early stages?-- Yes.

Well, that wasn't something that you were particularly aware

of, even after going to the seminar?-- I didn't practice that technique, no.

Now, again, with a panel with high velocity, is there perhaps - particularly in the case of a situation where people are tending to ignore the CO make but looking at the level of parts per million, the measurement of CO parts per million - is there perhaps another feature or even disadvantage in this connection in the high velocity in that any small change in the CO production - in the CO level in terms of parts per million may well reflect with the higher velocity a significant change in the CO make?-- Changes to the ventilation can affect your parts per million reading. It's always been my understanding that the CO make should remain fairly constant if your measurements are accurate.

I think you are coming at it from the other end. What I'm suggesting to you is if you have got a panel with high velocity, then if people are looking at it on the basis of the actual CO level that's being monitored rather than the CO make, then they may well tend to miss significant increases in CO make, because a small increase in the CO level, where there is high velocity, can reflect a greater change in the CO make-----?-- That's correct.

-----than it would do in a panel with lower velocity?-- It's true to say that small changes in parts per million with high ventilation quantities can be a fairly significant increase or decrease in make.

So that if people are looking at the CO level and not the CO make, there is a real danger of the existence of the heating being masked because it is a high velocity panel?-- You may get a false impression.

Right. Now, just while you have got the SIMTARS document there, I think what Mr Morrison was putting to you when he was dealing with that document as a whole is that in the end result it really offered no solutions and he referred you in particular to the last page of the document. In fact, he did highlight one section there which is in the third paragraph, the second line - or the first line, even - "A heating is a changing technical problem; the solution to the problem exists and can be discovered by a process of analysis, action and reaction." Do you see that there - "analysis, action and reaction"?-- Which paragraph are you in?

Third paragraph, first line?-- Yes.

Now, is it true to say, though, that even in a general statement like that, putting to one side all of the detailed information and suggestions that are contained in the document, that what the document does do is to indicate that some action at least must be taken?-- Yes.

If there is some suspicion of a heating or if there is some evidence, for instance, by way of a smell that's been reported, it really is essential to take some action to - either by way of analysis, or other action by way of

inspection - but some action to rule out the prospect of a heating existing in a panel?-- That's correct.

Now, I gather from what you said, if there was a report of a slight tarry smell, for instance, to you, then you certainly wouldn't dismiss it?-- No.

You would certainly be taking some action to investigate?-- Yes.

I think I asked you before what you'd do and you said, first of all, you would go down there yourself and have a smell. Now, assuming that you didn't smell anything, I think you said that you would monitor it fairly closely; is that right?-- Yes.

You would be monitoring the CO make?-- Paying closer attention to the CO make, yes.

In terms of the CO make, I think you agreed in your evidence that certainly you wouldn't be waiting until there is what's been called an exponential rise in the CO make graph?-- No.

But at the same time, I understood you to say that the mere fact that there was an increase in the CO make from week to week in itself wouldn't cause you any concern?-- No, I don't think I said that, did I? If you have got an upward trend - and bearing in mind that you do get highs and lows from week to week - so if your trend is generally upwards, then that would still make you pay close attention to it as well.

It would?-- Yes.

That's upwards to any extent? If your trend over a period of time - for instance, four weeks - was generally upwards, you say that you would be concerned enough to pay closer attention to it?-- I would be paying attention to it if it was approaching an upward trend of about 10 lpm.

Whether it is a slight upward trend or a middle path upwards, any sort of upward trend over that period of time?-- I am not saying I would initiate anything extra being done, but I would certainly keep an eye on the graph.

You wouldn't be complacent about it?-- No.

You wouldn't regard it as normal?-- We would experience a rise through extraction period, but a continued upward trend, you would keep an eye on it, yes.

Just a brief point about what you said about considering flooding of a panel. I think you said at one point that if there was a panel where you were only looking at being in there for three months, having regard to your view of the period that would elapse before spontaneous combustion might be a problem, you said if there was a panel where you had an extraction period of three months you wouldn't consider flooding from day one, I think, is the way you put it?-- On the initial planning of extraction method.

What did you mean by that when you said "from day one"?-- As part of the extraction plan - it wouldn't be considered to flood the panel in the initial extraction plan. So "from day one" is when the panel starts. You flood as you retreat like we did in '91.

Are you saying that circumstances may well arise during the extraction phase then whereby you would consider flooding?-- If it was possible and circumstances indicated it needed to be done or might solve the problem or help the problem, then, yes, you could.

What circumstances would indicate to you that it would need to be done?-- Confirming a heating in one certain location of a panel so you know where it is and it's possible to flood to solve the problem would be one. A panel where you've got a suspected heating or problem going on and it's possible to flood the panel and see whether that makes - and you can't find out where it is but you think there is a trend you are not happy with, then you may try flooding as one way of solving the problem. It's one of the things you are just going to have to play as you go along.

You were asked some questions about the usefulness of the Graham's Ratio, and in particular you expressed the view in answer to a question that the Graham's Ratio was useless once you've sealed a panel. You went on to say "because of the rate at which the methane is produced". Can you explain what you meant by that?-- Yes. Moura, when you seal a panel up methane usually builds up fairly quickly depending on the size of the panel. You still will build up quickly, large or small, with the methane make. It's always been my opinion, and it is my opinion only, that Graham's Ratio assumes that all the oxygen deficiency is due to oxidation. Now with the methane make behind sealed panels at Moura, as your methane builds up oxygen levels will drop anyway and Graham's Ratio doesn't take that into account. So in actual fact every panel at Moura that's ever been sealed, by Graham's Ratio, has always had an active fire in it.

According to the -----?-- Graham's Ratio.

Normal tests or normal levels?-- Because of the oxygen deficiency which is predominantly due to methane build-up. Graham's Ratio doesn't assume that, it assumes through oxidation, and that's purely my opinion.

What you are saying is you haven't researched the point in any particular way?-- No.

It was a view that you formed because of the part that oxygen deficiency plays in the ratio?-- That's correct.

Just on your own view then, is there a particular time at which the Graham's Ratio becomes useless after sealing? I mean is it the case that immediately the seals finished then it becomes useless on your view of things?-- Well, I've seen seals go over, virtually become inert within 24 hours, and it depends on the panel and the size of it. Others will take a week and as we know, in 1991 it took two days to reach 5 per cent and that was a fairly large area too. So to be honest with you I've never used the concept of Graham's Ratio in a sealed area without reason, so I couldn't say what time period is affecting what it is, just discounted it.

Even on your theory, can I ask you this, are you saying it's useless immediately the sealing has taken place or is it something that becomes progressively less useful?-- I think you'd have to ask people more experienced than me in Graham's Ratio.

Okay, you can't say that. Just briefly on that, Exhibit 190, I think you've got it there in front of you, it appears, on a quick flick through that, that undermanagers for the most part at least have no assessment sheet located on file as does Mr Abrahamse and Mr Barraclough?-- That's what it says.

Are you able to say why it would be that if that does indicate that they were given no training of the kind referred to in that document? Are you able to say why that would be?-- Because it's refresher training - no, I can't say exactly why, no, not while those particular people are not mentioned in here, no. That's not to say it wasn't done either, by the way. It's just there is no record of it. Probably the easiest way is to ask those people.

I was just asking you in your role really now as the - more associated with the Quality Assurance whether there was any policy which seems to exclude undermanagers from training of that kind or whether it's simply an accident of the way things happened that it appears there was no assessment sheet?-- There was No system in place to exclude those people.

It's not as though they are assumed to know all these things?-- No.

Finally - or before I move to finally, one more quick question. The alarm system that you were asked about that generated calls to various telephone numbers when the system wasn't attended?-- Yes.

Did that system remain in existence through until the time -----?-- To the best of my knowledge it was still in place when I left there, yes.

And through until August last year?-- I don't know.

You don't know?-- No. As I said, it was only for when the

mine was unattended and I think you will find in recent times that that situation didn't occur anyway.

Finally, it seems that just looking at the history of things in reports that have been referred to, that BHP mines have at least experienced a number of explosions, I think three it was in New South Wales and two in Queensland; from your position in respect of Moura, do you know if there is any broad plan that's being adopted or any steps being taken to address the future on an across the board basis with a view to mines safety management or is it something that's just being addressed at local level in each case?-- I can't answer that very thoroughly, but all I can say is that BHP itself has got safety management plans whether it's underground or open-cut, and they have been implemented and are being upgraded all the time. Whether there is anything targeted specifically to the underground I think you would have to ask those relevant people.

Thank you, Your Worship.

EXAMINATION:

MR PARKIN: Mr Reed, just a few questions. How many years were you manager at Moura?-- Eight.

Was that No 4 and 2 or -----?-- Just No 2.

In cross-examination by Mr Clair I think you stated that house-keeping, safety audits and accident investigation were not included in the Quality Improvement program, was that correct?-- I said they weren't included in the Quality system as such at this point in time. Even though the systems still exist they are being added to the system. What I'm saying - it's not to say the systems don't exist, they are just not into the Quality system.

I guess really the reason I asked the question is, as you well know - and you are a very experienced manager - as you well know those three are very important key aspects of any safety program?-- That's correct.

And I guess the question is why were they not included initially?-- Because we only targeted the main operating areas of the mine and we always had a plan to put safety and maintenance in at a time down the track, but I think you will find that safety audits, house-keeping inspections are still being carried out even though they are not part of the Quality system.

In your opinion what is the Quality system down at Moura for the safety aspects of the mine?-- Safety aspects?

I'm trying to glean from your experience?-- Well -----

Beg your pardon, I'll let you continue?-- Go on.

Did it enhance the program, the safety program?-- It's going to formalise the program in the fact that you can then audit the safety systems you've got in place to double check on the effectiveness of them. It's got to be a plus because you could have all the systems in in the world, and if you don't do an audit check to see how effective they are then you get a false sense of security. So once they are into the Quality system they become auditable and they can become more effective or maintained and have confidence in the system.

Whilst they are in the system have you found, from your experience, any problems in maintaining the operational side of the program?-- No, they are continually being reviewed and updated all the time.

So you are continually monitoring that situation?-- Yes.

I think you've answered the question, but I would just like to get a little bit of clarification. You attended the course on mine fires and heatings in '89 and the question I was going to ask is did you pass this knowledge on to other staff or even other employees? I think you said no to that initially?-- Passed on some information to some people.

I guess what I'm trying to get to is that if you attend the course that's beneficial to other staff and indeed employees, is it not sensible to arrange for that information to be passed down the line?-- Yes. We didn't do it in a formal sense and that's probably where you are coming from.

You did it, but not in the strictly formal sense?-- No.

I guess the other question was, the 5 North heating, there was no education of employees regarding spontaneous combustion after that situation, was there?-- No.

Do you think in hindsight that should have been the case?-- Yes.

With your considerable experience at Moura, and especially in reference to the heating at 5 North and indeed your experiences with 5 North West, did anyone in management ask you for any advice or help in the events leading up to the incident of 7 August?-- No.

Because you are a pretty experienced mine operator with a lot of experience and yet nobody talked to you about the events leading up to 7 August?-- In regards to CO makes and -----

Yeah, you know, general information, advice, help?-- No.

Do you find that strange in retrospect?-- It depends how they think they are handling what's going on, then - why should they ask me? That's -----

If you are an experienced operator and you've witnessed one heating and you've been associated with sealings, you've been

a manager eight years there, would not somebody approach you if they had any doubt in terms of spontaneous combustion or in fact what to do?-- I think you would have to ask those people that.

Okay. I guess on 22/7 Dave Kerr visited the mine and made a visit on the afternoon shift to 512 Panel, and there is obviously some concern otherwise they wouldn't have gone down the mine on the afternoon shift. Did anybody speak to you about those circumstances at all?-- On that weekend?

Yes?-- No.

Answer this question strictly in relation to your experience: if I can take you to the events of the weekend of 6 and 7 August, if you had been the mine manager at the time what would you have done if you had been aware of the CO make of approximately 18 lpm and reported benzene and tarry type smells in 512 Panel? What would you have done?-- Probably go down for a look. That's the first thing I'd be doing.

What would you do then if you did find anything?-- I think you'd need more information than just a spot reading on the Friday. You'd have to look at the graphs, the trends of the graphs, related changes, any reports from people. Just to walk in as an outsider and look at a reading and try and make a decision I think would be wrong.

Sure?-- Like I said, the first thing is go and investigate with people and any equipment available to help you.

I guess I won't bother showing you the graph, I'll just read the numbers off it. On 16/6 the CO make was approximately just over 7 lpm and by the time we get to the 7th we are looking at 18 lpm. I mean would that cause you any concern that increase?-- That's a fairly rapid rise, yes.

It would cause you some concern?-- Yes.

Because certainly in the 5 North-west I believe you did say that with 9 litres in the top return and 3 in the bottom you did take some precautionary measures and seal the panel?-- That's correct.

I want to ask you one final question. The Graham's Ratio is related - now, I don't want to get into a discussion - and this is after the sealing - I don't want to get into a discussion whether Graham's Ratio is appropriate after a sealing or it's not because, as you said earlier, you are probably not qualified to answer that question and probably neither am I, but if I said to you that remembering that the 512 Panel was sealed early in the morning on 7 August and you knew that at 10 p.m. on the evening of the 7th - you knew that the Graham's Ratio was in excess of .6, the CH4 was approaching 5 per cent, the CO was approximately 150 ppm, that's an increase from 12 ppm to 150 in approximately 22 hours - and I don't think anybody argues about the fact that it's not difficult to get 150 ppm CO behind a sealed area, it's a question of the time it takes to do it - and also that the CO2 was in excess of .1 - now, that on top of what we just spoke of earlier about the litres per minute and the report of smells, would that give you any concern?-- Yes, it would.

What would you do about it? Look, I don't want to put you on the spot here, I am just trying to find out from your experience and from your knowledge what would you have done?-- I think my decision would be made before we got a Graham's Ratio reading like that anyway. I'd probably have a fairly close decision on what to do before we even sealed it, but what you are saying is correct, 150 ppm rise in that period of time, in my experience at Moura, is very rapid. I wouldn't personally look at the Graham's Ratio, I have said that before, but the significant rise in parts per million would be a cause for concern, yes.

What would you do? Would you tell the men about it, for a start?-- I'll answer that by what I did in '91. When I decided to pull out and seal, I had shift meetings with everyone, so my past actions dictate I would, but that's all I'm going by, is my own past action. So, I'd have to predict what I would do if I was actually working there.

Let me say this in looking at your experience - and I stress the fact, Mr Reed, that you are a very experienced underground manager - what would you have done on the evening of the 7th?-- I would have kept them out of the mine.

I have no further questions, thank you.

EXAMINATION:

MR NEILSON: Mr Reed, just a couple of questions. Have you ever smelt a known heating?-- '86.

1986 you did smell that -----?-- There was a smell there which subsequent events said that that was from a heating.

And, as I understand it, that's the smell you described as a thunderbox smell?-- Yeah, it is, yes, yes.

We may have to determine which generation that's come from at a later date, but on the way to the mine you pass the old No 1 mine and it's been described in these proceedings that quite often you get a smell as you drive past there, and I think it's known that there is coal on fire in that area?-- Yes.

Does that smell to you like a thunderbox smell as well?-- Different smell.

It's a different smell?-- Yes.

How about subsequent to the explosion in 1986? It's been described in these proceedings, or there has been a reference to a No 4 like smell which was a smell present in the atmosphere directly after the explosion. Did you smell that?-- I never went down the mine for weeks.

No, no, no, I am talking about directly after the explosion on the surface. I may have this wrong, but I thought that that was what was referred to as a No 4 type smell?-- The smell I smelt in 5 North in '86 wasn't burning coal, associated like that smell in the waste, the sulphury-type smell, it was completely different to that. It was more of a goaf type smell but stronger, musty, stale-type smell. I wouldn't describe it as a benzene smell, no.

So, what you are really saying is that you now associate it with a heating because at a subsequent date it was proven to be a heating?-- Yes. I think any smell associated with waste workings would trigger some concern to me after that event.

So, at the time you smelt it, I guess what I am really trying to get to is - and you described it as a thunderbox-type smell - you really didn't have it in your mind that it was a heating at that time?-- I knew it wasn't the norm and that's why I initiated GFG tube samples right on the goaf edge to see whether the GFG's taken back at the monitor points were representative of the goaf edge, so that triggered that action, and all the other indicators that were available to me, which is parts per million and Graham's Ratio, indicated no change.

Can I just take you a little bit further on from the question of Mr Parkin in relation to your actions when you returned from that seminar that dealt with the SIMTARS document? You

say that - and I take it that that's when you first really had a knowledge about CO make and what the significant levels refer to, in other words, the German standard; is that correct?-- That's correct.

Would it be correct to assume that at that time probably you would have been the only person at the mine to have that knowledge?-- On my immediate return, that's correct.

Now, you have said that you did disseminate some of that information verbally but in no formal manner?-- No, apart from giving the manuals to the ventilation officer to read.

You see, we have had a lot of evidence given in this particular Inquiry from people that probably you and a lot of others would have assumed that they had some fairly understanding knowledge of what this new procedure that you introduced in terms of CO make meant, and we have had some people give evidence to say that they knew how to calculate it but really didn't know what it meant. We have had an undermanager say that, or tell the Inquiry that he knew how to calculate CO make, he had some basic understanding of it, but he preferred to deal with the old situation of looking at carbon monoxide in parts per million. Can you tell the Inquiry why you didn't see fit at the time to put some documentation out to make sure that the necessary people were aware of the new procedure that you were introducing?-- Well, whether it's right or wrong, I perceived that monitoring of CO make as my responsibility and, as such, it became a tool for me, and, you know, whether that's right or wrong, that's the way I did it, and the people that were doing the calculations understood the concepts of it and the information sharing went on, but primarily that information was for me to monitor and make decisions by.

Well, what happens when you are not there?-- I have a relief.

Did your relief understand it?-- I spent some time explaining it to him, yes.

Who might that have been?-- Mark McCamley.

Are you sure that Mr McCamley really understood?-- To my knowledge he did. Yeah, he fully understood all the reasons behind the '91 sealing.

As a result of some of the questions that Mr Morrison put to you in relation to that SIMTARS document, and referred to things such as, you know, there is a lot of judgmental matters that really don't have conclusions and it's possible for different people to have different views even though you may give them the same information - I mean, I'm not saying that's incorrect because I know that stands to reason, that judgmental matters can be left to individuals and it's quite possible for individuals to draw different conclusions, but, you know, isn't that only possible where there is no laid down set procedures?-- People are trained to look at other signs for spon com, as we all know. CO make was a management tool

but there are others, parts per million changes, it may or may not be indicative. You have a few other factors as well in the latter stages like smell and haze. People can react to those and report those sorts of things.

I appreciate that, and I think it's fairly plain to see now that they were the circumstances at the mine. There was a lot of confusion, and, I mean, if a new system was going to be introduced, then surely you would have adopted that practice on the basis that you believed it was a far better system than the old, would that not be correct?-- That's why I introduced it, yes.

Well, if you introduced it, then why would you not see fit then to make sure that all of the other - particularly statutorily responsible people knew what the new system was and understood it?-- Well, like I said, I didn't do it in a formal sense, but I will go back to my original statement, whether people judge that right or wrong, it was a management tool for me and the people around me.

Can I ask that the witness be given or shown Exhibit 149? Mr Reed, you will see there is no identification where this particular document has come from. I just ask you to accept that the information on it is correct. I mean, if you wish, you can do some calculations. This particular graph really does simplify the whole question of CO make, doesn't it? I mean, can you see what it's trying to -----?-- I can see what it's doing. How accurate it is, you know, relying on a piece of paper is debatable.

Well, would you like to do a couple of calculations to satisfy yourself?-- I'm not saying it's graphed wrong. I am saying if you are going to read readings off a graph like this, then you could be 2 or 3 lpm out purely on the way you measure it.

Sure, but it's a very good indicative graph, isn't it? I mean, have you ever seen that before?-- Not that particular graph, no.

Have you seen a graph like that?-- Similar at some stage.

You see down the bottom of that graph are three indicative figures, aren't there?-- 10, 20 and 30.

That's right. Then below that it says "Instructions to persons doing readings". Would you just like to read those instructions out?-- "Any readings that are approaching the 10 lpm curve, inform the undermanager and manager before leaving the colliery. Any readings which are above the 10 litres, inform the undermanager and manager immediately."

Well, my question is to you that, you know, that's been produced by certain people at a certain mine and, you know, they have seen fit to produce that graph in order to make sure that all of the statutory people and the people taking those readings fully understand what it is that they are doing and fully understand the importance of the 10 litres, 20 litres and 30 lpm respectively, which you fully understood, but at

the time you, through your own admission, was the only person at the mine who knew that?-- Initially, initially.

Initially?-- I didn't say that case remained, or in my impression it didn't remain anyway.

I know that we can sit around and talk about things in hindsight all day, and I don't intend to do that, but thinking back - and I will ask you to answer this question in hindsight - do you think it would have been a good idea, had you thought of it, to do something like that at the time at the mine to make sure that people understood what it was that the new procedure meant?-- Sitting here today in hindsight, yeah, I would say it could have been done better.

Well, that was my next question. Thank you, Mr Reed.

EXAMINATION:

PROF ROXBOROUGH: Mr Reed, you graduated in 1975 from the University of Queensland in Mining Engineering?-- Yes.

That's a four year full-time degree?-- Yes.

And you gained your first-class certificate in 1981?-- Yes.

Did you take an undermanager's certificate before that?-- I got a first class ticket and worked as an undermanager after that.

You went straight to the first class certificate?-- Yeah, that was allowable to do that.

But is that usual practice to go straight for a first class certificate?-- If you had the qualifications you could. I think that's changed now. Yes, in those days it was possible.

So, as far as you know, there is no requirement to obtain a deputies' ticket or an undermanagers' ticket before a manager's ticket?-- There might be now. In my time there wasn't.

Do you consider mine manager, mine management or colliery manager to be a profession?-- Yes.

Do you consider coal mine managers to be mining engineers?-- Someone with those skills, yes. There is a lot of effective mining managers around the place that don't necessarily have a mining engineering degree.

I appreciate that, but since a mining engineering degree is only partial fulfilment for a mine manager's certificate, it would be reasonable to suggest as a consequence that a colliery manager, however he has achieved that status, is a mining engineer; is that reasonable?-- Yes.

Are you a member of any professional body or learned society?-- Used to be, I'm not now.

Why aren't you a member now?-- Just let it lapse.

Well, yes, but why did you let it lapse? You weren't getting anything out of it?-- I didn't think so, no.

Could I ask which society you were a member of?-- AUSIMM, AMIE.

Was there a local branch of the AUSIMM to where you were working?-- I think there is one in Central Queensland, yeah.

Did you attend any meetings?-- A couple but not too many. Not so much meetings but any symposiums or seminars they may organise.

So, you don't think that you got very much value out of your membership and that's why you allowed it to lapse?-- I didn't try much either.

Would that be perhaps because it had a greater emphasis in one direction than the other? I mean, perhaps it covers both metalliferous mining and coal mining?-- A lot of publications I used to get from the AUSIMM leaned very heavily towards metalliferous and metalliferous processing, and I didn't get a lot out of that either.

Do you subscribe to any professional mining journals?-- They used to arrive at the mine quite regularly. The Coal Miner, I think, was one; the World of Coal is another. So, quite a few magazines would arrive.

They are more trade journals than professional journals. Do you understand what I mean by "professional journals"?-- Give me some examples.

Well, I was hoping you might give me some. Have you heard of the Australian Coal Journal?-- Yes, we had that.

Did you personally subscribe to it?-- The company did. It was never delivered to the mine.

Mining Engineering?-- May have been there, can't be sure.

The Mining Engineer?-- Yes.

The International Journal of Rock Mechanics and Sciences?-- I can't say I have seen that one.

Do you have a personal library?-- At the mine I did, yes.

You say you did. Did it belong to the mine or did it belong to you?-- Most of the books belonged to the mine. I had some books of my own personal nature, particularly the books I picked up through the institutes and when I was at university.

Would you expect professional persons to maintain a personal library?-- Yes.

What did your library contain? 50 volumes? 100 volumes?-- Personal one?

Yes?-- Probably about 10.

Did you make frequent reference to your library?-- Not a great deal.

What, because there wasn't need?-- No, because the information was at the mine, not necessarily at home.

Was there any opportunity for you to meet with other managers on a regular basis?-- Yes.

Did you do so?-- Yes.

Under what auspices?-- The managers, particularly in Central Queensland, but expanded to Queensland, regularly held meetings throughout the year to discuss different issues. That was the concept and it worked very well. I don't know if it is still continuing, but it was certainly good practice when I was there.

Did those meetings tend to be an opportunity to exchange ideas, discuss specific topics?-- Yes.

Was spontaneous combustion ever discussed?-- I can't recall.

During your time as manager at Moura, did you ever personally take carbon monoxide measurements underground on your visits?-- I have done many times.

Many times?-- Mmm.

Would you normally carry apparatus with you on underground inspections?-- Only the methane oxygen detector and Drager if I had to - if I was going down for a specific purpose.

Would you say when you were at Moura that there were enough Dragers and Minders available and properly attended to at all times for all personnel who required them?-- I think so.

In response to a question by Mr Morrison, you said that the strata overlying the D seam at Moura allowed you to carry a span of seven metres width in the headings?-- That's correct.

Although we have been told of this massive sandstone, we have also been told that there was an immediate roof that wasn't so strong?-- Yeah, more shale.

Were you able to carry that?-- Yes.

Over the span of seven metres?-- Yes. I think from day one. If you go through the portal at No 2, you are looking at seven and a half metres anyway, and 23 years those roadways have stood up.

Is there any legal limit to the amount of coal that can be extracted during - I don't know what you call it in Queensland, but in New South Wales we call it first workings - during the development phase?-- There is no maximum width for development roadways in Queensland, not like New South Wales.

Well, my question was: is there any legal limit to the amount of coal that can be extracted during the first phase?-- Not to my knowledge.

So, technically you could practice extraction - full extraction on advancing?-- No. No, the rules of secondary workings or extraction is specific where you have to apply to the inspectorate to carry that out. Now, they also define what extraction is, which includes if you take more than a metre of coal off the floor, that's determined to be second workings as well, and you have to follow all the regulations and rules governing that criteria.

But you are saying that there is no restriction to the width of the headings?-- No.

In reference to 5 North, which is the one which was sealed in '56, am I right?-- '86.

What did I say, '56?-- I'm not that old.

I am. I'm showing it. You said that was full extraction and that you were caving the sandstone roof but that you were having problems because the width was subcritical. You weren't getting good caving?-- Total extraction at Moura-----

Yes?-- -----always was a problem. That particular panel was even narrower than normal and, yes, it was experiencing major problems.

So there had been panels prior to 5 North that had been fully extracted?-- Yes.

You had always had the same sort of problems?-- Not to the extent in 5 North, but the extent of getting the roof to cave when you wanted it to cave.

Would it be true to say that there was really no settled method of mining that had been established at Moura No 2; that you were still developing an effective method of working?-- I wouldn't necessarily say that. The settled method of mining was partial extraction and - that was the first point - and that itself is a major decision to make - no more total extraction. From that point on, we were doing the best we can. Now, we were doing reasonably well with the mining method we were using in secondary extraction, but we thought maybe we could do a bit better and bring some extra people in to help us and that's an essential thing in any mine - to look at improving what you are doing and not sit back and be satisfied with what you are doing.

Yes, I accept that. Can I ask you finally what circumstances

led you to relinquish your position as manager at Moura No 2 in 1992?-- The position I'm in now became available and I asked for it.

There was no conflict of personality or anything of that nature that led to your departure?-- No, certainly not.

Thank you.

EXAMINATION:

MR ELLICOTT: We have heard some evidence of a restriction on working height - whether that was self-imposed or otherwise. Would it be true to say that that resulted from a fatality, resulting, in turn, from a rib failure?-- Yes.

It wasn't to do with roof stability as such?-- No, it was rib.

Can you tell me if, in your opinion, Moura could be mined at the present and future depths without the aid of methane drainage, given its gassiness?-- There is probably areas - well, I haven't seen the drill data and gas absorption figures from around the place. There may be areas where methane content dictates you don't have to go into methane drainage, but the deeper you get at Moura the more gas you get.

So, in fact, methane drainage is necessary, or would have been necessary to continue to mine Moura?-- Certainly No 2 was, yeah.

During your time as manager, how far would you say the training at Moura No 2 went beyond that required by statute?-- What sort of training?

Any sort of training?-- Okay.

There is certain training that we have heard about that was required by statute?-- Yes.

I am trying to get a feel about how far Moura went beyond that and in what respects?-- Well, equipment operator training was an ongoing thing and was happening in a fairly major way, so that's training - that's beyond the statute - and that was increasing at a rapid rate. As far as other training goes, I think the refresher training is a thing we were concentrating on.

That's required by statute, I believe?-- Yeah, that's correct.

That's not beyond statute?-- Not that section of it, no.

I think we have heard it suggested that with regard to spontaneous combustion and sealing and monitoring and all

those sorts of things, there are a number of decisions that have to be made?-- That's correct, yes.

I think those decisions have been described as - in many cases, as very difficult?-- It can be, yes.

They may often be very complex decisions?-- Yes.

But they are nonetheless very important decisions?-- Yes.

They impact to a great deal on the safety of personnel?-- Yes.

And they may, in fact, impact very directly on what might be called the safety of the whole mine?-- Yes.

Would it be fair to say that those decisions often have to be made with incomplete information?-- May well be, yes.

Would it be fair to say that that information may have to come from a wide variety of sources, and in different forms?-- Yes.

Would it be fair to say that certain of that information would have to be considered critical to making valid decisions?-- Yes.

In other words, you would just have to have that certain set of information?-- Yes.

So, it would be fair to say that it would be in everybody's interest for there to be an adequate system to ensure that it is useful and to ensure that it is obtained?-- Yes.

Would it be fair to say that it may be less than desirable to leave that sort of gathering of information to processes such as word of mouth?-- Yes, I agree with that.

Would you also agree that given the difficulty in complexity of these sorts of decisions, one can't really expect the workforce to make them?-- No. I'd just like to add that there is nothing wrong with getting information verbally, as long as it is documented somewhere.

As long as it is reliable?-- And reliable.

And, to some degree, disciplined?-- Yes.

Such as may be found in a QA system?-- Yes.

Can you say - can you agree that there is no doubt that ultimately these sorts of decisions that I've just described are fairly and squarely management decisions?-- The ultimate decision comes down to management, yes.

The buck stops there?-- Yes.

We have heard some discussion of the SIMTARS seminar material from 1989. I think we have heard it suggested as - and I

think you agreed that the material contains a lot of guidance oriented material - what might be, I guess, described as good advice; is that true?-- Yes.

It is not really a recipe book, is it? It doesn't say if you have got that, then do that; is that the case?-- No, I would agree with that.

But, in your view, would there be anything to prevent a mine management using that sort of guidance material to develop their own sort of decision systems based on it?-- Yeah, you could say that.

So, you would say that would be reasonable?-- Yes.

That although the formality - although the material only appears as guidance-----?-- If it was possible to go beyond those guidelines to have more detailed systems.

Or to structure decision processes based on that guidance?-- Could well be, yes.

When you were the manager of Moura No 2, was there a health and safety policy in effect?-- I think BHP itself has got a health and safety policy. The mine has got their own policy as well.

Did they have when you were manager?-- I can't be sure.

Okay?-- I imagine there would be, but what I'm saying is I can't be sure because I know now that they are displayed variously all over the mine. Now, whether that policy was in place but not displayed in the mine in my time, that's the point I'm trying to make.

Would you expect that if there was a mine policy, the manager would have signed it?-- Manager of Moura mine?

Yes?-- Yes.

If it was the local policy?-- Yes.

And that would be an expression that the manager accepted the values expressed in that policy?-- Yes.

Can you tell me who your immediate successor was as manager?-- Albert Schaus.

Was there any period of overlap when he became manager and you departed so that information could be exchanged?-- I think we spent a couple of days together, or approximately two days.

With regard to Graham's Ratio, would you agree that it is accepted as having certain strengths, and one of those strengths is that it is not interfered with by things like methane dilution?-- That's true.

If you seal an area and it gases out, isn't that a form of methane dilution?-- Would you like to repeat that?

If an area is sealed and it gases out, isn't that a form of methane dilution and so Graham's Ratio, at least as far as that's concerned, remains valid?-- I don't know.

Would you agree that there may have or be other reasons why Graham's Ratio may or may not be valid in a sealed area?-- Like I said, it is only my opinion. I got no advice or there is no documented material anyway to advise of that that I'm aware of and - so - in fact, I've never seen it recommended to be used as a guide beyond a sealed area, but that's not to say it's not available.

Or to some degree may be useful?-- In a sealed area, no, I'm not aware of any material.

Could I ask you to open up that Exhibit 29, again, to page 4-3, please?-- Spontaneous combustion?

Yes, of course. There is a figure 4.1 there that shows a number of curves. I think you agree that the last two looked exponential in response to an earlier question?-- Yes.

Would you agree with me that the whole lot could be described as exponential?-- I suppose you could, yeah.

They may, in fact, be - represent the same underlying exponential function with different coefficients?-- Yes.

Would you agree that even though certain of those curves are described as low risk, that may not represent any form of comfort. My reason for saying so is that although there may be a steady rise in the situation, sooner or later it takes off?-- That's true.

And it may not know when it is going to take off?-- That's exactly right.

And that really introduces an extra level of difficulty?-- Yes.

Rather than making the indicated low risk a source of comfort?-- Yes.

And you may, in fact, be better off; if you have got what's described as a high risk, at least you know it's going to happen very quickly?-- Yes.

It was also indicated, I think, that an average ventilation quantity for an extraction panel or other panels at Moura was about 40 cubic metres per second?-- That's correct.

That air is put into a panel for certain reasons, isn't it?-- Yes.

To dilute gas, to remove dust from people's breathing zones, to adequately ventilate goafs?-- Yes.

So that the 40 cubic metres per second has probably been

estimated as what's necessary for those purposes?-- That's correct.

Now, in saying that Moura averaged about 40 and other mines averaged about 30, I would suggest you can't really take that as an indication of the generosity of Moura as regards ventilation, given that-----?-- That was Moura's needs.

Given it is there to do a job, that's what you need?-- That's right.

Thank you. Nothing further.

WARDEN: There are a deal of questions. I will go back around the table if you gentlemen have any other questions.

MR CLAIR: Thank you, Your Worship. I won't be long.

FURTHER RE-EXAMINATION:

MR CLAIR: Mr Reed, in answer to questions from the panel, you mentioned you regarded the CO make as a management tool?-- That's correct.

In effect, people outside management didn't need to know it except to the extent that as manager, for instance, in your case, you needed to have somebody to calculate it for you, first of all?-- Yes, and to have some understanding of it as well, and rely on the other signs to be picked up by the rest of the workforce; ie, deputies and so forth.

As far as the deputies were concerned at the mine, they didn't need to know about the CO make?-- That was my system, yes.

Of course, you mention that the CO make is a very important indicator of the existence or otherwise of a heating?-- Yes.

And, of course, if a decision had to be made about the likelihood of a heating, then the person making that decision would have to have all of the information, including the CO make?-- That's correct.

That follows from what you have said, doesn't it?-- Yes.

And that's because people who didn't know about the significance of CO make really didn't have all the information they would need to make a decision - at least an informed decision?-- That's correct.

Now, it's been said that in so far as the circumstances were concerned on the Sunday night, the circumstances really that were outlined by Mr Parkin to you on the Sunday night, 7 August, it's been said on occasions that really the miners or the deputies could make their own decision as to whether they wanted to go underground that night. Now, it seems to follow from what you've said that quite apart from the knowledge or otherwise of Graham's Ratio and all the rest, if they didn't know about the significance of CO make or even know what the figures were on CO make prior to the sealing of the panel then they really couldn't make an informed decision; is that so?-- It depends on what peoples perception of why this panel was sealed, but in the context that you ask the question I would say that's correct.

They just couldn't make an informed decision?-- No.

Thank you.

WARDEN: Mr Martin?

CROSS-EXAMINATION:

MR MARTIN: Exhibit 149, Mr Reed, do you still have it there? It's the CO versus air quantity, the document - I really don't want you to look at it -----?-- This is it, yeah, okay.

I understood you to say that you had seen a similar graph at some earlier time or some time earlier than now anyway?-- The curves, not the information on the bottom of it, but I've seen the curves somewhere before.

Where?-- Maybe it's from the German standard itself, I'm not sure exactly.

Where? I didn't hear you, I'm sorry?-- It may be a graph that was taken from the German standard, the literature. I'm not sure exactly where it was.

When?-- I don't know. It would be years ago.

But at some other mine?-- No, no, just in some literature somewhere.

Before 1989?-- Maybe, I'm not sure.

Just one final question, talking about literature for the moment, do you know the SIMTARS magazine published periodically, monthly perhaps?-- Yes.

Did you ever see that at No 2 Moura?-- On occasions.

Whilst you were manager of No 2 underground?-- Yes.

Thank you.

FXXN: MR MARTIN

WIT: REED P J

WARDEN: Mr Morrison?

CROSS-EXAMINATION:

MR MORRISON: Mr Reed, after you left No 2 and took up your Quality Assurance position, you were still around in the Moura area obviously and working at Moura mines generally?-- That's correct.

Not necessarily just the underground?-- That's true.

Therefore the operation of No 2 underground was turned over to the new manager or the new management and all the rest of it?-- That's correct.

Would it have surprised you not to be consulted if the management thought there was no problem with what they were doing?-- I wouldn't be surprised, no.

You wouldn't expect them to ring up and say, "Mr Reed, now listen. I've got absolutely no problem with this mine, I just thought I'd ring up and run through all the things about which I have absolutely no problem." You wouldn't expect that, would you?-- No.

But equally if the management did think they had a problem at the mine there is no reason why they couldn't get in touch with you?-- That's true.

It was suggested, I think, that you might not have been qualified to speak in relation to Graham's Ratio, but you certainly have had some experience with the appearance of the Graham's Ratio after sealed panels?-- Yes.

Did I understand you right to say - and I took the note but, I may have got it wrong - that in terms of the performance of it every panel ever sealed at Moura, according to the Graham's Ratio there was an active fire there?-- Well, we get to that stage. As the methane builds up and the oxygen deficiency dropped and you use all the oxygen deficiency due to oxidation of Graham's Ratio, you would always get high Graham's Ratio.

And that's the high rising methane that does that?-- Yes, predominantly, yes.

You were also asked about miners who, if they didn't know about CO make, couldn't make an informed decision about going down the pit, for instance. If they didn't know about it then they couldn't make an informed decision on that basis. I suppose it's axiomatic, if you don't know something you can't make a decision informed by that absence of knowledge?-- That's true.

In your experience miners might use other indicators that they

FXXN: MR MORRISON

WIT: REED P J

trust and know and are experienced with. For instance, the level of parts of CO or in some cases maybe the Graham's Ratio. In other cases maybe the Ellicott Diagram they would trust, in other cases levels of methane, in other cases sensory perceptions, smell and so forth?-- That's true.

So it would depend upon what the miners - and I speak here in a generic sense - what the miners perceived to be the method or system or the signs that they trusted?-- That's true.

If they made a decision based upon the method or system or signs that they trusted, that's an informed decision albeit not informed by some other knowledge?-- That's true.

I have nothing further.

WARDEN: Mr Harrison?

CROSS-EXAMINATION:

MR HARRISON: You were questioned before by Mr Neilson about that smell that you detected in 5 North West in 1986 and the note that I took was you said that it was like a goaf type smell but stronger. Do you recall saying that?-- Yes.

Am I correct in saying that at the time you detected that smell you never associated that with a heating?-- I think what I did say, and I didn't ignore it, I increased monitoring on the goaf edge to see if there was any other signs to back that change of smell up.

Would I be correct in saying that you only really associated that smell with a heating once the heating in 5 North West was subsequently confirmed?-- That's fair to say.

And that was done, I take it, because of the meteoric rise in CO parts per million that was detected on the day of sealing?-- That's true.

Thank you. I have nothing further.

WARDEN: Thank you. Thank you, witness. You may stand down. You are excused. I don't think there is any benefit starting another witness this afternoon, particularly if it's Mr Mason.

MR MORRISON: I agree with that. I don't want to quibble with that, but there is one matter I wish to raise that has nothing to do with witnesses.

WARDEN: Thank you, leave the exhibits, you may leave.

WITNESS EXCUSED

MR MORRISON: This morning you gave a ruling which was by way of clarification of the ruling on Monday which I perhaps don't need to go into. There are just a couple of matters I wish to raise about that, if I may. The first is in the course of that you mentioned - it's at 3,366 of the transcript - that your ruling doesn't support the narrow interpretation of nature and cause put forward by myself. Lest there be any doubt, Your Worship, I actually wasn't putting it forward by way of a definition or interpretation of that phrase. I've checked the transcript just to make sure and it accords with my memory of it. In fact what I was doing was contrasting features or examples of nature and cause with the alternative that I was dealing with in the central feature which was negligence, and I was really only postulating examples of nature and cause to contrast it that way.

So I wouldn't like Your Worship or anyone else to take it that I was making an argument for a definition of "nature and cause" at that time. I wasn't. Indeed I really understood Your Worship to accept that as so, because what followed was you said that in the ruling nothing in the ruling was dependent on what I had addressed that morning which is when I did that, and I think you said nothing Mr Clair and I said that morning affected what you wanted to say in the ruling. That's the first thing.

The second thing is that Your Worship gave that ruling this morning, and as I read it now, to clarify some aspects surrounding your ruling of Monday. Now, I would like to have it down on the record, not that it matters greatly, but I would still like to have it down on the record that that clarification was not the result of any of our clients making an oral or written request to Your Worship or putting forward any argument about that or any submissions about that, or indeed even enumerating orally or in written form any factors calling for clarification, and we don't know, simply don't know if that has been done by any other party including counsel assisting.

In those circumstances we submit that it really should be made clear if that clarification was brought about by any of the parties, including counsel assisting, doing so. That is to say, in an oral or written form making a request or putting forward an argument or submission or enumerating factors, however one wishes to put it. If that is the case then we really submit that all parties should be informed of that and the contents of that document or that submission or that argument so that it can be considered and if necessary some response formulated.

We do so for a couple of reasons. Firstly, parties are entitled to know, and that's just the parties, of course, but secondly, Your Worship referred this morning, quite properly in our submission, to the maintaining the integrity of the proceedings. We would submit that the integrity of the proceedings really demands that such matters be done in open Court and so we would ask Your Worship to indicate whether

that's so so that we might consider our position further.

MR HARRISON: Your Worship, if I may, I join in that application and seek similar information for similar reasons. I go one step further and submit that it's very important in proceedings such as this that justice must not only be done, but must be seen to be done, and in my submission the events of the past few days could well be interpreted - have to my knowledge by some people - as infringing upon that maxim.

We had a rather extraordinary set of circumstances yesterday where counsel wasn't present at the commencement of proceedings, where there had been reports in the press - again no-one is more cynical about the press than I am, but nonetheless there are reports in the press that counsel assisting was seeking clarification of a ruling made here on Monday. Now what concerns the people who I represent, those responsible for the management of the ACSA, is that it seems there has been quite a substantial turnabout in terms of what you ruled on Monday which was a ruling which was very much welcomed by those people after the treatment Michael Squires received here. There has been a complete turn around of the position as expressed this morning and the inference from that - this may not be the case, but the inference from that is that there were approaches made outside of these proceedings to which the representatives of the parties were not a party, if I can put it that way, or not present for, and I too for those reasons would seek clarification of the matters that have been raised by Mr Morrison. Thank you, Your Worship.

WARDEN: Thank you. It doesn't change our program for this afternoon. I will consider the matters overnight and speak to you tomorrow about it and we won't call Mr Mason this afternoon.

MR CLAIR: I don't intend to call Mr Mason this afternoon, Your Worship, but I would wish to be heard briefly on those requests since my learned friends are suggesting that there has been some sort of improper approach on my part outside the Court to this tribunal, and I don't want it to be thought that somehow I've made some further improper approach to the tribunal between now and tomorrow morning if Your Worship intends to respond to this tomorrow morning.

I, first of all, might remind my learned friends that my position in this matter is as counsel assisting the tribunal. I'm instructed by Mr Boiston who in turn is representing the Crown Solicitor who has been engaged, in effect, by the tribunal to provide counsel assisting. That's the first point. The second point is that I will place on the record the fact that while I communicated with Your Worship as warden after the ruling on Monday, I didn't do so in a context where I was seeking any clarification of the ruling. I did so in a context where I pointed out that as a result of the ruling I found that first of all I was not in a position to give effect to the role which I perceived to be the role of counsel assisting, and secondly I felt that there were imputations on my conduct within the ruling which made it, in combination with the first point, inappropriate for me to continue as

counsel assisting.

It was as a result of that letter that I was asked to see the panel and did so - that is Your Worship and the panel - and did so, and it was in fact Your Worship who then indicated that both on your own behalf and at the instigation of members of the panel Your Worship intended to give clarification of certain matters in the ruling.

That clarification has now been given, and it's only in light of that clarification in fact that I am continuing as counsel assisting, Your Worship. It's my submission that beyond what I have placed on the record, there is no necessity for either each of my learned friends who have made submissions to Your Worship or any other party, or anyone else, for that matter, to be given access to the material which I raised as the matters concerning me. They were matters, Your Worship, that operated on me personally in order to move me to make the decision which I did and communicated to Your Worship.

WARDEN: Thank you. Again, I will consider it overnight and advise you in the morning. Could we have an early start, 9 a.m., please?

THE COURT ADJOURNED AT 4.46 P.M. TILL 9 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 02/03/95

..DAY 36

THE COURT RESUMED AT 11.20 A.M.

WARDEN: Thank you, gentlemen. I apologise for the late start, there were some other matters to attend to. In relation to the close of proceedings yesterday afternoon, I will deal with the application of Mr Morrison, as joined by Mr Harrison, in relation to a perceived change of direction for the Inquiry and the tabling of documents.

The clarification of my initial ruling arose because members of the panel felt that the ruling, as initially delivered, may be seen by others before the Inquiry as a change of direction and so be misinterpreted. Subsequent communication from Mr Clair alerted me to the fact that Mr Clair appeared to have made such an interpretation. I requested the presence of Mr Clair and the panel for the purpose of clarification of that interpretation. As a result of all these processes, I clarified the ruling independently of Mr Clair, and that clarification has been given.

The initial ruling and the subsequent clarification should be read as a whole. There is no change of direction for the Inquiry. Nature, cause and recommendations remain our only objective. Counsel assisting has acted in a proper manner on procedural and legal matters at all times.

I do not consider it appropriate that correspondence between counsel assisting and myself be tabled before the Inquiry. The application for the tabling of documents is, therefore, refused.

MR MORRISON: Your Worship, if I may have the indulgence of the Inquiry for a short time, I wish to place on the record - if I can say by way of clarification without offending anyone - some matters to explain why it was that I raised that issue yesterday. They are these: in our submission, it's vital to the integrity of this Inquiry and the public acceptance of its findings and the course of other inquiries that there be complete confidence in the process. Any suggestion that a ruling upon the scope and the conduct of the Inquiry and the relevance of evidence to be heard has been affected by submissions to which all represented parties are not privy undermines that confidence. That's even more so when the parties are not told that such submissions, however described, have been made. Furthermore, any suggestion that the proceedings are more in the nature of an inquisition or Commission of Inquiry which seeks to allocate guilt or blame rather than an inquiry into the nature and cause of this accident undermines the confidence in the Inquiry and public confidence in the Inquiry. Any suggestion that the distinct and separate functions of the Warden and of the panel of experts assisting the Warden - any suggestion that that has become blurred further undermines confidence in the Inquiry.

Our request made yesterday that we be provided with details of any communication or submission which prompted the clarification of Your Worship's ruling on Monday was made by

us in order to ensure that the record was complete, and Your Worship will recall that I placed on the record yesterday that it was not prompted by any request or submission on our side of the record, we knew of none.

The principles of natural justice which Your Worship identified in your ruling on Monday really demand that no ruling such as that made by Your Worship yesterday be affected or appear to have been affected by the absence of an opportunity for all interested parties to be informed, first, of any proposal to consider such a revision and, secondly, to be given an opportunity to be heard in open Court.

There is a distinction, we would submit, between ascertaining the nature and cause of this accident and embarking on a prosecution of individuals and the adoption of intimidatory tactics. That distinction was at the heart of the objection that we made last Friday. We have objected before to intimidatory and unfair styles of a deal of the questioning in the Inquiry and we will continue to do that where we consider that there is intimidatory or unfair tactics being adopted. Such tactics would not be tolerated in a prosecution-style Court and has even less place in an Inquiry of this nature.

As we apprehend it, Your Worship has upheld the distinction, and those for whom we act are proceeding in this Inquiry on the basis that that ruling has been made and will have application for the rest of the Inquiry.

The governing legislation - that is to say, the Coal Mining Act - in section 74 makes it clear that the panel is appointed - and when I say "the panel", I am here referring to the four experts appointed to assist Your Worship - that the panel is appointed to provide expert advice in relation to the nature and cause of the accident. It is no part of the panel's function - here, again, I make it clear that I am talking about the four experts - it is no part of the panel's function to advise Your Worship on appropriate rulings as to evidence or to the scope of evidence to be adduced, they being peculiarly matters of law left to Your Worship, Your Worship being the person particularly qualified to deal with those aspects of the proceedings.

Mr Clair's submission yesterday indicated, at least on one view, that you had clarified your ruling on our objection at the instigation of the panel, or at least partly at the instigation of the panel.

Without investigating further whether that's so or not, we would respectfully submit that the charter of the panel does not extend that far under legislation. The panel are concerned with the facts as admitted into evidence by you and you determine, without their advice, what is admissible and what is the scope of the evidence. The difficulty that one faces in that blurring or potential blurring of functions is compounded, in our submission, by the fact that Your Worship continues to sit as Coroner conducting a Coronial Inquest and under that legislation are required to sit alone and without the benefit of experts such as you have in a Warden's Inquiry. Consequently, the evidence in one Inquiry, being evidence in the other - the Inquest - and the rulings in the Inquiry governing the evidence in the Inquest, it is all the more important to keep the distinction to which I have referred. As a Coroner, you would not, within the scope of that legislation, have any source of reference to experts to advise you or to instigate or to suggest changes to evidentiary matters, nor would it be proper to do so. Those are the matters that I wish to raise with Your Worship.

WARDEN: Thank you.

MR CLAIR: Your Worship, I don't want to dwell at length on these matters, because we have got an Inquiry to be carried out here and I want to get on with it. It should be placed on the record that counsel for all parties have met with Your Worship and the panel this morning for some considerable time and debated the matters of the last few days. It should also be placed on the record that in order to allay concerns expressed in that meeting out of Court about the events of the last few days, a copy of my letter, whereby I indicated that I considered it inappropriate to continue as counsel assisting, has been made available to the parties for the inspection of their legal representatives and the parties themselves, but on the basis that it not be distributed further.

I should also make the observation, in light of what Mr Morrison has said, that I reject the notion or suggestion that I have adopted what might be called a "prosecution-style approach". I would submit that any reading of the record would indicate that on occasions when it has been necessary to be robust, I have been, and will indicate for the most part that witnesses have not been the subject of robust questioning from me, in fact, and it has only been on odd occasions that that sort of questioning has been necessary. I would submit that that doesn't indicate that I'm adopting some sort of prosecutorial approach. These kinds of suggestions seem to arise out of perceived - or perceptions about my past history, rather than about what has actually occurred in this Court.

Your Worship, just on one other point, which arises out of what I placed before the Inquiry yesterday afternoon, whereby I did say that Your Worship indicated to me that you intended to clarify the terms of your initial ruling and that that was partly as a result of - and I'm not too sure what words I used - some instigation from the members of the panel. Can I say this: what I intended to convey and what does accurately represent the situation is that Your Worship indicated to me

that the interpretation of your initial ruling, which I was acting on, at least, when I wrote the letter to Your Worship, was, in fact, an incorrect interpretation, and I think Your Worship indicated at the time that members of the panel had indicated to you that they could see that the interpretation that I had taken was one that was open on what Your Worship had said, and that it was in light of that that Your Worship had decided to give some clarification to the matters dealt with in the ruling. I don't wish to say anything further on this point, Your Worship.

WARDEN: Thank you. I think we have said enough on it. I will indicate to Mr Morrison that the members of the panel are selected for their expertise in the mining industry, and I would in no way tell them how to mine coal, and they in no way told me how to rule on law.

MR MORRISON: I would expect no less and I fully accept that.

WARDEN: Thank you.

MR CLAIR: May it please Your Worship, I call George Arthur Mason.

GEORGE ARTHUR MASON, SWORN AND EXAMINED:

MR CLAIR: Your full name is George Arthur Mason; is that correct?-- That is correct.

Mr Mason, you're the Undermanager-in-Charge at BHP Australia Coal Moura No 2 Mine; is that so?-- I am, or at least I was at the time of the incident.

What position do you hold now?-- I have not had my position changed that I am aware of, but I have no mine to be in charge of, sir.

Yes, I see. But you are still in that position; is that so?-- I believe.

That's the description-----?-- That's how I am recognised at the moment, yes.

You started in the coal mining industry on 22 March 1971?-- That is correct.

You were then a cadet manager at the Moura operations, serving at both the open cut and the underground?-- That is correct.

You completed a three year cadetship and then served 12 months as a technical assistant followed by about 12 months as an underground miner at Moura No 1 mine?-- Those durations are roughly correct.

You were appointed as a shift undermanager in September 1976

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at Moura No 1?-- I was.

And you subsequently served periods as a shift undermanager at No 1, No 2 and No 4 mines?-- I did.

You were, in fact, at Moura No 4 at the time of the explosion in 1986?-- That is correct. I was the shift undermanager on the day of the explosion.

You transferred back to No 2 Mine in November 1986?-- Approximately November, yes.

And you were appointed as the undermanager in charge at No 2 in September 1988 and you have been in that position since then?-- I believe on review of my history it was October 1988.

Okay. You hold certain qualifications, being a Certificate in Mining (Coal) from the Queensland Technical Correspondence School?-- I do.

A Deputy's Certificate, an Open Cut Examiner's Certificate and a Second Class mine Manager's Certificate (Qld)?-- All those certificates apply to Queensland, yes.

You will recall that as a result of the Quality Assurance operation at Moura mine there was a set of position descriptions put together. Could the witness see Exhibit 12, please, Your Worship? While that's being obtained, do you recall having a look at such a document?-- I do.

Look to page 5, I think it is, of that document there that's just been placed in front of you. Yours may be in a different order to mine, but it could be thereabouts?-- I have the document.

Page 5. It is the position description for Undermanager-in-Charge, dated 23 August 1993?-- That's correct.

And if you look over two pages, your signature appears, acknowledging that you had read and understood the contents of your position description?-- That is correct.

Placed there on 21/12/93; is that right?-- Yes. If I might be of some assistance to you? In the construction of that document, the information was compiled by our mining engineer, Jacques Abrahamse. The information that he used in the compilation was derived from my performance review sheet, and I think that that performance review sheet sets out more accurately the accountabilities for which I was responsible.

Was there some change in those in the way that they were interpreted through into this document of position description?-- I believe in the position description document it just merely identifies those accountabilities. On a performance rating form, it actually prioritises those responsibilities or accountabilities.

Perhaps if we can look at Exhibit 12 and I'll just draw your attention to certain of the responsibilities, and then if there is some comment you want to make about those in light of the other document that you have there, you can make that comment. Do you understand what I'm saying?-- I can do that, or I can read from the performance review sheet, if you like.

I think at this stage I would prefer to be looking at the document in front of me and you can comment about priorities or any qualification by reference to your performance review sheet. The first responsibility that's noted on your position description is "to coordinate the shift undermanagers to meet the raw production tonnage and outbye requirements for the underground"?-- Yes, that is also included on my performance review sheet. It is listed as priority B.

Priority A, perhaps if you can identify that?-- It might be best if I read from the performance review chart. You can make the relevant association with that document. Priority A - and the only priority A accountability that I had was to maintain a safe working environment by ensuring the rules of the CMA and company safety policies were adhered to and ensure accidents are investigated and corrective actions implemented.

I take it you don't have any copies of that document?-- I am sure that could be made available.

I am sure they will be in due course. There are further items on your review sheet - performance review sheet?-- Yes, there are.

Can we refer to those as we go through? Looking back to your position description, the second one is a reference to assisting the underground superintendent in certain ways; is that so?-- That's correct.

The third one is described as being "a responsibility to develop the supervisory skills of the undermanagers so as to operate each shift at the underground in a safe, productive and efficient manner"; do you see that?-- That's correct.

Does that relate to one of the items on the performance review sheet?-- It does. On the performance review sheet it says "to conduct regular reviews with undermanagers to ensure the mine is performing efficiently". The rating for that particular accountability is rated as C.

The next on your list of responsibilities relates to regularly inspecting the working sections?-- It does.

"To ensure a safe underground mining environment is being maintained in accordance with the Queensland Mining Act"?-- That's correct.

The next of your responsibilities - or perhaps I should ask you: does that reflect an item on your review sheet - performance review?-- I think that is contained in item 1.

The fifth responsibility on your position description: "to

ensure subordinates are supported by supplying enough information to enable them to carry out their role in a safe, efficient manner"-- Once again, I believe that is dealt with in item 1 of my performance review.

The next, number 6, is: "to ensure that mine services are carried out in a safe, efficient and timely manner"-- Again, I see that as part of item 1.

And then 7 and 8 are in more general terms; is that right - "to maintain a harmonious work environment by dealing with people", and, finally, "to work in and promotion of continuous improvement"-- The latter of those items was not contained on my performance review chart because it had not been instituted at the time that that review chart was constructed.

Let me ask you this, then: in the performance of your duties, did you do so with an eye to these responsibilities that are listed on the position description?-- I believe I did.

And in your own mind, then, whether as a result of what's in the position description or the items in your performance review, did you have any notion of what was top priority?-- Yes, sir.

What was that?-- The safe, effective and efficient operation of the underground mine.

Okay?-- That was in no way not uppermost in my mind. It was regularly reinforced with me by other members of management, even up to the operations manager of BHP Australia Coal.

In asking you about priorities I'm really wanting to raise with you the weight, if I can put it that way, the weight that was assumed in managing the operations in the important position that you were in by the notion of keeping production up. Do you know what I mean? Was there a consciousness of making sure that production was kept up, and if you can make some comment on it, to what extent did that consciousness, if it existed, affect your operations in other ways?-- There was, in my mind, a large degree of consciousness of the need to maintain production, to strive to attain production goals. I saw myself as having a responsibility for that mine to ensure it worked in a safe, effective and efficient manner and the welfare of the people and the mine was something I took upon myself. I saw that I needed to run a safe mine so that people were not injured, I also needed to run an efficient and effective mine to ensure that it stayed as an operating mine where people could work.

Let me ask you this: in terms of your own performance, but not restricted to that, in terms of the way the whole place worked - that is, the way you performed, the way other people performed and your interactions with them - what would be your view as to whether safety sometimes suffered as a result of a desire to keep up production? Have you got any view on that?-- Yes, sir.

Can you tell the Inquiry?-- I would never - I don't know the right word. We would never - not contradict - safety always came as a first priority, sir.

I want to ask you something about training, and I will go right the heart of the matter first up, and you've been in Court - in the Inquiry for most of the time that evidence has been given?-- Most of the time I've been here.

Training in respect of spontaneous combustion?-- Yes, sir.

First of all, your level of knowledge as at the time of the events in August last year, can you define that? Is that easy?-- It might be easier if you ask me specific questions, sir.

Okay. According to the level of knowledge you had in August last year at the time of the explosion, what signs would you be looking for in order to determine whether or not there was a spontaneous combustion problem in the panel?-- I would take any unusual smell, especially as described a number of times in these proceedings as a tar smell, to indicate the onset of a spontaneous event. I would also look for haze or sweating and I would also look for a sudden jump in the parts per million of carbon monoxide being monitored.

CO make?-- I had some knowledge of CO make. I used CO make looking at the trend of a graph to discern - to assist me to discern the state of conditions.

What about the level of CO make?-- The level of CO make, sir?

Yes, as opposed to the trend?-- I had no knowledge or no

perception of any particular value of CO make indicating anything - the governing parameters that have been spoken about in this Inquiry, the 10 and 20 ppm, were not - I did not have them in my knowledge.

At all?-- At all.

This brings me back to the first question. What training had you had in terms of the detection of spontaneous combustion?-- Through the course of my cadetship I would have been - I would have encountered the subject of spontaneous combustion.

This was back in 1971?-- Yes, sir.

Through to '74?-- Yes. Throughout the experiences of my career in the coal mining industry I was subject to various - I guess my experience and my learning from people within the industry. With regard to formal training, in the very early 1980s I was in receipt of the red and blue books that have been mentioned in this Inquiry. Some time, I believe it was early 1987 - late - it was in 1987 or early '88, I believe, I have no accurate recollection of the time, but I did attend a workshop on spontaneous combustion run by the then Department of Resource Industries, I believe. That was at the Bardon Professional Centre in Brisbane. I believe it was of two or three days duration, I'm not sure.

'87 or '88?-- Yes, it was in that area, I believe.

Anybody else from Moura Mine go?-- There were a number of people attended. I recall Deputy Rod Stafford, Deputy Ken Guest, Deputy Bob Newton and I have no other recollection of -----

Anybody else from management?-- Not that I can recall, no.

You were the only person from management there?-- I believe at some stage the then operations manager of Moura Mine did attend, Graham Smith.

That's '87/'88; who conducted that? I know you mentioned the department, but were there people there from SIMTARS or do you know where the lecturers were from?-- No, I don't have a recollection.

Any material that you were given on that occasion?-- The main material that I collected at that was brochures from - there were quite a number of sales representatives there with various models of monitoring equipment. I don't recall any direct literature that was received as a result of the symposium.

Did you learn anything new at that symposium? We will go item by item. Before that you no doubt had knowledge of a smell and a haze and level of CO in parts per million being relevant to detecting spon com?-- That's correct.

Prior to that did you have any knowledge at all of the CO make or significance of CO make?-- No, I did not.

At that symposium was there a discussion about the significance of CO make?-- I don't believe so.

Tell me, had you ever heard mention of the Graham's Ratio?-- When I came across from No 4 Mine to No 2 Mine in the end of '87 was, I think, when I first took notice of the Graham's Ratio in as much as it was on the computer screen for the monitoring system. I'm not sure of how I gained the information about Graham's Ratio, whether it was verbal or whether I looked up some literature, but I looked up to find out - I made an endeavour to find out what Graham's Ratio was.

What did you find out?-- I don't recall at this time. It was an indicator of - well, I know now what it is. I don't know that I had that - I maintained that knowledge in my head.

When you looked at the computer screen and you looked at the Graham's Ratio, what did you look for going back to when you first learned about -----?-- I didn't really look for anything, I just wanted to find out what it was. It never seemed to change from day-to-day.

Did you know what levels of Graham's Ratio might be significant?-- I did not. I don't know that I have never had that knowledge, but I do know it was not - those levels that I've been made aware of in this Inquiry were new to me.

Did you know for what purpose the Graham's Ratio was shown on the Unor screen, the computer screen? Did you know for what purpose it was there, to indicate what sort of thing?-- I find that difficult to answer.

Was it relevant to the existence of spontaneous combustion or relevant to some other aspect?-- Reviewing the information I know now, I believe I would have understood that it was relevant for spontaneous combustion at the time that I made that inquiry.

But you didn't know what to look for; is that what you are saying? You didn't know what levels to look for?-- Well, I didn't know what various levels meant about Graham's Ratio until I was - until I've sat in here.

Knowing the Graham's Ratio was something that could be an indicator of the existence of spontaneous combustion did you take any steps at any time to find out what were significant levels, what you should be looking for when you looked at the screen?-- I don't know - at the time that I first made inquiry to find out what Graham's Ratio was I believe I would have, but it never carried any weight with me.

You were talking about that symposium in '87/'88. Any training after that in relation to spontaneous combustion?-- In terms of attending a formal training session, no, I have not attended anything. The only thing - the manager at the time, Mr Reed, brought to my attention at some stage the CO make. In review I know it was after he attended a seminar or symposium.

What did he tell you about it?-- He believed it was a good tool for monitoring the progress of sections in extraction with regard to the advent of any spontaneous combustion.

When he told you that it was a good tool did he tell you in which way the tool could be used?-- He believed it was a more accurate measure of monitoring the trend of production of carbon monoxide.

Did he say what it was about it that would indicate that there was some spontaneous combustion problem? He told you it was a good tool to monitor spontaneous combustion?-- Yes, sir.

Because it told you in more accurate terms how much CO was being made in a panel?-- Yes.

Did he go on and say, "Once it gets to such and such a level you've really got to watch things closely and then when it gets to such and such a level you've really got a bit of a problem on your hands." Did he say anything like that?-- I don't recall anything like that. He did speak about the ability to chart the trends of carbon monoxide production.

Well, he has told us that in his view if you've got an increase in the CO make over a period of time then it needs to be monitored closely. That's any increase over a period of time, then the panel would need to be monitored closely because that could be an indicator of spontaneous combustion. Now, he has told us that. Did he tell you that?-- Yeah, I think I said the same thing as you. You are able to plot the trend - by regularly plotting the levels of carbon monoxide make you are able to look at a graphical representation of that and -----

But you see I'm not talking about plotting the trend, I'm talking about the significance of the trend. What I'm asking you -----?-- Right, yes.

Did he tell you anything to the effect that if you've got an increase in the CO make over a period of time then that means that the panel warrants close monitoring to see whether there is a problem with spontaneous combustion?-- I believe I understood from Mr Reed that the thing to look for was a rapid increase in the make.

A rapid increase in the make?-- Yes.

You came over to No 2 Mine in September 1988, I think you told us?-- No, I went to No 2 Mine in late '87.

Late '87?-- It was September/October of '88 that I was promoted to my present -----

Undermanager-in-charge?-- Yes.

After you arrived there were there any occasions when there was concern about the possible existence of spontaneous combustion in any of the panels there?-- Yes.

And when was that?-- The sealing of the - what was called the 5 North panel, I was not - I was not present at work at the time leading up to the events, but Mr Reed conveyed to me that he had chosen to seal the panel off due to the carbon monoxide make along with a number of other conditions that existed in the panel, or in particular he was - we were unable to get to the back of the panel to make thorough inspections due to the nature of the roof in that area. He decided to seal the panel off as a precautionary measure.

Did you have any discussion with him in that context about the level of CO make that had been found in the panel?-- No, I did not.

You are talking about -----?-- I only became aware of the levels that were recorded at that point in time after the events of 1994.

Did you ever have any discussion with Mr Reed, or anybody else for that matter, about the sealing of 5 North back in 1986?-- I had no direct discussion, no, but I did know of the occurrence of those events.

Were you made aware of any charting of the CO make done subsequently, but examining the CO make levels leading up to the sealing of 5 North?-- No, I was not. Sorry, I was not prior to the explosion at the mine in 1994.

Mr Reed left Moura No 2 in October 1992, is that right, or thereabouts?-- I believe - thereabouts, yes.

Was there any occasion prior to his leaving when he instructed you, or yourself together with other people, in terms of the use of CO make in conjunction with detecting spontaneous combustion?-- Could you repeat that for me, please?

Was there any occasion prior to his leaving in October '92 when he instructed you, or you and others, in the significance of the CO make production in detecting spontaneous combustion?-- Not for myself, sir. I don't know about others. I'm not aware of any others.

Now, let me ask you this: as part of your responsibilities under your position description there is a reference to developing the supervisory skills of the undermanager so as to operate each shift. Was there anything specifically that you did which was designed to ensure that undermanagers did enhance their supervisory skills? Any specific action that you took to give effect to this here?-- I believe by my own conduct that I set an example for them to carry out their duties. I have had various meetings with undermanagers and spoke to them about things that I expected of them. I spoke to them also on an individual basis from time to time.

I mean, I appreciate that these things are written down as separate items, but I take it from your answer that really you went about your business and you tried to do it in such a way as to give effect to all of these responsibilities on a day-to-day basis?-- That's correct.

But no doubt in giving effect to them in that way, there would be specific things that you would do. For instance, if you needed to develop supervisory skills of undermanagers, that might be something that, on the one hand, could result just from your day-to-day activities, but there might be other times when you might say, "Well, gee, these fellows don't seem" - for example - "don't seem to be communicating with one another as much as they should. Let's get them together and have a talk with them, or let's set up systems to ensure that they are communicating properly." Do you recall any point in time when that sort of thing occurred?-- I believe the undermanagers communicated quite well.

Well, there were specific responsibilities about communication, if we can look at that, that were laid down at one point a bit later. I will just ask if the witness can look at Exhibit 188, please, Your Worship. Now, that's an

underground procedures and work instructions document, and it appears to have been issued on 30 October 1993. I want you to go to the last page of those four pages there and deal with this question of communication. Using this as a starting point - you will see that that page has the issue date up the top as 30 October '93?-- That's correct.

Using this as a starting point, 5.5, "End of Shift", "Approximately 15 minutes to 30 minutes prior to the start of the next shift the section deputy shall communicate by telephone with the undermanager and update the following information.", and several things are set out there. Included in that are, "Mining conditions, roof, ribs, methane levels, any other relevant information." It goes on: "The offgoing undermanager shall then communicate with the oncoming undermanager as in 5.3 of this procedure." Now, I take it that you would have become aware of that work instruction?-- I believe I would have been aware of it, yes.

Do you have a memory of becoming aware of it, or do you just state that as a belief?-- I state that as a belief.

You have no specific memory?-- No, I do not.

Well -----?-- It was in accordance with the way the mine was run, that's why I have that belief.

Does that reflect the way things were done anyway, or supposed to be done?-- I believe the majority of deputies did make telephone contact with the undermanager toward the end of the shift.

And what about the offgoing undermanager communicating with the oncoming undermanager? If you go back to the previous page you will see 5.3, "Start of Shift"?-- Do you need me to answer that question first, sir?

Yes, okay, if you want to answer it before going to 5.3, by all means do so?-- To the best of my knowledge, that communication always took place. Obviously there were situations at times when that couldn't happen, for example, the end of - production was carried out on a five day basis with sometimes production occurring on the weekends on an overtime basis. At the end of the Friday afternoon shift production ceased, and there is normally not an undermanager at work on the night shift subsequent to the Friday afternoon shift. If the undermanager who was responsible for the weekend was not the same undermanager who had worked the afternoon shift, the Friday afternoon shift, then there was obviously not an opportunity for communications between the offgoing undermanager and the oncoming undermanager.

But you say, to your knowledge, that's the only area where there wasn't this effective communication between offgoing undermanagers and oncoming undermanagers?-- No, that's not right. That same thing would occur at the start of the week with regard to the Monday night shift which began at 10.15 on Sundays, 10.15 p.m. If the undermanager who was in charge of that Monday night shift was not the same undermanager who had

been in charge of the weekend, then once again there would be no oral communications.

Broken communications there. Well, putting aside those two instances each week that you have given, you say that there was this effective communication between undermanagers between the end of shift and start of the next?-- Whenever I was at work I always - I normally brought the day shift undermanager to work with me in the mornings, or at least I was there at the time that the changeover took place, so I saw on many, many occasions that that occurred. In the afternoon shift I also evidenced on many, many occasions there was oral communications between the shift undermanagers.

If you have a look at 5.3, you will see - I will just take you very quickly to the relevant aspects - you will see that the system set-up is that prior to the start of each shift the oncoming undermanager shall communicate with the offgoing undermanager to obtain certain information, including conditions prevailing in the mining sections, and then if you go down two paragraphs you will see the undermanager shall then communicate with the oncoming deputies. Areas to be discussed include, amongst others, other relevant information gathered from undermanagers' discussions, conditions, etc, no doubt a reference back to conditions prevailing in the mining sections. You see that there?-- I do.

Did that reflect the system that you thought was in place?-- Yes, it did.

At the time this was issued, if in fact this came to your attention?-- Well, it does reflect the situation.

Now, you say that's the system that was in place at least as a system. Did you have some way of checking yourself as the undermanager-in-charge - some way of checking that undermanagers did communicate all relevant information, for instance, conditions existing in panels? Did you have any way of checking that these important communications took place?-- As I said to you just previously, sir, I was quite often in attendance during those changeover periods.

I see. In any event, you would agree that it's a most important aspect of the running of the mine - given the responsibilities of undermanagers it is a most important aspect that undermanagers, first of all, pass on relevant information or get relevant information from the deputy that's been on shift, pass it onto the undermanager that's coming on shift and, in turn, that the undermanager coming on shift passes on information to the miners that are coming on, or the deputies and the miners that are coming onto that shift; would you agree with that?-- I do.

Now, you have no specific memory of receiving Exhibit 188 or a copy of it?-- No, I don't have a specific memory of it.

Whether or not you did receive that, was there ever any training for you as undermanager-in-charge, or for you as undermanager-in-charge and the other undermanagers, in terms

of training people in communication, what sort of things were to go into various reports, what sort of things were to be discussed orally between undermanagers and undermanagers and deputies, anything of that kind?-- The BHP Australia Coal organisation does conduct a very large amount of training for staff people. It's coordinated through the Brisbane office. There are a large number of topics that are covered in those training modules that are available. Communications is one of them, report writing is another, and man management. A large number of modules are available.

Did you attend any of those?-- I have.

When was that?-- Throughout the course of my career, sir.

What was the one most recently before August '94?-- One moment, please.

Yes, certainly?-- The most recent course I attended was Job Safety Analysis Procedure Training.

When was that?-- I don't have a date here, but I believe it was sometime in 1993.

Well, that doesn't seem to relate specifically to teaching you how to ensure complete communications, or am I wrong there, in the connection that I have just asked you about?-- Sir, you asked me the most recent course I attended.

I appreciate that. I am just looking to see what the nature of that was, and against the background of my earlier question, you see, as to what training you had received or whether you had received training on this question of communications?-- I don't recall any specific communications instruction that I personally had attended.

There was, of course, the systems for the deputies' reports to be done, and we have heard that they were to be submitted by the deputies to the undermanager on that particular shift; is that right?-- That is right.

And did one come through to you as undermanager-in-charge when you were there as part of the system?-- Did one -----

Did a deputy's report come through to you as undermanager-in-charge as part of the system?-- There is only one deputy's report - for each section, sorry.

There is -----?-- The deputy - through the week during production, because of the hot seat change system that we employed at Moura, the deputy - offgoing deputy would bring his report to the surface with him, which left a copy of the report in the report book in the production section. The original copy which was brought to the surface was then given to the shift undermanager. Sometimes that would be the shift undermanager in charge of that shift, sometimes it would be the oncoming shift undermanager.

Was there any practice of the deputy's report then being

brought to your attention as undermanager-in-charge?-- The procedure was that the report was to be identified by both undermanagers, both the shift undermanager that had been in charge of the shift and the oncoming undermanager. It was then posted to noticeboard, so it was displayed for all and sundry to have availability to.

Okay. So, the answer is -----?-- At a later -----

Sorry, go on?-- At a later stage I would collect those deputies' reports and file them in my office.

How long would they stay on the board before you collected them?-- That varied from time to time. My best practice was to collect them on a daily basis. I would leave the most recent of the reports for each section on the board and take the previous three reports.

Would you ordinarily have read those prior to going to collect them?-- My perusal of reports was done in a number of ways. Quite often I would peruse them whilst I was in the undermanager's office during that change of shift time. Other times I would walk around and peruse those reports whilst they were on the noticeboard, especially the ones on the back shifts from the afternoon shift. At other times I would peruse the reports as I had them for filing in my office.

Well, it seems as a result of that you would have then relatively recent information as to what was contained in the deputies' reports. You would see them basically within - sometimes within a shift and sometimes, in the case of some of them, certainly within a day?-- Yes.

Now, there is also the system for shift reports to be done. Did they come to you? They were done by the undermanager on shift; is that right?-- The shift undermanager completed the report for the shift that he had worked. I would then peruse the shift reports.

Invariably?-- Not invariably, no.

Well -----?-- More often than not.

More often than not. What sort of information did you expect to receive from the shift reports?-- Any information that was relevant to the operation of the mine.

Any unusual aspects of conditions in the panel, would you have expected that to be in the shift reports?-- I would.

If, for instance, there had been a report of a benzene smell or tarry smell or an unusual smell of some kind, would you expect that to be in the shift reports?-- I would expect that to be in the shift report. I would also expect it to be prominent or - yes, I would have expected to have been made aware of that - some concerted effort to make myself aware of that.

I suppose you would expect it to be reported to you orally,

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quite in addition to something being put in the shift report, am I right in saying that, if there was an unusual smell in a panel?-- That's a fair comment.

But, of course, if you weren't there at the time of a particular shift, then you might well be dependent on the shift report to find out that kind of information; is that right?-- Yes.

We have heard evidence, at least, that indicates these things might not have been put into shift reports; for instance, the report of a tarry smell in a panel might not have been put into shift reports. In that connection, did you ever yourself have regard to the format of the shift report, in terms of whether it encouraged that kind of information to be put in?-- I did.

And what was your view on that? I mean, you can have a look at a shift report, if you like. There is one here that you have filled out, just so you have got an example in front of you. It is part of document number 48, Your Worship. It is the underground shift report for Friday, 5 August last year. The format of the report doesn't seem to invite the entry of items relating to conditions in a panel; would you agree with that?-- I might refer you to a number of other reports, if I can, Mr Clair?

Yes, certainly?-- I have in front of me a shift report for the day shift of 30 June 1994 for the 5 South section. It speaks of very poor immediate roof. Shift report for the day shift of the 1st of the 7th, "poor immediate roof conditions" - this is the 5 South section again - "poor immediate roof conditions; intersected gas drainage hole, no problems; water coming from hole".

Are those entries in the "Comments" column; is that right?-- That's correct.

Well, I don't need to have you go through a lot of reports. What you are saying is that there was certainly scope then in the "Comments" column to put in about any items that might indicate something unusual in the panel?-- There was that scope there. I would also make the comment that I believe it could have - if I had to design a shift report book now, I would make - I would make a point of having a particular area set aside for that, rather than just in a "Comments" column.

An area that might perhaps encourage an entry in relation to the smelling of a tarry smell, or report of a slight tarry smell or a benzene smell, that sort of thing?-- Yes.

For instance, conditions indicating any danger in the panel, something like that? Is that what you are saying?-- Yes.

Now, I know you referred to items about roof conditions and the stage work was at in panels, and the perusal of quite a number of shift reports would indicate that those sorts of things did go in. I am trying to sort out-----?-- Establish what the system was, yes.

Was that your own view - that that was a fairly standard kind of thing that might go into the shift reports, but nevertheless there was a dependence on the oral reports of other kinds of things? For instance, it might be standard to put in about roof conditions and then, of course, there is provision there for how much was produced on a shift and all the rest. But, if there was something, as I have mentioned before, say like a report of a smell of some kind or problems

with ventilation, recirculating in one of the roadways in a panel, that the system really depended upon oral communication; is that correct, or not?-- My personal belief is that a report should be a reflection of the conduct of the events of a shift.

And that's your belief. As far as the system went, do you think that the system that was in place reflected that belief?-- I believe so.

Okay?-- As well as the underground shift report, there was a number of other opportunities available for the reporting of things.

In writing?-- That's correct.

What were those opportunities?-- We maintained in our organisation an Incident Report Form. That was for the use or the recording and investigation of any accident or incident or potential. There was also an Accident Register maintained in our first-aid room for the reporting of injuries to people. There was also a specific Cable Damage Report that was used to report and investigate cable damage incidents, and there was also a specific white board that was implemented by our safety training undermanager for notices relevant to him from the shift undermanagers.

Well, you mention a range of reports there. The one you mentioned for reporting accidents and incidents, would you think that the report of a slight tarry smell, for instance, in a panel would qualify as an incident to be reported in that way?-- I do not.

You don't?-- No.

Well, of all those reports you have mentioned, was there one specific one there that might encourage a written report on this kind of event?-- From an undermanager's viewpoint?

Yes?-- Yes, sir. The Shift Record Book, and that brings to mind another reporting process, which was the Mine Record Book itself.

The Mine Record Book?-- Mmm.

And what input did you, as Undermanager-in-Charge, have into the Mine Record Book?-- Very little. Manager of the mine was the one who predominantly made entries into that book.

I want to ask you about your knowledge of the history of the - I'm not too sure what time Your Worship intends to adjourn today.

WARDEN: We have a 3 to 3.15 finish today. I'm quite happy to have a short lunch break. It just depends how far - how much further you want to go-----

MR CLAIR: I am moving on to a new topic. That's the only reason I raise it at this stage. I am quite happy to continue

at this point and adjourn at some later stage.

WARDEN: Go to quarter to 1 and we will resume at 1.30.

MR CLAIR: Thank you. I want to ask you some questions about your knowledge of the history of the development and extraction of 512 panel. First of all, did you as undermanager have any - have an input into the design of the panel?-- I did.

Undermanager-in-Charge, I should say?-- Maybe you had better repeat that question for me. I wasn't concentrating enough.

I said did you, as Undermanager-in-Charge, have any input into the design of the panel?-- I did.

And did you have any concerns at all that arose out of the ultimate design, particularly by way of any concerns about ventilation?-- I did not.

I want to come to some specific notes during the extraction phase of the panel, the first of them being the 11th of June. If the witness could see Exhibit 43, please, Your Worship? Now, this appears to be a day when deputy Ken Guest reported some difficulty with ventilation in 512 with air coming back along the top supply road to 8 cross-cut, and by way of action taken he has noted, "Stopping put up diagonally across 9 cross-cut. CH4 coming back is bleeding into return in some cross-cuts."; see that there?-- I'm afraid the reproduction is very poor quality and I am finding it difficult to discern what is on it.

Perhaps if I read that more slowly. In relation to the first inspection box there, do you see that?-- Yes.

It reads: "Air coming back along top supply road to 8 cross-cut. Okay elsewhere in section."?-- I take your word for it.

And in the "Action Taken" column, it has an entry in there, "Stopping put up diagonally across 9 cross-cut. CH4 coming back is bleeding into return in some cross-cuts."?-- "In some cross-cuts"?

Mmm?-- I take your word for that again.

"In some cross-cuts", S-O-M-E. I know it is hard to distinguish that one. Now, it seems that that report came to you as undermanager. It has "GM" on the bottom there?-- That is my signature, yes.

Do you have any specific recollection of these ventilation difficulties at this point?-- I have a recollection of a conversation with Mr Guest subsequent to this date.

And what was that-----?-- Shortly in the week after. I think it was on the Tuesday.

On the Tuesday, and this was a Saturday day shift?-- Yes, I

believe the 13th was a holiday.

What was that conversation?-- He brought to my attention that he had concerns about the ventilation in the 512 panel and I believe he was referring to the area in the 512 panel, which is the triangle at the upper rear portion of the panel.

What did he say about it?-- What he said was he didn't like the ventilation system that was in there, and I don't believe Mr Guest had been in there very much previous to this occasion. I explained that that was the only system that could be used to ventilate such a panel. I believe I discussed with him also at that time about the possibility of putting a hole in 12 cross-cut stopping. That's a stopping at 12 cross-cut between 1 and 2 roads. The nature of Mr Guest's concerns, I believe, was the flushing of the goaf, and I understood him to be concerned about the stoppings that were at the back of the panel. I found it difficult to comprehend what his problem was, because holes were needed in those stoppings to ensure that the ventilation through the goaf was directed through all areas of the goaf as best possible. So, he seemed to be saying to me he didn't like the idea of the holes in the stoppings, but I pointed out to him that it was necessary, and at that point I believe I also mentioned the possibility to him of putting a hole in another stopping.

The holes were already there in the stoppings. You are talking about the stoppings between 12 and 13 cross-cut?-- That's right, in 2, 3, 4 and 5 headings.

The holes were already there?-- Yes.

They were rolled up brattice windows, or something to that effect; is that right?-- I cannot say for sure. I had never seen the standard of construction of those stoppings.

Well, as far as you knew, the holes were already there in those stoppings. This is what you understood?-- Yes.

Did you have any view about the action that had been taken to alleviate this problem that was mentioned in his report and that he discussed with you?-- I did have some difficulty trying to understand what they had done and why they had done it. The construction of a diagonal stopping at that point, really, was nonsensical to me.

Did you take that up with anybody? What you have just been given is the original carbon copy of most of that document. I thought you'd find it easier to read?-- Thank you.

Did you take that up with anybody? You say you had some difficulty understanding the efficacy of what they had done putting this diagonal stopping across. Was that a matter you raised with anyone or discussed with anyone in connection with the panel?-- I don't recall raising it with anyone.

Now, I don't want to dwell on this for any great length of time, but did this event give you any indication that there may be some difficulties in a more general way about

ventilating the goaf in 512?-- I don't believe so.

For instance, to put another hole in that stopping between 12 and 13, which I think was one of the things you discussed, would lead to different migration paths for the air through the goaf?-- Can I correct you on that point? It was in the stopping at 12 cross-cut between 1 and 2 roads.

I'm sorry, I misdescribed it. In the stopping in - that was adjacent to No 1 road; is that right?-- That's correct.

Leading into cross-cut 12?-- That's correct.

Now, if there was a hole put in that stopping, it would lead to a different migration path for the air inside the goaf; isn't that right?-- It would encourage more air to be directed towards that portion of the goaf.

And in doing so would reduce the amount of air elsewhere in the goaf or-----?-- To some extent it would, yes, or reduce the amount of air flowing through.

Would that concern you - to, in effect, reduce the amount of air flowing generally through the goaf?-- I didn't see that it reduced the amount of air flowing generally through the goaf. What it did, it redistributed the air that was flowing through the goaf. It was taken to ensure that the area at that back upper portion of the goaf was adequately ventilated.

Yes?-- The cross-section of the bottom roadway which entered into the return was fully open.

I think you have already accepted that if you were going to send more air to one part of the goaf, that means less air elsewhere; isn't that right?-- Yes.

What I'm asking you is did that concern you?-- It did not.

Reducing the amount-----?-- It did not.

Now, I want to ask you about the 17th of June, and in this connection: if the witness could see Exhibits 44 and 41, Your Worship? 41, first of all. This is the Friday night shift, 17 June, and it is a deputy's report from Mr Bob Newton, and you will see in respect of his second inspection he has got there, "Trying different methods to try and clear CH4 from top road. Asked undermanager to get more ventilation for panel." Now, can I ask you, first of all, did you become aware of that report and request at any time?-- I believe I did. I know I did, yes.

When was that? Same day?-- Same day. I was at work on the day shift of 17th of the 6th.

And how did you become aware of it? Did you read the report, or did somebody tell you about it?-- I do know I received a phone call from Reece Robertson on the day shift.

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Okay. Can I take you then to Exhibit 44? That's Mr Robertson's report for the day shift, 17 June. He refers to the 10 ppm CO and finding that from cross-cuts 5 to 7 in No 2 heading. Can you see that there?-- Yes, I do.

XN: MR CLAIR

WIT: MASON G A

He mentions about ventilation recirculating in the No 2 heading and he talks about the action that was taken in relation to that, that is that the stoppings were opened across the bottom of the panel, was bagged off across in front of the miner to clear the supply road and that the stoppings were altered as per the undermanager's instructions. Down below he has a note there that the section was down due to the gas readings coming from No 2 heading, asked that the undermanager comes and assists with the problem. Now, the undermanager that day, we were told, was Mr McCamley; is that right?-- Yes.

And you say that you've got a recollection yourself of receiving a call from Mr Robertson during that day shift period?-- I do.

Well, what was discussed with you?-- Reece had had to stop production because he had found a concentration of methane - I can't recall exactly - I believe it was around the crib table or the gate end box area. He stopped production because he had located this feature and wanted assistance in taking action to remedy the situation.

Right, and what did you do?-- I brought it to Mr McCamley's attention, asked him to go down to the section and investigate the problem and do whatever was needed to correct the situation.

What was the next thing you heard?-- It's difficult for me to be specific in what's the next thing I heard. I believe I - the section was down for some period of time and I believe I rang down there to try and find out what was going on, but was unable to receive any informative information.

Who did you talk to down at the section?-- I really don't - I don't have a specific recollection of that occasion. The best that I do recollect is talking to Mr McCamley after he came out of the mine.

But you are not sure whether you saw him or Mr Robertson down below or are you saying you didn't see them but you can't recall who you did see?-- I have not - I was - I did not go down below.

I'm sorry, I thought you said you went down to the -----?-- Rang down below.

You rang down, I'm sorry. When Mr McCamley came and spoke with you, after he came back up, what conversation did you have?-- Mr McCamley did not come and speak with me. I came upon Mr McCamley in the undermanager's office. He had only recently arrived out of the mine.

Who else was there at the time, do you remember?-- I cannot remember. I know there was somebody else in the office, but I cannot remember who it was, sir.

Anyway, what conversation did you have?-- I asked him what the situation was with 512 Panel. He reported to me that the

section was back into production and I don't know whether I've got the right list in my head, the right timing of the occasions, whether it was then that he told me the section was back in production or later on, but that is one of the bits of information he conveyed to me. At that point in time Mark was very pleased with himself. He was - he had been able to detect what he described as two currents of air in No 2 heading. The air had been - the air from the waste had been pushing out along No 2 heading. He had been able to detect by throwing stone dust into the air that there was actually two currents of air, the upper layer travelling outbye along the roof and the lower layer travelling inbye. He also conveyed to me a number of actions that had been taken to overcome this situation.

Do you remember what they were? Just say if you don't?-- What is very difficult for me is to try and recollect what was told to me at that point in time versus what I have read and heard subsequent.

Now, apart from that was there anything else that he said to you?-- No, I think the conversation closed. That's when I became aware that the section was back in production because I asked that specific question. "Is everything okay now?" He said, "Yes.", and when I further asked him about, you know, was it going to be - was it going to stay okay, was it going to be okay for the afternoon shift, he told me, yes, everything was fine.

Now, I just want you to listen to this. Mr McCamley did give some evidence about these events and he said that when he got up to the surface he "...went into George's office...", referring to you, "...and got Albert and George together..." in your office, and he put it this way: "...and took them through the whole sequence, what I had done." That is describing what he had done underground, and he claims that he said to you about - that the stopping that was taken down would have to be left down, and he also claimed that he mentioned the layering and the re-circulation, but he went on to say that he also told you about a very slight tarry smell that he had smelled there. What do you say about that?-- I say that Mr McCamley is a liar.

You've got no recollection of his saying that there was a slight tarry smell or very slight tarry smell I should say?-- He did not say that to me.

You say he did mention the layering and re-circulation problem?-- I don't know it was ever defined as re-circulation but there was two currents of air.

Now, do you recall whether Mr Schaus was there at all?-- I don't recall - I know Mr Schaus was not in my company in the undermanager's office when I spoke with Mark McCamley.

He said at another point in his evidence, seemingly referring to the same conversation, "...spoke with Albert and George about ensuring there was no repetition of the tarry smell in the panel...", and to quote his words, "...that we had to be

fairly careful that this didn't happen again and make sure we monitored it very carefully."?-- I'll believe Mr McCamley if Mr McCamley has got a couple of different events confused. I do recall a later instance when he did speak to Albert and I in my office - or the office that Albert and I share. It was on an occasion in close proximity in time to before he had left Moura Mine. He had been down the pit and discovered that ventilation - the ventilation system had been altered again and was most upset about that situation.

You say that was close to when he left Moura Mine?-- That's correct.

Do you remember just how close? Could you put a date on it at all?-- I cannot be exact, but to the best of my ability I would recall it to be 24 June.

That's your recollection and that's an approximate date or -----?-- Yeah, I know -----

----- or as good as you can recall?-- I know it was only shortly before he left Moura Mine and he left Moura Mine on - the last shift he worked was, I believe, 28 June.

I will come after the break to the events of the 24th of June, but just let me ask you this before we finish at this stage: it seems, if we look at that report of Mr Robertson, Exhibit 44, that on his second inspection he still spoke about the air being slow down No 2 and in the waste, and then in "Action Taken", "The bottom return has been completely bagged off up in front of the prep seals. Stoppings were re-altered as per the undermanager's instructions.", and he says down the bottom, "Cutting sequence 17. An eye must be kept on No 2 heading to ensure that the ventilation doesn't re-circulate." Can I ask you this: did that deputy's report come to your attention?-- It doesn't bear my signature.

I appreciate that?-- I believe that I had read that report prior. I believe I have read that report.

In light of that report and that one of Mr Newton's that we were talking about about asking the undermanager to get more ventilation for the panel, do you remember whether there was any action taken to examine the possibility of increasing the ventilation in the panel first of all?-- No, I don't have a recollection.

Do you remember if there was any particular action taken at that stage to do as Reece Robertson suggested, keep an eye on the No 2 heading to ensure that there wasn't any re-circulation? Was there any particular step taken to ensure that that occurred?-- Well, I believe that the steps that were taken on that shift remedied the problem.

Mr Robertson is writing his report at the end of the shift and talks about an eye must be kept on No 2 heading to ensure that the ventilation doesn't re-circulate. I'm just asking you whether as the undermanager-in-charge you recall whether there were any particular steps taken to ensure that there was some

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close monitoring of what was happening there?-- I don't recall taking any - making any particular - giving anybody any particular direction. I believe that to be incumbent upon the statutory officials who perform their duties in the mine.

MR CLAIR: That's an appropriate time.

WARDEN: Thank you. 1.45, please.

THE COURT ADJOURNED AT 12.52 P.M. UNTIL 1.45 P.M.

THE COURT RESUMED AT 1.50 P.M.

GEORGE ARTHUR MASON, CONTINUING:

MR CLAIR: Mr Mason, I was about to move on to deal with 24 June, and you had already touched on that by way of identifying it as an occasion on which you had some conversation with Mr McCamley, I think you said?-- That's correct.

Feel free to pull that microphone closer so that we can hear you. Now, perhaps the starting point is on 24 June you worked your normal day shift; is that right?-- I did.

Can you recall whether anything particular occurred during that shift in respect of 512 Panel?-- Not without viewing some documents, I need something to refresh my memory.

If the witness could see Exhibit 45, which is Mr Robertson's report? I will take you to that and you can tell the Inquiry whether you recall seeing that document. Mr Robertson worked the afternoon shift on that Friday and, amongst other things, he reports after a second inspection there that there was 7 ppm CO together with his other readings at 7 cross-cut between 1 and 2 headings at the stopping. He went on to say, "Also informed the undermanager that at this point there was a strong benzene-type smell and to keep a check on it." Can I ask you, first of all, did that document come to your attention at any time?-- Yes, it did. This document first came to my attention on the morning of 8 August, Monday, 8 August. Deputy Reece Robertson brought check inspector - I believe it was Bill Allison - up to my office and requested to view the deputies' reports. They took them, went into Jacques Abrahamse's office, went through the deputies' reports, and Reece pointed out this report to Bill Allison. That was the first time I was aware of the contents of this report.

Let me ask you this: in terms of what you have said about the system, can you explain how it is that this document wouldn't come to your attention either on the same day or not long after it came into existence back on 24 June?-- On the afternoon shift of Friday I was only in attendance at work until 4, 5 o'clock in the afternoon. That was my normal procedure. On a Friday sometimes I would get away earlier. I did not work the weekend of 25/26 June. Obviously on Monday, 27 June I had not read this report before filing the same.

You say you wouldn't have read the report on the Monday?-- I say obviously I didn't because I didn't know of the contents of this report.

Well, you obviously, from what you have told us earlier, weren't in the practice of reading right back over the deputies' reports back to the Friday; is that so? You weren't in the practice of reading back over the deputies' reports?-- On occasion I did but not - it was not consistent.

So, as a matter of system you wouldn't have become aware of it, but what about given that it has this note in it, "Also informed the undermanager that at this point there was a strong benzene-type smell and to keep a check on it."? Now, assuming that there was a report like that that came into existence, someone in the system must have become aware of it, and in those circumstances would you expect that it would be mentioned to you?-- I would expect it to have been mentioned to me, yes.

There was no mention to you about this particular report of Reece Robertson's?-- Nobody, including Deputy Reece Robertson, mentioned the contents of this report to me.

Was there any discussion with you by anybody which related to events which occurred in the 512 Panel on Friday, 24 June?-- On the afternoon shift?

On the afternoon shift?-- No, sir.

Now, Mr McCamley was on the day shift that day?-- That's correct.

And in his underground shift report - these are very difficult to read in a copy, so I want to give you the original, but before I pass it over to you I will just read out what's there. In the comments in respect of 512 he has a note, "Stopping (loose) put up across No 4 road prep seal to push air down top supply road and flush goaf." Just have a look at that. You see the part that I have just referred to?-- I do.

And then over on the right he has with an asterisk, "Please do not remove."?-- That's correct.

It seems to relate to that stopping. Did you become aware of that shift report, that one there?-- I would have read this - the shift report, yes.

Would you have read it that day, 24 June, that's the day shift?-- I can't answer for sure on that, no.

Well, you mentioned earlier that you did have some discussion with Mr McCamley on 24 June, which was not long before he finished at No 2?-- That's correct, I did mention that.

I think other evidence indicates that he finished about the 28th or 29th or something like that, at least the following week sometime?-- I believe the last shift he worked was 28 June.

Well, what was the discussion you had with Mr McCamley on the 24th?-- When Mr McCamley came out of the mine he pulled Albert and I aside in my office and he was most upset, and in fact I found it very peculiar, the manner in which he spoke to us. He was most upset that the ventilation arrangements which had been in place had been altered, and I distinctly recall the conversation because of his mannerisms on that day. He spoke as if he were the manager of the mine and telling us

what to do with the mine. He said, "I do not want this to happen again." He was very forceful in the manner in which he conveyed his message.

Did he make any reference on the occasion of that conversation to anything about having smelt a slight tar smell or anything in the previous week?-- He did not.

Did he say why he was upset about the ventilation arrangements being changed?-- No, he didn't qualify his statement, he was just angry that the arrangements that had been put in place to help control the problem that had been experienced earlier had been tampered with.

Well, it seems from the note he has put in his shift report there that there were problems in No 2 heading; is that right?-- I believe so, yes.

And that reflected the difficulties that had been experienced the previous week on the 17th?-- I am sorry, could you say that again, please?

That reflected the same sort of difficulties that had been experienced the previous week with the layering and recirculation?-- A very similar situation, yes.

And there had been a problem also on the 11th, to your knowledge, which was the first report that we looked at this morning?-- I understood on the 11th it was more a problem in the waste itself rather than in 2 heading in the intakes.

You mentioned a problem on the 11th as being a difficulty with that top back triangle, I think you said?-- That's what I understood from conversations with Mr Guest.

Anything coming up No 2 heading would be coming out of that top back triangle, wouldn't it? I mean, if there was something coming - some recirculation of air back up No 2 heading, that's where it's coming from?-- It would be coming from somewhere within the goaf.

Somewhere within the goaf, but doesn't No 2 heading come back up out of that top back triangle of the goaf?-- It does.

Okay?-- Yes.

Did you, in your mind, relate these problems to one another?-- Could we go back to that previous point? Just because No 2 heading comes out of that top back triangle does not necessarily mean that whatever was coming out into No 2 intake road was coming specifically from that area.

Okay. Well, all I need for my purposes is for you to agree with the fairly trite observation that No 2 heading comes back up out of that top back triangle of the goaf?-- I can agree with that.

That's a geographical fact, isn't it?-- It is.

Now, what I want to ask you then is did you relate - in your own mind, did you relate these problems to one another as though there was some continuing ventilation problems in that area?-- No, I did not.

See, what I'm interested in is whether anybody on the management side, given these various reports we have looked at, actually grabbed hold of this problem to see what was going on down there and to try and do something positive about it?-- Well, we did try and do something positive about it. We took steps to increase the velocity in the No 2 road to overcome that problem.

When was that done?-- I think on every occasion that the problem arose.

You can be sure of that?-- To the best of my knowledge, yes.

See, there was a bit of a problem, wasn't there, because take, for instance, when Mr McCamley came and spoke to yourself and Mr Schaus on 24 June that you have told us about?-- Yes.

Was there a plan that you could look at that indicated to you what the ventilation arrangements were in 512 panel at that time? Was there a plan that you could take down and put on a desk in front of you and actually examine to show you what the ventilation arrangements were there?-- There was not a working ventilation plan as such. If you say we had a plan - if I can say that - no, there was not a working ventilation plan that showed the current status of the ventilation at any one of the ventilation appliances at any one particular point in time. What there was was ventilation plans showing what was the proposed ventilation appliance construction for that panel, plus a knowledge of what the situation was.

Did you have a knowledge of exactly what the position was with the various stoppings and apertures in stoppings throughout 512 panel, for instance, on this occasion on 24 June?-- I believed I had a working knowledge of the position of those appliances.

What do you mean by a "working knowledge"?-- Because I understood what was expected to happen in the panel.

Did you know what stoppings were in tact and which ones had apertures in them which were open on that day?-- No, I did not. From what I have heard since, I did not know what the full extent of those apertures.

As undermanager, did you see that as a problem - that you couldn't at any given time, without going down and actually making an inspection of all the various stoppings in the panel - you couldn't at any given time be sure as to just what the ventilation paths were through the panel? My question was did you see that as a problem?-- Not at that time I didn't, no.

Why not, if I can ask you that? It was really very important, wasn't it, to know which way the ventilation was flowing through the panel?-- Yes, it is important to know that.

Can I come back again to 24 June and ask you what happened then on that occasion to address what was presenting as a recurring problem with the ventilation?-- The problems that arose throughout the life of - well, in the time that 512 panel was in extraction - always appeared whenever we moved to the bottom side of the panel. It is when we are working on the bottom side of the panel that these problems seem to evidence themselves.

Well, why was it specifically when you were working on the bottom side? Because the air had to be sent down across the miner?-- Well, that's what I saw as being the cause of the situation - that the air was short-circuiting - if I can use the term "short-circuiting" to mean that air was coming into the panel and then sweeping directly towards the miner and then passing the goaf, rather than travelling throughout all the intake roads.

And was it the case also that the air coming into the panel lost some of the velocity due to the number of the headings and the size of the headings?-- I think it was more the size and the number of headings in the waste which assisted in that. We had experienced similar problems in the mine in two other panels that I'm aware of, that being the 4 South section, which is inbye of 4 South B - that particular area of 4 South. We had experienced similar problems with that panel, both on development and extraction, and that was attributed to that cause - the loss of ventilating pressure because of the size and number of roadways. We also experienced the same problem in the 5 South panel which was on development, and that was inbye of the 510 panel - in that area of 5 South.

What about the fact that the panel was designed with five headings that, in effect, became six, and that there is throughout the panel this difficulty with offset pillars - the compartment pillars and the other larger pillars in between? Did you see that as a problem too?-- I might correct you. The panel was designed with six headings and, in fact, became five in places, rather than a reverse of that.

I was looking in an inbye direction starting with five and then it became six as you move into the panel?-- I take your point.

Okay. And that's the problem that I was pointing out; that where you have five headings, they don't head straight in; they run into compartment pillars or an obstacle. Was that a feature that was regarded as a problem - slowing down the air as it ran into the panel?-- I believe it had some effect on the development process of the section.

On the development process?-- During the development phase of mining, yes.

Of course, the feature remained, at least at the outbye end of the panel, as extraction occurred - that feature remained with pillars - with roadways running into pillars, as it were?-- That's correct, until those larger pillars became part of the

goaf.

Given those design features, and given what appeared to be a recurring problem, from your point of view, as undermanager, did you keep a close eye on this question of how the ventilation was going in 512?-- I'm sorry, can you repeat that or rephrase that for me?

Did you closely monitor what was happening with ventilation in 512, given that there were these design features and given that we had, over a space of three weeks, or, in fact, over a space of two weeks, three incidents with difficulties in the No 2 heading? Did you closely monitor what was happening as undermanager?-- No more than I closely monitored whatever else was happening in the mine.

We have got Reece Robertson on the 17th talking about an eye must be kept on No 2 heading to ensure the ventilation doesn't recirculate. We had the problem back on the 11th that you were personally aware of, and then on the 24th there is this - what you have described as a fairly enthusiastic complaint by McCamley about what was happening with the ventilation, and a note in that book there about, "This stopping must not be removed." So, there was this sequence of events; is that correct?-- That's correct.

Was there anything special done by you, as undermanager, after that to ensure that the ventilation position in 512 was closely monitored, or did things just continue on the same day-to-day basis as they had before?-- Things continued on the same basis.

Now-----?-- And I might - can I say that ventilation is closely monitored at all times by all people in the mine.

Can I turn to what was happening with the calculation of CO make over this period? You were aware, of course, that there was a weekly calculation of CO make done by the ventilation officer?-- I was.

That was Allan Morieson?-- That's correct.

Could the witness see Exhibit 110, please, Your Worship?

While that's being obtained, Mr Mason, are you willing to say that weekly surveys were put up on the wall by way of a graph; is that right - a wall in the undermanagers'-----?-- The CO make graph was posted in a number of locations.

Did you get a copy of that at all yourself?-- On occasions a copy was dropped into my office.

But not as a regular part of the system?-- I would say more regularly than not.

If you didn't get a copy of it, did you make a point of going to have a look at it each week?-- If a copy was not given to me, I would not have made a particular point of going to look at it, but I would have noticed it.

Where would you have noticed it?-- In either of the undermanagers' office or the deputies' cabin.

If you go to the back page of that document that's just been given to you, I just want to take you to how the graph would have appeared early in the piece. That's a graph that runs through to 27 May and you have been given-----?-- The very most rearward graph?

Yes, that's right?-- This one is-----

The last point plotted is 27 May?-- No, sir.

It's not?-- That's correct. We are looking at different graphs.

I'm sorry, that one might be in a different order, but I think, in fact, the correct order is the one that finishes 27 May?-- That's the third from the back in this series of documents.

Well, if you look at the one on the back there, what's the last date on that?-- I will give you the series of dates on it, it goes 28/2, 25/3-----

Just have a look at the last date so I know that we are looking at the same one?-- That's why I prefer to read the series out if we can. 28/2, 25/3, 27/4, 9/5, 13/5, 20/5, 27/5, 3/6.

You see, I think we have established that that's 3 June which is the reason I've taken you to the 27 May one as the earliest. It just appears they are in a different order there, you see. If you look at 27 May, one which you say is the second back page in your -----?-- Third from the back.

27 May, would you have seen that graph?-- I believe I would have seen this graph.

That's the one I'm looking at?-- Yes, I'm looking at the same one.

Did that have any effect on you, that one?-- I don't believe at that point in time, no.

When you looked at these graphs what sorts of things were you looking for?-- The thing that I looked for in a CO make graph was a sustained and steep upward trend. That's what I had been - that's the information that I had received was the thing to look for.

A sustained and steep upward trend?-- Yes.

And who told you to look for that - I'm sorry, when you say what you were looking for, what would that indicate to you, a sustained and steep upward trend?-- That the production of carbon monoxide was rapidly increasing.

I think I better go back to my question about when you looked at the graph. That graph, 27 May, what sort of graph were you expecting to see at that time in respect of CO make in 512?-- I think I expected to see a graph that was similar in nature to all graphs that had been produced during the life of extraction panels. They showed a variation from week to week. I was unable to predict where a point on that graph would be from week to week.

What sort of increase were you expecting? Did you have any expectation as to the nature of the increase, the steepness of the increase? Were you looking for a flat graph? Were you looking for one that might go up slightly from week to week or did you think that at that stage it might go up steeply? Do you understand what I mean?-- I do, yes. I find it difficult to interpret these graphs, and in hindsight, if I might use that term, I think the manner in which the graph was produced, there was no consistency. If I had to use a CO make graph now, if I was starting to plot the make in a panel from this point in time I would have the entirety of the expected duration of the life of the panel plotted on the horizontal axis so that it gives a more representative picture rather than changing the axis points on each week.

So that what you produce each week is another extension on the same scale?-- That's correct.

In any event, if you look at those, and we will attempt to look at them in order, there is the one that finishes 27 May. The one that on the actual document appears to be finishes on 3 May, but we have obviously interpreted it as 3 June, do you

see that?-- I do.

And then the one for 10 June? Can you go to that? I don't know where that will be in yours?-- That's second from the end.

Second from the back, and let me ask you about that. Do you recall whether you saw that graph?-- I have no direct recollection of any - of this particular graph, but I can't say - I can say I presume I would have seen this graph.

Now, that was a graph which showed, certainly if you took it from 27 April through to 10 June, a pretty steep upward trend in the production of carbon monoxide. Would you agree with that?-- I could agree with that.

Well, did that cause you concern when you saw it?-- No, it did not.

It didn't?-- No.

Why wouldn't it have caused you concern given what you've told us about the significance that CO make had for you? Why wouldn't that have caused you concern?-- Given the -----

Given what you've told us about the significance of CO make for you, that is that all you knew about it really is that if you saw a fairly steep upward trend that would indicate some problem with spontaneous combustion, why wouldn't that graph there, the one finishes on 10 June, why wouldn't that cause you concern?-- Because I don't see that as a sustained, steep upward trend.

We are looking at this -----?-- Yes, that's the one I see. Taking a portion of a graph and looking at a portion of a graph does not necessarily reflect to me the overall trend.

Did it have anything to do with the level? You see the level is somewhere between 11 and 12, isn't it?-- I see that.

Did the response that you've described to that sort of graph have anything to do with the actual level?-- It did not.

It didn't? You really didn't have any idea at all about levels at which you might start to become concerned about carbon monoxide and levels which you felt you could comfortably accommodate, is that what you are saying?-- I've said that before and I say it again.

Did anybody, Allan Morieson or Jacques Abrahamse or anyone, when these graphs were being produced and spread around the place, ever talk to you about how the CO make was going in 512?-- The only - the first time that I became aware of the level of CO make as such as a particular value was on 22 July and, yes, there was concern expressed at that point in time.

We will come to the 22nd in due course, but you are saying prior to that you had no idea about levels at all; is that right?-- That's correct.

Was there ever any discussion with you as the undermanager-in-charge about what levels of carbon monoxide make might be expected in 512 Panel?-- There was not.

Is there any reason why this sort of thing wouldn't be discussed with you?-- I don't know, but I was not involved in any discussion. I would only see it as conjecture at the best.

Now, I want to come to 22 July. What was the first thing that you can recall on that date in respect of this matter concerning CO make in 512?-- I had been away from the actual underground mine for some time during the day shift. I'd been up at the mine manager's office being the operations manager, Mr Regan. I returned from conference with him some time after the end of day shift. I would approximate it as between three and 3.15, 3.30 at the latest. After I returned to the mine I had a conference with a couple of union delegates from the mechanical trades union and I believe it was shortly after that that Jacques Abrahamse brought to my attention the concern he had over the CO make in 512 Panel that had been measured on that day.

Did he show you anything at the time?-- I believe he did.

Do you remember what it was that he showed you?-- Well, I know he spoke with me about the circumstances of the obtaining of the readings for the calculations, and I'm fairly confident he showed to me a graph, CO make graph on which he had plotted the value achieved on that particular day and it was marked with a question mark, I believe.

Marked with a question mark on it?-- Yes.

Could the witness see Exhibit 93 and 94? Have a look at 93 first of all. You see that that's a graph that has been plotted and has a question mark on it?-- Yes.

Plotted up to 22 at least in one direction, up to the 22nd, reflecting a reading of about 19 - in fact 18.98 at the last point on the high arm, as it were, of 22 July. Is that the one that you recall seeing?-- I don't believe so. I believe the one I saw would have been very similar in appearance to this except that question mark was in pencil and I'm not sure if the line drawn up to it was in pencil as well. It also did not have those other readings plotted on it, the lower reading on 22 July and subsequent readings.

I really was asking you to look at it in terms of the upper arm of 22 July. That graph that's in front of you there, from 22 July on, has points - or provision for points to be plotted day by day; do you see that?-- I do.

Do you remember if those points were provided for on a day-by-day plotting on the one that you looked at?-- I don't believe they were.

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Just have a look at the second page of that Exhibit 110, the one we were looking at before, the thicker one. You will see that that's a graph plotted up to 22 July '94?-- Yes.

But without any provision for further points to be plotted?-- Yes.

Is the graph you looked at more like that?-- I think it may have been.

A question mark in pencil up the top?-- Yes.

Were you shown any actual table of results for that day, that is, results in a tabular form rather than in a graphic form?-- I believe I was shown that.

Now, have a look at Exhibit 94, and the sort of table that you are talking about, while this may not be the actual document that you were shown, but was the table like that table that you see there?-- It was.

The first entry being for 22 July '94?-- It was similar in appearance to this document - similar in format, sorry.

And it had entries in for 22 July; is that right -----?-- Yes.

----- when you saw it. What discussion did you have with Mr Abrahamse?-- Initially Jacques told me that the calculation that he had made to plot the graph had been done from the Drager reading. He had done that because it was at variance with the reading for the Unor monitor point that was monitoring that return. I am just trying to recall the exact process of events as best I can.

Yes, you do your best?-- At some stage it was brought to my attention that the normal procedure was to plot the weekly average. I didn't realise that until that point in time, so - and then again sometime later it was also brought to my attention that there had been problems with the anemometer reading that was used to calculate the quantity.

Who told you that?-- Jacques.

Yes, go on?-- These were spread out over a period of time, discovery of the various anomalies.

When you say "over a period of time", within the one conversation?-- No.

Over some days?-- No, no, no, in that same afternoon, but not all at the one point in time.

When he showed you the graph and the table, quite obviously he must have shown you what level of CO make had been calculated?-- Yes.

And in fact on the table the total CO make for the panel was identified as being 18.98. You see that on that table,

Exhibit 94?-- I see that.

Well, did that level have any meaning for you?-- It showed me that there was a large increase from the previous reading.

Yes. In terms of that level, 18.98, did that have any meaning for you?-- I just described what it did for me, sir.

Only that it was a large increase over the previous reading?-- That's correct.

Did Jacques or anyone else in the conversation say, "Look, we have got a really high CO make reading here."?-- Yes, I do believe the term of a high CO make was used.

What was your response to that?-- I accepted that.

Was that the first time that you had come to any realisation as to what was a high CO make reading and what was a low one?-- Yes.

Never before that had you appreciated what level of CO make reading might be regarded as high or what might be regarded as low; is that what you are saying?-- That's what I'm saying, sir.

Well, you say you just accepted what he said. What happened after that?-- I might - no, that's fine. Carry on. Sorry, can you repeat that question?

If you want to expand on your answer, by all means do so?-- No, I'm fine. Can you repeat the question, please?

What happened after that? You say he told you about this reading, showed you the table, showed you the graph, had indicated 18.98, and you just accepted that that was a high reading. What happened then?-- We were discussing the - I believe plans were - at that time that it was first brought to my attention that plans were already in place to carry out an investigation in the panel. Quite a number of things developed throughout the course of that afternoon. A number of other people became - a couple of other people became involved. So, it's the whole process that I probably need to -----

Tell it as you remember it?-- I believe it would have been about 4.30 in the afternoon when Dave Kerr arrived at the mine and came down past my office, so I invited him in to give me some assistance with the situation.

What did you tell him?-- I told him that - much the same that Jacques had conveyed to me, that we had had a reading - a high reading which was the result of a Drager tube measurement of parts per million. I don't think I knew at that point in time that there had also been some difficulties with the anemometer reading or - not difficulties but whatever the word is to describe the discrepancies. I guess - I think I first - when I first saw Mr Kerr I said, "Oh, just the right man in the right place at the right time. Can you give me some help

here, please?" I conveyed to him the substance of the knowledge that I had and were discussing steps that would be taken.

What steps did you think should be taken?-- Well, I was in concurrence with the measures that had already been - or arrangements that had already been made. That was to investigate first the situation.

Which way, to investigate it how?-- By making further inspection.

Do you know who took the reading in the morning?-- I believe I did. No - yes, Jacques would have - Jacques did tell me that Steve Bryon and Peter Rose had been involved in the measurements.

Steve Bryon was an experienced deputy?-- Very experienced deputy.

Were you concerned about getting this high reading of CO make?-- The parts - I don't know if I was concerned, no. At the outset, no, I wanted to investigate to find out if it was - find the truth of the matter.

Well now, I don't want to dwell on all the details from there on in on that day. There was a further investigation made; is that right?-- There was.

You didn't go down yourself?-- No, I did not.

You were aware that Dave Kerr went down?-- Yes, I was. I asked Dave if he would assist in that inspection.

With Jacques Abrahamse?-- Yes, and also the afternoon shift undermanager.

Now, was there some report to you when they came back up again?-- Yes, there was.

What was that?-- The report that was given to me was that the highest reading that they could ascertain on their inspection was between 5 and 6 ppm; that they had done their testing with both high range and low range Drager tubes and they were in accordance with each other; that the high range tubes were actually easier to discern the reading on than the low range tubes. Most of that information came from Jacques. When I asked Mr Kerr what it was like down there, what's going on, he said to me that everything was sweet, everything was okay in that panel.

Now, you must have had some lingering concern because early the following week you issued a directive for the readings to be taken on each shift - that's by deputies on each shift - to enable the CO make to be calculated; is that right?-- That's incorrect.

That's not so?-- That's not so.

Right?-- I issued that directive on the Monday subsequent to 22 July.

Yes, that's what I was saying, early the following week. Do you say you issued a directive or you didn't issue a directive?-- I did issue a directive.

Was it early the following week?-- I thought you said in the earlier - it was on the Monday subsequent to 22 July.

We are talking about Monday the 25th, you see, just to identify the date?-- Yes, that's correct.

Well, that's what I said, that you must have had some lingering concern because you issued a directive early the following week, and you say it was on the Monday, for readings to be taken on a shift by shift basis to enable the CO make to be calculated; is that right?-- No, that is not right. I did issue such a directive but it was not as a result of concern or a lingering concern of mine. On the afternoon of the 22nd Mr Barraclough, who was the acting manager of the mine, had made an agreement with Mr Bryon that one of the things that would be done as a result of the inconsistency of the Drager reading and the Unor reading on that Friday was to further monitor.

The CO make?-- No, sir. As far as I understood, it was to further monitor the Drager tube measurement against the Unor tube measurement. If I might explain, the Drager tube reading was taken as a means of verifying the authenticity of the Unor reading, and, as I understand it, if those two things were in agreement, then the average for the week was then used in that calculation to determine CO make, and as I understood the agreement between Mr Barraclough and Mr Bryon was to keep a further check on those - on the Drager tube reading and the Unor reading.

Well, what did you put in your directive? Do you have a copy of it any more, do you know?-- I have not been able to find that directive, sir.

Well, can you tell the Inquiry what you put in the directive?-- I put in the directive that measurements were to be taken, and I believe I made it on a daily basis, but I'm not sure whether I had "daily" or "shiftly" on it, but I believe I had "daily" written on it; that measurements were to be made with regard to CO parts per million, CO2 percentage and air velocity.

Well, this was a directive to deputies?-- That's correct.

Are you able to say why you directed them to take measurements of the air velocity if it wasn't the intention to use those measurements to calculate the CO make?-- When I returned to work on the Monday and saw the extent of the checks that were being made, I just went along - I issued my directive on the basis of what I observed the deputies had been measuring over the weekend.

But you must have known, surely, on that day, the Monday, that the reason that you would be asking people to take CO in parts per million and take the wind velocity would be to calculate the CO make?-- Yes, I would have realised - I would have realised that that was able to be done from those readings.

Isn't it so that as a result of your directive most of the deputies, if not all of them, started to take these readings on a shift by shift bases - that's readings of CO, CO2 and the wind velocity?-- Yes, they did.

Your directive must have been plain in its terms that the wind velocity was to be read?-- I said to you that that was on my directive, sir. I did include the anemometer reading as part of the instruction that I issued.

And did you understand that those figures were to be used to calculate the CO make which, in turn, was to be plotted on a graph?-- No, I did not.

Have a look at that Exhibit 93 and 94, 93 being a graph, which has the provision for entry of daily points - that's the one you looked at before - and 94 being a document which makes provision for the entry of readings on a daily basis?-- I see that.

Readings with a view to calculating the CO make. Have you ever seen either of those documents before?-- Yes, I have.

Where did you see them?-- I believe I saw these at some stage on the Friday afternoon shift - Friday, the 22nd of July.

Under what circumstances?-- When Jacques Abrahamse - after he had prepared them - probably in the process of giving them to Terry Atkinson.

When you looked at them, it must have been absolutely plain that the purpose of the exercise was; to produce, first of all, a table designed to calculate CO make for the panel and that, secondly, there was intended to be a graph that plotted the points that were arrived at in the total; isn't that so?-- I understood that.

It must have been perfectly plain?-- It was.

So, you knew from that time that the idea was to calculate the CO make for the panel on a daily basis from when they were shown to you on the Friday afternoon?-- I knew that that was not my intention, and I also believe I knew that that was not Mr Barraclough's intention.

But you must have realised it was the intention of somebody because you have documents that at that stage wouldn't have had any of the figures written in. It was 94 without the figures written in, and a graph that allowed for the plotting of daily points?-- Yes.

So, irrespective of whether it was your intention, you must have realised that it was someone's intention that this be

done?-- Yes, I knew-----

Did you have any view about that - as to whether that was a good step or a bad step?-- After the inspection of the 22nd of July my mind was completely at ease about the situation. Jacques organised for this to be done, which was over and above the arrangement that Joe Barraclough had made with Steve Bryon. I was quite happy with it - to go on.

You were quite happy for it to be done?-- Yes.

When you issued your directive on the Monday, it was against the background that you knew that this system had been put in place; isn't that right?-- Yes, I did know that that system had been conducted over the weekend.

That is the system reflected by Exhibits 93 and 94?-- That's correct.

Well, then, did you see the documents again after the Friday?-- I believe I did - well, yes, I do have a recollection of seeing them on the Monday. I do know that the folder which contained those documents stayed on the undermanager's desk through until the time of the explosion. I did see that folder. I don't believe that I investigated the contents thereafter.

Did you at any time take steps to find out whether people were doing - that is whether deputies were doing what you directed them to do on that Monday, and that is taking shift by shift readings to enable the calculation of CO make?-- I noticed that the deputies' reports contained that information that I had requested.

Given that you had set that system up, did you ever take steps to find out what levels of CO make were being calculated as a result of that system?-- No, I did not.

So, you issued the directive but you never followed it up?-- I issued that directive as a result of the agreement that was reached between Mr Barraclough and Mr Bryon. I wanted to be sure that Mr Barraclough was not let down on his side of the agreement and his side of the agreement was that CO parts per million would be monitored as a check against the accuracy of the Unor.

Well, did you ever take any steps to see whether that was the case - that the readings that were being taken confirmed or disagreed with what was being read by the Unor?-- I knew the readings that were coming through on the Unor, and I knew the readings that were obtained by the deputies. I can't say that I - I can't say that at all times that I took the information from the deputy's report and directly compared it with the values on the Unor, but I had a general idea of those two figures.

Is a general idea good enough, Mr Mason?-- I believed it was.

You are dealing with a panel - then an extraction panel -

where there had been these ventilation problems, and where there had been at least one occasion of a high CO make as a result of a reading by an experienced deputy. Where you have issued a directive that people take the readings which enable the CO make to be calculated from day-to-day, if not shift to shift, is it sufficient that it just appeared to you when you read the reports that the deputies' readings on CO parts per million might have been generally in line with what was on the Unor? Do you regard that as sufficient?-- I do. I know that Mr Barraclough had made the arrangements with Mr Bryon and I knew that Mr Barraclough would follow through on his side of that agreement.

Did you discuss-----?-- I was watching.

Sorry?-- I talked with Mr Barraclough on the - to answer your next question, I was - I did talk with Mr Barraclough on Monday, the 25th. That was the first time I had occasion to see him. Now, to revert back to the question before-----

Yes, go on?-- -----I was watching the parts per million on the Unor. There was no - they were remaining steady. I had no cause for concern.

Could the witness see Exhibit 152, please, Your Worship? Just while that's being obtained, did you take any steps at any time to see whether people were calculating the CO make from the deputies' figures at any time, right up to the time of the explosion on 7 August?-- No, sir.

Just have a look at that document there. The second back page is the useful part of it. In particular, I want to take you to Thursday, 28 July, a night shift, Bob Newton the deputy, and you will see that the figures that - and just accept for the moment, if you are not already aware of it, that these figures are taken from the deputies' reports, and this total has been done recently, showing the results that would have been calculated from those figures on the deputies' reports. Now, if you have a look at that, you will see that the CO make for that shift, 28 July night shift, calculates through to 19.36?-- I see that.

And you would have known by then, from what you have told us - in any event, you would have known by then that that was a high reading - a high reading; isn't that right?-- Yes.

Given what you had learned?-- Yes.

According to you, the last Friday afternoon - you would have known that that was a high CO make and the sort of thing that would cause concern?-- Mmm.

Now, given that, and given that deputies were going to all the trouble of taking these measurements on a shift by shift basis and recording it, can you explain why it was that there wasn't some action taken by someone - yourself or someone else - to ensure that these things were calculated through to CO make and then charted on to the graph? Can you explain why it didn't happen?-- I think I can explain. Jacques was the one

who had set this table and graphing procedure up and, to the best of my recollection, Mr Abrahamse was absent from work for the majority of that. I think he attended work on the Monday and then was absent thereafter for that week.

From the Tuesday to the Friday of that week?-- Yes.

And you were aware of that; is that right?-- I was.

Did you think that in his absence it would be wise to follow through and see that somebody was doing these calculations?-- I did not.

What did you think? That someone else would just move in and do it, and if so, who?-- I think I explained to you before, after the inspection that was carried out on 22 July, my mind was put at ease about the situation. I issued that direction to assist Mr Barraclough in the carrying out of the agreement that he had reached with Mr Bryon. My monitoring was done through the parts per million, as shown on the Unor, and I did not see any variation on that Unor, and my mind was at ease.

Jacques came back on the Monday of the following week; is that right - 1 August?-- I don't know.

You can't remember. Do you remember having any conversation with him after he got back as to whether anybody had been calculating the CO make?-- I say I don't know whether Mr Abrahamse was at work, because I was not at work.

You weren't at work that week?-- I was absent from the mine on Monday 1 August, Tuesday 2 August, and I returned to work on Wednesday 3 August.

When you came back on the Wednesday, did you have any discussions with him about what had happened with this system?-- No, I did not.

I just want to ask you then about events during that week. You say you were back on Wednesday, which would have been the 3rd; is that right?-- That's correct.

Wednesday, 3 August?-- Mmm.

I want to ask you - before I come particularly to events on that day, I want to ask you what involvement you had with the Unor system at the mine?-- Can you explain "involvement", or ask me specific questions?

Okay, I can. Did you have any training in how to use it?-- I did.

Did you have an ability to accept alarms?-- I knew how to do that.

To acknowledge alarms on the Unor system?-- I knew how to do that.

To reset the alarm levels on the Unor system?-- I knew how to do that.

And did you understand what all the consequences were of the acknowledgment of an alarm on the system, that is in terms of when the system alarmed again and what you had to do to reactivate the siren?-- No, I did not.

You didn't know any of that?-- No, I did not.

Where did you get your knowledge about the Unor from?-- Mr Reed.

Are you able to say whether whilst you were undermanager-in-charge whether there were systems established to train other people in the use of the Unor?-- There was no written procedure for training of people on the Unor, but people were shown how to use it by other people who were competent.

What about provision for the identification of people who accepted alarms? What do you say about that? Was there any system to identify people who accepted alarms?-- I don't recall if Mr Reed explained the cap lamp - the use of the cap lamp as a system. I know that I used the number 01 whenever I accepted an alarm on that system.

That wasn't according to any pre-arrangement, that was just a number that you tended to use, was it?-- That's correct.

As far as you were aware there wasn't any prearranged system for people being authorised to accept alarms and having to give identification numbers?-- I believe it was general knowledge in the mine that not just anybody went and tinkered with the Unor system. They knew that that was not acceptable behaviour. As for the entering of cap lamp numbers as registration of who had accepted an alarm, no, I don't know of any procedure. I would not put any faith in such a system anyway. Anybody can enter any number in.

Have you got Exhibit 127 there? Could the witness see Exhibit 127, please, Your Worship? When the siren goes off at the mine, Mr Mason, there is no difficulty with anybody aboveground hearing it, is there? It's a pretty loud siren?-- Unless you were deaf.

Can you go to the entry 3 August, that's about line seven there? It shows an alarm at nine minutes past 11 being a breach of CO level in the 512 top return, the set point value being eight. Do you see that?-- Yes, I see that.

Can I ask you first of all, do you remember that alarm sounding?-- I have no specific recollection of that alarm, no.

You would have been at the mine at the time?-- Yes, I believe I was at the mine at the time.

Apart from just after a sealing or when the span gas tests are

being done do alarms go off at the mine very often?-- Yes.

How frequently? A couple a day or one a week, one a month?-- The Unor system, the siren from the Con Log, that siren sounds for any number of different - quite a number of different alarms.

I am asking you about the siren, not just the Unor system, you see?-- Yes.

So how frequently would the siren be sounding?-- I would say - it's very hard for me to give a quantitative figure, but -----

Let's try. Is it more than once a week?-- I would say an average would be more than once a week, probably more like three times a week if you average it over a year. The most common occurrence for the activation of that siren was the compressed air system.

Okay, we don't need to go into that. You have no memory specifically of that alarm going off. You will see that it wasn't accepted until five past seven that night, so it was almost eight hours, it seems - when I say accepted, it wasn't acknowledged at the Unor until five past seven that night. Do you know how that might come about, if the Unor system is being monitored in some way?-- I'm sorry, I could give you a number of scenarios, but they would only be speculation on my part as to how that could happen, but -----

Is this the sort of thing that happened very often to your knowledge?-- Not that I was aware of.

That is that alarms went unacknowledged at the Unor for periods of eight hours?-- Did not happen often to the best of my knowledge.

Can you go to 5 August, that's the next line down, at 10 to one in the early afternoon?-- Yes.

Again it shows there an alarm which resulted from a breach of the CO level of eight in the 512 top return. Do you see that?-- I see that.

Again you would have been at the mine at that time?-- I was.

Do you have any specific memory of that alarm?-- I do not and would not. I was underground at that point in time.

You were underground at that stage. Did anybody ever bring it to your attention that there had been a breach of that set point value of eight?-- No, sir.

You will see that that set point value of eight remained unaltered from when the alarm went off on the third?-- I see that.

Did anybody ever bring to your attention that the alarm had gone off on the third as a result of a breach of that CO level

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in the 512 top return?-- No, they did not.

Did anybody ever discuss with you what level that should be set at?-- I have no recollection of any such discussion.

As the undermanager-in-charge wouldn't you expect that you would be contacted about what levels to set the alarm set point value at?-- Either myself or the manager, yes.

Did you become aware at any time of anyone consulting the manager about the setting of these levels?-- No, I have no knowledge of that.

You weren't at the mine early the next morning, the Saturday morning?-- I was not.

Your Worship, that might be an appropriate point.

WARDEN: Thank you, Mr Clair. Thank you, gentlemen. It's a late start Monday morning, from memory, 11 a.m.. Adjourn proceedings until Monday morning, 11 a.m..

THE COURT ADJOURNED AT 3.08 P.M. UNTIL 11 A.M., MONDAY, 6 MARCH 1995

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 06/03/95

..DAY 37

THE COURT RESUMED AT 11.03 A.M.

GEORGE ARTHUR MASON, CONTINUING:

WARDEN: Thank you, witness. Do you recall the oath you took the other day when you commenced giving evidence?-- Yes.

You are still under the same oath; do you understand that?-- Yes.

No need to reswear, thank you.

MR CLAIR: Mr Mason, do you have a copy of your statement there?-- Yes.

I have been covering quite a number of things that occurred in the history of the 512 panel, but I want to take up the narrative of events that you set out in your statement, and it is basically at the top of page 2, Thursday, 4 August. It may be a little quicker if you can follow where I am going to some extent by reference to your statement; do you understand me?-- Yes.

You mention there about a meeting on Thursday 4 August, which was the regular weekend planning meeting?-- Yes.

You chaired it and the purpose of the meeting was to plan the work to be done on the weekend with a view to achieving what could be achieved then and with a view to the following week; is that right?-- Yes, mainly it was scheduling of tasks to be carried out, taking into account the manpower that was available. Basically it was the knowledge of tasks, and it was fitting those tasks into the schedule and any new issues that had arisen from the other departments.

And what was discussed at that particular meeting was the - for weekend work, that is - was the construction of prep seals in 4 South level?-- That's correct.

The preparatory work in 512 which had to be done to enable the sealing of the panel?-- That's right.

And at that stage when was the sealing of 512 panel planned to take place?-- At that stage in my mind I was going to - I intended to seal the panel at some stage during the following week.

When you say "the following week", did that mean it could have been Sunday, or was it some time Monday and following in your mind?-- I had no set - in my mind, it would have been some time the following week, not including Sunday.

You might just pull that microphone over a little closer to you?-- That better?

That's it. Okay. Now, with a view to that, then, all the machinery and equipment had to be removed from 512 panel, ventilation modifications had to be made and sealing materials and equipment had to be delivered to the seal sites?-- Yes.

Was there a regular monthly span gas testing carried out on the Unor system?-- There was.

And was that scheduled for the Sunday day shift?-- That's correct.

Some time after the meeting, you discussed the planned weekend work with the undermanagers; is that so?-- That was my normal course of action.

Do you know if, in the course of that, you had discussions with Michael Squires?-- I did.

Was that on the Thursday or the Friday?-- I have no specific recollection of discussions on the Thursday, but I do on the Friday.

He was rostered for afternoon shift on the Friday; is that so?-- He was.

And you had some discussion with him at some point that afternoon. Do you remember when that was?-- I had a number of discussions with Mr Squires on Friday afternoon.

Well, in particular, in relation to the sealing of 512 panel?-- Yes.

Well, what were those discussions? First of all, do you remember-----?-- My initial conversations with Michael were by telephone. I was the shift undermanager on the Friday day shift. I had not completed my inspections on the day shift prior to Michael coming to work. I was still down the mine when he arrived at work. I phoned Michael from the 6 South section and discussed with him the status of the mine and perceptions of work for the afternoon shift crew.

And at some stage you spoke with him about sealing of 512. Was that after that?-- When I came out of the mine, I came out with the day shift crew. At that stage, the afternoon shift crew had already been deployed. Those people had been deployed to production duties at least. I recall being in the undermanager's office and Michael making the comment that he would like to seal 512 panel that weekend.

Did he say why?-- I don't recall any reasoning that he gave me.

Well, what did you say to that?-- I told him that I had only just recently been in the 512 panel and knew of no reason to advance the sealing or bring the sealing forward; the workload we had for the weekend was plentiful enough without undertaking that task. I don't know if I used those specific words, but it was in that context that I conveyed that to him and that the plans that I had in place would remain in place.

What had you noticed in 512 panel when you were there?-- I had been in the 512 panel on two occasions on the day shift. I went in there early in the morning. I did not get past the crib table. I received phone calls from the - I received a message, anyway, by phone, so without making an inspection there, I made my way across to the 512 panel in company with Mr Schaus, the mine manager. We were doing a joint inspection on that day. When I came back - no, it was during that first occasion that I was in there - deputy Dick Stafford was in charge of the 512 panel on that day. He asked me if I wanted the readings that were being taken to continue, seeing that the production had finished in the section, and I said, "We might as well. Until such time as the panel is sealed up, we will continue with the taking of those readings."

These were the readings of CO in parts per million and the wind speed and-----?-- Carbon dioxide.

Sorry?-- Carbon dioxide.

CO2, and I think the wet and dry; is that right?-- Well, those readings were being taken, but I really - I don't recall ever issuing a direction to take those temperature readings.

Go on?-- When I - I returned to the 512 panel some time later after conducting my business in the 5 South section. During the inspection that I carried out there, I did not notice any untoward condition.

How far into the panel did you go on that occasion - the second occasion?-- The extent of my inspection was only in the intake roadways. I travelled the No 2 roadway to just inbye of No 1 cross-cut, then I travelled down the cross-cut between 1 and 2 roads to - sorry, between 2 and 3 roads, down to number 3 intersection, only slightly inbye of the intersection on number 3 road, and not far down the cross-cut between number 3 and 4 roads - that's No 1 cross-cut between 3 and 4 roads.

You didn't go into-----?-- Mining had retreated to that - that was the goaf edge.

You didn't go up near No 1 heading yourself?-- I did not enter the return on that day, no.

Well, you were speaking of the conversation that you had with - well, perhaps I should ask you: did you notice anything unusual when you were there in 512?-- I did not.

You were telling the Inquiry about the conversation you were having with Michael Squires on the Friday afternoon, and I asked you what you said in relation to his proposal to seal the panel. I think you said that you indicated to him that you weren't intending to change the plan. Did he say anything to that?-- No, he did not.

Later that afternoon, you had some discussions with Michael Squires to make some changes for the weekend manpower

arrangements; is that right?-- I did.

What was the reason for that?-- The scheduling of tasks was done in conjunction with the manpower availability. Weekend work is voluntary overtime. We also operate at the mine - the rostering of overtime was done on a four weekly cycle, and the men could only work four shifts in a four week cycle. That's the union restrictions on overtime. That weekend of the 6th and 7th of August was the last weekend of the particular cycle of the roster; hence, as people withdrew from the - withdrew their voluntary decision to work - which had previously been indicated by placing their name on the roster list - as they withdrew, then obviously the workload had to be varied to accommodate the differences in manpower availability.

Well, this was nothing unusual for this particular time in the cycle; is that so?-- What made it more difficult was that other persons who would have worked if they had the opportunity, did not have that opportunity if they had already filled their quota of overtime.

You left the mine late on Friday afternoon?-- I could probably add a couple of things in to help give some clarification.

By all means. About the Friday afternoon; is that so?-- That's correct.

Go ahead?-- At some stage on the Friday afternoon, Michael brought to my attention that the continuous miner operating in the 5 South section, which was the only section on production that afternoon, was still giving trouble - still playing up - so, he - well, he put to me that we should give away attempts at production on that afternoon and better utilise the men on other duties because it was a - an intermittent fault on the miner. So, I agreed to that proposition, as long as testing and maintenance was continued on the - on the 5 South continuous miner. So, men were deployed to other duties, and at some other - at some later stage - I don't believe it was at that same point in time - I spoke with Michael about the sealing of the 512 panel, and I told him that if all the necessary preparations had been put in place and there was sufficient manpower to cope with that workload, that he could seal the 512 panel on the Sunday.

That was some time later on the Friday afternoon that you had that conversation with him?-- Yes.

What did he say to that, do you remember?-- Not distinctly. It was, "Yeah, righto.", or words to that effect.

He indicated that's what he would do at that point, did he?-- I believe it came as a result of Michael still wanting to seal the panel on that weekend, and obviously the effect of deploying men from production duties to outbye duties on the Friday afternoon shift.

Is there anything else that you wanted to mention about the Friday afternoon?-- No, that's fine.

You returned to the mine - or I should say at least on Saturday morning - between - or some time in the course of the morning, did Michael Squires contact you by telephone?-- Excuse me, did you ask me if I returned to the mine?

No, I think I corrected that. On Saturday morning, some time between 10 and 11, did Michael Squires contact you at your home?-- The time of the contact I'm not absolutely sure of. That was my best guess at the time.

You mention in your statement between 10 and 11 a.m. Could it have been later than that?-- It could have been.

Well, what conversation did you have with him over the telephone?-- Michael began his conversation with telling me that he would - he wanted to seal the 512 panel as a precautionary measure. He then went on to give me information regarding the 512 panel.

What did he tell you?-- I can't recall the exact order of information I received or the words that it was received in, but - given in, not received - the Friday afternoon shift deputy, Michael Caddell, had reported the observation of a tarry smell. I think the word "tarry" was used, but I can't be 100 per cent sure on that. That was in the top return roadway. I believe he told me that it was at 10 cross-cut. Other information that he conveyed to me was that he had asked Michael Caddell to inspect the section again on the night shift - to keep an eye on the panel on the night shift. Michael had worked the afternoon shift and was rostered to work the voluntary overtime shift on the Saturday night shift, but he conveyed to me that Michael had not done that - Michael Caddell, that is - and that Bob Newton had inspected the - had charge of the 512 panel on the Saturday night shift. I also think he told me that he had not had the opportunity to converse with those deputies regarding the state of the section. The order of events I just can't recall exactly, but I believe it was when he spoke with Bob he didn't realise that he had actually looked after the 512, and when he went to see Mick, Mick was in the shower - or - I don't know, I can't recall exactly the state of affairs, but he had not had the opportunity for oral communications regarding the conditions with any of the deputies.

He also brought to my attention that he had been in the 512 Panel on Saturday, day shift, and had observed a haze in the air on the intake side of the panel, that he was unsure of the source of that haze, that there were a number of diesel vehicles working in the vicinity and that he had noted the problem with ventilation was occurring again in that area of the intakes.

What sort of problem?-- A reversal effect that we had experienced previously. He also told me that he had been into the return and the odour in the return was a stronger odour than what he had - he thought it was of a stronger - it appeared to be stronger than previously. That is, the - I questioned him about that odour and he said, "No, it's just a normal goaf odour." It just appeared to be stronger in intensity than it had previously to him.

Did he explain what he meant by "previously"?-- Not that I recall.

Well, what did you say?-- I questioned Michael about the carbon monoxide parts per million for the top return and at that point in time he was unaware of what the readings were. He told me that Deputy Cole Klease was in the panel at that point in time making those measurements. Whilst I was still in contact with Michael by telephone he took a phone call from Cole Klease who was down in the pit and who relayed to him the information regarding his inspection, and that was that the parts per million reading that he had detected was between eight and 9 ppm.

Now, when you asked him about the CO concentration in the top return, was that some information that you felt was important in order for you to make some judgment on the other information that he had given you?-- Just to assist me with understanding what the conditions were, yes.

At that point what he had told you was there had been - as far as you can recall - a tarry smell reported the previous afternoon, Mick Caddell -----?-- Yes, on the Friday afternoon shift.

There had been Michael Squires' own observation of a haze and also his report that there was this stronger odour in the top return. That was the information you had from him?-- That's correct.

And against that background you asked him about this CO concentration in the top return. Now, can you say just what it was that you were looking for in terms of CO concentration? How did you see that that would assist you in judging whether there was any problem in the panel?-- I wanted to know if there had been any change from the readings that had been recorded up to that point in time.

Did you ask him about previous readings there or did you have something in your own mind about previous readings?-- No, I don't recall asking him what the previous readings had been.

When he told you that there was a reading of eight to nine reported to him while he was on the phone to you, did you have anything to compare that with?-- Yes, sir.

What was that?-- Well, to the best of my knowledge the readings on the Friday day shift had been seven to 8 ppm.

Well, what was your response when you were told that it was eight to 9 ppm?-- I just accepted the information that I received.

Did it produce any response on your part in terms of whether there were signs of danger in the panel?-- No, it did not.

Well, at that point you had a tarry smell, a haze, a further report of a stronger odour of some kind and you had CO concentration of eight to 9 ppm. Now, were you content to just accept that information or did you feel that you needed to make some judgment as to whether there was something unusual going on in the panel when you got that information?-- Well, the information that I was in receipt of, that there was - a tarry smell had been observed or reported on the Friday afternoon shift and had not been repeated. The deputy who had made that observation had been asked to keep an eye on the panel on the following shift and he had not done so. There was - a haze had been observed in the intake airways, but there was - it was unknown as to the cause of the haze. It was believed to be - well, from the information I got I assumed that it was associated with the diesel machinery and the reversal effect with the ventilation was causing that haze to be in the intake airways.

You say that was an assumption?-- That's correct.

Did you think that that aspect bore some further investigation?-- Well, it was being further investigated by the deputy who was down in the panel at the time that Michael was on the phone to me.

And he reported this CO make of eight to 9 ppm?-- He did.

Now, of course, you knew yourself that the CO make alone wasn't really as good a piece of information - I should say the CO reading, the CO reading of eight to 9 ppm was not really as good a piece of information as would be the CO make itself. You knew that, didn't you? I mean you've told us that you did appreciate that the CO make was a more accurate indication of what was happening than the simple CO reading in parts per million?-- Yes, I have said that to you on previous occasion, I believe.

Well, what I'm saying to you is you obviously appreciated that the CO make would be able to give you a better indication as to what was happening in the panel?-- I believe the CO concentration would give me a good idea of what was happening in the panel.

Well, the CO concentration will give you precisely that, the CO concentration, but I think you've already agreed that the

CO make, the CO make gives you a better idea as to what is happening in the panel?-- Well, I can only tell you what information I sought on that day and how I used that information.

Well, that's what I'm about to ask you about, you see. Did you ask anybody to calculate a CO make for you -----?-- I did not.

----- as a result of that conversation?-- I did not.

Could the witness see Exhibit 152, please, Your Worship? I take it, Mr Mason, that a man of your experience would not be complacent about the existence of a tarry smell in an extraction panel; is that right?-- That's correct.

And you had a report of that?-- I did.

I take it again that you wouldn't be complacent about a haze in a panel, particularly when it's against the background of a tarry smell, report of a tarry smell; isn't that right?-- That is why I assented to the commencement of sealing on the Saturday.

When you assented to the commencement -----?-- I did not know what the - I did not have a full appreciation of the conditions. I did not want to stop the sealing process, and I say that would have been very difficult to organise or put into place. After undoing arrangements that had been made it would have been very difficult to reorganise if I had said, "No, we won't seal off at this point in time until I carry out further investigations."

But you see, one of those further investigations that could easily have been carried out was to have the CO make calculated, wasn't it?-- Yes.

That wouldn't hold anything up at all; isn't that so?-- No, it wouldn't.

And in fact expressly on the Friday when Dick Stafford spoke with you you had said that the deputies should continue to take the readings, including the wind velocity, that would enable the CO make to be calculated; isn't that right?-- I had.

And -----?-- But I would remind you of evidence that I gave on Friday as well, Mr Clair.

Well, you can remind me of that?-- The reason -----

You gave a lot of evidence on Friday. Which particular part?-- The reason that I issued the direction for those readings to be taken was to honour an agreement that had been reached between Mr Barraclough and Mr Bryon, not specifically for me or anybody to calculate CO make.

But Mr Mason, we are dealing with Saturday, 6 August?-- We are.

When you have a report of a tarry smell, you've had a report of a haze and you've got Michael Squires reporting to you that a deputy was actually down there and had just taken a reading of eight to 9 ppm CO. Now, why didn't you ask for the CO make to be calculated at that point?-- I don't know why I didn't ask for the CO make to be calculated at that point.

You see, whether or not you were going to just say, "We will go ahead and seal.", or just allow the sealing to go ahead as Mr Squires was suggesting, it would have been terribly important to know whether there was evidence of some kind of heating in the panel, isn't that so?-- That's correct, that's why I intended to make an inspection for myself. I was in receipt of a lot of conflicting information at that point in time when I received the phone call from Mr Squires.

The reason it would have been important, because going ahead and sealing against the background of what might be said to be substantial evidence that there was at least a suspected heating in the panel would be quite different to going ahead and sealing because Michael Squires simply wanted to do it as a precautionary measure. Those two situations would be quite different, wouldn't they?-- Could you repeat that to me, please?

I said sealing under the circumstances that you had a suspected heating in the panel would be quite different to sealing simply because Michael Squires wanted to do it as a precautionary measure and where there was no concern about a heating at all. Isn't that so?-- Well, what's the difference between the two? Precautionary measure and - well, I understood the precautionary -----

Can you see a difference -----

MR MORRISON: Let him finish.

WITNESS: I understand "precautionary" to be people were unsure of the situation, they wanted to take some action and they saw it as precautionary action.

MR CLAIR: Well, let me ask you this: after these things were reported to you did you have a concern that there may be a heating in 512 Panel? That is after Michael Squires rang you and reported the things we have just gone through did you have a concern that there might be a heating in the panel?-- I was unsure as to what the reality of the situation was. I had received a lot of conflicting information and I did not want to make a decision based on that information.

Well, then, I've already suggested to you that one way to get more information was to have the CO make calculated; isn't that right?-- You did suggest that to me.

And you agreed with that suggestion?-- Yes.

And you knew that the information was already available to calculate that CO make?-- Subconsciously I would have known

it, but it was not conscious in my mind at that time.

So it certainly wouldn't have been a factor that would have held up any actions to seal the panel, to simply have CO make calculated, would it?-- I've said yes to that before - or no in the right context.

Sorry?-- Or no in the right context. I agreed with that position.

Have a look at Exhibit 152, the third page, and you will see that on the fourth entry from the bottom there is a reference to Cole Klease's readings during his day shift on 6 August. Do you see that?-- Page 3?

Sorry, fourth page, the table there?-- Yes.

Fourth entry from the bottom and you will see that using the readings that he recorded on that shift and as are recorded in the deputy's report 3776 that there was a CO make calculated of 21.04 -----

MR MORRISON: That's an incorrect suggestion. That's a quite incorrect suggestion that Mr Clair keeps on saying, and Mr MacSporran has been guilty of it too. As we well know in fact it wasn't calculated. It must have been done for this schedule, but they keep on saying that we can see from this entry that there was a CO make calculated for this figure and of course we know it wasn't. It's creating a false impression that shouldn't be persisted with.

MR CLAIR: I understood this to be information taken from the deputy's report, Your Worship, but if needs be we will have a look at the deputy's report 3776 -----

MR MORRISON: I'm sorry, I'm not going to have this sort of non-response to a proper objection. I object not to the fact that these readings or these figures - I did not suggest they did not come from a deputy's report. The objection I made was that the suggestion Mr Clair had put forward was that there was in fact at that time a calculated CO make and this is the final figure, and that's just untrue. He knows it to be untrue and he persists in suggesting it.

MR CLAIR: Your Worship, I apologise. I misunderstood my learned friend's objection, and I must say that I didn't intend to suggest that there was a CO make calculated as at Saturday, 6 August. I didn't put it forward in any sense of putting it forward knowing it was untrue. Perhaps I should tidy up the question by saying that the figures that were available at that time calculate through to a CO make in litres per minute of 21.04 and that in fact was what I was intending to suggest to the witness. With Your Worship's permission I will do that and I do take my learned friend's point.

WARDEN: Thank you, I think that would be fair.

MR CLAIR: Now, Mr Mason, what I am putting to you, so that

you understand clearly what I am saying, is that there were figures that had been taken which, when calculated through to a CO make, indicate the CO make of 21.04; do you understand - you understand what I am saying?-- Yes.

You see, I am not suggesting to you that there was in fact a CO make calculated on that Saturday morning. I take it you understand that?-- Yes, I understand what you are saying.

And in fact that's the very thing that I am wanting to question you about, is why wasn't there a CO make calculated on that Saturday morning? Do you understand what I am interested in? Why wasn't there a CO make calculated on that Saturday morning, do you know?-- No, I don't know.

You see, what we had is this report of the tarry smell, we had the report of the haze, we had the report that this odour, however it was described to you, in the top return was stronger on the Saturday morning, we have your concern about getting a CO reading for the top return, and against all of that background -----?-- No, can I interrupt you, please, Mr Clair? I did not say I had a concern about the CO reading, parts per million reading. I did say that I had an insistent observation of a tarry smell. I did say that I was in receipt of knowledge of a haze, that people did not know the reason for that haze, but it was purported or believed to be in conjunction with diesel vehicles operating in the vicinity and problems with the ventilation reversal.

Let me be clear. I didn't say to you that you had a concern about the reading, I said you had a concern -----?-- You did.

A concern to find out - I said we had your concern to find out the reading of the CO in the top return. What you said to us earlier is when you got these reports of the smell and the haze, reversal of ventilation, your question was, "What's the CO reading in the top return?" Isn't that what you told us?-- I did ask for that reading.

So, you were concerned to find out about it. That was your response. You wanted know the CO reading in the top return?-- I did ask that question, yes.

What I am saying is that against all of that background, when you got that CO reading, which was 8 to 9 ppm, why didn't you ask somebody to calculate the CO make?-- I don't know.

You see, if in fact the CO make had been calculated, and if we take it on the basis of the calculation that we already have done here, which is taken from the figures in Klease's report, we find that there is a CO make of 21.04, isn't that right, if you have a look at that entry there?-- That's what it calculates to.

And isn't it the case that if there was a CO make -----?-- That's what it calculates to, I believe, as indicated here, if you use 10 ppm as the CO concentration.

Okay?-- So, obviously if it was calculated on the basis of 8 to 9, it would be less than that.

It would be less than that, but it wouldn't be any - well, it would be less than that, okay, but let me just ask you this: what would have been your response, because, you see, these figures were available to calculate a CO make. They are the ones that Klease took, the ones reported in his report, 3776. What would have been your response to a CO make of 21.04?-- I don't know what my response would have been. I didn't ask for the calculation to be made.

You see -----?-- Hence -----

What I would suggest is if it was known that there was a CO make running at 21.04 that morning, then people may have been far more concerned than they appear to have been. What do you say about that?-- I don't know.

You simply don't know?-- I don't know.

Okay. Now, can you go on then with the further conversation that you had with Michael Squires?-- The further conversation or the conversation that we were still having?

Well, on this occasion that he telephoned you. You said that he reported this reading of Cole Klease that had just been reported to him of 8 to 9 ppm. What was said after that?-- I don't have any - I don't know what other conversation took place. I do know that Michael asked me a number of - a couple of times within that conversation, or made the point that he would like to seal the panel as a precautionary measure. I assented to that course of action.

Was there some discussion about arrangements?-- There was.

What was that?-- I don't know when this particular part of the information was actually discussed, whether it was prior to my assenting to the sealing being carried out that day or subsequent, but it was man power arrangements, obtaining people to work on that afternoon shift, whereas previously there had not been anybody assigned to work on the Saturday afternoon shift.

Yes, go on?-- The other thing that he requested of me was that I approach Robert Parker. Robert Parker was the Tecrete representative. He had worked the night shift. Michael was concerned that he may be attending to social activities in the afternoon, so he asked if I would go to the single man - single person's quarters where Mr Parker was staying and approach him in person to see - or get him to come to work. Also at some point in that conversation I became aware that Michael was not intending to be at work on the afternoon shift during the sealing operations, so I told him that I would cover that period of time and that I would bring Robert Parker to work when I came out.

What else was discussed between the two of you, do you

remember?-- Yes, Michael made a request of me for a third deputy to be involved with the sealing operation. I took that to mean that he wanted an extra supervisory person, if I can use the term "supervisory", because he had not intended to be at work on that afternoon, so I said I didn't see there was a need for that as I was going to be attending for work.

Okay. Well now, when you were talking with Michael Squires and he was saying it was necessary to seal the panel as a precautionary measure, was there any discussion at all about a possible heating, or was that word mentioned at all?-----

MR MORRISON: Your Worship, I would ask our learned friend to just be careful in his phraseology. As I understand it, this witness has not said that the conversation with Squires went on the basis that it was necessary to seal as a precautionary measure but only that it was desired to be so, and this connotation - this sort of twisting of the words continues. I really ask that he proceed on a proper basis.

MR CLAIR: I am sure the witness's answers are the evidence, Your Worship, and not my questions. I apologise if I didn't ask the question as precisely as Mr Morrison would like, but I'm not suggesting that that creates evidence in any way at all, Your Worship. I am sorry, Mr Mason. When you and Michael Squires discussed the desirability of sealing the panel as a precautionary measure, was there any mention of the word "heating"?-- I don't believe so. I have no recollection of that terminology being used at that point in time.

Well, after the end of the conversation with him what steps did you take?-- Shortly after that conversation was terminated I received another phone call, this time from Mr Ziebell - I believe it was shortly after that - I know at some stage I received another phone call anyway, at some stage on that Saturday whilst I was at home - and Mr Ziebell made a further request for a third deputy to be in attendance during the sealing operation. He put to me that it would provide a better coverage for the sealing operation itself with having three deputies on site where you could have two deputies on the sealing operation and then the third deputy could attend to inspections throughout the rest of the mine. I was quite at ease with that situation when it was put in that context, so I assented to, or agreed to having a third deputy work during the sealing operation.

What else did you do?-- I went to the single person's quarters. I drove down there to attempt to find Mr Parker and arrange for him to attend work on the Saturday afternoon.

And did you find him?-- I did, yes.

You had a conversation with him?-- I did.

Can you remember what you said to him?-- I believe I conveyed very similar information to Mr Parker as had been conveyed to me. I told him that the panel - we intended to seal the panel as a precautionary measure.

I would like you to, as best you can remember, just say what it was you said to him rather than just saying that you repeated to him what you had been told. As best you can recall, what did you say to him?-- I do know that Mr Parker was curious or alerted - obviously with me approaching him at that point in time it was a change of plans to what he expected to be his duties over the weekend. I can't say for sure what I said to him, but I believe that I would have conveyed the information about the tarry smell, about the unknown haze, but he was still quite reserved or curious - I don't know the right words to describe it - he was seeking more information, so I spent some time with Mr Parker on that morning and I described to him what went on with spontaneous combustion and the reason why we seal panels up and those sorts of things to give him an understanding of the reason that he was required to attend for work again on that day.

Could the witness see Exhibit 18, please, Your Worship? Just go to the fourth page of that, if you would, Mr Mason. It's an entry for Saturday, 6 August I want to draw your attention to?-- 6 August?

6 August '94. Now, it seems clear that at some stage over the next day or day and a half, thereabouts, Mr Parker recorded in his diary in respect of 6 August these words: "George Mason requested 1 p.m. that I go in because of concern over heating." Now, first of all, did you have a concern over a heating at that time when you spoke with Parker, Robert Parker?-- I had a set of - I had a circumstance that I was unsure of at that time.

Would you -----?-- I don't believe - as a matter of fact, I'm sure that I did not tell him that I had a concern over a heating. Why he would have written those words, I cannot say.

Did you mention the word "heating" to him?-- I'm sure that I would have mentioned the word "heating" to him when I was explaining to him what spontaneous combustion was about.

You can hand that exhibit back. You took Robert Parker to the mine; is that right? You took Robert Parker to the mine?-- I did.

You arrived there at about 2.45 p.m.?-- I would approximate that to be the time.

Did you see Michael Squires when you arrived?-- I did.

Did you have a discussion with him?-- Yes.

What was that discussion?-- More to the state of events, where the operation was up to with regard to sealing.

Did you have any discussion with him about these signs that had been reported?-- Not that I recall.

Did you have any discussion with him in which you discussed the possibility of a heating or that word "heating" was

used?-- Not that I recall.

Did it occur to you at that stage that it would be wise to calculate the CO make in the panel on the basis of the figures that would have been taken earlier that day?-- It did not.

Now, you had some conversation with Michael Squires and then there was a shift just starting at that stage, is that right, the afternoon shift?-- Yes.

What happened in relation to that?-- At the recognised start time Michael addressed all the people who were working on the afternoon shift. He was - this took place in the - at the start point or the marshalling area which is outside of the lamp cabin where the men normally congregate to depart from the surface, and advised them as to the situation.

Well, what did he tell them about the situation?-- To the best of my recollection he repeated to them the information he had given to me, that there had been a tarry smell observed in the - or noted, detected in the top return on the afternoon shift. I believe he spoke about the haze that he had observed earlier in the day in the intakes. The exact content of each specific piece of information I have no direct recollection of.

You are saying you can't -----?-- He spent some time in conversation with the men who were carrying out the sealing.

You are quite sure that he did mention the tarry smell?-- I believe so, but, no, I can't be 100 per cent sure.

And the haze, the same in relation to that?-- Yes, yes.

How many men were there at the time? Was it the whole of the shift or just a few of them?-- When Michael first started speaking with the men there was all those men who were working on the afternoon shift, all the miners, there was the two gentlemen from Tecrete, and shortly after Michael started speaking the deputies came around from the deputies' cabin and were standing around as well.

Yes, all right?-- I believe all the deputies came around, but I'm not 100 per cent sure on that. I just have a recollection of deputies approaching.

What happened after the briefing?-- The men went down to commence their duties.

One of the deputies was George McCrohon?-- Yes.

And the other deputies were Len Graham and Neil Tuffs; is that right?-- Yes.

George McCrohon was to take the men down to 512?-- Well, he went down with the men, yes.

And Len Graham was the second deputy assigned to 512. You made some arrangements to meet him in the section in time to carry out a joint inspection with him; is that right?-- I did.

And then did you have a conversation at some stage with deputy Neil Tuffs?-- I did.

What was that conversation?-- I was proceeding from the marshalling area back towards the undermanager's office. Mr Tuffs was in the process of servicing a PJB troop carrier/man transporter so he could use that machine to go underground to carry out his duties. As I walked past he called me aside and asked me what my intentions were for the methane drainage drill on the next Monday. I told him that I hadn't considered that at this point in time, and that's where the conversation terminated.

When you say he asked you what your intentions were, can you remember what he said? Was there some reference to 512 panel?-- There was not.

As best you can recall, what did he ask you?-- Very close to the words that I used there - he asked me, "What are your intentions?" - yeah, "What are your intentions for the methane drainage drill on Monday?"

Ordinarily, I take it the intentions for the methane drainage drill crew would be that they go underground and work?-- That's correct.

Well, did he indicate to you what was on his mind as to why they mightn't go underground and work?-- No, but I think I assumed what was on his mind.

What did you assume?-- That if the situation was - in 512 was one of risk, then the drill would not operate.

Was there any reference to 512 going through the explosive range?-- There was not.

Nothing said by him?-- That's correct, there was not.

So, it seems from what you say you both proceeded on some

assumptions that 512 was going to be in its explosive range at some stage. I mean, just say if that's not correct?-- I don't know what was in Mr Tuffs' mind. I can't answer for Mr Tuffs.

Did he have any discussions with you about other sealing procedures or processes, including 5 North, at that stage?-- No, he did not.

Did he say to you that he wouldn't take the blokes down - that's referring to his drilling crew - while 512 went through the explosive range?-- No, he did not.

What did you do after you had that conversation with Tuffs?-- At some stage I phoned Michael Squires at home to check whether he had made meal arrangements for some of the men who were working the afternoon shift.

Do you remember what time that was?-- Before I went underground - no, I don't know the time.

Okay. Go on. You went underground at about 4.30 p.m.; is that right?-- I would approximate that to be the time I went underground.

Where did you go when you went underground?-- I took a PJB man transporter and went directly to the 512 section.

What did you do there?-- When I arrived there I was informed that Len Graham was away - I believe he was over at the - he had gone across to the 4 South section to gather up some more Tecrete grout. As I mentioned previously, I had arranged with Len for him to accompany me during an inspection of the 512 panel. Because he wasn't there, I was talking with deputy George McCrohon, so I said, "Well, we will go and do the inspection." - he and I.

Go on?-- Well, I parked outbye from the section and walked up the 510 No 1 road - this was before I met Mr McCrohon. I had noted the work that was being carried on at the belt road seal. After that conversation I had with Mr McCrohon, then we both proceeded into the return for 512 panel - the return roadway.

That's the No 1 road?-- That's correct.

Yes. Go on?-- My intentions were that I wanted to travel the length of the inspection route, being No 1 heading to 13 cross-cut and across the back of the panel. I wanted to make a full inspection. When we got into the return, the state of construction of the prep seal in No 1 road prevented access further beyond that point. At that stage Mr McCrohon told me that he had been inbye of the prep seal site - I believe he said in the vicinity of 5 or 7 cross-cut; that he had taken Drager readings and had been only able to obtain 7 ppm. I spent some time - I stayed some time at the prep seal site. I spoke to the men who were working there. I reminded them that they could not progress the state of that seal so that it was - I told them I didn't want the seal progressed too far in

advance of the other seals. At that stage the No 3 seal was still being worked on, and No 2 seal we had not started the sealing in the aperture. When we weren't able to travel further inbye due to the construction of the prep seal, we then traversed back through the man door and back out into the intake roadway, or intakes, and then we proceeded in to the 512 panel along No 2 road. I was looking for an alternate access to the No 1 road.

Were you able to find that?-- We were not.

Did you have some conversation with McCrohon?-- In my statement I say that I had a conversation with him in the return, but that's not correct. The conversation I had with Mr McCrohon was after we - well, the one that I was referring to was after we exited from the No 2 road.

Okay. Did you make some observations in No 2 heading?-- Yes did.

What were they?-- Well, I can speak for the ones that I made anyway. The ventilation flow - when - even when I first got into the panel, I observed - I was unable to detect any haze in the intake airways, and the ventilation flow was quite normal - it was quite a good flow of air in the No 2 roadway. When we got to 3 cross-cut, we had traversed - obviously the extraction process had been out to just inbye of No 1 cross-cut on 2 road. We had traversed through the extracted area. When travelling along No 2 road, there was some roof debris on the ground. When we got to No 3 cross-cut, the amount of fallen roof prevented further access without inherent danger to myself or Mr McCrohon, so we did not proceed beyond that point. There was no doorway in 1 or 2 cross-cut stoppings. There was a doorway in No 3 cross-cut stopping but access to that door was prevented because the bottom coal had been mined in the cross-cut. It was like a cliff face. We were standing down on the floor of the seam. It was quite high and I was unable to scale that cliff face.

Go on. What happened after that?-- As noted in my statement, the observations made at that point were that, as I repeated, there was still - I had not noticed any haze in the air. There was no - the air flow was quite good at that point in time. There was - the ventilation current appeared to continue further inbye. I had no goaf odour to speak of. The air temperature there was - it was quite comfortable.

Go on?-- Well, Mr McCrohon and I then proceeded back along No 2 roadway, exiting from the waste. I believe it was at that point in time that we came in contact with Mr Graham who had returned to the panel from 4 South, and there was discussion amongst those gentlemen with regard to the state of the section.

Did you take part in that discussion?-- Initially not. I wanted to reserve my opinions to ensure that they weren't in conflict with other people's opinions.

Go on?-- Both Mr McCrohon and Mr Graham made the observation

that they did not believe that there was any problem with the panel, and that the bringing forward of the sealing to the Saturday had not been necessary. That was an observation with which I concurred.

You stayed at the sealed sites until what time?-- I spent quite a deal of time in the top - at the top return seal. I can't recall whether I went directly from - on the completion of that inspection, whether I went directly to the top return or went down and had a look at the belt road seal, but I did go - I know I made my way back to the No 1 road prep seal and spent quite some time there, just assisting with the sealing process.

Okay. You don't need to go into detail about what occurred during that time, but you did stay until some time between 7 and 7.30; is that right?-- I would approximate it to be about that time, but I'm not sure.

Did you notice anything unusual at any time while you were there?-- No, I did not. The only - I had spoken to the men, and also Michael had spoken to them, I believe, about the need to - once sealing - the sealing process is begun, it needs to be continued - that is, continued until its completion. So, it is not something you start and stop and continue on tomorrow, or take an extended break from it. At the belt road seal, whilst I was there, I was made aware that the grout pump the men were using was playing up. I believe it was in relation to the split in the air hose, or something like that. The men decided that because of the extent of time that they were to be on the sealing operation, that they would roster their meal break - they would take an opportunity for them to have a meal break - stop working on the No 1 seal because it was advancing - it was way ahead of No 2 seal. So, they stopped working on that and the men carried on working on the No 3 seal, the belt road seal, to progress it to its completion, so that then No 2 seal could be started and brought up to the same state as No 1.

Well, at least during the time that there was the work being done on No 1 seal whilst you were down there, you were basically in the vicinity of No 1?-- Yes.

Is that right?-- Yes.

Did you notice anything in relation to the - either the regulator just outbye of that No 1 heading in 510 No 1 road - what condition that was in during this period?-- I've pondered that question myself quite a deal of time. I find - no, I really can't be 100 per cent - I can't say this is the state of the regulator.

What about the doorway between No 1 and No 2 heading in 0 cross-cut, 512?-- Well, it was ajar. The hoses that serviced the grout pump and the batcher or mixer both ran through that doorway. I don't know - no, when we first went through it, it wasn't fully ajar. I think at some other stage when I saw it it was - it was fully open.

Okay?-- I'm not sure, but I think when talking about that regulator in 510 No 1 roadway that services the 512 return, I think that the doorways were closed. It had a number of apertures in it with louvred controls, and I'm not 100 per cent sure, but I believe they were shut.

Was it still in tact when you were down there, or were parts of it missing? You don't remember?-- No, I can't give an accurate description of that, but I would say that there was parts of it missing because I know that - I knew that it had been breached on the Saturday day shift.

Some time after you went back up top again, did you have a conversation with Mr Schaus?-- I did.

What time was that?-- I would approximate that to be in the vicinity of 9 p.m.

And what was that conversation?-- I rang Mr Schaus to give him the courtesy of knowing that 512 panel was being sealed. I conveyed to him the circumstances that had been conveyed to me earlier on that day.

What did you tell him?-- Well -----

Just as best you can in terms of what you remember can you go through the terms of the conversation that took place?-- I believe that I relayed the same information to him that had been relayed to me, to give him an understanding of why the panel was being sealed. He was - I did not know that - well, it turned out that Albert had thought that the panel was going to be sealed on that weekend, so he was a bit confused about receiving the phone call from me that we were sealing the panel up when it was an expectation of his that it was going to be sealed.

I know you are explaining those things, but can you just recount as best you can the conversation that took place rather than what you thought or your reason for saying things? Just recount as best you can the conversation that took place between the two of you?-- I don't know if you've ever had a conversation with Mr Schaus, but it is usually quite protracted things that get talked about, so I find it very difficult to do that.

Just do your best?-- As best I recall, the information that I gave to Albert was the report of the tarry smell in the top return on the Friday afternoon shift. I told him about the perception of a haze - or detection of a haze in the intake roadways on the Saturday day shift, and that the sealing was being done as a precautionary measure. I told him that I had been down there and made an inspection and that I did not believe that there was a problem in the 512 Panel.

Did you have a discussion with him about there being any concern about there being a heating in 512?-- I can't recall that.

Did you have any discussion with him about the conversation you had had earlier that afternoon with Neil Tuffs?-- Yes, I believe I did.

What did you say to him about that?-- I think I just relayed it in the context that I've got in my statement here. I told him that he had approached me and was concerned as to what was going to be done with the drill - or the drill crew on the Monday. I told him that I had told Neil that I hadn't considered it at that point in time.

Did you mention anything to Mr Schaus about Neil Tuffs expressing concern - or at least about Neil Tuffs asking whether the 510 drill crew would be sent underground on the Monday shift while 512 was expected to be in the explosive range? Any discussion about that?-- There was no discussion about explosive range, no.

Any discussion about the fact that 510 was on the inbye side of 512?-- No.

What sort of response did Mr Schaus make when you mentioned this conversation about - conversation you had had with Neil Tuffs?-- No, I don't have any - I don't have any distinct

recollection of -----

Did Mr Schaus say words to you to this effect, referring to your report of a conversation with Neil Tuffs, did he say to you that if Neil had any such concern about the safety of the 510 location that he, that's Mr Schaus, considered that logically all other locations in the mine would be at risk and if you were not going to send the 510 drill crew underground that no-one else ought to be underground either because of the risks involved to them. Did he say anything to you like that?-- He may have, but I don't recall.

You don't recall anything like that?-- No.

Now, what happened after that, after you had the conversation with Mr Schaus? I take it the sealing of 512 continued, the men remained on the job, the night shift came in at some time?-- Yes.

That would have been about 11 p.m.; is that right?-- The night shift started 11 p.m. on the weekend, yes.

Did you have some conversation with the night shift when they came in?-- I did.

What did you tell them?-- The men who were working the night shift had previously - they were scheduled to work the night shift from the weekend planning meeting, so I brought to their attention that we were sealing 512 Panel as against their duties that they had previously been assigned. Basically we stone dusted on the back shifts on the weekend, so they would have been anticipating to be carrying out that work.

Go on, if you can just tell the Inquiry what conversation you had with them, what you told them?-- Well, I told them that the panel - as best I recall I told them that the panel was being sealed, that it had been done as a precautionary measure or a - it started in that fashion. I reiterated the importance to those people that the sealing process was to be continued through until its completion. That is, that there was to be no breaks taken as such, that the operation wasn't to stop. I told them that the men from the afternoon shift would be staying - that they were staying down there, it'd be a change over on the job as against - the normal thing on the weekend is that the shifts change at the bath house, that's not a change over on the job, but that they would be staying down there, and then I assigned them other work for them to - I believed at that stage that the sealing would be completed in the early part of the Sunday night shift and I assigned them other work to continue on with after they had completed the sealing process and had whatever meal breaks and that that were owing to them.

When you told the men that the panel was being sealed as a precautionary measure or precautionary action, did you tell them what it was a precaution against?-- I don't believe so.

Did anybody ask? Did they say, "Well, tell us George, why do we need to seal it as a precautionary measure? What are we

guarding against?"-- No. One of the - a couple of men who were on the night shift had been at work on the day shift, George Ziebell, Cole Klease. The main issue that was discussed with me was another of the gentlemen had desired to work afternoon shift on that weekend. With the shortage of manpower that resulted - that came about as a result of the overtime quotas being filled I had scratched the Saturday afternoon shift dusting crew, this gentleman was then re-assigned to the night shift. So he was making - he made comment of the fact that he had desired to work the afternoon shift and ended up working the night shift and then turned around and worked the afternoon shift anyway.

You can't recall anything else that was said or asked by any of the men in relation to this at the time that you briefed them?-- No, I cannot.

What happened after that? The men went underground, I take it?-- They did, yes.

And you stayed at the mine?-- I did.

Until what time?-- I believe I would have left the mine about 1.45 a.m..

Before that did you speak with Cole Klease who was down in 512?-- I did. Cole rang me from the section shortly after he arrived down there. I had a conversation with him at that point. Then he phoned me again about 1.15 a.m. and advised me that the sealing process had been completed. I questioned him as to whether he had had any problems, difficulties. He said, "No, everything went really well." There were some finishing-off touches to be carried out on the seals.

Yes?-- I think I just repeated to him that -----

That was all?-- That work - that the jobs that had to be done to put the seals, the 512 seals then into return air current.

Before you left the mine - I'm sorry?-- To ensure that the air that was passing across the face of the 512 seals was then going directly to return.

Prior to leaving the mine did you do something in relation to the Unor system?-- I did. What I do recall is talking with Len Graham. Len - well, there were three deputies again working on the night shift and I knew that the work load that was there for the three deputies wasn't to be there all night, right? The sealing would be finished in the early part of the shift and I gave Lenny a rundown on the Unor system - I think it was more a refresher than a rundown with regard to establishment of set points for the alarms with regard to the 512 - the sensor point in behind the 512 seals, asked him that if it was required, if it was alarming due to the set points being breached, that he would advance the set points to a new reading, but only in small increments.

Did you explain to him what you meant by "small increments"?-- Yes, I did. I believe I spoke about 10 parts per million, 10,

15.

That's the CO settings, what about the other settings?-- CO is the only ones that I believe I spoke to Len about.

Did you make any arrangements with him or with anybody in relation to the monitoring of that Unor system following the period after sealing right through the next day?-- Sorry, could you ask that again? Did I make any arrangements with Mr Graham?

Yes, or with anyone else for that matter about the continued monitoring of that Unor system during the period following sealing, that is throughout the next day?-- I made the arrangements with Mr Graham for the balance of the night shift that if the alarm set points needed to be modified, then for him to do that. I did not make any arrangement with him or with anybody else about the ensuing shifts.

Did you expect that the Unor system would be monitored during the following day, during the Sunday?-- Well, the Unor system is monitored every day.

Well, that is that somebody would keep an eye on it and adjust the alarm levels, that sort of thing, given that 512 had just been sealed?-- Yes, I understood that if that - yes, that was a normal course of action subsequent to any sealing, to all sealings.

Tell me, when you were resetting those alarm levels during your conversation with Len Graham, was the siren active?-- It was.

Did it trip on any of those occasions when you were adjusting the levels?-- Trip?

Did the siren go off?-- It did. That's why I took the - I had - I had adjusted the set point value for monitor point 5 at some time earlier on that night shift and it was the siren that drew my attention to the need to do that. I believe I adjusted the set point again whilst I was showing Mr Graham - giving him a run through again on the process for doing that.

Now, obviously after sealing, of course, progressively the alarm levels in respect of the point behind the seals would be breached. I think you've already explained that. They needed to be shifted in progressive increments?-- Yes.

Did you have some expectation yourself as to what would be the appropriate changes in the gas readings after sealing, that is what you might regard as within the bounds of normal and what you might regard as indicating something unusual happening down behind the seals?-- To give a qualitative answer to that, I believe I can - quantitative, sorry - when I gave Mr Graham the instructions on the night shift I told him if it needs to be moved, if it - if the - if it does alarm, so my "if" was the expectation that it would be some time in that night shift before the set point value that I had installed was reached or exceeded, and I thought that was in the 30 to

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35 ppm range that I had - a value that I had installed.

Sorry?-- The value that I had installed as an alarm level, I thought it was 30 or 35 ppm.

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You told him to move it in small increments, I think, is what you -----?-- If it was required, yes.

Did you say to him, "Look, what we normally expect is that it would rise to such and such an extent, but if it goes more rapidly than that, let me know or let somebody know."? Did you say something like that to him?-- Not that I recall.

Did you take any steps to put anybody in the position next day to be aware of what changes might be expected in the gas readings behind the seals in 512?-- Specifically, no, but I did know that an undermanager would be at work on the next day, and I also knew that Mr Schaus intended to visit the mine the next day.

Well now, did you have any expectation yourself as to what changes might occur in the Graham's Ratio over the period following sealing?-- No, I did not, no.

You left the mine at about 1.45, you mentioned. You were at home the next day?-- Yes.

Did you receive a call from Mr Squires at any time in the course of the next morning?-- I don't recall receiving a phone call from Mr Squires in the morning.

During the morning?-- Yeah, I don't recall that, no.

Sometime just after smoko?-- Well, I have no recollection of receiving that call.

Do you recall any discussion with him where he told you that he had inspected the waste with George McCrohon on the Saturday afternoon?-- Mr Squires wasn't at work on Saturday afternoon.

I am sorry. Did you tell him, I should say, that you had inspected the waste with Mr McCrohon on Saturday afternoon? Did you tell him that during any conversation on the Sunday?-- I don't recall it if I did.

Did you have any discussions with him on the Sunday morning about the readings on the Unor for that monitor point behind the seals?-- I don't recall having a conversation with Mr Squires on Sunday morning.

Sometime on the Sunday afternoon or early evening then did you receive a phone call from Michael Squires?-- I did.

What did he discuss with you on that occasion?-- Michael had a concern about dealing with a new crew of men. His normal crew that he worked with - he rotated on the day and afternoon shift with one particular crew. This evening for the night shift of - the Monday night shift, 8 August, was Michael's first shift as undermanager on night shift with the crew of men who worked permanent night shift. He said to me that a projection of the trend of the increase in methane in the 512 Panel behind - in the sealed area of 512 showed that it would enter the explosive range at some time on the night shift,

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Monday, 8 August. Because they weren't his normal crew, he didn't know how they would react to that circumstance and he didn't know - because he wasn't all that familiar with that crew, he didn't know how he would deal with them.

Did he say to you that he was concerned that the men on the night shift might not want to go down the mine?-- Yes, words to that effect.

Did he say why he was concerned -----?-- Or that they might not want to stay down the mine. He didn't know specifically when it was expected to go into - you know, it was only an expectation that it would go into the explosive range at some time during the night shift.

Did he say why he was concerned that they mightn't want to go or at least stay down the mine?-- I can't recall him saying that, no.

Did you ask him why he was concerned that they mightn't want to go down or stay down the mine?-- I asked Michael what his opinion of the mine was, was it in a safe condition or not. I asked him that on a number of occasions. I believe that the situation that was being put to me was that the men may not want to go down because it's going through the explosive range. Michael was firm in his conviction that there was no problem at the mine, and his concern was how he would deal with what he saw as an issue where he was the undermanager on shift having to deal with a strange crew about a situation that he believed was not warranted.

I don't know that you answered my question?-- I'm sorry.

Did you ask him at all why he was concerned that they mightn't want to go down? Was that something raised by you or -----?-- No.

Anyway, you questioned him about the Unor readings; is that right?-- Yes, I questioned Michael a couple of times about his opinion. I asked Michael, "What do you think about the mine? Do you think there is any problem in the mine?" He was resolute in his opinion that there was not a problem, so I asked him what the readings were. Yeah, I just wanted to know what the situation was - what the current situation was. I had not been in - I had not any knowledge of what had transpired throughout the day.

Did he tell you the readings?-- Yes, he did.

Do you remember now what the readings were that he told you about?-- The way I put things in my statement still reflects my recollection. I can't recall whether he said that the readings were at that point in time when he rang me up or - I am more confident that it was a projection of the trend indicated they would be in the 130 to 140 ppm range at the start of the night shift. Michael told me that he had kept an eye on what was going on through the day with the growing in carbon monoxide and that it plotted into a straight line graph, it was a very regular increase, and that's how he was

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able to project what it would be at shift start time.

Is that what he told you?-- Yes.

Did you have a view yourself about the significance of these readings that he gave you? What significance did they have for you, perhaps I should ask you that?-- No - well, I concurred with Michael when he told me what they were; I concurred with him that there wasn't a problem in the mine.

And was that your belief at that time, that there wasn't a problem?-- It was.

And did the readings indicate that to you? You see, I am just trying to find out from you what significance the readings had for you? I am sorry?-- Yes. Sorry?

The readings -----?-- Hang on, I am trying to recollect, sir -----

Yes, okay?-- ----- my impressions at that point in time. Well, no, they did not cause me any alarm.

Did you have any yardstick to measure these readings by, these readings that Michael Squires related to you?-- I guess a subconscious yardstick.

What was the subconscious yardstick?-- The experience of other panels.

Well, what did you have in your mind at that stage about the experience of other panels and the levels of CO in parts per million after sealing?-- The levels of CO increased after sealing, as did the methane content. That was the normal thing to happen at Moura No 2 Mine, is when you sealed off the levels of CO continued to rise, the percentage of methane continued to rise, the concentration of oxygen was diminished and at the final inertisation of the panel the gas content in there was almost 100 per cent methane.

All of those things that you just said were quite reasonable expectations, of course, after sealing a panel?-- Mmm.

But what I am asking you is when Michael Squires related to you specific readings of CO in parts per million during this phone call in the early evening of the Sunday, whether you at that stage had any yardstick against which you were able to say, "Yes, well, those readings don't give me any cause for concern."?-- Well, I was not alarmed by the readings that he gave me.

That's not really what I asked you. Did you have any yardstick against which you could gauge the significance of those readings?-- Other than what I've already said to you, I don't think so.

What you have already said to me is that you had in mind the sealing of other panels -----?-- Yes.

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----- at No 2. If I can take you to that. What did you have in mind at that time as to what levels the CO had reached after the sealing of other panels within the same time frame?-- The CO levels reached in other panels had been up, I believe, in the 170 to - up to 200 ppm, I think, would have been the highest level that I was aware of.

You realise what I am asking you is about your knowledge at the time of this conversation with Michael Squires?-- Yes.

And you are saying that your knowledge at that point was that other panels had reached those levels you just mentioned after sealing?-- Yes.

Did you know when they had reached those levels?-- I don't think I was cognisant of it at that point in time. I would have had some knowledge of - I had some knowledge of when they did get to those levels, but that was not a - it was - when I heard the value that Michael mentioned to me or told me what it would be, that did not cause me any alarm at that point in time.

We are talking about early evening, so I suppose we are talking about 16 or 17 hours after sealing, am I right there?-- Yes.

Did you know what level other panels in No 2 had reached 16 or 17 hours after sealing - that's what level of CO? Did you know that at the time that he was talking to you?-- No.

Did you have any yardstick at all against which to measure these things, any sensible, usable yardstick against which to measure these readings that he was giving you?-- Other than what I've said to you previously, no.

Well, in spite of that, you say you were of the opinion that there was no problem in relation to 512?-- That's correct, I agreed with Michael. I guess as a means of giving myself some more comfort because of the call that Michael had made to me, I drew Michael out a number of times on his opinion of the condition of the mine and I then put to him that if the men didn't want to go down the mine and he was still of the opinion that the mine was safe at that point in time, then I expected that he would go down the mine.

Did Michael Squires tell you against what sort of yardstick he was measuring these readings that he related to you?-- I'm not 100 per cent sure. I know he talked about the - plotting the trend of growth. I think he may have - he may have made a comparison with a trend for the 512 - 5 North or 5 North-west section that - from the 1986 period in time.

Was this mentioned in the telephone call?-- I think it was, but a lot of things have transpired.

I don't know that you make any reference to that in your statement. Is that something you have just remembered?-- Yeah, you are prompting my memory, but I can't be 100 per cent sure, that's why I say to you I believe - I can't be sure.

Well now, of course, he was an undermanager there at the mine and he had access to the readings on the Unor; is that right?-- Yes.

He rang you as the undermanager-in-charge?-- Yes.

And he related to you the readings that he had seen on the Unor; is that so?-- No, I don't think he gave me the readings that were on the Unor.

Well, some of the readings from the Unor?-- Well, that he had used information from the Unor anyway.

Did you believe that he was in a better position than you to judge whether everything was normal in the panel at that time or not?-- I believe my actions in questioning Michael a number of times for his opinion would reflect that, yes.

In what way was he in a better position than you? Why was his opinion better than yours?-- Because I had been isolated from the mine since 1.45, or approximately that time, on Sunday morning.

And he had been there?-- Yes.

And he had seen the readings?-- Yes.

And there was no reason why you couldn't ask him over the telephone what the readings were. You could have got any information from him that you wanted in relation to those readings, couldn't you?-- I thought we've just been through all that. I did ask him.

Yes, that's right. You asked him about some, but what I'm saying to you is that if you say he was in a better position than you because he was at the mine, what I'm suggesting to you is that you could have asked him for any of the information that he had access to in order to allow you to form your own opinion; isn't that right?-- I did.

Well, did you have as much information as he did?-- Well, I agreed with Mr Squires about the condition of the mine.

I see. Well, let me just ask you this-----?-- Which means I formed the same opinion as him.

Well, I understood from what you were saying that one of the things that reinforced you - or, in fact, caused you to hold the opinion you did is that you kept asking him for his opinion, and he kept telling you that he thought everything was okay. That's what I understood you to be telling us. Isn't that right?-- Yes.

Okay. Let me ask you: why is it-----?-- Mr-----

Why is it-----?-- Mr Squires had a concern about dealing with the men on the night shift in imparting a desire not to go down the mine, so I wanted to know where he stood in relation to that.

Well, you correct me if I am wrong, Mr Mason, but I understood you to tell us that one of the things that you relied on heavily is that you asked him a number of times whether, in his opinion, there was any problem; is that what you said, or-----?-- I drew comfort from his opinion.

Okay. I understood you to say that you thought he was in a better position than you to form an opinion; is that right?-- If I had been at the mine, I would feel that I was in a better position than somebody who was asking me over the telephone.

In any event, you relied basically, as I understand it, on his opinion of events, rather than any yardstick - any yardstick that you had yourself to measure these signs against CO concentrations that had been related to you; is that right?-- You have me somewhat confused. I think I used both of those things to-----

Okay-----?-- Assist me with my-----

That might be an appropriate point, Your Worship.

WARDEN: Thank you, gentlemen. We will take the lunch adjournment and resume at 2.30.

THE COURT ADJOURNED AT 1.04 P.M. TILL 2.30 P.M.

THE COURT RESUMED AT 2.31 P.M.

GEORGE ARTHUR MASON, CONTINUING:

MR CLAIR: Mr Mason, before the break I was asking you about this telephone conversation that you had with Michael Squires on the Sunday afternoon, either late or early evening?-- I recall.

Now, can you continue with that telephone call? You say that Michael Squires mentioned to you the concentration of CO, and I think you have told us about what significance that may have had for you. Can you say what else was said during that telephone call? Was there some reference to his carrying out an inspection of the mine?-- Yes, there was.

What was said about that?-- Michael told me that he had made an inspection of the mine on the Sunday day shift and that inspection had been carried out in the company of deputy Bob Newton and that Bob had not expressed any concerns to Michael about the 512 panel. At that stage, Bob was - he was content to attend to his normal duties on the night shift - Monday night shift.

He was generally the night shift deputy?-- He was - worked permanent night shift, yes.

Now, did you have some further conversations then with Michael Squires during the telephone call?-- Yes, I did.

Go on?-- When Michael raised the - first raised the possibility of a situation arising where the men came to work and may not have - or expressed a desire that they did not want to go down the mine that night, I told him of my attitude in the event that that situation should arise.

What did you say to him about that?-- That I do not force anybody to go down the mine. If the men do not want to go down the mine, then that is a choice that is open to them, and I detailed the list of alternate work that could be provided for the men if that situation did arise.

Go on. What else was said?-- Well, I think I have already detailed the balance of that conversation in earlier evidence. When I pursued Michael's opinion of the mine, I instructed him that if the men did have that attitude that they didn't want to go down the mine, and at that time he was to believe the mine was safe, he was to carry out an inspection of the underground mine on that shift.

Sorry, he was carry out an inspection?-- Of the mine.

Himself?-- Yes.

That is, if the men chose to stay out, you were asking him if he thought it was safe to go down?-- That's correct.

Let me ask you this: if the men chose to remain on the surface, would that itself indicate to you that there was some concern about the safety of the panel?-- It would indicate to me that the people had a concern.

And I take it the men weren't in the habit of staying out of the mine unless there was some genuine concern?-- That would be my experience.

Did you think it was wise in those circumstances to be suggesting to Michael Squires that he should go down the mine?-- Yes.

Well, what was it that gave you the confidence to suggest that Michael Squires should go down the mine if he still considered the mine to be safe - and I think you qualified it in that way?-- That is a course of action that I would undertake.

You didn't suggest to him that perhaps he should call you again and discuss with you any readings that he was getting on the Unor, or anything like that?-- No, I did not.

Did you have a view that Michael Squires might know more about the Unor system than you did?-- I don't think so.

It is just that you seem to have proceeded at that basis - that he was in a better position to judge whether the situation underground was safe than you would have been yourself. Was there a basis for that?-- Only because - well, yes, the basis for that is if I was in - if the role had been reversed, I would have believed that because I had been in attendance at the mine, had a background knowledge of what had transpired, that I would be in a better position to make that decision.

Can we move on with the conversation? Did he ask you something about how he should deal with the matter at the start of shift that night?-- Yes, he did.

What did he say about it and what did you say about it?-- Well, I was rather confused. Michael asked me then at that point, after I had explained to him my - how - I'd explained to Michael how I would deal with the situation, then he asked me how I wanted him to deal with it, how I wanted him to broach the subject at start of shift. I was somewhat confused, because I had just spent time going through that with him.

Again, if you could try to give the conversation that took place as best you can remember on this aspect of the telephone call?-- Michael asked me how I wanted him to approach the subject at the start of shift; did I want him to summon all the men together and give them a run-down of the events that had transpired. I told Michael there was no need to do that. I didn't believe there was a need to do that, as quite a number of the people who worked permanent night shift had been

involved with those events on the weekend. They had been there through the sealing, there were deputies that had been at work through the sealing and the shifts preceding and the shifts subsequent. I told him that I thought that the men would be well aware of the situation as it was.

But when you say "the situation as it was", what are you referring to there?-- Well, that course of events that had transpired over the weekend.

But I'm just interested in what you mean when you say the men would have been well aware of what the situation was. Can you explain that reference - "the situation as it was"?-- Well, all those things that we have spoken about up to-----

Just run through them?-- That the panel had been sealed as a precautionary measure as a result of a number of observations that had been made - I guess basically that's it.

The men that were to go down on the night shift that night, do you say that they would have been aware of this report from Mick Caddell about a slight tarry smell on the Friday afternoon?-- I believe they would have been, yes.

How would they have become aware of that?-- The people who were involved on the sealing process had that - had those circumstances explained to them.

But not all of these men that were to go down on the Sunday night had been involved in the sealing process, had they?-- That's correct.

So, on what basis did you expect that those people would have become aware of this report of Mick Caddell on the Friday afternoon of a slight tarry smell?-- News around the mine - there is quite a good grapevine at work. People always seem to have knowledge of events that transpire in the mine.

So, you were relying on the grapevine, in effect; is that what you are saying?-- Yes.

The smell that was reported on the Saturday and the haze, the same considerations apply to that?-- The smell?

There was a report of a stronger smell, you have told us - a stronger smell that was mentioned to you on the Saturday morning and a report of a haze. Well, let me ask you this: how did you expect that those fellows that were going down on the Sunday night shift that hadn't been involved with the sealing the previous afternoon would become aware of the fact that there was a smell and a haze that was reported on the Saturday?-- I guess by the same process.

The grapevine?-- Yes.

Did you think that the men going down the mine on the Sunday night would have appreciated what Unor readings had been registered during the Sunday since sealing?-- I don't know.

Did you think it would be a good idea for somebody to have attempted to explain the significance of those readings?-- Obviously I didn't.

What about the CO parts per million readings on the Saturday and the wind velocity, which would have enabled CO make to be calculated? Did you think the men going down on the Sunday night would be aware of those things?-- No, that didn't enter my head.

Well, did you think, Mr Mason, that it was a bit unfair, or do you think now, perhaps, that it was a bit unfair to expect the men who were going underground on the Sunday night to make a decision for themselves about whether they would go underground without their being aware of the various-----

MR MORRISON: I object to the question.

MR CLAIR: -----items of information.

MR MORRISON: I object to the question, thank you. This is now asking for a hindsight commentary on events which didn't happen, and forms no part of the determination of this proceeding in relation to nature and cause. Mr Clair is entitled to and has been pursuing what was in the man's mind or what was not in the man's mind, what he did do and what he didn't do, what others did do or what others didn't do, and I have no quibble with that, but he is now progressing beyond that and saying ex post facto, "Would you think it was fair?" Now, the concept of something having fairness is also foreign to these proceedings; they have nothing to do with the determinations here and smack much more and impermissibly more of laying blame or encroaching upon breach of duty, which Mr Clair well knows is not within the scope of this proceeding, and there is the topic that I mentioned as long ago as last Thursday - it is an objectionable course and it should not be permitted.

MR CLAIR: Your Worship, I don't want to get bogged down in any argument about it. I'm quite happy to proceed with my questioning without insisting on an answer to that.

WARDEN: Thank you.

MR CLAIR: Mr Mason, just so that I understand where you stood, as it were, at the time, what you are saying is that you were aware of these various things: the report of the tarry smell, the slight tarry smell on the Friday afternoon, you were aware of the report of a haze being seen in the panel on Saturday, you were aware of the report of what you described as a stronger smell in the panel on the Saturday morning, and you were also aware of the fact that there had been a - I think, 8 to 9 ppm of CO found on the Saturday morning from deputy Klease; is that right? Does that sum up the extent of your knowledge at that time?-- The description of the waste smell on Saturday was not my description, that was Michael Squires' description. Once again, I will bring you back to the point that the tarry smell that was recorded or observed on the Friday afternoon had not been repeated.

The deputy who had made that observation had not followed through on an inspection of that panel on the night shift. The haze that had been observed was of unknown source and was not evident at the time that I went underground. The goaf odour appeared to be normal to me when I went underground and I did not detect any other abnormal smell when I was in underground. Yes, I was aware that all those things had been brought to my attention. I was also aware of the observations that I personally had made, and other people had made subsequent to those things being brought to my attention.

Again, I'm dealing with the position that you were in at that time when Michael Squires was talking to you on the Sunday evening over the telephone?-- Yes.

When he raised with you this question as to whether he ought to broach the subject with the men on night shift before they went underground, your view was that there was no necessity for these various matters to be mentioned to them; is that the position?-- The position that I understood is that Mr Squires had a concern with dealing with a situation of difference of opinion - the potential situation of difference of opinion. He did not know whether that was going to arise or not, so that is why I made the comments to him that I did.

That doesn't answer my question. What I said is -----?-- I'm trying to convey to you, sir, the basis for the answer that I did give to Mr Squires.

Okay, if you can just listen to my question then and give an answer to me, at the time that Michael Squires asked you whether he should broach this subject with the men before they went underground on the night shift that night, you were of the view that there was no necessity to do so?-- That's correct.

It's a simple answer?-- That is correct. I was of the opinion that there was no necessity to do that.

It's true, isn't it, that the existence of a smell in a panel can be an indication, one indication amongst other matters, of the likelihood or possibility of spontaneous combustion?-- I understand that to be true.

I think you've told us all this in your evidence earlier?-- I could well have.

The existence of a haze in a panel can be an indication of the possibility of spontaneous combustion?-- Yes.

That's so, isn't it? The fact that there is a report of a smell, even a stronger goaf smell again even though it may not be described as a tarry smell, could be an indication of the possibility of some spontaneous combustion in the panel?-- I'm not sure about that.

That's not one that would cause you to carry out any investigation?-- I don't know that that's correct.

Okay. Well, in any event, the position was that the men then who were going underground on the night shift that night and who hadn't by way of the grapevine become aware of those various things were simply, as you saw it, to make their own decision without the benefit of that knowledge; is that right?-- -----

MR MORRISON: I object to that also. Mr Clair continues to put less than the evidence which has been given and I don't know why, but he does. The evidence clearly given, and so recently so that it's only about four or five inches up the same page of my notes, is that a number of the men going down had been on the shifts before, during and after the sealing privy to the sort of information that he has been given. Now, Mr Clair chose at that time to draw a distinction between those men who were in that position and going down Sunday night with those who weren't in that position but nonetheless going down Sunday night. Now he just comes back and encompasses everyone within the same sweep but chooses not to put the correct evidence to Mr Mason and that's quite an unfair line of questioning.

MR CLAIR: I can have my question read back out of the record or I can repeat it. I did refer to those who hadn't heard on the grapevine. I thought that was sufficient to identify the

group who either weren't on the shift or hadn't been told of it through the grapevine to which the witness has referred. If it's not clear to the witness I will make it clear to the witness.

WARDEN: Could you perhaps re-explain it to the witness to get the right answer?

MR CLAIR: Do you understand what I'm saying, Mr Mason?-- Can you repeat it for me?

MR CLAIR: I didn't detect any difficult. In respect of those men who hadn't been on the shift or been on one of the shifts to which you've referred, and either in that way or in some other way heard on the grapevine about the report of the tarry smell on the Friday night, a report of a smell and a haze on the Saturday morning, in respect of those men, that is the ones other than those that had heard or become aware in some way of those things, then they were in a position where they were expected to make their own decision as to whether they should go underground without the benefit of the knowledge of those matters; is that so?-- I believed that all the men on the night shift would - I know that the communication channels, especially on that shift, are very good and information flows freely amongst all the people. That's the opinion that I formed.

So what you are saying is that you expected that all of them would become aware in some way or another of these various things?-- Yes.

And the way you expected them to become aware was the way that you've described as the grapevine?-- Word of mouth, yes.

I'm interested in the further conversation that you had with Michael Squires over the telephone. You mention in your statement something about his being concerned about setting a precedent. What was said about that?-- I understood that Michael - one of Michael's concerns was that he didn't wish to be involved in - if the situation had arisen that he expected could be possible then he felt uncomfortable about being in that position, being undermanager on the shift when that occurred. I guess - he conveyed that message to me and it was akin to the setting of a precedent. He didn't want to be - I don't know if he used the words that he didn't want to be involved, but that's the message that I was receiving. So I just told him, "Well, I don't hold truck with precedents."

I understand what you are saying about that's the message you were receiving; you can't do any better with exactly what it was that he said to you?-- No, I can't.

Did you at that stage, at the time that you had that conversation with Michael Squires, have any concern at all about the possibility of a heating in 512?-- I did not.

None at all?-- I did not.

If there was a heating in 512 at the time that the panel was

sealed then there could well be a problem during the time that the panel went through the explosive range, couldn't there?-- If I believed that there had been a problem in the 512 Panel when it was sealed I would have not allowed people to work down in the mine from the time that the panel was sealed. That is Sunday night shift, Sunday day shift, Sunday afternoon shift and through until such time as I believed that the panel - that a danger no longer existed.

Now when you say if you had believed that there was a problem in 512 at the time of sealing, are you referring to some sort of problem with a heating? If you had thought there was a heating of some kind or any possibility of it?-- That's correct.

It might seem trite to ask the question, but if you had thought there was some possibility of a heating in 512 at the time of sealing why wouldn't you have allowed the men to go underground until you thought the problem had resolved itself? Why wouldn't you?-- Because of the potential danger that such a condition produces.

Because when the panel moved into its explosive range there would be the real risk of an explosion; is that so?-- Yes.

Can you remember anything further about that telephone conversation that you had with Michael Squires earlier in the evening that Sunday night? Just say if you can't?-- No, I cannot.

You received another telephone call from him some time later that evening about 10.30 p.m.; is that so?-- Yeah, I estimated it was around 10.30.

What did he speak with you about on this occasion?-- Just deployment of labour. Michael wanted to know what my desires were for the operation of the mine because the labour that he had available was less than he had expected.

Yes?-- He wanted to know what my priorities were for the deployment of those people who were available.

Is this the sort of thing that he would normally consult you about at 10.30 on a Sunday evening or would you expect that an undermanager on shift might make up his own mind about priorities of tasks to be performed on the shift?-- I would have preferred that they made up their own mind. I have been approached on various - a number of occasions about more trivial issues than that.

Did he mention anything to you on this occasion at 10.30 p.m. about the position with the panel, either the position with Unor readings or anything else in relation to the 512 Panel?-- I don't believe so. I don't recall anyway. I don't - I have no memory of any discussion about readings or anything.

Was there any discussion between the two of you on that occasion about whether or not the men should be underground?-- There was not.

Well, what was the next event that occurred?-- As I have detailed in my statement I was awoken by a phone call. My wife took the phone call and brought information to me that it was Michael Squires on the phone and that there was - it was an emergency situation. I proceeded from my bedroom to the phone and then conversed with Michael.

He told you there was a problem?-- I think he might have used the word "trouble", yeah.

I'm looking at page 11 of your statement there?-- Yes.

You say there he told you there was a problem at the mine - or you say he told you there was trouble at the mine and you go on to say, "...relayed the following information...", and then you set out there a number of items of information that he related to you; is that so?-- That's correct.

I don't need to go through all of those. We have heard from him about it and it is set out in some detail in your statement, but basically it was the observations that he had made as to the circumstances that arose at the time of the first explosion; is that so?-- Yes, the only thing that - notation that I've made here is that with regard to the cloud of dust in the cut, I think I recall Michael saying it was as if something had happened with the cut sub-station.

You asked him to contact the Mines Rescue superintendent and you told him you would contact Albert Schaus; is that so?-- To the best of my recollection, yes.

You did contact Albert Schaus and you advised him of the situation?-- I did.

You then phoned back and spoke further with Michael Squires; is that right?-- Yes.

He asked you if somebody should go down the mine to see if anybody could be found and you told him that no-one was to enter the mine; is that right?-- I did.

You told him to have somebody make ready the rescue suits?-- Yes.

You then went to Mr Schaus' house and then you went to the mine; is that so?-- That's correct.

You travelled to the mine via the southern access to the cut into the cut and past the portals?-- I did.

And you observed that the entire area was covered in a dust haze and there was an acrid smell; is that right?-- Yes.

You arrived there about 11.55 p.m.?-- To the best of my recollection that is the time that I arrived.

And you had a conversation with Michael Squires; is that right?-- Yes.

What did he tell you at that stage?-- That the men from the 1 North section of the mine had made their way out of the mine and also that Deputy George McCrohon had been on roadways inspection, had made his way out of the mine. There were still a number of men unaccounted for, these being the 5 South crew, belt patrolman and two men who had been working - deployed to the Tecrete seals.

Did you go to the Unor room?-- I did.

What did you see there?-- I observed that a large number of the points were in alarm condition, that is that the figures were all in red, description of the point was in red. I noticed that the background colour on the screen was a deep blue colour as against its normal greyish background colour. Brian French, electrician, was at the Unor screen and there was very high concentrations of carbon monoxide at most of the sample points.

Was the siren still going when you arrived?-- It was not.

Did you do anything in relation to acknowledging those alarms at the Unor itself?-- No, I did not.

Do you know if Brian French did that while you were there?-- I don't - no, I was - I can't answer, I don't know whether he did or not.

Nobody else did it in your presence anyway?-- No.

You checked the ventilation fan instrument panel in the undermanager's office and you saw that No 1 fan was running; is that so?-- Yes.

What did you do then?-- I believe I asked Michael if he had yet been able to make contact with the 5 South production crew and I asked him to continue trying to make contact by telephone with them. I then went - the only other recollection I have then is going to the marshalling area to check on those people who had come out of the mine, to check on their welfare.

You asked somebody to go and check the main fan; is that right?-- I did. I asked Gene Johnson, boilermaker, and I believe George McCrohon, deputy, to go with him.

You also contacted the Open Cut Examiner's Office to organise for some roadblocks; is that so?-- Yes, I did.

You spoke with Len Graham in the Mines Rescue room; is that so?-- Yes, I did. I requested Len to check in the cut to ensure that nobody else had made their way out of the mine and was in the proximity of the - well, in the cut area outside of the portals and in need of assistance.

060395 D.37 Turn 9 mkg (Warden's Crt)

Did Albert Schaus arrive at some stage after you did?-- Yes, he did.

And you spoke with him, and he told you he had contacted Mr Walker, the Senior Inspector, and Rob Regan; is that right?-- Yes.

Then did you and Mr Schaus initiate the formal emergency procedure?-- Yes, I believe it was around that time that that was done.

Did Mr Schaus say something to you about SIMTARS?-- Yes, he had been unable to make contact with SIMTARS. I believe I attempted then to contact one of the district check inspectors to see if they could do that.

You have referred to the readings coming from the monitor point behind the seals in 512. Did you know where that monitor point was located?-- I did. I saw that sensor point during my time down the mine on Saturday afternoon.

Did you have any view yourself as to whether that was an appropriate place to put it?-- Well, it seemed strange to me that the monitor point had been put there as against using the monitor point that was already in - at the top return seal, but I then recognised that it was just a matter of course that's where it was and the other one that was in the top return was used to monitor air that would be - the return air that passed by the face of the seals.

That's after that monitor point in the top return had been moved outbye, that is, outbye the seal?-- Well, there is still a lot of confusion in my mind as to when the monitor point was moved out there and whatever. I don't understand the circumstances of it.

That's one of the things I wanted to ask you about. First of all, what was your understanding as to the location of that monitor point prior to sealing?-- I believed that that monitor point was inbye of the prep seal in No 1 road.

You knew that it had been moved outbye prior to sealing; is that what you are saying?-- No, confusion still - I don't know when it was moved outbye.

But as far as you knew, was there just the one monitor point behind the seals, that is, monitor point 5?-- That's correct.

Did you have any view on the question as to whether there should have been another monitor point behind the seals?-- At that point, no.

What was the general practice? Did you have one or two monitor points in behind the seals when a panel was sealed?-- Mainly there had been one monitor point. On a couple of occasions I think there was two monitor points. I don't know if it was a couple of occasions or one occasion.

060395 D.37 Turn 9 mkg (Warden's Crt)

What led to there being two monitor points?-- I think the abundance of monitor points in that area, in that particular area.

In any event, by the time you saw where that monitor point 5 was located, it was already in place, there hadn't been any discussion with you about where it ought to be located?-- No, there had not.

What was the normal situation? Did you - as a matter of course were you normally consulted as to where a monitor point was to be located on the sealing of a panel?-- I was either involved in discussions about location of a monitor point or people would tell me where they had located it.

No further questions, thank you.

CROSS-EXAMINATION:

MR MORRISON: Mr Mason, can I just ask you a couple of things? I will take you back to your qualifications and experience. Remember you telling us that you had started out in '71 as a cadet manager at Moura?-- That's correct, I did.

Is it right to say that thereafter you had worked at Moura in one or other of the mines at Moura?-- That's correct, all my coal mining career has been at Moura.

And that includes numbers 1, 2 and 4 mines?-- And No 3 mine.

And No 3 mine as well?-- Yes.

Now, over that time has there been anybody else that was in the workforce who had been there in the Moura mines as long as you had?-- There were a number of people in the workforce who had been there as long or longer than myself.

Could you tell me a few of those?-- Lex Henderson, deputy, Maurie McPherson, a miner. Off the top of my head - there is quite a number of people who had received either their 25 year or 30 year service presentation awards in the years leading up - in the couple of years prior to 1994. Other names - just off the top of my head - Bob Davidson, I believe.

John Blyton had been there for quite a while, perhaps not as long as you?-- I believe John was there probably the same length of time as me.

Dick Stafford?-- Dick Stafford had been there longer than me.

But there were quite a number of those people, and they encompassed not only miners but deputies as well?-- That's correct.

XXN: MR MORRISON

WIT: MASON G A

And when you worked the No 1, 2, 3 or 4 mines, are you working the same seam across those mines or are they differing seams?-- They are different seams. No 1 mine is in C seam, No 2 Mine is in D seam, No 3 mine was in B seam and No 4 Mine was in C seam, C upper.

Now, when you were dealing with the day-to-day difficulties of running - helping to run Moura No 2 Mine, in terms of awareness of spontaneous combustion and the seam's liability to it, did the impact - was there any impact of those men's experience in your mind? Were you able to draw on your experience?-- Most of the knowledge that I gained in the mine was gleaned from people that I worked with, whether they be my peers or my superiors or my subordinates.

In terms of your own base of knowledge to draw on, were you able to draw on the experience of those other men who had been in these seams for a long, long time?-- I believe so, yes.

And did you do so in fact? Did you draw on the experience that those men had gone through?-- Well, I took a lot of comfort in the fact that there was a large proportion of our workforce who had been there for a long period of time and were conversant with the nature of the operations at Moura.

And the nature of the seam?-- Yes.

Were some of those people that we have mentioned either by name, or maybe you can recall anyone else to mind as well - had they been at No 2 for a substantial proportion as opposed to working across the mines?-- Yes, I believe that Dick Stafford had been at No 2 Mine for a large period of time; Maurie McPherson had been there for a large period of time, if not the whole of his career; Bob Davidson, I believe, was in a similar position. There were quite a number of people who have been at the No 2 Mine since its inception.

And the No 2 Mine had been going for quite a number of years one way or the other, hadn't it, come 1994?-- Yes, I believe it had been open for 24 years.

And over that time are you able to tell us roughly how many panels have been sealed or how many occasions of sealings have there been?-- A review of the number of sealings has indicated to me that there have been 28 sealings carried out at that mine.

In a variety of different sized panels?-- That's correct.

And in a variety of different locations, whether one takes it north of the main dips or south of the main dips, up dip or down dip?-- That's correct.

And after a variety of methods of extraction too, sometimes total, sometimes partial, sometimes a mixture?-- I believe so, yes.

Can I just ask you to look at this document, please? I just want to finalise this area. This is a document which sets out

the various formal qualifications you have as well as a number of the courses that you have been involved in?-- Yes.

Before I tender it, I notice in answer to Mr Clair on last Thursday he was asking you about whether you had attended some courses on communication skills. Have a look down at (ii) under the heading "Other Courses"?-- I see that.

You did participate in a communications skill course in 1989?-- Yes.

Are these courses all BHP run or someone else?-- BHP Australia Coal - no, not all of those courses are BHP run. I think there are a couple of courses in there that were run by other institutions.

In so far as they concerned courses that were run by other institutions than BHP Australia Coal, were you given effectively time off to go and participate in them?-- I was given time off to attend all courses, no matter who ran them.

I tender that document.

WARDEN: Exhibit 191.

ADMITTED AND MARKED "EXHIBIT 191"

MR MORRISON: Now, can I ask you this: in relation to the design of panels at No 2 Mine, in so far as you were involved in that, did you have some involvement in it?-- I was involved in panel design.

And was that from the time of your first arrival at No 2 or later on?-- More so later on. Panels being designed for extraction - panels where extraction was to be carried out in the early days after I transferred to No 2 Mine were sections that had already been developed. Other panels that were to be extracted didn't come along until later.

Was there a change in the approach to mining method in some of the panels that you have been involved in, if we move from, say, 4 South B through the sequence to 512?-- Well, even going back earlier to the panels over to the north side of the mine, because they had already been developed we had to use that geometry or layout during the extraction process. A lot of those panels had been developed prior to 1986. Subsequent to the explosion at No 4 Mine in 1986 it was decided that the total extraction process would no longer be carried out at Moura, so those panels still - they had to be extracted using the partial extraction process but still using the geometry and layout of the existing panels.

So, in a sense, the internal design had to fit within an already shaped panel?-- That's correct.

When you first arrived at No 2, can you tell the Inquiry just what was the state of the workings on, principally, the south side of main dips? Was 5 South in existence at that time?-- When I first transferred to Moura No 2 at the end of - I think it was November 1986, the panel head for 5 South was just in the process of being developed. There was no belt installation in that panel at all at that point in time.

I don't know if you have still got the laser pointer. Is that still there? You might just use that and indicate to us - when you say the panel head for 5 South was in existence, what are you talking about, or get up and go across if you are more comfortable with that?-- Development of this area at the head -----

Immediate junction of the main dips in 5 South?-- Yes, I think it's about 29 cut-through. That area of coal to the left or the south of there was being developed with the view to installing the 5 South conveyor and driving the 5 South panel.

So, if, we understand, 5 South didn't exist, obviously neither did 510, 511 or 512?-- That's correct.

What about 4 South?-- The 4 South section did exist, but when I transferred across there it was sealed off. There had been problems with the geological structure that went across that panel. At about 5 to 8 cut-through there was a major fault, some 80 feet displacement, and there was pillar movement in that area and the panel had been sealed off.

Well -----?-- The extent of the 4 South was through to, I believe, 30 cut-through.

Can you just indicate where 30 cut-through is?-- That area inbye of the 4 South B section did not exist.

Can you indicate that for us, please, the area inbye 4 South B?-- That is the same area I indicated.

All those panels -----?-- That panel to the rise from 4 South is 4 South B and that area of 4 South inbye of there did not exist.

Now -----?-- Neither 4 South A, 4 South B or the 4 South extended, I guess you could call it, existed at that point in time.

What was the extraction panel being operated, if there was one, at that time?-- Extraction centred on those areas on the northern side of the main dip workings.

That's the north and east -----?-- Don't ask me to describe that, please.

North and east. Now, in the time that you were involved in designing those panels that we know as 401/402 and 4 South level, 4 South and 511, were there different approaches taken to the size of pillars and how much would be taken off pillars

as one progressed through the sequence?-- Yes, there was. The reason that we stopped total extraction was that we could not control the roof, it was a massive sandstone, very strong. We could not control the caving mechanism within that roof structure. When it did collapse, it would collapse suddenly and violently, create major windblasts. There was further problems with the non-resolution of potential frictional ignition being rock on rock, and it also provided the opportunity for any - if the caving went through to the upper seam, the C seam, there was opportunity for inrush of methane into the working area.

What did that lead to then?-- That led to the partial extraction process that we adopted. Initially that was to decrease the size of pillars, still leaving sufficient coal in tact to support that structure.

So, you would have - instead of remnants on pillars, you would have larger size pillars which would serve a support purpose?-- We decreased the pillars on two sides of the pillars primarily, and that was done to the depth of the cabin on the miner. The rest of the coal was left in tact.

So, is that what might be called "rib stripping" on two sides?-- That's correct. That's the terminology that was used at the mine.

Can you just indicate to us, by reference to the panel, where that was practised? There is a map underneath there that bears all the numbers on the panels, if that helps?-- To the best of my recollection that system was employed in all panels on the north side of the mine with the exception of the inbye end of 2 north where the pillars were actually split, so that system includes 3 North-east, 3 North-east sub, the 2 North-east, the 2 North - that's the best I recall all those sections on the north side of the mine. That similar process was engaged in the 4 South A.

Point out to me 4 South A, please? Is that the triangular shaped panel off 4 South?-- To the rise off 4 South it is, yes.

Rib stripping two sides, did that have some - something that followed in terms of pillar size?-- Well, obviously it decreased the pillar size.

It would mean you would have to have larger pillars at the start, that's what I'm getting at?-- Those areas had already been developed. We just attacked those in the manner that I said to you. The newer panels - the panels that were designed for rib stripping purposes - were designed so that the amount of coal that was left there would be sufficient to support the overlying strata, but no larger than they needed to be - sorry, after extraction.

Did you have some role in the trend - if I can use that term - towards smaller pillars?-- I did.

Just explain to me when that was started and where?-- One of the features - we use Saloman's formula - or the mining engineer to use Saloman's formula to calculate the required size of the pillars that were to be rib stripped, or extracted using the rip stripping process. The seam at Moura is a dipping seam and using this Saloman's formula on a pillar-by-pillar basis, it requires that the deeper you go into the mine, the more down dip your panels become and the larger the pillar sizes need to be to follow the logic of supporting the increased stress, taking into account the depth of overburden from the surface. That gave us a problem with production - or productivity, sorry - on development, and also to some extent - or to the same extent during the extraction

process. The larger the pillars that were formed, the longer the wheel times and thus interchange times for the shuttle cars, and it also provided various other inconveniences to the mining process. With a view to increasing productivity during first workings, I changed the pillar sizes to a smaller pillar, subsequent to my attendance at an ACIRL seminar in Sydney.

Now, was that first done in 4 South?-- That's correct, it was.

And can you just indicate which portion of 4 South? Is that the - from about cut-through 30 inbye?-- It was in that area from 30 cut-through inbye, but not until the actual development had progressed some pillars into that panel, as is obvious on the plan.

Now, was the sequence of the extraction or of working panels - did it go 4 South A then 4 South B?-- I believe so.

Then 4 South itself?-- Yes.

Then 511?-- This is the extraction process you are talking about?

Yes?-- Yes.

Then 403?-- Yes.

Then 401 and 402?-- Yes.

And then 512?-- That's correct.

Now, when you went to the smaller pillars in 4 South, did you also consider a different system of development?-- It was considered but not implemented at that point in time. At the ACIRL seminar, there was talk about - the cut and flit system was first brought to my attention.

A cut and flit was brought to your attention there, as opposed to cut and bolt?-- That's correct, cut and bolt being once a working bord - coal had been mined from a working bord, production stopped while the necessary support activities were carried out, so it became a cyclic operation.

And cut and flit was different?-- That's right. It merely meant taking the miner from one bord - once the mining process was completed there, relocating the mining machine to another working place, and mining coal there while the support activities were carried out in the previous - this was in an endeavour to reduce the amount of time that the mining machinery was stood idle waiting for support activities.

Is it the case that 512 was the first time that cut and flit was actually used?-- No, it was not. Cut and flit - the first trial of cut and flit was carried out in 510 panel, even though that panel had not been designed for it. We had large pillar sizes in there. We gave it a trial run in there to see how it would go. It proved successful in that panel. 512 was

the first panel where it was used on a full-time basis.

And did it prove equally successful in 512?-- I think it proved equally, if not more successful, because pillar sizes had been amended to assist as well.

Now, as the sequence of panels was formed down inbye 4 South and then off 5 South, was there also-----?-- Sorry, could you start that again, please?

Sorry, I'm probably going too fast. As the sequence of panels was formed inbye of 4 South - so, we include 403, 401, 402, and so forth?-- Yes.

And those inbye of 5 South - so, that's 510, 511, 512?-- Yes.

Was there also a change from rib stripping to some other method of taking coal?-- Some variation of the rib strip method.

We have heard of take a row, leave a row as an overall method of taking coal?-- Well, it was a rather involved process, actually, again in the 4 South. Because that area had been developed with small pillars, ACIRL was involved in the assistance of a design to let us extract that coal, or as the - as much coal as we could from that area, and still taking into account those factors that I have mentioned previously, we obviously couldn't - the pillars were smaller, so we didn't want to just carry on with attacking two sides of each pillar, and they were brought in and they assisted us with some design parameters and a monitoring program to allow us to investigate the processes that we were undertaking.

And did ACIRL continue to be involved in panel design right through until 512 was done?-- Not in every panel, I don't believe. In the 401, 402 they weren't. In that area we had larger size pillars and we proceeded to extract that with the two-sided rib strip method. Because we were doing what we had done on many occasion previously, we did not involve them in that process. It was during the extraction of that area that we did change the system from rib stripping to take a row, leave a row.

And 401, 402 was a large panel as extracted?-- It was.

And did it take some considerable time to get out of that panel?-- It did. The life of that panel was, I believe, in the area of 11 - 11 to 12 months.

And was that considered-----?-- That was in extraction process, I'm sorry.

Was that considered by you and others at the time to be sort of overly long, or longer than you would like?-- Well, it was considerably long. 4 South A panel had had a similar length of life, but most other panels that I'm aware of had a much shorter time-span on extraction.

In either 4 South A or 401, 402, was there any spontaneous

combustion problem?-- 4 South A, 401, 402, not that I'm aware of.

In terms of extraction life of those two panels, was there any discussion going on about whether it was within or without the incubation period?-- Well, I guess I was somewhat uncomfortable with - my understanding of the incubation period was six months. Because of the different technique that was being employed, I guess that's what extended - allowed us to operate those panels for longer periods of time.

Sorry, the different method that was being employed?-- Yes.

Which was?-- Change from total extraction.

To partial?-- Yes.

Now, did you end up in 4 South with three stages of mining, as it were, as you came out of 4 South?-- The 4 South area, yes.

Firstly, was there a stage of taking only one strip off a pillar, one side?-- That's correct, there was.

And then, secondly, two strips?-- Yes, we divided the panel into three actual compartments and the first stage when monitoring was first carried out, we extracted one side off the pillar to see how the panel would behave. The indications received out of that allowed us to go on with the second stage, which even though they were smaller pillars, we were successfully able to take two sides off the pillars, and the third stage was then dealing with - there was larger pillars in the third compartment and we attacked them in a different manner again. We stripped two sides off those, plus took pockets out of the remaining two sides.

You say pockets - punching into the side of a pillar?-- Yes, punching - but only taking two punches off each side, still leaving a generous proportion of the coal in tact.

That was the panel monitored by ACIRL?-- One of them, yes.

Can I take you then to 4 South B, if I may, for a moment - and just show us where 4 South B is. It might be called the south, south-eastern and most inbye 4 South panel - too complicated?-- Yes, I'm happy with that description.

What were you doing in 4 South B on extraction there?-- Two-sided rib strip.

Was there any particular problem with roof falls?-- Not generally in the panel there wasn't. There was a couple of falls on the down dip side and about half-way back along the panel, if my memory serves me correct.

Any particular problems with CO levels?-- No.

And was it a very long panel to extract?-- No, it was not. I think it might have been four or five months.

And 4 South itself took some time - that's the next in the sequence of extraction. After 4 South B you went to 4 South?-- Yes.

And how long did 4 South take?-- I'm not absolutely sure, but I think it might have been six or seven months.

Any particular problems with roof falls, high CO and the like in 4 South?-- Roof falls in the 4 South area were much more prevalent, but mainly these were involved with structure that - there was a large area of structure that ran across the panel. Most of the falls were associated with that structure.

High CO?-- No, I don't believe there was any high CO problems. We did have some problems with ventilation in the panels.

This is the air reversals you were telling us about?-- Air reversals, that's correct.

Did it have the same appearance as the air reversals that we have heard about for 512?-- To the best of my knowledge, yes.

Can I take you to 511, which is a panel which appears to be roughly similar in size to 512; is that right?-- Very close.

What was being done in 511?-- That panel was developed and extracted using two-sided rib stripping.

It had other similarities with 512 in terms of returns, I think?-- Yes. The bleeder return - not the bleeder return, the main return on the up dip side of the panel - it had permanent stoppings isolating it - that return roadway from the rest of the panel.

Same as 512?-- That's correct.

And like 512, did it have a ventilation path down on the inbye end of the panel, the equivalent of cut-through 13 in 512?-- Yes, the inbye cross-cut in 511 was once again isolated from the rest of the workings by the construction of substantial brattice stoppings, which were then - there was an opening left in the - in those stoppings to encourage a flow of air - some flow of air through those stoppings.

Same sort of situation as 512?-- Yes, very much the same.

In terms of the standard or normal or usual type of practice for ventilation in No 2, can you make some comment about what was done in 511 and 512 from that point of view?-- Sorry, can you repeat that, or be more specific?

Well, was the approach of having a dedicated top return and ventilation forced down the panel and across the back - was that pretty much standard for Moura?-- It had been since 4 South B. That was something that I incorporated into the design of our panels for two reasons: a large number of the other panels had a belt road up the middle of the panel and flanking returns and - anyway, it meant that we would attack

coal on either side of the belt road, which resulted in having to erect stoppings for ventilation flow subsequent to the mining process or the extraction process having taken place. Using stooks left on pillars resulted in having no dedicated inspection route to the back of the panel, and in my mind it was a - not a good practice for ventilation. When we got to the situation of designing panels with the rib strip method or partial extraction process in mind, that's one of the things that I introduced into the design of the panels.

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Dedicated return for inspection purposes?-- Dedicated return for return purposes and inspection purposes.

Was that reflected in 511 and 512?-- It was.

In terms of 511 can I ask you again to comment on those three areas that I asked about in the other panels, that is problems with roof, problems with high CO, time out?-- I believe the time for extraction in 511 was in the five to six month range. There was no problem with CO and there was no problem at all with roof movement. You could still see the pick marks in the coal. We had a visit by a colliery manager from Collinsville. He went in to have a look at that panel to investigate the potential use of the system at his mine and he was amazed at the security within that panel if I can say security. He nearly cried at the amount of coal that was being left in there.

Sorry? He said what?-- Nearly cried at the amount of coal that was being left there with the conditions that were evident.

Any smells or hazes causing any problems in 511?-- Not to my knowledge.

What about smells and hazes in 4 South, 401, 402, 4 South B, any of those other ones?-- Not to my knowledge.

WARDEN: Excuse me, Mr Morrison, are you starting a new subject?

MR MORRISON: A slightly new one.

WARDEN: I might take a break. The witness has been there for a while. Resume at 10 past four.

THE COURT ADJOURNED AT 3.56 P.M.

THE COURT RESUMED AT 4.10 P.M.

GEORGE ARTHUR MASON, CONTINUING:

MR MORRISON: Mr Mason, I wanted to move to a slightly different topic and that is the aggravated topic of spontaneous combustion. Mr Clair asked you some questions, I think on Thursday, about your state of knowledge about spontaneous combustion and whether you had undergone any courses of training or education and so forth. Do you recall those questions?-- To some extent, yes.

You mentioned that you had had at one stage the red and blue

XXN: MR MORRISON

WIT: MASON G A

book. I think you might have said the early 80s is when you had those?-- I do recall that those volumes were issued to the entire underground workforce - well, at least to the entire No 4 mine underground workforce in the early days after I commenced work there. I believe it would have been 1980.

And you mentioned that you thought that the mine had a copy of that Mines Rescue book?-- Yes.

The Strang and Mackenzie-Wood book?-- Yes.

Can I just ask you to look at one of these exhibits, please? Just have a look at this, it's Exhibit 29. Have you ever seen that before?-- I can't recall having seen this volume.

You've certainly never read it?-- Have not.

You can put it to one side. We know that there is a second edition of the Strang and Mackenzie-Wood book, a blue covered volume. Have you ever seen that?-- I can't recall having seen that book prior to these proceedings.

You mentioned having gone to the course at the Bardon centre in Brisbane?-- Yes.

And there were a number of people from the mine who attended that course in addition to yourself?-- There was.

As I understood the way you mentioned their names they were largely deputies?-- I believe we took the deputy off each shift and I believe that the operations manager of the mine at the time attended, although not for the full duration of the course.

That was Graham Smith?-- Yes.

Dick Stafford was one of the deputies that went down to the course?-- I believe so, yes.

He's one of the those deputies that you mentioned earlier as having had a very long history with this mine?-- That's correct.

He in fact has been through some previous incidents at mines, hasn't he? He had been involved in Kianga?-- I believe that he was at Kianga previous to coming to Moura No 2.

In terms of your assessment of general awareness at No 2 of the fact of spontaneous combustion being a risk, what can you say about that?-- I believe that it was a general understanding at the mine that spontaneous - that our seam had a - well, it was liable to spontaneous combustion. That awareness was also heightened whenever we were in extraction mode.

Can you tell me how that heightening of awareness came about?-- Well, there is more opportunity for spontaneous combustion to occur during the extraction process. People took a much closer - paid much closer attention to the Unor system.

Now, was there some view that you held, and that others may well have held, about how spontaneous combustion was being coped with from a practical point of view?-- Well, it had been coped with by the inception of processes, or the procedures we used were designed to minimise the potential for spontaneous combustion to exist.

Tell me about those procedures and what the idea is behind them?-- Well, trying to keep the life of extraction panels - you know, so it wasn't an extended period of time. Clean up of rubbish and things like that are of less paramount importance. We really concentrated on that to a large extent. The ventilation design, the layout was done with that in mind, of not having to alter the ventilation in the panel during extraction.

Now, just pausing there. You just mentioned that the ventilation layout was designed so that you wouldn't have to alter it as you extracted. Now, can you tell us what features of that ventilation system you are talking about?-- By having a return airway that we didn't have to - one set airway that was the return airway, an airway that you didn't have to bridge stoppings to go through and extract coal on the other side of that return, things like that, so we didn't have to alter the ventilation circuit during the extraction process.

In 512 are the stoppings you are talking about those between 1 and 2 roadways?-- That's correct.

Down the length of the top return?-- Yes.

The idea was they would remain intact for the life of the panel?-- That's right.

What about the stoppings down between 12 and 13 cross-cut, did they form part of that system that you are talking about?-- They did.

Is the same thing intended in relation to those, that they stay there for the life of the panel?-- For the life of the extraction process, yes.

I am sorry, yes, I put that badly - life of the extraction process. All right. Are they the practical ways in which you thought spontaneous combustion was being dealt with?-- Yes.

In addition we have heard a lot about gas monitoring. Was that part of that same system?-- Yes.

Now, in terms of the development or design of panels, in so far as you were involved in design in No 2, was spontaneous combustion taken into account?-- I have just been through all that with you, sir.

You say it was taken into account in design of the ventilation and so forth?-- Yes.

Now, Mr Clair asked you a number of questions on a previous day about whether you had updated your knowledge on spon com. You mentioned a course and so forth. What can you say about your knowledge of spontaneous combustion in terms of your experience?-- All my coal mining career has been at Moura, in the Moura coal fields, and I believe there has been a number of spontaneous events occur - spontaneous combustion events occur in those seams through the time that I have worked there. It was something with which I was acquainted. I don't know what more I can say.

In your assessment, those people who had spent similar or even longer periods of time at Moura coal mines or even No 2 specifically, are they in the same boat as you?-- I believe so.

In terms of their awareness or your perception of their awareness of spon com?-- That's correct.

Do you think this was something that was not known by any of the workforce at No 2?-- I don't believe that it was not known. The degree of awareness would have been more acute with the people who had been there for a longer period of time.

Now, you mentioned to Mr Clair that you had been sent to a ventilation seminar at the University of New South Wales run by the Centre for Mines?-- Key Centre for Mines, that's correct.

And Mr Morieson had gone on that course with you?-- He did.

Was it like a fire officer's course?-- No.

What was its emphasis?-- It's part of a course that was offered to people who were in the industry wishing to further their education to gain higher qualifications, if I can use that term, but it was also - that was - if you took that as part of a longer term education program. It was also there for people from the industry to attend that in the same manner in which Mr Morieson and I did, merely a week long course.

Did some people undergo assessments at the end of that course and some not?-- Yes, I do believe that was the case. If you wanted to continue on, you could do so. There was other things - I think it was more practical or more tests that had to be - examinations that had to be sat for if you wanted that

attendance at that course recognised for furthering your educational qualifications - for a higher degree.

Now, if we can turn back to Moura No 2 for a moment. Were there a number of the men there who were also members of Mines Rescue?-- Quite a large number of our workforce were involved in Mines Rescue. I am talking about proportional to or in comparison with other mines, I believe we were - Moura was the only station, or Moura mine was the only mine that was serviced by the Moura station as such, so our whole Brigade membership was drawn from Moura, whereas those memberships from - for other stations, for example, Blackwater, were drawn from the various mines in that area.

Were you a member of Mines Rescue yourself? I think not?-- I was not.

Did you understand that at Mines Rescue people did gain some knowledge of spontaneous combustion?-- I believed that spontaneous combustion, mine fires, etc, was a primary requirement - the application of that knowledge was a primary function of the Mines Rescue Brigade.

And is that something that you drew comfort from in relation to your assessment of whether the workforce knew about spon com?-- Well, yes, I was very happy that we had such a large number of our people involved in the Rescue Brigade, and also it was of comfort to me knowing that they performed to the very high standard that they did.

The Moura team won a number of competitions from time to time?-- They won many and varied competitions, yes.

One of those Mines Rescue people was Mr John Blyton, wasn't it?-- John had been a long-standing member of the Rescue Brigade, yes. John acted in a relieving capacity for the Rescue Superintendent in the period - quite a period - I don't know, for quite a period but for a period of time prior to the explosion at Moura. That was in the absence of the standing Superintendent.

That's Dave Kerr?-- Yes.

So, in the normal course of events you would certainly expect John Blyton to be very familiar with issues such as spontaneous combustion and how to deal with it?-- I held John in high esteem.

Now, in terms of bringing the question of spontaneous combustion to mind - to the mind of the workforce that is -----?-- I am sorry, can you start that again, please?

I will start again. I want you to turn your mind to the ways in which spontaneous combustion might have been brought to the attention of the workforce by way of refresher training. Did Mr Danvers have something to do with that?-- He did.

Can you tell me about that?-- Mr Danvers was the safety, training and relief undermanager in the period prior to

Mr Barraclough holding that position. During his time there spontaneous combustion was dealt with in refresher training, and he used the material from the induction training course to train those people in the subject.

Can you have a look at Exhibit 39, please? Just have a look at that. I think it's Exhibit 39?-- It is.

Is that the induction folder that you were just talking about?-- It is.

To your knowledge, that was used by Mr Danvers in refresher training for the workforce in your time?-- That and the examination material, examination tests at the back - contained within.

As far as you understand it, those people who did that course would sit for an exam?-- I don't know that they all did, but I think that that was the procedure at the time.

You can hand that document back. I am assuming Your Worship wants to go until 5?

WARDEN: Yes.

MR MORRISON: Can I turn to a different topic now, if I may, Mr Mason, and that's the question of the awareness or attitude at No 2 towards safety matters. Now, I will deal with a number of categories, starting for no particular reason with management and we will work down to miners. Can you tell me about, so far as your experience enables you to, the attitude of management at No 2 towards safety matters?-- Any issue that we became aware of was always given very high priority. I pointed out to Mr Clair when going through my performance appraisal sheet the highest priority responsibility that I had was the safety of the operation of which I was in charge. That's the only topic that received that first priority. The attitude towards the safety and well-being of our employees was first priority right from the very top of our management structure, and I say that not just including BHP Australia Coal but BHP Pty Ltd, the company, and it was very much reinforced with all levels of management by the various officials of the company who attended to the mine. It was always the first topic that they wanted information about, was our performance in the area of safety. I recall on one occasion the then - positions change their name so much, I forget his title at the time - Mr John Grubb, who was in charge of operations for BHP Australia Coal, being at the mine and I recall the incident had a big impact. He wanted us to be fanatical in our approach to any safety issue, and they were the exact terms he used, "Be fanatical, don't rest anywhere less than a fanatic."

And is that something you felt was being put into practice?--
I did.

What about the attitude of the miners themselves, and here I'll include deputies with them for the moment? Did they exhibit to you an attitude that was very safety conscious as well?-- Yes, they did.

Is that something that management tried to help along, encourage?-- Well, yes, it was endeavoured to encourage it, but it existed in its own right within the workforce.

I don't mean to suggest it wouldn't have unless management involved themselves, but it is certainly a feature of the miners at No 2 and maybe elsewhere - that they have a very high safety priority?-- Yes. Well, I know at the No 2 Mine that was the situation.

And in terms of safety issues, would it be reasonable to say that miners were not inhibited about coming forward and complaining or raising those questions and pursuing them?-- They were not inhibited at all.

Have you experienced it yourself in your years at No 2 where a miner will go and stand some management person on his ear about a safety issue?-- Yes.

Yourself and others as well?-- Yes.

And what about the check inspectors who operated at the mine? Were they reticent flowers, or were they pretty bold in coming forward?-- I thought they performed their duties in an exemplary fashion. They had no problem conversing with us - "us" being management - at any time. No, they were vociferous. If the occasion warranted it, I've sought their assistance at times, and they have been most helpful.

Now, there were a number of safety committees established at this mine, weren't there - or committees that had a safety orientation?-- There was one safety committee, being the Mine Consultative Committee, Safety Subcommittee. As a committee as such, I believe that was the only committee.

That was the only committee dedicated solely to safety?--
With a sole viewpoint, yes.

And on that committee, not only represented was management, but miners as well?-- There were people from the whole spectrum of operations at the underground on that committee.

There were various other committees - training committees - the Mine Consultative Committee itself. Is it right to say in respect of any of those they could be the forum for a safety issue to be raised?-- They could be the forum for any safety issue to be raised. I would be disappointed if they had to be the forum for an issue to be raised, though.

In other words, you wouldn't expect people to wait for that opportunity. You would expect them to speak up before that?--

That had been the practice.

Was that the demonstrated practice at No 2? In fact, did people do that - not wait for any formal occasion, just bring it out and get it open?-- With issues of real concern, yes. There were a number of issues that were dealt with that people would hang on to them for safety meetings, things like dusty access road into the mine, those sorts of things.

Now, in terms of the safety of the men in the pit, have questions about the safety of the men actually in the pit been raised with you in the past by a variety of persons, including ordinary miners?-- Could you repeat that question, please?

I am talking about questions about the safety of the men in the pit; in other words, nothing that could happen to them above the surface, questions of what might happen to them down below, be it vehicle crashes, be it cable flashes, be it rib spall, whatever; have those sort of questions been raised direct with you and other members of the management by miners?-- Yes.

So, nothing new that such an issue might be raised?-- That's correct.

Just think about some of these - the deputies that I want to refer you to - John Blyton, for instance, could you imagine, given what you know of that man, if he thought there was a risk to the men underground, do you think he would stay silent, or would he speak up?-- John had no problem voicing his opinions.

What about Len Graham? Did he have any problems voicing his opinions?-- No, he did not.

From what you know of him, if he thought there was a risk to the men down below, would he speak up or stay silent?-- He would speak up.

What about George McCrohon? He is an experienced deputy, isn't he?-- George has been in the industry quite a long period of time, yes.

From what you know of that man, if he thought there was a risk down below to the men, he would speak up, wouldn't he?-- He would bring it to my attention immediately.

Likewise Cole Klease?-- Yes.

Bob Newton?-- Yes.

All of those men are men who, from your experience, wouldn't tolerate a risk to the men underground if they thought such a risk existed; is that right?-- That's correct.

Does that apply to the management as well in your experience - risks for the men underground just wouldn't be tolerated if they were perceived?-- That's correct.

That applies to Mr Squires too?-- It does.

And would that apply likewise to the miners themselves - if they perceived a risk to themselves in the pit, I can't imagine them staying silent, can you?-- I cannot imagine them staying silent.

Can I just take you to one particular time, if I may - briefly, another topic, and then move on to the time I want to take you to? We have been discussing safety and matters of that nature, and you have outlined for Mr Clair in some detail on Thursday the work procedures for governing communication - undermanager to undermanager, deputy to undermanager, deputy to deputy; do you recall that?-- Yes.

And, as I understood you, you said that those procedures were really designed and did, in fact, reflect the practice at No 2?-- Yes. Well, let me say the QA documents were written around what was happening, not what should happen. It was written around what was happening.

So, they actually reflect what was going on?-- Yes.

And your experience supports that?-- Yes.

Now, there were occasions, were there not, where people spoke up to you and others on what might be called safety issues, or not, and communicated their concerns to you - quite apart from that system - quite apart from the interchange of undermanager to undermanager or deputy to undermanager - directly to-----?-- Yes.

George Ziebell is one of them, isn't he?-- Yes.

He had a particular topic that he raised with you on at least one occasion about materials being available at prep seal sites?-- In particular in the 512 section, yes.

And he raised that with you direct?-- He did.

And was it dealt with direct from you to him?-- It was.

In terms of communication, was there - apart from the formality of the systems that we have heard about, were there occasions that you had to talk to the other undermanagers outside of shift change - is what I'm talking about?-- Yes, I often took the opportunity to talk with undermanagers - the day shift undermanager I would bring to work with me, quite regularly in - for the day shift, I had access to that undermanager any number of times throughout the day.

And would you bring some of the undermanagers to work?-- On the day shift, yes. I was at the mine for a considerable period of time. In the afternoon shift, the afternoon shift undermanager and I would converse, also the night shift undermanager had any opportunity and I had any opportunity to converse with him.

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Did you have a normal time when you got to work?-- Regularly it was - it varied between 20 to six and 10 to six. It just depended on the number of people that I brought to work with me - or took to work with me, sorry.

Usual time to leave?-- No, there was no usual time to leave. It varied between 4.30 and 6.30 p.m..

Your hours in fact straddled several shifts; the outgoing night shift, the oncoming day shift and the oncoming afternoon shift as well?-- Yes.

And did you regularly see all of the undermanagers involved in those shifts?-- I did.

Can I take you to, if I may, 17 June which you were asked about? That's the day on which you were mentioning Mr McCamley came up to tell you about the two streams of air in 512; do you recall that?-- Mr McCamley came up to tell me about it?

Do you recall the occasion, 17 June -----?-- I recall a conversation with Mr McCamley on that day, yes.

I'm sorry. You mentioned that you, I think, had taken the call from Reece Robertson which resulted in McCamley going down to the panel?-- Yes.

Did Reece Robertson come to you at any stage later to tell you himself what had gone on?-- I don't recall him coming to me, no.

Apart from McCamley did you get a report from anyone else about what had gone on?-- Well, I spoke with Cocky Morieson about it to some extent, yes.

On the same day?-- I think it was on the same day.

Did Mr Morieson tell you anything about smells in the panel?-- He did not. The best I recall is that it was Mr Morieson who told me about them having - well, he anyway, having traversed the goaf along No 2 roadway. No mention of any smell. I think I told him what I thought of his choice in doing that. I didn't think it was a wise thing for him to have done.

That is going down through the goaf?-- Yes.

Did Mr McCamley tell you anything about his perambulations through the goaf?-- No -----

He didn't stick to No 2 roadway, he went off in different areas?-- I don't have any recollection of that.

Now, did you in fact leave the mine on 17 June for a period of time?-- I did.

The 17th was a Friday. Where did you go?-- On Monday, 20 June, I attended to orthopaedic surgeon in Brisbane. I left the mine on Friday the 17th. I left Moura on Friday the

XXN: MR MORRISON

WIT: MASON G A

17th.

Did you get back to Moura on the following Tuesday, 21st?--
Yes, I got back to Moura - I attended for work on Wednesday
the 23rd.

Wednesday the 22nd?-- Yes, sorry.

Now, when you got back on the 22nd did you follow any
particular course or practice in relation to the reading of
reports, by which I mean undermanagers and deputies' reports,,
not the mine record book particularly or anything else, those
two categories of reports?-- I don't have any specific
recollection of my course of action on that date.

Did McCamley come back to see you or did you see McCamley
again when this question of what had happened on the 17th was
mentioned again or was it over and done with on the 17th?--
When it was mentioned again?

I'm asking you did he mention it ever again or was it over and
done with on the 17th?-- I believe the problem was rectified
on the 17th, yes.

Did McCamley ever raise with you again that business that he
had found or discovered - or what he had done on the 17th?--
No - well, at some time later he did - well, I recounted to
Mr Clair about another time that we had encountered the same
problem.

I'll come to that in just a moment. What I mean is in that
following week or thereafter did McCamley come back to talk to
you again about the actual events of the 17th or were they
basically left where they had been on the 17th?-- Did not
talk to me any more about the events of the 17th.

If he had perceived some continuing problem down there would
you expect him to have come and talked to you about it?--
Yes.

If he had perceived an unusual smell, be it tar, benzene or
any other sort of unusual smell, would you have expected to
hear about it from him?-- I would have.

Would you expect it to be in his report?-- Yes.

Can you imagine a circumstance where a man of McCamley's
experience would get a tar smell and not put it in his
report?-- Not if he observed that smell in the underground
mine.

Now, you mentioned the second occasion that Mr McCamley spoke
to you about a similar problem in 512. You mentioned that
second occasion; do you recall that?-- Yes.

You identified it as best you could as 24 June?-- That's
correct.

Did you have reference to some sort of document that helped

you identify as best you could the date that that occurred?--
Yes, the undermanager's shift report for that date.

I'll ask you to look at Mr McCamley's day shift underground
shift report for 24 June. Have you got that document there?--
Yes, I have.

That's Mr McCamley's shift report?-- It is.

Under the section for 512 has he written a number of
comments?-- Yes.

And is there some particular feature of those comments that
makes you think that it's the occasion that you are
discussing?-- Yes, there is. There is a comment against the
action that was taken to deal with the problem that
ventilation - the changes that were made to the ventilation
were working well and there is an asterix beside that and
"please do not remove".

Does that bear some resemblance to what Mr McCamley talked to
you about on that second occasion?-- It does.

What was Mr McCamley telling you, and I think Mr Schaus, you
said?-- Yes, that's correct.

What was he telling you about on the second occasion?-- We
need to ensure that - no, it was not that. He was saying, "I
do not want those ventilation appliances that were put in
place removed again."

He was very emphatic about it?-- Yes.

Can you just tell me, so far as McCamley was telling you on
the second occasion, what ventilation appliances was he
talking about, did he say?-- To the best of my recollection
there was - two things had been found out of place. It was
the bottom return regulator was open and the restriction
across the No 4 road at the panel head was down as well.

The restriction across the No 4 road. Was there some bag up
on the No 4 road as well?-- Yes, that intake had been
regulated to increase the air flow in No 2 road.

Was that part of the steps that had been taken on your
recommendation?-- I had made that suggestion that that be
carried out.

To whom did you suggest that?-- I'm not 100 per cent sure
that it was Mr McCamley, Mr McCamley only or whether it was
also to deputies - I can't specifically recall, no.

You had given an instruction or recommendation that the No 4
road be regulated in order to increase the velocity in the No
2 road?-- Also No 3 roadway.

Sorry, No 3 road also regulated?-- Yes.

Your Worship, I'm about to move to a slightly different point.

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WARDEN: Thank you, I thought that might be a convenient time.
9.15 tomorrow morning, gentlemen.

THE COURT ADJOURNED AT 4.56 P.M. UNTIL 9.15 A.M. THE FOLLOWING
DAY

XXN: MR MORRISON

WIT: MASON G A

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 07/03/95

..DAY 38

THE COURT RESUMED AT 9.16 A.M.

GEORGE ARTHUR MASON, CONTINUING:

WARDEN: Thank you. Witness, you are on your former oath you took before; do you understand that?-- I understand.

MR MORRISON: I wanted to ask you, Mr Mason, just one thing to do with panels and how one deals with them on extraction, and that is something that was raised with you previously about flooding a panel or inertisation of a panel. That's what I want to talk about?-- Yes.

We have heard that flooding was adopted in 5 North West, not 5 North, 5 North West?-- That's correct, it was.

Were you involved in the design of 5 North West or had that pre-dated your time?-- That particular panel, the majority of it was developed in my time there as an undermanager, not undermanager-in-charge.

From what you understand flooding was adopted for a particular reason in 5 North West?-- That's correct.

What was that?-- The size of the panel was extremely large both in length and width. It was adjacent to a panel which had - in which spontaneous combustion had been identified. That was the 1986 event. Basically due to the length of time we were expected to be in there we decided to flood that panel to remove the chance of a spontaneous event occurring in there.

Very much a product of the length of time that one would be in there?-- That's correct.

Was flooding an option that was considered for 512 when it was being designed?-- No, it was not.

Is there some particular reason for that?-- The expected life span of that panel on extraction was very short.

The problems with flooding include questions of the angle of the dip and things of that nature?-- It does. The 5 North West section was most amenable to the water levels. We flooded the panel in conjunction with extraction. That is that the water was introduced into the section along with the mining process - or at the same time. The water level was kept a couple of pillar lengths behind the retreating face and just the lay of the land in that panel was amenable, it rendered that panel amenable to that system.

Are there problems associated with flooding as an inertisation method in terms of its impact on ventilation, that is flooding while you are extracting?-- Well, there is a need to continually withdraw the stoppings outbye of the water level,

and also that the water level does not encroach upon the mining area or the possibility of a tidal effect if there is a major fall of roof in the waste which would influence the water to be pushed into the region where people are working.

So flooding is not something that can be just adopted for any panel anywhere anytime, is it?-- It has to be given careful consideration before using that method.

Say if one attempted to flood in 512, given the dip it would go to the rear of the panel first down in cross-cut 13?-- Well, the lay of the land - it would rise diagonally across the panel. It would make its way in the first instance to the back of the panel, but would not rise parallel to the line of retreat.

Parallel to the line of cross-cuts?-- That's correct.

As it filled up that ventilation return - when I say "return" I mean the ventilation access along 13 cross-cut - that would have an adverse impact upon the ability to ventilate the panel, wouldn't it?-- Well, it would impact upon the ventilation system, yes.

Now, was there an occasion that you can recall where you and Mr McCamley had a conversation about flooding as a contingency plan?-- I do have a vague recollection of us talking about the potential for flooding the 512 Panel, but I don't know that it was restricted to the 512 Panel.

Mr McCamley said that he could remember speaking to you that if there was a problem later on, if a heating did develop, that "...maybe we should have a contingency plan of flooding the bottom end of the panel like we did in 5 North." Now can you remember a discussion with Mr McCamley centering on 512 in those general terms?-- No, I recall having a discussion with Mr McCamley at some point in time, I believe it was early in the life of the panel, but I don't know that it was restricted to the context of contingency plan for 512. I believe it was more in the context of that similar arrangement that we were using in 512. It was believed that that similar - well, we had intended that that would be a similar system that we used in our future extraction panels.

That's the system similar to the one in 512?-- Yes.

So the context was not confined to 512, but for the future?-- I believe that was the context that we were discussing flooding -----

Confined to any particular problem that Mr McCamley talked about or was it just a general discussion covering all aspects?-- There was no specific problem that I recall. I believe it was early in the life of 512 extraction and was probably - most probably around the time of the risk analysis.

As you understood it the context was to do with panels generally, panels in the future and systems generally?-- That's my best recollection, yes.

Can I just ask you about some matters that we have heard about from time to time, that is the reduced velocity that you get in panels like 512. You can recall being asked some questions about that by Mr Clair. You mentioned to him reversal that you had experienced, I think, in 4 South and 401, 402?-- 4 South and 5 South.

4 South and 5 South, I beg your pardon. In your statement you mention that a major contributing factor, in your opinion, to that loss of velocity was the number and size of the headings in a panel?-- Yes.

And also the gradient of the seam assisted migration of lighter gases and thermal convection?-- Yes.

In a sense what we are talking about is panels that are mined, as it were, up dip might have that problem?-- That's correct.

And panels that have multi headings and multi cross-cuts?-- Yes.

There were in fact some controls put into place by you from time to time to deal with that problem in 512, weren't there?-- I didn't put them into place, I made suggestions.

I don't mean to say you did the physical work, you gave some instructions about that from time to time?-- Instructions and suggestions, yes.

You mentioned some of those in the statement, numbers 3 and 4 heading intakes were regulated to force more air down No 2?-- That's correct.

Was that suggested by you in response to some particular occasion when someone came to you about the ventilation in 512?-- I believe it was the events of 17 June.

That's when you got that report from Mr McCamley?-- Prior to the report from Mr McCamley.

I see. Another one that you mentioned in your statement is segregation stoppings being constructed in the cross-cuts on the down dip side of No 2 road?-- Yes.

Was that in response to some particular occasion when someone came to you?-- I believe that was the instance with Mr Bentham about 28 June.

So Mr Bentham had come to you about the question of ventilation and you gave him some suggestions, recommendations, instructions, call them what you will, about what to do?-- No, Mr Bentham didn't come to me.

I'm sorry?-- I spoke with Mr Bentham on the telephone. It was the afternoon shift. I was still at work.

And he gave you some information about the panel?-- Yes, he had a problem with methane in the intake airways.

And you suggested to him the construction of segregation stoppings as a way to assist with that?-- Yes, the action that we had taken earlier in regulating number 3 and 4 roadways was to force the air into the panel along via the No 2 roadway. Construction of the segregation stoppings on the bottom side of No 2 roadway was to maintain that air flow along No 2.

Force it down No 2?-- Yes, rather than diverting across - back across the other intakes once it entered No 2 road.

The third thing you mention in the statement is "Stoppings across the waste edge were left partially open as required." Can you tell me what that refers to?-- Primarily the stopping at the waste edge or goaf edge on No 2 roadway. It was left partially open to induce some of that intake air going directly into the waste rather than being all directed over the mining equipment.

You continued to get some flow into the waste area?-- That's correct.

And that was something that you dealt with in terms of a response to ventilation in the panel?-- Yes and no. That action of leaving that stopping at the end of 2 roadway open was not a suggestion from myself, but rather action was taken by people in the section and then reported to me.

Now, in terms of the ventilation difficulties in 512 as they were reported to you and as you assessed them, were they in essence different from what had been experienced in 4 South and 5 South, or in your view were they the same?-- In my view it was a similar problem.

And had steps been taken in 4 South and 5 South to deal with it as well?-- They had.

What did you understand yourself in terms of the general nature of the problem? We have heard the word "recirculation" used, we have heard the word "layering" used and so forth. What do you describe it as, the reversal?-- I describe it as a loss of ventilating pressure which results in the air not being directed in the manner in which it is desired.

And in your view at the time what was it caused by?-- Which panel, sir?

512?-- The size of the excavation in the waste or the goaf took all the ventilation pressure and, hence, velocity away from the air flow.

And is that something that's a common feature of bord and pillar extraction when you create a goaf and the goaf gets larger and larger?-- That's how I understand things.

When you create the goaf, you increase the cross-sectional area, don't you?-- That's correct, in a partial extraction system.

Yes, that's what I'm talking about?-- Yes.

Now, at any stage of your dealing with ventilation questions in 512 did you form the view that what you were experiencing might be the sign of a heating or indicative of a heating?-- I did not.

Did anyone express that view to you?-- They did not.

Now, there were checks kept on ventilation, weren't there?-- Yes.

One of them is a monthly vent survey?-- That's correct.

And what else was there apart from the monthly ventilation survey? If one looked for ventilation aspects, where would you look for it? The vent survey is one?-- There is - the measurement of ventilation flow in the 512 Panel specifically was also conducted on a weekly basis. That was in conjunction with the measurements taken for the working out of the CO make by Mr Morieson, or whoever was in his position. There was also - ventilation in an underground coal mine is everybody's concern, everybody watches ventilation all the time.

Well, as required or on occasions were ventilation matters dealt with in deputies' reports?-- Yes.

Undermanagers' reports as well?-- Yes.

Now, I just want to take you to some specific instances in terms of ventilation that have been raised and ask you to comment on them. One is 11 June which involved Mr Guest. Did you have anything to do with that?-- I was not at work on that weekend.

It was a weekend shift that Mr Guest was involved in on a Saturday, but did you talk to Mr Guest about that incident after the event?-- Yes, Mr Guest approached me after the - I think it was on the Tuesday.

Tell me about that. What did he tell you about his experience, and what did you discuss with him?-- To the best of my recollection, he really didn't discuss the events as such but his concern about the ventilation of the goaf or waste.

What did he give you to understand had happened?-- Well, he really didn't. He concentrated more on his concern about the ventilation in the waste, particularly in the rear upper corner of the waste. I don't believe Mr Guest had any time in the panel prior to that, so we were discussing the ventilation system as it was designed to operate in there.

Is this the occasion you were telling, I think, Mr Clair about where you had to explain to Mr Guest that the stoppings between 12 and 13 cross-cut were an integral part of the system?-- That's correct.

It was that aspect that he was talking about?-- Yes.

Now, did he tell you that some action had been taken? Did he give you to understand that he had done something, or was it just a general inquiry that he had?-- I'm sure Mr Guest would have spoken about action that was taken, but I don't have any direct recollection of that, of those steps, but I do recall him being concerned with the system.

As you understand it, he was discussing those stoppings at the back of the panel?-- That's correct.

Now, can you just have a look at this document, please? Now, that's a copy of the deputy's report for the shift next following the one where Mr Guest was involved?-- Saturday afternoon shift, 11/6, yes.

Does that bear your signature at the bottom?-- It does.

So, at some stage on that day - not that day, it's a Saturday - but after that day that came to your attention obviously?-- Yes.

Now, did that bear any relation at the time in your mind to what Mr Guest was talking about?-- Obviously, yes.

What Mr Guest said that he did in the evidence to this Inquiry was that he had put up a stopping diagonally across 9 cross-cut with a view to getting as much air and methane out of the area there - diagonally across 9 cross-cut in heading No 2. Can you recall him telling you about that?-- I'm not sure.

If you look at the deputy's report there, Mr Newton's report for 11 June, afternoon shift, he has under the "Comments"

section there, "Put stopping up in No 5 road 7 cross-cut. Stopping put up in 8 cross-cut between 4 and 5. Brattice pulled down 8 cross-cut No 2 road and stopping repaired 8 cross-cut 2 to 1. Methane cleared." Do you see that?-- I do.

Now, did you have some view about the efficacy or otherwise of what Mr Newton had apparently done?-- It seemed to be very sensible, the action that was taken.

You didn't have any concern over what he had done?-- No, that's good mining practice.

What about, such as we know it, what Mr Guest did, which is to say putting up a stopping diagonally across 9 cross-cut in No 2?-- I don't see that that would have any effect at all.

Is that something that Mr Guest discussed with you beforehand? No, it couldn't have been because it was on a Saturday and you weren't there?-- That's correct, I was not at the mine.

By the time you became -----?-- I may have been away for the weekend.

By the time you became aware of it on the Tuesday, obviously Mr Newton had done what he has reported in that report?-- Yes. These things were carried out on the Saturday afternoon shift.

And in your view at the time, what Mr Newton had done was an appropriate course of action?-- It was.

I don't think that report is actually separately tendered. I think it's currently Exhibit E for identification, so I will tender that report, Mr Newton's deputy's report, number 3984, Saturday afternoon shift, 11 June. I don't have multiple copies at the moment, I only have the one.

WARDEN: Exhibit 192.

ADMITTED AND MARKED "EXHIBIT 192"

MR MORRISON: Perhaps the exhibit could be Exhibit E which is, no doubt, somewhere in those boxes there, E for identification. If you can hand that document back, please, Mr Mason. Now, can I ask you about another event? There is some evidence from Mr Caddell that on 23 May he constructed a regulator in the bottom return between 1 and 2 cross-cuts?-- Yes.

Was that something you knew about at the time?-- After it was done, yes.

And how did you find out about it?-- Mr Caddell brought it to my attention.

XXN: MR MORRISON

WIT: MASON G A

Was it immediately after he had done it that he brought it to your attention?-- I'm not 100 per cent sure. It was in close proximity to the time that he had done it.

Can you recall anything of the events surrounding that incident?-- I believe that Mr Caddell had been - that the action he took was subsequent to a large fall in the panel. I do recall him talking about there being a lot of dust in the atmosphere, especially in that bottom return roadway at the time that he was there.

What did you understand he had done after detecting the fall?-- Well, the effect of the fall was to create a windblast which had raised all the dust in the atmosphere and damaged some of the ventilation appliances in that section. He was carrying out his duties to restore the ventilation.

So, a repair of an existing appliance?-- That's what I would have expected, but I don't believe that - well, Mr Caddell told me that he couldn't find a regulator there and that he had constructed one.

What do you say about the course of action that he took on that day? Do you agree with it?-- It was very appropriate. I had questioned him as to whether there was a regulator further outbye, was he sure there was not a regulator further outbye. He said that he hadn't been able to locate one.

This is about a month after extraction had started. We know extraction started on 29 April. It was about a month later?-- Yes.

Now -----?-- If I might just give some explanation with regards to that incident. Initially the ventilation from the bottom return in 512 had flowed inbye along 510 No 1 roadway after - that was after it had exited the 512 bottom return. It went then down 510 No 1 roadway and around the faces of the 510 panel. A temporary overcast was built across the 510 roadways at 5 cross-cut. In actual fact, there was only one temporary overcast which was across the supply road, and at the intersection on the belt road we had moved the belt structure and built stoppings both inbye and outbye of No 5 cross-cut, so that the ventilation flow was then changed to flow across the 510 roadways rather than down around the bottom of the panel. That was done as a result of a need to stop the return air from the mining section going around the faces as we shifted the methane drainage equipment down to drill in that area.

So, it was to cut out that bottom return of 512 anyway?-- No, to re-route the air.

Sorry, I mean prevent that air from going out into the 510 panel?-- Yes, that's correct.

Now, can I take you to just one other matter? Mr Bryon has mentioned in some evidence that he got some instructions about the installation of segregation stoppings in the cross-cuts on the bottom side of No 2 road and for headings 3 and 4 to be regulated at that panel head. Can you recall dealing with Mr Bryon in relation to those matters?-- Not specifically, no.

But you have mentioned to us that you did deal with segregation stoppings being erected and the regulation of 3 and 4 roads?-- I did.

Can I ask you this: can I take you to one last item, if I may, in relation to these ventilation matters? You mentioned 17 June and you have also mentioned the second time that McCamley came to - or second occasion which you place at 24 June when McCamley mentioned the appliances in 512 to you and Mr Schaus - the "I don't want this to happen again" conversation?-- Yes.

I want to take you later in time again to the occasion when Mr Bentham raised such matters. He says in his written statement that on 29 June he found air backing up in No 2 heading, and by that he meant he was getting methane coming out of the goaf, not two flows of air, just the presence of methane in the heading. Did you have anything to do with Mr Bentham on that occasion in terms of what was detected and what should be done?-- As I said previously, I did.

Can you just tell me what it was you told him to do, or recommend that he do?-- I can repeat myself, yes. We talked about the construction of - I don't know if it was construction or reconstruction of the segregation stoppings on the bottom side of No 2 roadway, and to ensure that the intake regulators across 3 and 4 roadways at the panel head were in tact.

Now, on all of the occasions that we have discussed through to this sequence with Mr Bentham - on all of these occasions ventilation questions have been brought to your attention by persons involved in those events and either on the occasion or soon after they occurred; is that right?-- That's correct.

And you have had direct involvement in both the reporting of those incidents and the assessment of either what was done or recommending what should be done?-- Yes.

Now, can I ask you one other thing - slightly different topic: did you have any discussion with Mr McCamley - in relation to 512 now - about the impact of the larger pillars that Mr Madden had recommended for the panel design?-- I don't have any direct recollection, but I don't say that we didn't. Discussions about panels was - or any facet of the operation

at Moura was encouraged amongst all people.

What did you see at the time - that is, at the time of design and during extraction - was the impact, if any, of the big pillars?-- I'm sorry, I lost concentration. Could you repeat that, please?

At the time of design and during extraction, what, if anything, did you see as being the impact of having those large pillars there?-- The impact of having them there? They would - I saw that the biggest - that they would cause a problem with mining on the advance operation mainly.

In which sense?-- In the sense of the amount of work that was required to ventilate the production faces during development and the procedure that - procedure for wheeling shuttle cars to the working face, and just change in sequence of operations. Because of the irregularity, it changes the way mining progresses.

Does it make it more complicated to wheel the shuttle cars as you go?-- Yes.

Longer and more turns than you would get without them?-- Yes.

Was there any discussion that Mr McCamley had with you, or you with others - that is to say, McCamley and you alone or McCamley to you while others were there - about the impact of those big pillars on the resistance for ventilation?-- As I say, I have no direct recollection, but it is obvious that they would have some effect on the air flow into the panel.

Did you see them as having substantial effect?-- I did not.

So far as you can recall, did anyone express that view to you - that the large pillars would have a substantial effect on the ventilation?-- Quite a number of people expressed the view that they were a pain in the butt, but - not quite those words, but similar meaning, but not with regard to causing any problems, no - any-----

Were those comments directed more to the wheeling questions and matters of that nature?-- That's correct. It was during the development of the panel.

Not during extraction?-- That's correct.

Now, during the life of the extraction, did you receive any complaints from anyone about dead spots being created by the pillars?-- I did not.

Specifically, did you have any occasion when Mr Rose might have raised such a question?-- I don't recall any such instance.

Can you recall whether Mr Rose raised with you at any time the fact that, as he says, the design caused an increase in the ventilation in the top two roads and a decrease at the bottom? Can you recall any occasion when he raised that with you?--

Mr Rose wasn't a deputy in 512 panel. I can't - no, I don't have any recollection of him raising that.

Can I just ask you on a related topic, but at a different time - could the witness have Exhibit 152, please? If you look at the fourth page of that document, you will see, as it were, a table. I want to take you down to six lines from the bottom and direct your attention to the "Velocity" column, and you will see an entry there from Mr Stafford's report on Saturday - day shift Saturday, 5 August?-- 5 August was Friday.

Sorry, yes, of course it was. Friday, 5 August. A velocity of 1.55; do you see that?-- I see that.

If you look up for the entries - half a dozen or so will do before that - you will notice that 1.55 was significantly lower than any other velocity recorded around that time, or after; is that right?-- All the velocities prior to that are in the 1.7, 1.8 range.

Do you know of some event that may have accounted for that?-- I do.

That is to say, on Friday day shift, a low velocity reading?-- I do.

Can you tell me what it is?-- On the Friday day shift the normal shift undermanager was not at work. I had responsibility for the daily operations. I received a phone call early in the morning that there was a problem with layering of methane in the 520 panel. I believe it was deputy Moody who had discovered that problem. It was not he who - I received a phone call asking permission to alter the regulator on the 5 South bottom return to assist with the clearing of that methane. It was not from Mr Moody. I believe it was either Mr Rose or Mr Henderson.

All right. And what happened?-- I gave permission for that course of action to be taken.

Can you just indicate for us where in 5 South that regulator is or was?-- It is on the 5 South bottom return, inbye of 510 No 1 roadway.

How far inbye, though? I'm interested in knowing approximately where?-- I can't recall exactly whether it was the pillar inbye of there or the pillar inbye of that again.

One to two pillars inbye of the 510 junction?-- That's correct, 510 No 1 roadway junction.

As far as you were aware the regulator was open?-- Yes.

And do you know how long it remained open for?-- I do not, but I have no - I did not receive any information to say that the regulator had been restored to its original condition.

And in your view would that account for that low velocity there recorded by Mr Stafford?-- The opening of that

regulator would impact on the flow of air in the 512.

Now, you can hand that document back, please. Now, we have heard a number of people talk about a set of new overcasts that were constructed in No 2 Mine. Can you recall those yourself?-- Main overcasts?

Yes, the main overcasts?-- Yes.

Can you indicate on the map where they were?-- Across the main dip roadways, and I believe it was 30 cross-cut on the main dip roadways.

And what was the purpose of those overcasts?-- To reduce the ventilation pressure at the main fan, to improve the ventilation flow throughout the mine. The overcasts that served the south side of the mine at the date of installation had a very low cross-sectional area. These were put in to assist with that measure. As a result of a ventilation survey that was conducted by consultants, that was one of their recommendations for the future workings of the mine.

And did they seem to you to have the effect that they were supposed to have, increasing ventilation as a result of the drop in pressure?-- They did assist. There was still a lot of work being done to further improve the ventilation in the mine.

So notwithstanding the construction of the overcasts improvements were ongoing?-- Yes.

I just want to direct your attention to another topic for a moment, if I may. You were asked some questions about the Unor system by Mr Clair, and I don't want to go over those matters again, but mention has been made of the screen that is available on the Unor system that has figures on it. As we understand it that screen was usually pointed out the window towards the marshalling area or the start point; is that right?-- Normally that was the case, yes. In the time prior to the installation of the new computer and VDU we had had to leave the screen pointing inwards and not be turned around. It was just - the movement of the screen on it's fulcrum impaired the function of that VDU.

That was a prior system though?-- That's correct.

Now, what's your experience as to whether people looked at the screen, paid attention to it? We are talking about all ranges of people down to ordinary miners. In your experience did they do that?-- Yes, I quite often noticed people looking at the display screen.

That includes just ordinary miners, not just deputies and undermanagers and people like that?-- That's correct.

And was that attention more direct at some particular part of the shift than another part?-- Yes, the hot water service for other men to fill their flasks to take underground was in close proximity to that window so there were generally a number of people there at start of shift waiting to fill their flasks and they would take a take account of the screen during that time.

What would normally be showing on the screen? Would it be the graphs or would it be the data for the individual points?-- Data for individual points.

That would be the normal thing?-- That would be the normal thing, yes. That was - if you wanted to look at a specific graph you had to take a series of steps to bring the graphs up. The graphs weren't shown as a normal part of the display on the screen.

Can I just ask you something else? In relation to that area, that is to say the window through which one can see the Unor screen, where is the noticeboard on which deputies' reports were pinned up in relation to that?-- It was much removed from there.

Where is it?-- It's on a wall at 90 degree to that wall and would be five or six metres away. Five metres at the most, sorry.

Sorry?-- It would be five metres at the most.

Nonetheless at the start point?-- That's correct, it was in the marshalling area. It was on the wall adjacent to the marshalling area but which contained the lamp cabin.

So for a miner coming to work going and getting his lamp and standing around at the marshalling area, the noticeboard on which the deputies' reports was pinned up was very much central to those areas?-- That's correct. That's why it was put in that position.

Tell me what was usually the practice over a weekend in terms of the deputies' reports? If one took, say, the position from Friday night, the afternoon shift on from Friday through to the Monday, what would normally be the position with those deputies' reports? Where would they end up come Sunday, say?-- That did vary with the undermanager who was in charge of the mine over the weekend, but more often than not the report stayed on the noticeboard or display board until I collected them on the next day I was at work after that period.

Normally, if we deal with that usual situation, in the batch of reports which would be the earliest one that you would end up collecting come Monday? Would it be Friday afternoon shift or the Saturday night shift?-- The earliest one would normally be the Friday day shift.

Friday day shift?-- Yes.

So if -----?-- Or even the Friday night shift.

So if we look at Sunday, 8 August, when the men were going to go down the pit, in the normal course of events they would have available to them right at the marshalling point all of the deputies' reports back to Friday?-- They did.

They would have available to them Caddell's report which mentioned the smell he got?-- Those reports in particular I collected from the noticeboard subsequent to the explosion.

So those reports were in fact up on the board at the marshalling area?-- Yes, they were.

It's not just a question of normal practice, you know for a fact that they were there?-- I did.

What's the purpose of putting them up on the noticeboard? Why put the deputies' reports on the noticeboard?-- So they are available for perusal by the people working in the mine, give them an understanding of the conditions of the mine, and in particular the area that they are working.

So on that noticeboard and available to the men on that Sunday would have been Caddell's report?-- Yes.

Klease's report?-- Yes.

The reports of the deputies that did the sealing?-- Yes.

The reports of the deputies subsequent to the sealing?-- Yes.

And also close by to them would have been the monitor screen?-- Approximately five metres away.

Can I just ask you something else for a moment, if I may? You've been asked some questions about 24 June on a number of respects. Firstly, Mr Robertson's report of that day which you were asked about, and secondly, that being the occasion when you, as best you can say, Mr McCamley spoke to you and Mr Schaus?-- Yes.

I want to direct your attention to that day. Now, Mr Squires was on afternoon shift that day, wasn't he?-- On the 24th he was.

Do you need to look at a document to check it or do you know that to be a fact?-- I can look at a document if you wish.

Exhibit 179, thanks. Is that the case? Mr Squires was on the afternoon shift?-- This is a duplicate of shift report for the afternoon shift, 24/6 which bears Mr Squires' name and his writing.

Can I ask you to look at this, a copy of Exhibit 67, and does this show that Mr McCamley was on the day shift of that day? Is that right?-- It does. This is a copy of undermanager's shift report for 24/6 on day shift. It bears Mr McCamley's name and his writing.

I think I'm right in saying - you can check those documents - that neither of those reports mention any smell such as Mr Robertson indicated?-- I don't believe they do. I know the day shift report wouldn't, the shift that preceded Mr Robertson's shift. I have not seen any mention of any smell on the afternoon shift report.

Was Mr Squires away after that point, that's - 24th was the Friday, was he away over the weekend and the Monday following?-- I believe he was away over the weekend, but I'm not sure about the following Monday.

He didn't bring to your attention anything to do with any smell?-- He did not.

You can hand those documents back, please. Can I keep you in

the same general time frame; 24th was the Friday, 27th the following Monday, Tuesday is 28 June. Did you go down the pit on 28 June?-- I did.

Was that to investigate a problem with a continuous miner that had become jammed by a roof fall?-- That's correct.

Now, on that occasion did you have any conversation with Mr Tuffs in relation to problems with ventilation?-- I did not. Mr Tuffs - I went into the 512 Panel on the day shift. Mr Campbell was the deputy in there that day. Mr Tuffs wasn't on that shift.

Can you recall encountering yourself any problems with ventilation that day?-- I did not. There was quite a good air flow in those parts of the panel that I observed.

Can I take you now, if I may, to 22 July and the events that occurred on that day? When did you first become aware of a reading of eight parts?-- In the afternoon of that Friday, the exact time I don't know. I do know that I returned from the open-cut administration area - I believe it was some time after three o'clock that I returned from there. I believe I then had a conversation or an interview with the shift reps for the fitters' union about the broken down miner that we had, and I think it was some time after that, shortly after that, that it was brought to my attention.

Had you been doing some particular activity up at the open-cut?-- Yes, I had. I had discussions with the mine manager, Mr Regan. I was endeavouring to have the continuous miner that was broken down sent off site for repairs. I needed to have his approval for that to be done.

When you returned to the underground from that you saw the fitters' reps?-- That again was in relation to that ----

Yes, I understand that, and did they ask to speak to Mr Regan about that matter?-- Yes, they did.

As a consequence of that did you ask Mr Regan to come down to the underground?-- I did.

Was that in relation to the matter to do with the fitters and the continuous miner to go off site?-- Yes, it was.

Subsequent to that you became aware of the eight parts reading; who brought that to your attention?-- Mr Abrahamse.

At the time he did had there been anything organised by way of a check? Was that already under way or is that something you did?-- No physical activity had been undertaken, but I believe the arrangements had been made that it would be checked.

And did you have some discussion with Mr Abrahamse about the significance or otherwise of the eight parts?-- I believe so.

Well, can you recall what was said about it?-- Well, it produced - Jacques used the eight parts reading from the

Drager to do the CO make calculation. That give a substantially higher figure than the preceding one which produced a sharp rise on the - substantial difference between the preceding reading and that one.

At the time this conversation was going on had Mr Regan arrived?-- No, he had not.

Had Mr Kerr arrived?-- No, he had not.

Were you present when there was a comparison made of the 512 graph with those of other extraction panels?-- Yes, I was. That was done on a number of occasions, I believe.

Can you tell me who was involved in that comparison?-- Mr Abrahamse, myself, Mr Kerr, Mr Regan. I think that's all.

Was there some general agreement about what the comparison showed?-- Yes, the comparison which was looking at individual graphs for each section showed that the overall CO make was at a higher level than previous panels, than other panels. It seemed to be a similar trend but had a higher point value.

Did anyone raise or mention their thoughts as to why that may be so?-- Mr Regan did.

Tell me what he said?-- He said it was most likely attributable to the variation in the mining method.

Had that been a topic of discussion, the different method of mining?-- I don't recall if it was at that point in time.

When he raised that matter did anyone disagree with it? Mr Kerr, for instance, or Mr Abrahamse?-- Not that I recall.

Now, after Mr Kerr had arrived, did you discuss with him what was to be done in terms of the investigation to be carried out or the checking?-- I think I just asked Dave if he would assist with the investigation.

What I am getting at, was there any discussion about precisely how it would be carried out?-- Not that I recall.

Now, when the men went down, that is, Atkinson, Kerr and Abrahamse, what were you doing when they were down the pit?-- Mr Regan and myself had a conference with the fitters' reps as they had requested.

Did you see the gentlemen when they came out of the pit, that is those that went down?-- I did.

Did you see them all or only some of them?-- I saw them all.

And what report did you get?-- I did not take any report from Mr Atkinson that I can recall. Mr Abrahamse told me that they had taken Drager tube readings at the prep seal site and further inbye along the No 1 return roadway. The maximum that they could record was 6 ppm. He also told me that the ability to discern the level on the high range tubes was better than on the low range tubes. I don't recall much else.

Did Mr Kerr offer some comments about what he had detected down there?-- I asked Mr Kerr for his opinion of the section and he told me that there was no problem down there, everything's sweet, or words to that effect.

And was Mr Kerr someone whose opinion you respected at that time?-- It was and is.

Was there any further discussion about the impact of the new method of mining?-- Not that I recall.

Did you have a later discussion with Mr Kerr on the Monday or shortly after that about what he had done subsequent to that inspection?-- I did not.

Did Mr Kerr tell you about a conversation he had with Mr Mackenzie-Wood?-- He did but not on that Monday.

I am sorry. Well, whenever it was, can you tell me what he said to you?-- I spoke with Mr Kerr sometime after the explosion. He told me that he had spoken with Mr Mackenzie-Wood shortly after - sometime in the week after that inspection of 22 July and that Mr Mackenzie-Wood had concurred with him that the higher overall value of CO made was most likely attributable to the change in mining method or extraction method and that we were most likely establishing a new norm for the mine using that method.

Now, going back to the 22nd, when you spoke to Mr Abrahamse, he had already produced some documents that you saw?-- Yes.

And you identified - one of the exhibits may have been one that is the graph with the question mark and the daily

intervals. Perhaps I will ask you to look at them again. Exhibits 93 and 94, please. Did he show you either of those documents, obviously without all the written information on them - that came later in time - in their base form?-- Not initially. I think I saw them sometime later.

Later that day or later in -----?-- Later that day, yeah, or that evening.

Now, on the 22nd, that is the Friday, did you have anything to do with telling Mr Atkinson what he was to do over the weekend in terms of getting readings?-- I reminded Mr Atkinson to make sure that the readings were carried out, but as to instructions further than that, no.

All right. Now, you reminded him. Was that before you went home? Is that about when you went home or was it during the afternoon?-- Before I went home.

In other words, was it a last minute reminder as you left or was it something you did earlier in the afternoon?-- No, I think it was after the inspection had been carried out. I wanted to ensure that Mr Barraclough's instructions or agreement with Mr Bryon was continued with.

Now, you mentioned in your evidence that as a result of the inspection that day you were at ease with the situation, you had no concerns about 512?-- That's correct.

Did you call Mr Barraclough that evening to give you the results?-- I did.

What did you tell him?-- I wanted him to be at ease with the situation, not to be concerned with it, and over the weekend he would return to his home at Kingaroy, and I rang him there and let him know that the inspection had been carried out and the results of that inspection.

Now, can I take you to another point in time? Is it the case that on 1 and 2 August you weren't at the mine?-- Yes, that's correct.

Were you in Brisbane dealing with matters to do with the work model?-- Registration of the underground work model for Moura Mine on Monday, 1 August, and assistance with the BHP Australia Coal gas drainage project for Moura Mine on Tuesday, 2 August.

On those two days did you have any contact with anyone at the mine about what was going on at the mine or any signs or anything else?-- I don't have any specific recollection. I possibly did call the mine but -----

Nothing stands out in your memory?-- It does not.

You came back to the mine on Wednesday, 3 August?-- Yes.

Did you meet Mr Schaus that day?-- Yes.

Did you give him some sort of briefing on aspects of the mine that had occurred while he was away?-- We would have spoken about things, but there was a lot going on that day. I don't know that I gave him a briefing on the whole period that he was away from the mine.

That was the day some Board members from BHP were going down the mine?-- BHP Mitsui Board members were at the mine site for a meeting, and as part of that meeting they visited the underground operations.

Were you involved in conveying them underground?-- I was.

Were you with them when they carried out an inspection of 512?-- I was. One party - there was two parties.

There were two parties that went down?-- Yes.

On that morning had Joe Barraclough left the mine to go to Brisbane?-- He had.

Now, on that Wednesday, 3 August, did you have any concerns about the safety of the mine generally or anything to do with 512?-- No, everything was fine to the best of my knowledge.

Did anyone express any concern to you that they had about the safety of the mine generally or 512?-- They did not.

Now, can I bring you forward in time to the next day, that's the Thursday? Did you routinely have a meeting on Thursdays at which weekend tasks were planned and scheduled?-- Yes.

And did you on this Thursday the 4th?-- Yes.

Could the witness see Exhibit 184, please? Is that your document?-- That is a copy of a document I produced.

Does that deal with the work that was scheduled for the weekend?-- It does.

If you look on the second page - sorry, I might have these in reverse order, no, no, it's all right - is there work to be done on 512, day shift Sunday?-- Yes. No specific work. There is men allocated to work in 512.

The number "4" indicates the number of men?-- That's correct.

And 512 is the panel to be worked on?-- That's correct.

Was that preparatory work that you intended to be carried out over the weekend?-- At the stage that this document was produced it was.

You can hand that back. Can I just ask you one other thing. I am sorry to do this jump back, but I just brought it to mind. Back on the 22nd you mentioned to Mr Clair, or you were asked about the directive that you put out on the Monday and he asked you whether you still had a copy of it. Do you

recall that?-- Yes.

Was the directive -----?-- No, I don't recall being asked if I still had a copy.

Was the directive a typed document or a handwritten document?-- I believe I wrote that document in felt pen.

Not one produced through the typing system at the mine?-- That's correct.

I am sorry to jump you back. Can I now go back to the time period we were discussing? I want to talk about the period when you were conducting an inspection on the Friday with Mr Schaus?-- Friday, 5 August?

Yes?-- Right.

Now, did that inspection take some time?-- We were down the mine, I believe, from around about smoko, came out of the mine at the end of the shift with the men from day shift.

We are talking something over five hours down the pit?-- Yes.

At any stage of that inspection when you were in 512 did you see or experience anything abnormal?-- I did not.

Did anyone down the pit raise with you that they had experienced anything abnormal in 512?-- I don't know, Mr Shorten might have spoke about a roof fall in the waste. Other than that, no.

Now, on the Saturday after you had the conversation with Mr Squires and ended up at the mine and Mr Squires left, you were, as it were, undermanager on shift during the sealing?-- That's correct.

Now, had you made some or drawn some conclusions about some of the signs that were given to you by Mr Squires, that is to say, Mr Caddell's reading of parts per million, 10 ppm? Did you ascertain where that reading was obtained from?-- Yes, I believe it was taken actually in the - through a hole in the stopping.

At 10 cross-cut?-- Yes.

Now, it's not a reading in the return then, it's inside the stopping?-- Not in the direct air flow, that's correct.

Can you make some comment about the levels of parts in the return versus behind such a stopping?-- I would expect there to be a higher concentration of gas in that - through a stopping on the opposite side of the workings, yes.

Now, on that day you spoke to Mr Tuffs and you have mentioned that conversation at the start point while he was servicing the PJB?-- Well, he stopped servicing the PJB so I could have a conversation with him.

I am sorry, yes. Did you have a second conversation with him later that day?-- I did.

Can you tell me about that?-- Yes.

When did it occur and tell me what was discussed?-- I had a conversation with Mr Tuffs in the marshalling area adjacent to the Unor screen, or the window behind which is the Unor screen. I believe that would have been about 9.30 p.m. I recall Mr Tuffs expressing concern to me about the tube bundle Unor system, the delay time between analysis and - between the sample being taken and the analysis.

He had a concern about that issue on a previous occasion. It was to do with the potential rupture of our gas range. He was concerned that the time, both in the - if there was a rupture to the range, that the time between the gas getting to a sampling point and then the time again for that sample to be delivered to the surface and analysed was excessive. It was as a result of that concern that we installed the BM1 unit in the 5 South bottom return at 5 cross-cut.

This was a topic that Mr Tuffs had raised on the previous occasion?-- Yes.

Delayed time in terms of a rupture in the gas range?-- Yes.

Did he, in that conversation, or at any time, give you or tell you of a CO make calculation that he had done?-- He did not.

Did he say anything to you in that second conversation about his not going underground come the Monday?-- He did not.

Was there any other discussion between you and him on that second occasion after this question of the delay time in terms of detecting the gas range rupture?-- Sorry, could you repeat that question?

Was there any other conversation on that second occasion, apart from that topic of the delay times?-- Not that I recall.

In that conversation did Mr Tuffs say anything to you about a smell?-- He did not.

In any conversation you had with Mr Tuffs, did he tell you about a smell?-- He did not.

Can I take you to the conversation you had with Mr Parker when you went out to see him earlier that day to tell him that he might be needed at the mine, or would be needed at the mine? You mentioned yesterday that you gave him an explanation of the phenomenon of spon com?-- Yes.

How did that come about? Was that because he asked some questions about why he was going to the mine, or did you just feel it was appropriate?-- I think both of those things.

And what sort of explanation did you give him? Was it a long and detailed one, or a short precis, or what?-- Oh, no, I spent some time with Mr Parker. I wouldn't call it a formal training session, but it was an introduction.

Can I take you then to that evening when you went down yourself on the Saturday evening to conduct the inspection, which you ended up doing with Mr McCrohon, because Len Graham was off getting some Tecreta?-- Yes.

Did you at any stage of that inspection experience a smell other than a normal goaf smell?-- I did not.

Did anyone down there tell you such a thing?-- They did not.

Now, you not only conducted an inspection with Mr McCrohon, but you stayed down, you said, and helped out on a couple of the seals?-- I stayed down, yes, I did. I stayed and worked - not worked on the seal, but I just stayed in the vicinity of the seal. I was carrying out things - I guess I did assist. I was shifting bags of grout so they were in closer proximity to the batcher, and I was picking up rubbish and all the empty bags and that that were being - from which the grout had been used. I picked them up and placed them on the MPV tray, and picked up other bits of rubbish that were around.

And did you spend some time in the return doing that work?-- That was at the return, yes. I then went - after I had been there for some time, I went to the belt road seal and carried out a similar exercise there.

So, in the course of staying down and assisting, did you have some contact then with the men who were actually working on the seals?-- I did.

Did any of those men say anything to you about abnormal smells or anything else?-- They did not.

Now, could I turn specifically to the occasion with McCrohon when you were actually looking around the panel with McCrohon? Now, you couldn't get in, you said, through the baskets at the return seal site?-- Couldn't get beyond the return prep seal, that's correct.

Were the baskets erected there almost to the roof, if not to the roof?-- They weren't to the roof, but they were a metre from the roof.

And was grout being poured?-- It was.

And did McCrohon tell you about how far inbye he had gone?-- He did.

And can you recall how far that was? Has he recorded it with you?-- I'm sure he said 5 to 7 cut-through.

And did he tell you the CO levels that he got at that point?-- He did.

Which was?-- 7 ppm.

Did any of that information cause you any difficulties? Did you regard that as an abnormal amount of CO, or a worrying amount of CO, or anything else?-- No, I was relaxed with that reading.

Now, following that inspection, you stayed assisting, as you told us, on the seals. In the return seal site, was Mr Young working on the batcher?-- Mr Young was on the batcher. Mr Nelson was on the delivery hose from the batcher, coursing the grout into the baskets, and Mr Parker was involved with the construction of the frame.

070395 D.38 Turn 6 sbd (Warden's Crt)

That's Mark Nelson?-- That's correct.

Now, can you recall when you left the pit to go up to the top?-- Yes.

What time was it?-- I don't know precisely what the time was. I had spent quite a deal of time in the area. I'd say between 6.30 and 7.30 - in that range of time. I was down at the belt road seal. The men converged on that point. The men came down from the top return seal and they discussed the arrangements for the taking of a meal break, and they - some men went out of the mine to have their meal break while others continued working on the belt road seal, and I left shortly thereafter.

When you were back on the surface, did you stay at the Unor screen or were you doing other duties around and about the undermanager's office and the bath house and things of that nature?-- I did not stay at the Unor screen in the undermanager's office. I was in my office. I was in the bath house.

Did you check the screen from time to time?-- I recall being called to the screen to accept an alarm on the screen - on the system.

Who called you to the screen?-- The alarm.

I see. Not a person, the alarm went off?-- Yes.

And was that when you heard the siren going?-- Well, sorry, yes, I was called to the monitoring system by the siren, not the alarm.

Your Worship, I am about to move to a different topic. I notice the time.

WARDEN: I think it might be appropriate. We will take a short morning break, thank you.

THE COURT ADJOURNED AT 10.52 A.M.

THE COURT RESUMED AT 11.11 A.M.

GEORGE ARTHUR MASON, CONTINUING:

MR MORRISON: Mr Mason, there are two things I want to deal with. Firstly, on the Sunday, 8 August when you were speaking to Michael - 7 August when you were speaking to Michael Squires, you gave him a list of jobs that could be done?-- Yes.

If the men didn't go down the pit for whatever reason there was a list of jobs that they could do?-- That's correct.

Can you tell me some of those jobs that you enumerated for him?-- I believe I said work in No 4 mine, the surface belt system both maintenance and cleaning on that, housekeeping in the compound. I believe I spoke about training. I can't help you more than that.

There were a variety of tasks that could be followed though?-- That's correct.

Lastly can I just ask you this: you've had drawn to your attention a passage of the transcript that's page 3,544 which attributes a statement to you yesterday in answer to Mr Clair where you interrupted him about a list of the signs - tar, smell and so forth - that you had been told about and has you saying, "I did say I had an insistent observation of a tarry smell." Does that accurately record what you said yesterday?-- Does not.

What did you say in fact?-- "Inconsistent".

Thank you. I have nothing further. That's page 3,544 line 25. I would ask that that correction be made in due course.

WARDEN: Thank you. We will note that correction.

CROSS-EXAMINATION:

MR MACSPORRAN: Can I take you firstly to an exhibit that was tendered through you yesterday, and that is Exhibit 191 which I think relates to training that you had over the years; do you recall that exhibit?-- I do recall it.

Could the witness see that, please, Your Worship? Mr Mason, the way it's set out you have initially the formal qualifications and certificates in the upper section of the first page; is that so?-- There is.

And that goes from (i) to (iv); is that right?-- It does.

XXN: MR MACSPORRAN

WIT: MASON G A

And (i) deals with the, I take it, chronologically the first in time being 1973 which is the Certificate in Mining; that was your first formal qualification?-- It was.

And then goes through to what I assume to be the last one, (iv), which was your Second Class Mine Manager's Certificate; is that so?-- My Mine Manager's Certificate is the last one mentioned in that list.

That is the last formal qualification you possess? That's the last certificate you attained as a formal qualification?-- No, it is not.

What is your latest qualification?-- My Deputies' Certificate and Examiner's Certificate were received subsequent to the Second Class Certificate.

I beg your pardon. Can we date the Second Class Certificate firstly, that's (iv)? When was that obtained by you, do you recall?-- I could not receive my - any certificates from the Board of Examiners until I had turned 21. I did that in 1975. So it was some time in 1975 that I received that.

Your Deputy's Certificate was when?-- Shortly thereafter.

Do you mean the same year or -----?-- I believe so.

Around 1975?-- Those things should be on record somewhere.

I'm sure we can clear up the date if we have to, just a rough estimate at this stage. 1975 you think would have been the Deputy's Certificate, around that time?-- My Undermanager's Certificate - Second Class Certificate was in '75 and I believe that the other ones would be in that same year.

That's the Examiner's Certificate and the Deputy's Certificate?-- That's correct.

Then we move on to "Other Courses" outlined on the same first page and over on to the second page; is that right?-- That's correct.

Can I take you to (ii) of "Other Courses"? It says "Communications Skills, 2 November 1989."?-- I see that.

Can you tell me firstly where that course was conducted?-- I cannot.

Do you recall the course yourself?-- I don't recall the course content. This list was derived from my personnel file at the mine, I believe.

So it's an extract from your personnel file, but certainly with respect to (ii) under "Other Courses" you just don't have a recollection of what that involved at all?-- Not at this point in time.

That was said to be November 1989?-- Yes.

That doesn't help you? The date doesn't help you recall?--
Not at the moment, no.

Could I take you then down to (ix)? What does that relate to?
It says, "Intro BUCL Comp, January '94"?-- "BUCL" is for BHP
Utah Coal Limited, company name, and the "Comp" would refer to
computing system.

Can I take you over to page 2 of that exhibit? You have (xv)
which talks about a workshop on spontaneous combustion, "Old
DRI." I assume that's Queensland Department of Resource
Industries, is it?-- That's correct.

When was that, do you recall, that workshop?-- I believe it
was either late 1987 or early 1988.

And late '87 you would have been an undermanager at No 2
Mine?-- I was.

Whereabouts was that workshop conducted?-- At the Bardon
Professional Centre in Brisbane.

Do you now recall any of the content of that workshop which
was said to be on spontaneous combustion?-- Not specifically,
no. The main recollection I have of that is a demonstration
of various detection apparatus. There was quite a number of
salesmen there from various companies that produce detection
equipment.

Detection equipment such as the Multiwarn, things like that,
or do you mean other -----?-- Yes.

What about the Probeye? Was that mentioned?-- I don't recall
that being on display at that -----

Now, I think you've told us already that as far as you can
recall, at that workshop there was no mention of CO make?--
Not that I recall.

Do you remember who attended the workshop with you from
Moura?-- I do.

Can you tell us, please?-- There was three deputies who
attended along with myself. My best recollection is they were
Deputy Stafford, Deputy Guest and Deputy Newton. I've
mentioned before that I believe that the operations manager of
Moura mine at the time, Mr Graham Smith, was also in
attendance but not for the entire duration of that seminar.

What about Mr Fowler? Do you remember him attending?-- I do
not.

Mr Fowler, did you know him?-- I do.

As at late '87 or early '88 what position did he hold if any
at Moura?-- He didn't hold any position at Moura.

Had he retired, had he?-- He had left the company.

What position had he held earlier, before he left the company?-- The last position Mr Fowler held was manager of No 4 mine.

And he was manager of No 4 at the time of the incident in July or whenever it was, '86?-- Yes, he was.

What about Phil Reed? Was he at the workshop with you?-- I don't believe so.

You don't recall Phil Reed being there?-- I do not.

As at that date, that is late '87, early '88, Phil Reed was the manager of No 2, wasn't he?-- He was the registered manager at No 2 Mine and the superintendent of underground operations.

All right, I'll come back to that later. Can I take you down the page again to the next one which is (xvi), "Mine Ventilation Course"?-- Yes.

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Is that the one you referred to in relation to New South Wales with Allan Morieson?-- That's right, the course conducted by the Key Centre for Mines.

And when again was that, can you tell us?-- In 1992 or 1993, I think.

Well, the last one, (xix), Job Safety Analysis Procedure Training Course, when was that?-- I believe it was 1993 but it could have been - could have been early '94, I'm not sure.

At that stage you were the undermanager -----?-- Likely 1993, late '93.

At that stage you were the undermanager at No 2, undermanager-in-charge?-- Undermanager-in-charge, yes.

Where was the training course conducted?-- On site.

That's at No 2?-- Sorry, at Moura Mine. It was conducted at one of our training rooms in the open-cut at the wash plant.

Do you recall who conducted the course?-- It was an in-house course by BHP Australia Coal. I believe it was people from the Safety Training Department from the Brisbane office. I don't know whether there was another outside consultant involved in that as well, I'm not sure.

Do you know what topics were covered as part of that course, what particular topics?-- It was just the procedure of conducting a safety analysis.

Was that something similar to a risk analysis identifying risks in a particular task undertaken at the mine?-- Very similar, yes.

Did it deal in any way with any risks associated with extraction processes?-- This was training in procedure rather than the specific analysis.

So, it was to train you and others in how to set up a procedure designed to identify risks in a particular task?-- That was included in it, yes.

You can hand that back, if you would. Now, as I understand the evidence you gave earlier, your training in spontaneous combustion involved, firstly, some mention of it during your cadetship; that's the start of it?-- That's correct.

Then from that point there was some - was there some induction training of you at the mine at Moura?-- I could say that my whole cadetship was an induction process.

Then you have told us about the workshop in '87 or early '88. That was to do with spontaneous combustion; is that so?-- Yes.

I think you went on to say that at some stage Phil Reed told you something about CO make in relation to spontaneous

combustion?-- Yes.

Mr Morrison asked you yesterday about refresher training; do you recall that?-- Not directly but -----

I think you told him that you had had some refresher training from - was it Bruce Danvers?-- I don't think I said that.

Well, Bruce Danvers was the safety and training officer before Joe Barraclough, wasn't he?-- That's correct.

And do you think you had any training from him or refresher training from him in respect of anything?-- No, I think I said Mr Danvers conducted training for those people working in the mine.

And not -----?-- I didn't include myself. I don't think I made mention - specific mention of myself.

So, to be clear, you yourself didn't receive any refresher training from Mr Danvers personally?-- Not by virtue of attending a session, no.

Well, do you mean to convey by that that you did receive some training but not in a formal or official sense?-- Yes, I believe that's the case.

On-the-job experience?-- On-the-job experience. I conduct inductions and that myself, visitor inductions and that, make people aware of self-rescuers, those sorts of things.

Were you yourself trained to conduct the inductions or did you simply pick that up as you went?-- I believe I was competent to do that.

I am not suggesting you weren't, but were you trained to do it or did you just pick it up as you went?-- I have not attended a train-the-trainer course or on-job instructor's course or any other course in that field.

You haven't?-- I have not.

Well, you didn't receive any refresher training from Danvers. Did you receive any from Joe Barraclough?-- Well, I was involved in all of the safety meetings where various topics were covered, but as for Joe sitting me down and giving me a refresher training course, no, not in that sense.

You know, of course, that there is the requirement under the Act for refresher training to be carried out every five years?-- I do.

And I take it from your responses you didn't - your training didn't comply with that requirement for refresher training?-- You can take that if you like.

I am asking simply do you agree with that proposition, that the training you received did not comply with the requirement for refresher training every five years?-----

MR MORRISON: I object to this. This question is directed to asking a miner his opinion as a matter of law. Whether or not training complies with the Act is, no doubt, unquestionably a matter of law and not for lay witnesses to comment on. It's just beyond the bounds.

MR MACSPORRAN: I can probably approach it a different way to save time. Mr Mason, do you agree with me when I say to you that you didn't receive formal refresher training every five years?-- I do not.

What formal refresher training did you receive every five years? Do you understand what I mean by "formal training"?-- I attended those courses that I have nominated in that exhibit that you showed me before. There was other training courses available for me to attend.

The topic of refresher training was raised with you by Mr Morrison, wasn't it, yesterday?-- I believe so.

Well, what refresher training did you receive?-- I've already spoken to you on a number of occasions this morning about my involvement in various aspects of training. Above and beyond that I can't say anything else.

Specifically did you receive any refresher training in spontaneous combustion methods?-- Yes.

When was that?-- As I've outlined to you just before.

Which was?-- I was in attendance at safety meetings when such matters were dealt with, I conducted induction training for visitors with regard to self-rescuers and other dangers in the mine, those sorts of things.

All right. I am dealing, though -----?-- I guess I was being refreshed throughout my daily activities.

But in relation to spontaneous combustion specifically?-- Well, they were included amongst those.

Who spoke about those at any safety meetings you attended? Who spoke about spontaneous combustion?-- I can't recall at this point in time.

And the induction training that you conducted was based upon the exhibit shown to you yesterday which was Exhibit 39, the folder. Do you remember that yesterday?-- I do remember that now, yes.

And that was the material you used to train inductees in spontaneous combustion?-- I guess some of the material was included in that.

Was there other material that you used?-- Inductions that I - I was not involved in the induction of new employees as such. I am talking about induction training for visitors.

I am sorry, visitors, you did say that before?-- I did.

Did that involve induction training in spontaneous combustion? It wouldn't have, would it?-- It dealt with mine fires, the observation of a mine fire, action to be taken. It dealt with the use of the self-rescuer in the event of -----

Emergency?-- ----- coming into conditions where it needs to be worn.

And for those purposes you used the exhibit shown to you yesterday, Exhibit 39, that folder?-- I used knowledge in my head.

You also had copies, I think, of the red and blue books?-- I had received copies of the red and blue books.

And had you read those?-- At the time that I received them, yes.

Which was, I think you said, was it the early 80's or around then?-- Very early 80's, yes.

And they dealt specifically with spontaneous combustion?-- Yes.

There was also available, you told us yesterday, Strang and Mackenzie-Wood's book, that was available at the mine?-- It was.

And whereabouts was that at the mine, to your knowledge?-- In the engineer's office.

Did you have reference to that book? Did you read the book?-- No, I have not.

You still haven't read that book?-- I have not.

And you have heard, no doubt, evidence here about a SIMTARS seminar in 1989?-- I have.

And you have heard evidence, I assume, here about manuals being brought back to the mine by Mr Reed from that seminar?-- I don't know that I've heard that here.

Do you know that to be the case, that he brought back with him from the seminar some manuals?-- I have heard that.

Did you ever see those?-- I have not.

And obviously you didn't ever read any of the contents of those volumes from the seminar?-- I didn't.

Now, in early 1986 you were still an undermanager at No 4?-- I was.

And you remained there until, I think you said, November of that same year, 1986?-- I think it was November of 1986 when I transferred across to No 2 Mine. It was in the latter part

of the year anyway.

And you remained at No 2, finally becoming undermanager-in-charge in about October 1988?-- That's correct.

You have been there ever since?-- I have.

When you were an undermanager at No 4, did you learn of the heating and sealing in 5 North in about April of '86?-- Yes.

And did you know who had been involved in sealing the panel?-- No.

Did you learn later who had been involved?-- Yes.

Did you take an interest in what had actually happened in 5 North at that time?-- No.

Wasn't it a matter of interest to you that there had been a heating detected in a panel in a nearby mine?-- Yes.

Well, did you do anything to find out what had actually happened, what had been done, what had been detected inside that panel?-- I don't believe so.

Why not?-- I don't know.

Well, you agree it was a matter of importance at Moura, the heating of this panel, 5 North?-- Yes.

And the whole area was an area liable to outbreaks of spontaneous combustion?-- That's a phenomenon that had been observed at Moura.

And you knew about Kianga in 1975?-- I did.

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That had involved a heating and loss of life during the sealing process?-- That's correct.

Kianga was some short distance from Moura, wasn't it?-- It is in the same-----

General area?-- Yes.

In '86 you had an actual heating at Moura in 5 North?-- Yes.

Well, wouldn't that be something you would want to find out about, educate yourself about - what had happened in 5 North?-- Well, I knew of the incident.

What did you know of the incident?-- Not a great deal.

And you didn't find out?-- I've said that to you.

Did you know about any smells being detected on the day of sealing, or before the day of sealing in 5 North?-- No, I don't.

Did you know of any hazes being detected in 5 North?-- No, I don't.

Weren't you interested to find out whether those signs of spontaneous combustion had been present in 5 North in '86?-- No, I wasn't.

Was your lack of interest due to the fact that you were at No 4, not No 2; is that the reason?-- Could have something to do with it.

After that time you attended this workshop in Brisbane at the Bardon Professional Centre?-- Yes.

Was there discussion there about what had happened in 5 North?-- I believe that a case history of 5 North was part of that seminar.

And was that presented by the inspector at the time, Mr Brady?-- I don't recall.

Do you recall anything about the discussion at the workshop about 5 North?-- Not at this point I don't.

Well, at that stage, I think you have agreed, you were then at No 2 - you had come across to No 2 late '86?-- That's correct.

So, you attended the seminar dealing with, in part, the heating in 5 North. You were undermanager at No 2?-- I was.

The very mine which had had the heating?-- That's correct.

Well, at that stage - that is, during the seminar in Brisbane in late '87 early '88 - was it a matter of interest to you at that stage - 5 North and the heating?-- I don't recall if it was identified at that seminar that it was actually the

5 North panel at No 2 Mine that was the case history in question.

Well, surely you knew it was, didn't you?-- I'm not sure.

John Brady was there, as you have told us?-- I don't believe I did say that.

John Brady was at the seminar - the workshop?-- I don't recall saying that to you.

Well, did you know whether John Brady had any involvement in the 5 North sealing in '86?-- I do now.

Does that help jog your memory about whether he was in the seminar in late '87 early '88 at Bardon?-- I don't recall. I don't recall - specifically recall Mr Brady being there.

Well, when you came back from the seminar to No 2 Mine, was there any briefing at the mine about what had gone on at the seminar at Bardon?-- Not that I recall.

Was there any attempt at all made to share with others at the mine the things canvassed at the seminar in Brisbane?-- Not that I recall at this point.

I take it you took the seminar and its contents seriously when you attended?-- Yes.

Was it a practice back in those days to - for you to write any report when you came back to the mine?-- No.

Well, at some stage you have told us Mr Reed informed you about CO make?-- That's correct.

When was that in the chronology of things in terms of this seminar, or any other dates you can recall?-- It was prior to the sealing of the 5 North section in 1991.

I think you have already said at some stage in your evidence it was after the SIMTARS seminar?-- I presume it would be after he attended it.

Well, before '91, can you tell us whether it was before or after you became Undermanager-in-Charge at No 2?-- I think it would be after.

You think after?-- Yes.

Do you recall in what context Mr Reed raised with you the issue of CO make?-- No.

Do you recall there being some formal session where you and others were told about CO make, or was it just a passing comment he made to you, or what was it?-- I don't believe it would have been a formal lecture. That's not Mr Reed's manner.

Well, can you tell us anything about the circumstances in

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which it was raised with you?-- No.

You can't help us at all?-- No, I have no direct recollection.

Well, do you have any recollection?-- Not clear.

Do you recall it being in relation to an investigation of the 5 North sealing in 1986?-- I do not.

You were undermanager at No 2 when Michael Squires was a technical assistant; is that so?-- That's correct.

When did Michael Squires become an undermanager, do you recall?-- Late 1987, I believe.

Do you recall prior to that time speaking with Mr Reed about CO make?-- No.

Could it have been prior to that time that you had this conversation with Mr Reed about CO make?-- It may have been, but I - I don't know.

Do you recall there being discussions at the mine at about that time - that is, before Mr Squires became undermanager - discussions about what had gone on in 5 North in 1986?-- Sorry, could you repeat that question?

Do you recall there being discussions at the mine before Michael Squires became undermanager about what had happened in 5 North in 1986?-- I do not.

A revisiting of the data relating to 5 North, plotting of a graph of the CO make for 5 North?-- I do not.

If that took place before Michael Squires became undermanager, you would have been an undermanager at the No 2, wouldn't you?-- Yes, I would have.

Because you were undermanager between November '86 and October '88 at No 2?-- That's correct.

Well, do you remember being told anything about a CO make trend with respect to 5 North at any stage?-- No, I do not.

You did never find out about that?-- Not prior to the explosion; since I have.

That's since August last year?-- That's correct.

Well, I think you have said your understanding of the relevance of CO make was confined to looking for a consistent steep rise; am I correct in that?-- I think I might have used "sustained".

"Sustained"?-- Well, an ever-increasing trend.

And who told you that?-- I believe Mr Reed.

But you can't help us with when it was, or in what circumstances?-- I believe it was prior to 1991 and subsequent to my appointment as shift undermanager - Undermanager-in-Charge. That's the best that I can help you.

Do you remember it being in the context of a system being put in place at No 2 to monitor CO make?-- It may have been.

Mr Mason, surely you must remember, as Undermanager-in-Charge, after October 1988 a system being put in place to monitor CO make at the mine, or don't you?-- I recall Mr Reed saying at some time that he was going to use that tool.

Was that the same time that he first mentioned CO make to you - those conversations the same time, or were they different occasions?-- I don't know.

Well, at some stage you discovered from Mr Reed that he was going to use CO make as a tool?-- That's correct.

To assist him in the early detection of spontaneous combustion?-- To assist him in detection of spontaneous combustion, yes.

And I think your evidence may already have been that he told you it was a useful tool - a more accurate way of measuring CO emissions; is that so?-- I believe so.

Well, did you have any conversations with him to learn about that proposal?-- I don't recall any specific occasion, but-----

Wouldn't you have wanted to know about that in some detail as the Undermanager-in-Charge?-- Well, I was happy with the way I had been going. Phil wanted to use this new tool. That was his prerogative.

The way you had been going was to use CO concentrations in parts per million?-- Yes.

And smell and haze, those sorts of things?-- Yes.

But Phil Reed was the manager, wasn't he, at No 2?-- Yes.

And he thought that CO make would be the tool to use to more accurately detect spon com; isn't that so?-- Yes.

Didn't that make you, as Undermanager-in-Charge, curious as to what this new technique and procedure was? Did you want to find out about that?-- I believe I had an understanding of what it was.

CO make?-- Yes.

What did you understand it was?-- It was just applying the concentration to the ventilation quantity.

And where had you discovered that information?-- From Mr Reed, I believe.

So, he told you that - how it was - or could be calculated; is that so?-- I'm not sure.

Sorry?-- I'm not sure - very simple.

Did he tell you anything about the levels as a guideline for determining CO make data?-- No.

You say definitely "no", do you?-- Well, I have no recollection of that information.

So, if he told you, you don't recall it? If he did tell you, you have no recollection of it; is that so?-- Yes.

Of course, you say that at no stage, until after the explosion in August last year, did you learn about the guideline figures of 10 to 20 lpm?-- That's correct.

You know, don't you, that those figures are mentioned in the Strang and Mackenzie-Wood book? You know that now?-- I know that now, yes.

You had never seen those before the explosion last year?-- I had not.

Had you been to Mines Rescue training?-- No, I had not.

Do you recall around the same time that Reed was speaking to you there being some sort of change in emphasis in the industry away from parts per million CO and towards litres per minute of make; do you recall that to be a change in emphasis?-- No.

You've never perceived that at all in all your time at No 2?-- A change in emphasis within the industry?

Yes. Just deal with Moura, then. Moura No 2, a change from relying upon parts per million to CO make in litres per minute?-- Yes, the CO make was the tool in use at Moura.

And it was a tool in use when 5 North-west was sealed in 1991?-- 5 North, yes.

You found out about that, didn't you - the sealing of 5 North in 1991?-- I did.

And that was from Mr Reed, was it?-- That's correct.

He told you they had sealed that. Look, why?-- I believed that I was aware at the time the decision to seal was made. I don't have a direct recollection of it, so I believe I was. He told me that he had had a rising trend with regard to CO make, but he was more concerned with inability to get to the back of the panel for inspection purposes. Roof conditions in that - in one particular area in that panel were very bad. There was a zone structure running across the panel, and there was a lot of weight coming in on that particular area which made access to the back impossible.

When Reed told you about the rising trend in CO make did you ask what rising trend, what figures, what shape of trend?-- No, Mr Reed said that he may have acted hastily, but he had taken that action anyway and I said, "Well, that's your decision, that's fine."

He had sealed as a precautionary measure, hadn't he?-- Yes, it would be described that way.

Did you ever see his mine record book entry relating to that sealing?-- I'm not sure.

In the ordinary course of events, being undermanager-in-charge would you have seen that?-- No.

You have no recollection of whether you did?-- I don't believe I did.

Did he tell you that the trend in CO make had gone from a figure to another figure and that was what caused concern firstly? Did he mention the figures?-- Not that I recall. I think - I think he said that there had been a jump, but I'm not sure. It's quite a long time ago.

A jump in readings would be significant, wouldn't it?-- Yes.

A jump in levels of CO make?-- Yes.

What would you compare that with to know whether you had a situation of concern or not?-- I don't follow.

How would you know whether the CO make trend was cause for concern or not?-- If that jump was continued with, continued to accelerate.

At what level? Continued to accelerate in what fashion?-- With time.

But how steeply or otherwise? I'm just asking what you knew about these things?-- A continual acceleration.

So any continued increase in trend would be a matter for concern?-- Continued accelerating increase.

You see you use those words; what do you mean by that? Did you ever have a graph to look at to compare any trend with? What did you mean in your own mind or what did you think in your own mind about an accelerating trend? What did that bring to mind for you so that you could look out for it in another panel?-- Well, I knew it was - to me the CO make and CO concentration, they are interlinked. One is a product of the other.

I don't want to go back to parts per million. I want to stay with CO make?-- Yes.

What did you have in your mind to look for if the occasion arose to put you on alert that you might have a situation of concern inside a panel? What did you have in mind to look

at?-- There would be a jump in the - a rapid rise in the CO make, and that would be then continued with that steep acceleration or steep rise or - I don't know the words - I don't know what word I can use to better describe it for you, I'm sorry.

I'm just wondering what you mean by a steep rise that would put you on alert that there was something wrong inside a panel. You mention a jump in readings and a steep, continued rise. What do you mean by that? What did you have in mind or didn't you?-- Well, the rate of growth of CO production would be - would continue - the rate of growth would continue to increase.

Graphs were posted, weren't they, in respect of 512 weekly, CO make graphs?-- During extraction, yes.

Did you have regard to those yourself?-- I had some regard to them.

Well, what do you mean by you had some regard to them?-- Those graphs were posted in the undermanager's office. They were posted in the deputies' cabin, and on occasion a copy would be put on my desk. I used to have a brief look at those graphs.

To examine, I take it, the trend of CO make?-- Yes.

That would be the reason you would look at the graph, wouldn't it, to see what the trend was?-- Yes.

Did you do that every week?-- I can't say definitely that I did.

Did you yourself realise the significance in CO make being monitored every week inside 512?-- I'm not - could you rephrase the question for me?

Phil Reed had instigated a system at No 2 to monitor CO make, hadn't he?-- Yes.

He left the mine in about - was it late '92 as manager, left as manager of No 2?-- Yes.

Who was the manager that took over from Mr Reed?-- Mr Schaus.

Mr Schaus continued the procedure to monitor CO make inside panels?-- That's correct.

It was done thereafter, including for 512?-- It was.

Did you know why it was being done, the weekly monitoring of CO make?-- It was another tool to be used in the monitoring of the progress of the panel.

As another tool did you have regard to it?-- I had some regard to it.

Well, was it the case that you - although you were aware that

CO make was being monitored weekly and you didn't really pay much regard to CO make at all and stuck with your parts per million?-- I think parts per million gives you a much more up-to-date and workable analysis of the situation.

That was your belief throughout the period, that CO make was being monitored weekly for 512, that is that parts per million CO gave a better indication?-- Well, that parts per million figure was available at all times. Only had to look at the Unor screen. You could see what was happening. The CO make calculation was an historical piece of information.

You could do CO make at any time you wanted to, couldn't you?-- If you had the information.

And the information was that contained on the Unor firstly?-- You needed a concentration of carbon monoxide, yes.

On the Unor?-- Yes.

The only additional information you needed to do the calculation was the velocity; is that so?-- That's right, the cross-sectional area of the ventilation station was known.

Which could be done at any stage by taking such a measurement at the vent station?-- Yes.

Once you had those pieces of information you could calculate the CO make there and then?-- That's correct.

It was always available, wasn't it, CO make data?-- If you went and did an anemometer reading, yes.

Well, that's hardly more difficult, is it, than simply reading off the parts per million on the Unor or doing a Drager reading underground? There is no significant difference in carrying out those tasks, is there?-- I believe so.

You believe so? I didn't hear you, I'm sorry?-- Yes, I believe so.

You believe it's far more difficult - or more difficult to go and do an anemometer reading to calculate CO make rather than just rely on parts per million?-- Rather than look at a Unor screen. There is a lot more activity involved.

See, is it the case that you continued on with the system you had been using for years and didn't really take seriously the CO make data? Is that the position?-- I was comfortable with using parts per million.

Were you uncomfortable using CO make data?-- Well, I saw it as an historical thing. The two were interlinked anyway.

But you had regard to the parts per million over and above the CO make?-- Yes.

When you then looked at or paid some regard, as you put it, to the CO make graphs for 512, what were you looking for?-- That

representation on the graph that indicated that we had a jump which was then followed by a sustained - an increasing steepness of the rise. Sorry, I'm getting confused with the words I'm trying to -----

You would only have a graph once per week, wouldn't you, for 512?-- That's correct.

Did you have any other graph from any previous sealing to compare the 512 graph with?-- Yes.

Which one was that?-- I believe the graphs from previous panels since the time that Mr Abrahamse was there were maintained in the files.

And did those previous panels include 5 North?-- I don't think so.

Didn't include 5 North in 1986, any of that data by way of a graph as far as you know?-- No, not as far as I know.

It didn't include any graph for the 5 North sealing in 1991 as far as you know?-- That's correct.

But it may have included graphs for other panels such as 401?-- The most recent panels that we had extracted, yes.

That's 401, 402?-- Yes.

511?-- Yes.

403?-- Yes.

None of those had had a heating, had it?-- No.

I think you've agreed that the information you did gather that may have been on 22 July, was at the rate of increase for the 512 graph, was greater than any of those panels we have just mentioned?-- Can you say that again, please?

The rate of increase in the CO make in 512 was greater than that for any of the panels we just spoke of?-- I don't know that that is correct.

You don't agree with that?-- Well, the rate of increase appeared to be the same to me, it's just that we were at a higher overall level.

Well, could the witness see Exhibit 21, please, Your Worship? Mr Mason, if you can go towards the back of that exhibit - I may have given you the wrong exhibit. It might be easier, I think, if you look at 110, thank you. Just keep that with you for the moment, but look at 110, if you would. I think we established when you were being asked questions by Mr Clair that the exhibit you had, the back page, is a graph for the time ending - or the period ending what date?-- 3/5/94.

I think we know from other evidence that's an incorrect date. It's 3 June. You see by the dates previous to that that last

date would appear to be - or should be 3 June?-- It would appear to me that way, yes.

Can you dig up in that pile a graph that deals with an earlier period, 27 May? Do you have that one?-- I do.

Well, how would you describe the CO make trend depicted in that graph representation?-- It was fairly flat for the period where extraction commenced.

Between 28 February and 27 April it's reasonably flat; is that so?-- That's correct.

That's during development?-- During development, yes.

As soon as production starts, towards the end of April, what happens to the trend?-- There was an immediate increase in the production of carbon monoxide.

And would you call that a steep rise in CO make?-- Yes.

Well, that steep rise then, if you look at the next section of the graph which is 9 May to 13 May, it continues to rise albeit not quite as sharply; is that so?-- That's right.

Then there is a dip, isn't there, a dip in the readings between 13 May and 20 May?-- That's correct.

Then it takes off again between 20 May and 27 May?-- It increases again in that period.

And increases rather steeply; is that so?-- Not as steeply as the period from 27/4 to 27/5.

Pretty close though, isn't it? The lines are almost parallel, aren't they? Not quite, but almost parallel in steepness?-- That's a subjective consideration.

Well, did you see that graph on 27 May or shortly after that?-- I'm not sure.

Well, if you had had concerns about that graph you would remember, wouldn't you? If the graph was -----?-- I believe I would have.

If the graph was a concern to you you would remember?-- Yes.

Can we say if you did see this graph you had no concerns about it?-- I either didn't see the graph or I didn't have any concerns about it, yes.

Well, see, wouldn't that trend depicted there in that graph

cause you some concerns in terms of an upward trend in CO make as represented by that graph? Wouldn't that cause you some concerns?-- I would be watching, yes, to see what happened.

I am sorry, I interrupted you?-- To see what happened subsequently.

You would be watching it to keep a close eye on it?-- The behaviour on this graph is similar to that experienced in other panels. Because it's historical data that you are putting into the construction of the graph and the variations that are involved in the measuring process, I believe, cause it to have peaks and troughs or hills and hollows.

When you say the measuring apparatus, you mean the Drager tubes?-- Well, I think there is variation in all measuring -----

In respect of the answer you just gave, you mean to convey that there would be peaks and troughs because of what variations?-- Anemometer readings. I don't know that the Drager tube was used. Drager tube readings were taken as a check against the validity of the -----

Unor?-- ----- Unor rather than for any other purpose.

So, you would recognise that these graphs may not be entirely accurate because of those difficulties with measurement?-- Yes.

That would be all the more reason for investigation of any upward trend, wouldn't it?-- Yes.

Well, did you keep an eye on these graphs week to week or was that just something left to others at the mine?-- I did not have specific regard to the graphs. I was looking at the carbon monoxide readings on the Unor which would have indicated - any change in that would have indicated need for investigation, fuller investigation.

Well, if you turn then to 3 June which is, as you say, 3 May on your bottom axis, that's the week after the 27 May reading; is that so?-- That's correct.

There is a slight decrease in the CO make represented by that graph?-- That's correct.

Did you see that graph?-- I most probably did, but I can't be sure.

If you take the next graph, 10 June, that's the following week; is that so?-- Yes.

It takes off again, doesn't it?-- Yes.

Steep rise?-- That's a sharper increase.

Sharper increase. It goes past 10 lpm, 10 being on the

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vertical axis?-- It does.

Well, did you see that graph?-- I don't know.

Wouldn't that be the sort of trend that would cause you concern?-- More so than the previous graph that you had me look at.

Which means that as the panel is further in the extraction phase, the CO is continuing to rise and, on your assessment of it, more sharply than it had before; is that right?-- My assessment at this point in time, yes.

Well, do I understand you to be saying then you didn't see this graph at the time it was posted?-- I cannot be sure.

Well, I take it also that if you didn't see it, no-one brought it to your attention as a matter for concern?-- That's correct.

You see, the next sheet should be a reading taken the day after the last reading, that is, 11 June?-- Yes.

And you now know that the way that's been plotted, the bottom axis is incorrect, it gives the same space to a day as it does to a week; is that so?-- It does.

But the representation is that there is a levelling out of the trend, although it's still upward slightly; is that so, between 10 and 11 June?-- That's correct.

And the representation of the graph, of course, shows it to be a significant levelling or a halt in the steep rise, if you like, whereas the point should actually be very close to the steep rise from 10 June, is that so, if the bottom axis was correct?-- Yes, that's correct.

So, if you take the next graph which is 16 June; is that so?-- That's correct.

There is a drop?-- That's correct.

From about 11 or so, just reading off the graph, down to about - looks to be around about 7 or so; is that right, 16 June?-- I'd say it's slightly above 8.

All right. Just reading across, slightly above 8. The next one is 24 June; is that so?-- That's correct.

Again it takes off?-- It increases, yes.

In a steep upward trend?-- If you want to use those words.

Well, I don't want to put words in your mouth if you don't agree with them. How would you describe the reading or the trend between 16 and 24 June as depicted on that graph?-- It is less steep than the period from the 3rd to the 10th of the 6th.

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Less steep than that but still steep?-- It's an increase.

Steep increase?-- That's subjective again. I don't think I'd use those terms.

What's your opinion about the steepness or otherwise of the graph line?-- It appears to be behaving in a manner similar to previous on the graph.

What do you mean by that, that is an upward trend?-- There is a growth in the period of time from the outset of extraction and it seems generally to be - in relative terms to be the same scale of growth.

Ever increasing overall, peaks and troughs but the trend is upward?-- That's correct.

Continually upward?-- Yes.

The next sheet, does that have the last point, being 8 July, on that?-- It does.

So, it includes the readings from the previous graph of 24 June to the next two weeks, 1 and 8 July; is that so?-- That's correct.

And again, although perhaps the rise is not as steep, it goes up; is that right?-- That's correct.

15 July, the next one, goes up again?-- That's correct.

At this stage we are up around the high 14's in terms of litres per minute, just reading across to the vertical axis?-- It's in that area.

And then, of course, 22 July, with that high reading that we will come to, but that's a very steep increase, isn't it?-- It appears to be similar to the period from the 3rd to the 10th of the 6th.

And again if you look at the whole trend from 28 February through to 22 July, there is a consistent upward trend overall, isn't there?-- That's correct.

And the last on that page - on that format, I think, is the - there is included 23 July, 29 July and 5 and 6 August; is that so?-- That's correct.

And I think 6 August was never plotted before the explosion, but certainly the others appear to have been, and there is a dip in the curve?-- Beg your pardon?

There is a dip in the curve before it starts to go up again?-- That's correct.

But it does start to go up again, doesn't it?-- It does.

And I think you would agree from earlier evidence you have given that you didn't see any CO make graphs between when,

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WIT: MASON G A

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22 July and the explosion; am I correct in that?-- I don't believe I did.

The last one you saw, I think, was on Friday, 22 July?-- I know I saw that graph.

That was when Mr Abrahamse was giving it to, or perhaps showing you and handing it on perhaps to Atkinson?-- Yes.

Well, looking at those graphs as a whole, they do show, don't they, a consistent upward trend?-- Yes, the same as for other panels.

Well, do you want to maintain, do you, that the rate of increase in the CO make for 512 was similar to that in other panels?-----

MR MORRISON: I object to that sort of question. I mean, Mr MacSporran is really doing now what Mr Clair did the other day, and that is not following on one question to the other but twisting the words, and in a really unfair way we have gone straight from consistent, which is talking about a linear description, consistent upward trend, now to changing rates, which is a quite different thing. Now, maybe he is not doing it deliberately, I don't know, but it's really unfair to the witness to switch from one to the other and say, "Because you have said consistent upward trend, you can't then defend something about rates." It is unfair.

MR MACSPORRAN: I will do it another way, Your Worship, to save time.

WARDEN: Thank you.

MR MACSPORRAN: Mr Mason, do you want to maintain, do you, still that the rates of increase in the CO make for 512 were no different to those displayed in other panels, being 401/402, 403 and 511?-- What I say, Mr MacSporran, is that the overall trend or behaviour of the 512 Panel appears to me to be similar to that for other panels.

See, wasn't your evidence today that on 22 July the manager, Mr Regan, said the trend of increase in 512 was greater than the other panels? Wasn't that his opinion on 22 July that you told us about?-- I don't think I said that.

What did you say about Mr Regan on 22 July; I may have misheard you?-- I believe I said that it was - the values were at a higher level than other panels.

But nothing about the rate of increase? I thought you said there was a meeting on 22 July. Mr Kerr, Mr Regan, yourself, Mr Abrahamse were all together looking at graphs of CO make in all panels including 512; is that right?-- I don't say it was a meeting as such. All those persons were together and apart at various times and in different numbers and looked at graphs at different locations, being in my office, being in the engineer's office at various times.

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WIT: MASON G A

Was there any consensus amongst the group about the rate of increase or the levels in 512 - as compared with other panels I mean?-- Yes, I believe there was.

What was said?-- I believe it was expressed by most people there that the trend appeared to be similar.

The trend was similar?-- Yes.

Do you know what graphs you were looking at at that stage?-- I believe those ones that we identified earlier.

They are the 512 ones; is that so, the 512 ones?-- No, it would have been the graph for 512 up to 22 July and those panels that had been extracted in the time since Mr Abrahamse had been at the mine.

In any event, you say that the rate of trend or the upward trend was similar to other panels but the levels were higher?-- Appeared to be similar, yes.

Could the witness see - I think it's Exhibit 22, Your Worship? I want to see it first to make sure it's the right one. Now, this, no doubt, wouldn't have been the document you were looking at or one of the documents you were looking at. I think this was calculated after the event, but you see it seems to compare various panels in terms of CO make trends over weekly intervals?-- That's correct.

And the panels compared are 5 North, 511, 403, 401/402 and 512; is that right?-- That's correct.

I think from the legend, if I am right, 512 is the - it's the middle panel line; is that so? The top one is 5 North, then 512; is that right?-- It's very difficult to look at in a reproduction but, yes, it does appear that way.

And that would, no doubt, be over the whole life of the panel, but you see generally there, as depicted, the rate of increase in trend of 512, if it is that middle one, is higher than those three graphs below it?-- I do see that.

And, indeed, looking at that, would you agree the upward trend in terms of steepness is higher than that for 5 North as well?-- Yeah, some segments.

Perhaps I will split it up this way: 5 North behaves this way, doesn't it, it goes rather steeply to around 20 lpm or just beyond?-- Yes.

And then drops and levels out below 20?-- Yes.

For a substantial number of weeks, in fact months; is that right?-- That's correct.

And then takes off towards the end of its life when it was sealed?-- Yes.

512 seems to be ever increasing as a general trend from start

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of extraction?-- Yes.

And that trend is not reflected in the other panels, being 511, 403, 401 and 402?-----

MR MORRISON: I am going to object -----

WITNESS: I disagree.

MR MORRISON: ----- to questioning along this line. I wanted to see where Mr MacSporran was intending to go in terms of matters that are relevant to nature and to cause as at August 1994. Now, what we do know about this is, firstly, this document was not available, that's clear. No-one made a comparison from this document at the time, that's clear. Thirdly, as I understand it, Mr Mason said - and no-one has suggested to the contrary - that the 5 North graph was not available, that's clear. So, what we are now having is an ex post facto analysis by way of linear regression on the instant in a manner which didn't occur at the time or any time before the accident. Now, in my submission, that is nothing relevant to nature and cause. You can investigate what the man knew or didn't know, did or didn't do, looked at or didn't look at, what views he held at the time, but an ex post facto analysis is not relevant to that exercise and we object to it.

MR MacSPORRAN: Your Worship, in my submission, I would have thought it is obviously relevant to what steps can and probably should be put in place at all mines to deal with how to interpret such graphs. If Your Worship is against me on that, I can move on to another topic, but I would have thought it was clearly relevant to that topic, if nothing else.

MR MORRISON: I wish to be heard in reply on that. I concede for the future there is some relevance in it, but its only relevance is this: you get experts to say how one should treat that graph. You don't ask people who are involved at the time. That's not the function of this Inquiry. If it is for the future, ask the experts how should graphs be treated, otherwise we might as well bring back those little miners we have heard from, get back Mr Moody and ask him, "How do you think you should treat this graph?" It is about as helpful as that. Let's hear from the experts in due course, as we know we are going to.

MR MacSPORRAN: Your Worship, I would have thought it is important that not only the experts understand the interpretation of these trends, but ordinary miners, deputies, undermanagers, undermanagers-in-charge and those above. This man's state of knowledge of those features is obviously, in my submission, relevant to that factor and for the future, and all of these people should be trained in the interpretation of these graphs.

MR MORRISON: That's avoiding the point I am making. I'm sorry the audience doesn't like what we are doing here - we will have to calm them down - but what we are doing here is not conducting a nine week, 10 week or 11 week education course for everyone who wants to listen. That's not what we are doing. What we are doing is participating in a statutory exercise investigating the nature and cause of an event in August last year. Now, arising out of this, no doubt, there will be recommendations about what training should go on in the future, what people should understand or shouldn't understand, what courses might be introduced, how graphs might be read, but that is a matter for experts to tell us the proper way, not for everybody just to voice their opinion. Let's hear from the experts the proper way to do it, if that is to be done in due course, and from that, no doubt, we will be able to structure things for the future.

MR MacSPORRAN: Your Worship, with the exception of the representation on that graph of 5 North, I understood this witness to say that on the 22nd of July there was discussion and comparison between the graphs for 512 and the other panels, being 401, 402, 403 and 511. That document he is looking at now is relevant at least to that, if nothing else.

MR MORRISON: That, with respect, can't possibly be correct when our learned friend has extracted and looked at the exhibit that contains the graphs that might have been looked at on the day. On no contemplation of anything could it be seriously suggested that this document is relevant to that exercise post the event for the purposes of this Inquiry only.

WARDEN: Thank you. It is post the event. I think you have covered it with the other graphs anyhow. I uphold Mr Morrison's objection. It is a question for the experts to look at and interpret.

MR MacSPORRAN: Very well, Your Worship.

You can hand that back, Mr Mason. It is no longer required. Did you ever speak with your ventilation officer, Mr Morieson, about the interpretation of these graphs as the panel went through its extraction phase?-- I don't believe so.

Did you ever speak with Mr Abrahamse prior to 22 July about such matters as the CO make inside 512?-- I don't believe so.

Is that-----?-- Well, can I say that I don't believe that they were - well, nothing was brought to my attention as an issue that I recall.

As far as you are aware, you only had some regard to the graphs, but not a constant monitoring of them by yourself; is that so?-- That's correct.

Did you assume that others were closely and constantly monitoring those graphs?-- I knew the ventilation officer, or Mr Morieson was involved in the production of those graphs and I knew Mr Abrahamse was also involved.

And were you expecting that they would be closely and constantly monitoring the progress of those graphs and the trends depicted in them, or wasn't that in your mind at the time?-- I believe I understood that they would be looking at the graphs, yes.

You agreed before, I think, that the sealing of 1991 in 5 North was - didn't involve a heating - did not involve a heating?-- 1991?

Yes?-- I don't believe it did.

'86 did. '86 was the heating, 1991 was not; is that so?-- That's my understanding.

And 1991 was a precautionary sealing, I think you have told us, as you understood from Mr Reed?-- I think I said that it could be described in those terms.

And did you understand whether or not there had been any smell or haze or other such signs associated with the sealing of 5 North in 1991?-- I was not made aware of any.

Did you understand, in fact, that there were not any signs of smell or haze associated with the 1991 sealing in 5 North?-- I guess by default I would have understood that.

Can I take you then quickly to the design of the 512 panel itself? You participated in the risk analysis procedure, did you?-- I did.

Is it true to say that spontaneous combustion was identified as a potential risk for the 512 panel?-- Yes.

And I think there is a document, Exhibit 70, from memory, that reflects that fact?-- I believe that's correct.

But is it true to say that the risk analysis process identified predominantly a roof and rib control as the major risks inside 512?-- Yes.

And, in fact, there was some degree of concentration on those risks in the procedure; is that so?-- Controls to-----

Yes?-- Yes.

Efforts to make the extraction in 512 safer through control of rib and roof dangers; is that right?-- Yes.

Do you think there was much less emphasis in reality on the risk of spontaneous combustion inside 512?-- I don't know that I could agree with that.

Could I-----?-- I believe you are asking me if there was much less emphasis on the risk of spontaneous combustion as compared to-----

Rib and roof?-- Rib and roof?

Yes?-- I believe it was identified as a less likely event. The process dealt more with rib and roof than it did with spontaneous combustion with regard to controls.

All right. Significantly more? It dealt significantly more with proposed controls of those features rather than spontaneous combustion; is that so?-- Yes.

And do you think there was some deflection away from the risk of spontaneous combustion by the concentration on rib and roof conditions, or don't you agree with that?-- There was a great deal of effort put into the design of controls for those-----

Rib and roof?-- More imminent than rib and roof, yes.

Do you think there was some deflection away from spontaneous combustion because of that feature? I am not being critical, you understand? I am just asking whether there was some deflection of direction away from spontaneous combustion matters?-- I don't know. I don't know. I know that those others were of primary focus. I really can't say that they did detract from other issues.

Mr Mason, can I take you to those exhibits quickly - 188 and 189? They are the Work Procedures instructions, I think; one that deals with underground coal mining procedure and one that deals with underground ventilation procedure. Now, I think you have already told us that those documents were drawn up as part of a Quality Assurance system?-- Yes.

They were drawn up, you think, to do no more than reflect the

current operating procedure at the mine?-- That's correct.

That is, to document what was already happening?-- Well, that's what I understood was the purpose of introducing the system - was to document those things that were happening.

You can't recall, as I understand your evidence - you can't recall ever having seen those documents before - before you were shown them here - or perhaps in preparation for here; am I wrong in that?-- I can't recall.

Can we assume - or can we say that you were not trained by anyone in implementation of the procedures documented in those two exhibits - that is, you weren't trained to put into effect what was written in those documents?-- I don't understand your question, I'm sorry.

Did anyone draw those documents to your attention and say, "George, these are the work instructions. You have to bring them to the attention of the men under your control on shift and make sure they understand and follow the procedures outlined in each of those documents."?-- You have still got me a little bit lost. I believe that these documents reflect what was, in fact, happening.

So, do you say by that that everyone was doing it anyway, so there was no need to bring to anyone's attention to the fact that those procedures had been documented in some way; is that what you mean?-- No, you asked me if I had been trained to-----

Implement those-----?-- -----implement these things. That's what I'm saying to you; I think they were already implemented.

Procedures were?-- Yes.

But no-one said to you, "Here's the written procedure reflecting what's been going on. Make sure everyone is following it." You don't recall any such event?-- I don't know at what time - what period of time that these were produced.

I think the date - I think, from memory, the date's on the top, about the middle of the sheet - each of them - which is about October, I think, 1993, for both, with the exception of Issue 2 of one of them, which is July 1994, I think. Do you see that?-- No, I don't. I see 30/10/93 on both of them.

I think the last page of one of them reflects a different date issued to July 1994?-- Yeah, that's correct.

All right. Well, does that help you remember whether you were ever shown those documents and told anything about them?-- No, but it does help me - I would have known that at some stage an audit would have been conducted to ensure that procedures being used reflected those as described in these.

Do you recall there ever being an audit of you by anyone of oral communication reflected in those work procedures?-- No,

I do not.

Was there an audit conducted of you with respect to any part of procedures laid down in those two exhibits, 188 and 189, to make sure there was compliance?-- A couple of audits had been conducted.

I'm talking about audits of you, or your involvement in the procedures. Were you ever audited by anyone for your involvement in the procedures?-- Not that I recall.

Can I take you, then, to - well, Your Worship, I am about to move on to another topic, it is just short of 1, if that's convenient?

WARDEN: Unless you are going to finish very quickly-----

MR MacSPORRAN: I'm not going to finish quickly.

WARDEN: Thank you, gentlemen. I will take the luncheon adjournment. We will resume at 2.15 p.m.

THE COURT ADJOURNED AT 12.55 P.M. TILL 2.15 P.M.

THE COURT RESUMED AT 2.17 P.M.

GEORGE ARTHUR MASON, CONTINUING:

MR MACSPORRAN: Could the witness have those two exhibits back, please, Exhibit 188 and 189? Mr Mason, I don't think I specifically took you to it, but if you could take 188 first, that's the underground procedures and work instructions for coal mining procedure. Do you have that?-- Yes.

If you turn to the second page of that actual instruction which is page 3 of the bundle you've got there, it starts off 5.2, planning?-- That's correct.

5.3 deals with the procedure upon the start of the shift?-- It does.

And deals with the oncoming undermanager communicating with the offgoing undermanager?-- That's right.

And then further down the same section, "The undermanager shall then communicate with the oncoming deputies...", and gives areas that need to be discussed?-- It does.

And then stipulates that mining crews shall communicate with the offcoming - or offgoing mining crew; is that so?-- The wording is "...should communicate".

"...should communicate." Over the page, 5.5, a similar type of procedure is detailed, the deputies coming off shift communicating with the undermanager?-- It does.

And then finally at 5.6 it deals with reporting and that covers both the production deputy's shift report, and then the second paragraph, the underground shift report to be filled out by the undermanager; is that so?-- I do.

As you've told us, that just reflects the system that was in place before these - or at least at the time these instructions were written?-- That's right.

As far as you were concerned the system seemed to work well, there was good communication between deputies and undermanagers, and undermanagers and undermanagers, and deputies and deputies?-- Of course that varied between individual people. They were all different, but on the whole it seemed to work well for me.

You mentioned before lunch an event that occurred on the morning of 5 August when there had been layering, I think it was, in the 520 section?-- I recall that.

And you were informed about that, were you?-- Yes, request was made of me for permission to adjust that regulator.

And that was done, was it? The regulator was adjusted as far as you know?-- Yes.

Firstly, what concentrations of methane made up that layering; do you know?-- No, I do not.

Do you know the source of the layering in 520 or did you know, I should say, the source of the layering in 520?-- I did not know the precise source, but I believe it would be from the gas range in that area.

Did you know the approximate volume or estimated volume of gas that made up the layering?-- I did not. I received a request from - not the deputy in person, but from another deputy.

So you got it second-hand, as it were?-- That's right.

Perhaps third-hand?-- Perhaps.

You authorised the change of ventilation appliance by altering the regulator setting?-- I did.

And that was to open the regulator to, as it were, flush the layer out?-- To increase the volume of air flowing through there and hence remove the layering, yes.

Dissipate the layer with air?-- Yes.

Now, do I understand you correctly to have said to Mr Morrison that you don't know how long that regulator was open for?-- I did say that to him, yes.

That's correct, obviously? You don't know how long it was kept open for?-- I do not know that.

Do you know if it was closed eventually?-- I have not received any communication on that even to this point in time.

The regulator being opened and/or closed would affect the air flow both in 5 South and 520 and also, as you say, in 512?-- That's correct.

So it would have some significant effect?-- It would have some effect, yes.

Potentially significant?-- Yes.

You see, it seems to be put forward here as a basis for concluding that there was a lowering of air velocity reading in 512 so at this stage this regulator was opened, that's the suggestion, isn't it? That that regulator affected the air flow in 512, the air velocity?-- I believe it would affect the -----

Did you ever see a record made of the fact of that regulator being altered?-- I did not.

Do you know if one exists, any record anywhere of the - written record - of the alteration to that regulator?-- I

have not seen one.

Do you know if there is any record in any deputy's report, for instance, of the fact of layering in 520 on the morning of 5 August?-- No, I do not, no.

Do you know if there is any deputy's report record of the methane concentration that's said to form part of the layering in 520 on 5 August?-- No.

There should be, shouldn't there? As per the system you've looked at in Exhibit 188 there should be a written record of those things?-- That's correct, "should" the operative word.

Is it the case you don't know whether there is or not?-- I have not seen anything in writing to confirm or deny that incident - event.

If you look at Exhibit 189, that deals with the underground ventilation procedures; is that so?-- It does.

And the procedure on page 5, 5.5, talks of "Any alteration to the underground mine ventilation system appliances shall only be authorised by the underground superintendent, undermanager-in-charge or the shift undermanager. All changes are to be recorded in the underground shift report book." Is that so?-- That's what it says.

That apparently was an update, if you like, of that procedure issued on 1 July last year, the date on the top?-- It is 1 July.

In any event, you haven't seen any written record, any shift report of the alteration to that regulator on 5 August last year?-- That's correct.

But as per this procedure one should exist or should have existed?-- That is correct.

If the system was functioning in that respect?-- Yes.

That fact, that is the alteration to the regulator on the morning of 5 August, that wasn't mentioned by you to Inspector Walker, was it, in your interview, in a statement taken for this Inquiry?-- I don't believe it was.

Can you tell us why you didn't mention that particular event on that Friday - occurrence on the Friday?-- I cannot.

Was it a matter of significance, the alteration to that regulator that morning?-- In what regard?

I think you've agreed it had an effect on the air flow in three areas, 520, 5 South and 512. Wouldn't that be significant?-- It's a normal practice to adjust ventilation appliances to deal with problems as they arise.

And a significant matter when you are looking at what happened inside 512 on 7 August, potentially significant, or don't you

think so?-- I don't know.

You don't know? Can I ask you then a couple more questions about CO make? Were you aware from discussions you had with others at the mine, including Mr Barraclough, whether Mr Barraclough had an understanding of CO make?-- No, I'm not sure.

You don't know whether he understood it?-- I do not.

You seem to have suggested that Mr Abrahamse did because he was doing the graphing - or at one stage doing the graphing; is that so?-- That's right.

What about Mr Schaus? Did you ever discuss with Mr Schaus his understanding of CO make prior to 7 August?-- Not in the terms of sitting down and asking Mr Schaus to explain to me his understanding, no.

Did he ever speak to you about levels of CO make inside 512 before 7 August last year?-- I don't have a direct recollection of that, no.

Did he ever tell you, for instance, that you as undermanager-in-charge should make sure you kept an eye on the CO make inside 512?-- I don't believe so.

Did you ever speak with any other undermanager in relation to their understanding of CO make?-- Not that I recall.

Not Mr McCamley as far as you can recall?-- No.

Not Mr Atkinson?-- No.

Who were the other undermanagers? Mr Sim?-- That's correct.

Didn't speak to him?-- Not that I recall.

Were there any others?-- Mr Squires.

Squires; did you speak to him?-- Not that I recall.

So with the exception of Mr Abrahamse you had no idea whether these other people we have mentioned understood anything about CO make?-- I believe - I held a general belief that they did.

On what basis?-- CO make is not a difficult thing to understand.

Well, it might not be difficult to understand, but you certainly knew nothing about the 10 to 20 litre guideline, did you, you say?-- That's correct.

You don't know whether any of these others, perhaps with the exception of Abrahamse, did know those figures either?-- That's correct also.

Did that make it difficult to manage the mine with respect to monitoring 512 for CO make?-- At the point in time I didn't

believe it did.

That was because you really disregarded CO make and relied upon parts per million. That's the case, isn't it?-- I don't know that I disregarded it.

In any event, it's certainly true to say that no-one ever instigated a training program for you in respect of CO make interpretation before 7 August?-- That's correct.

Could I come then to some specific dates in relation to the extraction process of 512? Is it correct to say that you recall an event on 11 June involving the deputy, Mr Guest? You found out about it the following week?-- That's right.

You recall in some detail, according to your evidence, the conversation you had with Mr Guest on the Tuesday after the report of 11 June?-- I don't know about some detail. I recall having a conversation with Mr Guest.

That's my term perhaps. I think the evidence you gave was you recall speaking to Mr Guest and regarding as nonsensical his concerns about what he found on 11 June?-- I don't believe I said that.

Well, what did you say about the conversation with Guest on the Tuesday after the event?-- I believe I made a comment about action that was taken with regard to the construction of the diagonal stopping at 9 cross-cut would be nonsensical, but not have any effect -----

That's what Mr Guest had done, hadn't he, on 11 June? Hadn't he done that to cure the problem with respect to 11 June?-- Yes.

And you spoke with him on the Tuesday following that event and regarded as nonsensical the action he had taken to remedy the situation?-- Not at that point in time.

Well, when did you regard it as nonsensical?-- In the recent past.

But you certainly remember in some detail the conversation you had with Guest about that event; is that so?-- I have not said that.

Well, you are the one that told us about a conversation not that day, the 11th, but in the following week?-- That's correct.

You gave us details of what was discussed between yourself and Mr Guest; is that so?-- I believe I gave details, some details of that conversation.

A conversation you had had in the week after 11 June?-- Yes.

A conversation relating to problems in the - was it the No 2 roadway, No 2 heading?-- I understood the problem to be in the waste - or the goaf.

Did you read Mr Guest's report of that event?-- I'd have to see the report.

You don't remember whether you read it or not?-- Not at this point in time.

17 June you were aware of Bob Newton's report of the Friday night shift? I think you've said that already?-- Right now I'm not sure. I believe I would have.

We will take some time. Could the witness see Exhibit 41, please, Your Worship? Is that Mr Newton's deputy's report?-- It is.

Relating to 17 June, the Friday night shift?-- That's correct.

And do you recall now, looking at it, having read that report at the time, on the Friday? I think you told us before you had read that report?-- I most probably have read this report before.

That was the ordinary procedure, wasn't it? You would read such reports?-- Yes.

And then I think you told us on that Friday shift, afternoon shift, you received a call from Reece Robertson, 17 June, the Friday?-- No.

That's not right?-- It's the day shift, I believe.

Day shift. Very well. Did you speak to Reece Robertson that day?-- Yes.

He told you of a problem inside 512 No 2 heading?-- Yes.

And then, as I understood your evidence, you organised Mr McCamley, the undermanager, to go down and fix it?-- Yes.

You remember all this. You remembered these events of 17 June?-- Yes.

You remember that you saw McCamley later and spoke to him about what he had done; is that so?-- That's correct.

Mr Robertson's report you read of what he had found underground?-- I most probably did.

Could the witness see Exhibit 44, please, Your Worship? Do you recognise that report as being one that you read; is that so?-- I'm not sure.

Not sure now?-- Not at this point in time I'm not sure.

I can be corrected if I'm wrong, but I suggest to you that you have said in evidence before this Inquiry that you had in fact read that report of Reece Robertson on 17 June?-- Well, I accept that.

If that's right you would accept that you had a memory of that report and having read it on 17 June; is that so?-- Yes.

You remember too apparently, speaking to McCamley later and McCamley being very pleased with himself as to his investigation underground that day?-- I remember speaking with Mr McCamley. I remember him being pleased with himself on detecting the two layers of air current.

You gave us an account of the conversation with McCamley, McCamley telling you that he had detected the air flows by throwing stone dust into the air?-- Yes.

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Seeing the warmer layer in the roof area coming outbye up the intake road?-- The upper layer.

The upper layer, and the second air flow going inbye below it?-- Yes.

But you deny McCamley ever saying anything to you about a smell associated with that investigation?-- I do.

One way of detecting a smell in that No 2 heading would be to walk up and down the ramp or the dip; is that so?-- To detect a smell that you know, sir.

And if you were walking up and down the dip, the gradient, you could walk in and out of the smell, couldn't you, if the smell was at roof level or higher up in the seam?-- If you walked to the source or walked to whatever was producing an odour, yes.

If you are walking downgrade you come out of the smell; perhaps if you are walking upgrade you could come into the smell and detect it with your nose. It's a possibility, isn't it?-- Yes.

You are saying, of course, that McCamley didn't mention anything about that to you on 17 June?-- That's correct.

He described in some detail how he detected these air flows but didn't mention walking up and down the heading in and out of a smell?-- Mr McCamley didn't mention any smell to me on that day or any other day.

And I think you have gone as far as to call McCamley a liar for the suggestion that he reported a smell to you?-- I did say that.

And you have suggested, I take it, that he is lying when he says he reported the smell to you. You are saying he is lying about that, he didn't report it to you?-- Well, Mr McCamley says he did, I say he didn't, and I know I'm telling the truth.

Well, that was 17 June. Then we come to 24 June, the following week. A week later Reece Robertson's on shift, isn't he?-- On the day shift, yes.

And again you deny ever knowing of a smell being detected by Reece Robertson that day; is that so?-- I do deny any knowledge of a smell detected by Mr Robertson, yes.

And -----?-- I'm not sure which shift he was on that day. I am becoming confused.

I will show you the report in a moment. You say that you didn't ever read any report by Reece Robertson of a smell until Monday morning, 8 August, that is, after the explosion?-- That's correct.

Didn't ever come to your attention between 24 June and

8 August?-- That's correct.

Could the witness see Exhibit 45, please, Your Worship? You accept that's a copy of a report from Reece Robertson, afternoon shift, Friday, 24 June last year?-- I do.

You see in the section - you have been taken to this already - "General Comments", "Also informed the undermanager that at this point there was a strong benzene-type smell and to keep a check on it."?-- I see that there.

A most significant written report, isn't it?-- Yes.

Such a smell would be something about which you would be rightly concerned, a strong benzene-type smell; is that right?-- I would be taking action on such a report, yes.

Now, you were, I think, on shift that day, weren't you?-- I would have been there for some of the afternoon shift.

But you didn't either that day or any day the following week come upon this report?-- No, I did not.

But you had become aware of Guest's report, hadn't you, of the 11th?-- I had.

You had spoken to Guest about the 11th?-- Mr Guest approached me.

You had been aware of events of the 17th with the exception of McCamley's smell. You were aware of all the other events of the 17th with respect to this problem with No 2; is that so?-- Yes.

Including the reports?-- I'm not sure about the reports.

And then we came to the 24th and you had no knowledge of Reece Robertson's report of a smell in writing?-- That's correct.

Robertson was a very experienced and able deputy?-- Yes.

Someone who took his work very seriously?-- Yes.

And someone who would not have reported in writing a strong benzene-type smell unless it was something of substantial significance to him?-- I don't imagine Reece would put that in unless it was something he had identified.

And from the terms of the written record, something he considered was worthy of informing the undermanager?-- That's what he has written.

And further to keep a check on it?-- Yes.

And that apparently just was never done -----

MR MORRISON: I object to that.

MR MACSPORRAN: ----- so far as you were concerned?-----

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WIT: MASON G A

MR MORRISON: I am objecting to that statement unless it's withdrawn. I object to that statement because Mr MacSporran puts that assertion knowing full well that that's contrary to the evidence of Robertson himself given in this Inquiry. The assertion was to keep a check on it and that just wasn't done. It's quite contrary to the evidence of Mr Robertson, quite contrary.

MR MACSPORRAN: I was, Your Worship, in the process of finishing the question and I said, as I recall, "so far as you were concerned". It was never done, so far as this witness was concerned, keeping a check on it. He didn't know about it, so he couldn't keep a check on it. That's the question.

MR MORRISON: I will accept belatedly that Mr MacSporran hadn't in fact finished his question. I will accept that the big gap between one part and the other was just truly a pause to draw breath and then put the new question.

MR MACSPORRAN: I suppose it's similar to the pause in the answers.

WARDEN: Thank you, Mr MacSporran, the question is allowed.

MR MACSPORRAN: Mr Mason, is that right, keeping a check on this problem inside No 2 heading on 24 June was never something that was done so far as you were concerned, you didn't know about it?-- That is obvious.

And didn't learn about it until after this explosion?-- That's correct.

But, of course, you do recall on the same day speaking to McCamley about McCamley being upset about ventilation changes in the same area?-- I believe it was that same day.

The same day Reece Robertson had noted a strong benzene-type smell?-- On a previous shift.

Did you question McCamley at all about what it was that had been changed to upset him?-- No, he was forthcoming with that information without being questioned.

Did you see as being valid his concerns about that?-- Yes.

What did it indicate to you that something he had put in place and not to be changed had in fact been changed?-- Yes.

What did that indicate to you in terms of the system of operating the panel? Did that concern you, that an undermanager's instructions had been altered without his knowledge, apparently?-- Yes.

What did you do about that?-- Nothing specific that I recall.

Wouldn't that have been the ideal opportunity for you to review the reports dealing with that area?-- I don't

understand.

Well, McCamley was expressing concern to you about changes to arrangements he had put in place without his knowledge. That was the effect of his complaint to you, wasn't it?-- Yes.

Wouldn't that have been an ideal opportunity for you to investigate what had been going on in the reports in that area?-- It was an opportunity, but the problem had only just arisen. Once again, we moved to the bottom side of the panel. I believe it was in that movement to the bottom side of the panel that things would have been altered.

In any event, at no stage did you look for this report of Robertson to see what he had said about the state of the section; that's right, isn't it?-- Did I look for that report?

Yes?-- Which report, sir?

The report of Robertson, 24 June?-- No, I did not.

That would have been one way of finding out what was going on in the area McCamley was complaining to you about; is that so?-- It would have been impossible to look for that report at that time.

That day?-- That's correct.

What about the following week?-- Well, it would have been produced by then, yes.

And could have been made available to you upon request; is that so?-- Yes.

And you could have seen from that report what Robertson was saying about the same area that McCamley was complaining about; is that so?-- If I had seen that report, yes.

Not if you had seen it. You could have obtained it, couldn't you, the following week?-- I could have, yes.

But didn't?-- That's correct.

29 June, I think you have told us you were aware of Bentham's report?-- I am aware of the events of that day, of that shift.

And did you say that you spoke to Bentham about that or you read his report or both?-- I recall having a conversation with Mr Bentham on the telephone.

So, you have a memory of that day as well, the 29th?-- I do.

Mr Barraclough was acting manager for what period, do you know?-- A three week period that terminated on 1 August, I believe.

So, from July through to 1 August, that period?-- Sometime

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in July, yes.

And finished at the start of August?-- That's correct.

22 July he was still acting manager?-- He was.

On that day you were given, on your version, the first reading of CO make by Jacques Abrahamse, an actual reading of 18.98 lpm?-- That's right.

And told it was a high reading?-- Yes.

But you didn't discuss with Abrahamse how high it was, what 18.98 lpm meant in terms of CO make, what should be done?-- I understood it to be a significant increase from the previous reading.

What about the actual level? You were told it was high, but high by comparison to what?-- The previous reading.

And what significance in terms of level did the previous reading have?-- Excuse me?

It was a figure, was it, the previous reading, a figure of litres per minute?-- And a point on the graph.

Did that have any significance to you?-- Yes.

Just a point on the graph?-- Well, the change from the previous reading to that reading was of significance to me.

Then there is the investigation carried out by people at the mine, including Mr Kerr; is that so?-- He was involved, yes.

Mr Regan?-- I'm sorry, can you repeat the question for me?

There was an investigation carried out into this high reading?-- Mr Regan was not involved in the investigation.

He was part of the discussions about the CO make in 512 on this very day?-- He was involved, yes.

As was Kerr?-- That's correct.

Yourself?-- Yes.

And Mr Abrahamse?-- He also.

The general consensus was that everything was okay; is that right?-- At which point in time are you referring to?

That day, 22 July, everything was sweet, I think you said Kerr told you?-- That's correct. That was subsequent to the inspection.

Same day, 22 July?-- Yes.

Mr Regan said that any higher level of CO make in 512 was probably due to the different method of mining?-- Yes.

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WIT: MASON G A

As at 22 July you knew nothing about reports of smells inside the panel, did you?-- That's correct.

From discussions you had with anyone that day, including the ones I have named, did any of those indicate knowledge of smells inside the panel?-- They did not.

Would you think that would be a relevant factor for people to know when they are talking about whether everything inside 512 was sweet or okay?-- Yes.

It's fairly critical information, isn't it?-- That's important information.

It would place a whole different complexion - possibly place a whole different complexion on a CO make figure or a trend?-- Possibly. I don't think it would - I don't think it would change the results of an inspection, though.

No, but it might make you investigate more thoroughly if you knew there had been smells reported in the very area you were looking at; is that so?-- Yes.

Now, what's this evidence you give about an agreement between Joe Barraclough and Steve Bryon about readings to be taken? What was that about?-- Mr Barraclough had made an undertaking or reached an agreement, or whatever terminology you may wish to use, with Mr Bryon that the reading would be investigated and there would be further monitoring carried out by checking with the Drager tube.

Parts per million?-- Parts per million.

And Mr Barraclough was continuing as acting manager for a couple of weeks, or at least a week after that date - a week after that date?-- Yes.

Why did you need to issue a directive yourself on the Monday?-- I don't understand.

Well, there had been an agreement, as you understood it, between Joe Barraclough and Steve Bryon?-- Yes.

For the deputies to take daily readings with the Drager of CO in parts per million?-- That's - yes.

Mr Barraclough's idea?-- I don't know if it was Mr Barraclough's idea or a joint agreement between the two.

Well, it had been put in place between Barraclough and Bryon. The arrangement had been made on the Friday apparently, 22 July?-- I believe so.

Well, why did you get involved with a directive on the Monday?-- Because I was there.

But why? Why would you want to issue a directive on the Monday? Did someone tell you to?-- No.

Well, why did you do it?-- To ensure that the readings were taken.

Did Mr Barraclough ask you, as undermanager-in-charge, to issue a directive to make sure the readings were taken?-- I don't believe so. I think I told him that I would do that.

When did you tell him you would do that?-- I believe I told him that on the Monday.

So, you discussed with him on the Monday that you would issue a directive to make sure that his agreement with Steve Bryon was honoured; is that so?-- I believe so.

And that directive, in the ordinary course, would have been to take readings of CO in parts per million on the Drager?-- I issued the directive on the basis of the readings - of the extent of the readings that were already being taken.

By the deputies?-- By the deputies, yes.

So, did you find out on the Monday that the deputies had reported not only parts per million CO on the Drager but had been doing velocity readings as well?-- I did.

Is that the reason you say you issued the directive to include air velocity on the Monday?-- Yes.

But you knew as early as the Friday that the figures were going to be used for CO make calculations, didn't you?-- Yes, I believe I did.

Well, that's why you issued the directive, isn't it?-- No, I've told you why I issued the directive.

Abrahamse had shown you tabulation and a graph of CO make on the Friday, the 22nd?-- Yes.

And the tabulation indicated there were going to be daily readings thereafter, didn't it?-- Yes.

And that's why you issued a directive on the Monday, to keep that system in place for CO make?-- No.

Nothing to do with an agreement between Joe Barraclough and Steve Bryon regarding the Drager readings?-- I've told you before my reasons for issuing the directive, sir.

Are you trying to distance yourself from the suggestion that you wanted CO make done from the 22nd onwards?-- No, I'm telling you the circumstances in which I issued that directive.

In any event, the readings you say were taken after the 22nd; is that so?-- Beg your pardon?

Some readings were taken after the 22nd, including air velocity?-- They were.

But apparently you didn't ever follow up whether they continued to be taken?-- I noticed that those readings were consistently on deputies' reports.

Jacques Abrahamse went on leave, sick leave, or whatever; is that so?-- After the Monday, yes.

I think that was your reason for why CO make calculations were not continued through that week, because Jacques was away?-- Jacques was away.

And you made no attempt to see that the system he had started putting in place was continued?-- That's correct.

Did you ever ask him before you went away why he was considering it necessary or desirable to do CO make calculations daily?-- I don't believe I did.

You didn't see that as being significant, that he had made that decision, if it was his?-- I'm sorry, I'm getting confused. Can you ask me that again?

You didn't think it was significant that Jacques had decided to take daily CO make calculations?-----

MR MORRISON: If he did.

MR MACSPORRAN: If he did?-- After the inspection that was carried out on Friday the 22nd, I was at ease with the situation.

Because of the old parts per million; is that so?-- Because of a number of reasons. One, that the inspection had been carried out, that nothing untoward had been observed, parts per million stayed in the area where they had been.

So, you had no concerns?-- That's right.

But from Jacques' conduct, did you consider that he had concerns - conduct in ordering, drawing up a table system to take daily CO make readings? Did that indicate to you - that conduct - that he apparently had some concerns?-- I don't believe it did.

You didn't ask him, did you?-- No, I did not.

He was the underground mining engineer at the No 2?-- That's correct.

The fellow-----?-- He was also involved in the inspection that was carried out on 22 July and he had no concerns subsequent to that that I'm aware of. He was - he seemed to be at ease that evening.

At ease that evening, but apparently wanting to monitor it more closely - the CO make - from then on; is that so?-- I don't know the circumstances.

No, you didn't ask him, did you?-- No.

Never discussed it with him?-- That's correct.

He was - as well as being the underground mining engineer at No 2, he was also, by position description, the officer or the person assisting or to assist the ventilation officer; did you know that?-- I knew he assisted Mr Morieson.

And seemed, from your assessment of him - discussions with him - seemed to have some knowledge of CO make?-- Yes.

And he's the person who put in place this system to monitor it daily thereafter?-- I believe that's right.

Did you bring that to Mr Schaus' attention that that was being done?-- I don't believe I did.

Well-----?-- When Mr Schaus attended or returned to work, I was not present.

In any event, the weekend of the 5th and the 7th of August, you had planned the sealing of 512 to take place ordinarily in the week starting Monday the 8th; is that so - that was the plan?-- Some time in that week. Mr Bryon spoke to me on the Friday afternoon, asked me when I planned to seal the mine, and I told him I would expect that it would be some time in the ensuing week.

And that was because the production had finished as recently as the early hours of Friday 5 August; is that so - you were going to seal the very next week?-- The panel had been completed. It is common practice to seal a panel subsequent to completion of extraction.

So, finishing the early hours of Friday the 5th, you planned to seal some time the following week?-- That's correct.

Then there was some discussion, you say, between yourself and Michael Squires about Squires wanting to seal on the weekend - that same weekend?-- That was on the Friday afternoon, yes.

You said "no"?-- I said that I did not recognise a need to do that.

So, you could see no need to change the scheduled arrangement to seal some time the following week?-- At that point in time.

Later the same day, I think the Friday, you and Squires spoke again and you agreed that he could seal on the Sunday; is that correct?-- If everything had been - if everything was ready for that to - to enable that to go ahead, yes.

So, as at Friday the 5th, the arrangement was all things being equal - manpower and equipment - the sealing would take place on Sunday, the 7th?-- Yes.

Well, that changed, didn't it - that plan changed the following day?-- On the Saturday, yes.

Why did it change? Why did the sealing proposed for Sunday - why did it change?-- I was approached by Mr Squires by telephone. He reported information to me. He requested to me - of me to seal the panel on that day.

Well, he told you why he wanted it sealed, didn't he?-- That's what I just said to you.

He gave you the reasons?-- He gave me some information, yes.

What was that again? What information did he give you to support his proposal to seal before the Sunday?-- The afternoon shift deputy on Friday - on the Friday had reported a tarry smell. I believe "tarry smell" were the words that were used to me. On Michael Squires' inspection of the 512 on the Saturday day shift, he had observed a haze in the intake airways, and - or intake airway. He was unsure as to the source of that haze. There was ventilation reversal in that area. There was diesels working in that area. When he had gone into the top return, the goaf odour had seemed to be stronger to him. That was the extent of the information that he supplied to me-----

And on-----?-- -----initially.

And on that information, you made the decision to seal?-- I agreed that sealing would commence.

Why would you need to commence sealing that day as opposed to the scheduled day on the Sunday - the very next day?-- I believe a lot of arrangements had been put into place to allow that sealing to proceed on the Saturday.

What, before you were told or asked?-- I've said in my evidence earlier I'm not sure on the order of receipt of the

information - whether I knew about manpower arrangements having already been made, so I can't answer for definite on that.

See, there would be no logical reason, would there, to bring forward the sealing from the planned Sunday, which had been agreed on the Friday, to the Saturday?-- I beg your pardon?

Why would you need to bring the sealing forward from the Sunday as planned to the Saturday?-- Mr Squires requested that he seal the panel as a precautionary measure.

A precautionary measure against what?-- I would presume the development of a spontaneous combustion event.

The signs of which had been reported on the Friday and confirmed to some extent by Squires the Saturday morning; is that so?-- No, I don't agree that they were confirmed by Squires on the Saturday.

Well, you had a tarry smell on the Friday afternoon shift reported by Caddell; is that so?-- That's correct.

That's a fairly significant sign of a spontaneous combustion, isn't it - a tarry smell - or can be?-- That is an indicator.

Then on the Saturday morning there was a haze reported by Squires; is that so?-- The nature of which he didn't understand at that point in time.

He was concerned enough about it to report it to you as being a haze in that area - the intake area?-- Yes.

He reported further a stronger goaf odour?-- Yes, but he was not definite in that area.

Didn't he tell you there was a stronger odour than he had detected previously?-- Appeared to be.

Didn't that give you some cause for concern - a smell described in that fashion on the Saturday morning?-- That's why I agreed to go ahead with the sealing.

A precautionary measure against a heating?-- I don't think those words were ever used.

I'm not suggesting the words were used, I'm suggesting that's why you sealed - precautionary measure against, in fact, a heating - that's what was in your mind on the Saturday morning when you spoke to Squires?-- Yes, I believe that would have been in my head.

You hadn't at that stage confirmed there was a heating then?-- That's correct.

But there were signs?-- There was some unsupported evidence.

Well-----?-- Or "unconfirmed" - I don't know what the word is.

Unsupported or unconfirmed, you had a report of a tarry smell from a very experienced and able deputy in Mick Caddell?-- I had a report from Mick Caddell of a tar smell. It was not - it had not been repeated - that observation of that smell had not been repeated. Mr Caddell hadn't followed through on his observation himself.

You then went and organised Mr Parker, the Tecrete operator, to come in ahead of shift to work on the seals; is that so?-- I did.

And you went out personally to pick him up and bring him to work?-- That's correct.

You spoke to him about why he was coming in to work?-- When I went to see him, yes.

You gave him - or you spent some time with him talking about spontaneous combustion?-- I did.

Why?-- Because he was - he wanted to know why he needed to be at work on the day shift when he had not planned to be there until the Sunday.

He wanted to know what the rush was?-- No, I don't think he used those words to me.

But he didn't just accept that he had to come in to work. He wanted to know why he was being brought in?-- Yes, he was wary about the change. Any change produces caution in people.

And to allay his fears, you sat down with him and explained about spontaneous combustion?-- To give him an understanding.

Of why he was coming in?-- Yes.

Did you tell him that there had been reports of a tarry smell and haze - did you tell him that?-- I believe I did.

Did you tell him that they are signs of spontaneous combustion?-- I expect that I would have.

And that to deal with it, as at that stage, you were proposing to seal immediately?-- No - well, that was the reason - that was the reason he was being brought in to work - to carry out the sealing, yes.

Did you tell him it was being sealed as a precautionary measure against a heating?-- I don't think I used "precautionary measure against a heating". I think I told him it was a precautionary measure. Those were the terms that were used by Mr Squires when talking with me and I most probably would have used those same terms.

Precautionary measure to deal with reports of a tarry smell and haze, is that what you say?-- No, I think I just would have used "precautionary measure".

All right. Well, the sealing then commenced; is that so?--
It did.

After men were briefed on the surface?-- Yes.

They were told of reports of a tarry smell and haze?-- Yeah,
I believe they were.

And thereafter, you couldn't duplicate any smell or haze
underground, could you, on your inspections or inspections by
others that were reported to you?-- That's correct.

Is that why you thought that everything was okay - that you
couldn't duplicate those signs - you couldn't confirm the
evidence?-- That's right.

I take it you have never been told by anyone that smells, as
signs of spontaneous combustion, can come and go fleetingly
and be hard to detect again and again. No-one had told you
that as at 7 August?-- No.

You had no knowledge of that?-- No.

But that was your - that's what gave you comfort, wasn't it?
You couldn't repeat the signs from the Friday and the Saturday
- couldn't confirm them - that's what made you comfortable?--
I didn't observe any evidence of any heating when I was in the
mine. Other people did not observe any evidence of a heating.

Of course at no stage, to state the obvious, did you check
yourself or inquire of anyone else what the CO make was doing
about this time?-- That's correct.

It was just never looked at at all at that stage, was it, to
your knowledge?-- At that stage, no. Before I went down the
mine on the Saturday afternoon, I did make a CO make
calculation myself. I made that from deputy Newton's report,
I believe.

When did you do that?-- Before I went down the mine on
Saturday afternoon.

Why did you do a CO make calculation on Saturday afternoon, 6
August?-- I believe I wanted to see what the CO make level
was. I used - I believe I used deputy Newton's report and
deputy Klease's report.

Have you mentioned this before?-- I don't believe I have.

Did it just occur to you, did it?-- I have not been asked a
question about that before.

We have spent a couple of days talking to you about CO make,
haven't we, and your understanding of the significance of
it?-- Yes.

Didn't occur to you to tell us before now that you, in fact,
yourself, had done CO make calculations on the Saturday
afternoon, 6 August?-- Did not.

Well, did you get the figures of - I should ask, perhaps, what figures did you achieve on your calculation of the CO make?-- I'm not sure. I believe they were in the - around about 19 lpm.

Of course, you had no idea - I withdraw that. You knew that was high, didn't you, 19, because Jacques had said 18.98 was a high CO reading on 22 July?-- In regard to the previous figure, yes.

Well, 19 is higher than 18.98, isn't it?-- It is.

So, at a time when a sealing had commenced, you had a CO make increasing?-- I think it was the same on the night shift as the day shift.

Around 19?-- Yes.

High. You must have known that was a high CO make reading?-- Well, I don't know. I was looking at a comparison between those two figures.

Did you go to your folder that was on your desk where Jacques had left his papers - the daily reading/plotting of CO make?-- I don't believe I did. I don't recall-----

Would that have been a sensible thing - to try and determine a CO make for this period?-- I don't know that I was trying to discern a trend.

Why were you calculating it? For what possible reason were you calculating it if you weren't looking for a trend or something of significance?-- I think I was feeling - I was in a situation where I didn't - I wasn't sure about, and I was looking for something to do to try and give me some comfort.

You were concerned about the tarry smell and haze from the Friday and Saturday?-- I don't believe I was concerned about the haze.

You had started the sealing as a precautionary measure you say?-- That's correct.

You spent time explaining to Parker about spon com and why you were sealing?-- Yes.

And here you are on the Saturday, after sealing has commenced, looking for some sign to dispell the signs of spon com or otherwise; is that a fair assessment of it? You were looking for some evidence of what was going on inside the panel?-- That's correct.

And you got CO make readings of 19?-- I believe it was in that area.

Did you ask anyone what 19 meant in terms of CO make in a panel like that?-- No, I did not.

Did you go to the graphs I took you to earlier as part of Exhibit 110 of the weekly trends of CO make inside 512?-- No, I did not.

Well, when you got 19, what did you do with it? Did you put it back in your drawer?-- No.

Well, was that it? You did the calculation and you just carried on?-- I went down the mine after that.

Well, look, is it the case that in the absence of a smell to accompany a CO make or a haze to accompany a CO make, you were confident that there was no heating; is that what it comes down to?-- The reading - the CO parts per million reading that was taken down the mine on a number of occasions was 7 ppm. There was no other indicators obvious to me that there was a heating.

Did you do a calculation based on the 7 ppm down the mine?-- No, I did not.

Why not?-- Because I knew that that 7 ppm would decrease the CO make.

So, again, you reverted back to the parts per million CO to give you comfort there was nothing happening inside 512?-- Yes.

Even though you had calculated yourself figures of 19 lpm on the Saturday afternoon?-- That's correct.

You spoke to Neil Tuffs, didn't you, on the Saturday night?-- Yes.

About what he had discovered underground - results of his inspections underground?-- I don't believe so.

He told you of a figure of 16.25 lpm, didn't he?-- No, he did not.

You don't recall any such conversation with Tuffs at all?-- I recall a conversation with Mr Tuffs.

Not including mention of 16.25 lpm?-- That's correct.

Not including a stink underground on Saturday?-- That's correct.

But you do recall a conversation with Tuffs that didn't include those things?-- I recall talking about the delay times with the Unor monitoring system, yes - tube bundle system.

Well, was that the end of your CO make investigations for Saturday afternoon?-- It was.

Did you raise with Tuffs that you had done a calculation before speaking to him and got 19 lpm?-- No, I did not.

He was expressing concern, wasn't he, about sending the men down on the Monday shift in 510?-- I believe that was the underlying reason behind statements he was making.

And didn't you discuss with Tuffs that night sealing procedures in panels?-- I don't recall.

Perhaps I can be more specific: did you discuss with Tuffs that each panel was sealed on its merits and each case was looked at on its merits?-- They are reminiscent of the words that I would use.

Why wouldn't you tell Tuffs about information you had at that time, speaking to him, of your 19 lpm? Why wouldn't you tell Tuffs about that in terms of a sealing of 512? That would be relevant, would it?-- Probably because I didn't know what it meant and also I believed that the reading of 7 ppm was a more accurate reflection of-----

The situation?-- The situation, yes.

So, you did the calculation - you had 19 lpm but didn't know what it meant? Why did you do it?-- I don't know.

Mr Mason, you must know why you sat down and calculated out two CO makes that gave you a figure of 19 lpm? You must have had some reason for taking the trouble?-- I can understand you would think that.

What's your explanation? Why did you do it?-- I told you, I don't know. I think I was - I think I would - I was looking for a comparison between the two shifts - the night shift and the day shift.

Well, you knew that; did you in fact do a comparison having done the calculation of CO makes?-- Yes, they were - I believe they were the same.

That's the 19s though?-- Yes.

And that just satisfied your curiosity, did it?-- Yes, I believe so.

You say you used Klease and Newton's figures to calculate the CO make; is that so?-- That's correct.

And you think you got about 19 for each of them?-- Yes.

Could you look at Exhibit 152, please, Your Worship, and perhaps at the same time Exhibit 143. You see 143 is Cole Klease's deputy's report for the day shift, 6 August, Saturday?-- 143.

Did I say -----?-- I thought you said 153.

I'm sorry, I meant to say 143. That's Klease's report, 6 August?-- That's correct.

Kleasant reports what in terms of parts per million?-- CO parts per million is indicated here as nine to 10.

And what did you use to calculate your CO make?-- I used 9 ppm.

You think that came out at 19, do you?-- Yes. Mr Kleasant had reported to Mr Squires on the phone whilst I was in contact with him that the reading was eight to 9 ppm.

Well, did you see his report? Did you see his report that day?-- I believe I did.

You would have seen nine to 10 on his report?-- Yes.

Well, wouldn't you - surely being careful you would have calculated using the 10 ppm, wouldn't you?-- I used 9 ppm.

So you ignored the 10?-- I had two reports of the same inspection with different - I used the average of those two.

So you took the trouble to average them before you did your calculation. You remember all this now, do you?-- Yes.

10 ppm comes out to 21.04 lpm, doesn't it?-- I believe by looking at some other exhibit.

That's 152, I think. Look at the tabulation in there and you will see that - I think 10 comes out to 21.04 lpm?-- That's correct.

Well, what did you use for Newton's report of the Saturday night shift? You see 152 records it as seven and 8 ppm on the Drager?-- I don't recall.

070395 D.38 Turn 16 dfc (Warden's Crt)

If it was seven or eight it's less than the nine or 10 on the following shift of Klease, isn't it?-- Sorry?

If it's seven or eight on Newton's shift, that's less than Klease's report of nine or 10?-- That's correct.

The CO makes would be different as well, wouldn't they?-- Depends on the velocity.

Yes, depending upon velocity; is that so?-- That's correct.

In any event, you say you think you averaged them and did a calculation to get 19 and 19, the same readings?-- They were in close proximity, I believe.

But around 19. Could have been higher?-- I don't believe so.

And that's the last thing you did in relation to CO make before the explosion on Sunday night?-- That's correct.

You carried out no further investigation?-- That's not correct.

I'm sorry, you went underground - I will withdraw that. Did you tell Mr Schaus about your CO make calculation of the Saturday afternoon?-- I don't believe I did.

Well, why wouldn't you tell him? That was one of the tools you used, wasn't it?-- Not ordinarily.

Well, you did it that day?-- I made a calculation that day.

To assist you to determine whether everything was all right inside 512?-- I don't know that that is correct.

You didn't do -----?-- I don't know why I did the calculation. I believe it was just to bloomin' see the difference, see if there was a difference between those two shifts.

Were you just playing with your calculator in a spare moment?-- No.

Mr Mason, you did the calculation, didn't you, to see what the CO make was doing to satisfy yourself about concerns you had about 512? That's the reason you did the calculation?-- I think I wanted to see what was - if there was - see what was happening between the night shift and the day shift.

For that reason you would have read the reports, one of which I've shown you; is that so?-- I would have had to have read Mr Newton's report to get the information from it.

And Klease's report; is that so?-- Yes, I believe I did.

Klease is the one in front of you, 143?-- That's correct.

Could the witness see 181, please, Your Worship? Is that Mr Newton's Saturday night shift deputy's report?-- It is.

XXN: MR MACSPORRAN

WIT: MASON G A

6 August?-- That's correct.

CO seven to 8 ppm?-- Yes.

And the same reading on the second inspection; is that so?-- That is right.

Klease's reading, nine to 10 ppm on the first inspection?-- Those figures are written in the first inspection column, yes.

So you had a significant increase in even parts per million from shift to shift; is that so?-- The figures in Mr Klease's report do not align with the figures that were given to me on the telephone immediately his report was completed.

Well, his first inspection was at seven o'clock that night - I'm sorry, morning, 7 a.m., is that so, nine to 10 ppm in the morning?-- That's what's written in that inspection - in that "Action Taken" column adjacent to the first inspection.

Well, did you have -----?-- From one -----

Sorry, are you finished?-- No, I'm not.

Carry on?-- When I was talking with Mr Squires on the telephone which was subsequent to the time of this first inspection, I don't believe that the Drager tube readings had been taken at that point in time.

Anyway, you say you had conflicting information from Squires, from Klease via Squires, of Klease's reading; is that so?-- Yes.

Conflicting when compared with Klease's own written report which you saw later that day; is that right?-- Yes.

Well, what steps did you take to resolve the issue of what the difference was and whether it was significant between the oral report via Squires and the written report of Klease himself, Exhibit 143?-- I didn't take any. I went down the mine to make an inspection.

Well, it's a significant matter, isn't it, the difference in readings; is that so?-- You can describe it as that, yes.

And you ascertained the velocity to do your CO make calculations?-- Beg your pardon?

You ascertained the velocity to calculate CO make?-- I did?

Well -----?-- Are you saying I did?

I'm asking you, you see. You need air velocity, don't you, to do a CO make calculation?-- That's correct.

You got that from the deputy's report in each case?-- Yes.

Is that so?-- Yes.

So weren't you accepting information from the deputy's report to do your calculation or were you ignoring the nine to 10 ppm on the report and relying upon what second-hand had come to you via Squires from Klease, or don't you know?-- I used the velocity reading that was on the report. I had had an oral report of eight to 9 ppm that was conveyed directly to me - Michael was talking on one phone and I was on the other phone. He was on the pit phone with Mr Klease and on the outside phone with me.

So you ignored any conflicts; is that so?-- Well, that's why I selected the 9 ppm. It was - that figure was in both reports.

And velocity from the report as being an accurate record of what was on there; is that so?-- Beg your pardon?

And the velocity on the report as being accurate. So you accepted the velocity reading but discounted the Drager reading from the same deputy?-- I don't think I said I discounted it.

Well, you took the lower of the two figures?-- I used a figure that was mentioned on both reports.

Well, is there anything else you want to tell us about this CO make calculation you did on the Saturday?-- Only that I had forgotten that I had done that calculation for quite a period of time, only when I saw a piece of paper with my writing on it that indicated to me - jolted my memory that I made that calculation.

Where's that, the paper?-- Beg your pardon?

Where is the paper?-- In the - some of the files.

There is a bit of paper that exists that has this calculation of CO make done by you on the Saturday afternoon?-- A bit of paper that's got the readings I used to make the calculation, yes.

When did that turn up and in what circumstances?-- That turned up at - there was a search made that I was involved in subsequent to the tabulation, CO make tabulation. I had possession of that document at the time. So we went out to make sure there was nothing else - my legal advisors wanted to make sure that there was nothing else that I had that I was unaware of.

The CO make tabulation you are referring to, is that the one produced to the Inquiry on the last occasion after a demand was made for documents by Mr Martin? Is that the document you are referring to?-- I believe so.

So during the course of the search for that you say you came across this piece of paper containing figures that you recollected you had used to calculate CO make on 6 August?-- No. When I was made aware of the document that was being

sought on that time, that is when I recognised that I did have possession of that piece - of that document. Reference was made - people were talking about a CO log or a log of recordings - a log of the readings that were taken. I was of the belief that a log had been maintained at the deputies' station, at the crib table in the underground mine. When I was asked for - if I knew anything about such a log I said, "No, but if it was in being then it would still be at the crib table and would have been destroyed." However, the information that would have been on that was still available in the deputies' reports. It was only when Mr Abrahamse jolted my memory about the blue folder in which the graph and the tabulation was that I recognised that I - that that was the same document being talked about in this proceedings, and I volunteered it immediately I recognised it.

So when was this? When did you volunteer it?-- Pass.

Did you hand it over to someone in the last week or when?-- When it was tendered to the Court by our legal people.

Well, are you saying that the document that's been tendered here is the document that you used to calculate CO make on Saturday, 6 August?-- No.

Well, I am confused. You better tell me again?-- Subsequent to that document being handed to the Court by my legal advisors after I had given it to them, we then conducted a search at Moura -----

Who is "we"?-- My legal counsel, I was involved. I wanted to be sure there was nothing else, anything else that was not recognised or whatever.

During that search you located this piece of paper, did you?-- Yes.

When was that?-- When was that?

Yes, when, the dates?-- I couldn't tell you at the moment. It was -----

Before we resumed in February this year obviously?-- I believe it was.

Before Christmas last year?-- Yes.

So the document then, the piece of paper that contained the figures that you had written on to calculate your CO make, was handed over to your legal representatives, was it?-- It was.

And you realised at the time you handed it over the significance of it, what it related to?-- I believe so.

Well, how is it then that you only remember today that piece of paper and its significance?-- I remembered again that piece of paper, I think, 24 hours ago.

And that's before you were questioned by Mr Morrison, was it,

this morning about matters to be clarified with you?-- Yes.

You didn't mention it to him this morning, did you, or did you?-- No, I did not.

So you remembered last night about the piece of paper, did you, or in the last 24 hours; was that yesterday, last night or when?-- It might have been the evening before last.

So at that stage you knew that you had yourself done a CO make calculation or two of them, on Saturday the sixth?-- That's correct.

And you didn't mention that at all until I was asking you questions about it a few moments ago?-- That's correct.

So did you remember in the last 24 hours and then just forget about it until a few moments ago?-- No.

Well, did you think you didn't have an opportunity to mention it until a few moments ago?-- I had not been asked a question in relation to that.

Well, we have been through this, but you were being asked questions continually about CO make, weren't you, your understanding of it, your involvement with it; is that so?-- Yes, I was.

In any event, you did look into the CO make position on Saturday afternoon?-- I made two calculations.

And then promptly ignored the results of those effectively, or didn't understand perhaps; is that right?-- I don't think I understood them, but the inspection that was carried out subsequent is what I carried the weight of my determinations on.

Can I ask you finally, just back in relation to 520 and that layering effect that was there on 5 August, was there any way that you had, as at 5 August, to ascertain whether that methane layering would re-occur inside that area?-- I received no feedback on that from the day shift deputies. By the time I came out of the mine I did not see the day shift deputies.

If that situation wasn't monitored and a layering built up inside 520, that could be a dangerous situation; is that so?-- A potentially dangerous situation.

And, as you say, you heard nothing more about it after you authorised the regulator to be altered?-- That's correct.

Thank you, Your Worship.

WARDEN: It might be an appropriate time to take a 10 minute break, thank you, gentlemen.

MR MARTIN: Excuse me, Your Worship, before you do adjourn, at the risk of outraged indignation, I call for the production of that piece of paper.

WARDEN: I think we can make some arrangements during the adjournment to that end. Thank you.

THE COURT ADJOURNED AT 3.53 P.M.

THE COURT RESUMED AT 4.10 P.M.

GEORGE ARTHUR MASON, CONTINUING:

WARDEN: Gentlemen, I did intend to adjourn at about 20 to 5.

MR MORRISON: Your Worship, there is no need for Mr Martin to be apprehensive, I am absolutely delighted to hand the document over. I now produce it to the Inquiry. I can't imagine why he was apprehensive. May I hand five copies for the panel and I will send several up the Bar table, perhaps just noting at the moment I have only produced it and, no doubt, Mr Martin will tender it since he has called for it.

WARDEN: Thank you.

CROSS-EXAMINATION:

MR MARTIN: Who did you hand that document to?-- My legal counsel.

We don't want any confusion about that. By name, please?-- Miss Gibney.

Where was it found?-- I think it was in my office in one of the paper trays that I had.

Did you hand any other document to Miss Gibney at the same time as you handed that to her?-- I believe there were a number of documents.

What documents?-- My diary; I think there was the chart from the wall in the lamp cabin which was the emergency procedures, I believe; I think there was a couple of outstanding weekend work list sheets that I came across from the - that weren't in the filing cabinet. I don't recall what others, if there were any others.

Where is your diary now?-- It's been in - I don't know where it is at the moment.

So far as you know, does Miss Gibney still have it?-- I know that it has been in the possession of the Inspectorate. No, I'm not sure where it is at the moment.

I call for that document too, Your Worship.

MR MORRISON: We can produce that. It was in the possession of the Inspectorate. We got it back from them last week.

WARDEN: Thank you.

MR MARTIN: Could you look at Exhibit 127, please, and whilst that's being produced, when on Saturday, 6 August did you do those CO litres per minute make calculations?-- Before I went down the mine.

Well, that tells me exactly nothing. When?-- I believe I went down the mine at 4.30 p.m., so it was sometime before

070395 D.38 Turn 17 mkg (Warden's Crt)

then.

How long before then?-- I do not recall.

Was it five minutes or an hour or four hours? Do your best?--
I'd say it would be half an hour prior.

Just turn to Exhibit 127, if you would, and look at the
entries on 6 August respectively: 8.21, 23.16 and 8 minutes
past midnight on the 7th. Can you see those?-- 8.21?

That's the first one?-- That's point 16, 512 top return.

Yes?-- Yes, I see that.

What I want to ask you, and do ask you, is whether that entry
and the following two entries were acknowledged - the alarm
was acknowledged by you?-- I believe they were. I use the
acknowledgment code 01.

So -----?-- And that's indicated in the authority number.

I don't want to be repetitive, but I think you have told
Mr MacSporran that you were on the surface and probably around
in your office and were taken to the Unor room after a siren
went?-- That's correct.

070395 D.38 Turn 18 sbd (Warden's Crt)

At the 8.21 alarm, 10.30 lpm of carbon monoxide?-- Yes.

Did you do a litre per minute calculation on that?-- No, I did not.

Why not?-- I did not have the information available to do that.

What were you short, the velocity?-- That's correct.

I just want you to have look, please, at - it is Exhibit 152. You were speaking this morning and perhaps yesterday as well about the 5 South regulator; do you recall that?-- I do.

And there is a reduction there, isn't there, in relation to that event of something in the order-----?-- I'm sorry, I tried to attract your attention.

Sorry?-- Yes, 5 South bottom return regulator.

That's the incident I'm talking about. You gave evidence about that?-- Yes.

What I want to suggest to you is that that caused a reduction in volume in 512 - 5.48, approximately, cubic metres per second, if you look at that document?-- 152?

Yes?-- Whereabouts, sir?

Towards the bottom?-- Of?

39.46 goes down to 33.98. I'm sorry?

WARDEN: Which page?

MR MARTIN: I didn't realise, I'm sorry. This one. It is about four or five entries from the bottom?-- 39.46 is the quantity reading for the night shift of the 5th of the 8th.

Yes, and then it falls to 33.98?-- I see that.

There is a reduction of about 5.48 or 5.5 - close enough - cubic metres per second?-- Yes.

And that's in consequence of the 5 South ventilator - sorry, regulator having been opened - that was the effect of your evidence, I think?-- I believe the change in that regulator would have caused a change in the 512, yes.

Would you call that a significant event?-- No.

You wouldn't? All right. The opening of the regulator in 5 South, I suggest, would have caused a significant impact on the entire ventilation of the mine, including 512?-- I don't agree with that.

You don't. All right. I just might take you to Exhibit 189, please. That's the underground ventilation procedure?-- I see that.

XXN: MR MARTIN

WIT: MASON G A

Firstly, there is nothing contained in it, is there, about spontaneous combustion or ventilation in the event of the possibility of it or an actuality of it. There is nothing in that document at all, is there?-- Can I take your word for that?

I would rather you see it?-- 5.4.1 says-----

5.4.1. You are saying that relates to spontaneous combustion, are you?-- In general terms it would include spontaneous combustion.

"Ensuring the health and safety of all people working underground" encompasses it in your terms?-- I believe it does.

Just turn to the last item, 5.5?-- 5.4.2.

No, the last page-----?-- No, I bring that point to your attention, sir.

Right?-- Page 4 or 5.

I've got that?-- Bottom point.

The bottom one?-- Weekly carbon monoxide make.

Well, when did you first see that document?-- I'm reading this for the first time now. I'm looking through it - you asked me if it contained anything relevant to spontaneous combustion and I was reading through it to-----

When before 7 August, if at all, had you first seen that document?-- I don't recall that I had seen it. I can't recall having seen it. I may have seen it.

You may have seen it?-- I may have.

Can't you do better than that?-- No, sir.

Well, anyway, turning to 5.5 on the last page, there is a requirement there, isn't there-----?-- You don't want to deal with 5.4.2?

Don't I want to deal with it?-- You asked me a question and I drew it to your attention.

You said you never saw it before 7 August?-- That's correct.

But you have said, haven't you, that it merely reflects what was in operation anyway?-- That was the design of the document.

Well, before 7 August, you did know, if what you said is correct, that it merely reflects what was in operation about the weekly carbon monoxide make; that's the case, isn't it?-- Yes.

Now, coming to the last page, 5.5?-- Yes.

That merely reflects what was in operation, you have said?--
Supposed to, yes.

And it says, doesn't it, that any alteration to the No 2
ventilation system shall be only authorised, amongst others,
by undermanager-in-charge - that's correct so far, isn't it?--
Yes.

And all changes are to be recorded in the underground shift
report book?-- It does.

Well, just have a look at this document and tell us whether
that's the underground shift report for Friday day shift, 5
August, and say whether it is in your handwriting?-- I had a
copy of that report, yes. This is in my handwriting.

It says nothing, does it, about the ventilation change that
you authorised?-- I don't believe it does.

Why doesn't it?-- I haven't entered it on that report.

But why not?-- I obviously forgot to do that.

If you would just look over your left shoulder for the moment,
if you wouldn't mind, at the model, and you have got two
crossovers there just outbye of panel 520 - haven't you - 520
- overcasts, sorry?-- They are the overcasts for 520 panel.

Why was it necessary at all to interfere with the 5 South
ventilator to remove the layering of methane in the panel
520?-- Because it controlled the air flow in to that panel.

Why couldn't a brattice with a hole in it be erected either
inbye or outbye of the air crossovers? Simple brattice
directed with a hole to control the ventilation would have
achieved-----?-- You are talking about construction of
another regulator?

Brattice - a simple temporary-----?-- Yes.

That would have achieved exactly what was achieved by
interfering with 5 South regulator, wouldn't it - without
affecting any other panel in the mine?-- I don't believe so.

Tell us why not?-- Pardon?

Tell us why not. Tell us your reasons?-- It would merely
serve to increase the restriction on that side of the panel or
in that airway, which would have decreased the air flow and
added to the problem.

All right. I don't want to take you specifically to the -
again - to the position descriptions, but would you agree that
you, the undermanager-in-charge, would be the person with the
day-to-day hands-on management of production and safety in
Moura No 2?-- That was one of my accountabilities.

Yesterday you were telling Mr Morrison about men who had been at No 2 for as long as you had or in the Moura district, for that matter, such as Henderson, McPherson, Davidson, Blyton, I think, and Stafford was also mentioned. Do you recall that?-- Yes.

And all of those references - you may not have had your microphone on all day, by the way. It has been awfully hard hearing you?-- Similar to you at times, sir.

You have been listening to me for a shorter time?-- I have been in this room for a long time, sir.

But those men didn't enjoy your position, did they - that they were down the ladder, well down the ladder from you in your under-managerial position and in your position of undermanager-in-charge?-- They were subordinate to me.

And well subordinate, so far as McPherson, I think, and Davidson were concerned - for instance, Davidson was a mere lamp room attendant?-- He had been a very important part of the workforce over many years. He was working in the bathroom at the time the incident occurred.

Oh, yes. Still, didn't enjoy your position and didn't have your responsibilities - in terms of safety?-- Mr Davidson, he did not.

I just want to - did you ever know anything about Graham's Ratio?-- Yes, I believe at some stage I had made some inquiry into Graham's Ratio.

Didn't you learn that as a cadet?-- I don't recall learning it as a cadet.

Well, when do you believe you made some inquiry about Graham's Ratio?-- In the early - at some time in the early period when I moved across from No 4 Mine to No 2 Mine.

And from memory was that about '86 some time?-- I came across to No 2 Mine in November '86 I think it was.

That's right. Have you ever acquainted yourself with the relationship between carbon monoxide and carbon dioxide?-- No, sir.

When was the first time you ever heard anything about that ratio or relationship?-- In this courtroom or in this Inquiry. I don't know what the legal term is.

One is close enough to the other, I suppose, for present purposes. I don't want to dwell on this, but is it the case that since you obtained your initial qualification in about - was it 1973 or thereabouts?-- I completed my cadetship at the end of 1973.

Well, when did you complete all of your studies of a theoretical or technical kind?-- I don't think I ever have.

Well, between 7 August 1994 and the time you completed your cadetship can you point to any literature whatever that you have ever looked into or studied in relation to spontaneous combustion?-- The red and blue books. At this point in time I can't recall any others.

Do you agree that the greatest potential for disaster in a coal mine is a mine explosion of gas?-- It has a potential to cause the most damage, yes. Both in terms of loss of life and destruction of -----

And resources and machinery. Just turning quickly to another point, was any thought given as panel 512 was nearing its conclusion to heavily stone dust towards the area where the seals would be, that's within the panel and indeed outside the panel after it was sealed?-- The panel was heavily stone dusted on development.

To what point? I'm talking about, say, the week or indeed the days before the final seal?-- Considerable quantities of stone dust were used in that panel at all times that it was in operation.

But I'm specifically talking about the stage leading up to the sealing, say the last week. What happened in relation to stonedusting inside the area where the seals were to be erected?-- Standard practice was continued with.

Do you know whether it was or not?-- I believe it was.

Well, after the seals were erected what was done about stonedusting immediately outbye the seals?-- I don't believe anything was done.

Did you ever see the recommendation - or the plan of ACIRL in relation to panel 512? It's Exhibit 104, document 110, I think, A, B and C. If I might help you, page 3 of document 110A. Does that help you find it? Do you see there under -----?-- Third page in, sir, or the one that's -----

Well, it's page 3 of a document styled 110A, as I understand it, "Panel extraction..." it starts off?-- No, sir.

Could I just have a look at the document then, please? I will see if I can find it for you. Do you see the heading "Monitoring" on that page?-- I do.

And it reads, doesn't it, "The panel monitoring points are as shown. A velocity meter will be installed in the main return, No 1 heading at the sampling point." Do you see that?-- That's correct.

That wasn't done, was it?-- Was not.

Why not?-- I don't believe we had a velocity meter.

Isn't it a matter of just purchasing one?-- Yes.

Why wasn't it done?-- I think plans were in place to do that at some stage.

But this is the design for panel 512, isn't it, that we are talking about? 512 Panel extraction?-- It is.

It was not to be done at some stage because the panel had been sealed and not done at all?-- We had not obtained the velocity meter at that stage.

They are not hard to get, are they?-- I do not know.

Are you saying you don't know whether or not a velocity meter is available commercially and you are the manager - undermanager-in-charge?-- I don't know how difficult they are to obtain, that's correct.

Your Worship, I've got quite a lot more on various headings.

WARDEN: Yes, thank you. It might be an appropriate time. Can we resume at 9.15 tomorrow morning? Thank you.

THE COURT ADJOURNED AT 4.40 P.M. UNTIL 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 08/03/95

..DAY 39

080395 D.39 Turn 1 mkg (Warden's Crt)

THE COURT RESUMED AT 9.19 A.M.

GEORGE ARTHUR MASON, CONTINUING:

MR MARTIN: Your Worship, first of all, I tender Mr Mason's notes made on the afternoon of Saturday, 5 August.

WARDEN: Exhibit 193.

ADMITTED AND MARKED "EXHIBIT 193"

MR MARTIN: And I also tender the underground shift report which is titled day shift for 5 August.

WARDEN: Exhibit 194.

ADMITTED AND MARKED "EXHIBIT 194"

MR MARTIN: Mr Mason, if I might just return to that document containing your notes. You may not need to look at it, or perhaps you could be shown it. That was found by you, I suggest, and handed to Miss Gibney before this Inquiry adjourned last year?-- Yeah, possibly.

No, it wasn't possibly, was it? It was during the course of the Inquiry when you went to the mine with Miss Gibney?-- It was when I went to the mine with Miss Gibney.

During the course of the Inquiry whilst it was still sitting?-- I think that is correct.

Well, it is correct, isn't it?-- I have given you my answer, sir.

Who was with you apart from Miss Gibney?-- My wife proceeded with us to Moura Mine but she was not at the mine at the time, she went into town.

No other persons?-- I don't believe so.

Before yesterday and after handing that document to Miss Gibney, had you ever seen it in that intervening period?-- Before yesterday and after -----

I will put it the other way around. After you gave it to Miss Gibney and before yesterday, had you seen that document again?-- I had.

XXN: MR MARTIN

WIT: MASON G A

Where?-- In a room in the motel.

When?-- I guess it would be three evenings past.

What, on the weekend or Monday?-- I believe it was the weekend.

Your diary was given to the Inspectorate, you have told us?-- That's correct.

But those notes weren't?-- That's correct.

Why not?-- It wasn't asked for.

How would they have known about it?-- They wouldn't have.

If you just look at the document, please. You have it there, I think?-- I do.

The first page or the front page, is that all your writing?-- I don't believe so.

Well, tell us which isn't your writing then?-- The - what appears to be - telephone number which is in reverse to all the other writing at the bottom.

And with the word "Rosalyn" or something underneath it?-- That's correct.

But otherwise that is all in your handwriting?-- I believe so.

Well, just turn it over. There is a second sheet to it, isn't there? There is, isn't there? There is a back page?-- That's correct.

Whose writing is that?-- Mr Squires.

Is this document a page or two pages from a book of some kind?-- I believe it's an A4 sheet of copy paper.

Can you account for Mr Squires' writing being on part of that document?-- Obviously he wrote on it.

Yes, I know, but how would that have come about?-- He would have put pen to paper, sir.

I beg your pardon?-- He would have put pen to paper.

That really is cute?-- I don't understand your question.

Just look towards the bottom of Mr Squires' writing. Do you know what "M/CO" means?-- Machines.

All right. I would ask you to look, please, at Exhibit 104. It starts off "512 Panel Extraction", doesn't it, on the very front page?-- Yes.

And immediately following that is the letter by Mr Schaus to the Senior Inspector of Coal Mines?-- It is.

And it's a submission, isn't it, of details of the proposed scheme of work for the extraction of 512 panel?-- That's correct.

As we discussed yesterday, ACIRL was involved in the design, and the letter says so?-- That's correct.

We have already discussed the velocity meter which was proposed but not included or incorporated in the panel, so I don't want to deal with that other than to suggest to you that a velocity meter costs a mere couple of hundred dollars and is readily available?-- I do not know that, sir.

I might just take you to the second page of the letter under the heading "Ventilation", point (a). That specifically says, doesn't it, that the heading on the left-hand side of the panel, that is No 1, will remain intact because it's the main return?-- It does.

But that was breached, wasn't it, during the course of extraction? It didn't remain intact, did it?-- The intention behind that notation was that the stoppings would not be removed and for mining to take place in the return heading during extraction.

That's what you say?-- That's what I know, sir.

I am suggesting to you that it was intended to mean that no bottoms would be taken in No 1 heading?-- That's what I just said.

I thought you said stoppings. Anyway. Well -----?-- I did say the stoppings would not be removed.

Well, that was breached, wasn't it, in relation to the bottoms, the taking of bottoms?-- That's incorrect.

Well, what's incorrect about it?-- Bottoms were taken in No 1 heading during the development process.

You say no bottoms were taken during extraction?-- No bottoms were taken in No 1 heading during extraction.

I would just like to take you to one other place in the plan and it's right at the very back, if you would. It has a note, a flag on it. That says, doesn't it, that no bottoms are to be taken in cut-through 13, towards the top of the page?-- It does.

And that was breached, wasn't it?-- It was.

It was breached over some days before it was stopped?-- No, sir.

You say that it all happened in one shift?-- I did not.

080395 D.39 Turn 1 mkg (Warden's Crt)

Well, how long did it take before it was stopped?-- I think the mining in that area was two or three shifts, or part thereof.

With an undermanager in charge all of the time on each shift? I am not suggesting you?-- Yes, I believe there was an undermanager on each shift that mining took place.

What did you understand the purpose of the velocity meter which was proposed - what was its purpose?-- To measure the velocity of the air flow in No 1 roadway.

Obviously. What about CO make?-- That information could be then applied to calculate CO make.

Can you explain why that wasn't done?-- A velocity meter had not been purchased.

But that's the very document that you submitted, or at least Mr Schaus did, to the Department of Mineral Resources as the extraction plan?-- It is.

080395 D.39 Turn 2 sbd (Warden's Crt)

You had possession of that extraction plan, did you, during the course of extraction?-- I had opportunity to have possession of it.

Well, did you have possession of it?-- I don't believe I had my own copy, but there was a copy available.

One you turn to frequently during extraction, I suggest?-- No, sir.

Did you ever look at it, then?-- I have.

Before or during extraction?-- During its compilation.

But not after?-- Not that I can recall.

Were you in Court when counsel for BHP, indeed your counsel, tendered videos relating to safety?-- I believe I was.

Had you ever seen them yourself?-- I have seen videos, yes.

Those videos?-- I believe I have.

When?-- On a number of occasions.

Just be a little bit more helpful than that, if you can. When in relation to 7 August?-- I have no specific recollection of any particular date.

Well, was it before 7 August?-- Yes, sir.

Did you see one titled "Fight That Fire"?-- I believe I have.

You would have recognised, of course, Mr Don Mitchell as the narrator and demonstrator, wouldn't you?-- No, sir.

Who was the graduate engineer at Moura No 2 in the period leading up to 7 August?-- David Fairhall, I believe.

Is he still employed at the mine?-- The mine is closed.

All right. Is he still employed by BHP, to your knowledge?-- I believe he is.

Do you know where he is?-- I'm not sure, but I believe he is at Crinum Colliery.

Now, you were well into the mining industry by the time of the Box Flat explosion, weren't you - that's about 1972?-- I had been a cadet for about 12 months.

And you knew that was a spontaneous combustion caused explosion, didn't you?-- Yes.

You told us about Kianga, but No 4, you were very nearly a victim of No 4 explosion yourself, weren't you?-- Yes, sir.

In fact, you had only left that panel 40 minutes before it exploded, or approximately that?-- In that time-frame.

XXN: MR MARTIN

WIT: MASON G A

And you knew, for a time at least, that spontaneous combustion was suspected as a possible cause of ignition in No 4, didn't you?-- That's news to me.

But you sat through the Inquiry, didn't you?-- Not all of the Inquiry, no.

But you heard in the Inquiry, I suggest, that spontaneous combustion was suggested for a time that it might have been a possible cause?-- I have no recollection of that.

But, in any case, did you ever read the findings of No 4 Inquiry?-- Yes.

And you saw there, I suggest, references to spontaneous combustion as being a possible cause?-- I don't recall reading that.

Tell the Inquiry this: why is it that McCamley took the position of Acting Manager instead of you on one occasion in 1994?-- Mr McCamley is a holder of a First Class Manager's Certificate. I am a holder of a Second Class Manager's Certificate. The law requires that if a First Class Manager - if a person with a First Class Manager's Certificate is available, he is to hold that position.

I suppose the same answer applies in respect of Mr Barraclough?-- That's correct.

Had you ever handed out before the 7th of August 1994 any written sealing procedure?-- Not that I recall.

Why not?-- I had not observed the need.

Don't you think it would have been a good idea to lay down a procedure in writing that men could follow?-- The men at Moura mine seemed to be conversant with the procedures.

To your knowledge, how do you measure pressure differential in a mine?-- With an instrument called a Magnahelics, or other such devices.

When did you first become aware of a Magnahelic?-- I'm not sure if I had learnt about that during my cadetship. I do know that I became aware of it during the ventilation course at the Key Centre for Mines.

You realise the importance of it as a measuring device?-- I have a basic understanding of its use.

But you realise the importance of it?-- I understand its usefulness.

Yet there wasn't one at Moura No 2?-- When the ventilation survey was conducted by consultancy, they brought their own equipment.

But you had no means on a day-to-day or month-to-month basis

without bringing in a consultant of measuring pressure differentials; is that what you are telling us?-- Could you repeat that, please?

You had no means at Moura No 2 on a day-to-day or a month-to-month basis of measuring pressure differentials?-- Without bringing in consultants, no.

You have told the Inquiry how experienced Mr Kerr was and I think you said that Mr Reed was very experienced as well. Can you explain why, on the weekend of the 5th and 6th and 7th of August, either of those two men weren't consulted?-- After my inspection of the workings on the Saturday afternoon, I did not see a need.

On Friday, 5 August, you were underground - was it twice with Mr Schaus, or only the once, or not certain?-- We only went down underground once.

And how long did you and Mr Schaus spend in and around panel 512?-- The first occasion we were in there would have been - I estimate 15 minutes. We proceeded from there to the 5 South. We returned to the 512 panel after carrying out work in the 5 South. On the second occasion we were in there I'd estimate in the region of half an hour.

Was a Drager reading taken whilst you were there with Mr Schaus?-- I don't believe so.

Or a velocity reading?-- I don't believe so.

Did Mr Schaus instruct you to seal on the Friday?-- I don't believe so.

I suggest that he did; how do you respond?-- I responded to your suggestion before; I don't believe he did. I have no recollection of instructing me to seal. I'm confident he didn't.

Very well. Could the witness please see Exhibit 160? Those are extracts, are they not, from the Manager's Report Book?-- They are copies.

Copies. Yes, copies of extracts. Please turn to page 26. Look at the last page. Just look at the 512 panel notations. Just read that, if you would?-- Would like me to read it?

I want you to read it so that you know it is there?-- Yes.

It is recorded there, isn't it, in Mr Schaus' writing, "CO readings climbing steadily. 8 ppm equals 19 lpm. Section will be sealed as soon as possible (this weekend)."?-- It does.

Did he not discuss that with you on the Friday?-- He did not.

Could you just tell us when the siren system was introduced?-- I can't help you with a specific date, but I believe it was some months previous to the explosion.

Did you know of Mr Reed's proposal which he says was approved in the budget to have a permanent velocity meter situated or located into panels during the course of extraction with the electronic messages being sent to the surface to the Unor and the Unor would then perform the CO litres per minute calculation? Did you know of that?-- Mr Reed's proposal?

Yes?-- I may have, but I don't have a direct recollection of it at the moment.

Do you have any recollection of it? I'm not concerned with your direct recollection. I want to know whether you have any memory of it?-- I think I have a vague recollection of it.

He must have discussed it with you then?-- He may have mentioned it to me.

To put into the Unor system and therefore on to the screen and capable of the gas alarm, a CO litre per minute make?-- I don't know if that was possible.

That was what he was proposing, I suggest, and discussed with you?-- I don't believe so.

Well, do you know whether it was approved, whether that proposal was approved in the budget?-- I do not.

We have heard, and you might remember, in this inquiry about a phone system from the Unor if the alarm wasn't responded to or acknowledged?-- That's correct.

We have heard that it was discontinued or something happened to it in that it wasn't continued. Do you recall that evidence?-- The Elpro system I recall, yes.

Was that in use on 7 August? Was it operative?-- Was it operable, I believe so.

Well, operable, operative?-- I don't know what times had been - would have been initialised into the machine at that point in time, no.

All I want to know is whether on 7 August the back-up phone system to somebody's house, if the alarm wasn't acknowledged, was operative, operable, actionable, active, whichever one you choose?-- I can't help you with that information.

You knew of SIMTARS before 7 August?-- I did.

You knew of its capacity to receive by Telecom modem information from the Unor - I'm sorry, the gas chromatograph?-- Yes.

You also knew, I suggest, that there was a 24-hour a day scientist available to respond to queries in relation to gas analysis?-- I believe I did know that.

Why didn't you utilise it?-- I did not recognise the need.

You and Mr Schaus had discussions about the men perhaps not wanting to go underground, didn't you?-- No, I had a discussion with Mr Squires.

Only with Squires, not with Mr Schaus?-- Not that I recall.

Was it the practice to inform the Department of Mineral Resources when a sealing was about to take place?-- I don't believe so.

Well, tell us in relation to, say, the five sealings prior to 512, whether the department was notified or not?-- I don't believe so.

You spoke the other day about the Moura grapevine; do you recall that?-- I do.

Well, there was no necessity to rely on that, was there, with your electronic noticeboard in the marshalling area or close to it?-- I don't understand your statement.

All right, well, I'll try it a different way. On 7 August, on the electronic noticeboard there could easily have been put up a notice which read something to the effect, "Panel 512 sealed last night. Tar smell."?-- I don't know about easily. I don't know that many people had the opportunity or the knowledge how to operate that piece of machinery.

Yes, but you are the undermanager-in-charge. Did you know?-- I did not.

It's only a question of punching some keys, isn't it, tapping in a message?-- I do not know.

Surely that's all it is?-- I do not know. I have never operated that.

Could the witness please see Exhibit 21? The better exhibit to look at is 91 and 105. Would you please just firstly look at the ventilation survey dated 27 June. It's 105, I'm sorry. In relation to 512 top return you run down the left-hand side - we have identified that, point 46. Do you see that?-- I do.

And you will see the CO litres per minute was 9.71?-- Yes.

Just keep that to one side for the moment, and similarly, if you look at Exhibit 91 you will see that for the same return, 512 top return, a fortnight later, that is 15.07?-- It is.

About a 60 per cent increase?-- Yes.

With, I suggest, when you look at those two documents, no comparable increase elsewhere?-- I have not had an opportunity to analyse those documents.

Well, if you just do so?-- There are other increases.

Yes, nothing of that magnitude?-- In percentage terms.

I beg your pardon?-- In percentage terms there is.

Nothing - well, just direct me to that?-- Pardon?

Just direct me to that?-- Shaft South return, shaft North return, 1 North West return.

Thank you. Could you look at Exhibit 21?-- There is more, I believe.

I beg your pardon?-- There is more, I believe. 5 South top return.

The ones you've mentioned, were they extraction panels?-- They were not.

Was there any investigation initiated in relation to those increases?-- Not that I'm aware of.

Was it not your responsibility?-- I had not examined this document before now.

Is that one document that Mr Morieson kept?-- Pardon?

Was that a document Mr Morieson kept?-- It is a document Mr Morrison generated.

You have Exhibit 21 there. We have heard of an event on 22 July, haven't we, that is the reading which generated about 18 lpm. You recall 22 July in those terms?-- I do.

I just want you to look at the log, CO make 512. See if you can identify it from that. There is such a log, isn't there, for the life of the panel to 22 July. It starts about 28 February, I think. Of course it goes after 22 July as well?-- Yes.

See, I suggest to you that until 22 July the relative humidity in the top and bottom returns at ventilation stations 46 and 59 were reasonably comparable, would you agree with that, commonly being in the mid 70s?-- Until what period, sir?

Until 22 July?-- There is some variation.

Some, yes, but commonly, I said. Do you agree with that generally?-- Except for the period around 20/5 and 3/6.

And I suggest to you that on 22 July there was an abrupt departure in relation to relative humidity rising to 85 per cent in the top return and dropping to 49 in the bottom?-- That's the information on this document.

What does that suggest?-- I don't know.

You've got a lot of heat, haven't you, coming out of the top return?-- I don't know.

Well, you have, haven't you?-- I don't know, sir.

We shall turn to another topic. I think you said at the outset of your evidence, and you certainly went on to say other things as well in relation to this, but I think you said there was a large degree of consciousness to maintain production; do you recall saying that?-- I do.

Do you recall a meeting within a few months of 7 August when the future of the mine was discussed with the men?-- I believe I do.

And in fact the terms of such meeting was that unless production was kept up the mine might have to close?-- It could be. I believe it was more in the lines of we need to make sure that we maintain production or increase productivity to ensure that it doesn't.

080395 D.39 Turn 4 mkg (Warden's Crt)

Well, in terms of 7 August, how long before was that meeting, weeks or months?-- I believe it would have been months, I'm not sure.

You have told the Inquiry about, I think, the workshop you attended in New South Wales on ventilation. I think it was '88 or perhaps '87. Is there -----?-- No, sir.

Beg your pardon?-- No, I did not.

Well, what did you say?-- I attended a workshop on ventilation in New South Wales in the 90's.

All right. When in the 90's?-- I believe it would have been 1992.

Who were the lecturers?-- People from the University of New South Wales and Wollongong University.

Do you know what their expertise was, what their discipline was? Can you not identify them by name?-- Not at this point in time.

Did you receive any books or lecture notes, pamphlets of any kind?-- Yes, I did.

Where are they?-- Probably at my home.

When did you last refer to them before 7 August 1994?-- Probably in 1992.

When you were at the course?-- Yes, sir.

How many hours of classroom were there at that course?-- It was a week long course.

Well, how many hours, one a day, eight a day?-- I believe it was about an eight hour day.

Did you do any laboratory work?-- On computers, yes.

On computers?-- Yes.

Was there a library as such relating to technical matters in relation to mining at Moura No 2?-- There was no sign with "Library" on it, but there were a number of editions of books in various places.

Well, particularly in reference to spontaneous combustion, what books were in which place?-- I believe there were - I don't know - I can't specifically recall which books. I believe there was an ACIRL edition on spontaneous combustion.

Who had that?-- That was in my office, I believe.

What else was in your office on spontaneous combustion?-- There was a mining engineer's handbook, Australasian Coal Mining Practice.

Did you ever turn to that in relation to spontaneous combustion or the previous volume you mentioned?-- I don't believe so.

Why not?-- I didn't see a need.

Did you see books on spontaneous combustion in any other of the officials at the mine? I am talking about undermanagers, engineer, underground shift superintendent?-- Yes.

Well, firstly, what books?-- I'd seen the Strang and Mackenzie book in Jacques Abrahamse' office. I can't recall what other volumes.

What about Mr Schaus' office?-- Mr Schaus and I shared the same -----

I think you have said you shared a office?-- He did have another office but that was over in the other building. He mostly operated from our joint office.

Can I just ask you to look over your left shoulder at that wall, if you don't mind, just for a moment, and I am talking - want to talk about the remnant pillars around about cut-through 4, also 12 and 11. Do you see those remnant pillars?-- I do.

You can turn back now, if you wish. All I want to suggest to you is that in behind the barrier pillar would be an ideal place, in a stook or remnant pillar, for spontaneous combustion to develop, particularly if there was loose coal on the floor?-- I don't know that it would be any different from any other bord and pillar partial extraction system.

I suggest to you that that would be an ideal place because of the extreme difficulty of ventilating those areas of those stooks?-- I do not agree.

Well, what do you do, do you short circuit the system to ventilate there, behind the barrier pillars?-- I don't understand what you mean by short circuiting the system.

Well, you just tell the Inquiry how it is you would properly ventilate those stooks behind the barrier pillars?-- I believe the air would flow through the goaf after passing over the mining equipment, in a similar manner it does in all bord and pillar operations.

Can I just ask you to look at your statement for a moment, in particular page 22? You were asked a question by the Inspectorate to this effect: "Although CO readings taken along the top return showed a maximum of 8 to 9 ppm before sealing, how could you be sure that a localised, badly ventilated area within the waste was not spontaneously heating?" Your response to that was: "Roof, rib and floor conditions within the waste prevented access to this area for inspection purposes." This is the case, isn't it?-----

MR MORRISON: Go on with the rest of the answer; don't read

part of it.

MR MARTIN: You will have your chance.

MR MORRISON: I object to this, I really do. Now, I have tried private communication with Mr Martin but obviously to no avail. It is unfair to a witness to read only part of the answer given, and that's exactly what he has just done.

MR MARTIN: I wasn't intending to be unfair. The balance is, "The ventilation arrangement within the panel was designed to cause air to pass through the waste and exit via the top return." Are you satisfied?

MR MORRISON: No, you haven't read it all yet.

MR MARTIN: "The top return was also the inspection route to the rear of the panel. There was no sustained evidence, from monitoring or inspections from this roadway, to support such a circumstance." That's the complete answer, isn't it?-- That's correct.

Let me go back to the first part of your answer where you said that roof, rib and floor conditions within the waste prevented access to this area for inspection purposes. I suggest to you that that heightened your duty to take steps to ensure the safety of the men and the mine because of this incapacity for inspection. Do you agree with that?-- No, sir.

You don't?-- I held that as my highest duty at all times.

I beg your pardon?-- I looked upon that as my duty at all times, not be heightened.

You couldn't heighten your duty; is that what you are saying?-- I recognised my responsibilities, sir.

I just want to talk about the system that was introduced after 22 July in relation to readings on a daily basis. You recall that? You recall that evidence?-- I do.

I suggest to you that it is likely that you implemented the system, and highly likely, for it to be done each shift?-- No, sir, that's incorrect.

Well -----?-- On the Monday when I issued the direction I believe it did have shiftly because that's what had been done over that weekend.

But, in any case, you introduced the requirement for carbon dioxide measurement?-- Yes.

Why?-- Because it had been taken over the weekend.

But not at the requirement of Mr Barraclough. Do you know whether Mr Barraclough implemented the CO2 requirement?-- I don't believe he did.

Well, how did it come about?-- I don't know.

XXN: MR MARTIN

WIT: MASON G A

Didn't your curiosity get aroused when you saw it during the following week?-- No.

Deputies wasting time taking CO2 readings?-- I thought they were doing a good job. I didn't want to put out a directive to request them to do less than they were already doing, that's why I continued with that same -----

What purpose did you think the CO2 reading served?-- Another gas that's measured in the mine.

For what purpose?-- To detect the quantity of it.

Yes, and not only that but to utilise the CO/CO2 ratio we talked about yesterday, I suggest?-- No, sir. I had not heard of a CO/CO2 ratio prior to this Inquiry.

Why the wet bulb/dry bulb measurements on a shift basis or a daily basis?-- I don't believe I asked for them.

But you saw it being measured?-- Yes.

Was it being done for a purpose? Obviously?-- Not that I'm aware of.

Was it being done for no purpose then; is that what you say?-- I don't know.

Can you tell us the purpose of wet bulb/dry bulb measurements?-- Measure the relative humidity.

In fact, it's done with a sling psychrometer, isn't it?-- Yes.

And that's a valuable instrument which we have heard can only be taken underground with permission of an undermanager or undermanager-in-charge?-- I'm not aware of that.

Could anybody just come and get the sling psychrometer and take it underground?-- No deputy would be - have it withheld from him. I would not appreciate any - just anybody taking it underground.

Just turning briefly to the accounts you had of events in the closing stages of 512. You had an account of a tar smell, you had an account of a haze and you had an account of a stronger odour of some kind or other; do you agree with that?-- Yes.

And you say you couldn't confirm them; that's the case, isn't it? That's your evidence?-- I made no observation of any of those conditions.

What I'm suggesting is with that information, what you should have done was to confirm by all necessary means which were available that there was not a heating?-----

MR MORRISON: I object to that.

MR MARTIN: State your reason.

MR MORRISON: I will. That's what I'm standing up for. We have crossed the line now from investigating what was done and what was not done, what was carried out, what was not carried out, what was seen, what was not seen, what was observed, what was not observed, now to what should have happened, and we have crossed the line now into matters which do not relate to nature and cause and it should be ruled against.

MR MARTIN: I won't respond to that. I will just go on - I will do it another way.

WARDEN: Thank you.

MR MARTIN: Why didn't you confirm, by available means, that there wasn't a heating?-- My observations did not - I formed my conclusions on the basis of my observations. They were in agreement with other people's observations. I did not see a need to take further action.

Did you know about the purpose of measuring oxides of nitrogen? Did you know the purpose of that?-- Yes.

What was the purpose?-- To determine the state of engines producing such gases.

If there is any doubt at all as to whether it's haze from diesel or haze from a heating, that could have been put to rest very quickly, couldn't it?-- Yes.

Why wasn't it?-- Obviously the people at the time did not think of that.

That includes, of course, you, doesn't it?-- There was no haze there when I was there, sir.

But you had an account of a haze, an account that it might have been from diesel?-- That's correct.

Can I just ask you why you didn't implement the analysis?-- Obviously I did not think of making such a check.

From about 8.20 p.m. on the evening of 6 August - did you say something?

MR MORRISON: No.

MR MARTIN: It was Mr Allison. I will start that again. You were above ground in the Unor room, or close by, from about 8.20 on in the evening?-- Are you talking to me now, sir?

Yes, I am, thank you, very amusing?-- No, it's not, it's a very serious matter and it's not being conducted in such a manner.

It is, isn't it?-- It is. I wish we would behave in such a manner.

080395 D.39 Turn 4 mkg (Warden's Crt)

Well, you just have to put up with me for a little while longer?-- I have no problem with that.

Do you remember the question?-- No, I do not.

Do you want it repeated?-- Please.

You were above ground somewhere near the Unor room from about 8 o'clock or so onwards?-- That's correct.

And you were available to constantly monitor what was happening on the Unor machine and you did; that's the case, isn't it?-- I was above ground. I responded to the Unor when the siren was activated.

And, indeed, you put Mr Graham in there late that night and told him to stay there, or close by at least, to monitor, to keep close vigilance for the balance of the shift?-- That is incorrect.

Well, what is correct?-- I asked Mr Graham to keep an eye on the Unor. If there was a need to alter the set points due to them being breached, I gave him an instruction to do so. I instructed him only to move those set points in small increments. I had three deputies on shift. The workload was not there for three deputies. That's why I asked Mr Graham to do - carry out that task.

But the intention was that he be available to monitor for the balance of his shift?-- I wanted Lennie to be aware that he had my blessing to alter the set points if it was required.

Yes, but he had to be there, or approximately there, to be able to do it for the balance of the night, and that's what you wanted done?-- No, he did not need to be there.

What if he was underground?-- Well, it would have been brought to his attention by the bathroom attendant.

If he was underground?-- That's correct.

And what, with a 10 or 15 minute drive out?-- Depends where he was underground.

Well, is it 9 or 14 minutes, then? It is about a 10 or 15 minute drive out, isn't it?-- If he was down there. Deputies oft times on a weekend would do an inspection. On the completion of their inspection, they would remain on the surface until they had to go and do another inspection, by statute.

Did Mr Squires know how to reset the gas alarm levels, to the best of your knowledge?-- I'm not sure, but it is a very simple procedure.

Mr Squires gave evidence here - I don't know whether you were here when he did - to the effect that if the men didn't go down, he was happy to go down and kiss the seals; do you recall that?-- No, I do not.

But, in any case, you instructed him to go down, if that was the case - that if the men didn't go down during the shift, he had to go down?-- That's correct.

Why?-- I'm not sure.

Well, let me suggest this to you: the reason was that if the men declined to go down, Mr Squires had your instruction - it was to make them look like a bunch of wimps. That was the reason, wasn't it?-- I don't believe so.

What was the reason?-- I believe - I'm not sure, but I believe I was seeking confirmation from Mr Squires that he believed that the mine was in a safe condition.

When you spoke with Mr Squires at 10.30 or thereabouts on the evening of Sunday, surely you were concerned to ask him what the Ellicott Diagram was doing, or what the readings were?-- No, sir.

How many panels have been sealed whilst you were undermanager - in charge, that is?-- Probably in the vicinity of eight to 10.

They all went through the explosive range?-- Yes.

Did you instruct the undermanager on duty on those occasions

not to broach that fact with the men?-- I don't believe so.

But you did, in relation to panel 512, where you had reports of a tar smell, a haze and a stronger odour of some kind. Can you explain why?-- Yes.

Well, please?-- Mr Squires, as far as I was aware, had a concern that the men would not want to go underground at the same time - there was a possibility that the men would not want to go underground at the same time that Mr Squires believed the mine was in a safe condition, and so I believe his understanding was that it could become an industrial issue. He was not - he didn't like dealing with those sorts of situations. I told him if the situation arose, how to deal with it, and I then told him if the situation doesn't arise, "Why do you want to go looking for such a situation?"

Is that the end of your explanation?-- Yes, sir.

Who determined the final monitor point for 512?-- I do not know.

But surely that was your position to know - your duty to know?-- I knew where it was.

Yes, but you told the Inquiry as well, if my memory serves me correctly, that it seemed strange that it was where it was - strange to you. I think you said that you thought it should be in the top return?-- I thought it would have been in the top return.

Well, when did you see this for the first time - this monitor point? Was it the Friday?-- No, sir, on Saturday afternoon.

Still time to change it to where you thought it ought to be?-- I thought it would suffice where it was.

I want to talk for the moment about Tecrete. Was that ever approved as a final seal material by the Department of Mineral Resources?-- I believe so.

Can you point to any document in existence which approves it as a final seal?-- Not at this point in time.

Have you ever seen such a document?-- I believe I have.

Well, can you not help the Inquiry with when it might have been and what its contents were?-- I believe it was supplied to us from the distributors.

And what, I suggest, what was supplied to you by the distributors was an approval only for use as a stopping and a cross-over and nothing more?-- I don't know. I'm not sure about that.

You have spoken not to any great extent about incubation period, I think - six months, or something?-- That's correct.

What I suggest is that if there is no common incubation period

at all, that's affected by a host of variables; do you agree with that?-- Yes.

I don't want to - you have agreed, so I won't take it any further. Could I just ask you this: did you ever receive any training in methods and practices of sealing possible or actual fires or heatings?-- I don't recall any such training.

Have you ever had any experiences of sealing fires or heatings?-- No.

Who at Moura No 2, say in July/August 1994, had any such experience and training?-- The men who had been involved in the 5 North incident of 1986.

And what were their job descriptions? Miners? Deputies? Managers? Undermanagers?-- I don't believe that there was any staff at the mine at the time that had been there in 1986.

So, are you saying that there was nobody in management - management starting at the level of undermanager - with such experience in 1994 - August?-- I'm incorrect in that. Mr Squires was there.

You told the Inquiry about Saturday, August 6, when you went in the No 2 entry, I think as far as cross-cut 3, wasn't it; do you recall that?-- That's correct.

Can you tell the Inquiry whether the stoppings in cross-cuts 1 and 2 were breached or otherwise opened when you went in?-- They were complete.

They weren't breached?-- That's correct.

Can you say why it is that they were left closed?-- No.

Can you say whether they were intended to be breached before the seal?-- Not that I am aware of.

In relation to No 2 Mine on the weekend of Saturday and Sunday, 6 and 7 August, was coal being produced?-- Was not.

Was not?-- Could you repeat that question for me? On that weekend?

On that weekend was that No 2 Mine producing coal?-- Was not.

Not anywhere? Not anywhere within the mine?-- That's correct.

You told the Inquiry of the briefing, if I might use that term, by Mr Squires of the men on the sealing duties on the Saturday afternoon; do you recall that?-- Yes.

Do you recall whether any of the men asked any questions either of Mr Squires or of yourself?-- I don't recall any such questions being asked.

Can you help the Inquiry with this: were the 4 South prep

seals completed before the men were put on to sealing 512, or was there still some work left to be done?-- There was still work to be done on the 4 South seals - quite a large amount of work to be done, I believe.

Why is it that they were taken from 4 South and put on to 512 unless there was urgency related to 512?-- The plan was to bring the Tecrete representatives to Moura to conduct the prep seals for 4 South in and about the same time that 512 would be completed, so that they would be on site to assist with the completion of the 512 seals.

But they were taken off 412 - sorry, 4 South on Saturday and put over to 512 without completing the immediate work that they were doing?-- I don't know.

You don't know that. Can I just take you, please, to after the explosion? Do you know that repairs were being done for mine fan or mine fan housing on Monday, 8 August; do you know of that?-- The fan housing?

The mine fan or the fan housing, yes?-- No.

Did you know of any plan to run the fans on full power - I am talking after the explosion?-- No.

I think it was probably on Monday, in response to Mr Morrison, you described mining in various places in No 2, and I want you to tell us, if you can, or if you can remember, what were the initial and final heights of various extraction panels, such as 4 South A - initial and final heights of extraction in 4 South A?-- 4 South A would have been developed at, I would estimate, 2.5 to 2.7 metres. At the rear end of the panel there was no floor coal available, or was of very poor quality.

4 South B?-- 4 South A.

Well, we were talking about 4 South A, and I presumed you were finished with 4 South A?-- No.

Okay, please go on?-- At the inbye end of the panel, floor coal was either non-existence or of very poor quality. As we retreated outbye, the floor coal was taken. I believe - oh, no, I can't recall exactly what the seam height would have been. It was probably in the 3.5 to 4 metre range.

What I want to suggest to you, without taking a lot of time about it, is that the singular difference between extraction in 512 and 4 South A and 4 South B and 4 South, 401, 402 and 512 was that ramping and bottoms took place in 512 but not in those others?-- Bottom coal was extracted in 4 South. Bottom coal was extracted in 401, 402. Bottom coal was extracted on all the north side of the mine.

080395 D.39 Turn 6 dfc (Warden's Crt)

To the same extent as 512?-- In a different manner.

But to the same -----?-- But to the same extent.

In which of those panels that we have just been discussing were methane drainage holes drilled prior to development?-- 4 South A, 4 South, 401, 402, 403, I believe - I'm not 100 per cent sure on 403 - 511, 512.

Just going back to the heights of extraction for a moment on the panels we have been discussing, was permission received from the Department of Mineral Resources for the extraction, the taking of bottoms?-- In 512 Panel?

No, not 512, the other ones we were discussing, 4 South A, 4 South B, 4 South, 511, 401, 402?-- I believe so.

Do you know anything about the ultimate and approximate analyses of coals?-- No, sir.

Nothing?-- They are new terms to me.

Do you know whether such analyses exist by way of documentation at Moura No 2?-- I do not.

Do you know of self-heating temperatures of coals in any of the panels we have been discussing, 4 South A, South B et cetera? I presume you don't, but -----?-- No, sir.

When you were at that seminar or course in New South Wales did you ever experience a formula such as this?-- I may have.

Well, I think - sorry, I will withdraw what would have been a comment. Did you?-- Sorry?

Did you?-- I'm not sure. I have no definite recollection of that at this point in time.

Well, have you ever experienced or come in contact with that formula or equation that I have just shown you?-- I'm not sure.

See, what I suggest to you is that is the formula for ventilation?-- It appears to be.

How can you say that if you've never seen it before or don't remember seeing it?-- Just looking at some of the terms in it.

For instance, do you know what the "H" means?-- Not at this point in time.

I tender that for identification, Your Worship. I have nothing further.

WARDEN: That's exhibit J for identification, thank you.

080395 D.39 Turn 6 dfc (Warden's Crt)

MARKED "J" FOR IDENTIFICATION

WARDEN: if you have nothing further we might take a short
break, thank you.

THE COURT ADJOURNED AT 10.45 A.M.

XXN: MR MARTIN

WIT: MASON G A

THE COURT RESUMED AT 11.06 A.M.

GEORGE ARTHUR MASON, CONTINUING:

CROSS-EXAMINATION:

MR HARRISON: Mr Mason, I just want to deal with some questions about CO make and your knowledge of CO make. I won't go into detail about what you have said before, but - correct me if I am wrong - I have understood you to say so far that you knew what CO make was, that you knew that it could be used as some sort of indicator, but you did not know the relevance of the levels of 10 lpm and 20 lpm and that what you looked for was more a steep upward trend in CO make. Would that be a fair summary of your knowledge?-- Yes, a steep upward trend I would probably describe as an accelerating upward trend.

Now, were you here when Mr Reed gave evidence?-- I was not.

I would just like to remind you of some evidence that Mr Reed gave about events which occurred around 1989 when he went to a conference which dealt in part with the concept of CO make and the use of CO make in the future. Can you recall him going to a conference at about that time?-- I do not.

Did he ever bring to your attention the fact that he had been to such a conference and that in future CO make - or the emphasis would be on CO make as opposed to looking at CO in parts per million?-- Yes.

Now, at that stage - was that at about the time that this system of having these CO make graphs produced commenced?-- It is natural to assume it would be.

Has it been the case that for quite a few years we have had this situation where CO make graphs at the time that you have been shown - of the type that you have been shown time and time again -----?-- I'm sorry, can you start again, please?

Has it been the case for a number of years now there have been CO make graphs put up for different panels of the type that you have seen here?-- That's correct.

Now, Mr Reed gave evidence - and you weren't here - that the information obtained by the ventilation officers which was used to calculate the CO make became a tool for him and that he was the one that monitored that information and he was the one that made decisions, to use his words, by that information. Now, were you aware that that was being done; firstly, that this information was being collated and that he was the one that was looking at it and monitoring it?-- More so when Mr Abrahamse started at the mine.

And that was when Mr Reed was still there; is that the case?-- That's correct.

In your capacity as undermanager-in-charge, were you ever called upon to interpret that information yourself, what was obtained by the ventilation officers, and I mean CO readings, ventilation readings and such like? Were you ever called upon to interpret that yourself along the lines of what I have said that Mr Reed said he was doing?-- Not that I recall.

And I take it from that that, as far as you were aware, the undermanagers immediately below you weren't called upon to do that either?-- That's correct.

And from your dealings with the other undermanagers immediately below you, was it your understanding that all they would do with these CO make graphs, much as you would do, was look at them for trends as opposed to look at them for any specific levels?-- I presume that to be the case.

Certainly you weren't aware of any of the undermanagers immediately below you who had or who used that information any differently than that; in other words, for trends?-- That was my understanding, that everybody worked on that - the manner in which everybody worked on that information was trends.

Now, if I can deal with events of 22 July and, more importantly, the aftermath of that. You have already told us that you issued your handwritten note to honour what you saw as an agreement between Joe Barraclough and, as you knew him, Steve Byron; is that right?-- That's correct.

So, as far as you were aware, there was no requirement as such for daily or, for that matter, shift CO make calculations to be done?-- There was not.

And you have heard, I take it, in the course of these proceedings that Michael Squires was away on holidays at that stage and didn't come back until 1 August. You have heard that said here?-- Yes. I don't know whether he came back on 1 August or not. I was not there.

Would it be fair to say that you could have some recollection that he came back sometime shortly before the explosion after being off for some time?-- That's correct.

I take it that you would be the person who, in the main, would give instructions to Michael in the normal course of events?-- That's correct.

And, as you saw it, there was no need for you to give him any instructions along the lines that there was a need to do CO make calculations either on a shift basis or on a daily basis?-- I did not give him any such instructions.

And mainly because you didn't see that there was any need to do that, would that be fair comment?-- That's correct.

You dealt generally with the concept of being contacted by people at home. I think when Mr MacSporran questioned you yesterday you were asked whether it was unusual, for instance, whether or not an undermanager would ring you at home from time to time; do you recall that?-- I do.

I think you made some comment to the effect that you wished they didn't but it happened; is that the case?-- I may have made that comment.

I'm not saying there is anything wrong with it, but that was something - was it something like that that you said?-- I have been contacted many times, and oft times on trivial issues; for instance, the drain being blocked in the bath house. That used to make me quite cranky.

Well, in terms of what you were normally contacted about, you didn't see anything unusual as such about the contact on this occasion, did you?-- No, I did not.

Now, I discussed with you earlier some questions about the CO make and the change in emphasis in the late 80's?-- I'm sorry, can you start again, please?

I discussed with you earlier about the question of CO make and the change in emphasis in the late 80's; in other words-----?-- Yes.

----- that business of CO make being used perhaps as opposed to CO parts per million. What I would like to ask you is this: have you, throughout the time you have been an undermanager and more recently the undermanager-in-charge at Moura No 2, had an ongoing contact with the representatives of the Inspectorate who regularly visit the mine?-- I have.

And you have got to know the Inspectors quite well, I take it?-- I had a good working relationship with them.

Now, from your experience, if any of the Inspectors were ever concerned about any matter relative to safety at Moura No 2, would they bring that to your attention or to the attention of the manager?-- I believe they would, yes.

And I would imagine, from your experience, that you would expect that if anything was brought to the attention of the manager, that you would hear about it as undermanager-in-charge?-- That's correct.

Have any of the Inspectors prior to the explosion ever discussed with you the concept of CO make?-- Yes.

In what context, can you recall?-- I recall the Chief Inspector of Mines visiting Moura.

Is that Mr Lyne?-- That's correct.

When was that?-- I believe it was in the early days after his appointment to the position of Chief Inspector.

Unfortunately I don't know when that was. Can you give me a rough idea?-- Three years ago.

What happened then?-- That's an approximation, I'm not sure.

We will take it that shortly after you believe he was appointed?-- Yes.

What happened on that occasion?-- Mr Lyne made comment to me that the Graham's Ratio was not part of our ventilation survey information.

What was said about CO make as such?-- I informed him that CO make was on the ventilation survey.

Did he discuss with you the relevance of CO make?-- No.

When you were being questioned by Mr MacSporran yesterday, you were asked numerous questions about CO make, your knowledge of CO make and about the CO make graphs; do you recall those questions?-- I recall being questioned about CO make.

From your dealings with the Inspectors, did they ever have access to any of the material in relation to the CO make for various panels at No 2 when they visited?-- They had freedom of access to any information they required.

But in the sense that - I take it the CO make graph was up on the undermanager's wall there for quite some time, wasn't it?-- They were posted at all times during an extraction panel's life.

And I take it from what you said the other day, towards the end in the deputies' cabin as well?-- That's correct.

To your knowledge, did the Inspectors ever refer to the graphs?-- I can't give you an assessment on that. I can't recall.

Have there ever been any occasions since that system came into place of posting the CO make graphs where any of the Inspectors have ever expressed to you any concern about the levels of CO make graph in any panel?-- Not that I can recall.

And, more importantly, towards the end of extraction in 512 were there ever any concerns expressed?-- Not that I'm aware of.

In fact, at any time prior to 7 August last year did the Inspectors who visited ever express any interest at all in the concept of CO make or in the CO make graphs that were being posted, to your knowledge?-- I believe on Mr Walker's visit of the 27th, I think it was, 27 July, I raised the issue with him.

What did you raise with Mr Walker on that occasion?-- I believe that I told him about the events of 22 July.

Did you discuss with him levels of CO make -----?-- I don't believe so.

----- in the course of that discussion?-- I don't believe so.

Well, can you recall what you did discuss with him about the events of 22 July?-- I believe I told him that we had had a high make reading on 22 July which was the result of the - I told him that we used a Drager tube reading as against a normal Unor reading; that we had proven that to be a false reading, and that everything was okay.

Did you tell him what that high reading was?-- I believe I spoke about the Drager tube reading.

Did you explain it to him in terms of inquiries that were subsequently made suggested that a Drager tube reading that was taken may have been high?-- I'm sorry, can you repeat that?

Did you discuss it with him in the context that a Drager - that the Drager reading that was taken - I presume you mean the one by - is it Mr Bryon and Mr Rose - was high?-- Yes.

And that subsequent investigations didn't support that level of Drager reading?-- That is what I have said already, yes.

Now, what I want to get at is did you also discuss with him how this error, as we can describe it, reflected itself in the CO make calculations that were done on the 22nd?-- No, I don't have a recollection of that.

Do you know off-hand whether or not he looked on the 27th at the weekly CO make graph, which presumably at that stage would have been up to date to 22 July?-- Not that I recall.

Well, just reflecting back on that conversation, can you just tell me as best you can what you did tell him about the events of the 22nd and what his reaction was?-- I thought I had already done that.

Well, did it go any further than just telling him that you had a high Drager reading and that you - other investigations had been made and they didn't support that high reading?-----

MR CLAIR: Actually what the witness said earlier, Your Worship, was that he told him that "we" had had a high make reading on the 22nd of July as a result of a Drager reading and that "we" had proven that to be false and everything was okay. That's my note of what the witness said earlier. Perhaps if it is going to be put back to him, it could be put back to him in those terms, so that we don't end up with confusion.

MR HARRISON: You heard what Mr Clair just said. That was the conversation, was it?-- That best reflects my recollection of the conversation.

All right. Well, did he make any further inquiries when you told him that that's what had happened? Did he ask you any more questions is really what I'm asking you?-- I don't believe so. I believe the nature of the - or the manner in which I expressed - or conveyed my message to Mr Walker would have put him at rest.

He appeared to you to be put at rest at that stage?-- That's my recollection.

I take it he never asked to see any documentation at all - any reports, any graphs, any surveys, or anything else?-- Not in the time that I was there. I left some time shortly after

that to attend to a management meeting.

In any event, I take it that the conversation of that day was one which you instigated with him. He didn't raise CO make with you; you raised that point with him?-- Mr Walker made inquiries of me of how things were going at the mine.

And it was in that context that you mentioned the events of 22 July?-- That's correct.

Now, were there ever any occasions when he made inquiries of you in terms of CO make levels in the 512 panel?-- Not that I recall.

Could the witness be shown Exhibits 188 and 189, thank you, Your Worship? You have already been shown both of these documents in the course of your evidence. "Underground Procedures and Work Instructions" being the first one, and "Underground Ventilation Procedures" being the second one. Now, what I want to ask you is this: is it the case that you had no recollection of seeing those documents prior to 7 August last year?-- I may have seen them, but I have no recollection.

Would it be correct to say that these documents were not documents that were shown to the undermanagers generally, being the undermanagers immediately below you?-- I can't be sure on that. Probably not.

You had no knowledge of them being shown to the undermanagers immediately below you?-- I doubt they would have been. A system was being developed.

In other words, as you saw it, had the system continued, it's probably something that would have been brought to their attention further down the track?-- That's correct.

Could the witness be shown Exhibit 193, thanks, Your Worship? Now, you have identified for Mr Martin this morning some writing of Michael Squires on one of the pages of that document?-- That's correct.

See that?-- Yes.

It is, in fact, one document, is it, with two sides - writing on two sides, is it?-- It is a piece of paper with writing on both sides.

I have only got a photocopy, that's why I ask you. Just have a look at the writing there that's in Michael's handwriting. There are two names at the bottom, "J Hill" and "L Barrett". To your knowledge, were they people associated with the Tecretre contractors?-- No.

Do you know who they are?-- They are two people in the miners' union that work at Moura No 2 - or worked at the Moura No 2.

Do you know off-hand if they were involved on the Saturday

night shift which, of course, would commence Friday evening - in any of the Tecrete work that was to be done in relation to the 4 South prep seals and in relation to 512?-- At this point in time, I don't, but that information is available on the shift report.

But looking further at the items marked 1 and 2 there?-- I see them.

Do they appear to you to be a summary of what was to be done by the people who were going to be working with the Tecrete contractors, or the Tecrete contractors themselves, on that weekend?-- I believe they are work instructions for the people that were working on the night shift.

That's the Saturday night shift that would have commenced on the Friday night?-- That's correct.

Thank you. I just want to talk to you about the question of the training of undermanagers generally at No 2. Up until the end of June there were four undermanagers, basically, immediately below you; is that correct?-- That's correct.

McCamley, Sim, Atkinson and Squires?-- Yes.

McCamley left at the end of June and had not been replaced, I take it, as at 7 August?-- Shortly before the end of June he left.

But he hadn't been replaced by 7 August?-- That is correct.

Now, we have heard in evidence, and you have probably heard it yourself, descriptions of the type of shift that was worked on at weekends by the undermanager rostered for the weekend. How long had that practice been in place?-- Since we moved - from the time that we moved away from seven day roster, which was August of 1991, I believe.

Now, to your knowledge, were any of the undermanagers ever involved in any retraining courses, either on site or in situations where they were sent elsewhere to participate in courses?-- Excuse me, could you repeat that for me? Retraining courses?

Well, retraining generally I will ask you about first, and then I might get down to specifics, but just retraining generally. Was there any - did they participate either on site or elsewhere in any retraining, and I'm talking about the men immediately below you?-- I don't understand what you mean by "retraining".

Well, refresher training?-- Only to the extent that they were present during safety meetings when certain issues were dealt with.

Do you know of any situations where the undermanagers were sent away to participate in any courses that were conducted by the Department or SIMTARS or any professional bodies?-- The safety training undermanager attended seminars conducted by

the inspectorate.

What about the shift undermanagers - the ones who normally were in charge of shifts? Are you aware of any situations where they were sent away for such training?-- I can't recall at this point in time.

Would there have been sufficient coverage for them to do so in view of the staffing levels of people at that level?-- I believe so.

You were present, I take it, for Michael Squires' evidence in these proceedings?-- I was present for a very small portion of his evidence.

He has given evidence, and you may also have noticed that there was reference in his statement to a conversation that he says he had with you on the Sunday morning. You may recall that you were asked about this by Mr Clair on Thursday, I think, and you said that you couldn't recall such a conversation?-- I still have no recollection of that conversation.

Just to remind you of what his evidence was on that point, he said that he rang you up basically to see how the sealing had gone the previous evening. Now, would that be the sort of thing you would expect him to do - to contact you in relation to something like that?-- Yes.

Could it have been that he may have made some phone call to you that Sunday morning, inquiring about how things went, and you just don't have any recollection of it?-- That's correct. I was awake until late hours or early hours of Sunday morning.

Now, if I can deal with the conversation that you have related that you had with him on the Sunday? I'm not going-----?-- Can you start again, please?

If I can just turn to the conversation that you had with him on the Sunday that you can recall - the one you have given evidence of when he asked you what he should do if certain things happened?-- Yes.

Now, at no stage in the course of that conversation did Michael Squires express to you the view that there was any safety problem as such, did he?-- That's correct. I drew him out on that point a number of times.

And it was your understanding that his concern, if I can use the word "concern", was that, firstly, he was to be dealing with some people with whom he was not as familiar as he was with others, and he had some concern that something may arise about people not wanting to go down the pit, and what should he do?-- That's very close to correct. My understanding was that he had concern about the possibility of men not wanting to go down the pit when he considered that the mine was in a safe condition.

I take it again he did mention something about not being familiar with the crew - with the night shift crew that was on; was that the situation?-- That's correct.

Just turning to something completely different, I would like you to have a look at some documents. There are three documents in fact stapled together here. I can indicate I've got copies available for the panel and for the members at the Bar table. Just before I turn to that I would just like to go back to something you said when you were giving evidence on Thursday. You were asked about the format of the forms that were used at No 2 generally and you made some comment to the effect that looking at it now, if you had to design it now you'd do things a bit differently. Do you recall that?-- I do.

I want you to have a look at these three forms. You will see the first one is headed up "Deputy's Daily Production Report", and if we go quickly through that you will see basically that it sets out a lot of the matters that may appear in either a deputy's report or a shift undermanager's report at Moura, would that be fair comment, production related matters?-- Number of items that would -----

Would appear in either the deputy's report or the shift undermanager's report in Moura in the normal course of events?-- Yes.

Look at the second one, if you can. It's headed up "Report of Inspection of a Deputy's District made during Shift Production District", and you will see there that there are specific headings down the left-hand side in relation to various matters, and columns left to include information?-- There is.

Information in relation to flammable and noxious gases and action taken; do you see that?-- I do.

State of ventilation and action taken?-- Yes.

Firstly, just dealing generally with those two, looking back on it - and I am asking you to look back on events now - would you see advantages if the documentation to be used in a mine here in Queensland had similar specific provision of the type that I've just referred you to in relation to flammable gases, in relation to ventilation and action taken?-- I prefer not to answer questions with hindsight, thank you.

It's not a question, I can indicate for your own benefit, in the sense that it's in any way aimed as a criticism of you. I'm merely looking to the future in terms of whether or not perhaps there should be more provision for these types of matters in mines generally. I just make that point clear to you?-- I think that's a matter for other people to address.

But just from your own experience in terms of this overall matter, do you see advantages in having specific reference to those types of matters?-- I've made that comment before.

Similarly you will see further down that form there is

specific provision in relation to general safety and action taken. Do you see that?-- On the second form?

On that same form, the second form?-- "General safety and action taken", is that the one?

Yes. Again did you see advantages in the future if there is specific reference to safety matters as opposed to leaving it to individuals to make their own judgment as to what should or shouldn't go into a form?-- I would need more time to survey this whole form to make a decent assessment of it.

Again I would make it clear to you that I'm not asking you to say whether we should adopt this form?-- Well, please don't ask me to comment on it at this point in time.

I'll finish it off in any event. Have a look at the third one?-- I see the form.

Again do you see that in the undermanager's report, which is perhaps a lot different to the one you are familiar with, there is that specific reference to general safety?-- There is.

I won't labour the point with you. Your Worship, I seek to tender those forms. I can indicate that they are in fact deputies' reports and undermanagers' reports which are in use, as I understand it, throughout New South Wales. I merely seek to tender them at this stage. Perhaps they can be called upon for further comment by other witnesses.

WARDEN: Exhibit 195 on the basis on which you tender it, thank you.

ADMITTED AND MARKED "EXHIBIT 195"

MR HARRISON: Getting back to the situation at Moura No 2 before 7 August, I think you said in evidence that you would normally expect that if anything of a safety matter arose you would expect an undermanager to put something in his report; would that be fair comment?-- Yes.

I take it that at that stage there was no specific provision, there was no section set aside for that particular purpose?-- I have made that comment before.

Would you agree that the shift undermanager's report, the way it was designed, was geared more towards production matters than safety matters?-- I would not.

You wouldn't agree with that observation?-- That's what I said.

Even though there was no specific provision in relation to safety matters in that particular report in the format of the

report I'm talking about?-- "Comments" column allowed for insertion of any information.

Thank you. I have nothing further, Your Worship.

RE-EXAMINATION:

MR CLAIR: Mr Mason, there are a couple of matters that I want to tidy up. First of all you've mentioned that you did an inspection of the 512 Panel on the night - or late afternoon of Saturday, 6 August. I think you told us that you stayed down there for some time during that night up to a certain point during the sealing process; is that right?-- That's correct.

Now, when you were there were there items that were in front of the No 2 road seal that included the wire that would have been available for Tecrete sealing, perhaps being part of equipment that had been put there earlier in the event that there had to be a rapid sealing?-- Are you referring to the sheets of Tecmesh?

Yes, the Tecmesh? Do you remember if that was still there on the Saturday night? I think you've referred in your evidence to having some earlier conversation with Mr Ziebell about stores being put there in case there had to be an urgent sealing, at least put adjacent to the 512 seal - prep seal sites. Would that have included Tecrete Tecmesh?-- I don't believe that they were at the No 1 prep seal site. I believe that they were in the cut-through between 1 and 2 roads on the outbye - on the intake side of the stopping.

I was actually suggesting that it might have been in front of the No 2 seal site. Perhaps if you can stand up, push that front map over and indicate on the more detailed plan that's behind there where you recall that wire being when you last saw it. Use the laser pointer, if you would, so we can hear what you are saying?-- I believe that those sheets were in that cut-through between 1 and 2 roadways on the outbye side of the seal - of the stopping.

It's really in the 0 cross-cut of 512 or No 1 roadway of 510?-- That's an apt description.

Somewhere in the vicinity of the letter "D" that appears on that plan there is where you indicated with the pointer, I think; is that right?-- That's correct. That's my best recollection. I do have a distinct recollection of the Tecmesh sheets at the number 3 prep seal. They were on the inbye side of the seal and they were covered with coal.

At the time you were last down there too, of course, there would have been other - there would have been the Tecrete pump and various other things that were there in the area just outside that No 2 road seal; is that so?-- No.

RXN: MR CLAIR

WIT: MASON G A

It had been moved?-- The batcher - one of the batchers was at No 1 seal, the other one was at number 3 seal.

You've seen, have you, the borehole video that's been taken during the borehole inspection process?-- I've seen one run-through of that.

One run-through of it. Are you sufficiently familiar with it to recall seeing in that video in respect of the borehole that is adjacent to that No 2 road seal, seeing some wire somewhere - what appeared to be Tectrete wire somewhere on the intersection there? Just say if you don't remember?-- No, I don't recall.

You don't recall?-- No.

You've only seen it the once?-- Yes.

I take it you didn't look at it specifically to see what you could locate where on that occasion that you looked at it?-- I did not.

One other matter that I want to tidy up, I would like you to just have a look at this series of shift reports. You've told us about events on 24 June when Mr McCamley had a conversation with yourself and Mr Schaus, I think you said, when he said somewhat forcefully that there was a stopping that had been put in place, or at least a stopping that had been put across that No 4 road prep seal in 512 that had been put in place and he didn't want to see it moved, it wasn't to be moved again or something to that effect; is that right?-- I believe - it was - it had been interfered with, and the regulator in the bottom return.

I don't want to go right back over that, but you have seen the underground shift report in which he makes mention of that during your evidence-in-chief. When I say "makes mention" of it, there is a note on the side saying, "Please do not remove."?-- I recall that.

If you look at the next underground shift report there, that's Mr Squires' report, is that right, and that would be for the Friday -----?-- That's correct.

Friday afternoon shift; am I right there?-- That's correct.

There is no mention on that report of anything in relation to that stopping that is mentioned in Mr McCamley's report; is that so?-- There is not.

And if you go over the page again we come to the reports that relate to the weekend shift. There is a report of Mr Sim for Saturday; is that so?-- Yes.

And again the next report is a report of Mr Sim for the Sunday; is that right?-- That's correct.

Now, we haven't heard from Mr Sim, but I just want to have it

on the record through you, there is no mention on either of those reports of anything to do with that seal that's mentioned in Mr McCamley's report - I'm sorry, with that stopping that's mentioned on Mr McCamley's report; is that right?-- No specific mention to it.

Thank you. You can pass that back. I don't propose to tender copies of that, Your Worship. That document is part of the bulk exhibit, Exhibit 9. It's document number 49. Now, I want to touch briefly on some matters that Mr Harrison asked you about, the first thing, this visit that you mentioned some time approximately three years ago from the chief inspector, My Lyne, you said in respect of that that he made comment to you that the Graham's Ratio was not part of your vent survey, that is the mines event survey, and you went on to say, "I informed him that CO make was on the mine survey."?-- That's correct.

Can you just explain what you meant by that? In what context did he make that comment? Was he seeking to point out some flaw in the ventilation survey in that Graham's Ratio was not part of it? Is that the way that it was mentioned?-- I believe so.

Was that the case? That Graham's Ratio was not part of the ventilation survey?-- It wasn't recorded on that ventilation survey form.

On the particular -----?-- Was not recorded on that ventilation survey form.

That's on a particular one that he was looking at or that it wasn't - that it wasn't recorded as a matter of course?-- Would have been on a particular form that he was looking at.

And you told him that CO make was on the mine survey?-- That's correct.

It did appear on that form?-- Yes - no, I'm not sure about that.

I'm really just relying on what you told us this morning. You -----?-- Yes.

You say that -----?-- I pointed out that we used - that the CO make was recorded, I believe.

The CO make was recorded?-- Yes.

And that was your answer to him when he was pointing out that the Graham's Ratio wasn't part of it; is that so?-- That's correct.

Can you just explain why you regarded that as an answer to his criticism, that is, that the CO make was part of it? What did you mean by that?-- I was grasping for an answer. I'd been put on the spot and had a deficiency highlighted to me.

Did you see the absence of the Graham's Ratio being in some

way met by the fact that there was a CO make recorded on the form?-- I'm sorry, can you repeat that?

Did you see the absence of the Graham's Ratio on the vent survey as being an answer - as making up in some way for the absence - as being - I should say the absence of the Graham's Ratio as being answered in some way, overcome in some way, by the existence of the CO make on the form?-- I presume that that's what I was intimating to the chief inspector.

And the reason that you did that is that you regarded the CO make as being an indication as to whether there was something untoward in the panel?-- I knew that it was recorded.

I'm sorry?-- I knew that it was recorded.

You knew that it was recorded, but I don't think you listened to my question?-- I answered your question.

I said the reason that you saw it as making up for the absence of the Graham's Ratio was that you regarded the CO make as being an indication as to whether there was something untoward going on in a panel. That can be the only explanation, isn't that so?-- I regarded it as a means of monitoring.

Now, you mentioned a visit by Mr Walker on 27 July?-- Yes.

And he asked you how things were going, and it was in that context that you raised with him the events of 22 July. I think that's what you told us?-- I brought those to his attention, yes.

What you told him about that is that, to use your words, "We had had a high make reading on 22 July."?-- I believe those were the words I used.

And you regarded that high make reading of 22 July, albeit that you went on to explain that it was found to be false or based on a false parts per million reading, but you regarded that high make reading on 22 July as significant enough to mention to Mr Walker when he asked you how things were going at the mine; is that so?-- I had nothing to hide from Mr Walker.

No, I'm not suggesting you did, but you didn't tell him you had Vegemite sandwiches for lunch the previous day. What you told him is that ----?-- No, sir, sometimes I shared my lunch with Mr Walker.

Well, you didn't invite him to have a Vegemite sandwich perhaps, or even perhaps you did?-- If I had had Vegemite on them, he could have had one.

If you listen to my question. You regard the CO make reading you had on 22 July as being of sufficient significance to mention it to Mr Walker when he asked you how things were going at the mine?-- It was an event that had occurred at the mine. I thought it was worthy of mention to him.

Now, the one thing that did come out of the events on 22 July, at least for you then, was that the CO make reading which was calculated on that day, which was in the vicinity of 19 lpm, you did regard as a high CO make calculation. I think you have already said that in your evidence, but I just want to be clear about it?-- Inasmuch as that it was higher than the previous week's reading.

Yes, but it was a high CO make reading in that it was obviously a matter that would cause concern?-- Because of its increase over the previous week's reading.

Yes, okay. You were anxious to go on and explain to Mr Walker that although you got the high reading, that in fact that reading was proven to be false?-- No, sir.

It was one which was the result of a Drager reading and that that Drager reading was proven to be false and that everything was okay?-- No, sir.

Well, that's what you said this morning in your evidence?-- No, I did not, sir.

Well, what you told the Inquiry this morning is that you said to Mr Walker, "We had had a high make reading on 22 July.",

which was the result of a Drager reading and that you had proven that Drager reading to be false and that everything was okay?-- I agree with that. I do not agree that I was anxious to go and tell him.

I want to touch now on that document that has come into evidence since I was last asking you questions, that's Exhibit 193. Do you still have that there? Now, it appears to be just a page off a notepad of some kind. It doesn't seem to be any particular form of any kind; is that right?-- I believe it to be part of an A4 sheet of copy paper.

Part of an A4 sheet of copy paper?-- Yes.

Not A4 size, is it? The document that's in front of you there, it's not A4 size?-- No, it is not.

When you say that it's part of an A4 sheet of copy paper, has it been cut up or something?-- It appears that way to me.

Anyway, it's certainly not part of any forms that are kept at the mine to be filled out from shift to shift, is it?-- That's correct.

Now, I just want to establish the sequence in which things seem to have gone onto that piece of paper. There is the material that's been attributed to Mr Squires which is all on one side of the paper?-- That's correct.

And that deals with Saturday, or at least it's headed up "Saturday night shift, 6 August '94"?-- Yes.

And, in fact, that would have been, of course, as we know, the shift that concluded early on the Saturday morning; is that right?-- It is.

Okay. Now, the other side of the paper has largely your writing on it; is that so?-- Yes.

Now, are you able to say whether in fact Mr Squires' notes were already on the reverse side then when you started to write your notes on there?-- I believe they were.

Now, do you recall when you first started making notes on this piece of paper?-- I believe the information in the top left-hand corner was the first information placed on that paper.

But can you say when it was that it was placed there?-- On Saturday afternoon shift before I went down the mine.

How long before you went down the mine?-- I estimated to Mr Martin, I believe, half an hour.

And you went down the mine at what time?-- Approximately 4.30 p.m.

The other items then - or the first items that went on, you say, are the figures in the top left-hand corner. They are

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the ones that you have referred to earlier in your evidence; is that so?-- Yes.

That relate to the figures that you used to calculate the CO make in 512?-- Yes.

Beside that there is a list of notes starting with, "Recover belt in 6 South."; do you see that?-- I do.

When did you make those notes there?-- I made all of the subsequent information on the Saturday afternoon.

At what time?-- Sometime after I came out of the mine.

What time was that?-- Sometime between 6.30 and 7.30 p.m., I believe.

So, the whole of the balance of those notes went on during that time; is that what you are saying?-- To the best of my recollection.

And the purpose of those notes - first of all, the ones up in the top right-hand corner, "Recover belt in 6 South.", etc, what was the purpose of those, first of all?-- The same as the other notes that are there, a list of work to be carried out in the mine.

Just work that you yourself thought needed to be carried out, or were they made as a result of a conversation with someone?-- No, they are a reminder note for me.

Well then -----?-- For my own mind.

There appear to be the four items in the top right-hand corner and then there is a series of items down below that run from 1 through to 8; do you see that?-- That's correct.

That list of items from 1 to 8 all in your writing, from what you have said; that's right, isn't it?-- Yes.

And those items, were they simply put there as a result of some thinking that you did yourself about what needed to be done in the mine?-- That's correct.

The figures down the bottom are in your writing; is that right, "13", "25", "12", etc?-- They appear to be my writing.

They have got something under them, "Lotto"; is that so?-- That's correct.

They related to something that occurred on that Saturday night too, did they?-- I'm not sure. They appear to be.

Well, they haven't come on there subsequently, I take it, or have they? I mean, sometime after the Saturday night? Well, let me -----?-- They may have, but I have no direct recollection.

Okay. Well, you told the Court yesterday that - well, initially when you were being asked questions by Mr MacSporran you said that you remembered about that piece of paper sometime within the last 24 hours and then you went on to say, "Well, it may have been the evening before.", which would have put it back to sometime Sunday night. Now, I understand you -----?-- Yes.

Sorry?-- Yes.

That's what you said yesterday afternoon. I understood you to have said this morning that in fact it was sometime on the weekend that that piece of paper again came to your attention; is that right?-- Yes, I think so.

Now, are you able to say how the piece of paper came to your attention on the weekend?-- Yes.

How was that?-- I came to the motel to speak with my legal counsel. One of the questions put to me was with regard to CO make. I recollected that I had made those calculations on a piece of paper. Supposedly this piece of paper was then retrieved.

So, you recollected on the weekend that you had calculated the CO make on the night or the afternoon of Saturday, 6 August; is that what you are saying?-- When a question was asked of me I recollected that.

Okay. Now, the piece of paper, you say, was produced. When had you last seen that piece of paper?-- Whenever it was - the search was conducted at the mine.

Okay. Well, we can look to that date shortly, but the last time you had seen that piece of paper is when you had given it, I think you said this morning, to Miss Gibney last year sometime?-- I think I said that yesterday afternoon.

Okay. I think you may have said it again this morning. Now, at the time the piece of paper was produced to you, who was present at that time?-- My legal representatives.

Who was that?-- Mr Morrison. I can't be sure if Mr Roney was there.

Go on?-- Miss Gibney, who produced the paper. That is all.

Did you have to explain anything about the piece of paper in order for it to be located?-- Not that I recall. No, I did not.

Well, how did you identify the piece of paper that you needed to see in order to show your legal counsel what you were talking about?-----

MR MORRISON: That's an unfair question, with respect, and I object to it. I don't object on the grounds of privilege or anything, but Mr Clair has just put something to the witness that he hasn't said at all. He hasn't said that he needed to

see the piece of paper in order to tell counsel something at all. I don't know where Mr Clair has got that idea from because the witness hasn't said it.

MR CLAIR: I may have been jumping to a conclusion, Your Worship. I will go back a step. You say that you were asked a question about this business of CO make and that prompted your memory -----?-- That's correct.

----- about this piece of paper being in existence, and then sometime following that the piece of paper was produced. What happened between your memory being prompted as to the existence of this piece of paper and the piece of paper being produced?-- I believe I made mention of the fact that I had written that information down that I used to make the calculation. I presume that it was looked for.

I'm sorry, you mentioned that you had written it down. What happened after that? What was said after you had mentioned that you had written it down?-- I presume that it was gone and looked for.

I don't really want your presumptions. I would just like you to address the question, you see? What happened after you mentioned that you had written it down?-- Sometime later Miss Gibney produced this piece of paper.

Did you say anything more to describe the piece of paper, or did you do any searching for it yourself?-- I did not.

You see, what I am really interested in is given that this question of CO make - and in particular the fact that on the evidence, as it stood, it appeared that nobody had actually calculated a CO make on the Saturday, and that's been the subject of some considerable questioning - I am really interested in this aspect: how could you, Mr Mason, have forgotten about the existence of that piece of paper throughout all of the time since you first produced that to Miss Gibney last year?-- I don't know, sir. I can say to you honestly I did not recall it until Sunday evening.

Given all that has been said and asked about, sometimes ad nauseam, about this question of CO make, how could you forget until the weekend - this weekend - that you had calculated the CO make on that Saturday night?-- I don't believe I held that piece of paper in any significance.

Well, the thing is that when you did produce the piece of paper to Miss Gibney, you did realise the significance of the piece of paper. You told us that yesterday afternoon?-- Yes.

So, you knew at the time you produced it that it was a piece of paper that contained your figures that you used to calculate the CO make, but you say that you forgot all about it after that; is that so?-- That's correct.

Well, you see, I would suggest to you that there were any number of points along the way up to this weekend when your

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memory would have been prompted about these CO make calculations, if in fact you had forgotten them in the first place; what do you say about that? Any number of points at which your memory would have been prompted?-- I say it wasn't.

Well, I'll come back to that, but what we have established is that at least by the time you got here Monday, you had had the conversation with your counsel on the weekend about the calculation of CO make. You had seen the piece of paper on the weekend which showed the figures that you had used to calculate the CO make on the Saturday night, so that you must, when you came into the witness-box on Monday, have been conscious of the fact that you had calculated the CO make on the Saturday night prior to the explosion?-- I was.

Now, you were asked by Mr MacSporran yesterday why, in fact, you hadn't mentioned it in your evidence; do you remember being asked that?-- Not directly.

And your reply was that you hadn't been asked a question about it - on one occasion you said that, and on another occasion you said something quite similar to that. You said you hadn't been asked a question about it. Do you remember saying that? I can refer you to the transcript if you like?-- I can take your word for it.

Well, do you hold with that answer?-- I do.

I will quote you the bit from the transcript. Page 3675 at line 45, you were asked by Mr MacSporran, "Why did you do a CO make calculation on Saturday afternoon, 6 August?" You said, "I believe I wanted to see what the CO make level was. I used - I believe I used deputy Newton's report and deputy Klease's report." Question: "Have you mentioned this before?" Answer: "I don't believe I have." Question: "Did it just occur to you, did it?" Answer: "I have not been asked a question about that before." That's what you said at that point?-- Yes.

And then at a later point, at page 3683 at line 54, you were asked that question: "And you realised at the time you handed it over" - this was to your legal representatives - who was subsequently identified as Miss Gibney - "the significance of it, what it related to?" You said, "I believe so." Question: "Well, how is it then that you only remember today that piece of paper and its significance?" You said, "I remembered again that piece of paper, I think, 24 hours ago." Question: "And that's before you were questioned by Mr Morrison, was it, this morning about matters to be clarified with you?" Answer: "Yes." Question: "You didn't mention it to him this morning, did you, or did you?" Answer: "No, I did not." Question: "So you remembered last night about the piece of paper, did you, or in the last 24 hours; was that yesterday, last night, or when?" You said, "It might have been the evening before last." Question, "So at that stage you knew that you had yourself done a CO make calculation or two of them, on Saturday the sixth." Answer: "That's correct." "And you didn't mention that at all until I was asking you questions about it at a few moments ago." Answer: "That's correct." "So did you remember in the last 24 hours and then just forget about it until a few moments ago?" Answer: "No." Question: "Well, did you think you didn't have an opportunity to mention it until a few moments ago?" Answer: "I had not been asked a question in relation to that." So, on two occasions you said

that you hadn't been asked a question about that. Do you hold with that? I mean, is that why you say you hadn't mentioned it on Monday?-- I do.

You see, you really had every opportunity to mention this matter on Monday, I suggest to you?-----

MR MORRISON: I object to that question. If Mr Clair wants to identify particular questions that were put to the witness that necessitated that answer, that's one thing. To make a global statement in respect of a period of time in the witness-box which at that stage approached, I think, just over two days, is not the way to go about it.

MR CLAIR: Your Worship, I am, in fact, about to go to the transcript. I won't insist on an answer to the question I have just put to the witness. I will go straight to the transcript.

WARDEN: Thank you.

MR CLAIR: In fact, Mr Mason, it might make it quicker if you can follow this on the transcript yourself. There is a copy of some pages there. The first of those pages is 3540, and you will recall that I was asking you questions - and just to identify this, this was on Monday morning - Monday morning this week after you were aware, on your account of things - I should say after your recollection had been refreshed on the weekend and you had seen the piece of paper - Monday morning, early in the piece, at line 8 on that page, first of all, just to put it into context, I asked you this question: "Well, what was your response when you were told that it was eight to 9 ppm?" You see that? You said, "I just accepted the information that I received." I mention that so you will know what period of time you are talking about. This is when you are having a telephone call with Mr Squires?-- Mmm.

And he related to you that Cole Klease had just given him that reading - 8 to 9 ppm. Go down to line 53, question: "Well, what I'm saying to you is you obviously appreciated that the CO make would be able to give you a better indication as to what was happening in the panel." Answer: "I believe the CO concentration would give me a good idea of what was happening in the panel." Question: "Well, the CO concentration will give you precisely that, the CO concentration, but I think you've already agreed that the CO make, the CO make gives you a better idea as to what is happening in the panel." Answer: "Well, I can only tell you what information I sought on that day and how I used that information." Question: "Well, that's what I'm about to ask you about, you see. Did you ask anybody to calculate a CO make for you-----?" Answer: "I did not." And I went on with the question: "-----as a result of that conversation?" Answer: "I did not." Now, just pausing there; given that it would have been at the top of your mind, no doubt, that you, in fact, had calculated the CO make based on, as you have told us, not on the figures in Cole Klease's report, but on the figures that had been relayed through to you by Mr Squires, it didn't occur to you at that point in your evidence to mention that you had, in fact, made that CO

make calculation?-----

MR MORRISON: I object. I object to that question and any further questions along this line. These witnesses are here and they respond to questions. No witness is obliged to come here and volunteer things that are not asked of them; none. In fact, it is contrary to law to expect them to do so. Mr Clair asked a question - he asked a question in particular words. He is a very careful lawyer, we all know that, and he chooses particular words. He asked a question and got an answer. If he had thought to ask another question or wanted to ask another question, that was a matter for him, but he is not permitted to berate this witness on the basis that he asked a specific question, got a specific answer to that question, and this witness should have assumed something else that Mr Clair might have wanted to do or someone else wanted to do. That's not - that's not proper.

MR CLAIR: Your Worship, the witness has said in evidence yesterday that he didn't have the opportunity to mention that he had made this CO make calculation on the Saturday afternoon. What I'm doing at this stage, and what I would propose to do, is to take him to the occasions when he had the opportunity to mention it.

MR MORRISON: I object to that. I maintain the objection. The witness did not, in fact, say that. Mr Clair is putting it wrongly again. He did not say that he didn't have the opportunity. He said he wasn't asked the questions, or he didn't get asked a question about it. Now, if we are going to proceed, let's at least proceed on an accurate basis, if nothing less.

MR CLAIR: Sorry, Your Worship. He said that he hadn't been asked a question in relation to that - that is the calculation for the CO make. That answer was made in answer to this question - 3685, line 1 - I have already been through it: "Well, did you think you didn't have an opportunity to mention it until a few moments ago?" His response was: "I had not been asked a question in relation to that." - "...in relation to that"; that is, in relation to the calculation of the CO make. Now, Your Worship, I would submit that if the witness is going to give this evidence that he recalled it on the weekend and that he didn't mention it on Monday because he hadn't been asked a question in relation to the - to this matter of the calculation of the CO make, well, then, it is fair, and I don't just mean fair to the witness, but it is fair to the Tribunal to go through the opportunities that the witness did have to mention the matter of calculation of CO make. It relates to the reliability of his evidence in this regard. It relates, in fact, to the assertion that he makes that his memory was prompted about this important matter only on the weekend and, in fact, it is a process which is quite reasonable; one that would be adopted with any witness who came forward and gave evidence under oath about a matter - that the reliability and the credibility of that evidence would be tested. I would submit that it is a proper line of questioning, and that it would be, in fact, quite preposterous to confine questioning in the way that Mr Morrison submits,

because to do so would make a nonsense of the way in which witnesses give their evidence and the way in which witnesses should be and, in these circumstances, ought to be examined, or in this case, in fact, cross-examined. As far as my task is concerned, again, Your Worship, I reinforce the fact that my task before this Tribunal is to assist the Tribunal to arrive at the truth. In order for the Tribunal to do that, it has to be able to judge the reliability and the credibility of evidence that's been given by the various witnesses.

WARDEN: Thank you. I accept that submission and I will allow the line of questioning to continue. He should be given the opportunity to comment on the fact that he had the opportunity to bring forward that information that you are seeking.

MR CLAIR: Thank you, Your Worship.

I am looking at the top of page 3541 and to put it into context, I asked you this question at about line 8: "Well, that's what I'm about to ask you about, you see. Did you ask anybody to calculate a CO make for you-----?" Answer: "I did not." I went on to say, "-----as a result of that conversation?" Answer: "I did not." Now, what I was asking you, Mr Mason, is given what you have told us - that later that afternoon you, in fact, used the very figures that have been related to you in that conversation to do your own calculation of CO make - why is it that you didn't mention it at that point in your evidence?-- Mr Clair, I'm an honest person.

I'm not-----?-- The oath I took-----

Mr Mason-----

MR MORRISON: Let him answer, please.

WITNESS: Will you let me finish, Mr Clair? I am going to answer your question. I'm an honest person. The oath I took on that Bible I regard as serious, but I regard it only as a re-affirmation of my normal behaviour.

MR CLAIR: Yes, go on?-- The answer that I gave you to that question was a specific answer to a specific question.

Did you make a decision at that stage not to make mention of the fact that you had done a CO make calculation in answer to that question?-- Sorry, could you please start that question again?

Did you make a specific decision at that stage not to amplify your answer by way of referring to the fact that you had made a CO make calculation yourself?-- I understand my responsibilities in this Inquiry are to honestly answer all questions that are given to me, and I believe I have fulfilled my responsibilities, and will continue to do so.

But you haven't really answered my question, you see? Did you make a specific decision at that stage not to reveal that you had, in fact, done a CO make calculation yourself; that is,

reveal it by way of amplification of your answer?-- I don't believe I did at that point in time.

Now, if you go further down the page, you will see in the middle of the page that you were giving an answer to this effect - that you didn't know, you say - you see that at line 26 - "I did not have a full appreciation of the conditions. I did not want to stop the sealing process, and I say that would have been very difficult to organise or put into place. After undoing arrangements that had been made it would have been very difficult to reorganise if I had said, 'No, we won't seal off at this point in time until I carry out further investigations.'" Question: "But you see, one of those further investigations that could have easily been carried out was to have the CO make calculated, wasn't it?" Answer: "Yes." Question: "That wouldn't hold anything up at all; isn't that so?" Answer: "No, it wouldn't.", and then there are some further questions and answers at the bottom of the page. Because you had referred back to an earlier time, I said, "But Mr Mason, we are dealing with Saturday, 6 August." Answer: "We are." Over the page, question: "When you have a report of a tarry smell, you've had a report of a haze and you've got Michael Squires reporting to you that a deputy was actually down there and had just taken a reading of eight to 9 ppm CO. Now, why didn't you ask for the CO make to be calculated at that point?" Answer: "I don't know why I didn't ask for the CO make to be calculated at that point." Again, let me ask you, did you make - or why didn't you mention at that stage in your evidence that you had, in fact, used that very reading to calculate the CO make yourself later that afternoon?-- I believe the answer that I gave you to your question was an honest and full answer.

You don't think that it would have been natural to say, "Well, look, I used that information and I calculated the CO make."?-- I gave you an answer to the question you asked me, Mr Clair.

Well, were you just being particularly careful that you answered my question but that you didn't-----?-- I tried to be careful in answering every question.

I've noticed you have taken your time with answer you have given, at least to my questions, but was it-----?-- I think that's expected of witnesses, sir.

Was it the case that you didn't want to reveal that you had calculated the CO make later that afternoon?-- I believe that's correct, yes.

Why didn't you want to reveal that you had calculated the CO make later that afternoon?-- It would have been embarrassing for me.

Why embarrassing?-- (1) that I had forgotten about it; (2) that I did something - I carried out a calculation and didn't know what to do with the information that I received - that it gave me, you know?

So, in effect, you were trying to avoid having to reveal that when you were answering my questions on Monday?-- No, I was answering your questions as you put them to me.

Yes, but listen to my question: you were trying to avoid having to reveal that. You didn't want to reveal it, and you were being careful to give answers that didn't necessarily involve you revealing it?-- I do not select the questions you put to me, sir.

I'm talking about your answers, Mr Mason?-- I know that.

Have a look at the transcript there, line 54, question: "Well, then, I've already suggested to you that one way to get more information was to have the CO make calculated; isn't that right?" Answer: "You did suggest that to me." Question: "And you agreed with that suggestion?" Answer: "Yes." Question: "And you knew that the information was already available to calculate that CO make." Answer: "Subconsciously I would have known it, but it was not conscious in my mind at that time." Question: "So it certainly wouldn't have been a factor that would have held up any actions to seal the panel, to simply have CO make calculated, would it?" Answer: "I've said yes to that before - or no in the right context." And you went on to say: "I agreed with that position." At this point I said to you, "Have a look at Exhibit 152, the third page, and you will see that on the fourth entry from the bottom there is a reference to Cole Klease's readings during his day shift on 6 August; do you see that?" You said, "Page 3?" I said, "Sorry, fourth page, the table there." Answer: "Yes." I then said this to you: "Fourth entry from the bottom and you will see that using the readings that he recorded on that shift and as are recorded in the deputy's report 3776 that there was a CO make calculated of 21.04-----" Now, Mr Morrison took an interpretation of what I said, which was that I was somehow suggesting that that had been calculated on that day, and you will see there in the transcript that he leapt to his feet at that point and said that it was an "incorrect suggestion". You will remember that exchange. You were there in the witness-box; isn't that right?-- Yes.

And you heard Mr Morrison pointing out that, "As we well know in fact it wasn't calculated." The transcript reads, "It must have been done for this schedule..."; I don't know whether he said that or, "It may have been done for this schedule...", and he goes on, "...but they keep on saying we can see from this entry that there was a CO make calculated for this figure and of course we know it wasn't. It's creating a false impression that shouldn't be persisted with." There was a whole argument about it, whether the CO make was calculated on that day or not from Mr Klease's figures as shown on his deputy's report, or at least whether I put my question in such a way as to suggest that, perhaps I should say, and I in fact apologised because I didn't intend to be suggesting that there was a CO make calculated in that way and agreed to put the question to you in the plainest terms, that I wasn't suggesting that. Do you see that? You sat through all of that?-- I did.

And then over the page, line 1, I said, "Now, Mr Mason, what I am putting to you, so that you understand clearly what I'm saying, is that there were figures that had been taken which, when calculated through to a CO make, indicate the CO make of 21.04; do you understand - you understand what I'm saying?" Answer, "Yes." Question, "You see, I am not suggesting to you that there was in fact a CO make calculated on that Saturday morning. I take it you understand that?" Answer, "Yes, I understand what you are saying." Question, "And in fact that's the very thing that I am wanting to question you about, is why wasn't there a CO make calculated on that Saturday morning? Do you understand what I am interested in? Why wasn't there a CO make calculated on that Saturday morning, do you know?" Answer, "No, I don't know." Now, Mr Mason, in that context it didn't occur to you that you should advance the information that you had in fact calculated a CO make later that afternoon; is that the case?-- Mr Clair, I believe I gave you an honest response to that question.

But certainly not a full and honest response, Mr Mason, I suggest -----

MR MORRISON: I object to that. I object to that. With respect, it's quite improper to suggest so. Mr Clair asked a question in certain words and got an answer. Now he wants to suggest that someone should understand it a different way. It's quite improper.

MR CLAIR: Your Worship, the witness is quite entitled to make comment on whether it was a full response to my question.

MR MORRISON: "Full and honest" was what Mr Clair just put to the witness, "full and honest".

MR CLAIR: Okay. I'll change it to this effect, Your Worship. I'll say, "But not a full response", if Mr Morrison is concerned about the niceties of the question.

WARDEN: Thank you. It might be a matter for other people to draw the inferences from.

MR CLAIR: Should I, Your Worship, put it in those terms?

WARDEN: Yes, the way you phrase it will be acceptable.

MR CLAIR: But not a full response; is that so?-- I believe my answer to your question was a full response.

You see, this must have been screaming in your brain when I was asking you these questions that you had calculated the CO make, you had calculated it later that day, and here was a whole series of questions to you about why wasn't the CO make calculated on that Saturday morning?-- On that Saturday morning.

Did you take any steps to have somebody calculate the CO make? This whole gambit of questions designed around this burning ultimate question, was there a CO make calculated that day really, and you didn't at any point think it was appropriate to say, "Look, I calculated a CO make." Was that the case?-- No, it is not. I answered - I responded to the question when it was put to me that I did make the CO make calculation.

You were being - really, Mr Mason, you were being what I would suggest to you as a bit cute. Do you know what I mean by that? A bit cute. That is you were being very, very careful so that you could skirt around giving an answer to the question but not reveal that you had calculated the CO make. What do you say -----?-- No, sir, I listened carefully to your questions and I answered them honestly.

Have a look at line 46 there. "What I am saying is that against all of that background, when you got that CO reading, which was 8 to 9 ppm, why didn't you ask somebody to calculate the CO make?" Answer, "I don't know." Question, "You see, if in fact the CO make had been calculated, and if we take it on the basis of the calculation that we already have done here, which is taken from the figures in Klease's report, we find that there is a CO make of 21.04, isn't that right, if you have a look at that entry there?" Answer, "That's what it calculates to." Question, "And isn't it the case that if there was a CO make -----", and you interrupted and said, "That's what it calculates to, I believe, as indicated here, if you use 10 ppm as the CO concentration." Question, "Okay." Answer, "So, obviously if it was calculated on the basis of 8 to 9 it would be less than that." Well, you had already calculated it on the basis of 8 to 9, hadn't you? Isn't that right?-- On the basis of 9.

Okay, but again you didn't think fit to reveal that at that point in your answer?-- I did not.

Question, "It would be less than that, but it wouldn't be any - well, it would be less than that, okay, but let me ask you this: what would have been your response, because, you see, these figures were available to calculate a CO make. They are the ones that Klease took, the ones reported in his report, 3776. What would have been your response to a CO make of 21.04?" Answer, "I don't know what my response would have been. I didn't ask for the calculation to be made."

Question, "What I would suggest is if it was known that there was a CO make running at 21.04 that morning, then people may have been far more concerned than they appear to have been. What do you say about that?" Answer, "I don't know."

Question, "You simply don't know?" You made the answer, "I don't know." Now, Mr Mason, I've taken you through that series of questions, you've made it plain that you were really seeking quite specifically to answer each question, and what I suggest to you is that you did answer each of those questions in such a way as to avoid revealing that you had made this CO make calculation later on the Saturday. I think you've already agreed that that was the case; is that right?-- ----

MR MORRISON: No, I object to that also. The witness did not agree that that was the case. This is another blend that comes from Mr Clair of what has been truly said as against what he thinks. It really has to be accurate, and he hasn't also indicated in the run-through of those questions - though really one thinks he should - that that list of questions was all predicated on his response to getting the report, the oral report in the morning, what did he do then. Did he then ask. It's all in the morning. So, you know, he hasn't made it clear at all.

MR CLAIR: Your Worship, I think I put the transcript as fully as was decent in the circumstances, quite frankly. I've given the witness the whole context of the questioning. If in fact I was in some way misquoting the witness in the last question, I'm quite happy to revise the last part of it and simply let him answer it. I was trying to avoid having the witness answer a question which I thought he already had answered earlier. Was it the case then - look, Mr Mason, you told us a little while ago that you were embarrassed about this fact that you calculated the CO make and I think the way you put it is you didn't know the significance of it; is that right?-- I was embarrassed on two counts.

Yes?-- (1) that I had forgotten that I had made such a calculation; (2) that I didn't understand the significance of it.

I understood you to say that a little earlier in response to a question from me as to why it was that you didn't want to reveal these things in your evidence. Was that so or was it not? Am I wrong?-- I can't recall. I'm becoming very confused, sir.

Was it the case that you didn't want to reveal these things in your evidence on Monday morning?-- I don't believe the question that required that answer was asked of me on Monday morning, Mr Clair.

Okay. You, in fact, claim that you had forgotten about even the fact that you had calculated the CO make and, as I understood your evidence, about the fact that this piece of paper was in existence from the time you handed it over to Ms Gibney last year right through until this weekend. That's what you said a little earlier in your evidence; is that so?-- That's correct.

Now, let me suggest to you that really you couldn't - well, I'll ask you this first of all: you've been present throughout most of the hearing here; isn't that right?-- Major proportion of it I have.

And you've heard most of the questioning?-- I have.

In fact you were here last year when there was a request made by Mr Martin for the production of some graphs plotted on a daily axis; were you here in Court at that time?-- I believe I was.

You made some passing reference in your evidence yesterday to the fact that there was a - I'm sorry, Your Worship, I didn't see a note here about taking the break a bit earlier today. It might be an appropriate point to break at this stage.

WARDEN: I was trying to pick an appropriate stage in there without interrupting a particular line of questioning. So if it's suitable to you to break -----

MR CLAIR: This is a suitable time.

WARDEN: Yes, I think the witness needs a break too, thank you. Resume at 2.15, please.

THE COURT ADJOURNED AT 12.52 P.M. UNTIL 2.15 P.M.

THE COURT RESUMED AT 2.16 P.M.

GEORGE ARTHUR MASON, CONTINUING:

MR CLAIR: Thank you, Your Worship. Mr Mason, just before we adjourned for lunch I was asking you about the event when Mr Martin requested the production of certain documents, and I think you said that you were in Court at that time?-- I believe I was, yes.

I just want to draw your attention to that because it forms a background to your activities which you have mentioned in your evidence when this document was located. Now - and I am referring to the transcript, page 1238, line 30, Your Worship - Mr Martin said this - he referred to something else and then he said, "Secondly, I ask Your Worship to order the immediate production of all graphs plotted on a daily axis in relation to carbon monoxide make from the commencement of extraction of Panel 512 to the time of the explosion, including that daily graph handed by Abrahamse" - and it's got "by Atkinson", I think it should be "to Atkinson" - "on 22 July 1994 and plotted by Atkinson over the three consecutive days and then handed back to Abrahamse." Just pausing there. You might remember the context, that Mr Atkinson at that stage was in the course of re-examination and he had said something in the course of his evidence about that graph, and you have seen it subsequently and I will deal with its production in a moment. Now, Mr Morrison did respond when he had an opportunity, and that appears on the next page, 1239, and he said, "Now I may be able to respond. If that's the order that is identified, in the first place there are two curious aspects about it. Firstly, our learned friend does not identify any basis at all nor proffer any evidence at all in any form, whether it is by witness or affidavit or otherwise, to suggest that there is any daily graph beyond the one referred to by this witness. So, on the face of it, if one characterises this as an application for further discovery, which, of course, it is not, but if one has that characterisation, he proffers absolutely no basis for his application. So, that is merely a fishing expedition of the worst possible kind. Secondly, in so far as the graph referred to by this witness is concerned, on my instructions it no longer exists. Now, I will give an undertaking to the Inquiry now that we will make further investigations of that, but I know what my instructions are and I have already had them checked and I have got no doubt what they will be once we make the further investigation, but if there is any doubt about it, and our learned friend puts that hint in his mind, if there is any doubt about it, let me undertake here and now we will make that further investigation, but I will not put up with the sort of suggestion that is coming now that in some way BHP has held back documents. It is untrue to say, it is a headline grabbing sort of statement, it is baseless and I will not give it any further width than this: no basis is offered for it. The Inspectorate have had full access to our documents from

the day this Inquiry has first commenced and long before we arrived at this venue for this exercise. My instructions are as I have indicated to you. I give the undertaking that we will make further investigations about that document, but I put this caveat on it, and I don't do it in a defiant way, I know what the result of those investigations will be in my own confident way. So, I will do them, but I expect the answer to be as I have indicated. As to the first, there is no basis for the application." Now, you heard all those words. If you were here in Court you may not have immediately absorbed the meaning of them, but let me suggest to you that two things came through: one is that Mr Morrison was saying there is no basis for the suggestion that BHP has held any documents back. You agree with that?-- I agree that - well, I don't recall that specific time, but I agree that that's what you've read out.

Okay. Secondly, what comes through is that Mr Morrison was saying that really to suggest or to call for documents on any broad basis was just a fishing expedition of the worst possible kind. Then he went on to respond to the application in respect of a particular document, namely, the graph that had been referred to by Mr Atkinson. Do you agree that that's what comes out of that statement?-- Yes.

You see, I am just setting the background against which you carried out your search?-- Yes.

And then as a result of that, as Mr Morrison later explained, as a result of what he referred to as his own personal undertaking, there was a search carried out overnight that night; is that so?-- No, sir.

No?-- No, there was not.

Well, what happened?-- When it was brought to my attention specifically what was being talked about by way of Mr Abrahamse, I believe it was, he reminded me - well, made it clear to me that the documents in question were those that were contained in the blue folder. I immediately recognised them at that point in time.

Let's just take that bit by bit. You say that, first of all, somebody pointed out to you what was being asked for; is that right?-- Yes.

Was that something that happened after you left Court that day or is that something that you understood from what was said in Court that day?-- That was after I left Court that day.

Well, what were you told about what was being looked for?-- The documents that had been contained in a blue plastic folder.

Well, is that the way they were described to you, documents contained in a blue plastic folder, or was it described in some other way?-- No, it was - the mention of the blue folder is what made my memory associate - or what associated what was being requested with what I had in my possession.

Well, who described those documents to you?-- Mr Abrahamse.

What were the circumstances? Were there a number of you together looking through files at the time or was it over dinner? How did that arise?-- No, it was after Court.

After Court?-- Well, after the close of the Inquiry for that day.

Before dinner?-- That's correct.

And what happened after that?-- I said, "I believe I have those documents." Then I went through my stuff I had and located them.

When you say you went through the stuff you had, was that stuff you had here in Gladstone?-- That's correct.

Now, they were amongst material that you had brought here for the purposes of the Inquiry; is that right?-- And amongst other stuff.

Can I ask you, first of all, why you still had those documents that were in this blue folder? Well, let me ask you, first of all, were they still in the blue folder?-- No, they were not.

What were they in?-- A satchel similar to the one I bring to Court.

Where was the blue folder at that time?-- Be at Moura Mine, I would expect.

How did they get from the blue folder into your satchel?-- The contents of the blue folder, being the documents in question, sat on my desk in the - in my office throughout the time the investigation - the control team used my office and for some period of time afterwards. At some stage I wanted to use that blue folder for other purposes. I took those documents out of that and placed them in the drawer of my desk. I used - then used the folder for other purposes. When it came time to come across here, I brought stuff out of my desk, drawer desk - desk drawer across with me. It was contained in amongst those.

You knew what the documents were that were being asked for, you say; that is, a daily graph, is that right, of CO make?-- I didn't understand that at that time. I believe all the talk was about a log. What I understood was being in question was a log that the deputies were keeping, and I was led to believe that there was a log being maintained at the section crib table.

Yes?-- I had never seen that log. I believe that if it was being kept there, that it would have been destroyed or still be in the mine. I made mention of that fact, I believe, to Miss Gibney, that the information that would have been on it was still available.

When had you mentioned that to Miss Gibney?-- I can't -----

Before the Inquiry started or after it started?-- I think it was after the Inquiry had started.

Now, you say that was some sort of log that you thought was being kept at the crib table, but what I am asking you about is the set of documents that had come out of the blue folder, and in particular those that you say you mentioned when Jacques Abrahamse said something to you after Court -----?-- Yes.

----- on this day to which I've just referred. By the way, that date is 3 November '94 that I was referring to a moment ago. Now, you knew you had these documents and you knew that the documents were ones that involved some figures for the plotting of a daily graph of CO make; is that the case?-- I did not recall that I had the figures - had those documents.

Well, when Jacques Abrahamse spoke to you and you said, "Yes, I've got those documents.", what were you referring to? What did you understand the documents to be?-- Yes, I understood then.

Yes. What did you understand them to be?-- The documents that were in the blue folder, and they were - I know what they were. They were a tabulation - a tabulation sheet and a graph.

Tabulation sheet of what?-- Associated with CO make.

In 512 Panel?-- That's correct.

And a graph representing that; is that right?-- Yes.

Now, the documents you have seen here in the witness box, 93 and 94?-- That's correct.

Now, can I ask you this, first of all: why hadn't you given those documents to someone before that time, either to the Inspectorate or to your legal advisors?-- I did not recall that I had them.

But at the time Jacques Abrahamse spoke with you outside this hearing room here on 3 November you obviously did recall that you had them?-- That's correct.

So, you must have recalled it at least for some period of time prior to that?-- No, sir.

Well, how do you mean you didn't recall that you had them? You had brought them with you here to the hearing from Moura?-- I did not make a connection between what was being spoken about in here and what I had in my possession.

Forget about what was being spoken about in here, just listen to my question?-- I'm trying to.

Okay. Why hadn't you at some stage prior to 3 November given those documents to someone, be it members of the Inspectorate or to your legal advisors?-- I've told you, I did not recall that I had them.

But you must have recalled that you had them. You transferred them, first of all, from the blue folder into another folder and then you brought the whole bundle of them here to this Inquiry. There must have been points along the way when you knew that you had them. At any one of those points -----?-- I can only tell you what was in my mind, what - my state of being. If you wish to say that it was different, well that's all you can say.

I'm not saying that it's different, I'm trying to ascertain what it was, you see, because you mentioned that you took them out of the blue folder and put them in another folder. You must have at that stage known what they were, isn't that so?-- I believe I did, yes.

Why didn't you give them to a member of the Inspectorate at that stage or at least draw them to the attention of your legal advisors?-- I don't know.

Okay. Now, you've said that you spoke with Jacques Abrahamse after the Inquiry closed on 3 November; that you realised that documents that were being mentioned were documents that you had. Did you go straight away and get those?-- Shortly thereafter, yes.

Before dinner that evening, after dinner, when was it?-- It was - I believe it was before dinner.

Okay. And what did you do with them?-- I gave them to my legal representatives.

At that time?-- At that time.

Who was that? When you say your legal representatives, can you specify because it includes a fairly large group of people, you see?-- I think I gave them to Miss Gibney, and I'm not sure if Mr Morrison or Mr Roney were present, or both. I don't have a direct recollection of who I gave them to or who was present when I produced them documents.

Now, which documents did you give over to Miss Gibney, how many?-- I believe it was one document. There was two pieces of paper that were stapled together.

They're the ones that you have seen here?-- That's correct.

Now, was there any discussion about it when you produced those documents?-- I think there was discussion once I made it known that I believed I had them.

Was there any discussion about the importance of the documents, the significance of the documents?-- I believe the discussions centred around embarrassment, and I take this opportunity to apologise to all those people who might be

embarrassed because of my actions and to the company I work for.

And was there any discussion then about what would be done with those documents?-- That they would be tendered forthwith, or at the opening of the next day's proceedings, I believe. I don't know if that was a discussion or that was an impression that I formed.

Was there any question asked of you at that time about whether you had any other documents, significant documents, that you hadn't to that point produced?-- I believe that question was asked of me, yes.

And what did you say in answer to that?-- "Not that I'm aware of."

At that point did your recollection throw up an image of this document that we have seen produced just yesterday, Exhibit 193?-- No, it did not.

A document on which you calculated the CO make just the day before the explosion?-- No, it did not.

Are you saying that you really had no recollection of it at that time or was it a case that you didn't want to reveal the existence of it at that time?-- I had no recollection of it at that time.

Okay. Well now, the following day in Court those documents were produced, weren't they, the ones that you had handed to Miss Gibney?-- I believe so.

And at that time Mr Morrison - page 1276 of the record - this is on 4 November - Mr Morrison said, "Your Worship, yesterday you will recall that when the question arose of the hand-plotted graph for two or three days that Mr Atkinson had performed I gave an undertaking to the Inquiry that I would have investigations made in relation to that document. That undertaking was given by me personally rather than on behalf of my client, and after we adjourned last evening I involved myself personally in the investigations to be made in relation to that document. The result is that the document, that is to say the hand-plotted graph, was located. It was in a folder which was not in its usual folder and that's, I think, simply the reason why it was not located before, and so this morning as early as I could I provided Mr Clair with the original of that document and with some copies of that, and I have provided copies to all parties at the Inquiry. I should indicate also for the record that in addition and as a result of that search in which I was involved we also managed to locate the document which I suspect is probably called 'the log' which deputies kept in relation to their individual readings taken on a shift by shift basis from 23 July, and I think the document takes it through until 26 July. That document also was found in a folder which was not its usual folder and therefore that's probably the reason why it was missed before. That document also I provided in its original format with copies to Mr Clair first thing this morning when I

could and I have distributed copies to all parties at the Inquiry as well." Now, Mr Morrison went on at that point to produce some other documents which were computer print-outs, and I won't deal with those in detail, and then he went on to say at the next page, 1277, line 4: "Lastly may I place on record what I have conveyed to the parties also in further performance of the obligation I took on myself yesterday in front of the Inquiry: if any party considers there is any other document or category of document that they think is relevant in some way, we invite them to correspond with us directly and when they do we will institute immediate investigations in relation to that document." Now, again, you were in Court when those things were said; is that right?-- I believe I was.

And, no doubt, the effect of those statements by Mr Morrison, particularly given that there was the discussion of embarrassment the previous night, left you with the very clear impression that any relevant documents were to be produced; is that right? That is, that there was to be full cooperation and any relevant documents would be produced?-- Yes.

At that point did you have any memory at all - was your memory sparked about this document that contained the figures from which you had calculated the CO make on the Saturday night before the explosion?-- It was not.

From what you have said, pursuant to this undertaking to produce all relevant documents, you and Miss Gibney, and I think you mentioned your wife, went to Moura; is that right?-- That is correct.

That was during the following weekend; is that so, or are you not too sure about that?-- Yeah, I think it was a weekend.

Anyway, it was very soon after; is that right?-- That's correct.

And from what you have said, it was while you were at Moura that there were some documents found in your desk tray - did I understand you to say "paper tray" on your desk?-- Paper tray, yes.

What was the nature of this paper tray? Was this a tray in which you kept documents associated with the conduct of your job as Undermanager-in-Charge?-- Yes, quite a number of bits of paper, yes.

Did you ever offer the contents of that to any of the inspectorate when they were at the mine investigating the explosion?-- I don't believe so.

Well, did you go through it yourself to see whether there was anything relevant in there?-- I did not. I had a number of paper trays on my desk in my office. When my office was cleared for use by the incident control team, those paper trays were placed in a cupboard in my office. That's where they remained.

So, they didn't remain on your desk?-- They were not.

I understood you to say that the document was found in a paper tray on the desk in your office; is that understanding correct?-- I may have said that, but what I meant was the paper tray that had been on my desk, at least.

But it had then been put away in a cupboard?-- All the stuff that had been on my desk, I just grabbed it when the - in clearing the office for use by the control team, I just cleared my desk, took everything off the top of it and placed it in a cupboard.

You weren't attempting to hide this document away?-- I was not, sir.

Okay. Can you just describe the mechanics by which the document was actually located; who was there and what you did?-- If I was attempting to hide that document, sir, I could have destroyed it.

Yes, go on. Can you answer the question, please?-- Can you

repeat it for me, please?

Can you describe the mechanics by which the document was found; who was there and how it was actually located?-- Miss Gibney was the other person present. As part of the search, those paper trays were removed from the cabinet. In going through the various pieces of paper, I came across that particular piece of paper. I identified it as information that could be associated with the Inquiry.

How do you mean you "identified"? Can you just say what was said and done?-- It is difficult for me to recall.

Just do your best?-- I possibly said, "This could be of interest." I don't have a direct recollection, sir. There are any number of different pieces of paper that were looked at, discarded.

But obviously there were some - a few at least - that weren't discarded?-- That's correct.

That were selected as documents relevant to the Inquiry; is that right?-- Relevant or possibly relevant.

Now, you have already told us yesterday afternoon that at the time you handed that document over to your legal representatives that you realised the significance of it. Now, when was it handed over? You say you came across it. You identified it?-- On that day.

Sorry?-- On that day of the search.

Well, immediately that you found it?-- Yes.

What did you say when you handed it over?-- I think I just told you, I don't have any direct recollection. Possibly I said, "This could be of interest." That's possibly what I said.

Did you point out what was on it?-- I don't recall, sir.

Well, what response was there when you said, "This could possibly be of interest."? What did Miss Gibney say?-- I don't know. Probably, "Right. Well, that can go in that there."

She didn't say, "Well, what's on it? What is it?"?-- I don't believe she interviewed me about the document, no.

Well, did you volunteer anything as to what it was about?-- I think I did start to, but then stopped.

Well, what did you say if you started to volunteer something?-- I don't recall, sir.

Okay. Well, you have said that there were documents singled out as being relevant and were they all given to Miss Gibney at that stage?-- That's correct.

And did you subsequently come back to Gladstone?-- Yes.

Did Miss Gibney come with you and bring the documents, or did you bring the documents back? What happened?-- I did not bring the documents back. I believe my wife and I travelled back and Miss Gibney travelled back with somebody else.

Now, of the documents that were brought back, there were two bundles that were tendered in Court on 8 November, which I think was the following Tuesday - two bundles of documents. Those bundles of documents consisted of graphs and figures that had been used to calculate graphs, and Mr Morrison dealt with those in evidence. They became Exhibits 109 and 110. Now, did you take part in any discussions after you arrived back in Gladstone - in any discussions whereby it was determined which of those documents would be tendered, or would be produced to me or my instructing solicitor, first of all, as the bundles of documents were, and which would not be produced to me or my instructing solicitor?-- I don't believe I did.

Was there any further discussion about the documents that had been retrieved from Moura after you arrived back in Gladstone and before these bundles were produced on the Tuesday?-- Not that I'm aware of. I went to my place of residence at the moment.

Now, you told the Inquiry this morning that the reason that a decision was taken - I think you put it this way: a decision was not taken to produce the document at the time. You said the reason for that was because it wasn't called for. It was in answer to Mr Martin, in fact. Do you remember that?-- Not precisely.

Mr Martin asked you about this and was - you said the diary was given to the inspector but the notes weren't, and you were asked why not, and you said it wasn't asked for - this document containing your notes wasn't asked for. Do you remember saying that this morning?-- Yes.

Well, was that the approach that you had at that time - that you weren't going to produce any document that wasn't asked for?-- I had no more documents to bring forth.

But you did. You had this document on which you had the figures with which you calculated the CO make?-----

MR MORRISON: That's not right.

WITNESS: That's not right.

MR CLAIR: You gave-----

MR MORRISON: Excuse me, that's not right. It is not right to say that he gave all the documents to Miss Gibney. He has not suggested that that's false, though he knows what will happen next. It may be I will have to relinquish my brief in order to give evidence at this long-winded Inquiry or maybe Miss Gibney will have to relinquish her retainer. We haven't

got to that stage yet, but we are getting close. Mr Clair stood there and listened to that evidence and yet put something that's not reflected in the evidence.

MR CLAIR: Mr Mason, you had given the document to Miss Gibney, is that right, together with other documents retrieved from the mine?-- That's correct.

To that extent, they were with your legal representatives; is that right?-- Yes.

So, they were still, in a sense, under your control. It was a matter whereby you could say, "That document needs to go forward." - as a document that has got relevant matters on it. You could have said that, couldn't you?-- I believe I carried out my obligations in conductance of a search.

You didn't answer my question though, did you?-- I thought I did answer your question, sir.

Sorry?-- I thought I did answer your question.

Listen to my question, if you would. You could have said at that time the document had been produced by you, given to your legal representative, it appears from what you have told us, without any explanation - or any full explanation as to what the significance of the document was, although you realise the significance yourself. You had given it to your legal representative, it was open to you to say, "That document should be passed over. It is a relevant document.", and you didn't do it. Now, can I ask you why you didn't?-- I believe that I have said that before. I believe it was an embarrassment to me.

Okay. Things proceeded, and it seems from what you have told us that the-----?-- Could you start again, please. I was distracted. Could you start again?

It seems that things proceeded from that point where the document was still with Miss Gibney, or whoever else might have been holding those documents that had been retrieved from the mine, and you knew that it hadn't been handed over, either to me or my instructing solicitor, or tendered to the Inquiry; isn't that so?-- I don't know that I was 100 per cent certain of that, but I'm probably out - had an idea that it hadn't.

You think it might have been handed over and I wouldn't have asked any questions about it?-- I would have been relieved if you hadn't.

Well, Mr Mason, you sat there then throughout a great deal of the evidence during which I asked questions of witnesses about whether or not - or about - I should say why the CO make hadn't been calculated on the Saturday. You heard all of those questions; is that right?-- I'm sorry, Mr Clair, I really don't mean to do this, but could you repeat that question for me, please?

I will. I say you sat in this Inquiry during a great deal of

the evidence, during which, in my own peculiar, sometimes boring, but nevertheless thorough fashion, I questioned witness after witness about whether there had been a CO make calculated on the Saturday and then questions as to why there hadn't been a CO make calculated on the Saturday?-----

MR MORRISON: I'm not sure that that's actually correct. I would like Mr Clair to identify of which witnesses he did ask that. Now, my memory, off the top of my head, is that Squires was the only one, and Mr Mason said he wasn't here when Squires was giving his evidence, or at least a lot of it. There may have been others, but my memory is that it is only Squires.

MR CLAIR: Your Worship, I think I have spent enough time on this point. I don't propose to go back and quote more of the transcript. I'll withdraw that question and move in a different direction.

WARDEN: Thank you.

MR CLAIR: Mr Mason, were you, during the time that you were present at this Inquiry, conscious of the fact that one of the issues was whether there had been a CO make calculated on the Saturday?-- No, I was not.

You weren't conscious of that?-- My consciousness of CO make calculations was to do with the period leading up to that.

Did you think there was no interest in what the CO make was on the Saturday or whether it had been calculated on the Saturday, Mr Mason; is that what you are saying?-- I'm getting very confused. I don't know what I'm saying at the moment.

Just listen to my question?-- I can say this, Mr Clair: that I have produced to this Inquiry the relevant information.

I will come to that in a moment?-- And when I was asked the required questions, I did so.

I will come to that in a moment?-- If I had wanted to be deceitful, sir, I could have destroyed those documents.

Okay. Now, just listen to my question if you would. While you were sitting here throughout the Inquiry and up to the time - that is for the time that you were here - I appreciate you weren't here all the time - but up to the time that you took the stand, were you conscious of the fact that one of the issues that was the subject of questions - or at least one of the issues that had been floated in the Inquiry was whether there had been a CO make calculated on the Saturday?-- I don't believe I was. I say that because my consciousness of CO make calculation on the Saturday came on Sunday evening prior to this.

Okay?-- Or the Sunday, the start of this week.

In any event, what you are saying is that-----?-- Excuse me,

I will add to that. That was in response to a direct question from Mr Morrison.

Okay. Now, are you saying that at no time until Mr Morrison asked you that question was your memory prompted about the existence of this document - at no time?-- That's correct.

No time after you had handed it to Miss Gibney out at Moura back in November last year?-- That's correct, sir.

In any event, then, after Mr Morrison asked you about it, you remembered the document, and it was then produced, you have told us?-- Yes.

By Miss Gibney, I think you said, or at least-----?-- That's correct.

Now, when it was produced, of course, it was produced against the background that there had been statements made from time to time, both in this Inquiry and out, about this being a full and open Inquiry, and all relevant evidence being brought out. You were conscious of those kinds of statements; is that right?-- Yes, and again I take this opportunity to apologise to the Inquiry, the panel, the gallery, to my company I work for, to all the legal people here, especially to my legal team, for suppressing that information until this point - until the time that I was asked that direct question.

Well, you see, I'm really interested then in your attitude-----?-- I don't think I suppressed it, but I was not sufficiently alert.

I'm really interested in your attitude, then, after the document was produced to you on the weekend, you see? Can you direct your thinking towards that time? Are you with me?-- Yes.

Do you understand what I'm talking about?-- I believe I do.

Now, as late as last week, in fact, there was a news release by BHP through your legal representatives, or through BHP representatives, I should say, saying, and I quote, "Any moves to expedite proceedings and avoid duplication are welcome as long as all evidence is thoroughly examined. A full and open Inquiry is the only way to ensure that such tragic circumstances can never reoccur." Now, against the background of that sort of statement, against the background of similar statements that have been made, and things that have been said in Court, did you think yourself immediately when the document was produced to you on Sunday, or on the weekend, at least, that it ought immediately be made available to myself, as counsel assisting, or my instructing solicitor, or at least proffered to the Inquiry at the first opportunity?-- I was unaware of such statement being made.

Well, is it a statement that you disagree with?-----

MR MORRISON: Your Worship, this has really gone on long enough. We have been over this ground several times. In

fact, Mr Clair has been over this ground twice now, Mr MacSporran has been over it, Mr Martin has been over on it, we have spent hours on it. We are now getting to the stage of badgering witnesses; hectoring, if I can use that out-of-date term. It has gone beyond testing evidence against evidence, and may I respectfully remind you of the ruling that was made and clarified that there is a line to be drawn. There really is a line to be drawn. However indulgent counsel wish to be, there is a line beyond which one shouldn't go, and this Inquiry shouldn't go, and I think we have really reached this now. We have been over this ground again and again. We now have cross-examination on whether this witness agrees either in principle or in terms with some statement put out by BHP, which he said he wasn't even aware of. Now, there really has to be a limit to what we are doing here.

MR HARRISON: Your Worship, I join in this objection, and in my submission this whole line of questioning has gone way too far - to put it in the colloquial, "way beyond a joke". These proceedings have degenerated into personal attacks upon individuals, which is not the purpose of section 74 of the Coal Mining Act, and, in my submission, Mr Clair has drained every ounce he can out of this line of questioning, and it is totally unfair to subject this man to any more of what he has been subjected to this afternoon, and I would ask Your Worship to stop this; to indicate to Mr Clair that he has gone far enough with this line of questioning and leave it at that.

MR CLAIR: Your Worship, with respect, there is no badgering or hectoring. I have been most moderate in the way in which I have questioned this witness. I have been most moderate. I have certainly given him every opportunity to advance the explanations, and he has taken that opportunity on a number of occasions to advance the explanations, and it is proper that I be allowed to continue with the line of questioning so that relevant areas can be covered. I might mention I have not very far to go with it, but the fact is that this area that I'm questioning him about now is not one that's been covered before by any means, and it is necessary for the sake of completeness that I be permitted to ask the questions.

WARDEN: Thank you. Could I rule on it in a minute? We will take a 10 minute break, thanks. The witness has been here nearly four days. It is not a test of endurance and I desire to give him a rest.

THE COURT ADJOURNED AT 3.05 P.M.

THE COURT RESUMED AT 3.45 P.M.

WARDEN: Thank you, gentlemen. On the matter raised before the adjournment, I will permit the line of questioning to continue as long as it is relevant and necessary for completeness and we are moving forward. However, I will uphold the objection of Mr Morrison on the point of making any comment about a news release put out by BHP if the witness has not seen it, as he says he hasn't. Indeed, I haven't seen it myself. Perhaps now I should never see it. I understand Mr Clair's point that he is putting the background to the witness for the purpose of making the question clear and for the purpose of getting an answer. In my opinion, the question can be re-put, if he so elects to do so, but delete any reference to this witness's knowledge or appreciation of the press release put out by his employer. Thank you, gentlemen.

MR CLAIR: Mr Mason, to deal with it briefly then, was it your approach - that is, you personally - was it your approach that there should be a thorough examination of the evidence in relation to this matter?-- Yes, sir.

And was it your approach that there should be a full and open inquiry in respect of all aspects of the matter?-- Yes, sir.

Okay. Now, after you had produced this, or at least seen this document again on the weekend and you came here to give evidence on the Monday, it seems that you had made a decision that you weren't going to pass the document over or make reference in evidence either to having calculated the CO make on the Saturday or to the existence of the document unless you were asked a question which made it unavoidable for you to give that answer - in keeping with your oath, that is - am I right in saying that?-- Yes.

And I have already taken you through the questions that I asked you - I don't intend to re-visit those - but you were, as you said, careful in giving answers to questions?-- That is a practice of mine, sir.

I'm sorry?-- That is a practice of mine.

Can I ask you this: were you yourself comfortable with the notion that you wouldn't make this document available or mention the CO make calculation?-----

MR MORRISON: I object to this. I really do object to this. We are here embarking upon another step in this extraordinary process given under the guise of testing nature and cause of this incident.

Now, let me make a few points about this. It's okay for Mr Clair, as Your Worship has ruled before, to test veracity. That was the clarification Your Worship gave of the previous ruling some time ago, and you will recall that submissions I made at the time and subsequent acknowledged that that was, of course, a legitimate exercise, witnesses were to be confronted

with evidence. Now, it's one thing to do that for a variety of reasons. Two of those might be you wish to actually test whether an event happened a particular way or whether a sequence was a certain sequence or someone did or didn't do something. That's to test the facts. It's also permissible to test credit that way, of course, and that's what Mr Clair said that he felt he couldn't - he had to be able to do, otherwise he couldn't discharge his functions.

Now, you test that credit in an acceptable way by confronting witnesses with evidence, and we have had quite a measure of that. The proper limits here would have been at the end of showing the section of the transcript, confronting the witness with the opportunities and the point is then made. What we are now going on with seems to, with respect, infringe some very important principles, and let me just make the point in this way: there really isn't any doubt, I think, in anyone's mind that there has been a change in emphasis at this Inquiry over the last week or so away from an investigation into the factual sense of nature and cause, and I don't suggest any narrow definition of that, I re-emphasise that, but more towards the identification and allocation of blame and fault. We all know that those matters have been raised before, and I don't intend to go over them again and again. There are examples of that that are readily brought to mind, and I might just enumerate perhaps only a couple of them.

Mr Clair attacked Mr Abrahamse over suggestions that he was involved in the concealment of the document when in fact there was no evidence that Mr Abrahamse had any involvement with the document after 25 July. We are talking about Exhibit 94. There was no evidence which suggested he had any involvement after that date, and yet he was attacked on the basis that he was somehow involved in the concealment of them. That is an extraordinary thing to put to him. No evidence has been led to justify that accusation. Then, of course, we had the accusations against Mr Squires by Mr Clair effectively of perjury, and that brought about the objection that I made and the ruling that Your Worship made and then clarified.

The other examples are Mr MacSporran's cross-examination of Mr Mason yesterday which went for something like four hours, which, on any assessment, was not genuinely designed to elicit any new facts but, rather, to publicly ridicule the witness; certainly to demonstrate Mr MacSporran's own person opinion, which he amply demonstrated, but which is not the function of counsel. There are other examples, and I won't enumerate them.

Now, the difficulty that one faces then when that sort of emphasis in the Inquiry has changed, as indeed it has, is that we now have the suggestion implicit in this line of questioning that an individual's legal rights are not to be acted upon; in other words, individuals are being attacked because they are relying upon legal rights and legal advice. Now, the questions suggest that there is some sort of wrongdoing or it's improper to rely upon your legal rights and your legal advice.

Now, on any examination that can't be sustained. Were this an inquiry into morals, then maybe it would be a different question, but I don't think I need to examine at length the fact that this Inquiry is not a crusade into morals, and the questions are also predicated on the basis that not only is it some wrongdoing or is it improper to rely upon your legal rights and your legal advice, but somehow your credibility suffers if you do that, and that's the underlying substratum to this line of questioning, and any examination could suggest that that is not a sustainable proposition either.

Now, it really should not be permitted by this Inquiry that individuals are attacked because they rely upon their legal rights or their legal advice, and in that respect can I just make this point: Mr Mason was given in his personal capacity - and let me emphasise that, not BHP but Mr Mason personally - advice as to how he should respond to questions and how he should deal with Exhibit 193, and he has followed that advice, and yet this attack seems to be mounted on him now in order to suggest that because he has done so - this is what's implicit - someone who relies upon legal advice and legal rights, the rights that are inalienable to them, that their credit suffers or that they are guilty of wrongdoing and they should be made to sit here and be subjected to an unnecessary humiliation.

Now, the proper function of counsel assisting determined, as we have been told on any number of occasions, to find out the truth, is to do that - find out factually the truth. Now, it is not the function of counsel assisting to go further than that and embark upon a crusade akin to chasing corrupt police, or whatever else - into morals. That is not the function. Now, if one looks at the conduct so far in relation to this witness, Mr Mason was given advice to the extent of his responsibilities in terms of answering questions and dealing with the document. Despite protestations to the contrary, neither Mr Clair or Mr MacSporran asked a question about that fact and none have been pointed to, and so, in light of that, we now have this persistent line which can only be - which can only be - to suggest to the witness that because he is adhering to his legal rights and his legal advice that he should suffer in terms of credit, suffer public attack, or be suggested to have engaged in wrong-doing.

Now, may I respectfully remind Your Worship of the ruling that was made, and even as clarified, which recognised the protection of individuals' rights and their right to be treated fairly, and may I also remind persons about the different position between an individual and BHP, and this witness continues to be attacked on the basis of deceptions or his view - whether he is comfortable with the production or non-production of documents. It is a fact, and I have said it before, both privately to all parties, privately to the panel and publicly as well, that BHP undertook a commitment at the outset to allow full investigation of the documents.

Mr MacSporran, for his part, was candid enough to agree at page 1239 to 1240 that the inspectorate had had full access to the documents. It is not a surprising thing to say, considering the documents we are considering now. Exhibit 193, for instance, sat on the desk; likewise the log sat on the desk while the inspectorate were climbing all over the mine as part of the incident team, and thereafter. Mr MacSporran agreed that full access had been given and that position has not changed, but that's a perfectly different matter from an individual and the advice he receives and the legal rights he intends to adopt. Nothing in this Inquiry and nothing Mr Clair says should be seen to erode an individual's rights. That is not the function of this Inquiry, and that is, with respect, and with the greatest respect to Mr Clair, the underlying substratum of this line of questioning. It has gone beyond the test of credit. It has gone beyond a test of the facts, and so I object to the further line of questioning.

MR CLAIR: Your Worship, can I go to the core of what Mr Morrison said, so that we can get on with this matter? First of all, the witness has not at any stage said that he was given legal advice or that he was relying on his legal rights in what he did yesterday. He had the opportunity to do so, and possibly would have even had the opportunity to say that if Mr Morrison hadn't taken the objection when he did. That assertion by Mr Morrison from the Bar table perhaps should be added to the sum of our knowledge at this stage as to the position that the witness was in. Certainly from my point of view, in light of what Mr Morrison has said, then,

perhaps it's not necessary for me to pursue the very question to which Mr Morrison has objected; that is, in relation to whether this witness felt comfortable with it, and I'll say now that I don't intend to press that question. That's the core of what Mr Morrison said.

The bits and pieces around the edges, which may or may not have any relevance to the core of his objection, seemed to deal again with some assertion that there has been a change in emphasis in this Inquiry lately, and can I simply say, Your Worship, that from my point of view, in terms of my own behaviour, I reject that assertion. My approach to the Inquiry has been consistent throughout. In fact, any difficulties that arose last week arose because of a concern on my part that there may be some change in the direction and scope of the Inquiry. So, I simply say and place on the record that I reject that. As far as the question is concerned, I withdraw it, and with Your Worship's permission, I would like to proceed.

WARDEN: The question has been withdrawn. Are you satisfied with that?

MR MORRISON: Your Worship, obviously I don't need a ruling if Mr Clair withdraws the question. I don't accept his rejection of the proposition that, in fact, he has changed tack in this Inquiry, at all.

WARDEN: Well, at the risk of being here the whole week debating that, I think we should proceed. Thank you.

MR CLAIR: Thank you, Your Worship.

Mr Mason, I want to come actually to that point in your evidence where you did reveal this, because, you see, you have been saying that the reason that you didn't make any answer to me, which included volunteering that you calculated the CO make or included reference to the document, is that, in fact, I never actually asked you a question that put you in the position where you felt the need to reveal it. I just want you to have a look at this page of the transcript, 3675, and I will take you straight to the relevant part. Mr MacSporran was questioning you, at line 25, and he said, "...that's what gave you comfort, wasn't it? You couldn't repeat the signs from the Friday and the Saturday - couldn't confirm them - that's what made you comfortable." And your answer was: "I didn't observe any evidence of any heating when I was in the mine. Other people did not observe any evidence of a heating." Then Mr MacSporran said to you: "Of course at no stage, to state the obvious, did you check yourself or inquire of anyone else what the CO make was doing about this time?" Do you see that question?-- I do.

And your answer is, "That's correct."?-- It is.

Now, what do you say about that - that answer there? Was that a truthful answer?-- Obviously my concentration was not adequate at that point in time.

MR MORRISON: I object to the question.

WARDEN: Carry on.

MR MORRISON: If one looks at the transcript at page 3675, perhaps to state the obvious, one will see that the time Mr MacSporrán was inquiring about was after the end of the investigation - after the end of the investigation. That's the point that Mr Mason made - "...about this time?" "That's correct." And then when he was asked, "...just never looked at it at all at that stage...", "At that stage, no. Before I went down the mine...I did make" it. So, it was, in fact, volunteered. The answer is correct in its form, and then to the next question that was volunteered.

MR CLAIR: Your Worship, it is because of the fact that it is uncertain as to what time the witness took the question to be referring to that I've asked him whether or not that answer was, in fact, a truthful answer. I mean, I'm quite happy for the witness to read further back and forward in the transcript, if he would like to do that. I'm not in any way attempting to be unfair with him. I'm simply asking him whether-----

MR MORRISON: I'm sorry, I object to this sort of editorial statement. The question was not, "What did you understand the question to mean? What time did you accept it to be when you answered?" The question simply from Mr Clair, and in his usual fashion, was: "Was that a truthful answer?" He has pretended the question was one thing when what he asked was another.

MR CLAIR: Your Worship, I'm not pretending that the question is anything other than what the black and white reads on the page. I'm not attempting in any way to mislead this witness. He has had every opportunity to say why it was that he answered the question in that way, and I asked him, and he had the opportunity to say whatever he wanted by way of reply. I asked him, "Was that a truthful answer?" Now, the witness can give an answer to that question. The question is not objectionable. He can give whatever explanation he likes, and then I can move on.

WARDEN: Thank you, I would rather inquire of the witness: Mr Mason, do you feel up to it? Do you understand the question?-- No, sir.

WARDEN: All right. After four days, I can probably understand that, too.

MR CLAIR: Mr Mason, do you want to just read a little of the transcript there to see whether you're conscious of what the import of the question was at the time?-- Yes, I need to do that.

Okay. Well, would you like some more of it, or is that page sufficient?-- No, it is not.

Okay, have a look at this-----

RXN: MR CLAIR

WIT: MASON G A

WARDEN: Witness, if you feel you can't continue, please say so. Would you like a break? Would you like to resume tomorrow morning? I'm mindful of that?-- I would like to finish this afternoon.

Thank you. I appreciate your efforts?-- I need some time to digest this. I'm very confused at the moment. I don't know all the legal terms - legal argument - and I think I need some advice from my counsel.

WARDEN: Thank you. I will adjourn for that purpose, thank you. 10 minutes.

MR CLAIR: Your Worship, the witness is in a position where, in effect, he is being cross-examined. I don't shrink from that, and ordinarily the position is that a witness ought not to speak to his legal representatives whilst he is under cross-examination. I think it is appropriate in that case that that rule be enforced. I know we have had plenty of latitude in the way that matters have proceeded here, but it is my submission that it is inappropriate - inappropriate for there to be any communication between the witness and his legal advisors at this point in his evidence.

WARDEN: That can be arranged - that he not have any contact - but I prefer he have some time to read the transcript that you referred him to. Thank you.

MR CLAIR: Does Your Worship propose to give him that time now?

WARDEN: Now, yes.

MR CLAIR: And then resume?

WARDEN: Resume if he is up to it. We will take a 10 minute adjournment to do that.

THE COURT ADJOURNED AT 4.08 P.M.

THE COURT RESUMED AT 4.27 P.M.

GEORGE ARTHUR MASON, CONTINUING:

MR CLAIR: Mr Mason, did you have an opportunity to have a look at the transcript and the context in which that question was asked?-- I have.

I'll ask you again and you can make whatever answer you like and expand on it. Was the answer to that question, that's the answer you gave, "That's correct.", was that a truthful answer?-- It's obvious to me on a reading of the transcript that I had not listened to the question with sufficient intensity to discern the correct words that were used. I believed at the time that I was answering the question honestly. It would be more appropriate for the answer to the second question to have been the answer to the first.

I'm sorry, it was only the one question that I asked you about?-- The following question.

That's the one at line 30?-- Yeah, I'm talking about the following question.

Well, I want to come on to that, but just so I can be clear on this, in what way was your answer to that question at line 30 incorrect or inaccurate, however you want to put it?-- The words "at no stage", I believe I must have interpreted as that stage being - believing it was in reference to the time after the inspection was carried out.

Okay. Now, the next question that was asked of you was, "It" - that's the CO make - "It was just never looked at at all at that stage, was it, to your knowledge?", and at that point those words - in that question at least those words "at that stage" are used. Now, what did you take Mr MacSporran to be referring to when he said "at that stage"?-- I don't believe I heard those words at all. I believe the words, "It was just never looked at at all" was the ones to which I responded.

And then you went on to give the answer initially, "At that stage, no." Do you see that?-- I see that.

"It was just never looked at at all at that stage, was it, to your knowledge?" "At that stage, no.", you said, and then you went on and it was really by way of addition that you said, "Before I went down the mine on Saturday afternoon I did make a CO make calculation myself. I made that from Deputy Newton's report, I believe." Do you see that?-- I do.

That was the first point in time at which you actually mention making this CO make calculation?-- That's correct.

Given that sequence of questions it was really something that you did volunteer by way of additional information; isn't that

so?-- I don't believe so.

You don't believe so. Well, you will see the first part of your answer to the question was "At that stage, no."?-- It is.

So to that point you were saying at that stage, that is whatever stage you took Mr MacSporrán to be referring to, CO make wasn't looked at?-- I believed I answered - I believed at that time that I was answering that question honestly.

My only point about it is that really the way the answer comes out at that point, you could well - given what you've told us, you could well have made the reply, "At that stage, no.", and left it consistent with the approach that you had taken earlier in the day and the day before; is that right?-- I don't know. I believe what I said to you earlier was the point. I think the answer to those two questions could have been reversed. Obviously my concentration was insufficient.

Anyway, at that point you gave that information and then in answer to further questions you did reveal that you had also made a calculation based on Klease's report, and later you revealed that it was written down on that piece of paper?-- That's correct.

Exhibit 193. When you revealed all that, was there some change of attitude on your part at that point?-- Change of attitude?

Yes, that is that you had decided then that you would reveal it as opposed to the approach that you were taking earlier?-- No, sir. I believe I was giving an honest answer to a question. That's the same attitude I've had throughout the course of my evidence.

Okay. I just want to ask you some brief questions about the document itself, Exhibit 193. Do you have that there?-- I do not.

You will be pleased to hear that this is the last topic I want to tax you with. The relevant part of the document, top left-hand corner which contains the figures which are used to calculate the CO make. That part has at the top those two figures, 21.92 and 0.06. Now, what was the significance of those figures?-- They are the two constants to be applied to the formula for calculation of CO make. One is the cross-sectional area of the ventilation station and second is the conversion factor from cubic metres per second to litres per minute.

Did you have occasion to calculate the CO make at this ventilation station very often?-- No, sir.

Well, did you get those figures out of your head or did you get them from somewhere else?-- I don't recall.

Could the witness see Exhibit 94, please, Your Worship? From what you've said, Exhibit 94 together with Exhibit 93 were in

a blue folder on your desk; is that the case?-- Not at this point in time.

Sorry?-- Not at that point in time.

Weren't they? Do you know -----?-- They were -----

Sorry?-- They were collected from the undermanager's office subsequent to the explosion and then placed on my desk.

On this Saturday night when you were calculating the CO make - Saturday afternoon, I should say, 6 August when you were calculating the CO make then the blue folder containing 93 and 94 was not on your desk. You are quite clear about that?-- That's correct.

Well, was there anything else on your desk from which you could have got those figures, the 21.92 and the 0.06?-- I do not know.

You have no recollection now where you got those figures from?-- No, I do not.

If you have a look at the top of that Exhibit 94 it actually sets out the way in which you calculate CO make; is that right?-- It does.

That's area by velocity by parts per million, and again on that document it's actually got by 0.06; is that right?-- It does.

Okay. Do you know whether there were any other papers available in your office that contained these calculations of CO make for this particular point at that time?-- Possibly was. I think the cross-sectional area was on tabulations for each weekly CO make graph.

Now, you did say in your evidence on a couple of occasions in fact that your purpose in calculating the CO make using those figures which you used there and which are shown on Exhibit 193 was to see whether there was a difference between the day shift or - the night shift, I should say, and the day shift. I will just use your exact words. You said first of all that you were looking at a comparison between those two figures, that is for the night shift and the day shift, and then later you said, "I was looking for a comparison between the two shifts, the night shift and the day shift." There you go. Now, was that the case, that you wanted to see what had happened between one shift and the other?-- I think I said possibly that was the - I don't know if - I can't recall.

And then at 3,676 you said that you were looking for something - that was a situation you weren't sure about, and you said you were looking for something to do to try and give you some comfort. Do you remember saying that in your evidence?-- I recall that, yes.

Now, first of all, can I ask you what exactly you were looking for if you were looking for a comparison between one shift and

the other? Were you looking to see whether they were the same or were you looking to see whether they were different?-- Mr Clair, Mr Morrison, my counsel, plied me with that question for quite a period of time on Sunday evening. I could not recall the reason why I did that specifically at that point in time. I still cannot.

Because really on the shift reports there was a difference, wasn't there? It was a case of one being a reading of seven to nine that was recorded, seven to 9 ppm and the other being a reading of eight to 10 ppm; isn't that right?-- I don't recall that accurately at this point.

Well, you were taken through it yesterday, but in any event you say that you didn't really know what you were looking for; is that right?-- I don't know why I made the calculation, sir.

Can I ask you this: after you made the calculations, and I take it from what you told us, and in fact doing the calculations through from the figures on 193 that you did end up with a CO make of around 19 for both on the figures that you used; is that right?-- I believe that that is the figure.

Okay. Well, once you had ascertained that 19 lpm - first of all, you knew from your involvement with things on 22 July that 19 lpm was a high CO make; is that right?-- I knew that it was high in comparison to the figure that had been achieved for the week before.

Did you do anything about that, the fact that you had this high CO make calculation?-- I had made a calculation and got a result. I did not do anything further with it.

Did you tell anybody about it, the 19 lpm?-- I did not do anything further with it. No, I did not tell anybody about it.

Did you tell anybody about it the next day?-- I don't believe I did. I don't believe it was in my consciousness the next day.

I'm sorry?-- I don't believe it was in my consciousness the next day.

No further questions, Your Worship.

WARDEN: Thank you, gentlemen. I think it's an appropriate time to adjourn. Witness, we will require you tomorrow morning, so you are stood down until then. Do you understand?-- Yes.

Thank you. Adjourn the Court.

THE COURT ADJOURNED AT 4.43 P.M. UNTIL 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 09/03/95

..DAY 40

THE COURT RESUMED AT 9.25 A.M.

GEORGE ARTHUR MASON, CONTINUING:

WARDEN: Thank you, witness. You are on the former oath you took several days ago; do you understand that?-- I do.

Over to the panel now. Thank you, Mr Parkin?

EXAMINATION:

MR PARKIN: Mr Mason, a few comments, first of all, on ventilation. Could you tell me how the ventilation aspects of the mine were controlled and communicated?-- I believe at most times the ventilation capacity of the mine was in excess of our needs. Control was carried out by alteration of regulators throughout the mine as required. A ventilation survey was conducted by consultants approximately two years ago. That information was then used to assist in planning for the upgrade of the system to ensure that it was adequate for the future operations of the mine. A monthly ventilation survey was carried out to indicate or provide a record of the air flow throughout the mine. Changes to ventilation appliances were recorded in various places, primarily on a whiteboard in the undermanager's office, and in the undermanager's shift report book. There was a ventilation plan of the mine, which was in the ventilation officer's office. I don't think I can give you much more information.

Who did the ventilation officer report to?-- I believe he reported to a number of people. He was there to assist and he carried out the manual functions in determining measurements, etc. That information was provided to a number of people: the manager, myself, the engineer, and information was also made available to anybody else who wanted that information.

Who coordinated that situation? I mean, I'm trying to say who coordinated the communications of the ventilation area? I mean, did he report to you on a daily basis - the ventilation officer?-- Not specifically. Mr Morieson was a very competent person. He performed his duties very capably and sought to direct himself in the conductance of his duties. He liaised closely with Mr Abrahamse, the engineer. He had no trouble approaching me if he had any circumstances that he wanted advice on or making of arrangements. He also worked in with the undermanagers.

You have said that you have a ventilation plan and those, I think, readings were updated on a monthly basis; is that correct?-- Not on the ventilation plan, no. The readings were recorded on a ventilation report form. The plan merely

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showed the intake and the return airways.

I mean, you could look at the plan and the readings and ascertain any changes which had been made for the mine?-- If you wished to do so, yes.

You would do that if you made any ventilation changes, wouldn't you?-- My primary determination was made by acknowledgement from deputies if they had ventilation problems in any particular area.

What about the monitoring points? How often were they updated on the plan?-- There was a plan in the monitoring room showing the position of monitoring points, and as those points were relocated, they would be changed on the plan.

So, they were updated on, what, a monthly basis as well, or-----?-- No, as points were relocated.

Could the witness be shown this, please? This piece of paper is just the ventilation quantities from the 28th of the 2nd '94 to the 6th of the 8th '94. On the 15th of the 7th when the CO make was 14.95 lpm, the total quantity of air in 512 panel - can you see that on the 15th?-- I do.

You see that the total quantity, that's one, two, three - eight columns from the left was 57.79?-- That's correct.

And you will see that on 22/7 it decreased by 10 cubic metres. Do you know why that was? Mr Mason, it may help you -----?-- No.

The only reason for the question - and I'll come to it - on the 23rd - and I'm not trying to trick you here at all, it's a fair question - on 23/7 there was another drop of - down to 37 cubic metres. Do you see that?-- I do.

Now, I believe, and you may correct me if I am wrong, but I believe that you closed the bottom return at that time; is that correct?-- That's correct.

So I'm just wondering where that 10 cubic metres went from the 15th to the 22nd?-- At this point in time I cannot accurately answer that question. I believe that air would have been redirected to either the 510 panel where methane drainage was occurring or the 5 South production panel or a combination of both.

Because that could have some impact on the CO make readings in 512 itself; is that right?-- I don't believe so.

Well, I guess I'm just curious to know, and I've asked the question before, where that 10 cubic metres went to, and you don't know?-- I could not answer that accurately at this point in time.

Thank you. Mr MacSporran covered your knowledge of CO make and Mr Morieson's weekly graph in great detail. However, as undermanager-in-charge should you have known the significance of those graphs?-- Should I have -----

Known the significance of the graphs, in other words the CO make?-- I don't understand your question.

Let me say this to you: it would appear that Mr Reed set up a system of weekly CO make graphs, and you as the undermanager-in-charge - you told us you didn't know the significance of CO make in litres per minute?-- That's correct.

I guess the question is as undermanager-in-charge - I mean the ventilation officer knew what it meant and some deputies with Mines Rescue experience knew, but you as the undermanager-in-charge didn't know?-- That's correct.

Look, I don't want to go through that argument, but the CO make had no meaning to you, but you were able to calculate the make itself?-- I understood how to perform that calculation, yes.

But you didn't understand what it meant?-- Well, no, I didn't - I had no knowledge of the significance of particular values.

And you never asked anyone?-- No, I did not.

Now, the Graham's Ratio - again I don't want to spend too much time on this, but it was displayed on the Unor screen, was it not?-- That's correct.

Did I understand you to say that you didn't understand the significance of that Graham's Ratio?-- I believe that's correct.

But as undermanager-in-charge should you not have found out what it was about if it was on the Unor screen?-- It never seemed to vary in what attention I did pay to it.

I mean it's information that was on a screen that people looked at very frequently, and as undermanager-in-charge wouldn't you look at that? Wouldn't you want to know what it was?-- I believe in evidence I said I did make some inquiries in the early times when I moved across from No 4 to No 2 Mine.

The panel sealing was brought forward as a precautionary measure and you had reasons for caution, and I think we have been through those many times. Was the ventilation officer involved with regards to the decision to seal?-- Not that I'm aware of.

Did you ever involve him in terms of sealing or decisions to seal or whatever?-- I did not seek his advice, no.

Is that because he basically just took the readings?-- That's correct.

During cross-examination by Mr Clair you said alarm settings for CO were to be moved in small increments of 10 ppm; is that correct?-- I don't recall if I mentioned 10 ppm, but it would have - I believe what I said to Mr Graham was 10 ppm.

Mr Clair?-- To Mr Graham. Mr Graham was at the mine at the time, not Mr Clair.

I'm trying to get at the - you know, the alarm settings. You did state to Mr Clair under cross-examination that they were to be moved in increments; can you remember that?-- Yes.

Small increments?-- I believe that's the words I used.

Can you remember what those increments were?-- I thought that's what I just said to you. I believe I told Mr Graham to move them in small increments, and I think I used - it would have either been 10 or 15 ppm.

10 or 15, okay. Why was that? Why did you pick 10 or 15?-- I recognised that as a small increment, I guess.

On Saturday afternoon, 6/8, you visited 512 Panel?-- That's correct.

You observed no haze, you had normal odour from the waste, 7 ppm of CO?-- That's correct.

When did you do your calculation? That was on the afternoon of the 6th, was it?-- That's correct, before I went down the mine.

Can the witness be shown Exhibit 156, please? This exhibit is Mr Highton's report, and if you would turn to page 6, please. Mr Mason, I'm only showing you this exhibit so that - we are just going to refer to some smells from the 5th to 6 August. So on page 6, if you ignore 17 June and 24 June, you will see on 5 August -----?-- I do.

----- Caddell and O'Brien noticed a tar smell?-- That's correct.

On the 6th Klease noticed a possible heat shimmy, that was at 7.40, and a possible haze?-- That's correct.

And on the 6th again, at 9.45, there was a smell and a haze still evident to Klease?-- That's what it says.

And on 6 August again Squires, he saw a faint haze. Can you see that?-- I do.

And then again Klease at 11.45 noticed a slight haze still evident in 1 heading?-- I do.

And then at the bottom of the page on the 6th, at 1 p.m. Stampa says that the 1 heading prep seal, there was a smell he had never smelled underground before, and a haze?-- It does.

If you turn the page on to page 7, again on 6 August, Young says when sealing he could smell benzene but could not detect any haze?-- I see that.

And again on the 6th Graham - this was at 4.30 p.m. in the afternoon - Graham says he detected a faint odour that reminded him of fire stink?-- I see that.

And finally on the 6th at 8 p.m. Tuffs noticed a definite stink, a tarry smell, but there was no haze; is that right?-- I see that.

Were you aware of these reports of smells and hazes?-- I was aware of some of them, but not all of them. I point out this information was solicited from these people subsequent to the explosion and I don't know how much the effect of that explosion had on their - influenced their definitions or whatever.

We have had these reports and yet no-one sampled 512; do you know why that was?-- Beg your pardon?

Well, before the sealing - you know, we have had - these obvious smells have been reported and you detected some yourself, and if you are going to err on the side of caution wouldn't you do some monitoring of the panel?-- I did not detect any, sir.

No, I'm saying you were aware of some of these reported

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smells?-- I was aware of the smell of Mr Caddell on the Friday afternoon shift. I was also aware that there was no repetition of that.

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WIT: MASON G A

So, you didn't believe it was a problem at that time?--

That's correct.

Was any smell - I mean, you certainly went underground to investigate it, but you were completely satisfied after your examination that there wasn't a problem in 512?-- I was. I reached that conclusion that there was no problem, so did a number of other people, including Mr Graham, who did not mention at the time I spoke to him down the mine of any odour that he had detected. He believed that there was no problem in the mine at that time.

Because people don't invent smells, do they?-- I don't know I can agree with that.

I won't debate that with you, Mr Mason. So, it never occurred to you to seek advice because you didn't think there was a problem anyway?-- That's correct.

After sealing 512 Panel, why did you not monitor what was going on behind the seals using the gas chromatograph?-- I did not believe there was a need to do so.

And I think we have established that there wasn't a procedure - was there a procedure for sealing at Moura No 2?-- There was a common practice.

I mean, was there a procedure -----?-- Normal practice.

----- that you followed for sealing?-- Yes.

There was a procedure?-- I don't know if there is a written procedure, but we had sealed off many times.

Well, on the evening of the 7th, the information at approximately 10 p.m. on the Sunday evening, some 22 hours after the sealing, the CO had increased from approximately 12 to 150 ppm and the CH4 was approaching 5 per cent?-- At what time of evening, sir?

That's 10 o'clock on the Sunday evening?-- Mmm.

22 hours after the sealing?-- Right.

Approximately. Would those readings have any concern for you?-- I was unaware of the readings at that point in time. When I spoke with Mr Squires earlier in the afternoon or early in the evening, what he told me of the readings did not cause me any concern.

So, that wouldn't cause you any concern, from 12 to 150 in 22 hours?-- What he told me at that point in time I spoke with him, I was not concerned.

During your discussions with Michael Squires regarding the men going underground on that Sunday evening, I believe you mentioned the use of the grapevine for some communication. Could you clarify that for me, please?-- In what regard?

Well, I don't want to go through all this again, but did you say something to Michael Squires about men going down the mine on that Sunday evening?-- Did I say something to Michael Squires about the men going down?

Yes. Did you tell him not to inform them of the circumstances of that evening, of the CH4?-- I don't believe I told him not to inform them. I believe I told him there was no need to, that they would be aware of the - that the sealing had been carried out and the circumstances surrounding that.

But didn't you mention the grapevine regarding some men? You said some of the men had worked over the weekend and the grapevine was so good that they had communicated to the rest of the people on that Sunday evening?-- I believe I did use those words in this Inquiry.

Well, you wouldn't normally use the grapevine for safety communications, would you?-- No, sir.

Before the men were deployed underground on the evening of the 7th -----?-- Excuse me, could you start again, please?

Before the men were deployed underground on the evening of the 7th, would it not have been a good idea to tell the men what the circumstances were with regard to safety?-- Sir, men had been in the pit continuously from the time that sealing had been completed.

During cross-examination by Mr MacSporran two Quality Assurance documents were discussed. Could the witness be shown Exhibits 188 and 189, please? I think you have seen these before, Mr Mason?-- I have.

188 refers to the Underground Procedures and Work Instructions?-- It does.

And 189 refers to Underground Ventilation Procedures?-- That's correct.

Were you involved in the preparation of these documents?-- Not that I recall.

Have you seen them before? I think you said you may have seen them?-- I may have. I believe that Mr Abrahamse was concerned with the compilation of these documents.

Did you ever review the documents?-- Not that I recall.

Well, answer me this question: you were the undermanager-in-charge and ventilation and underground procedures and work instructions are very much a part of your duties at Moura No 2; is that correct?-- That's correct.

In fact, they are part of your statutory duties?-- Yes.

We have got two documents here, two Quality Assurance documents that you have not been involved with, you have not even reviewed them, and essentially, if you go through them,

they accommodate most of your statutory duties. Do you find that a bit strange?-- No, sir. These documents were compiled to reflect what was happening in the mine.

Yes, I understand that, but, I mean, if you are going to write some documents and you have got statutory responsibility for them, shouldn't you at least have the opportunity to review those documents? I mean, someone has put your duties on two documents here, you have not even reviewed them, and they are your statutory responsibilities. You see what I am trying to say?-- I believe I was carrying out my duties without the need to refer to these documents.

Mr Mason, please understand I'm not suggesting to you that it's your fault in any way, shape or form. I am just trying to suggest to you that, you know, we have got two documents here, two Quality Assurance documents. They accommodate - they cover a large percentage of your statutory responsibilities and you have not even reviewed them?-- That's correct.

Well, do you think that's a bit strange?-- No, sir.

Thank you, I have no further questions.

EXAMINATION:

MR NEILSON: Mr Mason, during your examination by Mr Morrison you mentioned that the mine had been visited by a Mr John Grubb; is that correct?-- That's correct.

And Mr Grubb either issued a statement or a directive or something in the form that he wanted mine officials to be fanatical about safety; is that what you said?-- That is the attitude he would have liked us to have adopted.

Okay. I just want to talk a bit about that. Under what circumstances did Mr Grubb say that? What I mean by that, was it at a formal meeting or just by way of conversation or what?-- It was a formal meeting. All staff attended.

When you say "all staff", can you be a bit more specific, please? Who ----?-- I don't know that "all staff" would be a correct term. There was a large proportion of the staff from Moura Mine in attendance. That's the whole of the Moura operations.

So, you would have people like Mr Regan, for example?-- I don't recall if Mr Regan was the manager at the time.

Mr Schaus?-- Yes, I believe Mr Schaus was there.

Mr Squires?-- I'm not sure about Mr Squires. He may have been in control of the underground operations on that afternoon shift.

So, I guess when you would be talking about people, say, the mine manager, whether it was Mr Regan or not, but whoever was the mine manager at the time would more than likely be there?-- More than likely, yes.

And undermanagers?-- Those undermanagers who weren't on shift.

So, it wouldn't have been a situation where, if it happened at 11 o'clock in the morning, for example, you wouldn't have night shift undermanagers and afternoon shift undermanagers come in especially for that meeting; is that the case, or ----?-- To the best of my recollection, the meeting was held in the early part of the afternoon shift, sometime after 3 o'clock. I know there were a large number of people there. I can't recall specific persons who were there or who were not there.

Were there deputies there?-- No, there was not.

So, purely just staff?-- That's correct.

Can you remember the topic that Mr Grubb was discussing that day?-- Safety.

Well, safety - I mean, that covers a pretty broad spectrum, doesn't it? Was he talking about safety at Moura or safety in general or safety at No 2 Mine, or what?-- I'm sorry, I didn't realise where - I think he was talking about safety across all of the BHP Australia Coal operations. He was speaking specifically to the people at Moura, so he was addressing us about our safety performance at Moura Mine.

Can you remember what it was he was saying? I mean, was he pleased about the situation or was he saying something different?-- I believe, in general terms, he was not satisfied with the performance of the operations across the board, all of the BHP Australia Coal operations in regard to safety. The goal of our company was zero lost time injuries, and he was endeavouring to communicate to us on a personal basis that he wanted us to do all in our power to achieve that.

So, it was in that context that he requested people to be fanatical about safety?-- Yes.

What did you take him to mean? I mean, what connotation did you then put on Mr Grubb asking you to be fanatical? What did it sort of tell you - the message? I mean, if you had to describe it, how would you do that?-- I guess it reinforced to me that my first priority in the conduct of my duties was the safety and well-being of the people who worked for and with me.

Do you believe that you did that?-- I have always done that to the best of my ability.

Can you tell us what position Mr Grubb held in the company at the time?-- The exact title I can't, but I believe it was Operations Manager, BHP Australia Coal, which meant - I understand that he was responsible for the operations of all the mines the company owned or managed.

And was Mr Grubb held in very high regard, in your opinion?-- I held the man in high esteem.

So, he was the sort of person that if he said something, he meant it?-- He was a very genuine person, or he is.

Do you know if he is still employed by BHP?-- I believe so.

In Queensland?-- I believe - I don't know his position, but I believe he is at Ok Tedi mining in Papua New Guinea.

Was he employed in Queensland on 7 August last year, do you know?-- I don't believe so.

Had Mr Grubb ever gone underground in the No 2 Mine?-- On a few occasions he has been underground at No 2 Mine.

Under what circumstances? What purposes, can you recall?-- He made a point of visiting the operations, especially on back shifts, with a view to finding out how the operation was proceeding.

Did he ever communicate his findings to the management people?-- Yes, Mr Grubb conversed with us.

Did Mr Grubb talk to the miners and ask them about their problems when he was underground?-- I believe he did.

Did he ever convey to people like yourself concerns that may have been raised by the miners?-- I can't recall any specific instance.

Did other senior BHP officials attend the mine from time to time and hold meetings with the staff?-- I'm having difficulty recalling.

Well, I mean, did people come along and talk about things such as production, targets, markets, etc?-- Not so much at the underground operation. I believe that happened on a more

senior level.

I just want to talk about this position of Mr Grubb's about wanting people to be fanatical. I mean, obviously for him to say that, he must have been - and I think you have said that he was concerned about performance or safety performance of the BHP's operations in general?-- BHP Australia Coal.

Was he at all specific in relation to his attitude towards Moura and the safety record at Moura?-- Not that I recall.

He never-----?-- When he was there, obviously he was addressing people at Moura Mine about Moura Mine's operations, but-----

Yes, and it was - sorry, finish?-- But he did - to the best of my recollection, he did talk in terms of group operations as well.

But, I mean, when he was talking - I mean, how did he put this question of being fanatical? Was it an instruction? Did he say this is how he wanted people to be? Was he directing people to the attitude he wanted, or in what context did it come up? I mean, how did he say it; that's what I'm trying to get to?-- I find it difficult to understand the nature of what-----

I probably didn't ask it in a very clear way. Did you see it as an instruction, that's what I mean? Was he saying, "You will be fanatical about safety."? Did he mean it in a sense that that was a directive?-- I don't believe it was in the sense of a directive. It was more if you - it was as if he had to be fanatical to get his message across, he would be, and he wanted us to perform in that - with that same vigour.

Well, I've asked you whether you believe you were, in fact, fanatical about safety yourself, and you answered by saying that you always put safety first?-- Yes.

Well, it is not really what I was asking you at the time, and I will ask you again: in putting safety first, can you say that you were always fanatical about whatever question of safety might be?-- I believe I've always been a very cautious and moderate person.

Well, if we go to 7 August and your discussion with Mr Squires where you were talking about - and it was obvious to you at the time that there had been a tarry smell detected, that there was a haze of some description, or whatever, but, I mean, you have said yourself that a tarry smell is an indicator of spontaneous combustion?-- I have.

Now, you were having a discussion with Mr Squires about his concern that the men may not want to go underground on that particular evening after the sealing had been completed, so, I mean, there was an ideal opportunity there for you to be fanatical, so to speak, wasn't there?-- Mr Squires raised a concern with me of the possibility that the men may not want to go underground when he believed the mine was in a safe

condition. I believed the mine was in a safe condition. If I had any other thought than that, I would have not provided the opportunity for the men to withdraw their labour, I would not have let the men go down the mine.

I guess what I'm trying to put to you is that with the information that you knew at the time - at the time - not in hindsight, but at the time - if you were going to be fanatical about the matter of safety, would not that tend to lead you to want to adopt a worst case scenario, so to speak? I mean, to be fanatical about something, as I understand it, means you sort of go overboard. What I'm putting to you is that you really didn't go overboard on that occasion, did you?-- I believe I addressed the situation appropriately.

Yes, but am I assuming things wrong when I assume that what John Grubb was trying to say to people is that when a question of safety arises, be fanatical about it; assume the worst. Don't let it happen and then have to come back and look at statistics at a later date. He was being very specific, wasn't he, with all of the staff at Moura No 2, or Moura, in telling them that he wasn't satisfied with the safety performance at Moura, as well as across all BHP operations, and he wanted you people to be fanatical about safety. I mean, it sends a message down?-- Yes.

I think you have agreed with that, and, to be fanatical, doesn't it mean that if there is a problem, that you would look for the worst in the problem to make sure you cover all aspects; doesn't it tell you that? I mean, Mr Mason, I appreciate that you are not the only one in this position. I mean, there are a lot of people that Mr Grubb was telling to be fanatical, unfortunately some other people who may have - should have been asked this question - I mean, it didn't arise until your evidence, so that's the reason I'm asking you. I think it is important that if we have a senior company official visit the mine and issue an instruction or a request such as this, it is important for us to know why it didn't follow through in the way it was meant to happen. Do you understand what-----?-- You are taking a hindsight perspective. At the point in time that - in question - I believe I acted appropriately.

I'm not asking about whether you acted appropriately or not, Mr Mason. I'm not questioning that. You have already said that. What I'm interested in is a senior company official giving a directive to people to be fanatical, and quite obviously, I don't think you could describe the actions that surrounded this incident as being fanatical on anybody's part. I just want to know why not? Why did you not be fanatical? I mean, if you don't know, just say so, or do you think you were fanatical?-- I've told you, Mr Neilson, I thought I carried out my duties responsibly and I made appropriate decisions.

Yes, that's not the question. In doing so, then, were you fanatical?-- I told you, Mr Neilson, I thought that I made apt decisions at the point in time.

But I'm asking you a question. I'm only asking you to answer

my question?-- Fanaticism is subjective.

Well, I asked you to tell me, you know, what impression you put on the request to be fanatical?-- I can only do my best, Mr Neilson, and I believe I did my best at that point in time. If that's not fanatical, then I don't know what is.

Well, so you are saying you were fanatical?-- Mr Neilson, put in the transcript whatever you want to have put in them. I've given my evidence. I've told it truthfully. I can do no more.

Well, I thought you said that you would answer questions, Mr Mason, that's all?-- I have endeavoured to do so to the best of my ability.

Okay. I only wanted an answer to a question, that's all. I have no further questions.

EXAMINATION:

PROF ROXBOROUGH: Mr Mason, I would like to talk to you about your visit to 512 panel on 6 August?-- Could you give me a moment, please? Mr Windridge, could I have five minutes break, please?

WARDEN: Thank you, gentlemen. Five minutes.

THE COURT ADJOURNED AT 10.15 A.M.

THE COURT RESUMED AT 10.35 A.M.

GEORGE ARTHUR MASON, CONTINUING:

PROF ROXBOROUGH: Mr Mason, I have just a couple of questions regarding your personal inspection of 512 on the Saturday afternoon?-- Yes.

I understand that you went there to personally investigate the conditions in the panel because you had had conflicting information. You weren't quite sure what the situation was in the panel so you decided to go and have a look for yourself; is that right?-- That's correct.

Now, I think you said when you arrived at 512 you couldn't get into the top return because they were erecting the baskets in preparation for sealing the top return?-- That's correct. The state of construction prevented access beyond that point.

But that you entered No 2 heading as far as 3 cross-cut?-- That's correct.

And you found a distinct air flow inbye, I think you said?-- There was a distinct air flow at that point and appeared to continue further inbye.

Appeared to continue further inbye, but there was no smell, no goaf smell?-- At that point there was not.

There was no haze?-- That's correct.

And the temperature was reasonably cool, or words to that effect. There was no distinct heat in the area?-- That's correct.

It was on this basis that you felt the panel was under control, there was nothing abnormal?-- That and my observations in the top return as well.

Now, at the time of the visit was the stopping in No 5 heading in place? Had it been erected?-- No 5 heading had been sealed some fortnight previously.

What about the situation in No 4 heading? Was that stopping in place?-- It also had been sealed previously.

And the one in No 3 heading?-- The construction of the baskets was complete. The extent of the grouting - probably 1.5 metres up from the fall.

So the situation in 512 Panel at that point in time was such that the number of effective intakes into the panel had been reduced?-- That's correct.

Let's say one and a half, and probably most -----?-- Probably

one and a third.

So that most of the air into the panel would now be entering No 2 heading?-- That's correct. There was a brattice hurdle across No 2 heading just on the inbye side of No 1 cross-cut diverting air - it was diverting air in both directions towards the bottom side of the panel and then flowing over the top of the hurdle inbye along No 2 road.

With the extra air entering No 2 heading you would expect, would you not, that it would have cleared any haze, it would have cooled down the area and it would have dispersed any of the signals that you were looking for? I mean you are fairly close to the main split, aren't you, from 510?-- That's correct, but I don't believe the situation was any different from - well, was not very much different from what it had been on the day shift.

On the day shift it had still been the same number of intakes, I think we have described as one and a third intakes?-- Probably was a little bit more. The belt road seal, the remaining portion of the seal that had to be built would not have been commenced. I believe the baskets were in place which would have reduced the air flow through there on the day shift, but there had been no grouting carried out.

Even though the top return was in the process of being sealed, there was still an air flow obviously out of 512?-- That's correct.

Was it not possible for you to take the carbon monoxide reading in that air flow?-- Deputy McCrohon had done so prior to my arrival there.

But you had gone in to make a personal inspection; you didn't take a personal reading?-- No, he informed me that he had only just previously done that, showed me the carbon monoxide tube.

Had you ever personally taken a carbon monoxide reading in 512?-- I had not.

Thank you.

MR ELLICOTT: No questions.

MR CLAIR: Just one matter, I notice that the witness still has the document that he was handed when Mr Parkin was questioning him. It may be appropriate if I were to tender that so that it can supplement the transcript. It could be described by way of the notation on the bottom as 512 ventilation data from Exhibit 21.

WARDEN: Exhibit 196.

ADMITTED AND MARKED "EXHIBIT 196"

MR CLAIR: The actual original exhibit can be the one that's still with the witness. I have no further questions.

WARDEN: Thank you, Mr Clair. My clerk will retrieve that. Mr Morrison?

CROSS-EXAMINATION:

MR MORRISON: Mr Mason, can I ask you a couple of things: Mr Martin asked you, I think yesterday - or suggested to you that the layering that had occurred in 520 on Friday, 5 August, could have been dealt with by way of brattice erected in some way across the 5 South return. Do you recall that question?-- I believe he used the terms "brattice with a hole in it".

Brattice with a hole in it, yes, you are correct, and you mentioned that you didn't think that would work. Could you just - perhaps even by reference to the big exhibit behind you if necessary, could you just explain why that's so?-- The overcasts for the 520 panel had been constructed. They were not in use at the time. Air flow from the bottom return 5 South faces was conducted around the faces of the 520 panel. Brattice stoppings had been erected to prevent air flow over the overcasts and brattice stoppings had been erected at the end of No 2 and 3 roads in 520 panel. It was to conduct the air around those faces.

For that reason the way to deal with it was to - a sensible way to deal with it was to open the regulator?-- If any other ventilation appliance had been erected in - anywhere in that return it would have merely served to restrict the air flow in that return.

Can I just ask you something about the use of Tecretite for seals? We obviously have heard that it was used for seals, not just these seals but other seals, and you've been asked by Mr Martin, I think, whether you've ever seen a document that approves the use of Tecretite for seals. Can I just ask you this: have you ever been queried by any of the inspectors about the use of Tecretite in seals in No 2 Mine?-- I have not. I also believe these seals had been constructed previously in other mines, specifically Collinsville Colliery - or the colliery at Collinsville. That was information supplied to me by Tecretite people.

I won't ask you to look at these documents for just a moment.

One last thing, can I ask you this: in the preparation for giving your evidence at this Inquiry did you have a number of conferences with what you have referred to as your legal team?-- I did.

Were you given some advice about how you should conduct yourself and your responsibilities at the Inquiry?-- I was given that, yes.

And were you given some advice about how to respond to questioning at the Inquiry?-- I was.

And in giving your evidence can you make some comment about what you did?-- I used the advice given to me.

Can I just ask you one last thing? If I may take you back to the 520 layering question. Was it the case that you had mentioned that problem or that layering to Mr Abrahamse that day?-- On which day, sir?

Sorry?-- On which day?

On the Friday. Mr Abrahamse has given some evidence at 2646 of the record that you spoke to him about a deputy's report earlier in the day, that morning, about some layering in the 520 panel and told him that the bottom regulator was to be opened to be able to remove it. Do you recall that?-- I do not recall - specifically recall mentioning that to Mr Abrahamse.

Thank you. I have nothing further, Your Worship. I have nothing further from Mr Mason.

WARDEN: Thank you, witness, you may stand down. You are excused. You may leave.

WITNESS EXCUSED

MR MORRISON: Your Worship, I want to tender some documents which have been provided partly, I think, by the Inspectorate. Perhaps we can lay an issue to rest so it doesn't keep arising. The first document I want to tender is a letter from the Chief Inspector of Coal Mines to Tecreté dated 20 June 1989. Sorry, I should make it clear, it's the Chief Inspector of Coal Mines, Queensland, to Tecreté dated 20 June 1989 approving the use of Tecreté and Tecmesh in the construction of ventilation stoppings in underground coal mines in Queensland. I am not sure if I have got copies photocopied immediately for the Bar table. I will do that shortly. Can I also - sorry, I should pause.

WARDEN: 197.

ADMITTED AND MARKED "EXHIBIT 197"

MR MORRISON: I also tender a letter from the Chief Inspector of Coal Mines, Queensland, to Tecreté dated 11 May 1990 approving the use in underground coal mines in Queensland of the various pumps used with Tecreté. That is currently document 130 in the Inspectorate documents, but I will tender it separately.

WARDEN: Exhibit 198.

ADMITTED AND MARKED "EXHIBIT 198"

MR MORRISON: I also tender a letter from the Acting Chief Inspector of Coal Mines, Queensland, to Tecreté dated 27 September 1983 advising that there was no objection to the use of Tecreté spray plaster in underground coal mines in Queensland. That document is part of Exhibit 18, but I tender it separately.

WARDEN: Exhibit 199.

ADMITTED AND MARKED "EXHIBIT 199"

MR MORRISON: And I wish to tender as the next exhibit in this sequence Part 3 of the General Rules for Underground Coal Mines.

WARDEN: Exhibit No 200.

ADMITTED AND MARKED "EXHIBIT 200"

MR MORRISON: Thank you, Your Worship. That's the last in that sequence of exhibits. May I now tender - and I think I have got enough copies for the Bar table, though not one for each panel member, and may I apologise immediately in advance, but I think you will see when I hand it up that you don't need it, without being disrespectful - may I tender a location map of the mines in the Moura area, and this is a document, as I understand, Your Worship has requested to be provided, no doubt for use in compiling the report. It's merely a location map with the mines indicated on it.

WARDEN: Thank you, Mr Morrison. Formally admitted as Exhibit

201.

ADMITTED AND MARKED "EXHIBIT 201"

MR MORRISON: Your Worship, may I do one last thing before Mr Clair resumes, and that is to place this on the record: there has been some mention in the last day or so, or the last couple of days, about documents. May I remind everyone we have here in Gladstone documents that have been brought from the mine in the possession of those instructing me. Some of those documents were collected from the mine last year. If anyone wants to look at any of those documents, they are welcome at any time, within reason. There are also any number of documents still at the mine which we didn't bring here because we don't think they have got anything to do with everything, but if anyone wants to look at any of those documents, they are welcome to at any time, within reason. Just tell us and we will make them available. That's all. Thank you, Your Worship.

WARDEN: Thank you.

MR CLAIR: May it please Your Worship, I call Robert William Regan.

ROBERT WILLIAM REGAN, SWORN AND EXAMINED:

MR CLAIR: Your full name is Robert William Regan; is that correct?-- That's correct.

Mr Regan, you are the Mine Manager at Moura Mine?-- That's correct.

You have provided a statement in relation to this matter on 24 August of last year?-- That's correct.

You have a copy of that statement there with you?-- I do.

That's document 70/15, Your Worship. Now, Mr Regan, you started in the mining industry in February 1972 as a Cadet Mining Engineer with BHP Australian Iron and Steel Collieries at Nebo Colliery, Wollongong, New South Wales; is that so?-- That's so.

You gained a degree in Mining Engineering in 1976?-- That's correct.

And during the next three years you gained the Third, Second and First Class Certificates; is that so?-- That's so.

That's in New South Wales; is that right?-- That's right.

XN: MR CLAIR

WIT: REGAN R W

You joined Mines Rescue in 1975 in New South Wales?-- That's correct.

And you set out in your statement there then the career that you have had. I gather, from what's in your statement, all of that being with one section or another of BHP; is that so?-- That's so.

I won't go through those in detail. You were appointed to your present position designated Mine Manager, Moura Mine on 9 May 1994; is that right?-- That's correct.

That was about three months before the explosion on 7 August?-- It is.

Now, can I turn to just what duties are involved in your position as Mine Manager at Moura? Perhaps you can briefly describe those duties and where the position fits in in the scheme of things?-- I'm the senior executive on site at the Moura operations. The Moura operations include the open-cut workings, the wash plant and the underground at the time. It's my - I report to - at the time of my commencement I reported to John Grubb who was the general operations manager of BHP Australia Coal mines and he, in turn, reported to the group general manager, Mr Flew. During that time there was a change in the operations and the position of Mr Grubb was changed into three regional positions, and as of some point in time around about June I no longer reported to Mr Grubb, I reported to a Mr Hedley who was the southern region general manager. My duties are to take an overview and longer term view of the operations of Moura Mine as a coal mining business, and that involves looking at the - probably one to five year - one to 10 year plan horizon for the business, where we would be mining, how would we achieve the corporate goals that are required at the mine. It was not a position of superintendents of day-to-day operations. Also the scope of those duties covers not only production but also the human resources. I have several functions reporting to me: human resources, commercial, mining engineering, production operations for the open-cut and for the underground and the Quality Assurance and Continuous Improvement activities.

Now, we have heard a bit about various of those activities. You mention in your statement in connection with the duties of your position, apart from the strategic planning that you have referred to, the implementation of operations, and I think you have touched on that; safety you include there as part of your general responsibility; human resources, investment and environment. In so far as safety is concerned, what sort of - in which way do you see your role?-- As I say in the statement, it involves the strategic planning and implementation for those items that follow, and that means looking at what systems and practices are available that we could adopt at the mine in those various areas, including safety, which would serve us best to achieve the corporate goals that we are after.

Whereabouts is your office located at Moura?-- It's located

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at the open-cut car park site.

And that's ----?-- Approximately 7 kilometres south of the No 2 underground offices.

Now, what were the practical aspects of those people who were your immediate subordinates reporting to you, or in particular in relation to the underground operations I think you mention in your statement that the person who reported to you was the underground superintendent, Albert Schaus?-- That's correct.

What were the practical aspects of that? How often did he report to you and in what way?-- We had weekly communication meetings where all of my direct reports would meet with myself and we would discuss the issues that needed to be addressed at the mine.

Would that be a combined meeting?-- That was a combined meeting and if there was any other requirement, then that was on an as-needs basis; either Mr Schaus contacting me directly and talking by telephone or coming to my office, or myself contacting Mr Schaus and going to his office, or vice versa. So, there was open communication there between himself and myself. The same with all the other persons that reported to me.

There were no regular arrangements for a meeting between Mr Schaus and yourself on a one-to-one basis?-- No.

The regular arrangement was for a combined meeting involving all operations?-- That's correct.

During the three months prior to 7 August, did Mr Schaus have occasion to contact you on this as-needs basis very frequently, or are you able to say with what frequency he would contact you? I'm just trying to gauge how much involvement you would have with the underground operations, you see?-- Well, initially when I arrived at the mine I spent some one and a half to three hours with each of my direct reports saying how they saw their particular roles in the organisation. So, that was the first meeting I had that enabled me to understand what they thought that was required of them, where they thought they were going with the operations, and so forth, and enabled me to get to know them. Thereafter was by way of the weekly meetings. Mr Schaus contacted me on a number of occasions about matters, mostly, I would have thought, to do with the budget that had been set for the mine and also to do with the work model and how we would progress with the change in the work model and incorporate some of the ideas that he had about improving the productivity and safety at the mine.

These one-to-one contacts, were they on a frequency of once a day, many times a day, or once a week, or aren't you able to give that sort of estimate?-- No, about once a week I would have said we would have discussions - either specific discussions that Albert had asked of me, where he may come to my office and discuss these things, or just casual discussions where I would drop in at the No 2 Mine site at the surface and talk to him about those matters.

Now, you did go underground at No 2?-- Yes, I did.

How many times?-- To the best of my recollection, four or five times in that three month period, and I had been down once prior to accepting the position.

Did you go down by yourself, or-----?-- No, I went down in company with Mr Schaus or Mr Mason, and on at least one occasion also with Mr Grubb.

What were the circumstances of that when you went down with Mr Grubb?-- Mr Grubb turned up for one of his casual inspections where he wanted to just have a look at the mine on an afternoon shift, and we went into the mine, I believe, some time around 4.30 or 5.30 in the afternoon, and went to have a

look at the number of the sections mined. Familiarisation for myself, basically.

When you say Mr Grubb turned up on a casual inspection, did he turn up unannounced, or did he - was there some forewarning of his coming?-- He said he was coming out to the mine on that day and he wished to go underground.

Now, on each of those occasions that you went underground, did you do a tour of the working areas?-- Yes, we did.

512 was one of those?-- That's right.

Did you spend long in the panel on each occasion you were down there?-- I would imagine between half an hour and an hour at the most.

Did you, yourself, carry out any particular inspections, or was it just a case of walking about and looking at the way the operation was running?-- Just a case of having a look at the way the operation was running, introducing myself to the miners and officials, discussing with them what they thought of the operations and the prospects for the underground mine, etc.

Were your inspections on each occasion, or even on any occasion, such as to enable you to form any conclusion about the safety of the operation or whether there was any particular problem existing in the panel with the risk of spontaneous combustion?-- You are talking specifically of 512?

Yes?-- My general impression of the mine and the panel when I was in there was one that relied on my experience previously in the southern collieries in the Wollongong area, and, to my mind, the operation looked very similar to those. There was no special indications of anything that I would have associated with spontaneous combustion.

Nothing that you noticed on the occasions that you were there?-- Nothing that I noticed, bearing in mind my history is not one of working in mines that have a spontaneous combustion propensity.

You didn't, yourself, immerse yourself in any examination of deputies' reports or shift reports?-- Only superficially. It has been my habit, being a former deputy and undermanager, to arrive in a working section and go to the deputies' station and have a casual flick through the deputies' reports to see what was being reported and how it was being reported, have a look at the general state of a deputy station, see what other plans and equipment might have been there on site - more from a familiarisation again to get the feel of how this place is operating.

Did you do that on occasions in 512?-- I did that on occasions in 512 and elsewhere that I went.

When you looked at the deputies' reports, did you see anything

in the reports that you did look at that caused you any concern?-- I've got no direct recollection of anything that I saw.

If you had seen a report that contained reference to a slight tarry smell or benzene smell or anything like that, do you think you would recollect that?-- I don't know.

You don't know. I suppose I'm asking you would that have assumed any particular significance for you at the time?-- Again, I don't know.

You mention that you worked mainly in the southern collieries. Had you had any particular association with problems of spontaneous combustion, first of all?-- No practical situations in any of the mines on the south coast. They are not prone to spontaneous combustion. The matters we dealt with were mainly high gas emissions and methane drainage.

What about in terms of your training? In the course of your training, had you learned anything about how to recognise signs of spontaneous combustion?-- I don't recall anything from my degree training, however from my deputy's course training that I undertook when I finished my degree and mostly from Mines Rescue training, yes.

And what was the state of your knowledge at the time that you were mine manager at Moura in respect of signs of spontaneous combustion?-- I don't know whether I had a conscious recollection of the information, but I must have known at some stage. It has certainly been brought to mind since then, but my learning from Mines Rescue work and from some visits to the northern - the Maitland coal fields when I was studying for my tickets was that operators looked for a change in the rate of production of carbon monoxide and, in those days, it was measured in parts per million, and you would also look for physical signs of sweating, a petrolly smell that increases and a haze.

At the time that you were in the position of mine manager at Moura, were you aware of the significance of the CO make as opposed to simply measuring CO in parts per million?-- At some stage I became aware, but I'm unable to pinpoint whether that was before or after the event.

That's the event on 7 August?-- That's right, or - I beg your pardon, before or after I had talked to Mr Mason on the 22nd of July.

I will come to that event. Now, you do say in your statement - just before I pass to particular matters - and I'm looking at the bottom of page 2: "There was evidence that there was a continuing improvement in the safety performance of the mine. In addition the mine had gained its Quality Assurance Accreditation to AS3902 in April 1994." Now, what were you referring to when you said in your statement, "There was evidence that there was continuing improvement in the safety performance of the mine."?-- The long-term - sorry, the lost time, injury frequency rate at the Moura No 2 underground mine

had decreased from 120 to 60 in the 12 months from June 1993 to June 1994, and as I reviewed monthly reports, I saw this downward trend.

That's all the evidence that you are referring to, or were there other matters?-- That was the most quantitative measure that I had.

You also mention in your statement, top of the next page, that you were familiar with the general - or aware, at least, of the general history of underground mining in the Moura area, the presence of the high methane content and the liability to spontaneous combustion, and you go on to say that you were familiar with the ways in which those things were being managed at Moura. Now, perhaps if I can ask you to address the period before the 22nd of July? Were you familiar in any detailed way with what was being done to address this risk of spontaneous combustion at the underground mine?-- I hadn't made any detailed study of it. It was purely from my observations of the layout of the mine, how I could see how the different panels had been laid out over time, the layout in 512, how the ventilation was managed, the gas drainage, and so forth - and the gas monitoring.

Did you have any detailed knowledge of the ventilation - of actually how the ventilation was being managed and how the gas monitoring was being carried out - this is prior to 22 July?-- I was - I am familiar with tube bundle systems because I used them on the south coast, so I understood that we were getting delayed trend information through that Unor system and that enabled you to watch trends, and, from my experience, I understood how the ventilation was coursed through the mine - through the 512 panel.

You understood that, but you wouldn't have known from day-to-day what changes were being made in ventilation or-----?-- I wasn't interested in day-to-day operations.

Quantities of air, was that a matter you were concerned about - quantities of air going through the panel?-- No.

So, you are not saying that you were familiar with those kinds of details?-- Not at that level in detail. I could feel the quantity of air when I walked in the place, which suggested what sort of quantities were flowing.

I want to come to events on 22 July. At that stage Mr Schaus was on holiday?-- I believe so.

Mr Barraclough was the acting manager?-- I believe so.

And you were contacted, as you mention in your statement, by Mr George Mason?-- That's correct; however, as I mentioned in my statement, he didn't contact me in that regard. He contacted me about talking to fitters about sending a continuous miner off site for repair.

Perhaps if you could just tell us what happened. He contacted you about that other aspect, and how did this matter come up

about 512 panel?-- Well, when I went down to the No 2 underground mine to talk to the fitters' representatives, George was in his office and there was somebody standing around outside, and he just told me that they had taken this reading, and that they had had a report of this CO parts per million reading which was higher than the general trend that they had had.

Mr Mason told you that?-- I believe so.

Can I just clear this up: you say in your statement, "George Mason rang me on a Friday afternoon to say that they had a higher than normal carbon monoxide reading from 512." You go on to say, "I went to the mine and we looked at the 512 CO make trend chart and also the 511, CO make trend which was the previous panel." Do I understand you to say that that's not correct?-- No, he didn't contact me about the reading. At the time of the interview, I was only thinking about the events that had transpired subsequent to that, and I didn't even remember the date when this event had occurred. It was subsequent to making that statement I recalled that George and I had been talking in my office earlier that day about how we were going to ensure that we had the continuous miner back in repair ready for the next working place, and there had always been difficulty in sending equipment off site for repair because the union representatives felt it was their job to do those repairs on site, but our estimation was that it wouldn't be done quickly enough and it wouldn't be ready for use, which would have caused us a further delay. So, we discussed that, and George went back to talk to them about it. He then rang me and said that they wanted to talk to me about that, and I went down to the mine - down to the No 2 offices to discuss it - and then came across some people there outside George's office and George in his office, I believe.

It was at that stage George mentioned to you about the higher than normal CO reading from 512?-- That's right.

Did he specify what sort of reading he was talking about - CO make or-----?-- I'm not sure that I haven't used those terms of "make" or "reading" interchangeably here, but-----

If you can just go on and actually say what you recall happening is the best?-- What I recall happening is that an 8 ppm reading was mentioned, which was expressed to me as being higher than the Unor readings at the time. I believe I was shown some chart which had some tables on the side of it, which showed that the Unor readings had been lower than this other reading, and I believe I was shown a chart that had a line on it from a trend chart - or a trend graph - to a point in time with a question mark at the top of it.

Yes, go on. Can you remember-----?-- I was shown that, but I'm not sure what chart that was now. I believe it was for 512, that one, but I'm not sure if I could identify exactly that chart.

Go on. What was discussed after that?-- Well, it was expressed to me that this was a departure from what the Unor

readings were showing and that it was going to be investigated.

Can you remember anything else that was said - anything that you said or anything that anybody else said that comes to mind now?-- No, I can't.

Was there any discussion about what could lead to the higher CO make if, in fact, there was a higher CO make in the panel?-- We compared at some stage the - another panel, and I think it was 511, but I'm not sure, and the rate of production of carbon monoxide in that panel appeared to be at a lower slope, but constant, than the one for 512, and the rate of production of carbon monoxide in the 512 panel again appeared constant, but at a higher slope, and I think I asked George - or somehow or other we got around to the discussion that, you know, why was the slope different, and again I'm not sure who said what, but we had a general discussion which resulted in some concurrence over the fact that the 512 panel had been much more productive, much more coal had been mined in a shorter period of time; that that could lead to this rate of - production of carbon monoxide being a steeper slope than the previous panel.

Any other conversation that you can recall from that occasion?-- Well, again only general conversation to the effect that it was going to be checked out to see whether or not in fact the reading was correct.

Now, was there ever any report back to you as to what occurred, that is whether it was checked out and what resulted from that?-- I had a general report back that it had been checked out and it was okay, that was it.

After that day, and that's - I think you in effect identified that as 22 July, were there ever any other matters brought to your attention about 512?-- Not that I recall, no.

In respect of either CO make or reports of any difficulties with ventilation or reports of smells?-- No, certainly not.

Do you recall whether you made any visits to 512 after that occasion on 22 July?-- The only one that's clear in my mind is 3 August when we took a party of the Board of Directors of BHP Mitsui underground after a board meeting in the morning, and we visited, I think, the 512 Panel which was very nearly completed at that stage and the drilling site in the 510 panel area.

Did you ever follow up with anybody anything more in relation to the event of 22 July?-- No.

After it was reported to you that it had been checked and a lower reading found?-- No, when I rang and found that it had been checked out and it was okay I left it at that.

You say that you went down there on 3 August. Were you back in the panel again, do you recall, before 7 August at any time?-- I don't believe so.

Now, you had some contact then on the night of Sunday, 7 August, just before midnight from Albert Schaus; is that so?-- That's correct.

What did he tell you?-- Well, he rang and told me that there had been an event at the underground mine and he then proceeded to tell me the details, that they had thought there had been an explosion underground.

You went to the mine yourself?-- I did.

And then you really took part in the events that occurred at the mine and you've set out the details of that in a written statement, is that right, that you did for the coronial purposes?-- That's correct.

That statement has been tendered. Well, I don't propose to take you right through that. Can I just ask you a question about your understanding of the line of command and the level at which decisions would be taken under the system as you understood it? I'm particularly interested in a decision as to whether or not the men should go down the mine at any particular time in light of the existence or otherwise of

potential dangers. At what point in the hierarchy would you expect that kind of decision to be taken?-- That decision could be taken by the men themselves, a deputy, an undermanager an undermanager-in-charge or the mine superintendent. At any of those points that decision could be taken.

You say you wouldn't expect any reference to you first of all -----?-- No.

----- for that sort of thing. That certainly wasn't your role because you had no role in the day-to-day operation?-- That's correct.

You say it could be taken by any of those people, but in effect the men might form a view they shouldn't go down, but would you see that as being part of the decision making process, starting at the bottom level that you've mentioned there?-- Not necessarily. However, if they formed that view then they could take those steps.

Take what steps?-- If they made a decision not to go down the mine.

Well, would they be expected to report to that somebody and ask for a decision on it?-- If they had made a decision they would normally just say, "This is our decision and we take it on this basis". They may or may not give a basis for it. However, they could have taken that decision, that's correct.

As far as you were aware were there - let me preface this question by asking you another one. Obviously there would need to be a system in place to allow any decision maker at any level in the system to be fully informed in order to make the decision; is that so?-- Anybody who makes a decision has to make it on the available information that they have.

Yes, but I suppose if you are within a management structure, to expect a person to make a decision then you must have systems in place that ensure that he is aware of all of the information that he needs to have in order to make that decision; is that right?-- No, it's not quite right because nobody can ever have all of the information that they need to have to make a specific decision. They have systems in place which enable them to gather all the normal information that would be available at the time and then make a decision on that basis.

Yes. I think that was my question. Normally there would be a system in place. It may not always be successful, but there would be a system in place to ensure that any decision maker was able to be aware of all the information that he had in order to make a decision; is that so?-- In the terms that you might use "system". I will use it in the boarder sense, there would be a system in place.

Well, was that the case at Moura? Given that you say this was a decision that could be taken by the men themselves, was there a system in place to ensure that they would be aware of

all the information that they needed in order to make that kind of decision?-- The systems that were in place that I believe would enable that were the statutory systems of reporting via deputies' reports and inspections by deputies and undermanagers. I expect that information system to make available that information and therefore the men, the deputies or the undermanagers, would have the information that they require from that system.

And in what way did you see that information being available to the men?-- It was my - the first time I had seen it since my experience in mines in the south, where these deputies reports were actually posted in the surface where all the men could see them.

Was there some training of the men, as far as you were aware, along the lines that they were expected to read these deputies reports and to make decisions for themselves as to whether they should go underground?-- I'm not aware of that, but it is, I believe, in the legislation.

What, that there should be training of the men?-- No, that the men should be aware and have a duty for their own safety as well as safety of others.

But you are not aware of any particular training that was given to the miners at Moura which made it plain to them that they were expected to read the deputies' reports and that they had the power to decide for themselves as to whether or not they went underground on any occasion?-- No training.

Now, you've been involved with the Inquiry from early in the piece; is that so? You've been present perhaps for quite a bit of the Inquiry; is that so?-- Yeah, probably 75 per cent of the time.

75 per cent of it. Have you had involvement in the collection of documents from the mine for the purposes of being available either at the Inquiry or to your legal representatives, the company's legal representatives?-- No.

You haven't had any involvement in that?-- No, I don't believe so.

I have no further questions of Mr Regan, Your Worship.

WARDEN: Thank you.

CROSS-EXAMINATION:

MR MACSPORRAN: Mr Regan, you only came to Moura in June or May of last year; is that so?-- That's correct.

Your role at Moura as at that stage was to, in effect, be in charge of the whole Moura mine; is that so?-- In -----

That's a bit clumsy -----?-- What way do you mean "in charge"? I certainly wasn't there to superintend the day-to-day operations.

That's what I'm coming to. Your role was not to look after the day-to-day runnings of any particular part of the Moura operation; is that so?-- That's correct.

And in particular here, not the day-to-day operations of the No 2 Mine?-- That's correct.

So for that purpose you relied upon, I take it, the underground superintendent amongst others?-- That's right.

And below him, next down the chain of command, would have been the undermanager-in-charge?-- That's right.

And of course undermanagers, deputies and then miners?-- Yes.

In terms of your actual knowledge of what was going on at No 2 in particular you relied upon, amongst other things, reports from those people that I've just named?-- Primarily discussions with Mr Schaus and my visits to the underground mine itself.

I think you already said that your visits to the mine itself were more to keep a basic eye on the way things were being done as opposed to carrying out yourself any particular investigation?-- They were there to inform me to enable me to gain the greatest understanding about how the operation worked and how then I could use that in the overall deliberations for the entire mine site.

And a good example of that was perhaps what you told us about whether or not you would look at the contents of statutory reports. You would, on occasions, flick through shift reports, more to get a general idea of what was going on than to investigate any particular aspect?-- That's correct.

Perhaps understandably you relied upon the parties who were in fact running the mine, No 2, day-to-day to inform you of any concerns they had?-- That's also correct.

One such occasion apparently was what you now know to be 22 July; is that right?-- That's right.

That was the Friday when apparently Mr Mason told you of some high CO reading, whether it be in parts per million or litres per minute, a high reading?-- That's right.

XXN: MR MACSPORRAN

WIT: REGAN R W

At that stage had you been made familiar with the concept of CO make, that's as at July 1994?-- I don't believe so.

You think your knowledge of that was after July 1994?-- Yes.

And before August 1994?-- That I'm not sure of.

In any event, whether you had knowledge of CO make after July and before the explosion you certainly had no cause to apply such knowledge before 7 August; is that so?-- I believe that's the case.

No cause that came to your attention between July and August, no issue arose where your knowledge of CO make was to be applied to anything before July -----?-- I believe that's the case.

As at July 1994 you don't think you knew about CO make. Your state of knowledge was still in CO parts per million?-- That's right.

I take it though you would have been aware that part of the monitoring system at No 2 included the production of CO make graphs?-- Not until the 22nd.

And that was your first experience with CO make graphs, on the 22nd, was it?-- That's right.

And again at that stage you weren't familiar with the concept of CO make as such?-- No, I wasn't, but it's not a difficult concept to multiply two numbers together.

Was there some discussion on that day, 22 July, about CO make as such?-- Only with reference to, "Here are the numbers on the chart", not as a concept of what it says or does.

Can you now recall anything of the numbers mentioned to you about CO make on 22 July?-- I've only got a very vague recollection of the levels of numbers that were on the chart, and of course, I've heard since that time what those numbers may have been.

Is it the case that regardless of what the numbers were at that stage, 22 July, you didn't know the significance of the numbers themselves?-- Yeah, I didn't know the significance of any level of CO make.

Was there any discussion by anyone that day about the significance of levels - figures representing CO make in litres per minute?-- Not that I remember.

In any event, you were shown, you think, a graph of 512 which had a question mark somewhere on its representation?-- That's right.

And that was compared with, you think, a graph relating to 511, the previous extraction panel?-- That's what I think, yes.

In preparation for today have you been shown any material that you've recognised or looks familiar in relation to those graphs you were shown that particular day?-- Those two charts possibly, but I'm still not sure whether they were the ones that I saw on the 22nd.

Do you recall whether, again in preparation for today, you were shown two separate charts or graphs or a combined representation of 512 and possibly 5 North?-- I think it was a separate chart of 511 and a separate chart of 512.

In any event, from what you were shown on the 22nd - your memory may have been refreshed by documents you've seen since - the clear impression you had was that the rate of production of carbon monoxide in 512 was higher than that in the other panel, 511?-- Measured on a time basis that's what it appeared to be.

And about that you mean the slope of the graph for 512 showed a steeper upward trend than the slope of the other graph which you think was 511?-- That's right.

And that to you meant rate of production was greater as opposed to simply an absolute level?-- That's correct.

As at that day, 22 July, what was it in your state of knowledge that led to an opinion, apparently expressed by you, that the higher rate of production may have been accounted for by the mining method in 512?-- The fact that, as I understand it, carbon monoxide is given off by the oxidation of coal and that's dependent on the surface area of coal available, and therefore if there is a greater surface area available in a shorter period of time then the rate of production ought to be higher.

Was there anything else in your state of knowledge at that time that led to you expressing that opinion?-- I don't believe so.

Had you had discussions with anyone before that date about rates of production of carbon monoxide relating to the extraction panels in Moura No 2?-- No.

Were you expressing the opinion on 22 July in an authoritative way, that is, that you knew that the answer might be the rate of production was explained by the surface area of coal being exposed?-- I have got no idea.

Do you think perhaps it may have been just a general opinion expressed by you as a one-off on that day?-- As I said, the discussion - I can't clearly recollect the discussion, but this was discussed.

You certainly, I gather, from your state of knowledge at that time - you certainly wouldn't have considered yourself in any way an expert in relation to the production of carbon monoxide inside an extraction panel at Moura No 2?-- I certainly wouldn't.

And in fact it wasn't part of your job to be utterly familiar with such matters, was it?-- True.

You had an overview of the system, the day-to-day running was left to others?-- The day-to-day running was left to others.

You would have expected, I take it, that your underground superintendent, Mr Schaus, would have had a very clear understanding of CO make and the monitoring of it in 512?-- I don't know that I would have and I certainly - at that time I did not know.

I am not saying you knew at the time. You say you didn't know, but wouldn't you have expected that to be a responsibility that Mr Schaus would undertake?-- Since I didn't know about CO make or the use of it at the time, I didn't have an opinion as to whether anybody else should know or use it either.

All right. if you accept that in place at the time - that is, 22 July - there was a monitoring system which used CO make as a tool to detect spontaneous combustion, you would expect, wouldn't you, that the underground superintendent would have a good knowledge and appreciation of the significance of such a tool?-- That would be a natural conclusion from the fact that it existed.

And the fact that the underground superintendent was the fellow immediately in charge of the running of - in this case 512?-- He was the person in charge of the underground mine, yes.

Similarly, you would expect that of the underground - I beg your pardon, the undermanager-in-charge, would you not?-- In the same vein, that if the system was in place in fact, then it would be a natural conclusion to expect that those that were using it did understand it.

And if in fact that was not the case, there would be a need to increase the level of awareness about those matters, wouldn't there?-- If one could determine that that was the case, that's correct.

Could I ask you this, just on a different topic for a moment: you came there in May, I think, '94. The Registered Manager at that stage was Mr Schaus; is that so?-- That's correct.

There was, can I indicate to you, a report compiled by a committee formed after the No 4 explosion that looked into the question of inertising panels underground. Were you aware of any such committee being formed, firstly?-- I'm not sure that I was aware of a committee.

Were you aware of, at any stage, a report being issued by any such body dealing with inertising panels?-- The only report that I was aware of - and I'm not sure at what time I became aware of it - was the Inquiry report on the No 4 incident.

And you became aware of that and read that report, I take it?-- At some time. I've got no recollection whether that was prior to 7 August or after.

So, just to be complete, you are not aware of any report from a committee dealing with proposals to inertise panels?-- No.

The Kianga report, are you familiar with that?-- No.

I take it you have - prior to this Inquiry have you heard of the Kianga incident?-- Only from Rescue training.

You have detailed some matters dealing with how communication would be dealt with at No 2 and you mentioned the reporting system which included deputies' and undermanagers' reports; is that so?-- Yes.

Would you expect any matters of concern relating to safety to be included in such reports, such statutory reports?-- Yes, I would.

And are you familiar with the layout or the format of those reports, that is, deputies' and undermanagers' shift reports?-- No, not very well.

You would certainly expect any matters of concern relating to safety to have been included in such reports in the written form?-- That's been my experience in New South Wales.

And furthermore, I take it you would expect that you would have not only a written report made of such matters but oral communication to relevant parties as well?-- That's been my experience in New South Wales.

In other words, you wouldn't simply expect that someone would make a note on their deputy's or undermanager's report about a safety concern and not mention it orally to anyone else?-- No, I would not.

In your experience in New South Wales, did you become aware of the Strang and Mackenzie-Wood publication?-- Yes, I did.

And do you accept that within that publication there is reference to CO make and levels of it?-- I now know that, yes.

I take it obviously then you weren't aware of those matters contained in that publication before the explosion?-- I'm not sure because the basis for that book is a southern Mines Rescue Station training notes that had been compiled over many years and added to with things such as the blue book and so forth, and at some stage I would have read some of that, so at some stage I may have known it but certainly wasn't conscious of it at that time.

The evidence here has indicated, I think, that there was a change from parts per million CO to litres per minute around about '87 or thereabouts. Were you in the industry at that stage yourself?-- Yes, I was still at Stockton Borehole Colliery.

Just finally in relation to publications and material, you may have heard evidence here of a seminar conducted by the SIMTARS organisation in Brisbane in 1989 and manuals relating to the topics covered there being brought back to the mine at No 2 by Mr Reed. Have you ever become familiar with that material as being at No 2 in your time there?-- I hadn't seen that material prior to 7 August.

Thank you.

CROSS-EXAMINATION:

MR MARTIN: Mr Regan, can you tell the Inquiry about a meeting, if you know about it, when the future of No 2 Mine was discussed?-- I don't know of any such meeting.

Or whether it was related to a fall in the price of coal?-- I know of no such meeting.

Can you tell the Inquiry, if you know, what BHP Australia Coal has done in relation to the operation of other mines - underground mines, that is - subsequent to the explosion on 7 August 1994 in terms of precautions or safeguards that it may have implemented?-- I have not been involved with those things.

When you took up your position, you knew you were going to a gassy seam mine and a mine liable to spontaneous combustion?-- Yes.

And you had some experience in the past, I suggest, with an underground coal mine explosion at Appin?-- That's correct.

You were a deputy?-- I was an undermanager, yes.

Were you concerned to see that all necessary safeguards were in place?-- I examined the mine from my inspections and from whatever materials my predecessor had and had discussions with Mr Schaus to come to a conclusion that those things were in

place.

And they were in place in fact, and such modern techniques as a gas chromatograph, they were all present?-- I'm not sure that I knew that a gas chromatograph existed at the time.

Well, you presumed, I take it - and reasonably so, I hasten to add - that the underground superintendent would have at his disposal and in place all necessary systems to safeguard the men and the mine. That would have been a presumption you would have made reasonably?-- I formed the view that the general safety of the mine was being taken care of as required.

You sat through this Inquiry for quite a long time, you saw many people from basic miner to deputy and others give evidence. It's the case, isn't it, that the basic miner, indeed many of the deputies, have a very, very fundamental or basic education. You heard them say it?-- Yes, I heard that.

And unless they were given specific information, I suggest to you, they would be in no position whatever to judge whether or not they should go down a mine?-- You may say that, but my experience has always been of miners that they decide on whatever basis whether a place is safe or not, and they have on many occasions decided a place is unsafe when it's not and vice versa.

But they must have the information before they can form any judgment whatever?-- That's true.

Thank you.

CROSS-EXAMINATION:

MR MORRISON: Mr Regan, can I just ask you a couple of things? You mentioned that when you went on the familiarisation trips underground that you flicked through some deputies' reports; do you recall that?-- Yes.

Was that on each occasion you went underground or just on the first?-- I believe I would have done it on generally every occasion that I went underground.

And I understood you to say you have no memory of any particular recording in there, in those reports?-- That's correct.

In terms of their general content, can you make some comparison with those reports that you saw here and those that you have been familiar with in New South Wales?-- My general appreciation was that they were of a similar standard to the deputies' reports that I had seen in New South Wales in the mines that I had managed and in other mines that I had visited.

XXN: MR MORRISON

WIT: REGAN R W

You mentioned that you had when you came to No 2 or came to be superintendent - sorry, I think I said superintendent, that is the wrong description. When you came to your position at No 2 you were aware that it was a seam that was liable to spon com?-- That's right, I was aware that the area was. I'm not sure that I was aware that the D seam itself was.

That will satisfy me. After you were appointed at Moura, did you do some review of the safety aspects?-- I did. John Grubb had asked for some - each mine in the group to develop their own safety management plan, and a draft had been produced at a meeting that I went to in April before I took up the position, and I reviewed that draft over the course of the time that I was at - that I was - from the time that I started at Moura through until probably October or November of last year.

So, it was an ongoing thing?-- Yes. I wasn't happy that it addressed all the outcomes that I believed should be addressed and so, consequently, I looked for some best practice information to compare it to and to fill in any gaps that I saw in the plan.

Now, did that result in a safety plan being developed?-- That's right, there were a number of drafts which - one of which at least was distributed for comment, and it was finalised, I think, sometime in November.

Post the explosion?-- That's right.

Is that the document that I have just handed to you now? Is that the final version?-- Yes, that's it.

Does it cover both underground and open-cut?-- It covers all the operations for the Moura site.

I tender that document. I will have to make copies available. I have only got a couple here. Perhaps what I will do is - at the risk of offending the panel - I will just hand up three along the Bar table for the moment.

WARDEN: One exhibit will be sufficient for the panel at this stage. We can get copies done after. Should there be some questioning in relation to it, I might have a look at it now.

MR MORRISON: What I might do is send it straight out and get a copy now. I'm not sure if Your Worship has given that a number.

WARDEN: Exhibit 202.

ADMITTED AND MARKED "EXHIBIT 202"

MR MORRISON: Mr Regan, you mentioned that you had visited some, I think you said, collieries in the Maitland area; is

XXN: MR MORRISON

WIT: REGAN R W

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that right?-- That's right.

Did you talk to operators of those coal mines?-- I did.

Were they coal mines that had a liability to spon com?--
That's right. This was in about 1977.

You never actually operated those mines yourself?-- No, I did not.

Am I right in thinking that all the coal mines you have actually managed - I am trying to remember some of them, Stockton Borehole, Corrimal, Tower Colliery and so forth - none of those have a spon com problem?-- That's correct.

And, in your experience, none of those used CO make?-- No, we did not.

You mentioned you were at Stockton Borehole in about '87 when Mr MacSporran asked you about the change from parts to CO make?-- That's right.

Was that change implemented at Stockton Borehole?-- There was no need for it.

Thank you. Can I come back to those people at Maitland? Did you get some information from the operators of Maitland about signs of spon com?-- Yes, this was in relation to studying for my Third, Second and First Class Certificates.

And what did they tell you about signs?-- They told me that they looked for physical signs of sweating, a petrolly smell that tended to increase and a haze which was a vapour, or a vapour haze, something moist you could - if you actually got into it you would feel the increase in humidity.

In relation to those signs, did they tell you anything about whether they, in their experience, persisted or were transient?-- They told me that those signs would persist if you got to that stage of detecting them.

Now, you mentioned the fact that you were not familiar with CO make but used parts?-- That's correct.

In even talking about parts, that can be used as an indicator of increased oxidisation, can't it?-- That's right.

And what is it about the figures that you see that tells you about that? Is it the absolute numbers that matter or the rate or the trend?-- My learning had always been based on the rate of production of CO, and if you were looking for evidence of a heating developing you would look for a change in the rate of production of CO.

And did your teaching tell you what sort of change in the rate? Is a steady linear increase good enough or is it something else?-- A steady linear increase is not a change in the rate.

XXN: MR MORRISON

WIT: REGAN R W

So, we are not just talking about-----?-- You are looking for an upward trend from whatever the steady state is, whether it is a steady linear increase or it is a flat trend.

So, a steadier linear increase is not a change in the rate?-- Most of the texts you look at certainly indicate the thing that I have heard in here which is called an exponential rise - a very steep rate of change.

I have nothing further, Your Worship.

CROSS-EXAMINATION:

MR HARRISON: Mr Regan, you mentioned earlier that you were involved in the budgeting for No 2 Mine as part of your overall duties?-- The budget was set when I arrived at the mine; however, Mr Schaus spoke to me about determining what things we could get, when we could get them as part of the ongoing process.

And when you say "the budget was set", do you mean the 1993/1994 budget?-- That's right.

And were preparations in place for the 1994/1995 budget in the sense that you were discussing the needs for No 2 with Mr Schaus?-- That's right.

Now, in terms of your familiarity with the budget for 1993/1994, was there any provision within the budget for the - what might be termed "refresher training" of the undermanagers?-- I couldn't comment on that. Certainly the overall budget for the mine involved something like \$400,000-odd for training.

What, the extent of your knowledge was that \$4,000 was allocated to training for that mine but you had no-----?-- \$440,000.

You had no idea as to how that was broken up within-----?-- I didn't have a break-down of that. That was to cover all training requirements.

When you first came to Moura, as I understand what you said before, you were aware that the area generally is such where seams were liable to spontaneous combustion, but you didn't have any particular knowledge about the seam here at No 2; is that a fair summary?-- That's correct.

Was there ever any concern on your part that the aspect of training relative to spontaneous combustion should ever be looked at?-- It was never raised with me.

And by that I mean at levels of deputies upwards?-- No-one ever raised that.

Are you saying, as such, you never saw any need and wouldn't have seen any need unless someone raised with you the fact that there may have been some need in that regard?-- That's right. Most people look at the risks and priorities that they have and they always push up the one that they think is the most relevant at the time, and the ones that people were talking to me about were these so-called risk and hazard analyses - getting involved in that.

You have heard the bulk of the evidence at this Inquiry, I take it?-- Yes.

You now, no doubt, are fairly familiar with what have been referred to as the parameters in relation to CO make, the 10 and 20 lpm?-- Yes, I have heard those.

I take it also that you have heard that numerous people at deputy level and upwards have said that they didn't appreciate the significance of those levels?-- I have heard that, yes.

Did you have any idea at all that there may have been, prior to 7 August, what I might term a lack of understanding of the relevance of those parameters?-- You would have to repeat that for me again.

Did you have any idea at all that there may have been a situation at No 2 whereby people did not understand the significance - perhaps if I can put it - the significance of the gas monitoring procedures that were in place?-- I don't believe I did.

You were aware, I take it, that the CO make graphs were being done from your own inspections at the mine?-- I hadn't noticed them until the 22nd when it was drawn to my attention.

You did, however, have some familiarity with the Unor because of some experience at an earlier mine?-- That's right.

But you weren't aware, as such, that a CO make was being calculated on a weekly basis for each panel in extraction?-- No.

I have nothing further, Your Worship.

RE-EXAMINATION:

MR CLAIR: Mr Regan, I meant to ask you this before: did you, as a matter of practice, read the mine record book?-- No, I didn't.

Just touching on a couple of matters that you have been asked about in cross-examination: you mentioned that as part of your training on spon com you were told, first of all, about these signs that would indicate the existence of spontaneous combustion, and you say that you were told that if, in fact,

RXN: MR CLAIR

WIT: REGAN R W

there was spontaneous combustion, those signs would persist, I think?-- That's right.

Is the way you put it?-- Yes.

You were told that they would persist and always be detectable?-- That's the way I understood it from these operators and the open air collieries in Maitland district.

Was there any explanation at the time that you were told that that at the early stage of a heating that the signs - for instance, a stink or even change in the CO make - well, let's deal with them one at a time - signs such as a smell or a stink - that that sign may come and then disappear and not be detectable for a time, then come back again?-- No, they indicated that that sign would come and it would be there for a period of time.

As a matter of common sense, did it occur to you that if there were changes in ventilation, that a sign may come and go - signs such as a smell may come and go?-- No, I don't-----

In the early stages of a heating?-- I hadn't considered that.

Anyway, you just accepted what was put to you?-- Oh, this is training 20 years ago.

Yes, okay. Now, you did mention later in connection with your understanding of signs of spontaneous combustion that another sign you'd look for was a change in the rate of production of carbon monoxide?-- That's right.

And you said in answer to Mr Morrison that a steady linear increase is not a change in the rate of production?-- That's right.

And it is true that if you were to set out on a graph the sample CO make as against a time - one axis being time, one axis being CO make - that if there was a constant increase in CO make, then you would get a linear graph; that's so, isn't it?-- That's right.

Would the rate of that increase be a matter of any significance for you?-- Only if you had some other background to measure that against.

Such as?-- Such as your previous experience.

If, over a period of two months, you had at the beginning of the first month 10 lpm, at the beginning of the second month 15 lpm - beginning of the second month 15 lpm - beginning of the third, 20 lpm, for instance, you'd get a straight line graph?-- Mmm.

The slope of the graph depends entirely on how far you spread your months out along the base; is that so?-- That's true.

But would that rate of increase be something that, in itself, would concern you?-- Not necessarily. You would have to go

back to the start of extraction on any panel and look at the entire period of time, because if that came at, for example, the end of a period which was at a different slope, and this was now a much steeper slope, then you would say "I have a change in the rate of production of CO". You can't take a segment here or a segment there. You have got to look at the development of the whole extraction sequence for that particular panel - well, that's my opinion.

I see. I mean, it must reach a point, though, musn't it, where a rate of increase over a particular period of time becomes a matter of concern; isn't that so, whether it is a steady linear increase or whether it is not?-- No, that's not necessarily so.

Well, if you had a graph that showed a - an increase of 5 lpm consistently each week over a period of time-----?-- That's fairly extreme. I would agree with that.

I put it up to illustrate my point?-- Yes.

It reaches a point, doesn't it, where it doesn't matter whether it is a graph that goes along gently for a time and then moves into what I think you have described as an exponential phase?-- I can only describe to you how it has been expressed to me over the years. That's my state of knowledge.

Now, you did mention in that connection that the texts indicate that you would look for an exponential rise, I think is the way you put it?-- That's correct.

In what connection - what would you expect to be indicated by an exponential rise?-- I would expect to see some steady linear increase which people have experienced time and time again, which said that this was quite normal, quite safe, the panel is finished and sealed and nothing comes of it, but at some point you would start to see this rapidly multiplying rate of change come in, and the texts that I have seen always seem to have some sort of a chart in it like that - whether it is based on experience somewhere in an actual practical situation or whether it is a laboratory test or not, they always seem to throw in that sort of a chart.

Right. What, though - coming back to my question, what does the exponential rise indicate in those circumstances?-- It indicates that you've - to me it indicates that you have gone past a stage of just oxidation of the - whatever material - coal materials are available, and you are starting to approach this regenerating heating - starting to approach these low levels of combustion or the heating phase. So, it is starting to develop.

So, you are not saying the exponential rise indicates a later stage of a heating, you say you wait for an exponential rise to indicate the early stage?-- That's been my understanding. When that happens you know - you definitely know you have got a heating.

When you get the exponential rise, you definitely know you have got a heating; is that what you are saying?-- That's right, but I wouldn't know beforehand, because there is nothing to indicate it to me.

Can I ask you to specify which texts you are talking about?-- That's the Strang Mackenzie-Wood text, because it has got the - what its name - the blue book graphs in it, and I think they come from - God knows - they are 1930's-odd, or something, those charts.

Of course, Strang and Mackenzie-Wood also refers to the parameters in terms of the significance of litres per minute make; is that right?-- Yes, I've seen that.

And that tells you - and I'm referring to Exhibit 183 - I don't know that you need to see it - that tells you - and I quote it - "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 considerable danger exists." Now, in the text that you have referred to - you have specified Strang and Mackenzie-Wood - was that sort of information juxtaposed with these graphs that you mentioned?-- Not that I recall, but I'm no expert on carbon monoxide.

Thank you. Thank you, Your Worship.

WARDEN: Thank you. The panel have a few questions.

EXAMINATION:

MR PARKIN: Mr Regan, how did safety at Moura No 2 compare to the operations that you were familiar with in New South Wales?-- My recollection is that based on the lost time injury frequency rate, that it was better.

What about other areas of safety? Lost time injury frequency rate is not the only indicator of safety?-- All my observations showed that the way in which production was carried out and the way in which things were done at the mine - that they were as good as, but the LTIFR showed that they were probably better.

What about in other respects? You know, production - how do they compare to the operations in New South Wales?-- From a production point of view?

Yes?-- Because the seam conditions and the seam thickness - productivity-wise, I think in first workings that they were probably better, but then again Moura No 2 Mine wasn't looking for advanced rate for long wall development, it was looking for productivity in first workings and in second workings.

At that meeting on the 22nd of July that's been raised, were tarry or benzeney type smells ever mentioned to you?-- No, they weren't.

Moura No 2 gained Quality Assurance in April 1994?-- That's right.

I think you have heard Mr Mason's evidence that he had not been involved in the underground procedures and work instructions and also the underground ventilation procedures. Now, these are areas of statutory responsibility, and yet he was not able to reveal the documents. Have you any comments? What's your view of that state of affairs?-- I make a general comment about Quality Assurance systems. In general, Quality Assurance systems are put in by a company to ensure to the customers that they are producing the product by a specific method, and that can be audited. Ford Australia is a good example of that. BHP Australia Coal decided that they would install Quality Assurance systems as a means of continuously improving all their operations, and, as such, tried to follow through on the AS3902 standard. The fact of the matter, with Quality Assurance systems, is that they do document on your first instance for gaining accreditation only what you currently do now, and therefore despite the fact that Mr Mason said he didn't review the documents, somebody had to know what Mr Mason was doing to put those documents together, and I find it hard to believe that Mr Mason, even if he didn't know it, was actually contributing to those documents for compilation. No-one else could have put them together in any case.

I think if you look at the documents, you can see that - I mean, they cover a large - you know, ventilation, the work procedures are basically part of the undermanager-in-charge's role and I guess one would have thought that if you are going to put a Quality Assurance system in, then at least - I can understand the people not being directly involved initially in the writing of the report, but surely at some stage the review of the document is essential if you didn't; in other words, if only for accuracy if nothing else?-- I would agree with that - to ensure that it does say what you do do.

Says what's going on, exactly?-- That's true.

Thank you.

EXAMINATION:

PROF ROXBOROUGH: Mr Regan, I'm just scanning this document that's been tendered by Mr Morrison - the safety plan. I don't know if you have a copy in front of you?-- I don't.

Do you need to have it? It is a simple question?-- Not particularly.

Perhaps you could have a copy?-- Why not.

XN: MR PARKIN

WIT: REGAN R W

If I could take you to page 3 to the table, item 5, under the heading "Who", there is reference made to a mine chemist. Could you tell us something about the functions and duties of the mine chemist?-- He works in the preparation plant for testing of our product type and also some of our bore hole sampling coals.

I see. So, it is a geochemist in a way, is it?-- Yes, you could say that. He is a coal quality chemist.

Okay. So, he wouldn't have had any availability for input or skills that he could have put to work on the underground mine atmospheres. He wouldn't have any role in that?-- No, he wouldn't have any knowledge of that.

EXAMINATION:

MR ELLICOTT: I've taken it from your evidence that you had responsibility for fulfilling corporate expectations with regard to Moura operations; would that be correct?-- That's correct.

That would include expectations regarding safety?-- Yes.

Can you describe to me how those expectations were expressed?-- Part of this safety plan, re the targets and goals, the corporate targets and goals, zero permanent disability injuries and zero lost time injuries and targets to reduce what was then the standing in those statistics over the 12 month period. We have world wide in BHP minerals group a general level of lost time injury frequency rate somewhere in the area of 10 and our corporate goals are to have all operations heading for zero, but certainly none above what is the average for the group.

Were those safety expectations also expressed in the form of policy?-- Yes.

Can you describe to me which particular versions of policy existed as of August last year?-- There would have been - there is a corporate directive from the managing director of BHP, Mr Prescott, and there was also an expression of that in terms of the mine safety manual which was, I think, dated some time in March or May 1993 signed by the former mine manager, Mr Brecknell.

Not signed by the current mine manager?-- No, not signed by myself, that's right.

The policy was really a Moura operations policy?-- That's right.

Was there a separate policy for the underground mine?-- No, I'm not aware that it's a separate policy. The overall policy applied to the site.

Did you perceive any change in corporate expectations regarding safety when Mr Grubb departed?-- No, I did not.

Thanks. No further questions.

MR CLAIR: I have no further questions, Your Worship.

WARDEN: Thank you. Nothing arising out of that? Thank you, witness. You may stand down. You are excused.

WITNESS EXCUSED

XN: MR ELLICOTT

WIT: REGAN R W

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WARDEN: We will take the lunch adjournment before we start on another witness, I think. Can we resume at 2 p.m.? Thank you?

THE COURT ADJOURNED AT 12.23 P.M. UNTIL 2 P.M.

THE COURT RESUMED AT 2.08 P.M.

MR CLAIR: May it please Your Worship I call Albert Hubert Schaus.

ALBERT HUBERT SCHAUS, SWORN AND EXAMINED:

MR CLAIR: Your full name is Albert Hubert Schaus; is that correct?-- That's correct.

Mr Schaus, you are the underground superintendent and registered manager of Moura No 2 Mine?-- That's correct.

You made a statement in relation to this matter on 8 September '94?-- That's correct.

And you've got a copy of that in front of you?-- Yes.

By way of your qualifications and experience, you gained a Bachelor of Mining Engineering Degree from the University of Liege in Belgium in 1980?-- That's correct.

That qualification is recognised by the Australian Institute of Engineers?-- Correct.

Whilst you were doing your full-time degree course did you gain some vacation employment in Belgian coal mines?-- Correct.

And you also took the opportunity to visit some hard rock and coal mines in Belgium, France, Germany and Canada; is that so?-- Yes.

You came to Australia, obviously before 1981; is that right? You started work at Appin Colliery New South Wales, in November 1981; is that right?-- Yes, that's correct.

Had you been in Australia for some time before that?-- About a year earlier I came to Australia as visitor and looked for work and I was lucky to find work with BHP Australia Iron and Steel Collieries.

It was from there then that you moved to work at Appin

XN: MR CLAIR

WIT: SCHAUS A H

Colliery?-- After the immigration papers had been -----

Processed?-- Processed through, year.

You worked there for four years as a miner, that's at Appin Colliery?-- That's correct.

During that period did you gain your First, Second and Third Class Certificates of Competency, New South Wales?-- That's correct.

In January 1986 were you appointed as a mine deputy at Charbon Colliery in New South Wales?-- Yes.

In August 1986 were you promoted to shift undermanager at Charbon?-- Yes.

And in that position you were responsible for the swing and the night shifts which involved about 50 people; is that right?-- Correct.

You will have to pardon my ignorance; the swing shifts, is that like an afternoon shift, is it?-- Yeah, New South Wales, when the shifts were seven hour length and there was one hour overlap, you had four shifts during the day. You had night shift, day shift, afternoon shift and swing shift. So it started at six o'clock at night until one o'clock in the morning.

Charbon Colliery was a bord and pillar mine; is that so?-- Yes, it is a bord and pillar mine. Appin is a longwall mine.

In March 1988 you were promoted to deputy manager at Charbon?-- Correct.

And in that position you were responsible for the day-to-day running of the mine, and on occasions did you act as relief manager?-- Whenever the manager was away during holidays or at conferences I was acting manager, yes.

When did you leave Charbon?-- In November - actually October '92.

October '92?-- Yeah.

And in December 1992 you were appointed to your present position at No 2 Mine at Moura; is that so?-- Yes, I took four, five weeks to arrange my affairs and come up here, yes.

About a year prior to that had you gained the Queensland first class mine manager's certificate?-- That's correct.

You set out in your statement, and I'm looking at page 2, the duties and responsibilities of that position of underground superintendent at Moura No 2; is that right?-- Yes.

Now, there is also the document that you have no doubt seen whilst you've been here which is Exhibit 12, and I'll ask the witness to see that, Your Worship, which is described as the

position description and you will find that relating to underground superintendent to be the first - just behind the first page of that document that you were handed there: have you got it?-- That position description document sets out amongst other things the responsibilities attached to your position; is that so?-- That's correct.

And if you go over two pages there is an acknowledgment form which bears your signature and the date, 21 December '93; do you see that?-- Yes.

And that acknowledgment form acknowledges that you've read and understood the contents of your position description?-- That is so.

Before I go to the question of duties and responsibilities of the position I'll just ask you to look at this letter here. That's a letter dated 8 December 1992 from Mr Brecknell and it relates to your appointment as manager of No 2 underground; is that so?-- Yeah, the registered manager in accordance with this book.

In the terms of the Act?-- Yes.

It's directed to the senior inspector of coal mines, Mr Mike Walker; is that right?-- That's correct.

I tender that letter, Your Worship.

WARDEN: Exhibit 203.

ADMITTED AND MARKED "EXHIBIT 203"

MR CLAIR: That letter appoints you, as from 9 December 1992, as the registered manager?-- That's so.

Thank you. You can put that to one side. First of all, if I can look at the items that you set out in your statement as your duties and responsibilities, the first of those you describe as the safety of the mine workforce and compliance with the Coal Mining Act and regulations; is that right?-- Yes, they were my first duties.

And then you set out various other duties there. Was it the case that you regarded the safety of the mine workforce and compliance with the Act and Regulations as in fact being top priority amongst your duties and responsibilities?-- That was so, yes.

If I can turn to Exhibit 12 and your responsibilities there. Again, the first responsibility that's listed there is, "To plan, organise and promote a safe working environment within the departments to achieve a no lost time injury frequency rate and communicate with all people to maintain safety awareness."?-- That is correct.

Again, that's listed as number 1. Is that just an arbitrary listing or is that intended to reflect some kind of priority of responsibilities?-- It reflects the priority of responsibilities, and during performance appraisal that priority had a rating of A and it's the only priority with a rating of A. All the other priorities are rated B, C or D.

So, you are saying those priorities were reflected in the performance appraisal?-- Yes, for salary reviews.

Now, item 3 of those responsibilities on your position description refers to ensuring the underground operation achieves its production goals by planning, organising and reviewing the activities of the department and within their operating budget. See that one there?-- Yes, that's correct.

Now, was the aspect of achieving production goals one that assumed some considerable weight in the way in which you carried out your activities?-- It is an important part of the operation, I will not deny that, but it wouldn't come at the expense of safety, and that was clearly made understood to me by all echelons of the organisation, and I was trying to reflect that understanding to all the people under my supervision as well going from deputy - going from undermanager-in-charge, engineering people, shift undermanagers, deputy and workforce.

What steps did you take to reflect that to those people, that is, that safety should come ahead of production?-- There were -----

I am sorry, I should say, when I ask you that, I don't mean in terms of specific instances but rather more in terms of any general steps that you took?-- The safety record of Moura No 2 Underground when I took over the job was improving, it was good, but it still had some way to go, because we were aiming at zero lost time injury, and as I took over I started different initiatives to try to improve the safety awareness and - the safety awareness of the people in general, I believe, with some success. These measures range from the introduction of systematic accident investigation to tool box meetings, safety meetings, the introduction of risk analysis to the underground and so on.

Yes?-- There are other -----

Those matters that you mentioned were all initiatives that you took after you came into your position?-- Yes. I'm not saying that there were none before, but I just enlarged the scope of them.

They are the ones that you can think of that you introduced yourself?-- Yes.

You report, we have heard in evidence, to Mr Regan, the Mine Manager?-- That's correct.

However, he has indicated in his evidence that he didn't really involve himself in the day-to-day operation at the underground mine; is that so?-- That is correct.

That was really left to you?-- That's true.

And those initiatives that you have mentioned, they would be things that you would initiate from your level?-- Yes. Some of those initiatives were my own initiatives, some were company policy or other directions coming from the company.

Mr Regan has referred to his role in strategic planning in various respects, one of which involved taking safety into account. During the time that he was there, were there any specific instances where, in that strategic planning role, he had any input on safety matters at the underground mine?-- I am aware of the safety strategies being reviewed after he took over his position, yes.

I appreciate there was little time between when he commenced in the position and the date of the explosion, 7 August, but during those few months were there any specific things that you took on board, as it were, as a result of his activities or initiatives?-- Well, we were in the process of reviewing the Moura safety strategy that had been implemented earlier, and I had some discussions with Rob about certain specifics, and we were trying to determine what we thought we achieved against - by those standards against areas that needed improvement.

And that process was underway before 7 August?-- That's correct.

Now, Mr Reed was also still involved at Moura and he had previously been at the underground mine?-- That's correct.

His involvement was really by way of the Quality Assurance and Continuous Improvement programs; is that right?-- After I took over the position that was the only involvement he had in regards to the underground.

Yes. Again, from that direction were there matters that had input, as it were, to safety strategies or initiatives that you adopted?-- At the time of the incident I don't recall any specific procedures being registered under the Quality Assurance system, but I knew through some discussions that we were in the process of registering those - registering the

safety plan for the mine and the different procedures to go with it under the Quality Assurance system.

As at the time of the explosion safety was a matter that was yet to be dealt with under the Quality Assurance system; is that what you are saying?-- Yes.

It was planned to do so?-- I am not saying the procedures weren't in place, but they hadn't been registered under the Quality Assurance system yet.

Okay. Well, that Quality Assurance program that was being put into place, did you have any input into that? Was that a matter of discussion between you and Mr Reed?-- Yes, it was. When we - the target was to get Quality Assurance registration for the beginning of '93, I understand. We achieved that goal. The system was in its infancy as we first started but it kept growing. I had not much involvement with the direction - with the direct drawing of those procedures but a few people at the underground were involved. Mark McCamley, Jacques Abrahamse and, to a certain extent, Allan Morieson liaised on a regular basis with Phil Reed in order to write those procedures and they were then referred to me and I signed them and introduced them to the Quality system.

I don't want to go into the mechanics of actually setting up the Quality Assurance system, but in terms of selecting what areas should be brought under or registered under the Quality Assurance system, who was it that decided that? Was that Phil Reed or you and Phil Reed in discussion?-- I understand there is a standard and there are certain areas that have to be registered to meet that standard.

Right, I see?-- So -----

So - sorry, I don't want to cut you short?-- So, I don't think that in - to get Quality Assurance accreditation the safety aspect does not have specifically to be addressed, but it addressed training, as I recall, and maintenance, preventive maintenance system, was not addressed either, but we always had plans to make the system grow.

So, what you are saying is there was a reason for safety not being addressed initially and that is it wasn't one of those matters that had to be registered in order to get the Quality Assurance accreditation?-- That is correct. Not that we were trying to get the minimum to get accreditation, but we needed a certain time to sort of get a start and then the system would grow, and it was growing, but we still had a long way to go.

Now, I want to ask you something about your own training. Before I do that, you have set out in your statement there the people that reported directly to you; is that right? I won't run through them?-- Yes.

I am looking at page 3, and we have heard from each of them in any event. Now, I want to ask you something about your own training, in particular in respect of spontaneous combustion,

and I am directing - when I ask you this I am directing your attention to the period prior to the explosion on 7 August. What did you know about spontaneous combustion at that stage?-- Could you be a bit more specific, please?

Well, what signs, for a start, would you have been looking for in order to determine whether there was a possible spontaneous combustion problem in a panel?-- I knew that we were looking for smell. Personally I would call them benzene-type smell. We were looking for - you would be looking for haze, some sweating on or condensation on the steel support at the mine, and the main factor would be a change of trend in the CO.

When you say "CO" -----?-- Well, CO as expressed in parts per million and CO make. Both are connected, as you well know; one being a more accurate and complete picture of the CO parts per million.

Yes, the CO make being the more accurate?-- Correct.

Giving a complete picture. Now, in terms of the state of your knowledge at that time prior to the explosion, what would you be looking for as the early signs of a suspected heating?-- I was looking for an exponential rise in the CO expressed in parts per million or CO make in litres per minute. By that I mean that if you had an increase, the increase was ever increasing over a certain period of time.

The increase was?-- The rate of increase was going always faster - like the 5 North, for example.

So, not just that the CO was increasing, but that the rate of increase was rising?-- Was rising and sustained.

Now, you say that you would expect or you would be looking for that as the first sign?-- Yes.

You have mentioned these other signs. No doubt you were looking for those other signs, too, at some stage?-- Yes, they play an important part as well.

Now, whereabouts did you obtain your knowledge from in respect of spontaneous combustion?-- My formal knowledge in regards to spontaneous combustion does come from my degree - mining engineering degree in Belgium, the tutorials that I attended at TAFE college - that's technical college in New South Wales - for preparing for my First, Second and Third Class Certificates in New South Wales, and the last formal training I remember would be when I joined the rescue team in early 1986 in the Western Districts in New South Wales soon after I gained employment at Charbon Colliery.

In the course of that training, had any emphasis been given to CO make as opposed to the measurement of CO in parts per million?-- It hadn't - all my formal training related to parts per million because the latest one was January - was February/March '86, and in New South Wales we were still relying on parts per million. The training that I received was still done with the old rescue notes from the Charbon Mines Rescue Station.

Obviously at some stage you learnt something about the significance of the CO make?-- That's correct.

When was that?-- It is hard to remember how you become aware of certain - of the knowledge, but I can only put it down through association, but before I joined Moura, I had a certain understanding of the CO make in the sense that parts per million were not telling the full picture. You had to look at the air velocity as well, and I understood that when you multiplied parts per million with air velocity, you had a figure - as we call it, a CO make - and that figure was constant under normal circumstances; that is - I'm not talking about extraction here. I understood that if parts per million were rising, that could - one of the reasons could be a reduction in air velocity and a product of both would still be constant, and vice versa. That was basically the extent of my knowledge of CO make prior to me commencing employment at Moura.

No doubt what you say would acknowledge the corollary that even though the parts per million may be staying the same, if there were changes in the ventilation, there could be a difference - depending on what sort of change in the ventilation - a higher or lower CO make; is that right?-- I was not aware of CO make being used as a tool for the control of spontaneous combustion before I went to Moura, so my

understanding of a CO make was more as a monitoring device to help me understand what the parts per million were doing. Before, in my formal education, I was told that you were watching parts per million. Then between '86 and '92, I understood parts per million on their own didn't tell the full picture, so you had to take consideration of the velocity as well, but that was the extent of my knowledge before coming to Moura. So, looking at CO make as a constant, if you understand what I mean, at a certain time.

Yes, so that you could explain any change in parts per million?-- Yes.

Possibly because of change in air velocity?-- Yeah, and if it wasn't - if the change in parts per million was not due to air velocity, then you could really be confident that the change in parts per million is an indication of something, depending on the trend.

You would look for some other explanation?-- Yeah.

Or change in parts per million. You say that was before you came to Moura. After you arrived at Moura, did you come to a better understanding of the significance of CO make in terms of ascertaining the existence or otherwise of spontaneous combustion?-- Yes, I did.

And when was that?-- Well, during the change-over, between - when I took the position, I spent two days with Mr Phil Reed. We had general discussions about the underground, the different state of the workings and projects that were ongoing at the time, consultants reports to follow through, and that kind of matter, and to the best of my recollection, I remember Phil Reed taking me through the Unor room showing me the Unor - the gas chromatograph, and I think it is around that area that he mentioned to me the figure of 12 lpm. I cannot really recall the conversation we had, because it is three years ago, but my understanding was that 12 lpm gave another dimension that I didn't have in the parts per million monitoring of the CO, if you know what I mean. I understood that 12 lpm was a figure of CO make - under 12 lpm, the likelihood of spontaneous combustion developing was null; above 12 lpm there was a possibility of a spontaneous combustion event developing, so you had to be more vigilant. That was the extent of the understanding I got from Mr Reed.

Did Mr Reed mention any other figures as far as you recall, apart from the 12 lpm?-- I don't recall any other figure that he mentioned. I would like to add that at the time of the change-over, the mine was not in extraction, so no CO graph was plotted, and I just remember the 12 lpm, because it is a figure that stuck in my head, but we didn't have a general sort of sit down discussion about CO make and the limits, but I vividly remember 12 lpm.

Did you at any time become familiar with that work of Strang and Mackenzie-Wood, which has been so often mentioned in the course of the hearing here?-- I received the glossy covered book - Mackenzie-Wood - shortly after I completed my training

in rescue - my rescue training in Lithgow - six months or so. I remember it was handed out to all the trainees and I flicked through it - I remember flicking through it and it was - it covered what we had been taught six months earlier, so I never read that book from page to page, but certain paragraphs or, you know, chapters caught my eye and I read through it.

You don't remember reading that part that deals with the significance of certain figures in litres per minute make in terms of indicating spontaneous combustion, or a possible spontaneous combustion problem?-- I do not remember reading that part, but if I did, it hasn't registered. I would have to add that at the time the Western Districts of New South Wales is not a district that's considered liable to spontaneous combustion, so my training, as part of a member of a rescue brigade, although it would have dealt with the problems associated with spontaneous combustion, my understanding and experience has been that rescue training - the emphasis on the training is on usage of breathing apparatus and rescue training, not on theories.

Apart from figures mentioned to you by Mr Phil Reed - the 12 lpm, as far as you recall?-- Yes.

Was there ever any other occasion on which there was discussion in your presence about the significance of 10 lpm, 20 lpm?-- While I was at Moura No 2 underground, before the event, I never heard those figures mentioned to me.

Okay. You refer in your statement - I'm looking at page 11 - to an understanding on your part that according to standards developed for German coal, a CO make of 12 lpm requires vigilant monitoring. That ties in what with what you were saying - or your understanding of what Mr Phil Reed told you?-- Yes.

What was the source of that piece of knowledge that I've just referred to there? Was that the conversation with Mr Reed, or was that some other source?-- The 12 lpm is the conversation with Mr Reed. The standard for German coal mines and the 20 lpm that I refer to later in my statement as a question by the inspectorate would be - if I can use the term "contaminated" after some reading that I had done after the event.

Okay. Hence the reference to German coal; is that what you are saying?-- Yes. I had read Mackenzie-Wood after the event and between the statement - someone put the page - the relevant page under my nose, so I read-----

Did Mr Reed draw to your attention a volume of information, including information on spontaneous combustion, which he had brought back from a seminar which had been conducted in Brisbane by SIMTARS?-- Before August 1994 I didn't know that there was such a seminar and that Phil Reed had attended and the books and the folders. I didn't know of their existence.

We have heard that Mr Morieson, the ventilation officer, did have possession of that at some stage. Were you aware of its existence?-- I was not aware of its existence.

You have seen it tendered here?-- Yeah. I was not aware of its existence until after the event.

I will come in due course to your - or to the significance which you attached to higher levels in terms of the litres per minute make when we are looking at the history of the panel, but before I pass on to that, can I just turn to another aspect of your - what shall I call it - supervision or administration, and that is the extent to which you had involvement in reinforcing communications within the underground mine area?-- Yes.

When you took up the position, did you have occasion to make any assessment of the way in which communications were carried out between deputies and undermanagers, and undermanagers and the Undermanager-in-Charge, and up to your level, and vice versa, I should say?-- In any organisation I have worked for, communication is a field where improvement can always be made. When I joined Moura No 2 underground, the standard of communication at that mine appeared to me to be equivalent to the other operations I had worked in before. However, I could see a possibility for improving - of formalising, I should say, not improving - of formalising the communication between the different people working for me, and soon after my arrival, I instituted a daily meeting where we reviewed the operation the day before, what was going to happen for the next 24 hours was planned as well, and so I - all that communication was happening at Moura, but it wasn't sort of formalised-----

Who attended those meetings, if I can just interrupt?-- All the people - initially all the people that reported to me by Joe Barraclough. Later, probably three or four months before the event, I had widened that communication meeting by asking Joe Barraclough to give us a report every morning of - as to the - as to the state of any injuries that we had incurred, lost time or no lost time injuries, or any other problem that he saw, and there was an emphasis as well on reporting the preventative maintenance side of things because we were in the process of introducing a preventative maintenance scheme, and I was hearing reports on the amount of maintenance that had been done and as a comparison with what we had planned to what we had achieved, so all that system was still in its infancy. It could have - you know, it was going to grow, but the methods weren't in place.

In terms of people's knowledge of what was happening underground - in the working panels particularly - at the time that you arrived and were able to assess this system, what was your view in that respect; that is, was there a system that enabled people to know - those people that needed to know - both at your level and going down from your level - was there a system that enabled those people who needed to know what was happening to find out what was happening?-- Because of hot seat changeover, my assessment of the situation was that that communication was good. At the mine I worked previously, there was no hot seat changeover, and that could create problems from time to time. Because of hot seat changeover, I

perceived the system working well and I witnessed the system working well. Every morning I saw the deputy liaising with the undermanager at change of shift - that was between night shift and day shift, day shift and afternoon shift as well. I was not there on afternoon shift/night shift, but I had an opportunity to witness two changes of shift, both on the surface and underground.

Now, the hot seat change-over system, of course, depends - system of communication, really depends on there being good oral communication between the incoming shift and the outgoing shift; is that right?-- That is correct, but there is a piece of paper which is a statutory report. As far as the deputies are concerned and as far as the undermanagers are concerned, the shift undermanager's report, that should support any relevant matters that are talked about.

That's what I wanted to come to now, the written communication, the actual recording of incidents, because as we have seen in the course of evidence, information, it seems, didn't get through to areas where it should have. Now, first of all, did you consider that there was enough information going on to the deputies' reports?-- We had reviewed deputies' reports in an attempt to improve the information flow. As far as I could ascertain deputies were fulfilling their duties in that regard, yes.

You didn't see any need to give any specific training to deputies as to what sort of information they ought to be putting on their reports?-- At the time I didn't perceive the need to do that training. My assessment was that the deputies were putting the relevant information in regards to their statutory duties on their report.

The next level, of course, was between the deputies - between the undermanagers and then the undermanager-in-charge and yourself?-- Correct.

It seems that the written side of that communication at least was by way of the underground shift report. Am I correct there?-- That is how I understand the system, yes.

Did you discern that there was any supplementary system for notes to be made of particular matters and recorded in some way or passed up to other - passed on to other undermanagers or up to the undermanager-in-charge and yourself?-- On more than one occasion I witnessed loose bits of paper going from one deputy to another or between George and the undermanagers, but they would be concerned with information regarding production basically or - the nuts and bolts basically. Any pertinent and relevant information I would expect - I was expecting to see in the undermanager's report.

When you actually saw undermanagers' reports, first of all what was your impression? Did you think that they were being used to record relevant information, and here I'm referring to facts such as the detection of an unusual smell in a panel or any concern about a rise in the CO make, that kind of thing? Did you see any evidence that those items were being included in the underground shift reports?-- Before August '94 I didn't see such events being reported in the shift undermanager's report, but I would like to say that I was expecting them to be reported in the undermanager's shift report.

Having a look at the shift report, perhaps now with some benefit of hindsight, they seem to have developed into a

fairly rote practice of putting in certain pieces of information, mainly in respect of what was happening in a panel, in respect of production and in respect of some ventilation changes, but that seemed to be about all, would you agree with that?-- There is a column there for comments, and in my opinion an undermanager, if became aware of any relevant information either oral - through verbal communication or through a report and he considered it relevant, I was expecting that information on the shift undermanager's report. Just even as a mention. You know, I'm not saying that - if it was a matter of importance I would expect verbal communication as well, but I would - I was expecting at least a mention in the shift undermanager's report.

If there was a significant matter there needed to be some record of it -----?-- That was my understanding of the system, yes.

Can I ask you this: was there at any time any step taken to make sure that undermanagers knew that they should put all significant events into their shift reports?-- My understanding was that the Quality Assurance system was documenting what was actually happening. It is a shift undermanager, Mark McCamley, and Mr Phil Reed, that had been previously responsible for the underground that devised that system. So when I read that system, to me it was a reinforcement of what was happening at the mine.

Well, we have seen the documents that relate to the Quality Assurance - or the system at least that was said to reflect the existing system but registered as part of the Quality Assurance scheme?-- That is correct.

In particular in respect of communication. Now, what you say is correct in that that system did provide for all significant incidents to be recorded in the shift undermanager's report. Now, you say you read that document, you were obviously aware of it?-- Yes.

Did you take any steps or were you aware of any steps being taken to make sure that undermanagers and everybody else for that matter, but undermanagers in particular and the undermanager-in-charge, were familiar with what was in that system in the registered Quality Assurance document?-- I was left under the clear impression that what we were documenting was actually what was happening. So at that time I did not perceive the need to issue the different people, if you may say so, with those documents, but I'm sure that some people would have been aware of it, but I'm not saying that everyone was aware of it.

There was no formal step taken to give everybody a copy of that Quality Assurance document with a directive from you to say, "Read this."?-- That's correct. I never gave any formal notification. However, I was taking steps to make everyone aware, and that goes for my staff through to deputies and the miners, of what the Quality Assurance system was all about and that was done in conjunction with Phil Reed. Phil Reed did

first a Quality Assurance awareness session that lasted four hours that explained the system, and for the last two or three safety meetings I dealt myself with relevant matters as regards to Quality Assurance. However, it was still in the broader term. It hadn't come down to the nuts and bolts.

Now, turning back just for a moment to the oral communication system which, I think I have correctly assessed from what you say, you regarded as the primary means of communication amongst the people that we have spoken of to be backed up with the written one by way of the shift reports?-- To be backed up by the written one, yeah.

Was there any way of checking to make sure that that oral communication was taking place so that people that needed to know at your level, senior or the undermanager-in-charge level and all the undermanagers, so that they would all know what was happening at any given time?-- Well, I've witnessed it on more than one occasion underground at the change of shift where deputy talked to deputy or miners talk to miners, and I've witnessed shift undermanagers communicating to each other not only about production matters, but safety related matters as well like a change in the regulators or other matters. I was there at the three change of shift.

Now, one of the problems that at least appears to present itself is that there can be an accumulation of events which looked at separately may not have the same significance as if they were all looked at together?-- That is correct.

Do you understand what I mean?-- Yes.

Now, again saying with this question of communications and recording of incidents, it appears that there was a difficulty in the system, even if the system was being perfectly carried out, that is things recorded on deputies' reports, things recorded on underground shift reports, people talking to one another at the change of shift. Even if that system was perfectly carried out there still seems to be a problem in that we don't have any place in which - any system whereby either you or the undermanager-in-charge, or for that matter the other undermanagers, could immediately become aware of that accumulation of events?-- I am not aware of such a system existing at any other operation.

You would agree from what we have become aware of, at least in evidence here, that that is a problem that would need to be addressed?-- In principle I agree with what you are saying, but like any system it's only going to be as good as the people that work the system.

Were you conscious of any problem such as that whilst you were at Moura No 2?-- I did not perceive that as being a problem because I regularly read the shift undermanager's report.

You regularly read the shift undermanager's reports?-- That's correct.

I was about to ask you, under the system as it was when you

were administering it, who should it be that became aware of the accumulation of events? If seems from what you say, you would say first of all you would expect you would become aware of everything through the shift undermanager's reports. Only yourself or was there -----?-- If all the relevant information were recorded on the shift undermanager's report, all senior management at the mine would become aware of the relevant information.

Now, I want to turn to another matter and that is the question of the design of the 512 Panel. I know you do make some mention of it at page 14 of your statement, and if I can turn to what's dealt with there, first of all you say something there about the operation and design features of the 512 Panel about quarter of the way down the page. You refer to the fact that you, "...considered that continuing with the method whereby two sides of the pillars were stripped was becoming uneconomical because of the increasing size of pillar required on development to achieve long-term stability.", and that it was against that background, it seems, that this method of take a row, leave a row was trialled in 401, 402 panel to a mining height of three metres. Now, can we move from there? What involvement did you have after that then in the developing of the design for 512?-- As registered manager of Moura No 2 underground I am the person that submitted the extraction plan. So I was involved with ACIRL and Jacques Abrahamse in the discussions of the different options.

Perhaps you can just briefly describe what occurred. ACIRL became involved; is that right?-- That is correct.

Jacques Abrahamse liaised with ACIRL; did you have much involvement in that process?-- It was really a three-way communication, sometimes involving George Mason as well to the final stages.

Now, the final design was produced, in effect, by ACIRL as a result of that process that the correct statement - the three-way process that you've referred to?-- Yes, it was chosen as an option.

Did you yourself see any areas of concern in respect of the design?-- I did not.

The guiding principle was to maximise the amount of coal that could be extracted and yet maintain the process within proper safety parameters; is that so?-- Yes, we were aiming at maximising the extraction and assuring regional stability. Local stability had an importance as well and that's reflected in the risk analysis.

Now, before I come to the risk analysis, at some stage before that risk analysis was carried out did you receive a letter from Professor Galvin who had visited the mine?-- That is correct. I received that letter after Mr Galvin visited the mine a fortnight earlier or so.

Could the witness see Exhibit 162, please, Your Worship, and 163 while that's being obtained too. Mr Galvin was invited to

come to the mine - or Professor Galvin was invited to come to the mine to, in effect, assess the design of the panel?-- Can I correct that?

Sorry?-- I have to correct that, Mr Clair. Mr Galvin was not invited to the mine to assess the design. Mr Galvin invited himself.

I'm sorry, I didn't mean to put it that way. He was involved in a program of his own; is that so?-- Yes, he approached me if he could come and visit Moura No 2 underground because he was doing some work on pillar stability, and he knew through his association with ACIRL that we had done quite a bit of partial extraction and he was wanting to, sort of, know what the different parameters were in order to upgrade his model.

When I said that he was invited to come to the mine, I mean after he expressed an interest in coming he was invited?-- Correct.

To do so -----?-- But I didn't ask him to come to look at 512, so the opinion that he referred to in his letter about 512 was after his visit to 512.

What I in fact intended to say in the rest of my question was to assess the panel for purposes associated with the program that he was carrying out?-- Not really. He was interested to see old extraction areas as he was - during his visit - I believe Mr Walker was with us actually - he took an opportunity to have a look at the existing operation.

In any event he came there, in effect, to get information for his own purposes. While he was there he saw 512 Panel; is that right?-- That is correct.

And after he went away again he then wrote a letter in which he expressed some concerns about the panel?-- That's correct.

That's Exhibit 162; is that right?-- That is so.

He actually suggested in the course of his letter - or asked whether consideration had been given to undertaking a formalised risk assessment to address the issues that he raised in his letter and others associated with the underground environment at Moura Colliery; is that so?-- That is correct.

You spoke with Professor Galvin yourself while he was there?-- Yes, and so did Mr Walker.

Did he express concerns whilst he was speaking with you at the mine or were they only expressed later?-- I don't recall the extent of his concern being as outlined in this letter expressed to me verbally. He made some comments while he was at the mine. I've got no clear recollection of the comments, but he never suggested to us at the time that we ought to do a risk analysis. That came through the letter.

After you received his letter was there some step taken

towards setting up a risk analysis?-- As far as I can recall, when I received the letter - it's dated 6 April here, but I made Mr Walker aware of the situation and I faxed to him the content of that letter.

And Mr Walker wrote you a letter subsequently, that's Exhibit 163?-- Yes, I would like to add that when I - I contacted Mr Walker by phone, faxed him the content of the letter and I stated that in that - through the telephone conversation and through the fax, I believe, that we were planning to undertake that risk assessment that Mr Galvin had suggested after discussing the matter with him.

That was specifically mentioned then by Mr Walker in his

letter to you?-- That's correct, in his approval he mentioned that the extraction could carry on providing that risk assessment was done.

Now, who carried out the risk assessment?-- An organisation called Minerisk, I believe. It's a subsidiary of ACIRL, I understand. I'm not sure.

And ACIRL, of course, have been involved in the design of the panel?-- That's correct.

Did you give any consideration to getting an independent risk assessment done?-- I was aware that the New South Wales industry is using the concept of risk assessment a lot, and Minerisk had developed a knowledge of the underground coal industry, so I recognised that they probably were the best in the field, I considered at the time, to conduct that risk assessment with some underground knowledge as well.

Well, if I can move on to the history, in effect, of 512 Panel, particularly once it moved into the extraction phase. In fact, early in the extraction phase you had occasion to speak with the crews that were going to be involved in extraction of the panel; is that so?-- Yes, before extraction is started, I stated in my Part 60 submission, I personally present the method of extraction and all relevant data and plan at a safety meeting.

At a safety meeting, and were all the men there who were going to be involved in the crews?-- All the crews and other - all the mine workforce.

Perhaps the witness could see Exhibit 160, Your Worship. Just while that is being obtained, Mr Schaus, you made your weekly inspection, as required, of the mine and you reported in the mine record book accordingly; is that right? As a matter of practice I am speaking about?-- Yes.

I will take you to the third page of that document that's just been placed in front of you there, which is for 6 May, or perhaps I should take you to the entry at the top, 3 May, first of all, and you mentioned there in respect of 512 section: "All crews have been familiarised with extraction procedures for 512."?-- Sorry, that's a reference to what I've just been speaking about.

You go on to say, "It was stressed to all people to remain in the low mining height" - that is, under three metres - "in order to limit exposure to ribs and roof. Future extraction areas inspected."?-- Yes.

That reflects what you spoke with the men about at that stage; is that right?-- My presentation is a lot more than just mining height of three metres, but that was the main emphasis after an incident we had.

Now, the next entry is in fact for 6 May, and you make reference there to: "All crews have been spoken to in regards

to amount of coal extracted. Procedures were reinforced with the need for" -----?-- Continuous miner.

Continuous miner is "CM", is it?-- Yes.

"...continuous miner driver, cable attendant and shuttle car drivers not being exposed to a rib height greater than three metres maximum. As much bottoms to be mined as possible without compromising those principles.", and you mention about operational problems due to the continuous miner being bogged at the bottom of the ramp. Now, what occurred to give rise to that event that you have referred to in the entry?-- As I recall, I was made aware that more coal than the extracted plan had been taken in that bottom return. I felt that some action had to be taken straight away. I didn't want that situation to continue, so I pulled all crews and told them in no uncertain terms my understanding of the situation and reinforced the fact that they had to stick to the extraction plan. If that was not the case, I would alter extraction or even stop it.

When you say more coal was taken than should have, was it too much taken off the side of one of the pillars or the remaining stooks or -----?-- Well, it involved the sides and the bottoms.

And the bottoms?-- Yes.

Too much taken out of the bottoms also?-- Well, both.

Well, if I can move on to the next entry that you have made, 12 May, over the page, 512 Panel. You make reference there to ongoing problems being experienced with the bogging of the continuous miner. Just pausing there, was that a difficulty that arose out of the method of extraction or out of the nature of the coal?-- I believe it was a bit of both. The operators were not used to the short ramping system that I introduced in conjunction with Mike Walker after a serious incident at the underground, and there was a layer of soft coal approximately two metres from the roof that the miner had to go through and that did create a problem in that area.

You mention there a procedure to be developed to pull out the continuous miner using a shuttle car?-- Yes. Well, I witnessed on a few occasions that the shuttle car was used to pull out the continuous miner by the use of the chain. I could see potential danger, serious risk involved in doing that, so I instructed George Mason and Joe Barraclough to conduct a mini risk analysis and a procedure to be drawn up to cater for that problem, and that was done straight away. We involved all people that were actually doing the procedure. We involved the car driver, I believe, a miner driver, a deputy, and George was involved as well, I believe.

Now, had that situation involving the shuttle car pulling out the continuous miner occurred on a number of occasions or was it just on the two occasions up to that point?-- Well, I had witnessed it during my inspection and I was made aware that that was a problem for certain times or -----

It had happened on other occasions?-- It had happened on other occasions, on other shifts, yeah. It reduced significantly as we were coming out of the section.

But on each occasion at least until the new procedure was developed there was a dangerous situation that arose and you felt that needed to be addressed; is that right?-- Well, I saw the potential for a dangerous situation. I'm not saying that what the people were doing at the time was dangerous, but I wanted to make sure that - because it was carried out on a more regular basis than I had anticipated, I wanted to be proactive and make sure that proper procedures were followed, and they were followed.

Sorry?-- And they were followed.

You refer later in that same entry to risk analysis and deputies' training taking place. What did that refer to?-- That refers to the risk analysis we conducted at the mine which involved Mr Walker and Mr Madden as well, and the training relates to two days training that ACIRL did in regards to deputies, make them aware of the conditions of underground. We were creating larger span and we were concerned about the local stability. In the design of 512 the regional stability was taken care of but the local stability is a matter for judgment by the people underground, and again in New South Wales I was aware that courses were conducted involving undermanagers, deputies from different mines and mine managers to make them aware of the mechanics of pillar extraction and what to look for and the pitfalls that people fell into, and there were studies of old incidents as well, and I thought that was a good idea to introduce to the deputies at Moura No 2 Underground after the change of method.

Okay. Now, on the following line in that entry you have noted: "Panel requires close monitoring and a hazard identification plan to be developed." What were you referring to when you say there "panel requires close monitoring"?-- The close monitoring refers to the shift undermanagers, or any other official, and deputies making sure that we were complying with the procedure that had been laid out and the different procedures that had been laid out as a result of the risk analysis.

Can I go to the next entry, 19 May '94? Towards the end of the 512 Panel entry you have these words: "Procedure for the pulling out of a 'bog' by the shuttle car has been developed and communicated to 512 crews." Now, does that indicate that there was some result from the process you had instigated the previous week?-- Yes. That doesn't mean that it was done on that day, but the procedure had been developed by the 19th and I record that fact in my inspection.

If I can go over to the next entry, 27 May. You have noted there, the last two lines of the 512 Panel: "People appear to adhere to procedure." You go on -----?-- They are the procedures that resulted from the risk analysis.

In the next line there is a reference to the extra roof and rib support being installed and then something else, "before" -----?-- "Before the sequence plan is drawn." That's part - the risk assessment determined that a hazard identification plan had to be developed for each row of pillar, and before the sequence plan was allowed to be drawn up by the undermanager-in-charge that work had to be completed or the sequence plan was not issued, and without a sequence plan being issued the mining would not take place. So, they were the check and balances that were put in the system to ensure that the procedures that we developed as a result of 512 risk analysis were actually into place and not just words on a piece of paper.

Can I go to the next entry for 2 June? You have there, third line of the 512 section entry, "Loose coal on floor increasing CO readings in return. CO readings being monitored weekly." Do you see that there?-- Yes.

Now, what did that refer to?-- That refers to the CO graph and the weekly readings that Allan Morieson did.

So, you were referring to the CO make there?-- Yes.

The CO make graph. Were you yourself keeping an eye on that or was this a feature that was mentioned to you by somebody else about the loose coal on the floor increasing the CO readings in the return?-- I remember discussions with Allan Morieson - I don't know if Jacques Abrahamse was there - but that was the explanation for the rise in CO, and we all concurred.

You can't recall who suggested that?-- No, I can't recall. I think we all agreed. I don't know, I can't suggest I recall it.

And then if I can go over to 9 June, just briefly, the 512 Panel entry. There is a reference there to CO readings increasing and being closely monitored. Do you see that there?-- Yes.

It's the third last line. Again, what led to that entry?-- What I meant by that, that the CO was rising, and the "closely monitored" was the Unor. The legal requirement is for a weekly CO make to be done and a daily CO reading in the panel being done or a continuous monitoring system, and the "closely monitored" referred to the Unor system. That took a sample every 15 minutes or so.

Who did you understand was doing the close monitoring?-- All people involved at the mine, including myself.

Was it somebody's job particularly to be keeping an eye on the CO level in 512?-- Well, I understood it to be my responsibility that I shared with everyone at the mine.

But nobody in particular had the responsibility of carrying out this close monitoring of the CO readings?-- As I say, everything that's happening at the mine is my responsibility,

090395 D.40 Turn 15 mkg (Warden's Crt)

so I was watching it with others.

Your Worship, that might be an appropriate time, if Your
Worship is intending to take a short break.

WARDEN: Thank you. We might take a short break, but I would
indicate I do wish to go through till about 5 o'clock today.
Thank you. 10 minutes.

THE COURT ADJOURNED AT 3.28 P.M.

THE COURT RESUMED AT 3.51 P.M.

ALBERT HUBERT SCHAUS, CONTINUING:

MR CLAIR: Mr Schaus, I want to ask you about events following the 11th of June. The last report we referred to there was the 9th of June and, as you know, there has been some evidence about events in the panel on the 11th of June when there was some difficulties with the ventilation. Can I ask you, first of all, what you became aware of in relation to that? Would you have seen the deputy's report?-- I don't recall having seen the deputy's report, but I recall a deputy, and it would be Kenny Guest, approaching George Mason and myself early in the week. I don't remember the 11th specifically.

Well, the 9th was the Friday, or at least the 9th was the day you made your report, I should say, but you think it was some time early the following week, and what occurred when he approached you and George Mason?-- As far as I can recall, he was expressing his concern about the lack of velocity of the air flow in the top left-hand corner of the panel at the bottom. I don't think that at the time I gave him any reply, but shortly after I remember having a discussion with Allan Morieson about the situation - I can't remember if Jacques Abrahamse was there - and referring to the concerns that Kenny Guest had reported to me. I remember agreeing with Allan Morieson that we were going to open up the door in the stopping between 12 and 13 cross-cut in order to increase the velocity of the air on the top left-hand corner, and therefore address the concerns from Mr Guest.

When you say the stopping between 12 and 3 cross-cut, there was a stopping in each of the headings between 12 and 13-----?-- It is the stopping between 1 and 2 headings, 12 and 13 cross-cut.

And 12 cross-cut?-- Sorry, yeah, I'm not thinking straight. It is the stopping at 12 cross-cut, the last stopping.

Between 1 and 2 headings?-- Between 1 and 2 headings, yes.

You understood that that stopping didn't have any door in it?-- By design it didn't have any door in it.

And did you say you discussed with Allan Morieson opening up a door in that stopping?-- Yes, we discussed the problems and we agreed that would be an appropriate course of action, and I do believe he went underground and carried that out within the shift.

Now, there were, of course, stoppings between the - in each of the headings between 12 and 13 cross-cuts?-- That is correct, bar the bottom return.

Bar the bottom return, I'm sorry. What was your understanding

XN: MR CLAIR

WIT: SCHAUS A H

as to doors in those stoppings, or windows in those stoppings?-- By design, they were to be left open to ensure dispersion of the ventilation flow throughout the back of the panel. If they were left closed, that would inhibit the ventilation in the top left-hand corner.

Did you have any concerns yourself about the adequacy of ventilation through the goaf area that was being created on extraction?-- I never had any concern about the adequacy of the ventilation, but I observed low velocity in each extraction section as extraction was carrying out. That's an inherent part of the process.

As the goaf got larger, velocity dropped; is that what you mean?-- As coal is removed, velocity drops in the area where coal has been removed.

With the opening of a door in that stopping between 1 and 2 headings in 12 cross-cut, that would have the effect of creating a new path, a new path for the air that was ventilating the goaf; is that right?-- That would assist in increasing the velocity in the top left-hand corner.

In doing that it would decrease the velocity elsewhere; is that so, I mean assuming that the air quantities remain the same?-- Assuming that the air quantity remains the same it would take small increments of velocity away from the other part of the panel, yes. It would not take it from one particular site.

Would reduce the pressure in other areas if quantities remain the same?-- It would reduce velocities in other areas, but that would be distributed over the width of the panel, not in a certain area. So you could have six or seven cubic metres per second through that door. It doesn't mean that six or seven cubic metres per second is not going through No 2 heading or No 4 heading. That would spread itself.

Did you see any difficulty with the quantity of air that was being provided for 512 Panel at that time? In other words did you think there was sufficient quantity of air going through the panel?-- Yes, I always did.

Taking into account the opening of this door in 12 cross-cut?-- I've never doubted the adequacy of the ventilation flow in 512 or any other panel for that matter.

Well, if we can just go back to your record book, you carried out an inspection on the 17th -----?-- That is correct.

----- of June, and in respect of 512 there you said - second line I'm reading, "CO being monitored closely. Problems being encountered ventilating old workings through to lack of velocity. Layering. Action taken to improve ventilation and flushing." I think I've read that correctly?-- Yes, you have.

Now, just pausing there, what did that refer to?-- That referred to a report by Mark McCamley the previous - that same morning.

On the 17th?-- On the 17th, yes.

That didn't refer back to the earlier difficulties raised by Kenny Guest earlier in the week?-- No, it didn't. That matter had been addressed.

This was another report then on 17th of problems with ventilating the old workings. Now, first of all, I should ask you what precisely happened on the 17th as far as your involvement was concerned?-- During the morning I had discussions - I was in conference with people from ACIRL, namely David Hill and Russell Frith. I believe Jacques Abrahamse was there as well, but I can't be 100 per cent sure, and we were having discussions in the - in Allan Morieson's office, just the outside little corner from Jacques' office.

I recall being made aware that Reece Robertson had a problem with methane and carbon monoxide at the transformer in the travelling road. I understood that the section was done and Mark McCamley was sent down to investigate the matter. When he returned to the surface I left the people from ACIRL and we had a discussion in what's been referred to as George's office which I share with him, that is Mark McCamley, George Mason and myself. I cannot recollect all the details of the conversation, but I do recollect what he had observed which he was explaining to us as being two currents of air. He noticed that by throwing stone dust in the air, one warmer current travelling outbye and a lower current of air, of incoming fresh air, travelling on the bottom side. I understood that was happening just at the start of the ramp in No 2 heading. I don't have a clear recollection of all the actions he took, but I do remember him telling me that he or someone closed the bottom return regulator and I understood that that action helped the situation a great deal. I remember saying to Mark that I perceived the problem being maybe a brattice stopping in No 2 heading being too tight. By that I mean that I knew the miner was working in the bottom side of the panel. In order to direct ventilation towards the continuous miner brattice stoppings had to be erected in No 2, No 3 and No 4 roadways if they were required. However, if those stoppings were very air tight methane and CO could build up behind those stoppings. We generally are pushing around 40 to 45 cubic metres per second in the lifting section. The operators and the cable attendant do not require that amount of air to go over the machine in order to disperse the dust and reduce the gas concentration, so I perceived an opportunity - not an opportunity, but I perceived that a certain quantity of that air coming into the panel and flowing on to the miner should be directed and leaked through these stoppings which are namely No 2, 3 or 4, and I vividly remember telling Mark that's what we should do from now on, insist on these stoppings being erected, but leave a certain distance from the roof so that would help ventilate the area behind the brattice stopping and that would clear the layering. Layering occurs in underground coal mines, as I understand, due to lack of velocity, not quantity. That is the extent of the exchange as I recall it.

Did he tell you much about what he had done, or first of all, about what he had observed and then secondly what he had done whilst he was down there?-- The report he gave me took some time, so I recall about the layerings, that's what he had observed, and he talked to me about what he has done, but I do not have any clear recollection of other actions he took. I vaguely recollect that he has done something else than closing that bottom regulator, but I cannot repeat here now what he has done.

As I recall the evidence, the stoppings across those roadways, No 2 and No 3, were at 7 cross-cut where the workings were at that time and he described walking down the ramp and how, as you've said, there was a layering just behind the stopping. Did he say anything to you about making a much wider inspection of the goaf area?-- I honestly can't recall.

Did he say anything about readings which he took at the junction of No 2 heading and 9 cross-cut?-- I don't think he would have bombarded me with readings that - really details of his inspection. I was interested, as manager, in what he found, the basics of what he has done and was it successful. So I remember it in those terms.

Did he say to you anything about being able to smell a slight tarry smell at any time?-- He did not.

Anything about being able to smell the smell in that upper warmer layer of air but not being able to smell it when he walked down the ramp. Did he say anything like that?-- I never heard any mention of a tarry smell or any other sort of smell.

Now, do you know if action was taken on your suggestion about, in effect, reducing the height of the stoppings in No 2 roadway? Was that something you wanted done in respect of those stoppings that were up or were you talking about the way the problem was to be handled in the future?-- Well, it was sort of a suggestion by me and I was bouncing that suggestion to him, and George would have been there too, I believe. At that time I understood that the main solution to the problem he had experienced - or the main cause of the problem he had experienced was the bottom return regulator being too open. By design that return is only designed to carry five or six cubic metres per second because there is no mining taking place in that return and the design was laid out so the bulk of the air, the majority of the air would go through the goaf where it is required, and I understood him to convey that there was more than the five or six cubic metres per second that was required in the bleeder return. So I understood that as being the major cause of the problem.

Let me ask you, how did the conversation with Mr McCamley finish in terms of what action was to be taken or -----?-- What he had done had fixed the problem. What I suggested - I am not sure that if that's what he had done or partly what he had done, but I thought it was an extra provision that would help deal with the situation.

Now, if I can just for a moment refer to some deputies'

reports, and perhaps I should ask you: did you see any deputies' reports from 512 Panel relating to that day, 17 June?-- I might have, I'm not sure. I can't recall.

Could the witness see Exhibits 41 and 44, please, Your Worship? Now, 41 I will ask you to look at first of all, if you would, Mr Schaus. That's for the Friday night shift, so it's in fact completed on the morning of the 17th, and it's a report from Bob Newton. I simply want to draw your attention to the action taken on the - "Action Taken" box on the second inspection where Mr Newton noted: "Trying different methods to clear methane from top road."?-- I see that, yeah.

Now, was it mentioned to you that there was a problem with methane in the top road?-- On that day I did not become aware of any problem with methane on the top road until someone advised me of the phone call from Reece Robertson.

And then you will see also that Mr Newton has said, "Asked undermanager to get more ventilation for panel." Was that drawn to your attention at any time?-- I can't recall. Those type of ventilation, small ventilation changes, are well within the scope of the undermanager-in-charge.

Can I ask you to look at Exhibit 44? That's Reece Robertson's report. It deals with these events on the 17th when Mr McCamley was involved. He records there being 10 ppm of CO found between 5 and 7 cross-cuts No 2 heading. Now, was there any discussion with you about the level of CO readings on this day, any expression of concern about it, or even mention of it?-- I knew that there was methane and carbon monoxide in No 2 heading. Some levels might have been mentioned but I cannot recall those levels. They were not - it's the levels - I perceive the levels not to be alarming that were mentioned to me. It's just their position in the intake roadway at that point.

Can I draw your attention to the action taken? First of all, Mr Robertson also mentions the ventilation is recirculating in No 2, you see, but I want to draw your attention to the "Action Taken" column in respect of the first inspection there where Mr Robertson records: "Opened the stoppings across the bottom of the panel." Now, what was your understanding? Those stoppings across the bottom of the panel should have been open in any event; is that so?-- By design they were to be opened all the time.

He goes on: "Bagged off across in front of the miner to clear the transmission" - is it - "supply road"?-- Supply road.

Now, was that an action that you understood was taken before or after Mr McCamley's inspection? Was that reported to you?-- Mark McCamley might have told me that, I'm not sure.

And then in respect of the second inspection there is an entry by Mr Robertson that ventilation was still slow down the No 2 and in the waste, and in the "Action Taken" column there he has noted: "The bottom return has been completely bagged off

up in front of the prep seals." Is that an action that was taken with your knowledge, the bottom return being completely bagged off, or did you understand it was just being slowed down in the bleeder return, or at least in the bottom return?-- As far as I recollect, it would have - I recollect it being slowed down, not completely bagged off, but I'm not 100 per cent sure.

Okay. The general comments at the bottom were that an eye must be kept on No 2 heading to ensure that ventilation doesn't recirculate. Was that something that you were aware of or at least thought should be done as a result of these difficulties? That is, that some particular watch or closer eye should be kept on what was happening in the panel?-- I agree with that course of action. However, my perception at the time was that the closing of that bottom return had solved the problem and the measures I suggested at the time to Mark McCamley might help deal with that particular problem.

Can we go to your next inspection which was 22 June? Over the page, 512 section, second line you have noted: "Ventilation adequate. CO readings over goaf seem to have stabilised.", and then you say, "Situation and CH4 monitored closely." Now, do you recall what it was that prompted you to record that the CO reading over the goaf seemed to have stabilised - CO readings?-- That would have been a reference to the CO make graph, I believe.

And had you been looking at those graphs from week to week?-- Allan Morieson had - Allan Morieson - every week he produced a graph, distributed a copy or left a copy on my desk. If there was anything special we would talk about it, otherwise it was left there on my desk, so, yes, I received a copy of the graph on my desk every week.

Could the witness see Exhibit 110, please, Your Worship? You have probably been in Court, Mr Schaus, when - no, I am sorry, it's Exhibit 110. I think what you have been given in fact is document 110. It's designed only to make it confusing. There we are. You have probably, whilst you have been in the Inquiry here, heard reference to this document. It's the bundle of graphs progressively produced by Mr Morieson from week to week, although the dates shown on a couple of them are incorrect. I don't think I need to take you through that?-- No.

They are progressive graphs. That's the document, or at least those series of documents were the ones that, in effect, were delivered to you from week to week for the periods that are mentioned there?-- That is correct.

Did any of those cause you any concern?-- No, it didn't.

They were all within what you regarded to be safe parameters in terms of the CO make?-- Yes.

Just go to the one third from the back which was the one that was produced for the week ending 10 June?-- The second.

It's the second on yours, I'm sorry, yes. I think what's happened is that the actual exhibit has been arranged in the order that the date is shown rather than the correct date. That's why we have this confusion. But you know the one I mean. I will turn it around. The last date on it is 10 June?-- That is the one, yes.

Now, you have spoken about the thing to be watched with the CO make being whether there is something that might be described as an increase in the rate of production which would be on a graph represented by an upward change in direction compared with what you have seen before that as a general trend; sometimes described as an exponential rise, it seems. Now, if you look at that graph, is it fair to say that there does seem to have been over that week from 3 to 10 June precisely what I have just described, a fairly rapid upward change in direction when compared with what had been happening before that?-- My understanding would be that if that was the start of a heating, which, if you just look at those two figures between the 3rd and the 10th, you could interpret it as such, but had there been a heating the graph would have carried on.

But what about on 10 June itself? Did it cause you any concern on 10 June?-- It did not cause me any concern on 10 June because the parts per million stayed the same. Had they been increasing steadily first and then at an ever increasing speed, I would have been concerned.

When you say the parts per million stayed the same, over what period are you talking about there?-- Parts per million or CO make are really the same thing. The difference is the velocity, so CO make is more accurate, but assuming that the velocity - the quantity is the same in the panel, if I considered there was a problem - I am talking in parts per million now - 10th of the 6th, I don't know what the parts per million would have been, around 4 to 5 maybe.

Well, I understood you to say earlier - and in fact you have just repeated it now - that it's really the CO make that gives you the best picture as to what's happening and that you came to that appreciation not long after you arrived at Moura?-- Correct.

So, isn't it the case that the purpose in measuring, calculating and plotting the CO make was to see what was happening with the CO make?-- Correct.

Because that gave you the best picture?-- Correct. I can talk in terms of CO make if you wish.

Right. I am just finding it a bit difficult to see why we go back to parts per million when what we are looking at here is the graph showing the CO make. What I was asking you is whether on 10 June that graph would have caused you some concern?-- If the measurement that was taken on 10 June, which is - I haven't got the tabulation, but it appears to be 11.5 or so -----

Yes?-- ----- litres per minute. If another measurement was

taken on the Saturday and it would have gone to 13 lpm, on the Sunday it would have gone to 15 lpm, and on the Monday 20 and so on, then I would have been concerned.

Well, what you are saying, in effect, is that this graph that we are looking at by itself may cause you to look more closely at what happened or what was happening after this to see whether in fact the CO make was, to put it one way, taking off?-- Yes, that is what I mean. I would look at what is happening after within a shorter time frame than the week.

Did that happen, though? Do you remember whether you did closely monitor it after 10 June?-- The Unor is taking samples every 15 minutes. Now, I know we are going from litres per minute to parts per million again, but my understanding is that the quantity that we kept in a lifting section was always around the 40 to 45 cubic metres per second, so although watching the parts per million was not as accurate, an ever increasing exponential increase in litres per minute of CO make would have to be reflected in parts per million.

Well, of course, that depends very much on the assertion that the total quantity of air would be kept at the same level; is that right, or pretty much the same?-- Or pretty much the same, yeah.

Now, could the witness see Exhibit 196, please, Your Worship? What I am going to suggest to you is that perhaps that assumption is not one that you could safely make; that it's the column that's the seventh, I think, or sixth from the right that shows the total quantity of air through 512 Panel, and in fact there was a reasonable variation of the air quantities, wasn't there? I mean, we went from 48 on 27 May to just over 38 - or 47.9, to be accurate, on 27 May down to 38 on 3 June and back up almost to 47 again, then down to 44 and then down to 35 on 16 June, you see? So, there was really, it seems, a variation in that total quantity?-- I agree, and before - soon after the event I realised that the variations were so great. However, I would like to point out to you that I was on annual leave for some of the time where these variations occurred as well.

I appreciate that. I am simply making the point that the calculation of the CO make and dependence on the CO make had some point rather than looking at the parts per million?-- That is correct, but by the same token I mean to say that I cannot see how the CO make would indicate an exponential increase with the parts per million by the Unor remaining the same just due to the change of ventilation. I can't see - I know what you are referring to, and I know I am inaccurate, but I cannot see how the variation in the air quantity would be such that the CO make - an exponential rise in CO make could be missed with parts per million staying the same. That is what I'm saying.

You can put that last exhibit to one side, if you would. I want to come back to the sequence of events; in particular, what you were making of the CO make, from where you stood, you see?-- Yes.

Now, you have made this note, and I was referring to the 22 June entry, that the CO readings over the goaf seemed to have stabilised. You said that that was by reference to what was recorded in those graphs?-- That's what I presume here without having an actual look at the graph.

Okay. Now, can we perhaps go forward from there. There was then a series of events on 24 June, which was shortly after you had made that entry for 22 June. Did you become aware of those events - the 24th of June? I mean, you have heard evidence about them. I don't think I need to identify them. Reece Robertson contacted-----?-- Yeah, I know what you are referring to. I have a very vague recollection of events that I would put around that date, but I do not remember that date.

Could the witness see Exhibit 45, please, Your Worship? Just while that's being obtained, what was your recollection of what occurred around that date?-- I am not sure if it is on that date, but it would have been around that time that I remember being made aware by someone - and I honestly cannot recall who that someone is - would it be Mark McCamley or George Mason, but it would be one of those people - that the bottom - the regulator on the bottom return was left open again. To explain how that could happen, or at the time how I understood it could happen was that the miners and some deputies in consultation in developing the mining method for 512 had approached me to see if we could lift - or take some bottoms up the hill. It's easy on the machine and you are able to clean up better.

Working from the bottom of the panel up?-- That's right. Now, the only - by design, the only time we could do that was when we were rib stripping the solids off that bottom return towards 511. Other changes in the extraction sequence as initially laid out were also considered, and they were more in relation to wheeling of shuttle cars between 1 and 2 heading. I remember discussing those changes with Mr Walker after an underground visit and he had no problem with the proposed changes. Then I sent him a second - an amendment to the extraction plan to take into account that we were taking bottoms uphill on the return side, which was not in the initial submission. In order to mine coal in that bottom return the bottom regulator had to be open to increase the flow of air above the 5 or 6 cubic metres per second in order to clear the dust and methane during cutting operation. You did not have to open it fully, but you had to increase the quantity. That does happen as a matter of course because people would not cut coal in conditions where that 5 cubic metres per second was available flowing over the machine. However, as the continuous miner came out of that return and started the usual sequence between 4 and 5 heading like it had in the previous sequence plan, officials at the mine - that includes mine deputies and undermanagers on shift - when that happened had to be aware that that bottom return and regulator

had to be closed as soon as they came out of that return in order to flush the goaf fully with the bulk of the air - that's what I mean - not fully, but with the bulk of the air, and not with a reduced amount of air that would be - well, not with a reduced amount of air, because when the air is going to the return, it doesn't go through the waste. My understanding is that - and I'm not sure it refers to that time and that date - is that Mark McCamley or George Mason brought to my attention that although the miner was cutting between 4 and 5 heading, the bottom regulator had been left open. That had no impact on the miner being able to cut, because the bulk of the air was going over the miner; however, it was not ventilating the waste as per the design. I was very unhappy with that situation and I made the decision that taking that rib coal uphill was to stop immediately because I realised that we needed to keep that goaf ventilated with the amount of air available at all times.

You say you are not too sure just when this occurred?-- I have no clear recollection, no.

Of course, according to what is on that deputy's report of Reece Robertson of the 17th that you looked at before, Exhibit 44, the bottom return had been completely bagged off up in front of the prep seals?-- That was not my understanding at the time.

You don't know whether it stayed that way, or whether it was actually done to that extent?-- I don't know, but if sequences were taken uphill, that couldn't have stayed that way.

No, that's quite obvious, isn't it?-- Yes.

So, when you talk about the ventilation being returned to what should be normal after the sequence finished on each occasion, the uphill sequence finished, that would be taking it back to-----?-- To 4, 5 cubic metres, in that bleeder return; that was my understanding.

In any event, you can't say whether this event occurred - that is, your stopping the uphill mining - you are not sure whether that occurred before or after the 17th?-- I think it was after, but I'm not sure. I think it was after.

Well, if that's the case, any bagging that had been done to completely bag off the bottom return had obviously been removed?-- That's right.

Now, we were talking about the events of 24 June and whether you became aware of those. Now, the events that I referred to, of course, were the report by Mr Robertson of his smelling a smell, and in that connection, if you could just have a look at that Exhibit 45 and, in particular, the comments section down the bottom, you will see that Mr Robertson has put in there, "Also informed the undermanager that at this point there was a strong benzene-type smell and to keep a check on it." Did you read that report at any time?-- I never read that report before the incident.

It was never brought to your attention by anybody?-- It was never brought to my attention by anybody.

I take it from what you have said earlier that you would have expected that to be brought to your attention?-- Not only I would expect that to be brought to my attention orally, but at least to be in the shift undermanager's report, yes.

From what you have told us earlier, the existence of a strong benzene-type smell, as it has been described in the written report there, or as a benzeney-type smell or anything like that, that would have had some significance for you?-- Yes, it would.

And what would you do if you were confronted with that?-- There would be a bit of speculation here, because I've never been confronted with that while at the mine.

As a mining engineer, what sort of action would that kind of report require?-- After being informed of such an event - that is, benzene, tar or bitumen smell - to me they are all the same - I would go and investigate the matter myself.

How would you go about that?-- I would like to sort of talk to the person that had detected it, and go and see for myself - to evaluate the situation for myself.

And if you got there and you didn't detect a smell yourself, what - as a mining engineer, what sort of action would you take?-- Again, it is very hard for me to sort of say exactly what I would have done, not having been fronted with that position while at the mine.

Go on?-- I would consult with the deputy, the undermanager and other officials in the most appropriate course of action from them. I would expect a more frequent inspection of that area on a shiftly basis, or even two or three times a shift could be adequate initially, but that would very much depend on some consensus, but by "watch", I mean increasing the frequency of inspection.

On the understanding you had then of the significance of a smell in indicating the possible existence of a heating?-- Yes.

Was a smell the sort of thing that could be present on one occasion and then perhaps not present on another but then back on another?-- I am probably a bit confused between what I knew before the event and after the event now. Before the event I had the understanding that if there was a smell there it would stay there.

Can I address again the copy of your reports in the mine record book? I think I've referred you to the entry for 22 June?-- Yes.

You say that you certainly didn't become aware of that written report of Reece Robertson's. You mentioned the event in respect of the difficulties with the ventilation in the bottom return and the change in the mining system. Do you recall whether anything else occurred after that occasion on 22 June through to 1 July in respect of any difficulties with 512 Panel or did you become aware of anything?-- Apart from what I've been speaking before which is in relation to stopping that sequence uphill, I cannot recall any other time when something was brought to my attention or that I have experienced myself.

Now, your next entry in the mine record book is 1 July, and in respect of 512 you make reference to good ventilation?-- Yes.

And you mention towards the end of the report the CO monitoring is continuing. That reference was simply a reference to the -----?-- To the graph and the Unor.

Then on 8 July you made a further entry?-- Correct.

And in that entry in respect of 512 you speak of the methane and CO make stabilising. Do you see that there?-- Yes.

Again that was by reference to the graph; is that right?-- I would say so, yes. Without seeing the graph that would be by reference to the graph.

Now, the graph for 8 July in fact is in that Exhibit 110 which you still should have in front of you there. In mine it's the fourth sheet from the front, but I won't guarantee where it is in yours. Do you have that there?-- 8 July, yes.

Now, admittedly there had been a drop in the CO make down from 11 June to 16 June?-- Yes.

But then from 16 June to 24 June to 1 July there was again a substantial rise which evened out to some extent between the first and the eighth. Was there any point in time from 16 June through to 1 July that you were concerned about the direction that graph was heading?-- I was not, and it's appropriate for me to make a comment at this point in time. Since I've been at Moura No 2 underground I have been involved with 511 extraction, 403 extraction, 402, 401 extraction and

512. The previous graph showed peaks and troughs that I attributed to errors of measuring instruments, being Drager when it was used or Unor, and to ventilation quantity due to the anemometer. Previous panels had experienced peaks and troughs, and especially in 401, 402, as I recall, it would depend - the explanation that I accepted that was given to me by Jacques Abrahamse and Allan Morieson as I recall, it depended on where the miner was in relation to the width of the panel for that particular Friday. Being some people had noticed a difference in CO make depending if we were mining towards the top return or right at the bottom of the panel. So I never concerned myself with rises even to the amplitude you've been talking about here unless they were continued and sustained and at an ever increasing rate.

What about the actual level, that 8 July reading - I won't take you to the exhibit, but the graph there represents a level of make of 12.52?-- Basically in my head I was drawing a line through these peaks and troughs and that's why I'm sort of staying stabilising because I was drawing a line going from two to between - from two to about eight, 8.5 on 3/6, and then carrying on at a different angle, you know, to 8/7. That is how I saw the real value of the CO make. The peaks and troughs to me were related to errors of measurement inherent to the instrumentation we were using or the positioning of the miner within the panel.

I should ask you this: given that at least there was a CO make calculated of the 12.52 did you find yourself in that position where, as you told us earlier, you had a CO make in excess of the 12 lpm which for that reason required some vigilant monitoring?-- That is correct.

You did?-- Yes.

And when you saw that did you take any steps to ensure that there was a vigilant monitoring process to be adopted given that it got above the 12 lpm?-- Again I considered the Unor taking samples - I know it's parts per million, but you heard my comments before - a sample of CO in that panel every 15 minutes or so was adequate monitoring as far as I was concerned.

You didn't think that vigilant monitoring at that stage might require the calculation of a CO make on a more frequent basis than once a week?-- I did not consider that at that stage because had a heating developed we would have picked it up with the parts per million in my opinion.

In terms of the - again the level of the CO make, did you ever have any discussions with Allan Morieson or with Jacques Abrahamse or with both of them about their expectations of the appropriate level of CO make in the 512 Panel through the extraction process?-- I cannot recall conversations relating to the expected levels of CO make for 512 Panel while I was present. What I do recall is conversations between Jacques Abrahamse and myself about the rate of increase and the explanation that we agreed upon of the reason for that increased rate for the CO make in 512 in comparison to the

other panel.

Mr Morieson told us that he had an expectation given the - what I'll call the background CO make at the commencement of extraction and what he thought was an appropriate rise in terms of increase in litres per minute for each we can. He had an expectation of - I'm relying on my memory - of about 14 - I'm sorry, about 12 lpm at the latter stages of extraction. Was that ever discussed with you?-- Not as far as I can recall.

Mr Abrahamse spoke of his discussions with Mr Morieson about the expected make and I think, again if my memory serves me correctly, his view was that the discussion led to an expectation of around 14 litres per minute. Was that ever discussed with you?-- I have no recollections of discussions of expected CO make before the panel started.

Did you yourself go through any process of calculating what you thought might be an appropriate or safe level, as it were, of CO make?-- I never did because I believe it would be a very difficult exercise to -----

A very difficult exercise?-- I don't think I am qualified enough or I had enough background to do that exercise.

Did you think that Mr Morieson or Mr Abrahamse were appropriately qualified of their own learning and experience to come up with what might be regarded as an appropriate CO make, that is a safe level of CO make during extraction?-- Are you asking me to comment about if they are qualified to calculate an expected level or to make an opinion on the expected level?

To form an opinion as to what was a safe expected level. I mean they were both on your staff?-- That's correct. I knew that Allan Morieson had been at the mine for a while, so I would take his views into account. Jacques Abrahamse, I understood, had a similar background than I did. Although those two people could have a valuable input in that exercise, I do not think they would have the expertise in conducting that exercise. I am not sure that even some experts could do that. I can't comment really. I'm not - what I'm trying to say is I'm not sure it can be done. That's what I'm saying.

Now, we were looking at your entry for 8 July. You in fact went on leave on 11 July; is that right?-- That is correct.

And you returned to the mine - or at least to work at the mine on 2 August?-- Correct.

Had you been there at all during your leave?-- No, I was overseas.

You were overseas. Whilst you were overseas had anybody contacted you in relation to anything to do with the mine while you were away?-- No, I didn't leave my phone number.

I'm not sure how long Your Worship wishes to go. I have some

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little distance to go and it might be appropriate to break at this point and take up after Mr Schaus' leave in the morning.

WARDEN: Yes. I thought that might be the case.

MR CLAIR: We won't ask him to leave his phone number overnight.

WARDEN: No, and I'm not giving you mine either. It's a short day tomorrow, gentlemen; a 9 a.m. start, thank you.

THE COURT ADJOURNED AT 4.59 P.M. UNTIL 9 A.M. THE FOLLOWING DAY

XN: MR CLAIR

WIT: SCHAUS A H

