

1903.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CONDUCT OF MR. ROGERS, AS MANAGER, MOUNT KEMBLA COLLIERY.

Printed under No. 13 Report from Printing Committee, 8 October, 1903.

RETURN to an *Order* made by the Honorable the Legislative Assembly, dated 30th September, 1903, That there be laid upon the Table of this House,—

“All papers, depositions, and documents in connection with the inquiry held under section 10 of the Coal Mines Regulation Act, into the conduct of Mr. William Rogers, as Manager of Mount Kembla Colliery.”

(*Mr. Meagher, M.P.*)

The Under Secretary, Chief Secretary's Office, to The Under Secretary for Mines and Agriculture.

Sir,

Chief Secretary's Office, Sydney, 1 October, 1903.

I am directed by the Chief Secretary to transmit to you herewith a copy of an Order of the Legislative Assembly, for certain information respecting conduct of Mr. Rogers, as Manager, Mount Kembla Colliery, and to request that you will bring the same under the notice of the Secretary for Mines and Agriculture.

I have, &c.,

J. GIBSON,

Under Secretary.

I think the papers are with Mr. Fegan. The Under Secretary.—H.B.S., 2/10/1903. These papers may now be laid upon the Table of the House.—E.F.P., 6/10/1903. Appd.—J.K., 6/10/1903.

6. CONDUCT OF MR. ROGERS AS MANAGER, MOUNT KEMBLA COLLIERY (*Formal Motion*):—Mr. Meagher moved, pursuant to Notice, That there be laid upon the Table of this House all papers, depositions, and documents in connection with the inquiry held under Section 10 of the Coal Mines Regulation Act into the conduct of Mr. William Rogers, as Manager of Mount Kembla Colliery.
Question put and passed.

Memo.

6 October, 1903.

In view of the Honorary Minister's instructions, the papers, of which a description is appended, may be considered sufficient to meet the requirements of the Order of the Legislative Assembly.

For approval.—E.F.P., 6/10/1903. Appd.—J.L.F., 6/10/1903.

PAPERS proposed for submission to Legislative Assembly:—

Date of Papers. 1903.	Description.	No. of Papers. 1903.
June 24-29...	Minute by Under Secretary, suggesting necessity of Inquiry, with endorsement of approval	11,027
July 15	Letter to Judge Heydon, desiring him to conduct Inquiry.	
July 16	Letter to Judge Heydon, with statement of case.	
July 16	Letter to Judge Heydon, covering appointment of Mr. B. Smith, barrister-at-law, to manage case.	
July 17	Letter to Judge Heydon, directing him to hold the Inquiry.	
July 16-22...	Copy of notice served on William Rogers, with certificate of service by police	12,839
Sept. 14	Letter from Judge Heydon, forwarding judgment, order of Court suspending certificate of William Rogers, and report and evidence	17,641
Sept. 17	Letter to Judge Heydon, acknowledging above.	

Memorandum by The Under Secretary for Mines and Agriculture.

Department of Mines and Agriculture, Sydney, 24 June, 1903.

CLAUSE 10 of the Coal Mines Regulation Act provides that—

“If at any time representation is made to the Minister by an Inspector, or otherwise, that any manager or under-manager holding a certificate under this Act, or under any Imperial Act, is, by reason of incompetency or gross negligence, unfit to discharge his duties, or has been convicted of an offence against this Act, the Minister may cause inquiry to be made into the conduct of the manager.”

The clause further provides that :—

“The inquiry shall be public, and shall be held at such place as the Minister may appoint by such District Court Judge, Police Magistrate, or Stipendiary Magistrate, as may be directed by the Minister, and either alone or with the assistance of any assessor or assessors named by the Minister.”

As the report of the Royal Commission on the Mount Kembla disaster contains some rather serious reflections on the manager of the colliery, it may be advisable to have the matter inquired into in accordance with the provisions of the Act quoted above.

E.F.P.

Appd.—J.K., 24/6/03.

His Honor Judge Backhouse may be asked to conduct the inquiry, and he may, perhaps, be allowed the same fees as were paid to Judge Murray in connection with the Royal Commission (Mount Kembla), viz., £5 5s. per day, with railway fares when travelling. If this recommendation be approved, the Crown Solicitor should be asked to prepare all the documents necessary for initiating the inquiry.—E.F.P., 25/6/03.
Appd.—J.L.F., 26/6/1903. Appd.—J.K., 27/6/03.

The Under Secretary for Mines and Agriculture to His Honor Judge Heydon.

Sir,

Department of Mines and Agriculture, Sydney, 15 July, 1903.

As the report of the Royal Commission of Inquiry respecting the Mount Kembla colliery disaster contains some rather serious reflections on the manager of the colliery, I am directed to inform you that the Minister has approved of the matter being inquired into in accordance with the provisions of the Coal Mines Regulation Act. Clause 10 of that Act provides :—

“If at any time representation is made to the Minister by an Inspector, or otherwise, that any manager or under-manager holding a certificate under this Act, or under any Imperial Act, is, by reason of incompetency or gross negligence, unfit to discharge his duties, or has been convicted of an offence against this Act, the Minister may cause inquiry to be made into the conduct of the manager.”

The clause further provides that :—

“The inquiry shall be made public, and shall be held at such place as the Minister may appoint by such District Court Judge, Police Magistrate, or Stipendiary Magistrate, as may be directed by the Minister, and either alone or with the assistance of any assessor or assessors named by the Minister.”

I am to request that you will be so good as to conduct the inquiry, and to state that you will be allowed the same fees as were paid to His Honor Judge Murray in connection with the Royal Commission (Mount Kembla), viz., five guineas (£5 5s.) per day (which will cover all personal and travelling expenses), with railway fares when travelling. The Crown Solicitor has been asked to prepare all the documents necessary for initiating the inquiry.

I have, &c.,

E. F. PITTMAN,

Under Secretary.

The Under Secretary for Mines and Agriculture to His Honor Judge Heydon.

Sir,

Department of Mines and Agriculture, Sydney, 16 July, 1903.

In sequence to previous correspondence concerning the inquiry about to be held under section 10 of the Coal Mines Regulation Act, 1902, into the conduct of William Rogers, manager of the Mount Kembla Colliery, I am now directed by the Secretary for Mines to enclose for your information a copy of the statement of the case upon which the inquiry is instituted.

I have, &c.,

E. F. PITTMAN,

Under Secretary.

INQUIRY under the Coal Mines Regulation Act, 1902, into the conduct of William Rogers, Manager of the Mount Kembla Colliery.

Statement of the Case upon which the Inquiry is instituted.

To William Rogers, Manager, Mount Kembla Colliery,—

TAKE notice, that representation having been made to the Secretary for Mines that you, as manager of the above mine, holding a certificate under the Coal Mines Regulation Act, 1902, are by reason of incompetency and gross negligence unfit to discharge your duties, the said Minister has directed an inquiry to be made into the conduct of you as such manager, and on the said inquiry the following acts, omissions, matters, and things will be relied upon to prove the charges against you :—

1. That you did not enforce No. 10 of the Special Rules established under the said Act in the said mine or cause the said rule to be enforced.
2. That you failed to cause a regular and proper examination to be made of places in the said mine temporarily or permanently idle which were situated on the intake side of working-places.
3. That you, knowing fire-damp to have been given off in the said mine, and that the same seam of coal as that being worked in the said mine gave off fire-damp, failed to cause adequate examinations to be made of the said mine with the view to the detection of the presence of fire-damp therein.

4.

4. That you, knowing that there was an opening or openings on the 5th Right rope-road from the "35-acre" goaf in the said mine, allowed to pass by such opening or openings the intake air intended to ventilate places beyond such opening or openings in which men were to work or pass.
5. That you are ignorant of the nature and quality of the gases met with in mines.
6. That you did not enforce, or cause to be enforced, the General Rules of the said Act or the special rules established under the said Act in the said mine, and were lax in the discipline of the said mine.

JOHN KIDD,
Secretary for Mines.

Sydney, 16th July, 1903.

The Under Secretary for Mines and Agriculture to His Honor Judge Heydon.

Sir,

Department of Mines and Agriculture, Sydney, 16 July, 1903.

I am directed to enclose, for your information, copy of a communication sent by the Honorable the Secretary for Mines to Mr. Bruce Smith, M.P., Barrister at-Law, appointing him to undertake the management of the case on which a certain inquiry is to be instituted into the conduct of William Rogers, manager of the Mount Kembla Colliery, in consequence of the report of the Royal Commission on the late explosion at the said colliery.

I have, &c.,
E. F. PITTMAN,
Under Secretary.

Department of Mines and Agriculture, Sydney.

INQUIRY under the Coal Mines Regulation Act, 1902, into the conduct of William Rogers, Manager of the Mount Kembla Colliery.

To Bruce Smith, Esq., Barrister-at-Law.

I, JOHN KIDD, Secretary for Mines for the State of New South Wales, in pursuance of the powers vested in me under section 10 of the Coal Mines Regulation Act, 1902, do hereby appoint you to undertake the management of the case on which a certain inquiry is to be instituted into the conduct of William Rogers, manager of the Mount Kembla Colliery, in consequence of the report of the Royal Commission on the late explosion at the said colliery.

JOHN KIDD,
Secretary for Mines.

Dated this sixteenth day of July, A.D. 1903.

The Under Secretary for Mines and Agriculture to His Honor Judge Heydon.

Sir,

Department of Mines and Agriculture, Sydney, 17 July, 1903.

I am directed by the Secretary for Mines to forward to you the enclosed document, directing you to hold a public inquiry into the conduct of Mr. William Rogers, Manager of the Mount Kembla Colliery, under the provisions of section 10 of the Coal-mines Regulation Act, 1902.

I have, &c.,
E. F. PITTMAN,
Under Secretary.

To His Honor, Charles Gilbert Heydon, Esq., District Court Judge.

I, JOHN KIDD, Secretary for Mines for the State of New South Wales, in pursuance of the provisions of section 10 of the Coal Mines Regulation Act, 1902, do hereby direct you to hold, at Wollongong or Sydney, as you in your discretion may decide, a public inquiry into the conduct of William Rogers, Manager of the Mount Kembla Colliery.

JOHN KIDD,
Secretary for Mines.

Dated this seventeenth day of July, A.D. 1903.

The Under Secretary for Mines and Agriculture to The Inspector-General of Police.

Sir,

Department of Mines and Agriculture, Sydney, 16 July, 1903.

I am directed to inform you that the accompanying document is required to be delivered to Mr. William Rogers, Manager of the Mount Kembla Colliery, as soon as possible, and I am to request that you will be good enough to have it delivered personally by the police.

The document is in duplicate, and I shall be glad if you will instruct the police officer to serve one copy upon Mr. Rogers, and return the other to this Department with notice of service duly endorsed thereon.

I have, &c.,
E. F. PITTMAN,
Under Secretary.

[Duplicate.]

INQUIRY under the Coal-Mines Regulation Act, 1902, into the conduct of William Rogers, Manager of the Mount Kembla Colliery.

Statement of the case upon which the inquiry is instituted.

To William Rogers, Manager, Mount Kembla Colliery,—

TAKE notice that representation having been made to the Secretary for Mines that you, as manager of the above mine holding a certificate under the Coal Mines Regulation Act, 1902, are by reason of incompetency and gross negligence unfit to discharge your duties, the said Minister has directed an inquiry to be made into the conduct of you as such manager, and on the said inquiry the following acts, omissions, matters, and things will be relied upon to prove the charges against you:—

1. That you did not enforce number 10 of the Special Rules established under the said Act in the said mine, or cause the said rule to be enforced
2. That you failed to cause a regular and proper examination to be made of places in the said mine temporarily or permanently idle which were situated on the intake side of working-places.
3. That you, knowing fire-damp to have been given off in the said mine, and that the same seam of coal as that being worked in the said mine gave off fire-damp, failed to cause adequate examinations to be made of the said mine with the view to the detection of the presence of the fire-damp therein.

4. That you, knowing that there was an opening or openings on the 5th Right rope-road from the "35-acre" goaf in the said mine, allowed to pass by such opening or openings the intake air intended to ventilate places beyond such opening or openings in which men were to work or pass.
5. That you are ignorant of the nature and quality of the gases met with in mines.
6. That you did not enforce or cause to be enforced the General Rules of the said Act or the special rules established under the said Act in the said mine, and were lax in the discipline of the said mine.

Sydney, 16 July, 1903.

JOHN KIDD,
Secretary for Mines.

New South Wales, }
Wollongong, }
to wit. }

SENIOR-SERGEANT H. S. BANKS on his Oath saith as follows:—I am a senior-sergeant of the Police Force of New South Wales, stationed at Wollongong, in the said State. On the 20th day of July, 1903, I served a duplicate of the within notice on the within-named William Rogers by handing the same to him personally at Wollongong. I duly read and explained the said notice to the said William Rogers at the same time.

DAVID BANKS.

Sworn before me at Wollongong aforesaid }
on the 21st day of July, 1903— }
JOHN SAUNDERS, J.P.

Memo:— Police Department, Inspector-General's Office, Sydney, 17/7/1903.
Referred to Superintendent Brennan for attention and report. T. M'GUINISS,
Assist. I.G.P.

For careful attention by Senior-sergeant Banks.

MARTIN BRENNAN,
Superintendent of Police, Eastern District; Depôt, Sydney.
17/7/03. J-1,352.

Senior-sergeant Banks, Wollongong.

Police Station, Wollongong, 20/7/03.

ORIGINAL NOTICE with affidavit of service duly endorsed thereon forwarded herewith.

Service of the notice has been delayed owing to Mr. Rogers' absence from the district.

DAVID BANKS,

Martin Brennan, Esq., J.P., Superintendent of Police, Eastern District. Senior-sergeant.

Forwarded.

MARTIN BRENNAN,
Superintendent Eastern District; Depôt, Sydney.
22/7/03.

The Inspector-General of Police, Sydney. J.-1,352.
The Under Secretary, Department of Mines.—T.G., for Inspector-General of Police. 22 July, 1903.

His Honor Judge Heydon to The Honorable John Kidd, Secretary for Mines.

Sir, Judges' Chambers, District Court, 14 September, 1903.

I have the honor to forward herewith my report in the matter of the inquiry into the charges against Mr. William Rogers, Manager of the Mount Kembla Colliery, with a full copy of the evidence given before me, the exhibits, the plan of the mine used before the Royal Commission and before me, my order as to his certificate and as to costs, and a note of my judgment on the different grounds of my order as to costs. As Mr. Rogers' certificate is suspended for twelve months, I also forward it to you for safe custody until he shall be again entitled to it.

I have, &c.,

CHAS. G. HEYDON.

Department of Mines and Agriculture.

INQUIRY under section 10 of the Coal Mines Regulation Act, 1902, into the conduct of Mr. William Rogers, Manager, Mount Kembla Colliery.

Judgment delivered by His Honor Judge Heydon, at No. 2 District Court, on Monday, 14th September, 1903, at 10 a.m.

Present:—Mr. H. D. Wood, of the Crown Solicitor's Office, on behalf of the Crown; Mr. C. G. Wade, Barrister-at-Law, instructed by Mr. Barry, on behalf of Mr. Rogers.

HIS HONOR: Having carefully considered the grounds and the evidence in this case, I have come to the conclusion that I must find Grounds 1 and 2 proved against Mr. Rogers. The most serious ground of all, that of his failure to use safety-lamps, I find in his favour; and another important ground with regard to dust, I find also in his favour, and also all the others—the small charges. These two charges which I have found against him, I am sorry to say, I have come to the conclusion, are rather serious. The last examination of the waste places and report was on the 19th July. The disaster took place on the 31st July, which was twelve days afterwards. If there had been a weekly examination and report, there would have been an examination on the 26th July. Now, as the disaster originated really in the accumulation of gas that had taken place in the 35-acre goaf, it does seem barely possible, if a thorough examination had been made on the 26th, the beginning of the accumulation might have been detected and the disaster avoided. I do not say that this is probable, because the place was in a very dangerous condition, and, probably, it would not have been possible to make a complete examination; but still, apart altogether from that, the facts of the disaster show how important it is to have as complete examination as can be made of waste places, and what an important rule that is. Then there is another thing in regard to that, which, to my mind, makes it rather serious. There was a disaster at Stockton, which took place in December, 1896, which was the subject of an inquest and inquiry, very much like the Royal Commission Inquiry on this occasion, and afterwards of an inquiry like this Inquiry into the competency or negligence of the Manager and under-manager. They both had their certificates cancelled, and the reports made were full, and were published by the Government, and called attention, in a very marked way, to the danger arising

arising from possible accumulations in old workings, and it was in consequence of that disaster that Special Rule 10 was formulated. That was in the year 1897. Mr. Rogers, in the year 1897, was manager of this mine, so that the Stockton disaster and inquiry occurred, and Special Rule 10 was subsequently drawn up whilst Mr. Rogers was manager; yet it seems evident that these circumstances did not impress upon him the danger of these old workings, and he appears hardly to have altered his former practice at all. It may be that after that rule was formulated these monthly examinations became more strict; it may be that before that time the monthly examinations were not recorded—but except, possibly, in those two respects, he does not seem to have altered his practice. It is evidently a very important rule, so that the matter is one of some seriousness. With regard to Ground 2, which I find also to be proved against him, I think his non-examination of the standing-places was also a serious matter. It was always quite possible that the brattice might become disarranged. A slight fall might disarrange it, and an accumulation of gas might take place. If that happened, which, of course, was quite possible—it may be not at all a probability, but still a possibility—then the later examination on the same day, being an examination with a naked light, might have produced a disaster—a serious disaster. It is quite clear to me that the long immunity from any discovery of gas or any accident had caused Mr. Rogers to lose sight of the danger from gas. However, he has been found guilty of these things, and I am very sorry to say that I must find him guilty of gross negligence in these respects within the meaning of the Statute, and must direct that his certificate be suspended for a period of twelve months. Now, there is another matter. Under the Act, I have power to deal with the question of costs, and to make an order as to costs. Section 11 of the Act says: “The Court may make such order as it thinks fit respecting the costs and expenses of the inquiry. . . .” No argument was addressed to me as to the question of costs, so that before I make my order I should like to know if the parties on either side wish to say anything in regard to it.

MR. WADE: Well, your Honor, I did not deal with the question of costs because, in the first place, the Crown did not make any representation at all with regard to the cost of the Inquiry. I submit that there should be no order against him. Mr. Rogers is a man only drawing a moderate salary, and if the order is made against him, it must carry with it some condition that the suspension shall not cease until the costs are paid. I think his salary is something like £300 a year, and he has a family. Further, I put it on this ground, quite apart from the possibility of his being able to pay the costs, that, in so far as it has been opened up to the field of review with regard to his mine management for a period of nine or ten years, and in so far as he himself courted the Inquiry on matters outside the specific charges to show what the general management of the mine had been, and in so far as your Honor says the charges are only proved on those two grounds, I ask that no order should be made as to costs at all, because with regard to these two matters they are both offences, and the Act provides for those offences being dealt with by order of prosecution in the Police Court. I think it is either section 49 or 50.

HIS HONOR: Section 49 reads:—“Every person who contravenes or does not comply with any of the General Rules in this Act shall be guilty of an offence against this Act; and in the event of any contravention of or non-compliance with any of the said General Rules in the case of any mine to which this Act applies, by any person whomsoever, the owner, agent, and manager shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means, by publishing and to the best of his power enforcing the said Rules as Regulations for the working of the mine, to prevent such contravention or non-compliance.”

MR. WADE: If they can show then he has taken steps to enforce the Rules, he is a free man. Your Honor has found that he has not taken those steps. I think there is a further section that provides for offences against the Special Rules or General Rules.

HIS HONOR: Section 60 says:—“Every person who is guilty of an offence against this Act for which a penalty is not expressly prescribed, shall be liable to a fine not exceeding, if he is an owner, agent, or manager, or under-manager, twenty pounds, and if he is any other person, two pounds for each offence;”

MR. WADE: That is the section I had in my mind. What I want to submit to the Court is this: there is an obvious remedy for the Department and for the mine to have brought Mr. Rogers before the Police Court on both these charges, and he would, under the circumstances, have been fined, but by no means as excessive an amount as they have by taking him to the expensive Court, where they have opened up the whole question of mine management, which, of course, the Police Court could not deal with.

HIS HONOR: That section, Mr. Wade, only speaks of the General Rules.

MR. WADE: I think there is a section which puts the Special Rules on the same lines as the General Rules. I think it is section 49.

HIS HONOR: I have read section 49. It says:—“Every person who contravenes or does not comply with any of the General Rules in this Act shall be guilty of an offence against this Act;” About the matter of costs, Mr. Wade, the point for consideration, it seems to me, was this: the most important ground—that about the non-use of safety-lamps—was found in Mr. Rogers’ favour, and all the other grounds, except two, were found in his favour. Two have been found against him, and I think they are two important ones. That fact, I think, justifies the action of the Minister in directing the Inquiry, and it seems to me the two parties should pay their own costs. The question then comes in as to the cost of the investigation apart from the witnesses’ expenses and counsel’s fees on each side. It seems to me the cost should be divided, too. I do not think it would be fair to make Mr. Rogers pay all the costs of the Crown, because the Crown have not succeeded entirely against him.

MR. WADE: The point I was referring to was section 50, subsection (3):—“If any person who is bound to observe the special rules established for any mine acts in contravention of or fails to comply with any of them, he shall be guilty of an offence against this Act.” That brings us back to the section we were on just now. The reason I asked that there should be no costs imposed upon Mr. Rogers is this: the Minister had two courses open to him to proceed for the breach of the Act. In connection with the disaster at Burwood, where four lives were lost during the early part of last year, the steps taken were to prosecute in the Police Court. The whole thing was thrashed out there from first to last, and the amount of expenses which would be imposed on the respondent would not bear comparison at all. I submit that, in so far as the other matters, which are fair questions for a tribunal like this, have been found in Mr. Rogers’ favour, and the matters that have been found against him are really matters which could have been dealt with in the police court, he should only be called upon to bear such costs as if he had been brought before the Police Court. That will be heavy enough as it is.

MR.

MR. WOOD: I would like to point out, with regard to the question of taking proceedings otherwise than by holding the Inquiry, even if we had proceeded against Mr. Rogers for a breach of the Act, an inquiry would also have had to be held under section 10, and added to the expenses of the prosecution would have been the expenses of this inquiry.

MR. WADE: It did not happen in the case of Burwood.

MR. WOOD: It might have. With regard to the matter of costs, I leave that entirely in your Honor's hands.

HIS HONOR: In regard to Ground 2, which I have found against Mr. Rogers, it is an arguable point whether he was guilty of a breach of the Act or Special Rules in not examining the standing-places. I think, myself, that he was, on a proper reading of the Special Rules, but certainly it is an arguable point. I did not decide it, in the finding I am sending to the Minister, but I found against him on the ground, outside the Rules altogether, that it was a matter which he should have attended to. I think the view which I have mentioned in regard to the costs is the one I shall give effect to, that is, to divide them between the two parties. That is practically what it comes to—each party to pay its own costs of appearing, and Mr. Rogers to pay the Minister one-half of the expenses of the Inquiry.

ORDER of Court suspending Certificate of William Rogers.

In the Court of Inquiry, Sydney, New South Wales.

In the matter of the Inquiry under the Coal Mines Regulation Act, 1896, into the conduct of William Rogers, Manager of the Mount Kembla Colliery.

WHEREAS representation having been made within the meaning of the 10th section of the Coal Mines Regulation Act, 1896, to the Secretary for Mines, that William Rogers, Manager of the Mount Kembla Colliery, situated near Wollongong, in the said State, holding a manager's certificate of service under the said Act, was, by reason of incompetency and gross negligence, unfit to discharge his duties as such manager as aforesaid, the Secretary for Mines, on the 17th July, 1903, directed an inquiry to be made into the conduct of the said William Rogers as such manager, and did duly appoint me, Charles Gilbert Heydon, one of the District Court Judges, to hold the said inquiry, and did direct the said inquiry to be held at Wollongong or Sydney, as I in my discretion might decide, and the said Secretary for Mines did before the commencement of the said inquiry furnish to the said William Rogers, the said manager, a statement of the case on which the inquiry was instituted, and did appoint Bruce Smith, Esq., a Barrister of the Supreme Court, to undertake the management of the case; and whereas the said inquiry was duly held by me at such Court as aforesaid on the 20th, 22nd, 23rd, 24th, and 27th days of July last in the No. 2 District Court, Sydney, on the 28th and 29th July last in the said mine, and on the 30th and 31st July last and the 3rd August last in the said Court; and whereas, the said William Rogers attended the said inquiry and was represented by counsel thereat, and the said William Rogers tendered himself as a witness, and was sworn and examined as an ordinary witness in the case. Now I, the said Charles Gilbert Heydon, after hearing the evidence in support of the case and the evidence on behalf of the said manager, and under and by virtue of the powers conferred on me under the said Act, do hereby order that the manager's certificate of service, held by the said William Rogers under the said Act, be and the same is hereby suspended for twelve months on the ground that the said William Rogers is unfit to discharge his duty by reason of gross negligence; and I further order that each party pay his own costs of appearing before me at the said inquiry, and that the said William Rogers pay to the Secretary for Mines one-half of the costs and expenses of holding the said inquiry.

Dated at Sydney this 14th day of September, A.D., 1903.

CHAS. G. HEYDON.

Department of Mines and Agriculture.

INQUIRY under Section 10 of the Coal Mines Regulation Act into the conduct of Mr. William Rogers, Manager of the Mount Kembla Colliery.

Sir,

Judges' Chambers, District Court, Sydney, September, 1903.

Having been directed by you under section 10 of the "Coal Mines Regulation Act, 1902," to "hold a public inquiry into the conduct of Mr. William Rogers, Manager of the Mount Kembla Colliery," I beg now to send you my "report containing a full statement of the case and my opinion thereon, with a report of the evidence," as required by the said section.

Your direction to me was dated 17th July last, and I was to hold the inquiry at Wollongong or Sydney, as I should decide.

The first sitting was held on the 20th July in the No. 2 District Court, Sydney. Mr. Bruce Smith appeared and handed in his appointment by you "to undertake the management of the case," and Mr. Charles Gregory Wade appeared for Mr. Rogers. Mr. Bruce Smith also handed in the statement of the case which had been served on Mr. Rogers, and said that he desired to supplement the said statement. It was arranged that Mr. Bruce Smith should then open the case, setting out all the grounds upon which he relied, and referring to the evidence supporting them so far as such evidence appeared in the report of the Royal Commission upon the Mount Kembla Colliery Disaster; and that he should at the next sitting hand in the written additions which he desired to make to the statement of the case. It was further arranged, at the request of both sides, that the sittings should be held in Sydney, and (at Mr. Wade's request, the notice to Mr. Rogers having been rather short) that the next sitting should be on Wednesday, the 22nd.

A Blue Book containing the evidence given at the inquest and the report of and evidence given before the Royal Commission on the Mount Kembla Colliery disaster, was taken to be before the Court, both sides to be at liberty to refer to any passage therein, and to have the right to recall any witness.

As finally completed by Mr. Bruce Smith, the grounds in the statement of the case were set out in paragraphs as follows:—

1. That you did not enforce No. 10 of the Special Rules established under the said Act in the said mine, or cause the said rule to be enforced.
2. That you failed to cause a regular and proper examination to be made of places in the said mine, temporarily or permanently idle, which were situated on the intake side of working-places.

3. That you, knowing fire-damp to have been given off in the said mine, and that the same seam of coal as that being worked in the said mine gave off fire-damp, failed to cause adequate examinations to be made of the said mine with the view to the detection of the presence of fire-damp therein.
4. That you, knowing that there was an opening or openings on the 5th Right rope-road from the 35-acre goaf in the said mine, allowed to pass by such opening or openings the intake air intended to ventilate places beyond such opening or openings in which men were to work or pass.
5. That you are ignorant of the nature and quality of the gases met with in mines.
6. That you did not enforce, or cause to be enforced, the General Rules of the said Act, or the special rules established under the said Act, in the said mine, and were lax in the discipline of the said mine in the following respects :—
 - (a) In neglecting to order safety-lamps to be used in the mine.
 - (b) In failing to acquaint yourself with the cause and results of accidents in other coal-mines.
 - (c) In neglecting to ascertain whether dust was accumulating to a dangerous extent in the Mount Kembla Mine.
 - (d) In neglecting to inform yourself as to the dangerous character of coal-dust accumulation, or of the quantity required to become an element of danger in a mine.
 - (e) In neglecting to attend to correspondence from the Department bearing on the safety of the mine and the persons employed therein.
 - (f) In neglecting to inform yourself upon the several subjects required in a certificated manager, and necessary to enable him to properly discharge his duties as a mine-manager.
 - (g) In neglecting to see that the state of the ventilation of the mine was properly recorded each month in a book kept for the purpose as required by General Rule 1, section 47.
 - (h) In neglecting to keep a proper book for the purpose of reporting the examination of the waste workings as required by Special Rule 10 ; and
 - (i) In failing to require from the officers under you a strict observance of Special Rule 7 as to reporting all instances in which gas has been met with in the mine.

The inquiry was limited to the matters mentioned in this statement. The 20th, 22nd, and 23rd of July were taken up by Mr. Bruce Smith's opening, and the evidence called by him. On the 24th and 27th Mr. Wade called evidence. The 28th and 29th were devoted by me to an examination of the underground workings of the mine, a course which I found it necessary to adopt for the proper understanding of the case and the evidence. On the 30th and 31st, and at a long sitting on Monday, 3rd August, a public holiday, the evidence and addresses of counsel were concluded. On the following day the sittings of the Court of Quarter Sessions at Darlinghurst began, at which I had to preside, and, as they lasted for more than four weeks, my attention to this inquiry was necessarily interrupted.

I will now deal with the grounds *seriatim*, re-arranging and re-grouping them in the order of their importance and mutual relation.

Grounds 3 and 6a.

“3. That you, knowing fire-damp to have been given off in the said mine, and that the same seam of coal as that being worked in the said mine gave off fire-damp, failed to cause adequate examinations to be made of the said mine with the view to the detection of the presence of fire-damp therein.”

“6A. That you . . . were lax in the discipline of the said mine in neglecting to order safety-lamps to be used in the mine.”

These charges raised the general question whether Mr. Rogers had taken sufficient steps to inform himself of the condition of the mine as to fire-damp, and whether he had been guilty of bad management in working it with naked lights.

It was admitted that in former years fire-damp had shown itself in small quantities in the mine. In 1891 a man named Gallagher was severely burnt through the ignition of gas which a blow of his pick had released from a cavity, an old working place. In October, 1895, Mr. Ronaldson, the then manager of the mine, gave evidence before the Royal Commission of that year on the Coal Mines Regulation Bill, and then stated that the mine gave off fire-damp from fissures, rarely, in all sections.

Mr. Rogers himself, at the inquest, stated that he did not know that gas was constantly exuding from the coal in Kembla, even in small quantities ; that he knew of the accident to Gallagher ; that he knew that gas was found in the mine years ago, but that there had been no gas there during the last ten years, because the deputies would have reported it if there had been, and he would have heard about it ; that he had seen fire-damp in the mine about ten years ago, before the present ventilation shaft was put in ; that he knew it was a seam that produced gas, but he relied on there being no gas by reason of the superior ventilation, and his not finding any gas at any time.

It appears, however, from the evidence before the Royal Commission, that during this period of ten years before the disaster gas did show itself from time to time in Mount Kembla, and the questions are : Did Mr. Rogers, in fact, know of this ? If he did not, was it his own fault ? Under all the circumstances, ought he to have worked his mine with safety-lamps, and is he responsible for not having done so ? These considerations were of great importance in the present inquiry, for, in the opinion of the Royal Commission (paragraph 76 of their Report), the giving up of naked lights was the only change in the management that would have been likely to avoid the disaster, and it could, with almost absolute certainty, be said that it would have prevented the disaster. If, therefore, Mr. Rogers was in default on this point, a full responsibility for this terrible event, which caused the loss of ninety-five lives, necessarily rests upon him.

First, then, as to Mr. Rogers' knowledge. The evidence of the witnesses, who testified to the existence of gas in the mine before the disaster, is summarised in paragraph 48 of the Report of the Royal Commission. Of these witnesses, some fifteen or sixteen miners speak of having seen gas ignited either by lamps or blown-out powder shots, at various periods ranging from a month to ten or twelve years before the disaster. Six of them admit that they never reported what they saw ; three admit that they sometimes neglected to report what they saw ; three say that they reported to Dungey, a deputy ; one that he was informed

informed by Dungey that he had found a heading standing full of gas; and two state that they reported to Nelson, the under-manager. (Both Dungey and Nelson perished in the disaster.) Four state that they reported to David Evans, a deputy, and four that they reported to Mr. Rogers himself. It will be seen that two of the persons to whom reports are alleged to have been made could not be called to contradict the evidence.

By Special Rule 17, it was the duty of every workman employed in any part of the mine to inform the person in charge of the working of the existence of any choke-damp or fire-damp; and by Special Rule 41, all employees were to report to the manager or official in charge any appearance of fire-damp, choke-damp, or other noxious gas.

Under Special Rule 7, it was the duty of the deputy to report to the manager, under-manager, or overman, any danger that might from time to time arise from any cause; and by Special Rule 11, a deputy was empowered in the under-manager's absence to act on his behalf, and was bound to report any important occurrence to the manager or overman.

By Special Rule 3, the under-manager or overman was, as soon as possible, to report all occurrences to the manager, and, by special rule 5, was to immediately report to the manager any accident, danger, or defect in the working-places or appliances.

From this it would seem that if everybody did his duty, any appearance of gas must speedily be reported to the manager. It will be noticed, however, that none of these reports need be recorded.

With regard to the reports said to have been made to the two men who were killed, Mr. Rogers says that, whether they received those reports or not, they never repeated them to him.

With regard to the reports said to have been made to David Evans, the Commission discussed them in paragraph 75 of their Report. They dismissed the evidence of two of the miners from consideration, but, on the evidence of the remaining two, they were inclined to believe that Evans was rather lax in his treatment of what information he received; and they add that, whilst he certainly should have acquainted the manager with what he had been told, he seems to have neglected that duty.

With regard to the alleged reports to Mr. Rogers himself, one rests upon the evidence of Broadhead, a miner, whose evidence was disregarded by the Royal Commission on account of its peculiar and contradictory nature. It is not really evidence against Mr. Rogers, for Broadhead does not say that he told Mr. Rogers, but merely that he sent word to him. Then, the complaint which he says he made that his working-place was "gassified," was mixed up with other complaints as to the difficulty and the bad ventilation of the working-place; and he was contradicted by two other witnesses. The next witness was Quinn, a miner, who stated that eight years before, when Mr. Rogers was under-manager, he had lit a jet of gas in front of Mr. Rogers, in a heading in the No. 1 district. Mr. Rogers stated that he had no remembrance whatever of any such occurrence. The evidence of the next witness, Johnson, a miner, referred to an occurrence twelve years before. The fourth witness, David Evans, a deputy, said that he was positive sure there had been no report of gas for four or five years; that he had come across gas eleven or twelve years ago, perhaps thirteen, when the furnace was in the tunnel mouth, and when the new up-cast shaft was being sunk, but when he found the gas some years ago, he reported it to Mr. Rogers, who was then underground manager, and also reported it in a book. The reference to the fact that Mr. Rogers was underground manager when the report was made to him, and that the new up-cast shaft was being sunk when Evans observed the gas, fixes the date at more than seven years before the disaster. Mr. Rogers did not remember the reports of which Evans spoke.

It will be seen that three of the witnesses speak of periods running from an uncertain period of over seven years, to about twelve years before the accident. These old reports may well have been made and forgotten by Mr. Rogers, but have very little practical bearing on the case, for it was the great improvement produced in the ventilation by the new up-cast shaft and furnace which, in Mr. Rogers' opinion, made the mine so safe.

The fourth witness, Broadhead, whose evidence, even if accepted, amounts to very little, cannot be depended upon.

As to his own examinations for gas, Mr. Rogers gave the following evidence before me:—

2839. *Mr. Wade.*] Now, I am coming to this question of making inquiry. I want to know whether you ever took any steps to use a safety-lamp when you were under-manager? *A.* Yes.

2840. *Q.* Tell us all about it, how often, and for what purpose, and when and where? *A.* I used to do my examination with a lamp that I brought with me from the old country, my own. I used to take it into the mine very often, and sometimes I would be with the deputy, and he would have a lamp if I did not have my own, and we used to examine the places with that lamp—many scores of times I did it.

2841. *Q.* Take the case, now, of being with the deputy, and he carrying his lamp, and you not? *A.* We would go, perhaps, into a waste working, or a place that had been fenced off, a standing-place stopped for some reason or other, perhaps a heading, perhaps a bord; and he would go into these places. I have been going very often by myself, and I would have the safety-lamp, and examine it by myself. I did not always use to go with the under-manager, nor did I always use to go with the deputy. Sometimes I went in with the contractor.

2842. *Q.* Have you made examinations with the safety-lamp since you became manager? *A.* Yes, many and many a time.

2843. *Q.* With what result, as to finding gas or not? *A.* I never found any gas, never found any gas at all; never found any gas, only the times I said, about ten years ago. That was before the new ventilating shaft was put down, and before the new furnace was made; and the reason why I used to think—well, I was certain about it—that why there was no gas seen was because we had such good ventilation, and the place had improved so much through putting this shaft down, and the thing had played away. I would not say but what the place was making gas; I know that it would make a little gas; but what I meant to say was that I never saw any; not that it never made any, but that I never saw any by trying with the ordinary safety-lamp.

2844. *Q.* Explain what you mean by "making any."

2845. *His Honor.*] *Q.* The discharge?

2846. *Witness.*] *A.* The discharge.

2847. *Mr. Wade.*] *Q.* I want you to explain that? *A.* What I meant was that I would not say that the gas would not come out of the coal, but I never saw any.

2848. *His Honor.*] *Q.* Of course, the ventilation would not prevent the gas from coming out of the coal? *A.* No, but I never saw it.

2849. *Q.* It would sweep it away? *A.* Yes.

2850. *Mr. Wade.*] *Q.* How long have the deputies been examining in the morning with locked safety-lamps? *A.* Ever since I have been in Kembla, that is about fourteen years; and I was always very careful with them in the morning. I used to see them four or five mornings out of every six. I used to meet them in the fireman's cabin; and I used to ask them "How are things to-day? All right?" Many a time I told them "Now, don't you tell me things are all right for the sake of pleasing me if they are not all right; if there is anything wrong let me know so as I can deal with it; do not keep me in the dark; if you see gas, or if you see anything wrong, tell me, and let me know about it, and then I know how to deal with it, and what to do. If you report everything is right when they are not right, how am I to get on?" Many and many a time have I told them that; and I am sorry to say there is only one deputy now alive. If the other three had been here—I am speaking about the dead again—I am sure that every one would indorse what I have said now, that I was very very careful with them. And I used to congratulate myself about putting on one more deputy, two at night, and two in the day, and keeping those extra report-books—I used to congratulate myself upon doing these things—I thought I was getting on very well.

At the inquest he had stated "I have not gone down the mine myself with the safety-lamp in recent years. I used in years far back. Since the ventilation shaft has been put up we have had very good ventilation, and I never thought it necessary to take the safety-lamp. When I said yesterday to Mr. Lysaght the gas was found many years ago, I meant it was ten years ago I saw fire-damp; that was before the present ventilation shaft was put in.

Further on Mr. Rogers gave the following evidence:—

3446. *Q.* The next portion of your evidence is:—"When I said yesterday to Mr. Lysaght that gas was found many years ago, I meant that it was about ten years ago that I saw fire-damp—that was before the present ventilation shaft was put in." What do you say about that? *A.* That is what I did mean. I meant that I saw gas at that time, before the ventilation shaft was put down.

3447. *His Honor.*] Then, there is nothing in that passage to correct.

3448. *Mr. Wade.*] *Q.* Well, have you looked for it since? *A.* Yes, certainly, I have looked for it since. I have always looked for it.

3449. *Q.* Have you found it? *A.* I have never found any since then. I am always looking for it.

Under these circumstances it is impossible for me to say that any direct knowledge of the presence of gas in the mine, in quantities large enough to be detected, has been brought home to Mr. Rogers.

The next question is: Was this ignorance on his part, itself, a fault? This is a question of degree. If it could be shown that the existence of gas in the mine was notorious, that all the miners knew it, that it was the subject of conversation between them, and that they had often spoken of it to the deputies, the conclusion would be irresistible that ignorance on the part of Mr. Rogers must have been due to a supineness in the discharge of his duties which, itself, would be most censurable. I cannot see, however, that in the present case the circumstances point to any such conclusion; and though, possibly, if the ninety-five miners who perished could have been called as witnesses, a greater body of evidence as to the existence of gas might have been obtained, that is a possibility which must not be taken against Mr. Rogers. Of the miners who stated that they had seen gas, a large proportion admitted that they had never reported it, and they seem themselves to have shared the general opinion that Mount Kembla was not at all a gassy mine, but, on the contrary, taking it altogether, a mine peculiarly safe and free from gas. This, indeed, seems to have been the universal opinion. The ventilation, since the sinking of the new up-cast shaft and the construction of the new furnace, had been so good and abundant, and the quantity of gas manifesting itself even before that had been comparatively so small, that a feeling of general confidence and security had been generated; and it appears to have been accepted amongst the mine officials and the colliery world generally that Mount Kembla was the last mine in New South Wales at which danger from fire-damp was to be apprehended. It seems to me, therefore, that Mr. Rogers' want of acquaintance with the occasional appearances of fire-damp, and the confidence which he felt in the mine, do not prove any carelessness or neglect or want of vigilance on his part sufficient to call for censure.

The real point, however, is whether Mr. Rogers is censurable for working the mine with naked lights, and the question arises here whether, even if he had known of all the occurrences sworn to by the miners, the use of safety-lamps would have been so imperatively called for as to make Mr. Rogers responsible for not adopting them. Here, too, I think, the verdict must be in Mr. Rogers' favour.

The evidence material to the point is as follows:—Mr. A. A. Atkinson, Chief Inspector of Coal-mines, said in his evidence before me (type notes 604) "I think if Mr. Rogers had a knowledge of the occurrences with reference to gas which have been given in evidence he should have worked the mine with safety-lamps as a precaution." Then further on Mr. Atkinson gave the following evidence:—

1195. *Mr. Wade.*] *Q.* Well, Mr. Atkinson, you made careful inquiry as to the gassy capabilities of Mount Kembla? *A.* Yes.

1196. *Q.* You inquired personally yourself? *A.* Yes.

1197. *A.* You tested yourself with the safety-lamp? *A.* Yes.

1198. *Q.* You inquired of the Inspectors? *A.* Yes.

1199. *Q.* And you were even open to any communication anonymously? *A.* Yes.

1200. *Q.* And you came to the conclusion honestly that there was not gas detectable in Mount Kembla? *A.* Yes, I had not heard of any, and I was not able to find any myself.

1201. And that opinion was indorsed by the opinion of your Inspectors? *A.* Yes.

1203. *His Honor.*] *Q.* Is it an unusual concurrence of circumstances, that which existed here, where the examinations were with safety-lamps but the working was with naked lights? *A.* Oh, it is not an unusual thing.

1204. *Mr. Wade.*] *Q.* It generally indicates, does it not, a little extra care on the part of the management? *A.* Yes.

1210. *Q.* May I take this: up to July the 30th, if the Rules with regard to firing shots in dusty places were observed, you saw no reason for using safety-lamps in Mount Kembla? *A.* So far as my own knowledge is concerned?

1211. *Q.* Exactly? *A.* Yes.

Mr. D. A. W. Robertson, General Manager of the Metropolitan Coal Company, and a member of the Royal Commission on the Mount Kembla Colliery Disaster, gave his evidence before me as follows:—

1859. *Q.* Can you say that there is a divergence of opinion, even at the present day, amongst experts, as to the necessity for safety-lamps? *A.* Yes, I am sorry there is. There is no doubt about it. Possibly one manager amongst a hundred would insist upon safety-lamps being used in mines giving off a small percentage of gas; and the other ninety-nine would disagree with him.

1860. *Q.* Do you give that as indicating the proportions of opinion on the matter? *A.* I do.

1861. *Q.* The great bulk of opinion then, of experts, is against the use of safety-lamps in mines giving off a small quantity of gas? *A.* I do not speak with egotism, but I will say that I am the only man in this State that advocated the use of safety-lamps in mines that are now using them.

1863. *A.* . . . Five or six years ago, or three or four years ago, anyone that would have proposed that safety-lamps should be used in some of these mines that are now working with them would have been thought a madman, a crank; but unfortunately there have been explosions which have been object-lessons, and opinion has very much changed of late, I am very glad to say. You see it has never been actually determined yet what constitutes a dangerous mine in respect of gas. It has all been a matter of opinion, and perhaps one man's opinion is as good as another's. Take Kembla, for instance; there are plenty of the highest in the profession who would have laughed at the idea of using safety-lamps in Kembla. There are many mines of precisely the same character now working in Great Britain.

1864. *Q.* With naked lights? *A.* With naked lights, particularly in Scotland. . . .

2133. *Mr. Bruce Smith.] Q.* Now, I want to ask you some practical questions about gas and managers: I ask you first of all this general question: With all the knowledge of gas that was revealed in this Commission in regard to the presence of gas in the Mount Kembla Mine, would you, if you had been in the position of manager, have thought it necessary to use safety-lamps in that mine? *A.* Yes, I would; but you must bear this in mind—I am not saying it in any boastful respect—I am one man, perhaps, in a thousand in regard to this—I would go to the extreme; I would have safety-lamps in every mine; and if I had suggested that they ought to have been used in Kembla Mine before the explosion they would have thought I was a madman; and men who are quite as high, perhaps higher in the profession than I am, would have thought I was, and that it was quite unnecessary.

2262. *A.* . . . Then, in respect of gas, of course, in the Metropolitan we have gas being given off in great quantities everywhere; and in Mount Kembla you can only find gas in quite inconsiderable quantities. I was unable to find it without the hydrogen lamp. An hour or two after the explosion I was examining everywhere, and for two or three days afterwards with the ordinary lamp, and I could find nothing.

2263. *Mr. Wade.] Q.* The ventilation was deranged then? *A.* Yes, and I could find nothing.

2264. *His Honor.] Q.* It was found, but not by you; some very large quantity was found? *A.* No, not any large quantity.

2265. *Mr. Bruce Smith.] Q.* In No. 1 headings? *A.* Yes, a quantity of gas was found there where the air was cut off; but, when the Commission visited those same headings we found, I think it was, a half per cent. or three-quarters per cent., I am not quite sure which, while the headings were being worked.

2266. *Q.* That of course was while the ventilation was going on? *A.* Yes, but it would be absolutely impossible to my mind under ordinary circumstances in Kembla to have detected the presence of gas without the aid of the hydrogen lamp. It could not have been found with the ordinary lamp.

2267. *Mr. Bruce Smith.] Q.* You did not find it; do you mean it could not be found? *A.* It could not be found. I am convinced that, in the ordinary atmosphere of the mine, it never existed above, perhaps, one-half per cent.; and then it would only be in the working faces. To get that half or three-quarter per cent. we had to go right up to the face, and right into the cut, where the gas was issuing from it. Well, of course, under those circumstances of a mine giving off a small quantity of gas, if you put in your lamp and shield your lamp from the air you may get a higher percentage from that; but, in the ordinary circumstances of the mine, I am sure it did not average more than one-eighth per cent.; but, still, I am one of those that believe that even an eighth or a quarter per cent. is a danger that ought to be provided against; but then that is where the difference is between myself and other competent men who do not recognise that a minute percentage is a danger to be guarded against. You see there has never been a standard definition of what constitutes a "gassy mine." The best authorities fail to agree on that point. It is a matter of opinion.

2278. . . . *A.* I am quite sure of this, that had, say, Mr. Rogers reported to his proprietors that, in his opinion, safety-lamps ought to be used in Kembla, they would have received the report with amazement. They may have called in experts to confirm or otherwise his reports; and I am quite sure those experts—I do not care who, any man in the Colony you might mention, would have reported that it was absolutely unnecessary; because I am quite certain that not another man in the Colony would have suggested that safety-lamps should be used. Of course, as I say, this is an object-lesson.

2279. *Q.* Now, what extent of ignorance of the existence of gas are you assuming on Mr. Rogers' part in making that statement;—are you assuming that he had no knowledge of gas since the accident to Gallagher, or are you assuming that he was acquainted with the issuing of gas from the coal in small quantities? *A.* Well, my impression is that Mr. Rogers, having been aware that the coal, in former years, gave off gas, may have thought it was given off now, but in such inconsiderable quantities as to be negligible.

2280. *Q.* You are assuming that it was in his mind that gas was issuing in small quantities with a fine system of ventilation? *A.* Yes.

2281. *Q.* And you say you are sure that there are many competent men who would have said that they did not need safety-lamps? *A.* I may say this: that in my capacity of Consulting Engineer, I have had occasion, not very long ago, to report on a certain mine to the Directors that safety-lamps, in my opinion, should be used, although the quantity of gas was not very great; but still it was infinitely greater than at Kembla; and I was met, of course, with the opposition of the management, who thought it was not necessary, "We cannot see it in our lamps." "Well," I said, "I can get it in the hydrogen lamp, and I can get so much per cent., and, in my opinion, that is dangerous." And I advised the proprietors,

proprietors, and they thought—they were naturally advised by their Manager—that there was no necessity for it; they would put down another shaft and get abundant ventilation, and they would not be put to the expense of all those safety-lamps. Very well, time went on; and I think the men opposed it, bitterly opposed it, went in a deputation to the Minister, if I am not mistaken; and, what between the owner, and the Manager, and the miners, the thing remained in abeyance. And then they had a little flare up after the Kembla explosion, and they made haste to put in lamps then. Now, I am absolutely certain, I know it, and I believe that the Chief Inspector can confirm my view, that the issue of gas in that mine was ten times greater than Mount Kembla; and yet it was a danger that was not recognised there. And I can tell you another instance where I was called in by the Government to give an opinion as to the necessity for safety-lamps in a certain mine; and the Manager of that mine is very eminent—he stands at the head of his profession—and he said there was no need for it. I recommended that safety-lamps should be put in that mine, and after a good deal of trouble they consented to put them in a certain section of the mine. Well, we were glad: we thought half a loaf was better than none, and we accepted that, although we would have liked to have seen lamps put on all sides. Well, time went on, and there was an explosion, and a certain number of men were killed in the section where safety-lamps were not put in. I mention that to show that, even in mines where gas is given off, even a considerable quantity of fire-damp, the competent men object; they think the quantity is not sufficient to warrant the use of the safety-lamp. You see the whole trouble has arisen from the want of a standard definition of what constitutes danger in a “gassy” mine. It has been a matter of opinion, and one man’s opinion is as good as another’s.

2282. *Mr. Wade.*] *Q.* And there is this fact standing out, that a number of mines where gas is given off are worked by competent managers with naked lights? *A.* Oh, unquestionably.

Mr. J. C. Jones, Manager of Mount Kiera Colliery, gave the following evidence:—

2460. *Q.* Now, first of all in regard to the condition of Mount Kembla—from what you know of Mount Kembla did you form any opinion as to its safety as a mine with naked lights? *A.* I always considered it as one of the safest mines in the Illawarra district. I never saw the slightest trace of gas at any time I have been there, or ever heard of any, only some ten or twelve years ago when a man struck into old workings.

2462. *Q.* Now, I want to ask you this: whether you would say that safety-lamps were necessary or not before the disaster? *A.* I should say certainly not, not as regards gas. Of course, it has come nowadays that safety-lamps are a safety anyway, whether there is gas or not; in preventing fires, of course, they are a safety—to prevent the ignition of bark and props and timber; but as far as gas is concerned, I would never dream of putting lamps into Mount Kembla—I would never think it was necessary.

Dr. J. R. M. Robertson, Mining Engineer, gave the following evidence:—

3155. *Mr. Wade.*] *Q.* I want to ask about the question of gas again—let me put this case: Supposing you were managing Mount Kembla itself, and supposing you actually became aware on different occasions that gas had been found, I want to know what your view would be as to the necessity or not for introducing safety-lamps in consequence of that knowledge? *A.* I think that would be a very good reason for considering the question of safety-lamps, provided that the gas was persistent, and in sufficient quantity, and could not be swept away with the ordinary ventilation. If it could not be swept away with the ordinary ventilation, I think it would be quite a good reason for considering it.

3156. *Q.* I want to know what your view would be as to its necessity or not if there is just an occasional manifestation of gas? *A.* And the ventilation perfect? It would depend altogether on circumstances. It is hardly a question you could answer right off. It would depend altogether on the circumstances surrounding the case. But if it was only occasional, and in an insignificant quantity, then, of course, that would qualify it.

Mr. A. E. O. Sellors, Manager of South Bulli Colliery, gave the following evidence:—

3317. *Q.* Let us come to this question of using safety-lamps. Supposing you, as manager of a naked light colliery, had from time to time discovered the presence of fire-damp, I want to know whether you would, therefore, think it necessary to introduce the safety-lamp? *A.* That depends on the extent of the fire-damp that was discovered. At Corrimal, before we put in safety-lamps, we occasionally, if not frequently, had discoveries of very small quantities of fire-damp which were in themselves not dangerous, and we worked the mine with naked lights.

3318. *His Honor.*] *Q.* I suppose it was worked with naked lights up to the time of this disaster? *A.* After the disaster too.

3319. *Q.* I mean the change has been since the disaster? *A.* Yes; we brought the change about in Corrimal when we discovered that we were getting gas in the goafs—I mean that it was coming from the lower seam.

Mr. A. A. Atkinson, recalled, gave the following evidence:—

3608. *His Honor.*] *Q.* I should like to get a definite answer to this question;—I would be glad if you would go back to the time before this disaster happened, Kembla was not the only mine then in New South Wales that was working without safety-lamps? *A.* Not by any means; in fact there were very few mines worked with safety-lamps.

3609. *Q.* Now, were any of those mines known to be giving off small quantities of gas? *A.* Yes; your Honor.

3610. *Q.* Yet they were worked with naked lights? *A.* Yes.

3611. *Q.* Assuming then that Mr. Rogers did know this mine was giving off small quantities of gas, going back now to before the disaster—putting the lesson of the disaster out of your mind—was it bad management in the light of the practice and the knowledge at that time to work the mine with naked lights? *A.* I think it was so in that case and in all the others.

3612. *Q.* Yes, you see, the disaster has shown that;—the disaster has been an object-lesson that has taught the necessity;—but I want you to go back to before that time; it was known then to the mining world, to the managers, and to you, that mines that were giving off small quantities of gas were nevertheless worked with naked lights;—I suppose because it was considered that small quantities of gas could be efficiently dealt with by ventilation? *A.* That is the usual reason given.

3613. *Q.* In your opinion, then, were any of those managers to blame for doing that, in the light of the then opinion, the then views existing about mine management, before the disaster? *A.* The opinion prevailing amongst managers, your Honor, generally in the State, or—[*Interrupted.*]

3614. *Q.* The opinion prevailing amongst them, as shown by the fact that they worked their mines with naked lights? *A.* Yes, that is so.

3615. *Q.* Well, going back before the disaster, here were all these mines known to be giving off small quantities of gas and worked with naked lights, and amongst them was Kembla;—now were those managers to blame? *A.* I think so, your Honor.

3616. *Q.* And they all stand on the same footing as Mr. Rogers, then, as far as that particular thing is concerned? *A.* Yes.

3617. *Q.* And he is to blame, then, so far as that is concerned, only in the same way as they were all to blame—to the same extent? *A.* Yes.

3618. *Q.* Do you know whether any steps were taken to bring about a change and compel them to use safety-lamps? *A.* Well, in several cases, I have had considerable correspondence with collieries about the use of safety-lamps. Some of them have absolutely refused to use them. Others after—well, in one case, an unfortunate accident at Burwood—they now use them throughout the mine.

3619. *Q.* I can quite understand that you would certainly not err on the side of rashness, because your duty is to keep the management up to the mark if it is possible; and, of course, in regard to this particular mine, you did not know that it was giving off gas in small quantities? *A.* No; we had no official knowledge.

3620. *Q.* But would it not have been a matter of degree;—It is a question of opinion when the discharge of gas is sufficient to make it dangerous to use naked lights? *A.* It is, no doubt, a matter of opinion.

3621. *Q.* I am going back to before the disaster, because now the rule seems to be laid down, at any rate the Commission have made that recommendation, that if you have got any escape of gas you should use safety-lamps. That is since the disaster. Because here you have a mine which everybody thought was a safe mine, the discharge of gas in which has been only small, and yet there has been a terrible disaster. If you can, will you put your mind back to the time before that disaster. It was, I suppose, even to you, a question of degree?—if you were satisfied that the quantities of gas given off were small, really small, then you would have considered them justified in using naked lights? *A.* Yes, your Honor.

3622. *Q.* Of course, as long as a thing is a matter of degree it is a question of opinion too—you cannot lay down a hard-and-fast rule.

At paragraph 87 of the Report of the Royal Commission, the following passage occurs:—

“Too much reliance would seem to have been placed in most mines on the non-detection of gas in the usual examination with the safety-lamp, or on the fact that it was only occasionally so detected; and it has hitherto been the practice, both here and in Great Britain, to use open lights, not only in any mine where fire-damp could not be discovered by means of the safety-lamp, but even in mines where it has been so discovered.”

In the face of this evidence it appeared to me that even if Mr. Rogers had known of all the manifestations of gas spoken of by the different witnesses he could hardly have been held to be in fault for forming the opinion, in which he would have evidently been supported by the great bulk of expert opinion of his profession, that it was unnecessary to introduce safety-lamps. Both on the question of knowledge and on the question of practice, therefore, this, the most serious charge against Mr. Rogers, in my opinion, fell to the ground.

Ground 1.

“That you did not enforce No. 10 of the Special Rules, established under the Coal Mines Regulation Act, 1902, or cause the said rule to be enforced.”

Special Rule 10 is as follows:—

“He (the deputy and fireman) shall at least once in every week examine, so far as is practicable, the state of the waste workings and main air-ways, and make and sign a true report of the state thereof in a book kept at the office for the purpose.”

It was admitted that this examination and report, which by the rules should be made weekly, was only made monthly, and that Mr. Rogers was aware of the fact, and permitted the practice.

George Leitch, Manager of Stanford-Merthyr Colliery, West Maitland, who had been under-manager under Mr. Rogers at Mount Kembla, after stating that the examination under Special Rule 10 was made monthly, but that there was an inspection of the goafs daily, gave the following evidence before the Royal Commission:—

22628. *Mr. Ritchie.* *Q.* Did you draw the Manager's attention to the fact that the rule was not being carried out? *A.* Yes.

22629. *Q.* What was the answer? *A.* That it had been the custom of the Colliery whilst he was manager, and also the custom of the Colliery before he was manager.

22630. *Q.* Did you consider you did your duty? *A.* I was not manager; I was under-manager. I pointed it out to him, and that was the answer I got.

22631. *Q.* Who was the manager? *A.* Mr. Rogers.

22632. *Q.* Did Mr. Rogers give you any other answer? *A.* No, not that I am aware of.

22633-4. *Q.* Was any question raised as to what the rule meant? *A.* Mr. Rogers was under the impression that it was carrying out the rule. I said: “No; he was not.” He said he was, because he was examining the waste workings every day.

22636. *Q.* But that was not an excuse for not having a report in writing? *A.* He told me that that was the rule of the Colliery.

The truth of this evidence, the Royal Commission considered, was practically admitted by Mr. Rogers, and, as the evidence was given before them, they are in the best position for deciding the point; however, reading over the evidence myself, I quite agree with them. Mr. Rogers, however, both at the inquest and before the Royal Commission, gave as his reason for not examining the waste workings once a week, that he misunderstood the rule, and thought that it meant, not that he was to examine as far as practicable, but that he was to examine every week as far as practicable. It is evident that Mr. Rogers said nothing of this to Mr. Leitch. It is evident also that such a reading of the rule is entirely wrong. It

was to me further evident that, even if his reading were right, nothing existed to make it impracticable to examine the waste places every week—as, indeed, Mr. Rogers himself admitted at the inquest. It followed that Mr. Rogers had been guilty of a breach of the rule, and that the only matters to be considered were such as could be put forward by way of mitigation.

It was suggested, first, that the value of the examination itself was somewhat problematic, inasmuch as it had to be made only “as far as is practicable,” and that it must be always left to the opinion of the person making the examination to what extent a complete examination was practicable. An examination of goafs or waste places is an examination of a part of the mine in which the roof is left to fall, and may fall at any time. As the examination is made to detect gas, and as gas always rises to the highest parts of the roof, it follows that the examiner should climb over the fallen stone as high as possible, in order to place his safety-lamp at the highest points of the roof. Yet this is evidently a dangerous task, and a man can hardly be expected to risk his life. Unless he does it, the examination, as far as gas is concerned, will probably be practically useless.

It was further urged that the deputies' report-books, showing that this examination was only made once a month in violation of the rule, were examined and initialled by the Government Inspectors.

Yet again, following up Mr. Rogers' answer to Mr. Leitch that he was carrying out the rule because he was examining the waste workings every day, and Mr. Leitch's own statement that the inspection of the goafs was done daily, it was argued that, in the course of their daily inspections, the deputies did practically examine the waste places—at any rate, as well as could be done without climbing up the fallen roof.

Mr. Atkinson's evidence before me on this point is as follows:—

1423. *Q.* Now, on this question of wastes, Mr. Atkinson, I think you said, did not you, this morning, that these special rules of Kembla were drawn up by the management, and not by the Mines Department? *A.* Yes.

1431 (*b.*) *Mr. Wade.] Q.* Now, is not this a fact: that this question of the examination of the waste workings has been regarded as of importance only during the last few years, say the last four years? *A.* Oh, I think it was regarded as of importance at the Stockton inquiry.

1431 (*c.*) *Q.* That is, the first time? *A.* And subsequently to that.

1432. *Q.* Well, the Stockton inquiry was the first time it was raised in New South Wales? *A.* I think so. Of course, that was before my time.

1433. *Q.* That was about nine years ago? *A.* Stockton inquiry was in the beginning of 1897, I think, nine months before I came here.

1434. *Q.* And there is no provision for it at all in the Coal Mines Act—the inspection of waste workings? *A.* No.

1435. *Q.* And a number of collieries, until quite recently, had no special rule with regard to the inspection of wastes at all? *A.* That is so.

1436. *Q.* Well, did you give your Inspectors any instructions to inquire into the matter of the inspection of waste workings at Mount Kembla? *A.* Well, they have general instructions to see that the Act and special rules are carried out, and—[*Interrupted.*]

1437. *Q.* And if they are not carried out? *A.* And report any breach.

1438. *Q.* And then you will either inform the Manager, or they may verbally tell him? *A.* Yes.

1440. *Q.* Now, you know—you saw yourself, did you not—that these deputies' report books, which contain the inspection of the wastes also, were actually initialled by your Inspectors as having been seen? *A.* I think I saw that.

1441. *Q.* That was during the inquest, was it not? *A.* Yes.

1442. *Q.* Now, with regard to the actual inspection itself, no rule could be laid down as to how far any man is to go inside the edge of the waste once the roof has fallen? *A.* No.

1443. *Q.* You must leave that to his own discretion?

1444. *His Honor.]* No rule could be laid down in feet. The rule says “as far as practicable.”

1445. *Witness.]* As far as practicable.

1446. *Mr. Wade.] Q.* It depends on a man's good sense, I suppose, and, to some extent, on his nerves? *A.* Well, I should say “as far as practicable” means, to a large extent, “as far as is safe.”

1447. *Q.* Then, we have been told that, whilst the pillars were being worked in the 4th Right during the process of extraction, the deputy would go round the circle where the work had been done every morning? *A.* Yes, I suppose so.

1448. *Q.* And in that way it would be his duty to examine the edge of this falling place, would it not? *A.* Yes.

1449. *Q.* And by holding the safety-lamp just above his head the probability is that if there was gas there it would show? *A.* Yes; if there was gas there.

1450. *His Honor.] Q.* Why would it be his duty to examine the edge of the goaf?

1451. *Mr. Wade.]* Because it is a place along which men have to travel in the course of their work. He would probably follow the ventilating current.

1452. *His Honor.]* That is, if it happens to go through the edge.

1453. *Mr. Wade.]* I am speaking of the morning inspection. If the road happens to go along the edge of fallen bords he would examine that, because it is a place where the workmen have to travel.

1454. *Q.* Then, when you get to the actual working-place you may have an angle cut out of the solid pillar of coal? *A.* Yes.

1455. *Q.* You may have a solid pillar on one side and on the other side you may have an open space where the roof has fallen? *A.* Yes.

1456. *Q.* And he may examine that open space alongside the pillar? *A.* Yes; he should.

1457. *Q.* So that, in that respect, if a man does his work properly you can get a good idea of the condition of the waste places as to the presence of gas, can you not? *A.* Not in the ordinary inspection; he would not go up the edges of the goaf.

1458. *Q.* He would not climb up? *A.* No.

1459. *Q.* No; but you say if gas is present it is fairly sure to manifest itself on the lower levels? *A.* Oh, no, I did not say that. I say that if gas is where he inspects with the lamp he will find it; but gas is more likely to be in the higher parts of the goaf than in the working-places.

1460. *Q.* Then it is more likely to be in the place that is out of reach? *A.* Yes.

1461. *Q.* But if it is in the part that is accessible, within reach, he will find that morning after morning when he inspects? *A.* Yes.

1462. *Q.* So that it really comes to this : as a matter of practice, if a man is inspecting these wastes adjoining working-places generally, he gets as good an idea of the condition of the waste as if he makes the special inspection once a week? *A.* I could not say that, really, because a man making the usual inspection in the morning is not supposed to go on to the edge of the fall, which another man, making an inspection of the wastes, might fairly be expected to do, if it was safe.

1463. *Q.* Quite so;—but if gas came down from the level of the top of the seam he would find the gas in the ordinary daily inspection? *A.* Quite so.

1464. *Q.* But if it means climbing, then the gas would be beyond his reach, even if he does climb? *A.* It might be; yes.

1465. *Q.* Then, whatever the meaning of the rule may be, you admit that the non-inspection of this waste had nothing to do with the disaster at all? *A.* No; it had nothing to do with it.

1466. *His Honor.*] I am happy to say that I have not got to inquire into the cause of the disaster; that has been very fully gone into by another tribunal.

1467. *Mr. Wade.*] I am getting out these various circumstances regarding the inspection of the waste by way of mitigation. I do not intend to contend that Mr. Rogers' understanding of that rule was correct.

1664. *Q.* Now, with regard to Special Rule 10, can you tell me why it is that it is advisable to examine the state of the waste workings? *A.* In order to ascertain if there are any accumulations of either fire-damp or black-damp, especially as some of the travelling roads in this colliery are return air-ways.

1665. *Q.* Now, to examine a waste working—as it is called in that rule—for the presence of fire-damp, at any rate, the examiner would want to get to the highest places of the roof? *A.* Yes.

1666. *Q.* Can he do that where there have been falls? *A.* Well, he must use his own judgment in order to keep himself safe. He should not go where it is unsafe to do so.

1667. *Q.* If the examination is made—as you say it is made—for the purpose of detecting fire-damp or black-damp, ought it to be made with the safety-lamp? *A.* Well, particularly so far as fire-damp is concerned, it ought to be made with the safety-lamp.

Mr. D. A. W. Robertson gave evidence before me, as follows:—

2384. *Mr. Wade.*] There is one thing, your Honor, in regard to the question of the waste workings.

2385. *Q.* Do you know of your own knowledge when that first became a question of any consequence in the coal-mining world? *A.* Well, I believe I may claim, with all modesty, to be the discoverer of old workings. At all events, I was the first to formulate a rule making it a statutory obligation to examine old workings. Old workings, your Honor, have been examined in a perfunctory manner, when it was convenient, up to a certain time. Then, after the Stockton inquiry, of which I was a member, very particular importance was attached, not only to the ventilation, but the inspection, of the old workings. Up to that time there had never been a rule, except in my own colliery, requiring the inspection of old workings. Now, that is not so many years ago, and if you searched in the principal Act you might come to the conclusion that such a thing as an old working did not exist, because, except in one place, they are not referred to at all.

2385½. *His Honor.*] *Q.* In one place in the Act? *A.* In the principal Act. It all goes to show that importance was only attached to the examination of the working-places—the working parts of the mine; and it is only of quite recent years that any importance has been attached to old workings at all. As I say, I was the first to formulate a rule. Others have followed suit; but I do not know if they have all got such a rule now.

2386. *Re-cross-examination by Mr. Bruce Smith.*] *Q.* I take it from what you have said about wastes that you regard it as very important that wastes should be examined? *A.* I do.

2387. *Q.* To what extent do you think that wastes should be examined;—I mean to what extent should a man go into the wastes? *A.* As far as is safe.

2388. *Q.* And that must depend on the judgment of the man who is there? *A.* Yes. Well, just the other day I had a difference of opinion with one of my officials. I went into a place, and I did not see his mark in the old workings. Certainly it was a little dangerous; the timber was broken, and the roof dangerous. I hauled him over the coals, and he said, "It is not safe: I do not care to go in there," and I could not force the man, because he declared, and undoubtedly it was not safe, although I went in myself.

2389. *Q.* Still it is a loophole for a man not to do it? *A.* It is a loophole in this way: that a man might get out of the examination of a few yards of the old workings, but he could not possibly get out of the examination of the old workings sufficiently far not to be able to determine their safety.

2390. *Q.* I understand you went 50 yards further than he had gone? *A.* Yes.

2391. *Q.* How far had he gone? *A.* He had gone a fair distance in and under a roof that was not particularly safe; but I could not say to him, "You must go in; I am determined that you shall," because it would be taking a responsibility I had no power to take.

2392. *Q.* How far did he go in? *A.* I daresay I went 80 yards in, and the man may have gone 30. I am only speaking in round figures.

2393. *Q.* How often do you consider that ought to be done? *A.* Well, I do it once a week.

2394. *Q.* And you insist on having it done? *A.* Oh yes, I insist upon it. But then again, that is only something new. The old workings did not have any existence until a few years ago.

2395. *His Honor.*] *Q.* But they did become important a few years ago? *A.* Well, I did my best in that report of the Stockton inquiry, to draw attention to the importance of it, and my suggestion that the old workings should be examined and ventilated did not meet with the support from the then Chief Inspector that was to be expected.

2396. *Q.* That may be; but the matter at that time did assume importance from the action which you took about it; attention was directed to the importance of it? *A.* Attention was certainly directed to it; but I merely state this to show that old workings, not only here, but in Great Britain, did not receive the attention their importance deserved.

2397. *Q.* Was it after that time, do you know, that these special rules were drawn up, containing this Special Rule 10? *A.* Yes, your Honor.

2398. *Q.* Then your action did, as a matter of fact, come home to the knowledge of the mining world; and, in the case of Kembla, came home to their knowledge sufficiently to induce them to draw up this rule about examining once a week as far as practicable? *A.* Yes.

2399. Q. So that, whether it was recent, or whether it was ancient, it was a thing known? A. Yes. I understand, your Honor, that the old workings at Kembla had been inspected once a month, but that there was no rule.

2400. Q. That was stated in the evidence, once a month? A. Oh yes; but previously in times past. But my impression is that the examination of the old workings in former years, if it ever was done, was done in a very perfunctory sort of way, whenever it was convenient, and as far as convenient.

2401. Q. However, the examinations, as they used to take place, seemed to you to be an insufficient sort of thing, and it seemed to you that there ought to be more attention directed to these places? A. Undoubtedly. My impression is that the old workings were not, in the ordinary sense, inspected at all. They were neglected.

2402. Q. The question to my mind is, and it seems to have been realised by others too, because it says "as far as practicable," what were the old workings to be inspected for? A. Well, really, the principal factor in the examination of the old workings is the possible presence of gas that may be carried on to the working-places. Of course the matter of the security of the roof and sides does not directly affect the safety of the persons employed, because they are not working there; but, if you have gas, explosive gas, or any other noxious gas, lodging in the old workings, there is just the possibility that it may be brought in contact with a light, for instance, as in the case of Dudley. Now Dudley explosion was after that Stockton inquiry, and I have no knowledge of Dudley, and I do not know whether the old workings were properly examined or not—I cannot say—but I think it is clearly understood there that the explosion there was the outcome of gas in the old workings coming in contact with a naked light.

On this point the Royal Commission expressed themselves in paragraph 70, as follows:—

" and it was clearly not incumbent upon Morrison, nor could it be expected of him, that he should (on the 19th of July) go under a large area of roof from which the props had been withdrawn, or (on the 24th, 30th, or 31st) that he should, in order to make his examination, go over the 2½ feet fall, in view of the fact that the whole of the stone was hanging and likely to come down at any moment. It does not appear probable, therefore, that, even if the waste had been carefully tested once a week with a safety-lamp, the disaster would have been averted."

The last monthly examination made and reported by Morrison, the deputy, was on the 19th of July. The disaster occurred on the 31st of July. If the examinations had been made weekly there would have been an examination of the goaf on the 26th July. In view of the opinion of the Royal Commission that the disaster was caused by a fall in the 35-acre waste, driving an inflammable mixture of fire-damp and air which had accumulated in that waste into the roads with sufficient force ultimately to bring it into contact with a naked light, it is evident that an examination on the 26th, if thoroughly made, might possibly have discovered the beginning of the accumulation which led to the disaster; but inasmuch as it could only have been discovered by mounting to the highest parts of the roof, and the Commission are of opinion that Morrison's duty did not require him to do that, the examination might, it would seem, have been quite useless to discover the accumulation, and it appears to be on this ground that the Royal Commission concluded that even a weekly examination with the safety-lamp would probably not have averted the disaster.

The inconsistencies and confusions of Morrison's evidence are discussed by the Commission in paragraph 66 of their Report, and the conclusion to which they come, to which I attach weight, inasmuch as Morrison gave evidence in their presence, is that Morrison probably confounded in his memory the circumstances of two examinations, one made on the day after the men were withdrawn (and the roof left unsupported—19th July) and another which he seems to have made about the 24th of July. They mention also Morrison's statement that he examined the 4th Right goaf (in which the gas which caused the disaster accumulated) about the 30th and 31st July, but there is much doubt in their minds whether this was really an examination of the waste or merely an examination of the road leading to the waste. If, however, Morrison did really make a proper examination about the 24th, then the failure to comply with the rule did not, in fact, result in the goaf being left unexamined, and did not, therefore, it would appear, in fact contribute to the disaster. The daily examination of the waste workings relied upon by Mr. Rogers as being a substantial compliance with the rule "cannot possibly" (the Royal Commission say—paragraph 65) "if it could be said to be an examination at all, have been more than superficial." They conclude that Mr. Rogers was, in their opinion, "certainly deserving of censure" for not complying with the rule after it had been brought so pointedly under his notice by Mr. Leitch.

A further feature of the examination as actually made under Mr. Rogers' management was that it was not made with a safety-lamp. Morrison's evidence is very confused, and I find it difficult to draw any satisfactory conclusion from it. I cannot find any rule imposing upon the deputies the duty of examining the waste places at other times than at the weekly examinations prescribed by Special Rule 10; and though it may have been the practice of the mine to look in at the wastes when passing along the roads in making the daily examinations, it seems evident that such an examination would not appear to the deputy as one requiring any great thoroughness or expenditure of time. It seems to me that the real feeling which operated in Mr. Rogers' mind was that of the safety of the mine and its freedom from any discoverable exudation of gas. This fact, together with the further fact that examinations of goafs, owing to the danger of the falling roof, can hardly be required to be made very thoroughly, and to the feeling which Mr. Rogers had that a certain examination of the waste places was made by the deputies in their daily rounds, seems to me to have been at the root of Mr. Rogers' action. I am satisfied that Mr. Rogers considered the course he was adopting was perfectly safe, and he was so far justified that the Royal Commission expressed their opinion that the breach of this rule was not one of the operative causes of the disaster. *It is evident, however, from the very circumstances of the disaster itself, and the danger which it reveals in the existence of waste places, that the rule is one of great importance; and, although, perhaps, in concluding, as a mere matter of mine management, that a formal monthly examination taken with the daily inspections was sufficient for the safety of the mine, Mr. Rogers may have committed, at most, an excusable error of judgment, it is impossible to overlook the fact that it was also an act of disobedience of a very important rule, which, if properly carried out, might, perhaps, have averted the disaster.*

From the evidence of Mr. A. A. Atkinson and Mr. D. A. W. Robertson above set out, it would appear that the dangers arising from the existence of waste places were first brought into prominent notice early in the year 1897, when what is called the Stockton disaster occurred. Before that time, apparently, the

the mines had worked without any special rule relating to the inspection of goafs, but after that rules were drawn up for various mines (which rules are all now uniform), and this Special Rule 10 was drawn up by the management itself (and not by the Government) for Mount Kembla. It is hard to understand how, under these circumstances, Mr. Rogers was not himself, partly at least, responsible for the drawing up of the rule and fixing the period of inspection at once a week. From the evidence of Mr. Leitch, however, and other evidence in the case—though there is no evidence specially directed to the point—the impression made upon my mind is certainly that Mr. Rogers had never had the rule brought so very distinctly under his notice as must have been the case if he had been in effect one of its framers; and it is certainly not a circumstance favourable to Mr. Rogers' vigilance that the lesson of the Stockton disaster, leading to the framing of a rule especially directed to deal with the then newly-revealed danger, should have been so little laid to heart by him as to produce no change in the former practice of the mine—the practice, that is, of monthly inspections and reports.

The object of the examination being mainly to discover whether or not gas was present, it is obvious that it should be made with safety-lamps, naked lights being useless to detect the presence of a small percentage of fire-damp. It seems, however, that the monthly examinations were made with naked lights. I can find no evidence showing distinctly that Mr. Rogers was aware of this; but it had, apparently, gone on for some time. Morrison, who, at the time of the disaster, had only been the deputy for that part of the mine for about two months, and had only, therefore, twice examined and reported as to waste workings, gave the following evidence before the Royal Commission:—

11748. *Q.* Will you explain how you examined the waste workings? *A.* Yes.

11749. *Q.* What do you understand by waste workings? *A.* That is a monthly inspection. We reported everything we saw. We came right down.

11750. *Q.* Did you, in making the examination, go into every place accessible? *A.* Yes, as far as safe.

11751. *Q.* You did not leave any bord which you could get into? *A.* We went into every place.

11752. *Q.* You went with naked lights? *A.* Yes.

11753. *Q.* Did you not think it necessary to have safety-lamps? *A.* The first time that I took a safety-lamp Nelson laughed at me, and said that he always went with a naked light.

11754. *Q.* Do you not think it probable that those were likely places in which to find gas? *A.* I would think that the most likely place to find gas would be in the highest place in the mine. I followed out what Mr. Nelson told me.

It appears incidentally in the case that Nelson—who lost his life in the disaster—had been deputy or under-manager for several years. *Mr. Rogers must, therefore, be held responsible for the method in which examinations were made, as well as for the intervals at which they were made; and after a careful examination of all the circumstances it seemed to me that Mr. Rogers (no doubt from his conviction of the freedom of his mine from gas) had shown a failure to appreciate the importance of the lesson taught by the Stockton disaster, and was negligent to a blamable degree in the manner and times of his examinations of the waste places. Even if Mr. Rogers was right in his conclusion that monthly examinations with naked lights and monthly reports were sufficient for good and safe management, the fact still remained that he was disobeying a rule which had the force of law. On this ground, therefore, I was driven to the conclusion that a case for censure had been made out against Mr. Rogers.*

Ground 2.

“That you failed to cause a regular and proper examination to be made of places in the said mine temporarily or permanently idle, which were situated on the intake side of working-places.”

The particular heading to the neglect of which examination under this ground was specially directed, was the No. 1 Right back heading, the point at which it was at first thought, and was, indeed, found by the Coroner's jury, that the explosion had originated. This was a heading the working of which had been for some time disused, and the entrance to which was fenced in accordance with the rule. It was bratticed to the face, and the intake air passed through it, and subsequently passed through a number of working faces. It was contended against Mr. Rogers that temporarily disused places of this kind, or “standing-places,” as they were called, should have been examined in the same manner as the working-places at the morning examination before work began in the mine. It was argued, on the other hand, that on a proper reading of the Act and Rules the law did not require any such examination, and that later in the day the practice of the mine was to examine them. General Rule 4, under section 47, says:—

“(1) As to inspection before commencing work,—A competent person . . . shall, within such time immediately before the commencement of each shift as shall be fixed by Special Rules made under this Act, inspect every part of the mine situate beyond the station or each of the stations, and in which workmen are to work or pass during that shift, and shall ascertain the condition thereof so far as the presence of gas, ventilation, roof, and sides, and general safety are concerned.

“The inspection shall be made with a locked safety-lamp, except in the case of any mine in which inflammable gas has not been found within the preceding twelve months.

“A report specifying where noxious or inflammable gas, if any, was found present, the condition of the ventilation, and what defects, if any, in roofs or sides, and what (if any) other source of danger were or was observed, shall be recorded without delay in a book to be kept at the mine for the purpose, and accessible to the workmen; and such report shall be signed by, and so far as the same does not consist of printed matter shall be in the handwriting of the person who made the inspection.”

“(11) As to inspection during shifts:—A similar inspection shall be made in the course of each shift of all parts of the mine in which workmen are to work or pass during that shift, but it will not be necessary to record a report of same in a book.”

Special Rule 8 states:—

“The fireman shall, within four hours, immediately before the commencement of each shift carefully examine with a safety-lamp the whole of the workings, faces, and travelling roads. He shall cause to be written with chalk the date when every working-place was examined, and if, in his opinion, any danger is apparent he shall cause a danger signal to be put up, beyond which no unauthorised person shall on any account pass until the danger is reported to the overman, under-manager, or Manager, and removed.”

Special Rule 9 states:—

“He shall also make a true report and enter and sign daily in a book kept at the appointed office for the purpose the state of the mine roads, doors, stoppings, brattice, faces, and ventilating appliances He shall fix danger signals when and where necessary, and shall continually, during his shift, inspect the working faces, roads, doors, brattice, and ventilating appliances.”

The object of examining the working parts of the mine before the workmen enter is mainly to see that the roof and walls are in good condition, that the brattice and ventilation are in good order and working properly, and that there is no gas. Inasmuch as no workmen have any right to go inside the fence which is placed across the entrance to a “standing-place” it may be fairly said that, so far as the state of the roof and walls is concerned, there is no need for an examination, though it must not be forgotten that miners do not always obey rules, and have to be protected against themselves. It is evident, however, to me, that it is almost as important to examine, for gas, a standing-place as an actual working-place. True, if the brattice is up and the ventilation working properly, any gas discharged in a standing-place will be swept by the air through the mine, and may as well be discovered in the adjacent working-places as in the standing-place itself. This view was pressed upon me by Mr. Wade, but it seems to me to prove too much; for it would justify the non-examination of an actual working-place quite as well as of a standing-place. Indeed, pushed to an extreme, it might be said that it would be sufficient to examine for gas in a return air-way.

To show the possibility of gas accumulating in headings, even when the ventilation is working, I refer to evidence given by J. Heron, a miner, before the Commission. He said that about nine or ten months before the disaster he met Dungey, a deputy (who lost his life in the explosion) going down the No. 1 main heading and about 100 yards from the face. Dungey said “Jack, if you had been here before me you would have got your head blown off. She was standing full of gas for 10 or 15 yards back; the brattice was all down.” Whether this evidence is true or not, it illustrates very forcibly the dangers which may arise in any heading; and it is evident that the brattice might be “all down,” and an accumulation of gas, therefore, take place in a standing-place as well as an actual working-place.

Two questions may be asked: (1) Was there a legal liability to include these places in the morning examination? (2) Apart from the Act and rules, was there a liability dictated by common-sense and prudent management? It will be seen that the general rule in the Act itself only speaks of a morning examination of places in which workmen are to work or pass during that shift. The Special Rules, however, speak of examining the whole workings and faces, whilst the daily report has to deal with, amongst other things, the state of the brattice, faces, and ventilating appliances. It seems evident to me that on a proper reading of these words there was a statutory duty to examine the standing-places as well as the working-places at the morning inspection. This, however, is a point of law, as to which there might be a difference of opinion, and in such a case it would be most unjust to condemn Mr. Rogers for reading the Act one way rather than another. The other question, however, still remains. Mr. Rogers knew that he had to manage the mine carefully. To read the Act and rules critically to find out the minimum prescribed by them, and never to go beyond that minimum, is a most unfortunate spirit, and one by which I do not believe that Mr. Rogers was animated. It seems to me that very little thought would have shown any man, to whose mind the danger of gas was present, the importance of including the standing-places in a morning examination, and especially the standing-places in a rising heading, as No. 1 Right was. I feel certain that, if Mr. Rogers had constantly and vividly kept in mind the danger of gas, and had given one minute's thought to the question of examining standing-places, he would at once have directed that they should be examined as thoroughly as all the rest of the mine. The explanation of his failing to do so is, I am sure, that through long impunity he had come, to some extent, to feel that the danger from gas in the Mount Kembla Mine, with its excellent system of ventilation, was practically non-existent.

The Royal Commission discussed this subject in paragraph 77 to 83 of their Report. The evidence before me was as follows:—

Mr. A. A. Atkinson:—

564. *Mr. Bruce Smith.*] *Q.* Now, is it as necessary, in your opinion, to examine those faces which are temporarily idle as it is to examine those in which men are working? *A.* I think it is equally so.

565. *Q.* And to examine them as often? *A.* Each shift.

574. *Q.* You think the standing-places ought to be examined also; should they be examined with a safety-lamp? *A.* I think so.

579. *Q.* Now, I want to ask you a question about the standing-places: will you tell His Honor why it is necessary to examine those places as well as the working-places? *A.* Well, in case of a mine in which inflammable gas is known to be given off, the intake air which is conducted into any temporarily idle or standing-place will also necessarily have to go into the places which the workmen are occupying during the shift, and, if any fire-damp is given off, or if there is any brattice in the faces which requires attention, that can only be done by regular inspection.

580. *Q.* Now, you gave evidence to the effect that, four days after the explosion you found, on that No. 1 heading, an accumulation of gas which, I think, measured up to about 10,000 cubic feet? *A.* Yes, some thousands of feet.

581. *Q.* Now, presuming that that accumulation had taken place before the disaster, and had not been discovered, what would be the danger of that? *A.* Well, a portion of it might have been carried along with the air current from those places to the other working-places on the return side of those particular places—carried round the working-places in which the men were working.

582. *Q.* Now, the top of the No. 1 heading is where you found the 10,000 feet of gas four days after the accident? *A.* Yes.

583. *Q.* Of course the ventilation was not in good order? *A.* No, it was deranged.

584. *His Honor.*] *Q.* Where were you standing when you detected it? *A.* About 4 or 5 yards on the outbye side of the last cut-through.

585. *Q.* I mean was this 10,000 cubic feet of gas entirely within the standing-place? *A.* Yes, your Honor.

586. *Q.* It was entirely within the fence which is placed to keep people from the standing-place? *A.* So I understand, your Honor, yes.

587. *Q.* You say that because you did not know where the fence was? *A.* Well, of course, the fence if there had been one, was down when I made the inspection; but I understood the fence had been up, and all this accumulation was on the inside of that.

588. *Q.* Of course that is material; and I wanted to know whether all that accumulation had taken place in that part which used to be left uninspected? *A.* Yes, that is so.

589. *Mr. Bruce Smith.] Q.* Your Honor will see—is this so, Mr. Atkinson?—that the air went up into that heading and round the end of the brattice, and then down again away to the west, along the working faces where a number of men were engaged? *A.* Yes, the air went first into Morriss's place, which is marked on the plan, and from there it went into the face of the front heading, and then round past a lot of working places.

590. *Q.* Now, assuming that the accumulation had gone on there, and had not been detected, through the want of examination, what would be the effect in time of that accumulation? *A.* A portion of the inflammable mixture might have been carried round to the working-places where the miners were using naked lights.

591. *Q.* Then the accumulation there, if it did occur, would be a positive danger? *A.* Quite so; yes.

592. *Q.* And is not this so,—if you had a large body of gas there it would tail out first with the air down to a naked light (I mean if it followed the course that the Commission find this explosion did) it would tail out, catch alight, flash back, and the whole body explode? *A.* That is assuming that the brattice became disarranged near the face, that would happen.

593. *His Honor.] Q.* I suppose that, as long as the ventilation and brattice were working in good order, there could be no accumulation, though there might be a discharge? *A.* There might be a discharge.

594. *Q.* But there could be no accumulation in any one place? *A.* No, your Honor, there should not, if the ventilation arrangements were in perfect order.

595. *Q.* But part of the examination, I suppose, is to see that the brattice is in good order? *A.* Yes, that is so.

596. *Q.* And unless he went into the standing-places he could not be sure whether the brattice there was in good order? *A.* No, he could not.

597. *Mr. Bruce Smith.] Q.* You heard the evidence of Mr. Rogers, and you have read it since—you heard the evidence of Morrison at all events? *A.* Yes.

598. *Q.* And you heard him say that he did not examine that for a considerable time? *A.* Yes.

599. *His Honor.] Q.* Mr. Rogers also spoke about it. He was quite aware that there was no examination made?

600. *Mr. Bruce Smith.] Yes.*

601. *Q.* Well, do you consider that good management of the mine, Mr. Atkinson? *A.* No, I do not.

1661. *His Honor.] Q.* Can you tell me any reason for examining an actual working face which would not apply to a temporary working face, going outside rules altogether . . . ? *A.* Yes, your Honor; the reason that the men are going to work in a certain place requires that the roof and sides be in a safe condition, that would not apply to an idle place.

1663. *Q.* Now, is there any other reason? *A.* No, I think not.

Mr. D. A. W. Robertson:—

2432. *Witness.]* Those (*i.e.*, standing-places) are generally considered to be places that need not be inspected, generally speaking; but I say it is wrong.

2433. *Mr. Bruce Smith.] Q.* Because they are inbye of working-places? *A.* Yes.

2434. *Q.* And, therefore, they ought to be inspected? *A.* Yes, as a matter of good-mining management. Of course that would impress itself more particularly on the mind of the manager of a gassy mine, because the only danger to be apprehended from the neglect to examine those places would be the danger of gas accumulating and being brought into contact with a naked light in a working-place.

2435. *His Honor.] Q.* Is not it a sufficiently good reason to make it bad management not to examine them? *A.* It depends from what standard you view it. If you view Kembla Mine as a recognised gassy mine it would.

2436. *Q.* The Commission said: "The Commission cannot but characterise the omission to make a daily examination of such faces is at least very bad management; and they regret to have found the practice prevailing at Mount Kembla."—(Par. 82 of Royal Commission Report)? *A.* Yes. I concur in that. But still I only wish there to point out that you can look upon this from two different points of view; that is, a manager of a recognised gassy mine will certainly be guilty of neglect of his duty if he fail to inspect these places.

2437. *Q.* Of course, I can understand quite that a duty may in some cases be much more urgent than in other cases, but here is your report that it was at least very bad management? *A.* Yes, although, of course, it was not in contravention of any rule.

2438. *Q.* That is a matter for me. At the same time if there were any common-sense in the matter—no man would be found guilty of a quasi-criminal charge because he had made a mistake in a fine legal point—but it is a matter of common-sense. There are two reasons why the workings should be examined; one is to see that the walls and roof, and so on, are in good order, so that there is no danger of the men being injured; and the other is to see that the ventilation and brattice are in good order and that there is no accumulation of gas; and one of the reasons applies to these places? *A.* Yes.

2439. *Q.* So, as a matter of common-sense, I do not see how it could be omitted, and it is a most deplorable spirit for a man to take a rule, and, because he thinks, in a legal view of it, that he is not bound to do a thing, then omit doing it, when common-sense says he ought to do it—it is a most unfortunate thing? *A.* You see, your Honor, Mr. Rogers is not alone. Your Honor must bear in mind that, the same censure as applies to Mr. Rogers would apply to many others.

In Mr. Rogers' evidence, on reference being made to the omission to examine the standing-places on the morning inspection, he said:—

2859. *Q.* . . . ? *A.* That is not saying but what these idle places were examined by the day deputy or by myself. I used to do it; and the underground-manager used to go into these places; but the deputies that used to examine the places in the morning would not go into these places and report on them; but it would be done during the day, either by the underground-manager, myself, or the day deputy.

Before

Before the Royal Commission Mr. Rogers gave the following evidence :—

26323. *Q.* Did you know that Morrison had not examined those back headings? *A.* Morrison would not examine only the working-places.

26324. *Q.* You knew that was his practice? *A.* That is the deputy's practice—to examine all working-places.

26325. *Q.* And who would examine the places not working, if the deputies did not? *A.* When the monthly examination was made they would be examined.

26326. *Q.* What monthly examinations? *A.* What we made as we went through the work.

26327. *Q.* The monthly examination of the waste workings? *A.* They might be examined then.

26328. *Q.* Now, do you say that you knew that the deputy would not examine a place that was not being worked, and that the only time such a place would be examined would be during the monthly examination of the waste workings? *A.* No; I do not mean to say that.

26329. *Q.* Tell me any other time such a place would be examined? *A.* The underground-manager would go there and examine it; and, perhaps, I would go there and examine it.

26330. When would the other manager go there? *A.* Oh, on making his rounds.

26331. *Q.* But you have no rule about it? *A.* No; there was no rule about it.

26332. *Mr. Ritchie.] Q.* Had you no stipulated time when such places as this would be examined? *A.* No.

26333. *Q.* Then, in your opinion, it was not necessary to examine them at all? *A.* Oh, yes; just to see that it was standing.

26334. *Mr. Lysaght.] Q.* You mean it was to see if there was any fall of the roof? *A.* Yes.

26335. *Q.* Then we may take it that the places not being worked were not examined for gas? *A.* They were examined for everything.

Mr. Rogers gave some hearsay evidence before me to show that Nelson, the underground-manager, was seen by both the engineer and the carpenter to examine both the No. 1 headings on the day before the disaster.

Bearing in mind the fact, that the brattice might become disarranged in a standing place; that an accumulation of gas might take place there; that No. 1 back heading was a rising heading, in which, therefore, there was a peculiar liability that gas might accumulate; that workmen do not always obey rules, and might go inside fences; and that the examination later in the day by the underground-manager or deputy would be with a naked light, it seemed to me that the failure to require that standing-places be examined with the safety-lamp during the morning inspection was censurable bad management, only to be explained, as I have said before, by the feeling of security in Mr. Rogers' mind as to the condition of the mine with regard to gas.

It has been, of course, on this, as on all the other questions submitted to me, my duty to form my own opinion, quite independently of that expressed by the Commission. Their duty was to inquire into the cause of the explosion, and to ascertain whether blame (for the explosion) attached to any person. They have, accordingly, reported as to the cause of the explosion, and have absolved Mr. Rogers from liability therefor. My duty has been simply to inquire whether Mr. Rogers' management of the mine has been such as to call for the cancellation or suspension of his certificate, and I have nothing at all to do with the question, already decided by the Commission, whether he is responsible for the disaster. As I have said, I must, on all questions submitted to me as to Mr. Rogers' management, think and decide for myself, and I have done so. I would, at the same time, point out that, on this particular charge, the opinion of the Royal Commission concurs with mine. They say (paragraph 82 of their Report) that they "cannot but characterise the omission to make a daily examination of such faces as, at least, very bad management; and they regret to have found the practice prevailing at Mount Kembla."

Ground 4.

"That you, knowing that there was an opening or openings on the 5th Right rope-road from the 35-acre goaf in the said mine, allowed to pass by such opening or openings the intake air intended to ventilate places beyond such opening or openings, in which men were to work or pass."

This was not a general question, like those which I have already examined, but related to one particular part of the mine, in the working of which it was said that Mr. Rogers had violated a provision of General Rule 1, which says that "the intake air shall travel free from all stagnant water, stables, and old workings." It appeared that shortly before the disaster the last pillars had been taken out and the men withdrawn from a large worked-out area, or goaf, some 35 acres in extent. This is the goaf in which the gas which caused the explosion accumulated, and from which it was driven out by a fall of the roof. There were several openings from the goaf to the various roads bounding it, but it was only to the openings on the north side, connecting it with the 5th Right rope-road, that the ground referred, and Mr. Bruce Smith expressly stated that the inquiry was to be limited to those openings and no others. The northern portion of the goaf had been worked out long before the disaster, and the roof there had fallen close up to the boundary-wall of the goaf. It had not, however, packed itself so closely against the wall that an open space was not left round the sides of the goaf through which air might travel. On the west side of the goaf, at the 4th Right opening, some six men had been for some time at work removing the last pillars of coal. They completed their work, left the goaf, and the supports (wooden props) were withdrawn on the 18th of July, thirteen days before the disaster. The case against Mr. Rogers was that accumulations of gas might take place in the goaf, and might, by means of the openings in the north side, mingle with intake air required for the use of the men at work. The consideration of this ground involves the discussion of the meaning of the words "intake air." From the point of view of each individual worker, all air is intake air which has not yet reached him, and all air is return air which has passed him. From a general point of view, no air can be said absolutely to have lost its intake character until it has passed the last man who requires pure air to breathe, and the last lamp which may ignite gas. The general practice appears to be to regard air as intake air until it has passed the last miners engaged in winning coal, and then to call it return air. Judged by this criterion, the air in the 5th Right rope-road, opposite the northern goaf openings, was, after the withdrawal of the men from the area at the 4th Right, return air, although tinted on the plan [Exhibit 29 before the Royal Commission], used before me, as intake air. The air from the 5th Right rope-road, however, passes into the travelling road adjoining the goaf on the west, and from that travelling road the men working at the pillars at the 4th Right received their air. It was pointed

pointed out, also, and appears to be clearly the case, that, as there were openings from the 5th Right rope-road into the north side of the goaf, and other openings at the 4th and 3rd Right on the west side of the goaf, the natural tendency of the air to seek a short circuit would prevent any issue of air or gas from the north side of the goaf. Leakage would take place from the 5th Right rope-road into the goaf through the north openings, and the air so admitted would find its way round the north and west sides of the goaf, and mingle with the air brought in for the ventilation of the pillars. Under these circumstances, I do not see how it can be said that the air, which remained intake air until it had passed these miners, was "travelling free from the old workings." Section 47 of the Act says that the General Rules are to be observed "as far as is reasonably practicable"; and the question, therefore, is, whether it was reasonably practicable to prevent the mingling of the air which had found its way round the edge of the goaf with the ventilation air brought to the pillars? A second question is, whether, assuming that it was reasonably practicable to prevent this, the failure was a matter of any real consequence, or whether it was not one of those small matters, which, on a reasonable interpretation of the obligations of mine management, might not be very properly disregarded.

First, as to whether it was reasonably practicable, a great deal of evidence was given by practical men to the effect that, towards the end of the workings in any particular area, control over the ventilation is, to a certain extent, unavoidably lost. The practice is, apparently, to begin to win the coal in any fresh-opened part of the seam at the point or side farthest from the mouth of the mine, and to work back towards the entrance. In the bord-and-pillar system, coal is first removed from the bord, the pillars being left to support the roof. The pillars are then removed, the roof being temporarily supported with wooden props. As the work advances, these props are removed, and the roof allowed to fall. In removing pillars, therefore, it is evident that the miners have, in close proximity to the ground on which they are working, and necessarily open to that ground, the edge of the old workings, either temporarily supported, or unsupported and ready to fall, or in greater or less degrees of consolidation after falling; and it is stated that, to keep the ventilation air quite free from contact with any emanations which may issue from the adjoining and worked-out parts of the mine, is a thing which really cannot be done. The evidence on the point before me was as follows:—

Mr. A. A. Atkinson:—

690. *Mr. Bruce Smith.*] *Q.* As a fact, you saw those openings (that is, the openings on the north side of the goaf)? *A.* I saw some of them.

691. *Q.* You heard Morrison admit there were four or five? *A.* Yes.

692. *Q.* I ask you is that proper mining management to allow openings from a goaf into an intake air-way? *A.* Well, in the first place, you must have regard to the requirements of General Rule 1, which says, "The intake air shall travel free from all stagnant water, stables, and old workings."

693. *Q.* Now, apart from the question whether it is a breach of the General Rule, which is for His Honor to determine, in your opinion is that good mining management? *A.* No; it is not good management to have no stopping between an intake and a goaf.

694. *Q.* They ought to have been stopped up, in your opinion? *A.* Yes.

695. *Q.* Built up? *A.* Yes.

Then, on its being pointed out that the air in the 5th Right rope road was return air as to everybody except the men working in the 4th Right pillars, the evidence of Mr. Leitch (page 674 of the Royal Commission) was referred to, and it was found that the names of six men were given as those of men who were working in the 4th Right pillars within a few weeks of the disaster.

Mr. A. A. Atkinson:—

740. *Mr. Bruce Smith.*] *Q.* Well, assuming that there were six men working there, was it, in your opinion, good management to allow those four or five openings from the waste into that heading? *A.* No; it was not, in my opinion.

In cross-examination by Mr. Wade, he said:—

1343. *Q.* And if there was an opening in the north of the 35-acre waste, and an opening again at the 4th Right, would not the suction of the furnace draw the air from the north side of the waste through the waste out of the 4th Right and up to the furnace? *A.* If there was any opening in the waste, that is the natural direction of the pressure.

1345. *Q.* So long as you have that current, there is not much fear of anything coming out of the waste on the north side? *A.* If there is a passage through the waste.

1346. *Q.* And if you have an opening round the edges of the waste, you would get your current, would not you? *A.* Yes; if there is an opening all the way round the edges.

1348. *Q.* Well, assuming there was, then there would be no harm done, so far as the air going in at the 5th Right and at the north side of the 35-acre waste, and coming out at the 3rd or 4th Right, and going to the furnace? *A.* No; I do not know that there would be any harm at all in it.

1349. *Q.* There would be no harm to the men working at the 5th Right? *A.* No.

1351. *Mr. Wade.*] *Q.* You know it is absolutely impossible to ventilate all the pillars without passing over some fallen roof? *A.* Yes.

1353. *Q.* And the reason is this, that you generally go to your farthest boundary and work your pillars backwards towards the tunnel mouth? *A.* Yes; that is the usual thing.

1355. *Q.* So that it would be nothing unusual if it turned out when they were working back through these pillars that they had to give the men air which did pass over some old workings in that very section? *A.* Well, you cannot prevent some of the air passing along the edge of the waste.

1356. *Q.* In fact, it is supposed to be good practice when you have a number of pillars close to the waste to let the air play round the edges of the waste? *A.* Yes; to let the air play round the edge of the waste is good practice.

1359. *Q.* And it is over the edges of this roof that had from time to time fallen that you are compelled very often to take the air for the men who are working on the outbye side of that waste? *A.* Well you cannot prevent it going round the edges; in fact, it is good mining practice to ventilate the edges of goafs. It is also good mining practice to have stoppings between intakes and goafs.

1362. *Q.* ? *A.* You should have some other method of getting your air in than depending upon a road where the pillars have all been extracted.

1363. *Q.* Does not that sometimes happen unavoidably? *A.* Well, it does sometimes happen, and I think the qualification of the words before the rule would permit such a thing; but it should be avoided where it is possible.

1370. *Q.* Did your Inspectors ever tell you that there had been this what you say now is a violation of the Act? *A.* No; they did not.

1371. *Q.* Do you know this—that for years and years this goaf has been worked by a split brought in from the north side of the waste? *A.* So I have heard since.

1372. *Q.* And that has been seen by your Inspector, presumably? *A.* Presumably so.

1373. *Q.* Do not you know this—that in other mines in the same State that principle has been adopted without objection of any kind? *A.* Oh, there has been objections raised to it; but it is sometimes, as I have already said, impossible to avoid it, and in such cases I think that the qualification in the rule would allow of its being done.

1377. *Mr. Wade.] Q.* But if this case arises: If you know that that goaf is giving off gas, it is a very different question then, if you conduct air through that goaf on to men who are working on the return side of it? *A.* Yes; it becomes then necessary to have some other means of ventilating it.

1378. *Q.* Then, if there was no reason to believe that there was fire-damp being given off in this 35-acre waste, under the circumstances, do you see anything wrong in taking the air in from the north side of that waste on to men working on the intake side? *A.* Well, I think it would be better to have a return between the goaf edge and the intake air-way; and I think, also, that it would be better practice to avoid taking it over the goaf if you can reasonably do it in other ways.

1379. *Q.* But my question was—Do you say that is wrong under the conditions which were supposed to exist in the 35-acre waste? *A.* Well, it just depends as to whether it would be considered reasonably practicable to have done it in another way. I could not say whether it was actually or not, and I think His Honor would have to judge as to that.

1380. *His Honor.]* Well, that is an expert matter. I would want guidance on that from you.

1381. *Mr. Wade.] Q.* Can you, as a practical man, say that this is wrong under the conditions I have pointed out to you, that this goaf was supposed to be free from inflammable gas? *A.* I cannot say that it was absolutely wrong; but if it could have been ventilated in another way, it would have been better.

Mr. J. C. Jones said:—

2547. *Q.* Now, in a case of this kind, take this area of 35 acres, when you are drawing your pillars back from the northern boundary, is there any other way of ventilating those men, except by passing over the pillars previously drawn? *A.* Not for a place like that.

2537. *Mr. Wade.] Q.* Now, if you had had in this waste no indications of gas during the whole time it was worked, supposing the air came through the north side to west, along the edge of the goaf, and mixed with the air that had gone down the return to these men at the 4th Right, would there be any harm in that, then? *A.* I do not see that it would at all. After you take a certain piece of coal away, the air must come round there. It is the only way you can do it.

2571. *His Honor.]* The rule does not say “as far as practicable”; but Mr. Atkinson says that sometimes it is unavoidable. The question is, is it unavoidable here.

2572. *Witness.]* In pillar workings, your Honor, it is unavoidable.

2573. *Mr. Wade.] Q.* Do you know, from your own experience, that that has been done, that the air has been taken through fallen ground on to men? *A.* Oh, in all pillar workings you must naturally go through old workings before you reach the pillars.

Mr. W. Rogers said:—

2664. *Q.* How long have you been carrying on the practice of taking air, which passes over fallen ground, whilst you are drawing pillars? *A.* It has always been the practice.

2675. *Q.* I want to know whether it is practicable to ventilate your pillar workings otherwise than by bringing air over the fallen ground? *A.* No; that was the practice.

2676. *Q.* Can you do it otherwise? *A.* No; you cannot do it any other way.

Dr. J. R. M. Robertson said:—

3173. *Q.* Do you see any objection, if the waste is open on the north side, and there is an opening to the return at the 4th Right, to allow the intake to go on the north side? *A.* There can be no objection to that at all. That is what it ought to be, because it would emerge from that into the return. That is exactly what ought to be.

3175. . . .? *A.* There is no rule for ventilating the last of the pillars of a section, and there was no gas ever discovered by any man born among these pillars. No man born ever discovered gas in these goafs.

3177. *Mr. Wade.]* When they were working the last of those pillars at the 4th Right there would be waste all round them where the roof had lately fallen? *A.* Yes; and vacancies.

3178. *Q.* I want to know what your opinion is with regard to the question of air passing over that fallen roof;—would it be more desirable to have it pass over, or that the opening should be blocked up? *A.* Personally, I should like to see it passing over. I should be very much easier in my mind if it passed over it and kept it sweet.

3185. *Mr. Wade.] Q.* . . .? *A.* Whilst you were taking out the last dozen pillars at the 4th Right, would it be practicable to seal off all the openings? *A.* No; it would be distinctly bad practice.

3186. *Q.* And would it be better to allow the air to go through the north side? *A.* Yes, to filter through. There is no rule for ventilating the last section of the pillars; and in our case the pillars are always ventilated by the air filtering along the faces.

Mr. A. E. O. Sellors said:—

3332. *Q.* Here are the 35-acre waste, and the No. 1 Main Road, and the 4th Right opening, and that is an intake from the cross-cut? *A.* Yes; the 5th Right rope road.

3333. *Q.* I suppose you know that there were some men working in the last pillars of the 4th Right just before the disaster took place? *A.* Yes.

3334. *Q.* And we have been told that some air, or rather the main air, came on to them from this 5th Right down the No. 1 return, into the men in these pillars? *A.* Yes.

3335. *Q.* Here is a plan showing the exact way it went during the last few weeks [*Exhibit 74*];—now, we are also told that there was an opening on the north side of this waste, and that there was a scale of air along the edge of the goaf down to the 4th Right again? *A.* Yes.

3336. *Q.* I want to ask you first of all, whether it is good or bad mining practice to have that opening on the north side and the scale of air passing through or round the goaf? *A.* Well, if it can be avoided it

it is usually done ; but it is impracticable to ventilate the pillars without taking the air past the goaf—round the edge of the goaf ; we aim at that, but that is impracticable always to do it, because the air frequently scales over the goaf to the next pillar.

3337. *Q.* I do not think you quite understand what I mean ; taking two cases, and dealing with them separately : Supposing the major portion of this goaf had gone solid, that the fall had been sufficient to consolidate it, and the air could only scale around the edge ? *A.* Yes.

3338. *Q.* Is there any objection to that ? *A.* No ; that is the ordinary way of working pillars.

3339. *Q.* And take the other case, where the fall had not become absolutely solid, would there be any objection to the air scaling through the interstices of the fallen roof ? *A.* There is some objection to that, and an effort is made sometimes to try and save that air from going through the goaf. But that is impossible, because you cannot block up the openings and the cracks, and some of the air naturally goes that way. And it has this advantage, it prevents any accumulation lying in the goaf in these particular pockets, and does more good than harm.

3340. *Q.* You see, according to that plan, that this scale may, and we will assume it did, come down along the edge of the goaf and meet the actual intake air coming round the 5th Right ? *A.* That is the ordinary practice, and the recognised practice, too, to ventilate these pillars by this air ; and so long as this air does not go to any other working-place after it has been through the goaf the practice is excellent.

3341. *Q.* I want to deal with more than that ;—first of all, would you call it bad practice to allow this scale that comes through the goaf here to mingle with the main air coming round the pillars ? *A.* No ; if I were satisfied, as I probably would be, of the condition of that air coming past the goaf, of its purity, and of its freedom from fire-damp. If it is a gassy mine, that is a different thing. If you have a lot of gas in the mine, and this scale was impregnated with gas, then you would never think of putting that scale on to these men here ; and that is found by the hydrogen lamp.

3342. *Q.* And if gas had never been found in that particular district ? *A.* Well, I do not think there is any objection to the practice.

3343. *Q.* Let us take the alternative ;—supposing you closed up the opening on the north side through which the air came in the first instance, would that, in itself, prevent the intake air of the 4th Right drawing on this empty space in the goaf ? *A.* Meaning to seal all those ? [*Indicating the openings on the 5th Right.*]

3344. *Q.* Yes, supposing you sealed this off at the top, so that there was no current of air through the waste : at the same time the intake air of the 4th Right goes against this end of the goaf, around which the air would circulate if you had the current ? *A.* You mean the air to work back this way then ?

3345. *Q.* No, no ; there is one thing I am dealing with first of all : the air to these men from 5th Right goes round the No. 1 return into the 4th Right and round the 4th Right workings ? *A.* Yes.

3346. *Q.* If you had the opening on the north side and the opening on the 4th Right, you would get a current of air round the goaf which would mingle with the air coming from the 5th Right ? *A.* Not mingle with the air from the 5th Right. The air from these openings would go round and mingle with the air at the 4th Right, yes.

3347. *His Honor.* *Q.* But if it were sealed off at the top, would the current in the 4th Right draw any of the air out of the goaf ? *A.* Yes ; it would pick up some of it.

3348. *Q.* Where one body of air works along another body of air, a certain amount of mingling must take place ? *A.* Yes ; we always try to keep the air from a goaf from going into other air.

3349. *Q.* You take it into a return air-way ? *A.* Yes.

3350. *Mr. Wade.* *Q.* The only way to shut the air off altogether would be to put in a stopping on the north side of the waste, and build up some kind of a wall to stop the air coming again around the goaf edge at the 4th Right ? *A.* No ; that would be impracticable, because the roof would be always breaking down.

3351. *Q.* I will not mislead you by saying a wall—say a partition of wood, canvas, or brick ? *A.* No ; I do not think it is a good practice.

3352. *Q.* And you think it is better, if you find this waste clear of gas, to allow the current to go through ? *A.* Yes ; I think so. That is the ordinary practice. That is to scale along the edge of it.

3353. *Mr. Wade.* Yes.

3354. *Q.* Now, supposing you have a wall or partition along the edge of the waste to shut off anything that might come from the inside of the waste, would a man be able to examine that on the inside of the partition ? *A.* No. Of course it is possible to examine it by lifting it up ; but the men working that particular pillar would not be able to see how the goaf away from them was acting. The men, when they are working, want to be able to see the condition of the goaf alongside of them.

3355. *Q.* In what way ? *A.* So far as affecting the broken timber and the loose stone, and that sort of thing.

3356. *Q.* And that is another objection to shutting it off ? *A.* Yes. It is never done in practice. I have never seen it done in practice.

In cross-examination he said :—

3381. *Q.* Now, I will come down to the actual case. You have an intake air-way along here, down No. 1 and into the 4th Right ;—would you approve of four or five holes or openings being left in the north side of that goaf, so that the air passes over the goaf to these men, or so that it could pass over the goaf to these men ? *A.* If I could ventilate these men here another way I would have done it.

3382. *Q.* Suppose these men are ventilated as it is shown here, would you allow some of that air to escape through four or five openings across that goaf to the men ; never mind Rogers, or anybody else ; would you, as a practical man, allow it to be done in your mine ? *A.* I do not think I would.

3383. *Q.* Do you call it good management ? *A.* It all depends on conditions.

3384. *Q.* On those conditions ? *A.* Well, supposing that is stopped off in that way then there is this difficulty how to keep this goaf clear. Now, you get a condition in a mine frequently where you have a small area of pillars left in and you have lost your air-way, and you have to do something as a temporary expedient to keep the mine right generally ; and I take it that that system would keep this part generally right until that was done.

3385. *Q.* Are you in a position to say that that goaf could not be ventilated any other way? *A.* No.
 3386. *Q.* Can you see any reason for taking this intake air-way over that goaf? *A.* Only for this reason.
 3387. *Q.* You cannot see any feature on that plan which would require that? *A.* Excepting the feature that goafs should be ventilated generally.
 3388. *Q.* And therefore you take that air over that goaf to these men? *A.* How else would you do it?
 3389. *Q.* Would you leave four or five openings on the northern side and let the air go over that goaf? *A.* Excepting that, that may be the reason.
 3390. *Q.* Would you not know of any reason;—and in the abstract you would renounce it as bad management? *A.* Yes, in the abstract, as a general principle.”

And in re-examination:—

3394. *Q.* You have been asked about an intake being taken from that north side over the goaf to the men? *A.* Yes.
 3395. *Q.* Now, take this case, where there is a good intake to the 4th Right, and only a small scale coming through from the north side: could that small scale do any harm at all to the men? *A.* That depends on the condition of the place. If there were no gas in that goaf, if the condition of that air that went through the goaf was ascertained, and it contained no fire-damp, then there was no harm in it at all.
 3396. *Q.* It depends on the condition of the goaf? *A.* Yes. We have a certain abstract principle which guide us in our work; but, frequently, those principles have to go on one side in a condition like this, where the principles that have been laid down for working have been altered by exhaustion. A difficulty is always reached when the pillar workings are nearly finished, and you have to do something to meet that difficulty. And coal-mines are not gold-mines: you cannot spend thousands of pounds making overcasts. The arrangements for ventilating a district are lost as you exhaust the mineral, and a certain stage does come when you lose your air-ways, and you are forced then to take that course.
 3397. *Q.* When does that happen? *A.* Towards the end: towards the finishing up.

After the foregoing evidence had been given, Mr. Atkinson was recalled, and gave the following evidence:—

3492. *Q.* In regard to the evidence that has been given concerning the intake air-way passing the northern side of the 35-acre goaf, you heard what Mr. Sellars said? *A.* Yes.
 3493. *Q.* He said that there might be circumstances under which it might be advisable to carry part of the intake air over the goaf to the men? *A.* Yes.
 3494. *Q.* From what you know of that mine, and what you have before you, is there any justification under good management for allowing these openings to remain open so that that intake air could go over the goaf to the pillars? *A.* No; I think not.
 3495. *Q.* Do you know of any reason which would justify it? *A.* So far as it is practicable the intake should be separated from a goaf by some sort of stopping; and, so far as practicable, the air to the workmen should be taken free of that goaf. As a matter of ventilation, of course, the pressure is always from the intake towards the return, and, even though you put stoppings in those openings, there is a certain pressure and a certain leakage of air over the goaf which it is impossible to stop.
 3496. *His Honor.*] *Q.* Would it go right through the stoppings themselves? *A.* Through the stoppings themselves.
 3497. *Q.* Supposing they are bricked up? *A.* Well, even an ordinary brick stopping is not hermetically sealed.
 3498. *Q.* There is a little leakage, even there? *A.* There is always a little leakage, which does useful work in going round the edges of a goaf. It is impossible to avoid that little air going through the working.
 3499. *Mr. Bruce Smith.*] *Q.* But so far as you can practically prevent it, you say that good management requires it to be prevented? *A.* Yes.
 3500. *His Honor.*] That is the rule distinctly.
 3501. *Mr. Bruce Smith.*] You heard Mr. Sellars say he did not agree with that rule?
 3502. *Mr. Wade.*] He did not say that.
 3503. *His Honor.*] He said it, but did not quite adhere to it, I thought.
 3504. *Mr. Bruce Smith.*] I put it down as “I do not unconditionally approve.”
 3505. *His Honor.*] Yes, that may be taken as a summary of it.
 3506. *Mr. Bruce Smith.*] *Q.* You heard him say that he did not approve of that rule? *A.* Yes.
 3507. *Q.* You heard Mr. Rogers say that those openings were left because the coal had originally come out of there? *A.* Yes.
 3508. *Q.* And he said that the openings were left so that the air could go in? *A.* Yes.
 3509. *Q.* Have you any hesitation in saying that is bad management? *A.* No, I have not.
 3510. *Q.* Have you heard Mr. Sellars say that they were left open to let the air go round the goaf? *A.* Well, a certain scale cannot be prevented.
 3511. *Q.* So far as you can prevent it, I take it, good management commands that you should prevent it? *A.* Yes.
 3512. *Q.* So that the air goes round to the pillars as pure as possible? *A.* Yes.

In cross-examination, he said:—

3543. *Mr. Wade.*] *Q.* With regard to this opening in the waste on the northern side, you would not think of partitioning off the edges of the waste where the pillars were being worked;—at the mouth of the 4th Right there were two or three pillars being worked, and all round them would be fallen ground? *A.* Yes.
 3544. *Q.* And perhaps one fall or two falls? *A.* Yes.
 3545. *Q.* And you would not advocate shutting off those falls from the men who were working the pillars, would you, by any form of partition? *A.* No.
 3546. *Q.* And you think they ought to be open? *A.* Yes.
 3547. *Q.* If they are open, and there is any scale of air coming through from the north side, the current of air in the pillars would necessarily draw some of the still air with it? *A.* Yes. The pressure of the ventilation is from the intake towards the return, and it would have that effect.

3548. *Q.* And if you have the actual current of air blocked, you are liable to get the air more or less stagnant on the edge of the waste, are you not? *A.* Do you mean by the air being blocked when you put the stoppings in?

3549. *Q.* You first of all say you would not shut off the fallen roof round the pillars from the men who are working at the pillars? *A.* No.

3550. *Q.* So that any air that had come over the fallen ground could come to the men? *A.* Yes.

3551. *Q.* And I say this: If you have not got a regular current of air through, assuming the air is more or less stagnant round the edges of the waste, still the current of air going to the pillars themselves would draw some of that air through the waste, would it not? *A.* Yes, it would.

3552. *His Honor.*] I think that is quite clear. Where one face of air moves along another face of air there must be some mingling, that is absolutely certain.

3553. *Witness.*] There would be some mingling.

3554. *Mr. Wade.*] *Q.* Would it not come to this: That the less air you have going through the waste the more chance of impurities in the waste becoming a serious question? *A.* Yes, I suppose that follows.

3555. *Q.* Then would it not be an assistance if you had a fair scale of air going through the edge of the waste and keeping the waste fairly pure? *A.* Yes. It is inevitable, from the fact that the pressure is from the intake to the return, there must be a scale of air.

3556. *Q.* It is a question of degree after all. You admit, under the circumstances, that there must be some scale of air through from the north side to these pillar workings? *A.* Yes, unless the goaf is actually sealed, which is quite unusual.

3557. *Q.* That is impossible? *A.* Well, it is almost impossible, too.

It further appeared in Mr. Atkinson's evidence, that, until the Coal Mines Regulation Act was passed, there was no recognised practice for dealing with waste workings at all, but that since that Act it had been the practice in many parts of the State to ventilate the wastes, and so purify the air in them; and it was contended by Mr. Wade that there was less danger in allowing air from a ventilated, and therefore purified, waste to come into contact with intake air, than would be the case if the waste were unventilated and might contain accumulations of dangerous gas. As it appears to be impossible to ventilate men working at pillars, without the air coming into contact with the old workings adjoining the men, it was argued that such air must inevitably pick up some of the air in the old workings with whatever impurities it might contain; that, if the openings on the north side of the goaf had been sealed up, the filtering of the air through and round the edges of the goaf would have been stopped, and the air in those parts have become stagnant, and any discharge taking place would remain there in a concentrated form until picked up by the current of air ventilating the pillars. It was generally admitted to be quite impracticable to separate the men at the pillars from the old workings in their vicinity by means of brattice or partitions, and as it was therefore inevitable that other air should, to some extent, mingle with the air from the old workings, it was urged that it was better that the air in the old workings should be kept moving, and so comparatively pure, rather than be allowed to remain dead and possibly become dangerously impure.

When at the mine I made myself acquainted by personal inspection with the appearance of goafs, or worked-out areas, and it appeared to me that the filtration of air which must necessarily have taken place through the openings on the north side of the 35-acre waste round the edges, and possibly in parts along the roof of the goaf, could have been no serious disadvantage to the men working, and that there was much to be said in favour of the view that it was better to leave the openings at the north side unsealed, and so ventilate the goaf, even though the ventilation passed on to the pillars, than to seal them up and leave the air in the open spaces in the goaf almost dead and motionless. As a matter of practice, it will be seen that the experts differed in opinion. Theoretically, three things should be considered: (1) the goafs should be ventilated; (2) they should be ventilated only into a return airway; and (3) men working at pillars should have their air kept free from the air of the old workings. Practically, it seems to me that it is impossible always to do this, and on the whole I came to the conclusion that I must find on this part of the case that the charge against Mr. Rogers had not been sufficiently proved.

Grounds 6 (c) and 6 (d).

"6. That . . . you were lax in the discipline of the said mine:—

(c) In neglecting to ascertain whether dust was accumulating to a dangerous extent in the Mount Kembla Mine.

(d) In neglecting to inform yourself as to the dangerous character of coal-dust accumulation, or of the quantity required to become an element of danger in a mine."

These grounds, it will be seen, are directed to Mr. Rogers' ignorance; but the evidence, in fact, was directed to show that he had failed to take proper precautions against the danger of dust, from which, I was asked to infer, that he had not made himself properly acquainted with the condition of the mine as to dust, and with the danger of coal-dust accumulation generally.

Two things were charged against Mr. Rogers under this head—First, that he failed to keep down the dust in the passages by watering; and second, that he failed to water the ground in the vicinity of shots. To take these in order:—

The Royal Commission found that in the present case, as apparently in many others, the greater portion of the damage was due to a series of explosions of coal-dust started by the original explosion of the combustible mixture of fire-damp and air. The coal-dust, resting on the floors, and hanging on the walls and roofs of the passages, is, by the force and heat of the original explosion, violently thrown into suspension and ignited. In its turn, it then also explodes; and in this manner, by a series of explosions following each other in a chain, but practically instantaneous, extends the damage for a considerable distance through the passages. In doing this it may pass over, or jump, long stretches where the passages are wet, and no dust is to be found; and, on the other hand, in the present case it was stated that in some directions the explosion had come to an end in dry lengths or passages. The danger from dust being so serious, it suggests itself as a natural and advisable precaution that, in all dry parts of the mine, the floors, sides, and walls should be kept continually wet by watering. If this could be done it might fairly be expected that, even if an explosion of gas did occur, its destructiveness would be much diminished. On the evidence, however, I find myself driven to the conclusion that Mr. Rogers is not open to censure for his management

of the mine in this particular. All the dry lengths of the rope roads in Mount Kembla are now thoroughly watered by a sprinkling machine, which wets the sides and the roof as well as the floor. Before the disaster all that was done apparently, was this: Accumulations of water used to take place in certain parts of the mine, and a man named Frost had a contract to remove them. He used to bail the water into tanks, and wheel them along the passages. At a suitable place a wooden plug in the bottom of the tank would be pulled out, and the water allowed to run on to the roadway. He was left, apparently, to use his own judgment as to places in which this was to be done. There was no one to supervise him, and his duty was regarded, apparently, as being rather the removal of the accumulations of water than the watering of the roads. The sides and roof, where the finest and most dangerous dust is deposited, were left untouched. Mount Kembla, taken as a whole, is described as a damp mine; but there were occasional stretches on the roads where it was dry and dusty. The disaster itself has proved that it was a sufficiently dry and dusty mine to make the dust a serious element of danger, and, as I have said, the management are now thoroughly watering the dusty lengths on all the rope roads. It seemed to me at first that the omission, before the disaster, of this precaution, which is now taken, was a somewhat serious matter; but the evidence does not support this view.

There is no rule requiring the general watering of passages, and Mr. Atkinson, the Chief Inspector of Coal Mines in the State, whilst admitting that the watering of dust would be an extra precaution, declined to say that it was a necessary precaution, or that Mr. Rogers' failure to do it was bad management. (See his evidence, paragraphs 605 to 678, 1212 to 1276, and 1540 to 1555 inclusive.) He was examined and cross-examined at great length on the point, but he always came back to the opinion that, if the mine was known to be giving out gas, the proper thing to do would be to use safety-lamps, and that the watering of the passages would, in that case, be unnecessary. At paragraphs 1268 and 1269, his evidence is as follows:—

1268. *Q.* Now, Mr. Atkinson, I come back to this question: Supposing there was no watering done at all in Kembla up to July the 30th, would you say that it was bad management in the light of your knowledge of Kembla as to gas? *A.* No.

1269. *Q.* Now, you know that Gallagher had been burnt twelve years ago? *A.* I would like to qualify that answer with the requirements of General Rule 12.

(General Rule 12 refers to watering in the vicinity of shots, and has nothing to do with the question of the general watering of passages).

Then later on he said:—

1553. *Witness.*] With safety-lamps in use, I consider that it would have been an extra precaution to water.

1555. *His Honor.*] *Q.* If I am walking along the road, and there is a banana-skin on the pavement, it would be an extra precaution if I walked across the road, but it is not a necessary precaution;—if I walk round the banana-skin it would be sufficient? *A.* I consider it would be an extra precaution; but I do not consider it would have been bad management not to have watered.

The evidence of Mr. D. A. W. Robertson is to be found in paragraphs 1953 to 2052, 2260 to 2262, and 2287 to 2383 inclusive, of the typed notes of evidence.

The evidence of Mr. J. C. Jones is to be found in paragraphs 2477 to 2521 inclusive.

Mr. Rogers' own evidence is to be found in paragraphs 2895 to 2944 and 3073 to 3082 inclusive.

The evidence of Dr. J. R. M. Robertson is to be found in paragraphs 3140 to 3153 inclusive, and 3205 to 3230 inclusive.

Mr. A. E. O. Sellers' evidence in paragraphs 3277 to 3316 and 3391 to 3393 inclusive. Mr. Rogers, 3449 to 3454 inclusive; and Mr. A. A. Atkinson, 3153 to 3542 inclusive.

In this further examination, when brought again by Mr. Bruce Smith to the question of dust, Mr. Atkinson repeated his former evidence.

It will be seen that a good deal of the evidence was devoted to a criticism of the statement of Professor Galloway as to the exceedingly small proportion of dust sufficient to be dangerous, and to an explanation of the inconveniences and dangers, making it, in many cases, impracticable, from difficulty and expense, to water the haulage roads in which most of the dust, as a rule, is deposited. The explosion at Mount Kembla, however, which is admitted to be generally damp and comparatively free from dust (see paragraph 11 of the Report of the Royal Commission), but where the explosion was nevertheless reinforced and greatly increased in its destructiveness by the coal-dust present, seems to me to afford strong support to Professor Galloway's conclusion, and even to go beyond the "two remarkable facts" which, in his lectures on mining (as quoted by Mr. Atkinson), he states that he had observed, viz.:—

(1) That a fire-damp explosion in a wet mine never by any chance assumes the characters or proportions of a great explosion.

(2) That all great explosions took place in dry and dusty mines.

For, as Mr. D. A. W. Robertson, a member of the Royal Commission, stated before me (see paragraph 1968, typed notes), "No one would have said that Kemblâ Mine was a dry and dusty mine." That it is safe and practicable to water the haulage roads at Kembla is practically admitted by the witnesses and proved by the present practice. But for Mr. Atkinson's evidence, I should have been, therefore, inclined to think that the failure on Mr. Rogers' part to carry out, before the disaster, the precautions as to watering, which he has now adopted, was evidence that he had failed to realise the danger from dust and the necessity for providing against it; though certainly an important consideration making against this view was pointed out by Mr. D. A. W. Robertson in his evidence (see paragraph 2051 of typed notes), where he says, "There is one point: the watering of roads has been confined to haulage roads; but if you have a number of parallel exits from a particular district, and you water one, what is the good of it? If it can find a path by some other parallel road, the watering of one is practically useless; and if the watering is not to be thorough, and if you are not to water the whole of the mine, it is useless—it is practically a useless expenditure of money. If you had only one road into a particular district, and it was reasonably practicable to water, and it would not be injurious to the roof or floor, then I would say water it; but where you have more than one road to a district, and it is impracticable to water throughout, it seems to me that it is simply throwing away money. The real security is to water in the vicinity of shots, because I suppose ninety-nine out of a hundred explosions originate from a shot." The evidence of Mr. Atkinson, however, the responsible Government expert, called by Mr. Bruce Smith, puts an end to the

matter. Where no expert will say that it was bad management of Mr. Rogers to leave the passages of his mine unwatered, it is impossible for me to infer, from the fact that the actual method of watering adopted by him was quite insufficient to remove the danger from dust in the passages where it was carried out, that Mr. Rogers was ignorant of the dangers of dust, or of the conditions of the problem with which he had to deal.

I turn, now, to the second charge against Mr. Rogers under this head, viz., "That he failed to water in the vicinity of shots." As to this, General Rule 12 provides that in dry and dusty places no shot shall be fired except by or under the direction of a competent person appointed for that purpose, nor unless the place of firing and all contiguous accessible places within a radius of 20 yards therefrom are at the time of firing in a wet state from thorough watering, or other treatment equivalent to watering, in all parts where dust has lodged, whether roof, floor, or sides. There is a further provision as to cases in which watering would injure the roof or floor, which it is not necessary now to consider.

At the inquest Mr. Rogers said on this point (page 40 of the Royal Commission Blue Book), "To the best of my memory we have never watered in the immediate neighbourhood of a shot; we have no apparatus for doing that, and it has never been done." The defence on this part of the case was that Mr. Rogers was justified, both under the provisions of the rule, and by the requirements of good management, in not watering in the vicinity of a shot, if the place where the shot was fired was not dry and dusty. He stated in his evidence before me (*see* paragraph 2895 *et seq.* type notes) that the blasting on the main roads had been very rare; that, as far as he knew, the places in which the shots had been fired were damp places; that the last blasting on the haulage roads had been in a very wet place where he was brushing the roof to fill up hollows in which water had accumulated; and that the working faces at Mount Kembla were damp, and not dusty at all. He explained his statement before the Coroner as to having no apparatus for watering in the neighbourhood of a shot to mean that he had no special apparatus for the purpose, but that he had plenty of appliances which could have been used for the purpose if watering had been needed. He added that he had been often round the working places with the Government Inspectors, and no suggestion had ever been made by them that he should water the faces.

I was not able to satisfy myself when I visited the mine as to the dustiness or otherwise of the haulage roads and working faces, because, since the disaster, they have been regularly watered; but I asked Mr. D. A. W. Robertson, a member of the Royal Commission, who had visited the mine almost immediately after the disaster, for his opinion, and he informed me (*see* paragraph 1981 *et seq.* type notes) that the dust usually found in mine faces was coarse, what he would call non-explosive, though no doubt mixed with some fine dust, and it is generally recognised by all authorities that the dangerous dust is found in the haulage ways. In the working faces you very rarely get dangerous dust. He also informed me (paragraph 2349 type notes) that, speaking generally of the faces (but not of the whole of the mine, because he had not been through it), he could not say that he had seen any face that was dry and dusty in the sense of requiring watering. I called his attention in a particular manner to the evidence of Mr. Rogers before the Coroner, and my question and his answer appear in paragraphs 2321 and 2322 of the type notes as follows:—

"2321. *His Honor.*] Well, taking it that way, that he had no apparatus specially for the purpose, but that he had the means of doing it; he says it has never been done. Taking the whole thing together it conveys to my mind the irresistible conclusion that it was not done at all, that it was not considered to be necessary, and that they had made no preparations for doing it. No doubt, having tanks and buckets, they could have used them for the purpose if they wanted to; but, as a matter of fact, they never used them for the purpose, and they never made them into an apparatus for watering shots, and, as a matter of fact, they never did water in the vicinity of shots.

2322. *Witness.*] Well, my opinion is that they did not need to do so, and I think I am confirmed in that opinion by the fact that they were never called upon by the Inspectors of Mines. If the Inspectors of Mines had noticed that the places where shots were fired were dry and dusty, the attention of the management would have been drawn to it.

In addition to this evidence it was pointed out that, in a letter of the 13th May, 1898, written by Mr. Atkinson to Mr. Rogers, which referred to a visit of Mr. Atkinson to the colliery two days before, and to a conversation which they had then had, one of the subjects of their conversation was said to be:—

"3. General rule 12. Blasting on haulage roads in presence of dust, and necessity of strict observance of the above rule."

And it was argued that as Mr. Atkinson had then been in the mine, and had himself seen the working faces, his reference to the blasting of the haulage roads alone was, to some extent, an admission by him that the faces were not so dry and dusty as, in his opinion, to come within the general rule.

On the whole I found that there had been a failure to prove as against Mr. Rogers that the places, whether on the road or at the working faces, where blasting was carried on without watering, were dry and dusty places within the meaning of the rule, and I need hardly say that in an inquiry of this kind, unless a charge is clearly proved, it must fall to the ground. I confess that I received an impression that if Mr. D. A. W. Robertson had himself been managing the mine, the working places, or some of them, would have been watered before shots were fired, but he told me that the faces, as he saw them, were not in such condition as to call for watering, and that is evidence which it was impossible to disregard. It is true that the faces are now watered in Mount Kembla, but it would be unfair to Mr. Rogers to infer from that that he was guilty of bad management in not watering before the disaster.

The form of the charge against Mr. Rogers is that of failure in knowledge, vigilance, and constant realisation of the danger from dust; and Mr. Rogers' evidence before the Coroner does read very much as if he took it as a matter of course that there was no danger in his mine from dust, and no necessity to give any thought to the question of watering near shots. At the same time, the charge of ignorance was attempted to be made out by proving a positive failure to comply with General Rule 12, and to exercise due care to water when firing shots; and, as those allegations were not proved, inasmuch as it did not appear affirmatively that any of the places were in other than a damp condition, I felt myself constrained to find that the charge itself was not proved. I should, perhaps, add that it seems to be admitted that blown-out shots are the cause of the large majority of explosions; and, as blasting in faces at Mount Kembla, without watering, had been carried on for many years, during which time many blown-out shots must have occurred, the very fact that no explosion had ever been caused to some extent appears to support

Mr. Rogers' statement that there was never dangerous dust in the working faces, although, of course, the probability of the dust originating an explosion without any gas would, it seems, be exceedingly slight, even if it is possible at all.

Grounds 5, 6 (b), and 6 (f).

"5. That you are ignorant of the nature and quality of gases met with in mines.

"6. That you were lax in the discipline of the said mine:—

(b) In failing to acquaint yourself with the cause and results of accidents in other coal mines.

(f) In neglecting to inform yourself upon the several subjects required in a certificated manager, and necessary to enable you to properly discharge his duties as a mine manager."

These grounds, taken together, dealt with the general question of Mr. Rogers' want of professional knowledge and failure to educate himself to the standard required in a modern mine manager, and to keep himself abreast with the times. Mr. Rogers holds a certificate under section 8 of the "Coal Mines Regulation Act, 1902," and has never passed the examination prescribed for applicants for certificates. He has, however, had a very large practical experience in responsible positions in mines. He began mining at the age of about 12 years, and in 1874, when Mr. D. A. W. Robertson became acquainted with him, and Mr. Rogers was apparently about 25 years of age, was under-manager of a colliery in North Wales. He remained there till about 1881, and then became under-manager of extensive stone and ironwork mines in Scotland till about 1887, was then manager under Mr. D. A. W. Robertson, of Greta Colliery, and then went to Mount Kembla, where he was under-manager up to the year 1895, since which time he has been manager. The best part of his life has, therefore, been devoted to the practical work of mine management. It is evident that, as the Act directs the granting of a certificate to all persons who were actually in the position of mine managers at the time of the passing of the "Coal Mines Regulation Act, 1896," the Legislature contemplated that persons who had not passed, and might be quite unable to pass, the examinations which are now required might, nevertheless, be thoroughly competent to be entrusted with the responsible work of managing a mine; and it is impossible for me, therefore, to find Mr. Rogers incompetent merely because he is deficient in the scientific knowledge necessary to pass such an examination successfully, and is probably unable now, when he has passed the middle stage of life, successfully to prepare himself for such an ordeal. At the same time, a certain standard of knowledge sufficient to enable him to understand the problems of mine management as they arise is necessary to make him competent, and the question is whether he has been shown to be deficient in that degree of professional information.

The case against Mr. Rogers as to his ignorance as to gases was based largely on his evidence before the Coroner. (*See page 35 of the Royal Commission Blue Book*):—

"I do not know that there was any after-damp in the pit after the disaster; when I went in I may have got a little; I felt a smarting in the eye and nose, but I do not know whether it was after-damp; I do not know what after-damp is; I do not know any of its constituents; I know fire-damp when I see it in a lamp; I do not know any of its constituents; I do not know what light carburetted hydrogen is; I do not know what methane is; I have heard of light carburetted hydrogen, but I do not know its composition; I have heard talk of people meeting with it in mines, but I do not know that I have met with it; I do not know whether there are any means of discovering it in mines; I have never tried to discover it; I have never read any scientific works upon it; I do not know whether it is explosive or non-explosive; I do not know whether it is life-supporting or not; I am a practical, and not a theoretical, man."

This evidence was given in cross-examination by Mr. Lysaght, and with regard to it there are two things to be said:—First, that it is not reported question and answer, and it is impossible to know exactly how much of each of the statements belong to Mr. Lysaght and how much to Mr. Rogers; and second, it is quite evident, upon a perusal of the whole of Mr. Rogers' evidence under cross-examination at the inquest, that in much of it he does himself far less than justice. Mr. Rogers is not a quick-minded man, or one possessing much dialectical skill. He is a bad witness, and one whom it would be very easy to confuse, and it was clear to me on reading his evidence that, finding himself at that time in a very serious position, being greatly troubled in his mind at the terrible disaster by which ninety-five persons (including an adopted son of his own) working under him, and amongst whom his life was passed, had been killed, and being placed in a position entirely new to him, that, namely, of being subjected to a very hostile and vehement cross-examination by a practised attorney, and realising his own unfitness for such a conflict, he took refuge in a generally dogged attitude, and denied nearly everything. Some of his statements, if full credit is to be attached to them, are very damaging to himself; but to my mind, some of them are absolutely incredible, and others almost so. It seems, however, pretty clear, and was in fact admitted, that Mr. Rogers had no scientific knowledge of the chemical constitution of the dangerous gases to be met with in mines; but it was stated by witnesses (such as Mr. D. A. W. Robertson) well acquainted with Mr. Rogers in the practical work of his life, that he had quite sufficient knowledge of the dangerous nature of the different gases and the practical means to be adopted to combat them to make him competent to deal with them in any mine. Many years of his experience as under-manager was in mines worked with safety-lamps, and he began when very young to accompany the deputies in their searches, and was even entrusted at the age of 16, he says, with the duty of searching alone through the mine with a safety-lamp for fire-damp. In the opinion of Mr. D. A. W. Robertson, himself a member of the profession possessing the highest scientific qualifications, and entrusted as a member of the Royal Commission with the duty of inquiring into the cause of the Mount Kembla disaster, practical knowledge of the kind possessed by Mr. Rogers is really sufficient, not indeed as a guarantee of intelligence or scientific professional education, but for safe and successful mine management. It seemed to me that this was so. If a man knows that coal gives off fire-damp; that where there is insufficient ventilation, fire-damp may accumulate; that it is dangerous, both in its explosion and in its after effects; that if brought in contact with a naked light, when present in dangerous proportions, it will explode; that it can be detected by the use of a safety-lamp; and that it must be frequently and carefully looked for and constantly diluted by a sufficient current of air, directed into all dangerous places; he knows enough to keep the mine safe, and this knowledge, I was satisfied, Mr. Rogers possessed.

6 (b). On this ground I think there is some fair reason to criticise Mr. Rogers. He appears to be a man of regular and industrious habits, who has few interests outside his practical work as mine-manager, who takes a great interest in that work, and devotes himself to it in a regular and constant way; but he did not seem to me to be an educated man, or, I think, a reading man, or a man of a very active and inquiring

inquiring mind. His attention has been devoted during the whole of his working life, since his early boyhood, for a period of now more than forty years, to the practical work of mining, and he possesses quite sufficient intelligence, in my opinion, to enable him when devoting his mind in this exclusive and undistracted way during so many years to one profession, to understand and master all its practical problems and duties. It was stated by witnesses who were acquainted with his work, that in every place in which he was employed he introduced improvements and bettered the general management. He was described also as being a careful man. It is certainly not necessary, to make a man a successful mine-manager, that he should have an original mind or any great degree of scientific or literary knowledge, but he ought certainly to extend his professional interests over a wider field than Mr. Rogers appears to have done. I have already had occasion to remark on the fact that the Stockton disaster appears to have made but a small impression upon him. He admits that he never read the report of the inquiry into the Dudley disaster, and he seems generally to have neglected the study of his profession, so far as it is to be found in the transactions of societies, in text-books, and in reports upon coal-mine explosions. On the other hand it was stated, and I quite believe it, that, when in the company of other persons of the same profession as himself, he talked fully and freely upon coal-mining questions, and discussed with his fellows all matters that arose relating to their common profession. It was contended that in this way he acquired a knowledge as to the other disasters which had, from time to time, occurred in New South Wales, and as to the general methods adopted in other mines, equal, for all practical purposes, to that which he could have acquired by reading for himself. There is a good deal in this, no doubt, and I do not think that I can say that a plain practical miner interested in, and continually occupied about his professional work, but with rather a slow mind and no literary habits, must necessarily be incompetent. At the same time, I do think that Mr. Rogers has been rather remiss in this respect, and it would have been well if he had devoted some of his time to keeping himself somewhat up to date in the literature of his profession.

6 (f). The foregoing remarks apply generally to this ground also; but whilst the impression left on my mind is what I have stated, I do not think that Mr. Rogers can fairly be called an ignorant mine-manager. All men have their strong points and their weak points. Mr. Rogers' strong points appear to be the interest he takes in his work, his steady attention to it, his power of managing men successfully, and his mastery of the practical problems of mining (such, for example, as haulage, which he greatly improved at Mount Kembla). His weak points appear to be a certain want of education (for which, in the first instance, in all probability, he was not in the least to blame), and a disposition to neglect the scientific side of his profession and the various reports and text-books in which mines and mine management are discussed. It would certainly have been more satisfactory if Mr. Rogers were stronger in these respects; but on a general view of his experience, knowledge, and capacity, I could not say that the charge of incompetency on the ground of ignorance had been made out against him.

Ground 6 (e).

"6. That you were lax in the discipline of the said mine:—

(e) In neglecting to attend to correspondence from the Department bearing on the safety of the mine and the persons employed therein."

The correspondence referred to appears at pages 935 and 936 of the Royal Commission Blue Book, and consists of the four following letters:—

"Wm. Rogers, Esq., Manager, Mount Kembla Colliery, Wollongong.

Sir,

13 May, 1898.

Referring to my visit to the Mount Kembla Colliery on the 11th instant, and to our conversation on several matters, amongst which were: (1) Old Davy lamps now used by deputies being considered as out of date, and illegal under General Rule 9, should be replaced by another type of safety-lamps; (2) General Rule 4—As to reports being made at the 'Station' and before each shift commences, whether day or night; (3) General Rule 12—Blasting on haulage roads in presence of dust and necessity for strict observance of the above rule;—I shall be pleased to hear from you on these matters."

"Wm. Rogers, Esq., Manager, Mount Kembla Colliery.

Sir,

14 December, 1901.

With reference to the recent accident to the brothers, H. and J. Biggers, on the 26th of last month, when they were unfortunately left three or four hours in the mine after their injuries had been received, and the conversation which Mr. Bates has had with you in regard to some system being adopted in order to ascertain when all persons are out of the mine, I will be pleased to hear what you have decided to do in this matter.

I have, &c.,

A. A. ATKINSON,
Chief Inspector of Coal Mines."

"Wm. Rogers, Esq., Manager, Mount Kembla Colliery.

Sir,

10 January, 1902.

I have the honor to direct your attention to my letter of the 14th ultimo, inquiring what procedure you intend to adopt to avoid in future the possibility of any such unfortunate occurrence as that connected with the accident to the brothers Biggers in the Mount Kembla Colliery, and to request that you will be good enough to let me know at your early convenience what arrangements you have made or propose to make.

I have, &c.,

A. A. ATKINSON,
Chief Inspector of Coal Mines."

"Wm. Rogers, Esq., Manager, Mount Kembla Colliery.

Sir,

25 February, 1902.

I regret to learn that as yet nothing has been done at your colliery for establishing some system of knowing whether all the workmen have left the mine. The matter, as you know, was first mentioned to you by Mr. Rowan, in the month of May last, and having regard to the accident which took

took place to the brothers Biggers, on the 27th November last, when they were unfortunately left in an injured condition in the mine for some hours, unknown to the management, it appears to me that the necessity for such a regulation ought to appeal strongly to you.

I also regret the attitude which you have taken up by neglecting to answer any letters addressed to you on this subject, and I shall therefore be compelled to seek an early interview with you in regard to it.

I have, &c.,

A. A. ATKINSON,
Chief Inspector of Coal Mines."

Mr. Rogers does not appear to have answered any of these letters. The ground rests, it will be seen, not on any neglect to attend to the subject matter of the letters, but upon his neglect to answer them. Some evidence was given, certainly, to show that he continued to use the old Davy lamps after receiving the letter of the 13th May, 1898, but as to this it was contended that General Rule 9 was not violated. The Davy lamps, it was said, were quite as good for testing purposes as any other. In Mount Kembla, safety lamps were only considered to be required, and were only used, for the purpose of testing, and as a screen which passed half round the lamp protected the flame against any air current, they complied with the rule. However this may be, the only question raised by the Ground is as to Mr. Rogers' neglect to answer letters which clearly referred to questions of importance, and should certainly, it seems to me, in a proper business-like course, have been replied to. Mr. Rogers' explanation was given at the inquest (page 40 of the Royal Commission Blue Book) as follows:—

"I do not believe that I answered the letters that Mr. Bruce Smith referred to this morning; during the time I received those letters from Mr. Atkinson, the District Inspectors would visit the mine (Mr. Rowan and Mr. Bates), and I mentioned the matters referred to in the letters to them. I used to tell them that I had got the letters from Mr. Atkinson, and they used to ask me what I proposed to do, and I would tell them, and they would say, 'Well, if you do that, I will be only too pleased to mention it to Mr. Atkinson.' I therefore took it for granted that, as they said they would do that, that I had no need to write. It was not done out of any disrespect."

With regard to this, while it was a perfectly natural and proper thing for Mr. Rogers to bring the letters under the notice of the Inspectors, and to discuss their contents fully and freely with them, I do not see that his doing that in any way dispensed him from the business duty and courtesy of answering the letters. At the same time, it is evident that this is only a small matter. It was admitted with regard to the letters relating to the accident to the brothers Biggers that Mr. Rogers had adopted a system by which it would be known when all the miners had left the mine, and by which any recurrence of the unfortunate accident therein mentioned would be prevented, and the really important thing was therefore attended to by Mr. Rogers. It would have been better, certainly, if he had answered the letters; but it is evident that his failing to do so cannot be called either incompetence or gross negligence. It is only fair to say that on this and several other of the points brought forward against Mr. Rogers, Mr. Bruce Smith was careful to explain that he did not rely on them as being individually strong enough to make a case against Mr. Rogers, but that in their cumulative effect it was possible, he thought, to show an unfitness in some respects on Mr. Rogers' part for his position as mine manager.

Grounds 6 (g) and 6 (h).

"6. That you were lax in the discipline of the said mine:—

- (g.) In neglecting to see that the state of the ventilation of the mine was properly recorded each month in a book kept for the purpose, as required by General Rule 1, section 47.
- (h.) In neglecting to keep a proper book for the purpose of reporting the examination of the waste working, as required by Special Rule 10."

The material part of General Rule 1 is as follows:—

In the case of mines required by this Act to be under the control of a certificated manager, the quantity of air in the respective splits or currents shall at least once in every month be measured and entered in a book to be kept for the purpose at the mine."

At the inquest Mr. Rogers (page 40 of the Royal Commission Blue Book) said in cross-examination to Mr. Lysaght:—

"The book [*Exhibit O*] is the only book I have for recording the ventilation in. I do not know whether there is any other book regarding ventilation. I believe there was another book kept before that. When the Coal Mines Regulation Act was passed, we got the book [*Exhibit O*]. The ventilation may have been recorded sometimes on sheets of paper. I do not know where the reports are from 12th October, 1896, to 8th August, 1899; those reports do not appear in the book [*Exhibit O*]. I see an entry on the 1st January, 1901; after that I see that there is a whole sheet left blank. I cannot tell you why it was left blank; I cannot tell you why there is no report for February at all. I looked at the ventilation book every time after the ventilation was taken."

On page 42 he is reported to have said on the following day in answer to Mr. Bruce Smith:—

"I remember Mr. Lysaght pointing out certain omissions to me yesterday in the ventilation book [*Exhibit O*]; those omissions are supplied in the book I now produce [ventilation book put in and marked *Exhibit R*]. The reason that the omissions appear in the first book is that there was no room in it for certain particulars that were required, and it gave instructions that they were to be supplied on certain forms, and then the old book [*Exhibit O*] to be returned. The two books together make a complete record."

This way of keeping the ventilation books was, perhaps, somewhat lax, and not quite satisfactory, but it complied with the rule, and the matter is a very small one, and such as I think might occasionally occur in the best-managed office.

Special Rule 10, which has been already referred to under a former ground, is as follows:—

"He shall, at least once in every week, examine, so far as is practicable, the state of the waste workings and main air-ways, and make and sign a true report thereof in a book kept at the office for the purpose."

What

What was complained of here was that these monthly reports were not recorded in a book devoted exclusively to that purpose, but were entered by the deputies in books used by them for quite different matters, and in this way the results of the examinations of the waste workings and main air-ways were not brought prominently under the manager's notice, and so might be overlooked by him.

It seems to me that the proper meaning of the words "for the purpose" is for the exclusive purpose, and not for the purpose amongst other things. I can quite understand, however, that Mr. Rogers might think that, if one of the purposes for which a book was kept was the recording of these monthly examinations, the rule would be complied with; and if he did his duty and carefully read all the reports, it would not be a very serious matter whether they were mixed with other reports or not.

The books in which they were kept were apparently the books required by Rule 4, as follows:—

"(1.) As to inspection before commencing work." After providing for an inspection of the mine before the commencement of each shift, &c., it goes on: "A report specifying where noxious or inflammable gas, if any, was found present, the condition of the ventilation, and what defects, if any, in roofs or sides, and what, if any, other source of danger were or was observed, shall be recorded without delay in a book to be kept at the mine for the purpose, and accessible to the workmen; and such report shall be signed by, and, so far as the same does not consist of printed matter, shall be in the handwriting of, the person who made the inspection."

Before the passing of Special Rule 10, and before the Stockton disaster had called attention to the danger from wastes, it may well enough have been the practice to inspect the wastes once a month, and record the result of inspection in the deputies' daily report book, under General Rule 4; but a careful reading of Special Rule 10 would have shown Mr. Rogers, I think, not only that the waste workings were to be examined once a week, but that the report of such examination should be kept in a separate book. The consequences of the failure to comply with the second part of the rule may not, as I have said, have been very serious if Mr. Rogers carefully read the daily reports. Provision for his doing this is made by the keeping of the book in duplicate. One portion was kept in the mine, so as to be accessible to the workmen under the rule; the other portion was sent to Mr. Rogers for his perusal; but though Mr. Rogers' misreading of the second part of Special Rule 10 may not in itself have been a very serious matter, it goes to show, together with his failure to have the wastes examined every week under the early part of the rule (a point which has already been examined under Ground 1), that Mr. Rogers had not read and considered rule 10 with sufficient care, or properly realised the danger against which that rule was directed. However, as a separate ground, I thought it was a matter of no very great importance.

Ground 6 (i).

"6. That you, . . . did not enforce or cause to be enforced the General Rules of the said Act or the Special Rules established under [the said Act in the said mine, and were lax in the discipline of the said mine, in the following respect:—

"(i) In failing to require from the officials under you a strict observance of Special Rule 7, as to reporting of instances in which gas had been met with in the mine."

Special Rule 7 refers to the duties of the deputy and fireman, and, so far as is material to the present ground, is in the following terms:—

He shall also report to the manager, under-manager, or overman any danger that may from time to time arise from any cause.

It appears that, in fact, if the evidence of the various persons who state that they reported the occurrence of gas to the under-manager and deputies is to be believed, and if Mr. Rogers' evidence that those officials never reported the occurrence of gas to him is true, the system of safeguards established for the secure management of the mine broke down at that point. Unfortunately, as regards reports of gas, there is no provision in the Act or rules for their being made or recorded in writing, and the matter is consequently left to the vagueness and the contradictions of oral testimony. It is only by inference that it can be stated that Mr. Rogers did fail to require from his officials careful reports of all discoveries of gas; but certainly if it could be conclusively shown that the men had time after time reported gas ignitions to a number of different officials working under Mr. Rogers, and that they had never once repeated those reports to the manager, it would seem that he cannot have made it a custom to deal strictly with failures on their part to keep him fully informed as to everything of importance. Laxness in this important matter would have indicated general laxity, and general laxity would certainly reflect upon a manager. It has to be noted, however, that two of the persons to whom the majority of the reports are said to have been made perished in the disaster; that of the four reports said to have been made to the surviving deputy, David Evans, two are dismissed altogether from consideration by the Royal Commission, and the other two relate only to powder shots, which may possibly not have been gas ignitions at all; and that, of the various reports said to have been made to Mr. Rogers, and examined by me seriatim in a former paragraph, not one will bear examination. It is not, therefore, to my mind, at all satisfactorily proved that there was the laxity on the part of the under officials, which is the first step in the argument.

Mr. Rogers himself, in evidence which I have quoted, states that he continually impressed on all working under him the importance of fully informing him as to all occurrences, and of concealing nothing from him from any mistaken idea of not troubling him. From what I saw of Mr. Rogers, I am sure that his relations with all the men with whom he worked, whether above him or below him, would be perfectly easy and open. One of his good points appears to be the fact that he gets on easily with other men. He is not, in the least, a man of any pretension or difficult to approach, and I can imagine no reason which would lead any responsible official under Mr. Rogers to refrain from reporting to him any important or dangerous occurrence. The whole thing rested on inference and, to my mind, was not satisfactorily proved.

This concluded the grounds brought against Mr. Rogers. There remained the general view and result of the examination to which I have submitted them. For, as the case was put before me by Mr. Bruce Smith, he relied, not merely on the importance of several of the grounds in themselves, but on the cumulative impression of laxity and negligence resulting from them taken together. In this view of the matter it must be admitted that Mr. Rogers' weakness on the scientific and professional side of his profession; his failure to inform himself, by the study of reports, for himself, of the results of investigations into other accidents; and his neglect of the business duty of replying to important letters received from the Chief Inspector, show that there are points in Mr. Rogers, as a mine manager, which he might amend with advantage; though, in fairness, it should be said, as a set-off, that in some other important respects he appears to be particularly efficient and valuable. Certainly, I did not find, in viewing these matters altogether, sufficient reason for doing more than speaking as I have done.

In

In the general result, therefore, I found that the case had failed against Mr. Rogers, except under Grounds 1 and 2. I was driven to the conclusion that, as to Ground 1, he neglected to enforce the provision of Special Rule 10; that those provisions were of importance; and that their neglect might, under certain circumstances (similar, indeed, to those which actually occurred), have been the cause of disaster; and, as to Ground 2, that he allowed the person making the morning examination with a safety-lamp—a most important examination, and absolutely necessary for the safety of the mine and the men—to omit examining places in the mine, which careful consideration and a full realisation of the objects of the examination should have shown him ought never to have been omitted. I believe that these two faults were both due to the same cause. Long security has, in the case of nearly all men, a tendency to dull the sense of immediate danger, and of the necessity for incessant and sleepless vigilance. Mount Kembla appears to have been at all times regarded as a mine giving off no very large quantity of gas. Mr. Rogers has been in the mine for fourteen years as under-manager and manager. So far as the evidence before me in the case is concerned, during the whole of that time he had known of only one accident from gas—the accident, namely, to Gallagher—many years before the last disaster, and resulting from the sudden breaking-open by Gallagher, with his pick, of an old closed-up working-place, in which the gas had accumulated and could not escape. Some seven or eight, or more, years before the disaster, a new ventilating upcast shaft had been sunk, and a new and powerful furnace had been erected in the mine, and from that time, Mr. Rogers says (and I find that his statements have not been disproved) that he never heard of a single discovery of gas in the mine. This fact, with the rooted conviction (which became at last almost an article of faith—a thing to be as much taken for granted as the rising and setting of the sun) in the minds of all about him, that Mount Kembla was a mine perfectly safe and free from gas, bore its almost inevitable fruit in Mr. Rogers' mind, and led him, by degrees and, perhaps, unconsciously, to the feeling that it was hardly necessary to be extremely strict as to the provisions relating to gas. I am sure that Mr. Rogers considered that he was managing the mine as carefully as (until the disaster) he seems to have managed it successfully. He is a man, I think, of a kindly disposition, and anxious for the welfare of those under him. If anybody had told him that he was running the risk of a terrible explosion he would have heard it with amused incredulity. Even as it was, the disaster resulted, as the Royal Commission have found, from an extraordinary and unprecedented combination of circumstances, and is in no way traceable to any act or omission by Mr. Rogers. It has not been my duty to inquire whether Mr. Rogers is responsible for the disaster—that was the duty of the Royal Commission, and they have acquitted him of any share in it. It has been Mr. Rogers' misfortune that an occurrence so very serious in its consequences has caused a searchlight to be thrown upon all the details of his management, with the unfortunate result, to him, that I have been compelled to find against him on the two points mentioned. Mr. Rogers has had a high character given to him by witnesses who have known him for many years, and whose testimony in his favour must carry great weight. He has been very unlucky in this: that, but for the series of coincidences which produced the disaster, and for which, as the Royal Commission have found, he is not responsible, he would have gone on to the present day with the reputation of being a very safe and successful mine-manager. It may be supposed that the Inspectors would have said no more in the future as to his methods of ventilating the pillars, as to his not watering at the working-faces, as to his failure to record the examinations of the wastes in a book kept for that exclusive purpose, and as to his neglect to show only monthly, and not weekly, records of such examinations, than they had done in the past. Their failure to point out these matters to him cannot, of course, get rid of his responsibility; but I must say that I entirely agree with the remark of the Royal Commission, at the end of paragraph 71 of their report. They say: "In connection with this subject, the Commission think it is much to be regretted that the fact that Special Rule 10 was not being observed escaped the notice of the Government Inspectors, whose duty it was to see that the rules were properly carried out, and to draw the manager's attention to any omission, and also to report it to the Chief Inspector, for such action as he might consider necessary. If the Inspectors had made the discovery, and had carried out their duties properly in this respect, the misinterpretation of the rule would have been pointed out to Mr. Rogers, and he would, the Commission are sure, have taken steps at once to see that it was strictly observed." From what I saw of Mr. Rogers, I also feel sure that this would have been the case. Mr. Rogers did not strike me as being at all a conceited or pig-headed man. I think he is a man who would be always ready to discuss any point upon mine management, particularly one connected with his own mine; to listen to reason, and to attend to any representations made by such persons as the Mine Inspectors. It is true that Mr. Leitch pointed out to him that he was not properly carrying out Special Rule 10, and that Mr. Rogers did not agree with him; but Mr. Leitch does not seem to have pressed the matter at all, and was hardly in a position to speak with the same authority on the point as the Government Inspectors; for, as the Royal Commission say, it was their duty to see that the rules were properly carried out, and to draw the manager's attention to any omission.

The next thing to consider was, what should be done. Some difficulty, to my mind, was created by the terms of Section 10 of the Coal Mines Regulation Act, 1902, from which alone I drew my jurisdiction, and outside of which I could not travel. Subsection (f) of section 10 says:—"The Court may cancel or suspend the certificate of the Manager . . . if it finds that he is by reason of incompetency or gross negligence . . . unfit to discharge his duty." I had therefore to find, apparently, that Mr. Rogers was so incompetent or had been guilty of such gross negligence as to be unfit to discharge his duty. If this meant that I could deal with Mr. Rogers' certificate, unless I found that he was at the time of the hearing unfit to discharge his duty as a mine manager, I could do nothing, for I could make no such finding. But, if that is what I had to find, it seemed very inconsistent that power should be given to me not only to cancel, but to suspend, his certificate—for the only proper thing to do with an absolutely unfit man is to cancel his certificate altogether. In this view of the matter it seemed to me that I might regard the unfitness referred to as being either total unfitness calling for the cancellation of the certificate, or such partial or temporary unfitness as might be fairly expected to be cured by the censure necessarily accompanying a temporary suspension of his certificate. I think this is what the Legislature must have meant, and upon this view of the section I acted. With great regret, therefore, feeling that I was pronouncing judgment against a worthy man, who, without educational advantages, had risen from a humble rank of life to an honorable position by the exercise of valuable qualities which had secured the goodwill and the confidence of those with whom he had been brought in contact, I came to the conclusion that the disobedience and negligence which I found to have been proved against Mr. Rogers must be punished by a suspension of his certificate, and I accordingly suspended it for twelve months.

By

By section 11 of the Act, I had power to make such order as I thought fit respecting the cost and expenses of the inquiry. I thought that the information laid before the Minister in the report and evidence in the Royal Commission Blue Book justified his directing this inquiry; and as in the result I found two important charges against Mr. Rogers proved, and the rest not proved, I directed that each party should pay his own costs of appearing before me, and that Mr. Rogers should pay to the Minister one-half of the expenses of holding the inquiry.

I have, &c.,

CHAS. G. HEYDON.

To the Honorable John Kidd, Esq., M.P., Minister for Mines.

The Under Secretary for Mines and Agriculture to His Honor Judge Heydon.

Department of Mines and Agriculture,
Sydney, 17 September, 1903.

Sir,

I am directed to acknowledge receipt of your letter of the 14th instant, forwarding your Report and various papers connected with the inquiry held by you into the charges against Mr. William Rogers, Manager of the Mount Kembla Mine.

I am, &c.,

E. F. PITTMAN,
Under Secretary.

Department of Mines and Agriculture.

Inquiry, under Section 10 of the Coal Mines Regulation Act, into the conduct of Mr. William Rogers, Manager of the Mount Kembla Colliery.

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20 JULY, 1903—DISTRICT COURT, KING-STREET, SYDNEY.

Present:—

HIS HONOR JUDGE HEYDON, who was directed to hold the inquiry by the Minister for Mines.

MR. BRUCE SMITH, instructed by Mr. H. D. Wood, of the Crown Solicitor's Office, appeared to conduct the case on behalf of the Department of Mines and Agriculture.

MR. A. A. ATKINSON, Chief Inspector of Coal Mines.

MR. C. G. WADE, instructed by Messrs. Curtiss and Barry, appeared on behalf of Mr. W. Rogers.

MR. WILLIAM ROGERS, Manager of Mount Kembla Colliery.

MR. J. GARLICK, Shorthand-writer to the Public Service Board, was present as Secretary and Shorthand-writer to the inquiry.

1. HIS HONOR.] I have received a direction from the Minister for Mines directing me to conduct a public inquiry into the conduct of Mr. William Rogers, Manager of Mount Kembla Colliery, and I hand that in to the Secretary. I have also received a copy of the statement of the case on which the inquiry is instituted, and an appointment of Mr. Bruce Smith to undertake the management of the case.

2. MR. BRUCE SMITH.] Shall I tender this appointment? Perhaps it had better go with the papers.

3. HIS HONOR.] I was going to put in the copy which was sent to me.

4. His Honor then handed to the Secretary the following documents:—

“Department of Mines and Agriculture, Sydney.

“To His Honor Charles Gilbert Heydon, Esq.,
District Court Judge.

I, John Kidd, Secretary for Mines for the State of New South Wales, in pursuance of the provisions of Section 10 of the Coal Mines Regulation Act, 1902, do hereby direct you to hold, at Wollongong or Sydney, as you in your discretion may decide, a Public Inquiry into the conduct of William Rogers, Manager of the Mount Kembla Colliery.

“(Sd.) JOHN KIDD.”

Dated this 17th day of July, A.D. 1903.

“Inquiry under the Coal Mines Regulation Act, 1902, into the conduct of William Rogers, Manager of the Mount Kembla Colliery.

Statement of the case upon which the Inquiry is instituted.

To William Rogers, Manager, Mount Kembla Colliery.

Take notice that, representation having been made to the Secretary for Mines that you, as Manager of the above Mine, holding a Certificate under the Coal Mines Regulation Act, 1902, are, by reason of incompetency and gross negligence, unfit to discharge your duties, the said Minister has directed an inquiry to be made into the conduct of you as such Manager, and on the said inquiry the following acts, omissions, matters, and things will be relied upon to prove the charges against you:—

1. That you did not enforce No. 10 of the Special Rules established under the said Act in the said Mine, or cause the said rule to be enforced.
2. That you failed to cause a regular and proper examination to be made of places in the said mine temporarily or permanently idle which were situated on the intake side of working-places.
3. That you, knowing fire damp to have been given off in the said mine, and that the same seam of coal as that being worked in the said mine gave off firedamp, failed to cause adequate examinations to be made of the said mine with the view to the detection of the presence of firedamp therein.
4. That you, knowing that there was an opening or openings on the 5th Right rope-road from the 35-acre goaf in the said mine, allowed to pass by such opening or openings the intake air intended to ventilate places beyond such opening or openings in which men were to work or pass.
5. That you are ignorant of the nature and quality of the gases met with in mines.
6. That you did not enforce or cause to be enforced the General Rules of the said Act or the Special Rules established under the said Act in the said mine, and were lax in the discipline of the said mine.

(Sgd.) JOHN KIDD,
Secretary for Mines.”

Sydney, 16th July, 1903.

“Department of Mines and Agriculture, Sydney,

Inquiry under the Coal Mines Regulation Act, 1902, into the conduct of William Rogers, Manager of the Mount Kembla Colliery.

To Bruce Smith, Esquire, Barrister-at-Law.

I, John Kidd, Secretary for Mines for the State of New South Wales, in pursuance of the powers vested in me under Section 10 of the Coal-mines Regulation Act, 1902, do hereby appoint you to undertake the management of the case on which a certain inquiry is to be instituted into the conduct of William Rogers, Manager of the Mount Kembla Colliery, in consequence of the report of the Royal Commission on the late explosion at the said Colliery.

“(Sgd.) JOHN KIDD,
Secretary for Mines.”

Dated this 16th day of July, 1903.”

5. HIS HONOR.] Do you appear for Mr. Rogers, Mr. Wade?

6. MR. WADE.] I appear for Mr. Rogers.

7. MR. BRUCE SMITH.] I understand Mr. Wade proposes to ask for an adjournment, but I have told him that I am quite prepared now to make a short statement of the case that I propose to put before your Honor. It is a fair thing to let my friend know whose evidence and what parts of their evidence I am going to rely upon, so that he may have time to look it up and see how far he is prepared to admit the evidence of Mr. Rogers himself, which, I suppose, will be taken as a matter of course, and the evidence of other witnesses who were called at the inquest and before the Commission. The evidence before the Coroner was made part of the evidence before the Commission, so that we may take it as a whole.

8. Now, the evidence I shall rely upon to support the case for the Department is that of Mr. Rogers himself, which is in the nature of admissions, and the evidence of several other witnesses, coal-miners principally, who were called at the inquest, and one under-manager, I think, who was called before the Commission itself.

9. I think, if I were to formulate now the grounds upon which this charge or case is based, formulating the different propositions which I propose to put before you, and indicate the whereabouts of the evidence on which I shall rely to support those propositions, it will give my friend a very fair opportunity of looking into them, and judging to what extent he is prepared to admit the evidence as already printed; because, if the evidence of Mr. Rogers and of the other witnesses upon whom I rely is admitted as it stands in those two documents, the report of the Commission, and the report of the Inquest, the case will be a very short one—it will obviate personally and individually calling the attention of the witnesses to the evidence they have given, and getting them to re-state it before you.

10. HIS HONOR.] Well, with regard to that, the best plan would be to adopt the course that was adopted, I think, by the Commission, that is, to have the evidence put in, subject, of course, to any right on the part of Mr. Wade, if he wishes it, to ask any further questions of those witnesses.

11. MR. BRUCE SMITH.] It is such an enormous volume here [*the report of the Royal Commission*], and I should attempt to limit your work by referring you to the parts of it. There is not so much evidence in the report of the Commission itself as there is in the printed statement of the Coroner's Inquest, which is embodied in this large report, and made part of it; and, if I indicate it now, and afterwards refer you to the names of the witnesses and the pages and the numbers of the questions upon which I rely, I think, with my friend's consent, it may save an immense amount of trouble.

12. HIS HONOR.] That, I think, would be a very convenient course to adopt.

13. MR. WADE.] I am inclined to fall in with that course, because I can see this—from the evidence of the charges which I saw for the first time this morning—that, if evidence is taken upon these specifically *de novo* and orally, we may be here for some weeks; and, as the evidence that will be given that way must traverse the same ground as the evidence before the Royal Commission, it seems to me there is no good purpose in heaping up expense. Therefore, it seems to me to be the best way to even allow the Royal Commission to go in bulk before Your Honor, and let each of us refer to the evidence which may support or minimise or qualify the particular charges brought forward or supposed to be answered by me; and with the right, of course, that, if necessary—and I think it would be a fair thing to allow—the witnesses who gave the evidence upon which the Crown rely may be further questioned by me.

14. HIS HONOR.] You would certainly have to have that right.

15. MR. WADE.] I am anxious to do that for the purpose of saving time and saving expense to the Company, which is a very serious matter indeed.

16. HIS HONOR.] Of course, the expense is a serious consideration, because I have power under the section with regard to the costs; and, even if I directed the Minister to pay all the expense of the inquiry, that would be nothing at all to Mr. Rogers' pocket, but if he had to pay all the costs it would be a very serious matter to him.

17. MR. WADE.] Another thing is the question of the place of hearing. On the ground of expense and on the ground of convenience, it would certainly be of the greatest convenience indeed to us if the inquiry could be held in Sydney. I could certainly give more immediate attention to the case if it were heard in Sydney than if it were taken to Wollongong.

18. MR. BRUCE SMITH.] I have no desire to go out of Sydney.

19. HIS HONOR.] As I understand from the statement you have made, you may not require to call any witnesses?

20. MR. BRUCE SMITH.] I may have to call Mr. Atkinson as to one or two facts bearing on the evidence, which will not take more than half an hour.

21. HIS HONOR.] Then, as far as convenience goes, it would be as convenient to your case to sit in Sydney as to go to Wollongong?

22. MR. BRUCE SMITH.] Yes.

23. HIS HONOR.] And you, Mr. Wade, would prefer to sit in Sydney?

24. MR. WADE.] Yes.

25. HIS HONOR.] That being the case I see no reason why it should not be held in Sydney.

26. MR. WADE.] Then, if Mr. Bruce Smith would outline his case here now, I would not ask for an adjournment to more than Wednesday morning, and I would do my best to get to work then. If I knew what he proposes to go upon I would have an opportunity of looking at the report of the Royal Commission and the particular cases he relies upon, and shape my case accordingly.

27. HIS HONOR.] Perhaps you had better do that then, Mr. Bruce Smith.

28. MR. BRUCE SMITH.] I will just do that. I need not make any preliminary statement about the disaster itself. Your Honor knows that Mr. Rogers was Manager of Mount Kembla Colliery at the time of the accident, and has been Manager for some years, and Your Honor knows the extent of the disaster, and that this is a proceeding now by the Department under Section 10 of the Consolidated Act, which is this:—

“If at any time representation is made to the Minister by an Inspector or otherwise that any Manager or Under-manager holding a certificate under this Act or under any Imperial Act is by reason of incompetency or gross negligence, unfit to discharge his duties, or has been convicted of an offence against this Act, the Minister may cause inquiry to be made into the conduct of the Manager or Under Manager, and with respect to every such inquiry the following provisions shall have effect.”

I do not think I need read the rest. I think it is only on the procedure.

29. Now, this is an inquiry, and this is a statement of the case, of which I think Your Honor has a copy.

30. [Mr. Bruce Smith then read the statement of the case, which is copied on page 2 of these notes].

31. MR. BRUCE SMITH (*continuing*).] I would like to say, Your Honor, and I think it fair to give the other side due notice, that, before the next sitting, I should like to alter or add anything to that statement which might make it clearer. I have not had an opportunity of going over the whole of the evidence, and there may be some slight variation in the form in which it would be desirable to put it before you. This was not drawn by me. I do not think there will be any objection from the other side.

32. MR. WADE.] It is reasonable.

33. HIS HONOR.] If you should want that I think it might be done.

34. MR. BRUCE SMITH.] I have been through the evidence since I received the report of the Royal Commission, and I have endeavoured to formulate the propositions which I will put before your Honor.

35. The first is that Mr. Rogers had a knowledge of the gassy character of this mine. That is important, because it has a bearing upon a subsequent proposition, viz., that he neglected to use safety-lamps when necessary.

36. If your Honor will look at the Special Rules, I will be able to put before your Honor the particular rules and sections—I think there are only a few—on which these charges depend. Your Honor knows, of course, that there are Special Rules for this mine. The second Special Rule (page 63, Royal Commission) has a bearing upon the Manager's duties and obligations. Your Honor will see there:—

“Special Rule 2.—The Colliery Manager shall have full charge and control of all persons employed, and of all operations in, at, or about the mine, and shall regulate the work thereof. He shall, in all respects, comply with the requirements of the Coal Mines Regulation Act, and shall enforce its observance by all employees. He shall, to the best of his ability, employ only efficient officers for positions of responsibility, and competent workmen for carrying on the work of the mine. He shall, as often as practicable, inspect the underground workings, and shall periodically ascertain personally, or by deputy, the amount of ventilation passing in the mine, and cause the same to be recorded in a book kept at the colliery for the purpose, and signed by the person making the record. He shall see that the colliery plans are regularly plotted, and that they show the salient features of the mine. He shall, when necessary, order locked safety-lamps to be used throughout the mine or any district thereof, or by any individuals therein, and shall appoint a competent person to examine them, who shall in every respect comply with the provisions of the Coal Mines Regulation Act applying thereto. He shall inspect, or appoint some competent party to inspect the machinery, erections, boilers, appliances at, in, or about the mine, and to have the result of such inspection recorded in a book to be kept at the mine.”

37. Now, your Honor sees that under that he is charged with the responsibility of administering this mine, and, impliedly, if not expressly, of supervising the conduct of their work by inferior officers. Therefore, the 9th Special Rule becomes important (p. 63, Royal Commission). That defines the duties of the deputy and fireman:—

“Special Rule 9.—He shall also make a true report of, and enter and sign daily in a book kept at the appointed office for the purpose, the state of the mine roads, doors, stoppings, brattice, faces, and ventilating appliances. He shall instantly suspend any workman who passes the appointed station without his permission; and if he discovers any danger he shall at once take whatever means he deems necessary to ensure the safety of the workmen, and shall instantly report to the overman, under-manager, or manager.

That is the only part of it to which I wish to go now. Then, in the 10th Special Rule (p. 64, Royal Commission), which is also with reference to the deputy and fireman, this appears:—

“Special Rule 10.—He shall at least once in every week examine, so far as is practicable, the state of the waste workings and main airways, and make and sign a true report of the state thereof in a book kept at the office for the purpose.”

38. Then on page 66 (Royal Commission) there is an abstract of the Coal Mines Regulation Act, which is repeated, of course, in the consolidated Act of 1902. Your Honor sees it is section 3, on page 66, and it is section 5 of the consolidated Act of 1902:—

“Section 5, subsection 1. In every mine required by this Act to be under the control of a certificated manager, daily personal supervision shall be exercised, either by the Manager or by an under-manager, nominated in writing by the owner or agent of the mine.

Subsection 2. Every under-manager so nominated must hold either a first-class or a second-class certificate under this Act, or under the Imperial Act fifty and fifty-one Victoria, chapter fifty-eight, or any Act thereby repealed, or a certificate of service under section 8 of this Act, or under any of the said Imperial Acts, and shall, in the absence of the Manager, have the same responsibility and be subject to the same liabilities as the Manager under this Act; but the nomination of an under-manager shall not affect the personal responsibility of the Manager under this Act.”

Does your Honor see that?

39. HIS HONOR.] Yes.

40. MR. BRUCE SMITH.] It is only just to show that the delegation of certain duties to the under-manager, does not, as a fact, exonerate the Manager from personal responsibility.

41. Well, then, on page 69 (Royal Commission), section 47 of the Act, is set out, with rules under it.

42. HIS HONOR.] General Rules?

43. MR. BRUCE SMITH.] Yes, General Rules. I will just find the section of the 1902 Act under which that comes. Oh, it is the same number, 47, and I think General Rule 1 is the same. I will read it, your Honor:—

“General Rule 1.—An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working place of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working places shall be in a fit state for working and passing therein. The ventilation so produced shall be the supply of pure air in quantity not less than 100 cubic feet per minute for each man, boy,

boy, and horse employed in the mine, which air in that proportion, but with as much more as the Inspector shall direct, shall sweep along the airways and be forced as far as the face of and into each and every working place where man, boy, or horse is engaged or passing, main return airways only excepted.

"Every mine, except such as are worked on the long wall system, shall be divided into districts or splits of not more than seventy men in each; and each district shall be supplied with a separate current of fresh air. The intake air shall travel free from all stagnant water, stables, and old workings. In the case of mines required by this Act to be under the control of a certificated manager, the quantity of air in the respective splits or currents shall at least once in every month be measured, and entered in a book to be kept for the purpose at the mine."

44. Now, I think they are the principal parts of the Act and the rules to which I shall have to refer. Now, irrespective of the statement of the case, I propose to formulate the case I make under a series of propositions, and I will leave until afterwards the bringing them in under the different paragraphs of the statement of the case.

45. I first of all will seek to establish that Mr. Rogers had a knowledge of the gassy character of this mine, and I shall do that for the purpose of trying to bring it within that Special Rule 2, which says, "He shall, when necessary, order locked safety-lamps to be used throughout the mine." Now, in order to establish a breach of that rule, I would have, of course, to satisfy you that he had a knowledge of the gassy character of the mine. In order to establish that, I propose to refer to the evidence of Broadhead, on page 7. He was giving evidence of having discovered gas "about four months ago"—that was four months ago at the time of the evidence being given. He said:—

"I asked Mr. Rogers to be shifted. I said the place was too hard and was very gasified, and was too badly ventilated. Mr. Rogers ordered the fireman to shift us about half a mile down the rope-road."

Now, it is fair to point out that on the same page, at the end of the second paragraph, the same witness said this, which would tend to cut it down. Speaking of having sent a message he said (p. 8, Royal Commission):—

"I believe that my message reached Mr. Rogers, because I was shifted; that is my only reason for so believing."

And he said, two lines above that,

"I did not speak to Mr. Rogers myself personally about being shifted."

I point that out because it came under my notice as I was reading through the evidence. There is the affirmative statement on the one page, and there is the statement on the other page that his reason for making the statement was so and so.

46. Then I refer your Honor to the evidence of one David Evans. Evans was a day-deputy. He said that he found gas some years ago. Of course, your Honor sees that I am directing my attention now to Mr. Rogers' knowledge that this was a gassy mine, not to any particular period. David Evans said, five or six lines from the bottom of page 31 (Royal Commission):—

"When I found the gas some years ago I reported it to Mr. Rogers, who was then underground manager; I also reported it in a book. At that time we kept at Mount Kembla a special report book for gas."

47. HIS HONOR.] I suppose the fact, that it was a gassy mine is now established?

48. MR. BRUCE SMITH.] I think so.

49. MR. WADE.] That there was gas in the mine is established, but "gassy mine" is a term that the Commission themselves could not define.

50. MR. BRUCE SMITH.] I point out that in Special Rule 2 it says he shall, "when necessary," order safety-lamps to be used.

51. MR. WADE.] I may say that the Act contemplates a mine being worked with naked lights even although gas may be discovered in it, because it says that the first inspection shall be made with a safety-lamp.

52. MR. BRUCE SMITH.] It is important, your Honor, to remember that certain gassy mixtures got from a waste on to one of the roads, and were lighted at a certain point by an open light used by one of the wheelers, so that it becomes very important to determine—although your Honor will not be called upon to do that—to determine in one's own mind whether this explosion could not have been prevented if open lights had not been used in the mine. That then involves the further consideration whether the necessity for safety-lamps in place of open lights had not been demonstrated sufficiently to induce a competent manager to adopt them, because in this Special Rule 2 it is left in that broad way—"He shall, when necessary order locked safety-lamps to be used throughout the mine." Now, if a manager is satisfied, not from any one event of a very drastic character, but from a series of events, that a mine has escapes of gas in it, and knowing the great danger of any one of them being lighted in a mine in which there is coal-dust (which I will point out to your Honor by-and-by) it certainly becomes a question for him to determine whether locked safety-lamps are necessary.

53. HIS HONOR.] Well, with regard to that, Mr. Bruce Smith, I would just like to call your attention to one aspect of the case which suggested itself to me when I was reading over section 10. So far as the case itself is concerned, of course, I know practically nothing, and you and Mr. Wade know all about it; but section 10 says that the inquiry is as to the fitness of the Manager—that is, I suppose, a present fitness to be Manager. Well, I do not know that the fact of an error of judgment having been made—you see I am speaking in perfect ignorance of the matter you are going to put before me—
[Interrupted.]

54. MR. BRUCE SMITH.] We are all conducting this in a purely academic way. There is no personal feeling in the matter at all.

55. HIS HONOR.] It might be that a manager made a mistake in that some particular precaution was necessary which he did not take. That might be an error of judgment; it might be that he was deceived by somebody; yet it would not follow that he would be unfit for his position. I admit that there is a peculiar inconsistency in section 10. Whilst the matter to be inquired into is the fitness, that is the present fitness, of the Manager, power is given to return, cancel, or suspend the certificate. A suspension in the case of unfitness seems a singular thing.

56. Bye-the-bye, in reference to that, I should have asked Mr. Rogers to deliver up his certificate pending the result of the inquiry.

57. MR. WADE.] We will get that by Wednesday, your Honor. We did not know you would want it. Of course, the two words, "incompetency and gross negligence," seem to govern the whole thing: "If . . . any manager . . . by reason of incompetency or gross negligence, is unfit to discharge his duties;" so a mere error of judgment would not be unfitness.

58. HIS HONOR.] The "gross negligence" would have to be such as would show that the man is unfit to continue as Manager of the mine. Of course, gross negligence in the past would not necessarily show present unfitness.

59. MR. BRUCE SMITH.] Unfitness is a present qualification which may depend upon past actions or omissions, and it all depends on whether I can establish a series of occasions upon which knowledge came to his mind of the dangerous character of this mine, so as to make it seem to your Honor, as a jury, that he ought, if he were competent, to have considered it necessary to order the use of safety-lamps in the mine, and thus enable you to say whether, in your opinion, he was incompetent to discharge the duties of Manager. I admit that it is a matter that is quite open, and it will depend very much upon the effect upon your mind, after you have heard all, or read all, that is to be put before you on the subject. One isolated case may lead you to say, "Well, this is an error of judgment, but it occurred years ago, and it does not show that he is unfit now." On the other hand, if I were to establish a whole series of cases upon which information came to him of the presence of gas in the mine, then it might have an entirely different aspect in your mind. I do not say I am going to do it, but that is the particular portion of the Act upon which this has a bearing, and here Evans says:—

"When I found the gas some years ago I reported it to Mr. Rogers, who was then underground-manager. I also reported it in a book. At that time we kept at Mount Kembla a special report book for gas."

Well, of course, it would be taken that Mr. Rogers, being under-manager at that time ——[*Interrupted.*]

60. HIS HONOR.] Whereabouts in his evidence does he speak of the particulars of this finding of the gas?

61. MR. BRUCE SMITH.] Above that, about two-thirds of the way down the first paragraph on the same page. If your Honor will look at the same page (p. 31 Royal Commission), your Honor will see that his attention is called to a report book. He falls into a double negative there. He says:—

"I am positive sure there has never been no report of gas not this four or five years. I have come across gas. That was eleven or twelve years ago—perhaps thirteen. The furnace was then in the tunnel mouth."

And then he is cross-examined by me. I take it that your Honor will read back from these passages in order to clear them up.

62. HIS HONOR.] But, unfortunately, that does not give me any idea of the quantity of gas.

63. MR. BRUCE SMITH.] Oh, no, it does not! It may have been a very small or a very large quantity.

64. HIS HONOR.] Of course, that seems to me to be a very material thing.

65. MR. BRUCE SMITH.] Of course, I can only put my evidence before you piecemeal. It will all turn upon this: whether, after having all the evidence I can put before you under consideration, you come to the conclusion that, with the knowledge that Mr. Rogers had, or ought to have had, it was necessary to put in safety-lamps. And, of course, that would involve some other knowledge on your Honor's part, which I propose to put before you as to the effect of the safety-lamp (that is common knowledge), and as to the greater safety that it ensures in a mine over and above a naked light, such as is now said by the Commission to have been one of the factors in this explosion. I think I shall very likely ask Mr. Atkinson, the Chief Inspector of Coal Mines, when he is in the box, to give your Honor some evidence as to the extent of gas in a mine which makes it sufficiently dangerous to, in his opinion (and I will put him forward as an expert), render it desirable to use safety lamps. Your Honor sees that it will only be when all the evidence is before your Honor that you can tell.

66. HIS HONOR.] Of course, I can see that. I merely mentioned that about the section so as to draw your attention to a point that appeared to my mind as a material point when I read the section over.

67. MR. BRUCE SMITH.] Your Honor sees that the very fact of your Honor being appointed to determine whether a man in Mr. Rogers' position is competent, presupposes that you are qualified to form an opinion even on a point of coal-mine management; and, therefore, your Honor must of course go on the evidence put before you; in this sense, I mean, you will not have misgivings as to the sufficiency of your knowledge of coal-mining to determine that question, because it is what one man would determine of another as to what would be safe and reasonable under certain circumstances. Your Honor is really put in the place of a jury to determine what was necessary for an ordinary man in such a position. All I can do is to put this before your Honor, and see what the cumulative effect is upon your Honor's mind. Of course there are other instances which I will put before you; and it will really be the aggregate of all these which will be material for your Honor to come to a determination upon. Now, with regard to this last one I am not reading back into the evidence, because I do not know to what extent your Honor would wish that to be done. I thought I would leave that for your Honor to do, merely indicating the particular point of the evidence to my friend, and then he can read back or forward and show by the evidence that there is some qualification of it that I have overlooked.

68. HIS HONOR.] I only did that because what you read seemed to indicate that there had been previous evidence on that point.

69. MR. BRUCE SMITH.] Yes. Your Honor will see that there were three representatives here (at the Inquest and at the Royal Commission). Mr. Wade was representing the Mount Kembla Coal Company, I was representing the Crown and the public, and Mr. Lysaght was representing five or six different bodies; and your Honor will find that each witness was subject to a number of examinations and cross-examinations, and the latitude allowed by the Coroner was such that sometimes a witness was examined five or six times over. I just mention that for your Honor's information. Now, if your Honor will look at page 36 (Royal Commission), your Honor will see some evidence by Mr. Rogers himself on the subject of gas. Referring to the evidence given by Evans, about ten lines from the bottom of the page, he said:—

"I never remember Evans reporting gas to me. I will not swear he did not report it to me; it would be in a report book if he did, in the deputy's report book. I do not remember gas being

being reported while I was under-manager. I cannot say, as manager, whether gas has been reported or not. Everything dangerous I told them to report it and let me know. If gas were in the mine I would regard it as a matter of serious importance. During the time I have been under-manager and the time I have been manager it has been my honest belief that there was no gas in the mine. I knew that gas was found in the mine years ago."

Well, that is the kernel. About twenty lines above that he said :—

"I have seen some black-damp there. I saw some there a week ago last Saturday. Before the disaster I remember seeing black-damp in Kembla."

Well, it probably would be contended that the presence of black-damp does not necessitate the use of safety-lamps.

70. HIS HONOR.] Black-damp is an expression I do not understand.

71. MR. WADE.] Fire-damp is explosive; black-damp is not. Black-damp will not support combustion. Black-damp is carbonic acid gas.

72. MR. BRUCE SMITH.] On page 40, that is the evidence of Mr. Rogers again. About twelve lines down, he says :—

of the superior ventilation, and my not finding any gas at any time. I did not suppose that the

"I knew that it was a seam that produced gas. I relied on there being no gas by reason character of the seam had changed."

Now, your Honor, that is all I have on the subject of its being a gassy mine.

73. HIS HONOR.] Is there anything more than that that would give me an idea of the extent of the gases in the mine.

74. MR. WADE.] A number of people say it is the safest mine in the world.

75. MR. BRUCE SMITH.] Of course, there is other evidence here on the occurrence of gas, but I cannot connect it with Mr. Rogers, and there seems to be a tendency on the part of the miners not to report gas—in fact, the Commission has recommended some machinery by which there should be a heavier obligation on the miners in the future to report gas—but then I cannot connect that with Mr. Rogers; there is nothing to show that it came to his knowledge. There is evidence to show that it came to the knowledge of one or other of the deputies, but not of Mr. Rogers.

76. HIS HONOR.] Well, Mr. Bruce Smith, assuming that I came to the conclusion that the evidence that you called my attention to, of Broadhead and Evans, was correct, and that information had been given to Mr. Rogers, so that the knowledge that there was gas in the mine would be brought home to him, is there anything then to show that the gas in the mine was enough to call for action, or do you say that a mine, if it is gassy at all, ought to be worked with safety-lamps?

77. MR. BRUCE SMITH.] I will not, personally, express an opinion; but Mr. Atkinson, the Chief Inspector, will go into the witness-box, and will give your Honor his opinions upon the necessity, in very minute revelations of gas, for safety-lamps, or as to how much it requires.

78. HIS HONOR.] I suppose, where there is a very small escape of gas, the danger is that, in some cases, and under some circumstances, it may accumulate.

79. MR. BRUCE SMITH.] The danger is that where there is some there is more; and there is a great deal of evidence as to its liability to accumulate; and Mr. Rogers himself, on several occasions, speaks of the probability of gas, if it is there, accumulating in the upper part or apex, so to speak, of a cavity produced by a fall of stone. Of course, I do not know to what extent your Honor has had contact with these colliery cases; but where there is a fall after the seam is taken out, the fall goes on and on until the place is really filled up by reason of the stone above where the seam is taken out falling less compactly than it was before the seam was taken out, so that there is a cavity; and, as gas is lighter than air, the tendency is for the gas, if it is there, to get up in this cavity and remain there. And, of course, the theory, as it was put before the Commission, was that a higher fall forced this gas out into the workings, where it came into contact with the light. That is the theory that was put before, and apparently accepted by, the Commission. Your Honor will see some plans at the end of that report, and all over the plans you will see great spaces from which the coal has been taken, and they are called wastes or goafs.

80. MR. WADE.] General Rule 1, section 47, meets what your Honor was asking just now. It provides for the ventilation being sufficient to dilute all the noxious gases; and then, if the ventilation fails to dilute them, then follows what you shall do next.

81. HIS HONOR.] How do you know that you are diluting it?

82. MR. WADE.] Well, they use a safety-lamp which will find $2\frac{1}{2}$ per cent. of gas, and that is what finding gas means. Of course, they use a very fine mechanical contrivance to find a half per cent. of gas; but that is only used for special purposes by special officers.

83. HIS HONOR.] I understand then that you put in a certain amount of ventilation to dilute the gas; and then you take in a safety-lamp to find out if it is being diluted, and that implies that the whole mine is being swept by this ventilation.

84. MR. WADE.] If it is not, you are liable to prosecution.

85. HIS HONOR.] I have in my mind that finding, which apparently contemplates gas coming in from an unused part, and therefore an unventilated part.

86. MR. WADE.] Of course, there is a great deal of difference about this question. Even Mr. Atkinson says that if there was gas it could not have been foreseen.

87. MR. BRUCE SMITH.] It might be as well if your Honor would turn at this stage to the particular paragraph of the finding of the Commission as to the disaster, page xxxv :—

"A fall in the 35-acre waste drove an inflammable mixture of fire-damp and air down the 4th Right rope road to the No. 1 Right main level with sufficient force to cross the travelling road without distributing itself in that road to any great extent, and to blow out a canvas door—or doors, as to which there is a doubt—between the two headings. The mixture, driven, in a state of compression, into the main level, with a tendency—due to the angle at which the 4th Right meets that road—to travel rather inbye than outbye, met the intake air current; and, its forward movement thus retarded, and its momentum quickly reducing, its centre came to be about the 4th Right junction. The northern extremity of the mass spreading inbye along the main level, first reached the wheelers' right in an over-diluted state; but, as soon as a mixture rich enough to burn came in contact with the light, a flash of flame ran back, starting the destructive action by communicating the ignition to the whole body—which was made more violently explosive by the presence

presence of coal-dust raised by the first blast. Thus the centre of force showed itself at the centre of the explosive body, and not at the point of ignition ; though there is a prevailing and natural, but the Commission believe erroneous, inclination to assume that in such cases the force must necessarily radiate from this point. The fire-damp and air exploded, and in turn started a series of explosions of coal-dust, which wrecked a large portion of the mine, and killed a number of the miners. These explosions of fire-damp and coal-dust generated a large quantity of carbon-monoxide ; and it was this deadly constituent of the after-damp of the explosion which caused the death of by far the larger number of victims of the disaster."

88. [Mr. Bruce Smith then explained the finding of the Commission to His Honor on the plan of the Mount Kembla Colliery].

89. MR. BRUCE SMITH.] It is fair to mention here, your Honor, that the representatives of the mine, Dr. Robertson in particular, who was what they call viewer, put before the Commission a theory that there was no gas at all, in his opinion—that there was a first fall of 2½ feet of the ceiling of the space left after the seam had been taken away, but that there was a second fall—there is no doubt about that—and that that second fall was so large and so simultaneous in all parts of the roof, that the air which was forced out travelled at the rate of 700 miles an hour, and generated—there was a lot of scientific evidence given on the generation of heat sufficient to produce fire by a great force—and that the whole trouble was caused by that without any gas at all. That was his theory. The Commission did not accept that, and found, as I have just read. Of course, your Honor, the Commission had before it a great deal of evidence with regard to gas in the mine which I am not able now to connect with Mr. Rogers. For instance, it had before it the fact, which did not touch Mr. Rogers at all, that, four days after the explosion, Mr. Atkinson found up in a higher part of the mine something like 10,000 cubic feet of explosible gas, which had evidently accumulated there since the accident.

90. MR. WADE.] After the ventilation had been broken down?

91. MR. BRUCE SMITH.] Yes, after the ventilation had been broken down, there was this enormous accumulation of gas there. At all events, that quantity of gas had accumulated there, but Mr. Rogers cannot be connected with that. I cannot bring any of the evidence in unless I can connect Mr. Rogers with it.

92. HIS HONOR.] But it would show the necessity of taking ventilation there to dilute the gas?

93. MR. BRUCE SMITH.] Yes. This mine, I might mention, was ventilated by a furnace, not by fans, so that it depended upon the continual keeping up of a fire to keep the air moving. Now, that is one head, your Honor.

94. The next head I take is under Special Rule 10, page 64, Royal Commission. This is one of the duties of the Deputy and fireman :—

"He shall, at least once in every week, examine, as far as is practicable, the state of the waste workings and main airways, and make and sign a true report of the state thereof in a book kept at the office for the purpose."

Now, in order to connect Mr. Rogers with that, I have to turn to Special Rule 2 :—

"The Colliery Manager shall have full charge and control of all persons employed, and of all operations in, at, or about the mine, and shall regulate the work thereof. He shall in all respects comply with the requirements of the Coal-mines Regulation Act, and shall enforce its observance by all employees."

94½. HIS HONOR.] Of course the book should be kept at the office, and Mr. Rogers could look at it.

95. MR. BRUCE SMITH.] Yes. It is his duty to look at it. If your Honor will turn to page 15, you will see there that Morrison, who was the deputy of that particular district of the mine to which I have drawn your Honor's attention says :—

"I did not get into that waste by either of those ways that night. I went in to the fence. With the exception of going to the fence, I did not go into any of the waste that night—I never do go in. I went to the fence to inspect. I just go and see that the stoppings are all right, and that the roof is all right. It is not my duty to go right into the centre of the waste. I saw no gas. I do not know whether gas could accumulate inside those waste workings, where I never got. I never did anything to see whether gas had accumulated in that waste. I never went into the waste in my life."

Then, on page 17, Royal Commission :—

"I have only made two monthly inspections—one report I put in this book, and one in another. That is since I have held my present position."

96. HIS HONOR.] These are inspections of this waste, I suppose?

97. MR. BRUCE SMITH.] Yes. And then, on the same page, he says :

"I did go into the waste seven days before the disaster, to see if the roof had fallen, for my own satisfaction, with a safety-lamp."

98. MR. WADE.] Of course, your Honor, there is no dispute, as a matter of fact, that these inspections were only made once a month. There was a misinterpretation of the reading of the rule.

99. MR. BRUCE SMITH.] I was going to refer His Honor to that. The rule requires a weekly report. Well, it was admitted then, and it is admitted now, that this inspection was only made once a month instead of once a week. Then I will refer your Honor to Mr. Rogers' knowledge of the non-examination. If your Honor takes down that admission, of course, I need not give the evidence.

100. HIS HONOR.] It was so, as a matter of fact, that the examination of the waste places was only made once a month?

101. MR. WADE.] Yes; owing to a misinterpretation of the rule.

102. MR. BRUCE SMITH.] Yes. I am going to refer His Honor to what Mr. Rogers said about that. I will refer your Honor to the Commission report, page 679, beginning with Question 22628. This refers to that very rule. It is the evidence of Mr. G. Leitch, who was previously the Under-Manager of this Colliery. It is :—

22628. Mr. Ritchie.] Q. Did you draw the Manager's attention to the fact that the rule was not being carried out? A. Yes.

22629. Q. What was the answer? A. That it had been the custom of the Colliery whilst he was Manager, and also the custom of the Colliery before he was Manager.

22630. Q. Did you consider you did your duty? A. I was not Manager; I was Under-Manager. I pointed it out to him, and that was the answer I got.

22631. *Q.* Who was the Manager? *A.* Mr. Rogers.

22632. *Q.* Did Mr. Rogers give you any other answer? *A.* No; not that I am aware of.

22633. *Q.* Was any question raised as to what the rule meant? *A.* What do you say?

22634. *Mr. Lysaght.*] *Q.* Can you tell the Commission whether any question was raised as to what the rule meant? *A.* Mr. Rogers was under the impression that it was carrying out the rule. I said, "No; he was not." He said he was, because he was examining the waste workings every day.

22635. *Q.* The explanation was that they were examining them every day? *A.* Yes; he said that they were examining them every day.

22636. *Q.* But that was not an excuse for not having a report in writing? *A.* He told me that that was the rule of the Colliery.

22637. *Q.* You took no steps to have it reported to the Inspector? *A.* No; I had no right.

22638. *Q.* You, knowing that the special rule had been violated, did you report it to the Inspector? *A.* Mr. Rogers was under the impression that they were carrying out that rule.

That is just to show Your Honor that the fact that Mr. Rogers was not having the rule carried out was brought under his notice by this Under-Manager at that time.

103. HIS HONOR.] The fence spoken of by the witness you referred to—what is that?

104. MR. BRUCE SMITH.] That is a fence that is put to prevent people from going into the waste—it is put along the edge.

105. MR. WADE.] You must not go inside the fence according to the rules of the Colliery.

106. MR. BRUCE SMITH.] The men must not go in, but the officials must in the course of their duty.

107. HIS HONOR.] What kind of a fence is it?

108. MR. BRUCE SMITH.] It is only a single rail or two rails. It is a danger signal.

109. HIS HONOR.] Is it a fence put there to show that people must not go in there, because the roof may fall, for instance?

110. MR. BRUCE SMITH.] That fence is not supposed to be a bar to an overman or deputy. He is allowed to go in, because he is a deputy.

111. HIS HONOR.] He (Morrison) says he did go in.

112. MR. BRUCE SMITH.] But he did not go once a week.

113. HIS HONOR.] What is in my mind is this, and, perhaps, I am anticipating a good deal of the evidence that is to come—the paragraph as to the cause of the disaster says that gas was forced out of this goaf by a fall. Well, I take it that, looking at that goaf from outside the fence, would not show the man that there was gas there.

114. MR. BRUCE SMITH.] No.

115. HIS HONOR.] Well, if he was not bound to go in, if it was a proper examination to look at it from outside the fence, then the examination would not matter whether it was held once a week or once a month—the gas would not be found—and he would have a good excuse for not going in, because something might fall on him.

116. MR. BRUCE SMITH.] Beyond a certain point it is not contended that he should go in; but to say that the waste is to be examined once a week, and reported on, does not mean to say that he is not to go inside the fence, because that would be merely walking by.

117. HIS HONOR.] Of course, because the examination once a week might not have revealed any danger, even if there was a danger, that would not relieve him of the duty of carrying out the rule.

118. MR. BRUCE SMITH.] General Rule 6 of the Act of 1902 says:—

"Every entrance to any place which is not in actual use or course of working and extension shall be properly fenced across the whole width of the entrance, so as to prevent persons inadvertently entering the same."

That has a bearing on it; and one has only to look at the law to see that it has a meaning:—

"Special Rule 10.—He shall, at least once in every week, examine, so far as is practicable, the state of the waste workings and main airways, and make and sign a true report of the state thereof in a book kept at the office for the purpose."

Your Honor sees that there is a certain amount of discretion allowed to him as to how far he goes in. He is not supposed to go in so far as to jeopardise his life, possibly by falling stone.

119. HIS HONOR.] Now, I wonder would that be entered in the book.

120. MR. BRUCE SMITH.] Oh, the book is very important. It is the record.

121. HIS HONOR.] Well, if it was to be "a true report of the state thereof," that apparently would imply some description of the nature of the inspection that he made; for instance, if he had actually gone beyond the fence, the entry in the book ought to show that.

122. MR. BRUCE SMITH.] Yes.

123. MR. WADE.] No, it does not.

124. HIS HONOR.] Then, it looks as if it ought to show that. If it does not, it is not "a true report of the state thereof."

125. MR. WADE.] "The state thereof" is as to whether there is gas there, and whether it is dangerous.

126. MR. BRUCE SMITH.] My case is that he is supposed to go in, and that these words "as far as is practicable" leave it to his discretion as to how far he shall go up this fallen stone to see if gas is present.

127. HIS HONOR.] Supposing he had gone in to the fence, and then entered in the book, "Examined the waste workings, and found no gas," how would Mr. Rogers know how far he had gone?

128. MR. BRUCE SMITH.] But these examinations were only made once a month, instead of once a week; and Mr. Rogers' Under-Manager pointed out to him, as soon as he took office, "You are not conforming to the rules," and Mr. Rogers said, "Oh, we have always done this, and we are going to do it in the future."

129. MR. WADE.] It is not the method of the examination you complain of, but the periodicity of it?

130. MR. BRUCE SMITH.] Oh, I cannot complain of the method of making the examination, because it is a matter left to his discretion. If he only went a foot beyond the fence, I cannot blame him.

131. HIS HONOR.] Apparently there has been a breach of this rule. It should have been examined weekly, as I read the rule. It should have been examined and reported on every week, and should have been entered in the book, so that Mr. Rogers could have seen whether it was examined; and it was pointed out to him that it ought to be examined every week. Well, that is all right, so far; but does it show unfitness? On that question, one may look at in this way: Was this inspection practically of any value whatever? If a man is going to stand at the outside of the goaf and look in, when he cannot possibly see whether there is anything there or not, it would seem to be absolutely useless.

132. MR. BRUCE SMITH.] Of course, your Honor will understand that I am not attempting to put this as evidence, in an isolated form, of unfitness. I am putting a series of omissions and commissions before your Honor, and it is my contention that your Honor will draw from those evidences a conclusion that Mr. Rogers is unfit. I do not suppose one item alone would establish that general conclusion, apart from the others.

133. I have referred your Honor to page 17, Royal Commission. Now, there are three or four others; and, perhaps, I had better refer to them. On page 28, Morrison says:—

“Any report which I made with regard to the waste was put into the same book as that in which I put my daily reports. I examined waste workings on the rope roads once every night. My nightly examination of the waste workings was limited to the main roads.

“I did not go round any of the other goafs in my district every night. I did not go round any of the other goafs once a week. I did not report once a week my examination of the waste. I reported once every month of my examination of the waste workings.”

134. HIS HONOR.] That is admitted, that it is only made once a month.

135. MR. WADE.] Yes. Mr. Rogers read that word “if practicable” as referring to the question of time, but I admit that it refers to the examination.

136. HIS HONOR.] According to the evidence to which my attention has been called, I do not see that.

137. MR. WADE.] It is in his own evidence. That is the whole point in the rule.

138. HIS HONOR.] How did he read it?

139. MR. WADE.] He read it, “once every week, if it is practicable,” examine the waste workings; whereas the contention of the Crown is that he shall every week—that is compulsory—examine the waste workings, and the examination shall be as far as practicable. It is a question to which words you attach the “if practicable.”

140. HIS HONOR.] Well, of course it cannot be read that way; but, suppose it were read that way, why was it not practicable to examine every week?

141. He took it as “if practicable or convenient.” He gave the reason.

142. MR. BRUCE SMITH.] On page 29, Morrison says:—

“It was not reasonably practicable to examine the waste workings round the rope roads every week. That is my opinion. I examined the waste workings round the rope roads to the fence every night. I do not think it necessary to examine the waste workings every week. I cannot say who fixed a month as the time between which the waste workings were to be examined. Mr. Nelson told me when to inspect. I only inspected twice altogether. Nelson was my superior officer, and if he had told me to inspect at any time, I would have done it. If Nelson had told me to go and examine the waste workings any day, there was nothing to prevent me doing it. With all the work I had to do, I could not have examined the waste workings every week without someone being put on to do my other work. I had plenty of time to do my own work properly.

“To Mr. Wade: The monthly inspection used to occupy seven hours. It was always made in the daytime. I would not have time to do the waste workings and do my own work too at night.”

143. HIS HONOR.] Well, that throws the responsibility, if that is to be taken, on to the Company instead of Mr. Rogers, for not employing more people. Mr. Rogers ought to have insisted on enough people being employed to examine it.

144. MR. BRUCE SMITH.] Then, on page 366, Royal Commission, Morrison again says, examined by Mr. Ritchie:—

11829. Q. I will put it to you this way: when did you examine these places—in your daily examination, or in your waste examination? A. You mean the morning inspection?

11830. Q. Yes, the daily examination? A. Well, I did not examine these places at all.

11831. Q. You did not do them at all? A. No.

11832. Q. In neither one examination nor the other? A. Neither one nor the other.

11833. Q. So that whatever part of the workings was standing—pillar workings, or headings, or bords which may be standing driven up sufficiently far for the time being—those were never examined at all? A. Of course you mean they were driven up the distance, and cut off by the line of cut-throughs further up.

11834. Q. I understand these were never examined at all? A. Not by me.

No, your Honor, that does not refer to the wastes. That refers to the places that were not being worked.

145. Now, with regard to Mr. Rogers' knowledge of this, your Honor, I have already referred to Mr. Leitch's evidence at the inquest; but he gave evidence before the Commission (page 679). I have referred to that also. Then, on page 771, Mr. Rogers is examined about it. He says he is not well up in the English language—it has no bearing on this particularly. He says:—

25650. . . . You must remember, Mr. Lysaght, that I am not well up in the English language. If you spoke to me in Welsh about the mining terms, I could answer anything you wanted me to answer. I must admit that I do not know gas when you mention it to me in big words. I do not know what they mean.

25651. *His Honor.*] Q. Were you brought up to speak Welsh only? A. To speak Welsh only.

25652. Q. Up to what age? A. Up to 20 or 30 years of age.

25653. Q. English came as a strange language to you? A. Yes.

25654. *Mr. Wade.*] Q. You can speak Welsh now? A. Yes.

I refer to that, your Honor, because I submit that if Mr. Rogers is unfortunate enough by his nationality not to understand the terms, I think when your Honor hears him in the box, you will say that he speaks English very well. But, at all events, if he does not understand English sufficiently well to understand the true meaning of these rules, it is a question whether that is not an element in this inquiry.

25659. *Mr. Lysaght.*] *Q.* We have had some evidence from Mr. Leitch on this matter;—what reason do you give that the waste workings were not examined once a week, as required by Special Rule 10?

A. After I read them, I thought that the rule means once a week as far as practicable.

25660. *Q.* That is what you told us at the inquest? *A.* That is the way it was. I had a talk with the manager in Mr. Ronaldson's time, and it was reported that way; and the Inspector saw the report. I had no reason to think that it should not be done the way we were doing it.

25661. *Q.* Is that all you want to say in answer to that? [*No answer.*]

25661½. *Q.* Is it a matter of fact that Leitch pointed out to you when he went to Kembla that Special Rule 10 was not being carried out, and that there should be a special weekly examination? *A.* No; it is not correct.

25662. *Q.* Did Leitch make any statement to you when he went to Kembla about the inspection of waste workings being only once a month? *A.* No. But I remember that some talk passed between Leitch and myself about it.

25663. *Q.* Did you tell Leitch that once a month was the way they were examined when you became manager, and it was the way you carried it out? *A.* I might have done so; but I will not swear it.

25664. *Q.* Do you rely on the explanation given at the Inquest that you misread the rule? *A.* I did not misread it; I misunderstood it.

And then the whole of Leitch's evidence is put before him, and he is asked:—

“25666. *Q.* Is that true? *A.* I do not remember it.”

Well, the Commission came to the conclusion, your Honor will see, that Mr. Leitch's statement was correct; and I suppose that Mr. Rogers had forgotten it.

146. If your Honor will look at page 36 there is something more about this by Mr. Rogers:—

“The waste workings were inspected once a month. If I had thought there was any occasion for it, it would have been practicable to have the waste workings inspected once a week. I was aware of Rule 10 of the Special Rules before the disaster. I read the rule like this: “Once a week, or as far as practicable.” I am not now of opinion that there was some occasion to have the waste workings examined once a week. I do not know now that I wrongly interpreted that rule (Rule 10 of the Special Rules). I could not inspect the underground workings every day, because I had other duties to do.”

I have another reference on page 16. Morrison is being examined:—

“I never went inside the fence after that up to the time of the accident; I have been inside the fence since. When I made that examination of that waste, I made a report in writing. I did not make a report in writing of the examination of the waste seven days before the disaster; I made no report. I made no report of the black-damp. I was not supposed to go inside the place; but I did so to see how the roof fell. My duties do not at any time take me beyond any fence of a waste.”

Then, about five lines from the bottom of that paragraph he says:—

“The book produced contains the reports made as required by Rule 10 of the waste and working places in No. 1 Section. There is no book kept at the office, as far as I know, for a weekly report under Rule 10; I made the report in the book produced on the 19th concerning the waste workings [it is marked *Exhibit F*]; there is no report about the waste workings in that book since that one [*Exhibit F*]; the report is made every month.”

That is all I wish to submit under that, the non-examination of the waste as required by Special Rule 10, and Mr. Rogers' knowledge of it.

147. Now, there is another: the non-examination of the working faces that were not being worked at that time. That is required by Special Rule 9. I would like to show your Honor on this map the particular place that really it depended on. It was really the extreme heading up here (the extreme northern end of the No. 1 Right main level). Your Honor will see that bodies were found about here (Morrison's working place), and there was a good deal of evidence at the inquest that really the explosion occurred from an explosion of gas up in the extreme heading. [Mr. Bruce Smith then explained to His Honor on the map the course of the ventilation in this section of the mine.] Now, I will point your Honor to the evidence that will show that work had stopped, and there was a fence just past the jig, and that heading had not been examined. I will refer your Honor again to Rule 9, page 63, the duties of the deputy and fireman.

“He shall also make a true report of, and enter and sign daily, in a book kept at the appointed office for the purpose, the state of the main roads, doors, stoppings, brattice, faces, and ventilating appliances.”

148. *MR. WADE.*] That depends on section 47 of the Act, General Rule 4, sub-section 1.

“A competent person or competent persons appointed by the owner, agent, or manager for the purpose, not being contractors for getting minerals in the mine, shall, within such time immediately before the commencement of each shift as shall be fixed by special rules made under this Act, inspect every part of the mine situate beyond the station or each of the stations, and in which workmen are to work or pass during that shift.”

149. *MR. BRUCE SMITH.*] I do not admit that that cuts down the Special Rule.

150. *MR. WADE.*] The Special Rule comes in under the Act: that is the point.

151. *HIS HONOR.*] Well, it could not contradict the Act or cut it down in anyway; but it might impose a more stringent rule I should think.

152. *MR. BRUCE SMITH.*] I shall show your Honor that that place had not been inspected, but that it was absolutely neglected; and there is evidence that it was in that very place which had been so neglected that the Chief Inspector of Mines found this great accumulation of gas four days after the accident, showing that gas was being given off in that locality, if not in that particular spot. I say in that locality, because as it got up to that end, it rose considerably; and the gasses that may have been given off after the explosion may have risen to that point from other parts of the mine—and that place was not inspected for days and days.

153. HIS HONOR.] That is an illustration of the importance of the inspection?

154. MR. BRUCE SMITH.] Yes. The brattice ought to be examined up in this extreme end to see that the air (it was a main intake) that was going round there had been properly diverted into the working places of the mine beyond, to the left, as I have shown your Honor.

155. HIS HONOR.] There was no brattice carried along?

156. MR. BRUCE SMITH.] Oh, yes. There was a brattice carried up there; and that was all the more reason why it should be examined, to see that the brattice was up, otherwise the air might disperse itself in other directions than the ones required.

157. MR. WADE.] You would know at once if it did, by the test.

158. MR. BRUCE SMITH.] I will refer your Honor to page 352. Morrison again is asked by me:—

11230. Q. I want to know from you whether you went up to the extreme end of No. 1, where it was fenced off? A. I do not understand the question. Do you want to know if I went through the fence?

11231. Q. Yes. Did you go through the fence and examine? A. No.

11232. Q. Is this statement made by Mr. Rogers right: 'the fence at the top of No. 1 Right was put there because there was no one working up there; the bratticing was up to the face of that place; No. 1 Heading had been standing for six or eight months.' Is that right? A. I could not say how long it had stood.

11233. Q. It had stood for some considerable time? A. Yes.

11234. Q. Did you hear Mr. Rogers give this evidence at the Inquest? A. No.

11235. Q. He said, 'there was no reason for not inspecting the 30 or 40 yards beyond the fence at the top of the No. 1 Right, except that there were no men working there.' That is true? A. I never inspected it; and there were no men working there.

11236. Q. How long before that time had you inspected it? A. I was once there—once up in those headings.

11237. Q. Only once beyond the fence? A. Beyond the fence.

11238. Q. How long before the disaster was that? A. I cannot say.

11239. Q. Was it hours, or days, or weeks? A. Oh; I was just newly on the job at the time—just newly started. It was weeks before.

11240. Q. Some weeks? A. Some weeks, yes.

11241. Q. To your knowledge had any examination been made of the No. 1 Heading, the extreme part of it, beyond the fence? A. Yes; William Nelson told me—[interrupted.]

11242. Q. When did he tell you?

11243. Mr. Curtiss.] Would that be evidence?

11244. Mr. Bruce Smith.] I do not want it; but I think it would be fair to get it.

11245. His Honor.] Nelson is dead. I think we should have it.

11246. Witness.] Another man was with him, who is alive.

11247. Mr. Bruce Smith.] Q. When did he tell you? A. On the 19th.

11248. Q. Was there any man with you? A. Willie Hay and Johnson.

11249. Mr. Lysaght.] I object to that. One of the witnesses is alive, and can be called.

11250. His Honor.] This is evidence given by Morrison of what Nelson told him. The other man can only speak of what was said by Nelson to Morrison.

11251. Mr. Bruce Smith.] Q. Was Hay with Nelson at the time Nelson told you; or was he with Nelson at the time Nelson went to examine this place? A. At the time Nelson went to examine it.

11252. Q. Where is he? A. At Mount Kembla.

11253. Q. With the exception of that visit by Nelson and Hay, you know of no inspection of that place for a considerable time before the disaster? A. No.

11254. Q. Had you ever examined to see that the brattice was in good order beyond the fence? A. No, never; only the once I was up there.

11255. Q. So that, for all you knew, the brattice might have been down? A. Quite possibly.

11256. Q. And that might have been just the sort of place for the accumulation of gas, for all you know? A. I did not know. I never examined it.

159. HIS HONOR.] Well, I suppose if he did examine it, it was examined to see whether the brattice was in good order.

160. MR. BRUCE SMITH.] They examine to see if gas is there.

161. HIS HONOR.] Take a working place: do they examine for gas there?

162. MR. BRUCE SMITH.] Oh, yes. The men are not allowed to go in until they have received a check, or token, and a report is made that the place has been examined, and there is no gas there.

163. HIS HONOR.] The examination of a disused working place would be the same as the examination of a used working place.

164. MR. BRUCE SMITH.] Yes. If there was a great accumulation of gas there it might be carried round. If they discovered gas, something would be done to keep the men from that place.

165. HIS HONOR:] You say that was a rising place?

166. MR. BRUCE SMITH.] Oh, considerably.

167. HIS HONOR.] And it was the highest place in the mine?

168. MR. BRUCE SMITH.] Almost. On page 353, Your Honor, Morrison is further examined:—

11274. . . . A. . . . I was not understood to examine it. It was understood that I was not to examine it.

11275. Q. What do you mean by being understood;—what was the cause of the understanding? A. Well, of course, my examination is the examination of all the working places, unless it is my monthly examination.

11276. Q. And because work had ceased there, you ceased to examine it? A. Well, of course, the man who was there before me did not examine it either, and he went along and showed me how to examine the places.

169. Now, I will refer Your Honor to Q. 11448.

170. HIS HONOR.] What position did William Nelson hold?

171. MR. BRUCE SMITH.] He was under-manager.

172. HIS HONOR.] He was one of the victims, was he?

173. MR. BRUCE SMITH.] Yes.

11448.

11448. *Q.* Do you know that Special Rule No. 9 states what the deputy shall do ;—now, it says, “ he shall also make a true report of, and enter and sign daily, in a book kept at the appointed office for the purpose, the state of the mine roads, doors, stoppings, brattice, faces, and ventilating appliances ” ; you see that you had to make a report, and enter it in a book daily ;—I want to know whether you did make a report and enter it in a book ? *A.* I was authorised not to make a report on any place except the working-places.
11449. *Q.* Who authorised you ? *A.* William Nelson.
11450. *Q.* When did he authorise you not to make such a report ? *A.* When I first started on the job I was told to examine all the working-places, and he went round and showed them to me.
11451. *Q.* When were you authorised not to make a report on faces not being worked ? *A.* When I first started.
11452. *Q.* Then, from the date of your employment up to the date of the disaster, you never examined any face that was not being worked ? *A.* Never in the morning.
11453. *Q.* Did you ever at any time ? *A.* I never did at any time.
11454. *Q.* About how many faces, not being worked, are there in No. 1 Right district which you did not examine ? *A.* Nine or ten.
11455. *Q.* And could not every one of these nine or ten faces have become a magazine of gas ? *A.* No ; I do not think so.
11456. *Q.* Who examined them ? *A.* I did not say that anyone examined them.
11457. *Q.* Will you point out where those nine or ten faces are that were not being worked and were not examined ? *A.* Yes. There are two at the top of No. 1 main level—the second and third west of the 17 perches goaf ; and there are Nos. 4, 5, 6, and 7 west of the 17 perches goaf.
11458. *Q.* Is that all ? *A.* There are two places at the bottom of the 5th Right rope-road east.
11459. *Q.* Now, do you not know that, since the disaster, gas has been found in the vicinity of these places ? *A.* Yes, in the vicinity of these places.
11460. *Q.* I take it also that at no time did you examine any of these eight places ? *A.* At no time. I was once in the two headings.
11461. *Q.* You have told us about that before ? *A.* Yes.
11462. *Q.* Will you admit that you did not carry out the duty imposed on you by Rule 9 by examining all these faces and reporting in a book daily ? *A.* No ; I will not admit it.
11463. *Q.* Why ? *A.* Simply because I examined all the working-places.
174. HIS HONOR.] His reason for that was, that these were not working-places ?
175. MR. WADE.] Yes.
176. MR. BRUCE SMITH [*continuing reading from Morrison's evidence*] :
11464. *His Honor.*] Mr. Morrison does not admit your construction of the rule.
11465. *Mr. Bruce Smith.*] Whether the witness complied with that section is a matter of law.
11466. *Mr. Lysaght.*] *Q.* Did any other person besides Nelson tell you not to examine the places which were not being worked ? *A.* He told me just to examine the working-faces.
11467. *Q.* He did not tell you that you had to examine no places not being worked ? *A.* I was not supposed to do it.
11468. *Q.* Who was ? *A.* I do not know anything about who was.
11469. *Q.* Do you know anybody who was ? *A.* No.
177. HIS HONOR.] I can see no reason why they should not examine other places as well as working-places. It may be contended that the breaking-down of the coal tends to release gas, otherwise I can see no reason why working-places should be examined for gas, and other places not.
178. MR. BRUCE SMITH.] On page 363 there is the examination of Morrison by Mr. Robertson, the Manager of the Metropolitan Mine, one of the Commissioners :—
11728. *Q.* Did you observe the canvas in No. 1 back heading after the explosion, in the last cut-through up to the face ? *A.* Yes ; I observed that.
11729. *Q.* Was it not in position, excepting what was burnt ? *A.* The tail-end of one length was down.
11730. *Q.* Was that the only part missing ? *A.* There was none missing.
11731. *Q.* How was it burnt ? *A.* It was not properly burnt ; it was only singed.
11732. *Q.* In view of the canvas being there, and being intact, excepting one short length hanging down, do you not think it was in position before the explosion ? *A.* I think it was in position ; of course, these gentlemen here say—[*Interrupted.*]
11733. *Q.* Never mind what they say ;—you have no reason to think that the canvas was not in position before the explosion ? *A.* I have no reason to suppose that it was not in position.
11734. *Q.* Now, with regard to an examination of these standing-places ;—do you know whether they were included in the weekly or the monthly examination ? *A.* Those places would not be examined when I examined the old workings.
11735. *Q.* Would you not, if a place was abandoned, and you did not examine it daily,—would you not examine it when you examined the old workings ? *A.* I was told what to examine.
179. HIS HONOR.] I suppose “ standing-place ” means what we are speaking of as an idle working-place ?
180. MR. BRUCE SMITH.] Yes. [*Continued reading*] :—
11736. *Q.* Now, here are some standing places—if they were not examined in the daily examination, would it not be necessary to examine them weekly, the same as you do the old workings ;—would they not be old workings ? *A.* Yes.
11737. *Q.* Did you examine them ? *A.* No.
11738. *Q.* Did Nelson ? *A.* Whether Nelson examined them I cannot say.
11739. *Q.* I think you examined the waste workings ? *A.* I never examined those places.
11740. *Q.* Had you any instructions ? *A.* None to examine those places.
- That was rather rule of thumb.
181. MR. WADE.] He says it was no part of his work.
182. MR. BRUCE SMITH.] Then on page 366 the same man is examined by Mr. Ritchie.
183. [*Mr. Bruce Smith then read Questions 11829–11834, which are previously quoted in these notes—see paragraph 144.*]

184. MR. BRUCE SMITH.] I want you to notice, your Honor, that these examinations (of Morrison) are by practical miners, Mr. Ritchie, a miner himself, and Mr. Robertson, the Manager of the Metropolitan Mine.

185. HIS HONOR.] It seems to me pretty clear, from the passages you have pointed out from Morrison's evidence, that these places were not examined at all.

186. MR. WADE.] Not by Morrison in the morning inspection.

187. MR. BRUCE SMITH.] And they were not reported on; so that the standing workings, pillars, or bords which were driven up sufficiently far for the time being, were never examined at all. On page 367 there is an important question asked by Mr. Ritchie.

11890. Q. I am asking your opinion, as a practical man of over thirty years' standing, and with a knowledge of some scientific works, do you think the inspection was of any use whatever, when you knew that other parts were not inspected? A. But there was nobody else to go; and I was not supposed to go there.

11891. Q. I did not ask you whether you were supposed to go there; I asked whether, in your opinion as a practical man, it was of any practical use to have such an examination when so many places were left untouched? A. I am of the opinion that it would be better to examine them all.

11892. Do you think an examination without examining the whole is complete? A. Well, it is more complete if they are all examined.

188. HIS HONOR.] The other would be complete apparently, but still it would be "more complete."

189. MR. BRUCE SMITH.] Now, on page 40, Mr. Rogers says:—

"Morrison inspected up to the fence at the very end of No. 1 Right. No one would examine the two faces right up to the end of No. 1 Right on the morning of the 31st July. The fence is about 30 or 40 yards from the extreme face. That 30 or 40 yards would not be inspected on the morning of the 31st July by anyone. I do not say that that part of the mine is the highest in the mine. From No. 5 Right (meaning the 5th Right) up to the second cut-through would be a rise of about 1 in 25. The very end of No. 1 Right would be 30 or 35 feet higher than the point at No. 5 Right. I believe that the highest point in the mine is Bord 105. I think Gill's gannon bord is higher than the other two, that is, the face of it. Those three places are the highest points in the mine, but I am not sure which is the highest. There was no reason for not inspecting the 30 or 40 yards beyond the fence at the top of No. 1 Right, except that there were no men working there."

190. HIS HONOR.] Well, of course, that would be no reason if it was a dangerous mine.

191. MR. WADE.] If it was known to be dangerous.

192. HIS HONOR: Yes.

193. MR. BRUCE SMITH.] On page 788 there is some more evidence by Mr. Rogers, which shows direct knowledge by him.

26323. Q. Did you know that Morrison had not examined those back headings? A. Morrison would not examine only the working places.

26324. Q. You knew that was his practice? A. That is the deputies' practice; to examine all working faces.

26325. Q. And who would examine the places not working, if the deputy did not? A. When the monthly examination was made, they would be examined.

26326. Q. What monthly examination? A. What we made as we went through the work.

26327. Q. The monthly examination of the waste workings? A. They might be examined then.

26328. Q. Now, do you say that you knew that the deputy would not examine a place that was not being worked, and that the only time such a place would be examined would be during the monthly examination of the waste workings? A. No; I do not mean to say that.

26329. Q. Tell me any other time such a place would be examined? A. The underground manager would go there and examine it; and perhaps I would go there and examine it.

26330. Q. When would the under-manager go there? A. Oh, on making his rounds.

26331. Q. But you have no rule about it? A. No; there was no rule about it.

26332. Mr. Ritchie.] Q. Had you no stipulated time when such places as this would be examined? A. No.

26333. Q. Then, in your opinion, it was not necessary to examine at all? A. Oh, yes; just to see that it was standing.

26334. Mr. Lysaght.] Q. You mean it was to see if there was any fall of the roof? A. Yes.

That is Mr. Rogers' view of that. That is all the evidence I have to offer on those two matters, your Honor.

194. Now, I refer to Special Rule 2. This is another point that I put before your Honor, that there was insufficient inspection by the Manager himself as required by Special Rule 2, which says:—"He shall, as often as practicable, inspect the underground workings." Your Honor sees that that implies a certain amount of inspection by the Manager himself. I think some opinions were expressed on that by the Commission. Now, this is what Mr. Rogers did, as evidenced by himself—[*Interrupted.*]

195. MR. WADE.] Which charge is this?

196. MR. BRUCE SMITH.] That there was insufficient inspection by the Manager as required by Special Rule 2. I should say that it comes under the general heading, No. 6.

197. MR. WADE.] Why not put them in one charge only, and cut the other five out?

198. MR. BRUCE SMITH.] Charge No. 6 is:—

"That you did not enforce or cause to be enforced the General Rules of the said Act or the Special Rules established under the said Act in the said mine, and were lax in the discipline of the said mine."

Well, I will put one more specific than that. That will come under the head of the little request I made that I could form a general charge about neglect in the management of the mine—general neglect.

199. MR. WADE.] My friend cannot do that. My friend must specify his charges here. It is a question of the Manager being dismissed—

200. MR. BRUCE SMITH.] I will enumerate them.

201. HIS HONOR.] It comes under section 10, subsection *b*:—

"The Minister shall, before the commencement of the inquiry, furnish to the manager or under-manager, a statement of the case on which the inquiry is instituted."

Well, this is the statement of the case, is it? (*See* paragraph 4, page 2 of these notes).

202. MR. BRUCE SMITH.] I propose to put one of this kind in: that you were guilty of incompetence and gross negligence in the management of the said mine in the following particulars—and then I propose to enumerate them.

203. HIS HONOR.] Well, there is no form of the statement of the case mentioned. It simply says a statement of the case is to be furnished. Well, here is a statement of the case which contains certain specific grounds, and contains a general ground.

204. MR. WADE.] Which covers everything really.

205. HIS HONOR.] If Mr. Bruce Smith mentions a matter which comes within that general ground, then I think that all that I have got to see to is that the defendant has fair play in the matter: that is to say, it is true that he will not have had specific notice of that specific ground in the statement of the case, but he will have notice of it in the opening, and what I have to see is that he gets such a notice of it that he has really an opportunity to defend himself. What Mr. Bruce Smith says comes under the general ground.

206. MR. WADE.] Yes, but I want them to be bound by it. They may say *a, b, c, d, and e* are the grounds I am going to give under this heading, and to-morrow they may add *f, g, and h*, and legally your Honor is bound to take them.

207. HIS HONOR.] I understood you to object to Mr. Bruce Smith putting specific matters.

208. MR. WADE.] I do not wish to confine the inquiry in any way, but I think Mr. Bruce Smith should put the grounds in fair form, not in that general way. I want him to specify it now, so that we may know what we have to meet. I do not object to the general ground being set out in more detail; but what I want is to know the charge in definite form that they rely upon, whether it is one, two, three or four.

209. HIS HONOR.] I am very much inclined to think that Mr. Bruce Smith cannot go outside the statement of the case (par. 4 of these notes), because that has to be furnished before the commencement of the inquiry.

210. MR. BRUCE SMITH.] I propose only to particularise, your Honor sees, those words "lax in the discipline of the said mine." (Charge 6). Before we meet again, I shall particularise those. Now, if my friend likes, I am going to put them before you to-day. Your Honor sees no objection to my reshaping this so as to particularise the acts under it, without including any which may not come under it in its present shape and form?

211. HIS HONOR.] I do not know that there is any necessity to reshape it. If you mention now what specific matters you refer to under this Charge 6, that is what Mr. Wade wants.

212. MR. WADE.] That is all I ask—to make it definite, and not go outside that.

213. MR. BRUCE SMITH.] I was going to refer your Honor to page 36, under this heading of the insufficient inspection by the Manager:—

"I see the entry in the diary on the 1st July. That is the inspection I have referred to. From then up to the time of the disaster I did not make any special inspection of the mine. I will not swear whether I did or not. There is no book anywhere to show a report of an inspection by me, only the diary [*Exhibit N*]. I did not think it of importance to write down the result of my inspection."

214. HIS HONOR.] He said he did not make any special inspection of the mine. I suppose that means that he may have been in the mine afterwards, and may have seen something, but he did not make any formal inspection, except that General Rule 2 inspection.

215. MR. BRUCE SMITH.] Well, that is his admission. He admits there that he made no special inspection of the mine.

216. MR. WADE.] He gives the reason: that he was engaged at the Arbitration Court every day. I do not know how he was going to manage it.

217. HIS HONOR.] Well, it says, "As often as practicable."

218. MR. BRUCE SMITH.] Yes. Now, under that same charge I put this: "Neglect to see that the requirements of the Coal Mines Regulation Act are observed by the employees." That is required by Special Rule 2, which says:—

"He shall in all respects comply with the requirements of the Coal Mines Regulation Act, and shall enforce its observance by all employees."

219. MR. WADE.] That charge should be made in specific form, too.

220. MR. BRUCE SMITH.] On page 32, David Evans says:—

"I do not think I have seen the book in which I used to report gas for twelve years. It was full of reports. It was some kind of diary book. That book was kept to report any danger we would see. We generally had one of those books for every year. We gave up having those books when the present ones came out."

Your Honor will see further down the way in which the report books were kept. Of course, these report books not only ought, but, I suppose, did, come under the supervision of Mr. Rogers. You see at the foot of the page, cross-examined by myself, Evans said:—

"It is not a fact that I used to write up my reports three or four days ahead. My last entry is under the date of the 7th of August. I never wrote two reports at once. If I made an entry in the book before the proper day, I did it by mistake. After having entered up what I had done, I used sometimes to have to scratch it out and write across it 'no work.'"

It was a suggestion that there were entries in the book of facts which would be applicable to the ordinary day's work, several of them; and then, right across the face of the page the words "no work" are written, suggesting clearly, I think, to anybody that David Evans had been in the habit of writing up these pages beforehand, whether it is correct or not.

221. MR. WADE.] It was disproved absolutely. The jury saw the books. It appears that he turned over a week's leaves, and he wrote the reports for the 1st, 2nd, 3rd, 4th, 5th, and 6th, really in the last six days of July.

222. MR. BRUCE SMITH.] [*After reading the passage in the last part of paragraph 220 over again.*] This is not what my friend says. I shall be very glad if he will turn it up. [*Continued reading from page 32, Royal Commission*]:—

"The wording of the report is the same all through the book. There is an entry on the 28th July, which I had to cross out and write over it 'no work.' I found out I had made the mistake

mistake in July. The entry which is in the book for the 7th August is meant for another day. The book was kept in the Company's office. The underground-manager examined the book, and he found the mistake when doing so. When I reported on waste workings I entered them in my book. [*Exhibit M.*] I examined the waste workings every day, but I did not put it in a book. The report of the 22nd June in the book [*Exhibit J*] does not refer to waste workings; it refers to the roads and to the roof. The report of the 9th June in the book [*Exhibit I*] does not refer to waste workings. I have never reported on the waste workings in either of the books."

Then, on page 40, Mr. Rogers gives evidence. It shows, your Honor, I think, the way the books were kept—these report books. It is for your Honor to judge if they are properly kept.

223. MR. WADE.] This book David Evans refers to now he is not supposed under the Act to keep. He merely kept it for his own information.

224. MR. BRUCE SMITH.] I have no recollection of his having turned over certain pages. This is for my friend to explain.

225. MR. WADE.] I will show that to your Honor, and to my friend, too.

226. MR. BRUCE SMITH.] This is Mr. Rogers' evidence in answer to Mr. Lysaght :—(p. 40 R.C.)

"The book [*Exhibit O*] is the only book I have for recording the ventilation in. I do not know whether there is any other book regarding ventilation. I believe there was another book kept before that. When the Coal Mines Regulation Act was passed we got the book [*Exhibit O*]. The ventilation may have been recorded sometimes on sheets of paper. I do not know where the reports are from 12th October, 1896, to 8th August, 1899. These reports do not appear in the book [*Exhibit O*]. I see an entry on the 1st January, 1901. After that I see that there is a whole sheet left blank. I cannot tell you why it was left blank. I cannot tell you why there is no report for February at all. I looked at the ventilation book every time after the ventilation was taken."

General Rule 1 says :—

" In the case of mines required by this Act to be under the control of a certificated manager, the quantity of air in the respective splits or currents shall at least once in every month be measured and entered in a book to be kept for the purpose at the mine."

Your Honor sees that it is perfectly distinct there that every month there shall be an entry of the details of the ventilation. Now, that evidence that I have read shows, I think, that the record of the ventilation was kept in a particularly loose and lax manner.

227. HIS HONOR.] He says here that "The book [*Exhibit O*] is the only book I have for recording the ventilation in," but Mr. Wade points out that there was another book.

228. MR. BRUCE SMITH.] He says that the ventilation may have been recorded sometimes on sheets of paper: "I do not know where the books are from the 12th October, 1896, to 8th August, 1899. These reports do not appear in the book [*Exhibit O*]. I see an entry on the 1st of January, 1901. After that I see that there is a whole sheet left blank. I cannot tell you why it was left blank. I cannot tell you why there is no report for February at all." Your Honor sees the pieces of loose paper would account for that; because if it were kept on loose paper the paper would be lost, and there would be no record for the next month.

229. MR. WADE.] The whole thing was produced next day.

230. MR. BRUCE SMITH.] That is for you to point out in your reply. I do not remember it.

231. Now, your Honor sees that by Special Rule 2 the Manager "shall see that the colliery plans are regularly plotted, and that they show the salient features of the mine." Now, I shall refer your Honor to any plans that were put before the Inquest or before the Commission, and I shall give evidence that there is not one of them that really shows the direction—the proper direction, of the air—the ventilation. I refer your Honor to the evidence of Frost on page 34. Of course, I conclude that the "salient features" include the direction in which the air is travelling, because it is the one thing which anybody inspecting the mine would look at to see that in case of accident he would take the right direction. If your Honor were to go fully into this inquiry, as the Commission did, your Honor would see that those men who saved their lives did so by a knowledge of the direction of the ventilation.

232. MR. WADE.] It was not by consulting the plan.

233. MR. BRUCE SMITH.] No. And Evans gave evidence that he saved the lives of certain men by making them stay in a certain place while he opened certain doors and altered the direction of the ventilation in the mine. Well, if the evidence shows that there was not a plan showing completely the direction of the ventilation of the mine, then it shows that the Manager did not see that the plan was kept "showing the salient features of the mine." I can tell your Honor that this man Frost had been some years in the mine. He was the manager for his father, who was the contractor for the carriage of the coal out of the mine, and he seemed to know every part of the mine. Looking at the plan which was put before the Inquest, and which was a copy of a counterpart of the plan supplied by the mine itself, he said (p. 34, Royal Commission), in cross-examination by me: "I say that the arrows are wrong on the plan so far as the air is concerned. The air does not travel as shown on the plan." I ask your Honor to note that, because I shall give further evidence upon it.

234. Now, your Honor, I am going to direct my attention to three or four instances of incompetency which do not come within any particular rule. I am going to show your Honor that this was unmistakably what is called a "dusty mine," and it had roads with a much larger accumulation of dust upon them than is admitted to be dangerous by experts. I shall show your Honor by practical men who gave evidence that there were certain roads which had a considerable accumulation of dust upon them. I shall show your Honor that before this accident the Chief Inspector of Coal-mines had obtained samples of the dust of a number of mines in the northern and southern districts—among them dust from this very Mount Kembla mine. That that dust had been sent to England; it had been tested at Woolwich by the authorities there; it had been demonstrated to be among, at all events, the most explosive dusts in the Australian mines; that that fact had been communicated to Mr. Rogers; that a letter had been written to him by the Department drawing his attention to the fact; and that he had absolutely neglected to take any precautions to settle that dust by water. There is evidence that certain tanks were used, from which water was poured over the roads; but it was admitted in cross-examination by the very people who had given the evidence as to these tanks not only that they were very limited in number, but that the purpose of the tanks was not to water the roads at all, but to clear away the water where it accumulated in large quantities to enable them to get

at

at their work, and that the practice was to take these tanks on trucks along the line, pull out the plug, and let the water run where it would. I am quite sure when your Honor reads this evidence you will see that Mr. Rogers neglected to take any precaution to counteract the effect of the dust as an element of danger in his mine, and that whatever watering was done, was done with another object altogether, and was quite inefficacious in laying the dust, which the Commission found was an element in the disaster. Well, then, I am going to show that he was ignorant of the effect of dust in the mine, and of the conditions in the mine, and that he allowed the laxest control to go on in the mine; and that generally, whether from being fully occupied with other things outside or from want of study of the more modern aspects of mining, he comes under the definition of that section under which your Honor is directed to make this inquiry. Now, first of all, with regard to the presence of dust, I would refer your Honor to the evidence of Frost, on page 12 of the Inquest.

[At this stage the Inquiry was adjourned from 1 till 2 p.m.]

AFTERNOON SITTING.

235. MR. BRUCE SMITH.] Under the general head Charge 6, which I am going to frame, as I have pointed out, there are three or four sub-heads. There is the dust. I was going to refer to Frost's evidence on page 12 of the Inquest :

"I cannot explain whether any water is being made in the No. 1 main heading. There is an accumulation of dust on the floor of the travelling-road from the telephone cabin up. There may be an inch or so on the floor. Your feet do not sink into it. There may be a little dust on the sides and on the roof, but the roof is clean. That state of things would apply to the place where the dead bodies were found. . . . I do not consider myself competent to give an opinion on scientific questions. I do not know whether anything was done to remove the dusty conditions, because that was not my section."

Then Morrison says, on page 18:—

"I would regard the 4th Left as dusty. The main hauling road was always inclined to be damp. I cannot say there would not be any dust there. There might be some dust on it. There was no great accumulation of dust on the road. I could not say whether the dust was dangerous. I can give no idea of the amount of dust there was there; in general, the place was always inclined to be damp. With regard to the 4th Left, I think I am safe in saying that it was watered every night. Paul Donovan did the watering. The roads were 12 feet wide. The watering is done with a tank with a hole in the bottom. I cannot say whether the watering was done for the purpose of getting rid of the water, or for watering, but it was done regularly; that is all I know. After the watering, the muck had always to be cleaned off. If that part of the road was never watered, it would be dusty. I travelled that road every day. The watering was always done at night, but at no special time. The watering was done nearly every night. They had to draw that water to keep the place dry, and they put it on to the road. I could not say whether a great rush of air coming out of the 4th Right pillars would create a great cloud of dust or not."

Then Evans, on page 30, says:—

"There was dust in my section. I do not know that the No. 1 Section was a good deal more dusty than my section. I do not know anything about it."

Then Mr. Rogers himself speaks on page 39:—

"I believe my attention was called then to the danger of that practice on account of the dust. I never wrote in answer to that that there was no dust in the mine. I do not think that I ever protested to Mr. Atkinson verbally that there was no dust on the roads."

Your Honor will see that that has reference to one of these letters. It was the letter on page 74, and I will get your Honor to note the letter before the evidence.

"30th April, 1902. By direction of the Secretary for Mines, I have pleasure in enclosing herewith for your information copy of a report by the authorities at the Woolwich Testing Station, England, with reference to the explosibility of certain coal dusts collected in this State during last year, which was sent home for testing purposes. From this report you will see that under the conditions specified in all cases was an explosion produced, the intensity only varying. Having regard, therefore, to the fact that large colliery explosions are sometimes produced by blasting, and propagated by means of coal-dust alone, it is necessary in the event of blasting taking place in your colliery, in dry and dusty places, that the requirements of General Rule 12, Section 47, of the Coal Mines Regulation Act, should be strictly complied with, and the vicinity of the shot thoroughly watered, as required by that rule. I have, &c.

A. A. ATKINSON."

Then there are particulars of the experiments, and if your Honor looks in that list of mines on page 75, Royal Commission, you will see Nos. 21 and 22, Mount Kembla, "violent explosion." There are some more violent, but I think this is the second most violent explosion.

236. MR. BARRY.] That letter only referred to shot-firing.

237. MR. BRUCE SMITH.] Yes. Then it went on on page 39, Royal Commission, in this way:—

"I believe my attention was called then to the danger of that practice on account of the dust. I never wrote in answer to that that there was no dust in the mine. I do not think that I ever protested to Mr. Atkinson verbally that there was no dust on the roads. I do not think I wrote to him to that effect either. We supplied samples of coal-dust. They were not out of the mine at all. I had painted on the tin, "Sample of dust from the Mount Kembla Colliery"; that was true. That was collected from outside the mine at the tip, and was a fair sample of Mount Kembla coal-dust. I got a letter dated 30th April, 1902.

I do not read the reports on different explosions which have taken place in England. I do not read much of anything that happens at other mines."

238. I shall put papers before your Honor to show that in every explosion that takes place in England, there are investigations such as this Royal Commission, only of a much shorter character, and the results

results are published and distributed, and they come to the Mines Department here; so that men who cared to keep themselves informed of the results of investigations as to the cause of explosions, which reveal different causes of danger from day to day, would know of this danger of dust.

239. MR. BARRY.] Although they come to the Mines Department, they are not obtainable here.

240. MR. BRUCE SMITH.] I will get Mr. Atkinson's evidence on that by-and-bye. [*Continued reading Mr. Roger's evidence, page 40.*]:—

"I have seen explosions of coal-dust when I was 16 years of age. I saw a flame cause them. We had not that much coal-dust at Kembla that I thought it was dangerous. I never tried to find out how much coal-dust was dangerous; but I found out how much coal-dust there was in the mine. I knew that there had been instances where coal-dust had exploded without any gas at all. I have heard of it. I have heard of flour-dust explosions in a flour-mill.

"I have not read the passage which you have just read from Abel on 'Accidents in Mines,' page 53, beginning with the words 'some varieties,' and ending 'in suspension.' I have not heard of Abel as an authority. . . . There is no dust on the roof or sides, but there is a little on the floor. There was very little dust on the roof and sides before the disaster, but there is much more now. We have no apparatus at all for watering the roof, sides, and timbers, and we never have watered them. We have not fired shots in the roads for a considerable time, for nine or ten months, to the best of my memory. We have never watered in the immediate neighbourhood of a shot. We have no apparatus for doing that, and it has never been done. If all the dust were gathered up on the roads, I suppose there would be a few ounces to every foot of the road. I think that is as much as there would be. I do not think there is any, except on the floor. There may be a very very little on the roof and sides. I do not know what quantity of dust would be considered dangerous. Our mine is considered to be a damp mine. The sides and the roof are damp. I am not aware that 6 ounces of dust per foot of our roadway would be dangerous. I am not aware that 1 lb. of dust to 160 cubic feet is dangerous. Our road is 12 feet wide by 5½ or 6 feet."

241. And, on page 788 of the Commission, Mr. Rogers gave this evidence:—

26320. Q. Did you know what quantity of dust was dangerous? A. Yes.

26321. Q. What quantity was dangerous? A. If the road was dusty.

26322. Q. What quantity on the road? A. Say 1½ inches of dust."

242. That is only as to his knowledge, or want of knowledge. Now, the absence of watering is practically admitted, your Honor will see, as far as shots are concerned, by Mr. Rogers himself in that last passage, "We have never watered in the immediate neighbourhood of a shot." Now, as to the watering done, there was a case set up that there had been watering; but I will show you that that was not the intention, and my contention is that it was inefficacious. On page 12, Frost gave evidence. That is the young fellow who managed his father's work as contractor for the carriage of the coal out of the mine; he had the roadways and the tracks under his supervision. He said: "All the water that was used for watering was got from inside the mine."

243. That is only useful taken in conjunction with the other evidence (page 13, Inquiry).

"There is no water supply at the mine other than that in the mine. Water has never been carried down from the entrance for use in the mine. All the water that finds its way on to the roadway comes from one or other of the natural springs in the mine. When the tanks are not in use, they are placed in the most suitable place where it is thought they will next be needed to bale water where it has accumulated. The water is collected with buckets, and put into the tanks, and then they are taken away. If the water does not accumulate, the tanks are very seldom used for carrying water along the roads. The primary use of the tanks is to carry water away so as to get on with the working. The water is always taken to the watercourse that runs out of a mine, or to a pump to pump it out. It is taken to the most convenient place to get rid of it. When a plug is taken out of a tank, the tank takes two or three minutes to empty—the trolley is stopped, the plug is taken out, and we stay there till it is empty. When any water is taken along the road for watering, the water is distributed when necessary. The emptying can be made to extend for about a quarter of an hour. A tank of water would go a long way. One man working a whole shift might have used fourteen or fifteen tanks of water in watering twelve months ago. Since then there has not been anything like that quantity used on any road; but other parts of the mine have been watered. In wet weather there is an unlimited supply of water in the mine. Even in this dry season there are thousands of tanksfull of water come into the mine and go out in a week. There is no stint of water in the mine. A very small portion of that water has been used in watering the roads. The water runs between the rails. It can also run underneath the rails and on to the side. If the water was coming out in small quantities, the water would not go under the rails. Two feet is the maximum width watered unless the plug is pulled right out. At the ordinary pace, with the plug pulled right out, one tank would water 30 or 40 yards. Even in No. 6 Right the water would not be put on the roads for the purpose of watering, but for the purpose of baling. So far as my district is concerned, and my brother's, when I have had charge of it, no water has been put on for weeks. I have never seen any but the four tanks I have mentioned in the mine."

244. He was cross-examined in that way to show that, whilst water was put on the roads in certain parts, it was not with the view of watering, nor did it have the effect of watering—it was merely to get rid of the accumulation of water from the working places.

245. Now, Morrison, on page 18 Royal Commission, says: "They had to draw that water to keep the place dry, and they put it on the road."

246. Adam Frost is examined on page 33. This is a brother of the other Frost. About the middle of the page, you will see where he was cross-examined by me:—

"When I water the roads, I do it with a water tank with a hole of 4 or 5 inches in the bottom. The water used is that which accumulates in the mine, and which we want to get rid of. We always have plenty to put on the road which has accumulated. On several occasions we have put water on the road which has not accumulated. We have got water from Stafford's gannon bord. That is a place in which water accumulates. The water is carried away from that

place and emptied on to the road. We have no hose. The tank is a small iron malt tank. It is wheeled out on to the road, and the plug taken out, and the water runs away on the road. As soon as the water accumulates again, the tank is taken back and filled. That is not the only place. There are several other places that have to be baled. The water is taken away from them in the same way. There is one place which is the swallow between Stafford's and Powell's flats. There is another place, No. 1 wheels; that also has to be baled. There is another place which has to be baled at old No. 5. Some of the bords going to the dip also make a drop of water. Those are all the places. If there is any place we see wants watering on the road, if it is twice as far to take it, we take it there. The plug is in the centre of the tank, and it runs out into the middle of the road. The water-baler empties the tank. If he wants the water all to run out in one place, he takes the plug out and stands there. If he does not, he follows the horse along. Fifteen or twenty tanks a day accumulate in all the places we have to bail in my district."

247. MR. BARRY.] That is his particular district.

248. MR. BRUCE SMITH.] Yes. Now, on page 34, the same witness says:—

"I have often heard of travelling roads being watered, but not at Kembla. We have no appliances for watering the sides and the roof. I cannot say why we have not got such appliances."

249. Then, on page 37, Mr. Rogers himself gave some evidence:—

"I knew before the disaster that coal-dust lying about the roads and sides and roof was dangerous. I agree with what you read from 'Hughes on Coal-mining,' page 396. . . . The effectual means which we adopted at Kembla for dealing with dust was watering it, and clearing it away where there was any. The appliances which we had were water tanks. We filled water in skips as well as tanks, sometimes. I think we had eight tanks in the mine before the disaster. I think there were four in the shaft district and four in No. 1 Section. There were three for No. 1 Section, and three for the shaft section. The biggest tank would hold about 200 gallons, and the next biggest would hold about 120 gallons, I think; nobody was employed actually for watering the dust. The real reason for having the tanks there was to bale the water out, and to water the roads. The tanks were made for both purposes. Most of the places, the roof does not need to be watered. I have not seen a place in Kembla where the roof or sides needed watering. We only watered the floor. We never watered the sides or roof, because there was no need for it. The water would not, as a rule, run in a straight line when the plug was pulled out."

250. He was asked, your Honor, whether, if the plug was taken out, the water would not simply run between the rails, without extending beyond the rails to the sides. [*Continued reading*]:—

"The baler could regulate the way the water would run by shifting the plug in a certain way. I do not know the names of the men who watered the road, because they were employed by the contractor. One of the men is named O'Donovan. The watering of the mine is not left to the contractor who hauls the coal. The men who do the watering are employed by the contractor, and paid by him. The watering is done by any man the contractor likes to send. The Company has control over the man O'Donovan I have mentioned, and can discharge him. The contract includes the haulage of coal, the water baling, and the repairing of the mine as well. There is not a word in that contract about watering the roads to keep the dust down. The contractor gets an allowance for watering the roads. He has to do that work under the same contract. There is no special charge for watering the roads. I have given orders to the contractor to water some parts of the mine, but not in No. 1 to my knowledge."

251. That was simply to show that whatever water was put on the roads was simply put out as the result of the baling, instead of with the direct object of watering the roads. Your Honor sees the distinction there. Then there is evidence in the Commission by Mr. Atkinson about the quantity of dust that is dangerous, which, of course, we contend that Mr. Rogers should know, especially in view of the fact, as I shall show, that explosions of coal-dust are not the revelation of the last few years, but extend for twenty years back.

252. HIS HONOR.] You refer then to Mr. Atkinson's evidence before the Commission as to that?

253. MR. BRUCE SMITH.] Yes. I would particularly refer to page 396 of the Commission—Q. 12988. Your Honor might take all that without my reading it.

254. HIS HONOR.] There are a couple of pages of it, or more.

255. MR. BRUCE SMITH.] Yes.

256. Now, of course, directly connected with that will be my contention that when a man takes a position, or continues to hold a position, as the manager of a big mine in which hundreds of lives are daily subjected to dangers of different kinds, it is part of the conditions implied in his taking the position that he should keep himself to some extent abreast of the times—I do not say by the highest kind of academic scientific knowledge, but with the practical knowledge that most managers of coal-mines have with regard to the dangers which have to be provided against. And I want now to refer your Honor to some admissions of Mr. Rogers. I am bound to say that they were made under cross-examination by Mr. Lysaght, and at a time when Mr. Rogers was, as we know, very much upset, and under circumstances in which it seemed that he was afraid the cross-examination was conducted with a view to trapping him—that seemed to me the effect upon Mr. Rogers' mind at the time—but, although that was the case, Mr. Rogers was asked afterwards whether he wanted to correct any of his evidence, and he did not seem disposed to go back upon any part of it; but I shall leave your Honor to judge for yourself as to whether it does not show that Mr. Rogers has not kept his mind abreast of even the ordinary knowledge which ought to be possessed by a man in his position. That is shown, I think, on page 35, the whole of his cross-examination there by Mr. Lysaght down to his signature. Then the whole of page 36 bears on the same thing, and a great part of page 37 (Royal Commission)—certainly the first half, down to this passage:—

"I know that samples of the coal-dust at Kembla were taken for Mr. Atkinson, the Chief Inspector, to have analysed twelve months ago. We collected the samples for Mr. Atkinson. The samples were supplied to find out the gases in the coal. I did not make any inquiries as to the result of that analysis. I had no interest in knowing the result of the analysis. I mean that I took no interest in knowing the result. I would like to have known the result of the analysis. I believe a report of the result of the analysis was sent to me. I do not remember what the result was with regard to the samples sent from Mount Kembla."

257. It is only fair to say that this evidence was taken in a manner quite different to that adopted by the Commission, where the question and answer are given; and throughout this evidence it is transcribed in this way: If he were asked a very pertinent question about something, and he said "No, I do not," the reporter incorporated the whole of the question into what appears to be the answer. I think it is fair to Mr. Rogers to say that.

258. HIS HONOR.] That is evident on the face of it, I think.

259. MR. BRUCE SMITH.] Yes. "I did not make any inquiries as to the result of that analysis. I mean that I took no interest in knowing the result." He would be asked, "You mean that you took no interest in knowing the result?" and would answer, "No," and then these words were put down. And your Honor will see that, in the subsequent evidence before the Commission, Mr. Rogers did not avail himself of the opportunity, if he wished to correct that evidence at all, nor say that it was taken under circumstances unfavourable to himself. Then there is evidence on page 39—the last paragraph—his cross-examination by myself:—

"I believe my attention was called, then, to the danger of that practice on account of the dust. I never wrote, in answer to that, that there was no dust in the mine. I do not think that I ever protested to Mr. Atkinson, verbally, that there was no dust on the roads. I do not think I wrote to him to that effect, either. We supplied samples of coal-dust. They were not out of the mine at all."

And then it goes on to page 40 (Royal Commission).

260. HIS HONOR.] I have that marked before on another subject. However, I will mark the passages you refer me to, and I will read on in the evidence. I shall not confine myself to the passages you quote.

261. MR. BRUCE SMITH.] No: That leads on to the next item: A want of knowledge of the conditions surrounding the management of the mine, which the Department contends that Mr. Rogers, and anybody occupying the position of manager of a mine, ought to be familiar with.

262. And then, under the heading of lax management, I mention the same pages—35, 36, 37, 39, 40, and 41 (Royal Commission). These are the two last lines on page 41; your Honor may, by-and-bye, see some bearing in this on the whole thing:—

"I can act at all times for the safety of the mine without consulting Dr. Robertson. I always consult Dr. Robertson before I purchase anything required at the mine. He makes suggestions to me as a viewer."

263. There is no responsibility thrown by the Act on anyone known as a viewer unless he calls himself an agent—no responsibility cast upon him by the Act. Well, there is no agent here at all. Dr. Robertson is in the position of a viewer, and Mr. Rogers admitted here that he consulted Dr. Robertson before he purchased anything required in the mine.

264. HIS HONOR.] Did Dr. Robertson hold no position at all, then, in connection with this mine?

265. MR. BRUCE SMITH.] Yes, he did.

266. HIS HONOR.] What was it?

267. MR. BRUCE SMITH.] Well, he was Managing Director in connection with the mine. He called himself a consulting engineer.

268. HIS HONOR.] At all events, is not he looked upon as an expert in the management of mines?

269. MR. BRUCE SMITH.] Yes; his evidence took several days. He advanced the theory of the blast of wind at 700 miles an hour. The bearing of the evidence I have quoted is this: The evidence shows that when the accident took place they had to send to other mines and borrow safety-lamps, and that led to the question, "Why were not lamps kept?" which then led to the further question being asked, "Are you at liberty to expend money without consulting Dr. Robertson?" And then Mr. Rogers said:—

"I can act at all times for the safety of the mine without consulting Dr. Robertson. I always consult Dr. Robertson before I purchase anything required at the mine. He makes suggestions to me as a viewer."

270. HIS HONOR.] May I take it that Mr. Rogers took the responsibility for the insufficient supply of lamps on himself by that answer?

271. MR. BRUCE SMITH.] No; he did not. I do not know that it is a matter for your Honor particularly.

272. HIS HONOR.] Are you making a definite point of that insufficient supply of lamps?

273. MR. BRUCE SMITH.] No, your Honor; I am not. I am putting it down here under the heading of lax management.

274. HIS HONOR.] However, I will take a note of it. What you say, I suppose, is this: that even supposing they were justified in working the mine with naked lights, still they should have had a supply of safety-lamps on hand?

275. MR. BRUCE SMITH.] Yes. It was suggested to me by the evidence that really the primary management of this mine would be under Dr. Robertson, who would be consulted about everything involving expenditure, and so throwing all the responsibility on the manager without giving him that free hand which he ought to have in order to make an outlay of money for necessary things. For instance, it has come out in evidence that since this accident regular tanks have been supplied to the mine travelling on wheels from which water is thrown in all directions, and these are run, not for the purpose of getting rid of the water, but for the purpose of watering the sides, and roof, and floor of the mine, to make the chances of explosion from coal-dust much less than they were before. That is the bearing of this matter upon reading the evidence.

276. HIS HONOR.] Of course, it is a matter for consideration, if Mr. Rogers has done things which ought not to have been done, or omitted things which ought not to have been omitted, if he is able to say or make out, "I wanted these things done, but the management was very economical, and I had not the materials given to me"—that might be a matter to consider on the question of his competency, which I have to consider. Does he make that out;—does he make that appear? Of course, it would put Mr. Rogers in an awkward position, because if he brought that out very strongly he might be dismissed.

277. MR. BRUCE SMITH.] If your Honor will look at page 42 (Royal Commission), there is a further explanation of Dr. Robertson's position.

"I do not know who is the agent for the Mount Kembla Colliery. I believe there is an agent. I have never heard who the agent is. I have never inquired. If I wanted to know whether I could incur certain expenditure, I would communicate, first of all, with Dr. Robertson, and then to the Directors. I do not know that any section of the Coal Mines Regulation Act defines what an agent is. Dr. Robertson has attended at the mine on an average about once a month for the last five years. I say about that. Sometimes he would go into the mine; not always. He would go into the mine, perhaps, once every six months."

278. HIS HONOR.] Unless I have got material before me to consider, in Mr. Rogers' defence, on his side, whether he was prevented from having the things done that he wanted to have done, by the Directors or by Dr. Robertson holding a different view and thinking, perhaps, the expense was unnecessary—unless I have that before me as something in the nature of a defence on his part to show that he was a competent man but a hampered man, I do not see how this about Dr. Robertson is exactly material.

279. MR. BRUCE SMITH.] Of course, I cannot tell what Mr. Wade is going to put before your Honor, but where there may be a doubt as to his deliberate neglect of certain precautions which involve money, the fact that he had to consult Dr. Robertson before he could make an expenditure raises a probability—[*Interrupted.*]

280. HIS HONOR.] Yes; it raises a possibility, certainly; it raises a question.

281. MR. BRUCE SMITH.] Yes, a possibility. And, as I have pointed out, and as I shall contend, after this accident, most elaborate and most sufficient provision has been made for watering these roads with sprays.

282. MR. WADE.] All over the country.

283. MR. BRUCE SMITH.] Yes, I know that. And if your Honor is of opinion that this was a dusty mine, in the sense of being dangerously dusty, having sufficient dust in it to come within the category of dangerous in the opinion of scientific men, and that it was insufficiently watered for that purpose, then it raises the probability that the non-provision of these appliances was the result of his having to economise in expenditure and to consult other people before he incurred expenditure. But if Mr. Rogers chose to bow to that necessity, and neglected them, it still does not make him any less negligent, because his obvious duty then would be to protest to the management: "These things are wanted for the mine in order to ensure the safety of the mine, and to prevent this accumulation of dust in a dangerous condition, and I am hampered." He cannot shield himself by saying that he had to consult Dr. Robertson.

284. HIS HONOR.] I can see why you are doing this; in fairness to Mr. Rogers. Of course, it is rather an awkward thing for him to bring forward; but I must say that unless something definite is put before me to show, either that Mr. Rogers had recommended that certain things should be done, and the recommendation was refused, or that he was really prevented from making necessary representations by a knowledge that he would incur disfavour by suggesting anything that would lead to expenditure, or something of that sort; unless he makes out some case of that kind I do not see that, from the mere fact that he had to communicate with Dr. Robertson, I can imply anything, either in his favour or otherwise.

285. MR. WADE.] This point was never raised in all these months.

286. MR. BRUCE SMITH.] My friend says this was never raised before. I should like to say that in all the months this inquiry was going on, I never directed my mind at all to placing the blame on anyone.

287. MR. WADE.] It was the basis of the Commission.

288. MR. BRUCE SMITH.] The basis of the Commission was, "Here is a great calamity; how did it occur?" The Coroner had to find out what was the cause of the death of all these men.

289. HIS HONOR.] The Commission had to find out who were the persons to blame, among other things.

290. MR. WADE.] Certainly.

291. HIS HONOR.] But that did not involve Mr. Smith, appearing for the public, attacking any particular person, and the Commission had to say who was to blame.

292. MR. WADE.] The Commission's whole inquiry was to find who was to blame;—the one issue for months past has been, "On whom shall we lay the blame?"

293. HIS HONOR.] But that did not involve Mr. Smith's attacking any one person.

294. MR. WADE.] It is not what Mr. Bruce Smith did, but the persons appearing on behalf of the miners; the whole effort of the case was to put the responsibility on Mr. Rogers and Morrison.

295. HIS HONOR.] Of course, *prima facie*, they are the responsible persons in the absence of something definite; and I can see there would be a great difficulty—they could not turn round and say, "It was not our fault; it was the fault of the Directors"—that would be a very difficult position for them to take up. However, I cannot see that I can consider that at present. The last evidence you referred to was page 42, Mr. Bruce Smith.

296. MR. BRUCE SMITH.] Yes. Then at the top of the page:—

"Dr. Robertson has never given me directions to water the roads because they were dusty. Dr. Robertson has never pointed out to me any danger from the dusty conditions of the mine. He has never referred to it in any way. I never told Dr. Robertson of the result of the experiments with the sample of coal-dust; I do not remember having any conversation with Dr. Robertson after I knew the result."

297. HIS HONOR.] Did he ever tell Dr. Robertson the tests were being made?

298. MR. WADE.] No.

299. HIS HONOR.] Of course, if he told Dr. Robertson that he had supplied the samples for the purpose of the tests being made, it is quite possible Dr. Robertson would have asked him afterwards what was the result of the tests.

300. MR. BRUCE SMITH.] I shall show that Dr. Robertson was supplied with a copy of the report.

301. Then, your Honor, we contend that the practice of allowing openings from a waste or goaf on to an intake air-way, is a breach of General Rule 1, which says:—"The intake air shall travel free from all stagnant water, stables, and old workings."

302. Then on page 20, Morrison says :—

“With the exception of the openings at No. 3 Right and No. 4 Right, the whole of the western side of the 35-acre goaf was a solid pillar of coal. I think there were two or three openings on the south side. There were one or two openings on the east side, and on the north side there are five or six openings.”

303. HIS HONOR.] I understand, that in front of this goaf, there was only this fence, a sort of warning fence.

304. MR. BRUCE SMITH.] On the west side there was an opening (at the 4th Right) into the 35-acre waste, through which the Commission find that this gaseous mixture came.

305. HIS HONOR.] Yes ; but as the result of a fall in the goaf.

306. MR. BRUCE SMITH.] That is on the west side. The north side is an intake air-way, and there he says there were five or six openings.

307. MR. WADE.] Might I ask my friend to state what was the actual complaint about that ?

308. MR. BRUCE SMITH.] I will formulate that before Wednesday.

309. MR. WADE.] I thought it was that the openings from the 3rd Right and 4th Right were improper ; and then you used Morrison's evidence in support of that.

310. MR. BRUCE SMITH.] I do not complain of the west side, your Honor, that opens on to a return, and that is how it ought to be. It opens there on to a return, in which the air is coming back after it has lost its purity ; but the rule is that the intake air must be kept pure from waste workings, and the contention is that on the north side there were openings on to the 5th Right rope-road, which was an intake air-way with pure air, and that the openings allowed any deleterious matter in the 35-acre goaf to be carried to the men in the pure air. That is the principle.

311. HIS HONOR.] I can understand the ground, but Mr. Wade asked the question where it came in.

312. MR. WADE.] I ask which side.

313. MR. BRUCE SMITH.] The north side.

314. MR. WADE.] There are three sides—west, north, and east. My friend spoke about the openings at the 3rd Right and the 4th Right.

315. HIS HONOR.] The plan shows where the intake air adjoins the goaf.

316. MR. WADE.] On two sides.

317. HIS HONOR.] And I understand that Mr. Smith says that where it adjoins the intake air way he complains of it.

318. MR. BRUCE SMITH.] This is under the fourth ground of complaint [*reading it*].

319. HIS HONOR.] Then you are speaking now of the openings shown here on the north side ?

320. MR. BRUCE SMITH.] I am taking all the sides admitted by Morrison. I shall give *de facto* evidence by Mr. Atkinson of what he saw. I am speaking now of the north side only.

321. MR. WADE.] Is it the north side only ?

322. MR. BRUCE SMITH.] I do not say that yet. I am only referring to Morrison's evidence.

323. HIS HONOR.] He speaks of the north side, the east side, and the south side.

324. MR. WADE.] But the charge only refers to the north side.

325. MR. BRUCE SMITH.] I know that. Beyond that I do not think I shall find any necessity to go, except as far as Mr. Atkinson is concerned ; and I expect to see Mr. Atkinson to-morrow, and to formulate his evidence under one or other of these headings that I have mentioned.

326. HIS HONOR.] That is all you have to say for to-day ?

327. MR. BRUCE SMITH.] Yes.

[The Inquiry was then adjourned till Wednesday, at 10 a.m.]

22 JULY, 1903, 10 a.m.—DISTRICT COURT, KING-STREET, SYDNEY.

Present :—

HIS HONOR JUDGE HEYDON, who was directed to hold the Inquiry by the Minister for Mines.

MR. BRUCE SMITH, instructed by Mr. H. D. Wood, of the Crown Solicitor's Office, appeared to conduct the case on behalf of the Department of Mines and Agriculture.

MR. A. A. ATKINSON, Chief Inspector of Coal Mines.

MR. C. G. WADE, instructed by Messrs. Curtiss and Barry, appeared on behalf of Mr. W. Rogers.

MR. WILLIAM ROGERS, Manager of Mount Kembla Colliery.

MR. J. GARLICK, Shorthand Writer to the Public Service Board, was present as Secretary and Shorthand Writer to the Inquiry.

328. HIS HONOR.] Has Mr. Rogers brought his certificate this morning ?

329. [*Mr. Wade then handed in Mr. Rogers' certificate.*]

330. MR. BRUCE SMITH.] I undertook on Monday to give Mr. Wade some particulars under the 6th paragraph of the complaint.

331. HIS HONOR.] Reading over the report of the Commission in this matter, I notice that there is one piece of evidence about gas which, apparently, you did not tell me of, and that is Quinn's evidence.

332. MR. BRUCE SMITH.] I was just going to give you that. I was going to supplement it. I only got that report on Sunday morning, and I had to devote most of Sunday to it, and it is quite possible that I may have overlooked something.

333. In the meantime, your Honor, Mr. Wade has been supplied with particulars under the 6th paragraph of the Statement of the Complaint, and I will read them.

334. HIS HONOR.] If you have a copy, and could hand it in, we could treat it then as an addendum to your statement.

335. MR. BRUCE SMITH.] We could supply a copy to you during the day.

336. [Mr. Bruce Smith then handed to His Honor the following statement] :—

“Additions to Charge No. 6.

In the following respects :—

- (a) In neglecting to order safety-lamps to be used in the mine ;
- (b) In failing to acquaint himself with the cause and results of accidents in other coal-mines ;
- (c) In neglecting to ascertain whether dust was accumulating to a dangerous extent in the Mount Kembla Mine ;
- (d) In neglecting to inform himself as to the dangerous character of coal-dust accumulation, or of the quantity required to become an element of danger in a mine ;
- (e) In neglecting to attend to correspondence from the Department bearing on the safety of the mine and the persons employed therein ;
- (f) In neglecting to inform himself upon the several subjects required in a certificated manager and necessary to enable him to properly discharge his duties as a mine manager ;
- (g) In neglecting to see that the state of the ventilation of the mine was properly recorded each month in a book kept for the purpose, as required by General Rule 1, section 47 ;
- (h) In neglecting to keep a proper book for the purpose of reporting the examination of the waste workings, as required by Special Rule 10 ; and
- (i) In failing to require from the officials under him a strict observance of Special Rule 7, as to reporting all instances in which gas had been met with in the mine.”

337. MR. WADE.] There were several things, your Honor, that my friend referred to on Monday in support of the charges that do not appear there. I do not know whether they are abandoned. For instance, there is the Ventilation Book.

338. MR. BRUCE SMITH.] That comes under Charge 6.

339. MR. WADE.] Then it ought to be stated. I do think everything ought to be stated. My friend has left out several things.

340. MR. BRUCE SMITH.] I avail myself of the general form of Charge 6, as well as adding several specific charges against it. It is quite true I did mention others.

341. HIS HONOR.] What other matters were referred to specifically which you say are not now repeated ?

342. MR. WADE.] That the Ventilation Book was not kept consecutively. You remember that passage about there being a gap, in one part of the evidence. That is one charge made, and that does not appear in that list.

343. HIS HONOR.] And the salient features of the mine not being marked on the plan ?

344. MR. WADE.] Yes. The ventilation arrows not being shown rightly.

345. HIS HONOR.] I think, Mr. Bruce Smith, it would be as well if those were put in in writing also.

346. MR. BRUCE SMITH.] Yes. I think I have shown a disposition to show my friend everything we rely on, even to quoting my evidence in my opening.

347. MR. WADE.] Another thing was that the reports were written up beforehand.

348. MR. BRUCE SMITH.] I did not say they were written up beforehand.

349. MR. WADE.] My friend expressly said that ; and it called from me an observation which I referred to afterwards.

350. MR. BRUCE SMITH.] It was the general principle that these particular books were not supervised as we say they ought to have been. I will add those three, your Honor.

351. HIS HONOR.] Very well. One of the matters you mentioned was that he had not complied with the Coal Mines Regulation Act, and you referred to General Rule 1 and to Special Rule 2. That, I think, had reference to the plans. You also said that he did not keep himself up to date, and so on.

352. MR. BRUCE SMITH.] Your Honor sees that at that time I had the general charge of laxity of administration before me ; and it had not been decided that I should give details ; and I brought them all under that sixth paragraph, “Laxity of the discipline of the said mine.”

353. HIS HONOR.] Then we must take it that the fact of your not having mentioned those matters in this additional list does not imply that you withdraw them in any way.

354. MR. BRUCE SMITH.] Oh, no.

355. HIS HONOR.] But in fairness to Mr. Wade I think it would be as well that those also should be put in writing with the others.

356. MR. BRUCE SMITH.] Yes, I will do that afterwards, your Honor.

357. HIS HONOR.] That will do afterwards. You have already mentioned them.

358. [The Statement of the additions to Charge No. 6, which appears in paragraph 336 of these Notes, contains the additions made by Mr. Bruce Smith after the above discussion.]

359. MR. BRUCE SMITH.] I propose now, your Honor, to supplement my statement, instead of just waiting until I put it before you in evidence. Under the first charge, the knowledge of the gassy character of the mine, I will mention some additional parts of the evidence. On page 51 of the Inquest, Quinn gave evidence. He was examined by Senior-sergeant Banks. Then the case of Gallagher, on page 35. I shall show your Honor that the Gallagher case is a well-known case of burning in the mine by gas. The point I wish to direct your Honor’s attention to is this : that although this case of Gallagher was well known, and the correspondence and the papers connected with the inquiry were in the Department, Mr. Rogers had made himself so little acquainted with it that, in his evidence, he says here, about the fifteenth line :—

“I remember a man named Michael Gallagher being burnt at Mount Kembla. I do not know that he was burnt from an explosion of gas. I do not know how he was burnt. I did not inquire as to what caused his burns. For all I know he may have been burnt with gas. I have no reason for not inquiring.”

360. I think that neglect to inquire into that has a very distinct bearing upon his knowledge of the occurrence of gas in the mine.

361. HIS HONOR.] I may say, Mr. Bruce Smith, that evidence is incredible ; and can only be accounted for in the way you suggested, that the man was, in a sense, at bay, and that he was being heckled.

362. MR. WADE.] That is so. He was heckled from start to finish.

363. MR. BRUCE SMITH.] He was under-manager at that time.

364. HIS HONOR.] He says so. It is to my mind incredible.

365. MR. BRUCE SMITH.] Then, if your Honor will look at page 54, your Honor will see the cross-examination by myself of Ramsey speaking of Nelson. He says:—

“I was working up near Gill’s gannon bord on the occasion I found the gas at the place marked on the plan X2. I had had my dinner, and had just gone back to work. I thought I had met a grey back. I told Nelson I had seen gas, and that I had lighted it. I do not remember what he said. He seemed to just treat it like as if it was unimportant. Edward O’Sullivan was my mate at that time. He is alive now. Nelson could see where the roof had fallen in the place I have mentioned.”

366. MR. WADE.] Nelson is dead.

367. MR. BRUCE SMITH.] Oh, yes. I am not putting this as against Mr. Nelson.

368. HIS HONOR.] I would like to say this now, Mr. Wade. Mr. Bruce Smith has referred to certain specific passages in the evidence, which he says are the only cases where he can show that the matter was brought to Mr. Rogers’ notice; but, reading over the report, which sets out a short notice of all the evidence with reference to gas, it seems to me that this becomes a material consideration; assuming that Mr. Rogers did not know of the existence of gas, ought he not to have known when so many people knew? I do not mean to say that they are to be excused for not reporting; but, when a thing becomes a matter of general knowledge, as apparently the existence of gas must have been—[*Interrupted.*]

369. MR. WADE.] That is a point we contest absolutely, right through. What is more, Mr. Atkinson had never heard of it; the Inspectors had never heard of it, and never found it even—never found it in the course of their general inspection month after month.

370. HIS HONOR.] I have not formed any conclusion at all about it, but it did seem to me that, with all these pieces of evidence put together in the report about the presence of gas, an active, inquiring manager, who always said, “Well, have you seen any gas? Has there been anything heard about gas?” would have had it come to his knowledge: but merely waiting to see if the thing was in the book. However, I have just directed your attention to that, and I will say no more.

371. MR. BRUCE SMITH.] Perhaps I may say now, at this stage of the proceedings, that I shall contend that all these pieces of evidence with regard to the discovery of gas, and the rather cavalier way in which the thing was treated by Mr. Rogers’ subordinates, all pointed to the fact that he was lax in impressing upon them the grave importance of dealing with every question in which gas was concerned in the mine.

372. MR. WADE.] That is quite contrary to the evidence. He says, “I called on every official to report gas wherever he found it.”

373. HIS HONOR.] The Commission say that it had become a universal impression—I think they say, “an article of faith”—that it was a safe mine; and, under those circumstances, they seem to think that allowances are to be made for the Manager.

374. MR. BRUCE SMITH.] Yes; and the impression was that whatever small evidences of gas occurred the ventilation was sufficient to sweep the gas away.

375. HIS HONOR.] I did not want to go off on this point, Mr. Wade, but just to let you know the way the thing had struck my mind. It is fair that you should know it.

376. MR. BRUCE SMITH.] My friend will have an opportunity of quoting all the evidence which seems to cut down or contradict what I have put before you. Our object is to save your Honor the trouble of reading the whole report. If he puts one class of evidence, and I put another, then your Honor will get all the salient features of it before you.

377. Then I would refer to page 780 of the Commission, from Question 25971, touching Quinn, down to 25984. It shows there Mr. Rogers’ reference to the Gallagher case, and gives an explanation, as far as he can give it, of the Quinn matter. Then Question 12077, the evidence of Heron, down to about Question 12100. And the evidence of Mr. E. O’Sullivan about Question 1312, and down to about Question 1323.

378. HIS HONOR.] These, I suppose, are all amongst the summary of evidence of this character in the Report?

379. MR. BRUCE SMITH.] Evidence of what?

380. HIS HONOR.] The evidence about gas is summarised in the Report of the Commission; the names of the witnesses, and a very short report of the evidence are given. Of course, I shall refer to that as a guide to the evidence.

381. MR. BRUCE SMITH.] Paragraph 48 of the Commission’s Report summarises it.

382. HIS HONOR.] Yes, of course, I shall refer to that as a guide to the evidence of this character.

383. MR. BRUCE SMITH.] That is simply a summary. How far would your Honor consider the conclusions of the Commission.

384. HIS HONOR.] So far as those conclusions are directly connected with this Inquiry, I do not think I would be bound by them; but so far as they throw light on this case, I should use them, I think. As to the cause of the explosion, I think I should take the Commission’s conclusion. That is a matter that only indirectly connected with this Inquiry—really only indirectly.

385. MR. BRUCE SMITH.] On pages 128 and 129, C. Smith gives an account in Questions 1897 to 1904 of gas; and David Evans—[*Interrupted.*]

386. HIS HONOR.] David Evans is referred to in the Report as having given evidence at the Inquest, and also as having been a victim.

387. MR. WADE.] No. He saved some of the men.

388. MR. BRUCE SMITH.] Oh, no. He was one of the prominent rescuers. He saved a great many men.

389. HIS HONOR.] Later on apparently he refers to it again, Question 1922.

390. MR. BRUCE SMITH.] Then, on page 55, there is the evidence of a man named Stafford:—

“I have worked in the No. 1 District. I worked in the 3rd Right and the 4th Right, and the 4th Left. My brother Albert was working with me in the 3rd Right. While we were working there we met with something unusual. That is three years and a half ago. It was at night; and I went to have my lunch at the turn; and when we were going into the face it lit. I do not know what it was, you could not see anything. It must have been gas.

It

It lit from our lamps which we had on our heads. It lit when we were within about three yards of the face. When it lit I dropped down on to the floor. When I got up again I could just see a little blue light waving on the face. I said to my mate, 'We had better get back to the tunnel,' and on the way we met Dungey, the fireman, and we told him what had happened. He came in and had a look, and said, 'Oh, there is nothing to be afraid of: whenever you are out for a while you ought to take your shirts and brush the place out.' We did what he said. When we went in we took our shirts and gave the place a brush out. We worked on that night. On the following night we went to work there again, and then we worked on there for about a week."

391. Now, with regard to the gassy character of the mine, I would like to mention a report by Mr. Wade, as Commissioner, with regard to a Newcastle mine, which, I contend, that a manager of a mine ought to read. There may be some excuse for his not reading the reports of English cases. Although the manager of an Australian mine may not exert himself to get the reports of the accidents which take place at home, which are published in foolscap form, and are obtainable, Mr. Atkinson, as I shall show, obtains about a dozen copies of each one, and he distributes them to those who take an interest in these things. He will say that he has never been asked to obtain any more. But, even granting that an Australian coal-mine manager can excuse himself for not reading reports of the English cases, one can hardly excuse him from taking an interest in things under his nose, seeing the importance of the things under his management: and, in the Dudley accident, there was a report, just as there is in English accidents; and I shall direct your Honor's attention to the two last paragraphs in that report, in which the Commissioner, Mr. Wade, laid down some very valuable injunctions for mine managers. He said:—

"Side by side with the precautions taken to prevent the ignition of inflammable gas, strict measures should be adopted to prevent the possibility of small local explosions becoming extensive through the agency of coal-dust, and some method, either of removing the dust, or of damping it, is essential where the dust exists in any quantity. However, the true interests of the mine cannot be effectually safeguarded unless all concerned strictly comply with the requirements of the Act and the Special Rules. Special Rules 15 and 71 impose upon the deputy and the miners respectively the duty of informing those in charge of the existence of fire-damp whenever found. The tendency seems to have been for the individual to constitute himself the judge of what should be reported and what not. Mr. Humphreys said that, in ninety-nine cases out of one hundred, there was no occasion to make a special report, as the quantity of gas was insignificant. A manager should clearly understand, and likewise impress upon those under his control, that every discovery of gas of any quantity must be reported in compliance with the Special Rules under pain of instant dismissal. Had this course been universally adopted throughout the mine, it is possible that we should never have heard of the Dudley explosion."

392. [The Report by Mr. Commissioner C. G. Wade on his investigation into the Dudley Colliery Explosion was put in and marked *Exhibit No. 1.*]

393. MR. BRUCE SMITH.] Now, my contention, Your Honor, is that a man in Mr. Rogers' position has not the option of reading or neglecting a report of that sort. It is a positive duty cast upon him by reason of the responsible character of his position to make himself acquainted with all the latest results in regard to the business that he controls, especially those that are right under his nose—a colliery within a hundred miles of him. Yet, here is a notorious explosion, a report by a person who is very familiar with all that sort of work, and it is apparently never read, or, if it is read, ignored. If he read that, then those instances which I have brought under your notice show neglect of his business; and if he did not read it, it is neglect of his duty to make himself acquainted with the current literature on the subject.

394. HIS HONOR.] Well, of course, I take it that these reports, although important, do not take away from a man his own freedom of judgment; they are not authoritative.

395. MR. BRUCE SMITH.] Oh, no.

396. HIS HONOR.] They are important and useful; but supposing, for instance, a recommendation was made which a mine manager thought unnecessary, or, perhaps, in some circumstances even mischievous, his responsibility could not be taken away from him; he could not follow the report and say, "Oh, I saw the report, and thought I should do it."

397. MR. BRUCE SMITH.] I do not say that a mine manager is bound to read any particular text-book, but he is bound to make himself acquainted with the character of any dangerous material that may show itself to his mind, as, for instance, gas. He may say, "Well, I do not feel inclined to read Mr. So-and-so's text-book; I do not consider him an authority"; but he cannot, because he does not care to read any particular book, allow his mind to remain a blank with regard to a dangerous material which he may meet with in the mine. Therefore, whether he reads the report of this explosion, or the report of others, he cannot allow himself to remain indifferent to—I cannot say the increasing dangers, but to the better-known character of the dangers of such things as coal-dust and gas when they are in close proximity. And that [*Exhibit No. 1*] is one of the latest statements, after due deliberation, with regard to a mine in his own State.

398. MR. WADE.] Entirely unlike his own.

399. MR. BRUCE SMITH.] It may be unlike his own; but the result is very like his own. But I think the Commission came to the conclusion that if the lamp that set fire to that gas had been a safety-lamp, possibly this explosion would not have occurred either, or if the gas which came from that waste had been discovered. That is the connection.

400. Now, your Honor, passing away from that heading, with regard to Mr. Rogers' knowledge, I go to the next one, the non-examination of the wastes; and with regard to Mr. Rogers' knowledge of the non-examination, I wish to refer — [*Interrupted.*]

401. HIS HONOR.] When you say wastes, you mean the goafs.

402. MR. BRUCE SMITH.] The goafs as distinct from the standing-places. I will call the working places which are not being worked "standing places."

403. HIS HONOR.] I think if I remember rightly, the evidence you referred me to on Monday, he admitted that the wastes were only examined once a month.

404. MR. BRUCE SMITH.] Yes, your Honor. In paragraph 69 of the Commission's report, I think there is something that has a distinct bearing on this, paragraphs 69 and 71.

405. HIS HONOR.] That is as to the examination with naked lights.

406. MR. BRUCE SMITH.] Yes.

407. HIS HONOR.] I have a remark on the margin there, "Did Rogers know this?"—that the examination was made with naked lights.

408. MR. WADE.] The law allows of the examination with naked lights.

409. MR. BRUCE SMITH.] My friend seems to think that in my opening I should refer to everything on the other side. Here is the Commission: It had a miner upon it; and a mine manager upon it; and I merely refer to what is said.

410. HIS HONOR.] The Commission, apparently, casts the blame for this sort of thing, to a very large extent, upon the whole system and the state of the law.

411. MR. BRUCE SMITH.] Yes. Of course, the Commission had in view the suggestion of fresh legislation.

412. HIS HONOR.] Still, it is a material thing to know whether he did know that the examination was made with naked lights. I must say I do not quite see why, if the ordinary examinations before the men went in were made with safety-lamps, the goaf should not be examined with a safety-lamp. Still, that is a very long way from saying that a man is incompetent because it is not done. That is quite another matter, and that is what I have to try.

413. MR. BRUCE SMITH.] Now, your Honor, this has occurred to me in the course of thinking about this case, that, in taking the evidence as given before the Commission, instead of hearing it from the witnesses, the element of demeanour is lost to your Honor; and, therefore, the way in which the Commission regarded the evidence where there was a conflict becomes in itself an element. Supposing, for instance, the Commission had before it one person giving affirmative evidence, and another giving negative evidence, they may have concluded without hesitation that the affirmative was right because of the manner in which the evidence was given.

414. HIS HONOR.] Yes.

415. MR. BRUCE SMITH.] Yes. Your Honor has not the opportunity of seeing that at all; and, therefore, the preponderance of weight which the Commission attach to one or other side can only be shown in putting before your Honor the conclusions to which the Commission came in such a case. Now, an instance of it is here in paragraph 65. In paragraph 65, the Commission expresses its opinion with regard to the conflict of evidence between Mr. Rogers and Mr. Leitch on this point.

416. HIS HONOR.] Yes; but that occurs merely in the Inquest evidence; so that that is given on the evidence itself. They say that the denial was too vague; and the same sort of thing occurred to me when I was reading the evidence on Monday.

417. MR. BRUCE SMITH.] In paragraph 65 of the report they refer to it:—"Mr. Rogers' denial, Question 25661, &c., is so vague that the Commission accept Mr. Leitch's account as substantially correct." That is simply a case that often arises where one man says a certain thing and the other says he does not know, or he is not sure.

418. HIS HONOR.] I think there is one other case in which the Commission considered the weight of the evidence—paragraph 75; there are four witnesses. They practically reject Broadhead and Brownlee. Brownlee's evidence they put on one side, as it refers to something that occurred ten years ago; and they say that not much reliance can be placed on Broadhead's statements. That brings them down to Sells and Smith. I certainly agree that I shall attach weight to the fact that they rejected the evidence of those witnesses whom they saw.

419. MR. BRUCE SMITH.] It is fair to myself to say that, after quoting Broadhead, I quoted the page on which Mr. Rogers gave it a flat denial. That was the one case which occurred to me where I thought the evidence of Broadhead unreliable. I refer your Honor to paragraphs 71 and 72:—

"71. Whilst the Commission consider that Mr. Rogers has been guilty of a grave irregularity in allowing the provisions of Special Rule 10 to remain uncomplied with, and thus permitting so lax and ineffective a series of examinations of this particular waste, still they cannot say that the irregularity actually contributed to the disaster."

"72. The Commission cannot, however, leave this subject without drawing attention to a serious defect in the method of making the regular examination of the goafs, and the use of naked lights in doing so. This, though, strictly speaking, within the limits of the law, is a reprehensible practice; and the Commission have, therefore, included among their recommendations one to the effect that all examinations in mines, including those worked with naked lights, be made with safety-lamps."

420. Now, with regard to the next charge—the non-examination of the faces—I refer your Honor more particularly to paragraph 82 of the report for the opinion formed by the Commission as to the degree of seriousness with regard to the neglect to examine those standing-places.

421. MR. WADE.] They say the rule is vaguely worded.

422. MR. BRUCE SMITH [*reading paragraph 82*]:—

"This rule (Special Rule No. 9), carefully read, seems to include as a subject for examination the faces of what are called 'standing-places,' *i.e.*, places that are temporarily, or even permanently, put of work, lying on the intake side of, or otherwise practically associated with, actual working-places.

The Commission cannot but characterise the omission to make a daily examination of such faces as, at least, very bad management, and they regret to have found the practice prevailing at Mount Kembla."

There are three books, your Honor, which were made exhibits in these inquiries—Exhibits F, I, J, and M. I suppose they are at the mine.

424. MR. WADE.] It appeared at the Commission that all the books at the Inquest were left in the custody of the Court, or, rather, in the Police Magistrate's room, at Wollongong, pending the opening of the Commission. The Commission opened at Wollongong two months afterwards, and when the books were asked for they could not be found. I think there were ten different report books, and a number of those big diary books, and a lot of loose sheets also. The only exhibits the Company were allowed to take away were the ventilation books and the mine plan. When the Commission asked for these exhibits, they made search for them at the Court Room, and could not find them; but they got the ventilation books and the mine plan.

425. HIS HONOR.] None of these exhibits mentioned by you, Mr. Bruce Smith, are printed amongst the exhibits in the evidence.

426. MR. BRUCE SMITH.] You see those that are printed in the Inquest are printed in full; and, therefore, as these were books, they were, possibly, omitted, because they could not print all of the book.

427. HIS HONOR.] Then, possibly, the absence of these books you ask for, Mr. Bruce Smith, would be accounted for in the way Mr. Wade says.

428. MR. WADE.] It is shown in Question 26059.

429. MR. BRUCE SMITH.] There is part of the evidence, your Honor, in which Morrison says that the reports with regard to the examination of the wastes were not kept in a book for the purpose or in a book by themselves, but were just written on the back of the butts.

430. MR. WADE.] On the butts.

431. MR. BRUCE SMITH.] I have here, "On the backs of butts." Whether it is on the front or the back, at any rate it is on the butts of the ordinary report book.

432. HIS HONOR.] Could you refer me to that evidence of Morrison?

433. MR. WADE.] No. Then he says, "The ordinary book."

434. MR. BRUCE SMITH.] My contention is that, if that irregularity existed, it must have been seen by Mr. Rogers.

435. HIS HONOR.] I want to see, first of all, exactly what it is;—what is the evidence, and where can I see it? Is it inquest evidence, or evidence before the Commission?

436. MR. BRUCE SMITH.] Will your Honor allow me to refer to Special Rule 10, regarding the duties of the deputy and fireman:—

"He shall, at least once in every week, examine, so far as is practicable, the state of the waste workings and main air-ways, and make and sign a true report of the state thereof in a book kept at the office for the purpose."

Now, the evidence I have taken a note of here, but, unfortunately, I have not got the page, was that the waste reports, according to Morrison, were on the backs of the butts. That is my note.

437. MR. WADE.] It is all in page 28 of the Inquest. It shows all the reports for some six months back:—

"There is an entry in the book [*Exhibit J*] (Deputies' Report Book from 2nd June, 1901, to 3rd September, 1901, put in, marked *Exhibit J*). On the 20th July a joint report, signed by Dungey and McMurray, of an examination of the intake, return air-ways, and waste workings of No. 1 Right, No. 5 Right, No. 6 Right, No. 6 Left, Nos. 1 and 2 Left; the report says all these places were found in good order. The next entry in that book on waste workings is the 17th August. The inspection of the waste workings in the book marked *Exhibit K* (Report Book from 3rd September, 1901, to 6th December, 1901, put in and marked *Exhibit K*) is reported on 14th September, 12th October, and 9th November. Inspections of waste workings in the book [*Exhibit L*] (Report-Book from 7th December, 1901, to 19th March, 1902, put in and marked *Exhibit L*) are reported on the 7th December, 1901, 4th January, 1902, 1st February, and 1st March. Inspections of waste workings are reported in the book [*Exhibit I*] on the 26th April, 24th May, 21st June, and 29th March. The morning of the 31st July is the last time I was at the fence of the waste in No. 4 Right."—(Evidence of J. Morrison).

438. HIS HONOR.] He does not say anything there about the butts.

439. MR. WADE.] It is a book like a cheque-book. The report is like the cheque, and the duplicate is on the counterfoil.

440. HIS HONOR.] Then are the reports in that form that there is a duplicate as it were.

441. MR. WADE.] It is provided that one shall be filed in the deputy's cabin in the mine, and the book itself is kept for permanent reference.

442. HIS HONOR.] It says here, "in a book to be kept at the office for the purpose." It does not say anything about the form of the book.

443. MR. BRUCE SMITH.] No; but it is evident that where you have a book with a butt, and that is a book for the purpose of deputies' daily reports, it is quite evident that that is not a book for an entry to be made of inspections of waste workings; it is not a book kept specially for the purpose.

444. HIS HONOR.] Your point is that he made it in the wrong book.

445. MR. BRUCE SMITH.] It was not in a book kept for the purpose. There is printed matter in the Deputies' Report Book which could be struck out; but he did not make it in a special book. The Rules contemplate a special book kept for the purpose of waste reports. If there had been a special book it would have been known as the "Waste Report Book," and Mr. Rogers would have had brought under his notice pretty vividly the fact that this book had nothing in it.

446. HIS HONOR.] He says here, "Inspections of waste workings are reported in the book [*Exhibit I*]."

447. MR. BRUCE SMITH.] *Exhibit I* is an ordinary deputies' report book.

448. HIS HONOR.] Is that admitted?

449. MR. WADE.] It was a book used for both purposes.

450. HIS HONOR.] But that book is gone?

451. MR. WADE.] I admit that the entries of the deputies were made in that book right through, and I admit Morrison was a deputy also, and made the entries.

452. HIS HONOR.] It is admitted that the book [*Exhibit I*] contained both deputies' reports and reports of waste workings.

453. MR. BRUCE SMITH.] The waste workings being on the butts.

454. HIS HONOR.] Why were the ordinary deputies' reports kept in that form, in books with butts? Is it in order to have a double record, the butt, and the part that is torn off and filed.

455. MR. BRUCE SMITH.] The report that is torn off is exhibited at the deputies' cabin in the mine. The men cannot go past that cabin until the report has been made.

456. HIS HONOR.] It is not for the sake of having a double record, but for the sake of placing a document before the men?

457. MR. BRUCE SMITH.] Yes; so that they can see it there; and they get a token there, from a board; and the object of that is so that you can see whether the men have come back or have been left at their work. The book then remains as a record of the inspections.

458. HIS HONOR.] Then, I suppose, there is some rule that these reports must be put where men can see them?

459. MR. WADE.] Yes; General Rule 4.

460. HIS HONOR.] And there is no rule of that kind with respect to inspection of waste workings?

461. MR. WADE.] No.

462. HIS HONOR.] So that reports of inspections of waste workings would not require to be in that form?

463. MR. WADE.] These reports go back to the year 1901. Nelson, when he was Examining Deputy—and I can verify this afterwards—kept a book of his own in one of these big Lett's Diary forms, and made his entries of his inspections in that.

464. HIS HONOR.] And that was kept at the office, I suppose?

465. MR. WADE.] I can tell you for certain when I look it up.

466. HIS HONOR.] Of course, as far as Mr. Rogers is concerned, here is a book that has to be kept at the office, and has to contain certain information; a book that, therefore, comes under his eye; and there is nothing easier than for him to see that it is done.

467. MR. WADE.] But Mr. Rogers says these inspections were made once a month.

468. HIS HONOR.] But Mr. Bruce Smith is now speaking about the books.

469. MR. BRUCE SMITH.] They were not made once a month, because Morrison says he had only made two while he was there. Mr. Rogers said he did not think it was necessary to make them only once a month. If a book had been there for waste inspections he would have had brought under his notice very clearly the intervals between these inspections; whereas, by having these put in the butts of a book for another purpose, there is nothing to strike him at all.

470. HIS HONOR.] What is entered in the deputies' report books?

471. MR. WADE.] They follow the wording of General Rule 4. They examine all the places where men are going to work.

472. MR. BRUCE SMITH.] General Rule 4 says:—

“A report specifying where noxious or inflammable gas, if any, was found present, the condition of the ventilation, and what defects, if any, in roof or sides, and what, if any, other source of danger were or was observed, shall be recorded without delay in a book to be kept at the mine for the purpose, and accessible to the workmen, and such report shall be signed by, and so far as the same does not consist of printed matter shall be in the handwriting of the person who made the inspection.”

473. HIS HONOR.] That was done by the deputies, as a matter of fact.

474. MR. BRUCE SMITH.] That is the deputies' report book. The men could not go in at all till he had done that.

475. HIS HONOR.] Yes; I see your point now under that.

476. MR. BRUCE SMITH.] Now, your Honor remembers that, under that sixth head, I enumerated “Neglect to ascertain whether dust was accumulating to a dangerous extent in Mount Kembla Mine.” The Commission, page 396, is very important as showing the quantity of dust that is not recognised as dangerous:—

12994. *Mr. Bruce Smith.*] *Q.* Will you just say where, in your opinion, the most dangerous class of dust is found in the roadway of a mine? *A.* Generally on the haulage road, and on the—[*Interrupted*].

12995. *Q.* What part of the haulage roads? *A.* And on the timbers and upper parts, rather than on the floor.

12996. *Q.* Why do you regard that as the most dangerous kind of dust? *A.* Well, it is the finest and the purest. The floor dust is very often mixed with stone impurities.

12997. *Q.* And this, which has lodged on the sides and the roof and the timbers, is the lighter, finer kind, which has floated in the air and gradually accumulated on any shelving position? *A.* Yes; and it is regarded as most dangerous.

12998. *Q.* Well, is there any theory of the power of this dust to absorb any chemical property? *A.* Yes. With constant currents of air passing over it, it is thought that it absorbs oxygen and thereby becomes more dangerous, making it more sensitive to explosion.

12999. *Q.* Now, as to the quantity of dust that is considered sufficient to become an element of danger, I think Galloway expresses a rather definite opinion, does he not? *A.* He has stated that 1 lb. of dust for 160 cubic feet in an air-way with a sectional area of 40 feet may be dangerous, and sufficient to carry on the explosion.

13000. *Q.* One lb. for 160 cubic feet in an air-way with a sectional area of 40 feet; I think you have made a calculation;—what is that equal to per linear foot in a roadway 12 feet wide and 6 feet high? *A.* About 7·2 oz. per linear foot.

13001. *Q.* Roughly, 7 oz. per linear foot distributed right across the roadway, up the walls, and on the timbers, is sufficient to be dangerous? *A.* Yes.

13002. *Mr. Robertson.*] 7·2 oz. per linear foot?

13003. *Mr. Bruce Smith.*] That is per lineal foot of the roadway. So that, Mr. Robertson, if 1 foot of the roadway, right across the roadway, and up the walls and on the timbers holds in the aggregate 7·2 oz. of dust, it is, in the opinion of Galloway, a dangerous quantity? *A.* It seems very small.

13004. *Witness.*] In another calculation it comes out to 1·228th of an inch thick.

13005. *His Honor.*] *Q.* Average thickness on the floor, is that? *A.* Average thickness all round the section.

13006. *Mr. Bruce Smith.*] *Q.* Ceiling and all! *A.* Ceiling and all.

477. I would like to refer your Honor to paragraph 82 of the Commission's Report, as bearing on the non-examination of the standing-places.

478. HIS HONOR.] Before going to that, I would just like to direct Mr. Wade's attention to a thing that struck my mind about the dust, which is that, as far as I can see at present, and, of course, I have only seen a little of the evidence, there does not seem to have been anybody in authority whose duty it was to see that the dust was properly laid.

479. MR. WADE.] Yes, your Honor; Mr. Atkinson, Mr. Bates, Mr. Rowan, and the Manager himself—the whole four of them.

480. HIS HONOR: It seemed to me, as far as I could see, that a contract had been made with Frost; and that it had been left to Frost, apparently.

481. MR. BRUCE SMITH.] Did your Honor understand whom my friend said just now? He named the Chief Inspector of Mines and two other Inspectors.

482. HIS HONOR.] I merely wanted to bring the matter under Mr. Wade's attention. It is not what Mr. Wade says; it is what he proves by-and-bye. I only wanted to point out what was in my mind.

483. MR. BRUCE SMITH.] Now, I pass on to another matter under No. 6—Neglect of correspondence. I shall show your Honor that certain correspondence directed to Mr. Rogers with regard to the use in the mine of the Davy lamp had been sent to him by the Chief Inspector of Mines; that the correspondence was quite ignored for months; and that, on a subsequent occasion, when the Chief Inspector of Mines went there, he found the same lamp being used—no, it came out in the evidence that the same lamp had been allowed to remain in the mine for some months after his attention had been directed to it. That is one. Correspondence about the Davy lamp.

484. HIS HONOR.] Does any of that appear in the evidence given, or is it a matter you are going to prove?

485. MR. BRUCE SMITH.] Yes, your Honor, the correspondence was put in. It is on page 935, *Exhibit 41*:

“Exhibit No. 41.

“Wm. Rogers, Esq., Manager, Mount Kembla Colliery, Wollongong, 13th May, 1898.—Sir,—Referring to my visit to the Mount Kembla Colliery on the 11th instant, and to our conversation on several matters, amongst which were: (1) Old Davy lamps used by deputies, being considered as out of date, and illegal under General Rule 9, should be replaced by another type of safety-lamps; (2.) General Rule 4—As to reports being made at the ‘Station’ and before each shift commences, whether day or night; (3.) General Rule 12—Blasting on haulage-roads in presence of dust, and necessity for strict observance of the above Rule; I shall be pleased to hear from you on these matters.”

486. Then there is other correspondence included in that same exhibit, dated 14th December, 1901. “William Rogers, Esq., Manager, Mount Kembla Colliery, 14th December, 1901.—Sir,—With reference to the recent accident to the brothers H. and J. Biggers on the 26th of last month, when they were unfortunately left three or four hours in the mine after their injuries had been received, and the conversation which Mr. Bates has had with you in regard to some system being adopted, in order to ascertain when all persons are out of the mine, I will be pleased to hear what you have decided to do in this matter.—I have, &c., A. A. ATKINSON, Chief Inspector of Coal Mines.”

487. Then on the 15th January, 1902, a month after, another letter is written: “William Rogers, Esq., Manager, Mount Kembla Colliery, 10th January, 1902.—Sir,—I have the honor to direct your attention to my letter of the 14th ultimo inquiring what procedure you intend to adopt to avoid in future the possibility of any such unfortunate occurrence as that connected with the accident to the brothers Biggers in the Mount Kembla Colliery; and to request that you will be good enough to let me know, at your early convenience, what arrangements you have made, or propose to make.—I have, &c., A. A. ATKINSON, Chief Inspector of Coal Mines.”

488. And then on the 25th of February, five or six weeks after that again: “William Rogers, Esq., Manager, Mount Kembla Colliery, 25th February, 1902.—Sir,—I regret to learn that as yet nothing has been done at your colliery for establishing some system of knowing whether all the workmen have left the mine. The matter, as you know, was first mentioned to you by Mr. Rowan in the month of May last, and having regard to the accident which took place to the brothers Biggers on the 27th November last, when they were unfortunately left in an injured condition in the mine for some hours, unknown to the management, it appears to me that the necessity for such a regulation ought to appeal strongly to you. I also regret the attitude which you have taken up by neglecting to answer any letters addressed to you on this subject; and I shall therefore be compelled to seek an early interview with you in regard to it.—I have, &c., A. A. ATKINSON, Chief Inspector of Coal Mines.”

489. Your Honor sees the last paragraph.

490. MR. WADE.] That is explained on page 40 of the Inquest.

491. MR. BRUCE SMITH.] Yes, I have got a note of that. I will refer your Honor to that, so that you may read them together:—

“I do not believe that I answered the letter that Mr. Bruce Smith referred to this morning. During the time that I received those letters from Mr. Atkinson, the District Inspectors would visit the mine (Mr. Rowan and Mr. Bates), and I mentioned the matters referred to in the letters to them. I used to tell them that I had got the letters from Mr. Atkinson, and they used to ask me what I proposed to do; and I would tell them; and they would say, ‘Well, if you do that, I will be only too pleased to mention it to Mr. Atkinson.’ I therefore took it for granted that, as they said they would do that, I had no need to write. It was not done out of any disrespect.”

492. What we say is this, that the correspondence shows that, on the 14th December, 1901, his attention was directed to a certain thing; there was no answer; nothing was done: on the 15th of January, 1902, his attention was again directed to it; nothing was done; on the 25th of February, which is two months after his attention was first directed, he has to be written to again, “I regret to learn that nothing has been done at your Colliery, &c.”

493. HIS HONOR.] Yes. These letters speak for themselves as to the dates. But, with regard to the first letter, that of the 13th of May, is there anything to show what was done about the Davy lamps.

494. MR. WADE.] His own evidence.

495. MR. BRUCE SMITH.] He admitted, I think, that the Davy lamps were in use at the time of the disaster.

496. MR. WADE.] Nothing of the kind. His evidence was that they adopted the same lamp for examining as is used at the Metropolitan Mine.

497. HIS HONOR.] You can look that passage up perhaps. It will appear in the notes somewhere.

498. MR. BRUCE SMITH.] I will look that up, your Honor, to show you that the Davy lamps were in use up to a very late date, notwithstanding the correspondence; and the correspondence was never answered—that is my point here.

499. HIS HONOR.] Well, where does that appear?

500. MR. BRUCE SMITH.] He admits there on page 40 of the Inquest, and gives his reasons for not answering these letters.

501. HIS HONOR.] Is that one of the letters you spoke about then?

502. MR. BRUCE SMITH.] Yes, your Honor, I am referring to all those letters.

503. HIS HONOR.] That would appear in his evidence to you—what letters he referred to?

504. MR. BRUCE SMITH.] Yes, I think it would. That is on page 39, the last paragraph, the cross-examination by me.

“The system of tokens was established about two or three months ago. I received the letters which you have just read to me from Mr. Atkinson, the Chief Inspector of Mines, dated 14th December, 1901, 15th January, 1902, and 25th February, 1902.”

505. These two men Biggers—one had had some coal fall on his leg and it was broken; and while his mate was away; and he was left there for some time.

506. HIS HONOR.] It is the Davy lamp letter that I was asking about. That refers to a later letter.

507. MR. BRUCE SMITH.] This refers, your Honor, to the correspondence about Biggers and his mate.

508. HIS HONOR.] On the face of it that correspondence shows a neglect to reply; and Mr. Wade has referred me to a passage in which it is explained; but in the Davy lamp matter the letter shows nothing wrong at all, merely that a letter was written about substituting something for the Davy lamp. Can you show me something about that?

509. MR. BRUCE SMITH.] On page 39 Mr. Rogers says:

“We have the same kind of safety-lamp in the mine now, since the disaster, as they have at Helensburgh and South Clifton. Before that, for examining, we had the old Davy lamp. There were others in the store which I do not know the name of. They had never been used. They had been there two or three years. I do not think they were bought in consequence of the letter you have just read to me from Mr. Atkinson, the Chief Inspector, in May, 1898, which I believe I received.”

510. But that does not give the date when they ceased to use the Davy lamp.

511. HIS HONOR.] “Since the disaster”—that means this disaster, I suppose?

512. MR. BRUCE SMITH.] Yes.

513. HIS HONOR.] So that, up to the time of the disaster, they had the Davy lamp?

514. MR. BRUCE SMITH.] Yes.

515. MR. WADE.] It does not mean up to the time of the accident at all.

516. MR. BRUCE SMITH.] At this stage I am opening to you, it is hardly right for my friend to say what it means.

517. HIS HONOR.] You say, Mr. Wade, then, that this shows that up to the time of the disaster they used the old Davy lamp for examining?

518. MR. WADE.] No, I do not. That is taken down in this form, not question and answer, and it is misleading.

519. HIS HONOR.] He says:

“We have the same kind of safety-lamp in the mine now, since the disaster, as they have at Helensburgh and South Clifton. Before that, for examining, we had the old Davy lamp. There were others in the store which I do not know the name of. They had never been used. They had been there two or three years. I do not think they were bought in consequence of the letter you have just read to me from Mr. Atkinson, the Chief Inspector, in May, 1898, which I believe I received.”

I assume the lamp used at Helensburgh and South Clifton is a proper kind, and I suppose the letter of May, 1898, is the letter to which you have referred, Mr. Bruce Smith?

520. MR. BRUCE SMITH.] Yes.

521. HIS HONOR *continued reading*.] “Dr. Robertson sent these lamps up unknown to me.”

522. Well, on the face of it, subject to anything that may be shown to me afterwards, it looks to me as if that was the meaning of it: that they had the old Davy lamp in use up to the time of the disaster; and I suppose the very name “Davy lamp” shows that it is out of date. They are all called safety-lamps now.

523. MR. WADE.] It is a safety-lamp.

524. HIS HONOR.] Yes, the Davy lamp is a safety-lamp; but the lamp which Sir Humphrey Davy invented was called by his own name.

525. MR. BRUCE SMITH.] There is something about lamps on page 41:—

“I have seen men who were accustomed to using safety-lamps say that they preferred safety-lamps to flare lamps. I think the men at Kembra would prefer flare lamps, because they are accustomed to them. It depends on what sort of lights they have as to which gives the better light. I do not think the employers care which kind of lamps the men use. There is a difference in the cost of a safety-lamp and a flare lamp. A safety-lamp would cost about 10s., and a flare lamp 1s. I suppose if safety-lamps were used the expense would fall on the Company. The Company supplied the dozen or eighteen safety-lamps which we had before the disaster. They had not been used. They were sent up by Dr. Robertson, and I was surprised to see them because we did not require them.”

526. I want just to explain, in case it came up in the course of the inquiry, with regard to Biggers and his mate, that some accident had occurred—whether he had broken his leg or not I do not know—but it was brought under Mr. Atkinson’s notice. An accident had occurred, I understand, at another colliery, and then the Biggers affair occurring, it was suggested to Mr. Rogers, among others, that there should be some means adopted by which you could ascertain whether all the men were out of the mine.

527. HIS HONOR.] That seems to be in the correspondence : They were left three or four hours after their injuries ; and then Mr. Atkinson writes about the system being adopted to ascertain when all persons are out of the mine ; and he would like to hear from Mr. Rogers about it.

528. MR. BRUCE SMITH.] In connection with these lamps, your Honor sees in the last paragraph a statement that Dr. Robertson had sent these lamps up ; but he did not know anything about them, and he did not consider they wanted them ; and then he said at the end of that page : " I always consult Dr. Robertson before I purchase anything required at the mine." I mean to say that those things hang together.

529. HIS HONOR.] Yes ; before that he says : " Dr. Robertson is my viewer ; he is immediately over me." I do not quite see the materiality of that, as I could not see it on Monday.

530. MR. WADE.] I shall not take any point about his being confined or limited. I shall not take any technicalities.

531. MR. BRUCE SMITH.] There was correspondence, your Honor, about the watering ; that is in *Exhibit 41*, in the first letter on page 935 Royal Commission (*See copy in paragraph 485 of these notes*). He had had a conversation with the Chief Inspector, and he is reminded of it in that letter, *Item No. 3* : " General Rule 12—Blasting on haulage roads in presence of dust, and necessity for strict observance of the above Rule ; I shall be pleased to hear from you on these matters." That is on the 13th of May. Then, your Honor will remember, coal-dust was obtained and sent home to Woolwich Testing Station, and the report came from Woolwich, and then there was a letter.

532. HIS HONOR.] Do you say, Mr. Bruce Smith, that that letter of the 13th of May was not answered ?

533. MR. BRUCE SMITH.] No.

534. HIS HONOR.] Or is your point under that that he did not get the better kind of safety-lamps ?

535. MR. BRUCE SMITH.] I have passed that point, your Honor. I am now on the question of his not answering the correspondence. Your Honor will see it is admitted that he got those letters. On page 935 [*Exhibit 41*], there is a letter :—

" Wm. Rogers, Esq., Manager, Mount Kembla Colliery, 27th September, 1900.—Sir,—With a view to having a sample of coal-dust collected and sent to England for testing from your colliery, I am sending a letter addressed to you at the colliery, and shall be pleased if you will be good enough to keep it until I have an opportunity of discussing the matter with you at the colliery.—Yours, &c., A. A. ATKINSON, Chief Inspector of Coal-mines."

536. And then, on the 4th of March, page 936, Royal Commission [*Exhibit 41*] :

" Wm. Rogers, Esq., Manager, Mount Kembla Colliery, 4th March, 1901.—Dear Sir,—With further reference to the tin of coal-dust, after soldering the lid will you kindly cause to be painted on ' Sample of coal-dust from Mount Kembla Colliery,' and consign it to Messrs. J. R. Reid and Sons, 412 Kent-street, Sydney who have kindly consented to pack it for the Department. Enclosed are address labels for above.—Yours, &c., A. A. ATKINSON."

537. Then, if your Honor will turn to page 74 of the Inquest, there is a letter of the 30th April, forwarding to him the result of the tests at Woolwich. Mr. Rogers' evidence about that is on page 39 :—

" We supplied samples of coal-dust. They were not out of the mine at all. I had painted on the tin ' Sample of dust from the Mount Kembla Colliery.' That was true. That was collected from outside the mine at the tip, and was a fair sample of Mount Kembla coal-dust. I got a letter dated 30th April, 1902, with reference to that coal-dust, which you have just read to me. I received an enclosure, which showed Mount Kembla dust to be ' Violent Explosion.'"

538. HIS HONOR.] Were any of those letters answered ?

539. MR. BRUCE SMITH.] There is no evidence of any answer to that letter.

540. HIS HONOR.] Is there any evidence that they were not answered ?

541. MR. BRUCE SMITH.] Yes, page 40. (Mr. Bruce Smith then read that portion of Mr. Rogers' evidence which is quoted in paragraph 491 of this transcript). I think, your Honor, now, that those notes I have given you, supplemented by some evidence by Mr. Atkinson as to the way in which the ventilation was shown on the plan—[*Interrupted.*]

542. HIS HONOR.] Just forgive me, Mr. Bruce Smith, I do not see any evidence with regard to this letter about the Davy lamp as to neglect to reply. As I said before, the other letters about the brothers Biggers speak for themselves ; there was a neglect there—subject to explanation, of course. I do not mean anything blamable.

543. MR. BRUCE SMITH.] What is the date of the letter about the Davy lamp ?

544. HIS HONOR.] The first letter, on page 935, 13th May, 1898. I understood that you relied, with regard to that, not merely on the fact that he continued to use the old Davy lamps, but also that he neglected to answer the letter ; but I have not seen any evidence yet, or at least I have not remarked it yet, if I have seen it, dealing with the point of his neglect to answer that letter, which was a letter certainly calling for an answer. It says, " I shall be pleased to hear from you on these matters."

545. MR. BRUCE SMITH.] Your Honor sees at the foot of page 39, speaking of the lamps, he says :—

" I do not think they were bought in consequence of the letter you have just read to me from Mr. Atkinson, the Chief Inspector, in May, 1898, which I believe I received."

546. Then, on the next page, he says :—

" I do not believe that I answered the letters that Mr. Bruce Smith referred to this morning."

547. HIS HONOR.] I must take it then that that refers to all of them ?

548. MR. BRUCE SMITH.] Yes, because I had read them to him. I have just said, your Honor, that that evidence, together with some oral evidence by Mr. Atkinson, will really make my case.

549. HIS HONOR.] Then, there are no further passages that you want to refer to ?

550. MR. BRUCE SMITH.] No, your Honor. I am going to add two further heads, or three, to No. 6 (this was done and the items are copied in the statement given in paragraph 336 of these notes) ; and Mr. Atkinson's evidence will be very short—it is only just to supplement something where I cannot find it in the evidence.

MR. ALFRED ASHLEY ATKINSON was sworn, and examined as under :—

551. HIS HONOR.] *Q.* You are Chief Inspector of Coal Mines in New South Wales? *A.* Yes, your Honor.

552. *Examination-in-Chief* by MR. BRUCE SMITH.] *Q.* I wanted to ask you first about the examination of wastes ;—you are familiar with Special Rule 8, are you not, which requires safety-lamps to be used for certain purposes, does it not? *A.* Yes.

553. *Q.* What are they? *A.* In making the inspection of places before the workmen commence.

554. *Q.* That rule is, “The fireman shall, within four hours immediately before the commencement of each shift, carefully examine with a safety-lamp the whole of the workings, faces, and travelling roads. He shall cause to be written with chalk the date in every working face so examined, and if, in his opinion, any danger is apparent, he shall cause a danger signal to be put up, beyond which no unauthorised person shall on any account pass until the said danger is reported to the overman, under-manager, or Manager, and removed.”

555. HIS HONOR.] There is a distinction there between workings and faces.

556. MR. BRUCE SMITH.] Yes ; working-places and faces.

557. HIS HONOR.] It does not say “working-places.” It says “the whole of the workings, faces, and travelling roads.” And then he is to “cause to be written with chalk the date in every working face.”

558. MR. BRUCE SMITH.] *Q.* Will you just tell His Honor what, in your opinion, is the distinction between those? *A.* Well, “working-face” I take to be a place which is actually at work day by day. A face may be the face of a place which is temporarily not at work.

559. *Q.* The “face” is really the front of the coal which you are getting? *A.* Yes. In the extreme end of a gallery is the face.

560. *Q.* And the word “workings” you take to mean the places at which the work is going on? *A.* Yes.

561. *Q.* Is that the general understanding of the meaning of those terms?

562. MR. WADE.] Mr. Atkinson is giving an exposition of the meaning of a legal term, a term in a statute.

563. HIS HONOR.] I take it that it is a technical word, and Mr. Atkinson is giving his opinion.

564. MR. BRUCE SMITH.] Now, is it as necessary, in your opinion, to examine those faces which are temporarily idle as it is to examine those in which men are working? *A.* I think it is equally so.

565. *Q.* And to examine them as often? *A.* Each shift.

566. *Q.* Now, with regard to the wastes ; you say it is just as necessary to examine the standing-places as it is the working-places ;—I want to ask you now whether it is necessary to examine those places with a safety-lamp? *A.* Are you referring to the standing-places or the waste workings?

567. *Q.* I will call those wastes, and the others working-places and standing-places?

568. HIS HONOR.] If you would use the word goaf, then I do not think there could be a mistake. A goaf is an old worked-out place, and “standing-place” is an expression that has been devoted to a temporarily disused working-place.

569. MR. BRUCE SMITH.] Yes.

570. *Q.* What I want to know is this : The working-places have to be examined with a safety-lamp, have they not? *A.* Yes.

571. MR. WADE.] *Q.* Do you mean that, Mr. Atkinson, as an absolute rule? *A.* According to Special Rule 8.

572. HIS HONOR.] That is, before the men go in—before the commencement of each shift?

573. MR. BRUCE SMITH.] Before the men go in.

574. *Q.* You think the standing-places ought to be examined also ;—should they be examined with a safety-lamp? *A.* I think so.

575. *Q.* Now, ought goafs to be examined with a safety-lamp, in your opinion? *A.* Yes, certainly.

576. *Q.* Would you consider it good mining practice, when working-places and standing-places are examined with a safety-lamp, to go in and examine a waste with a flare light? *A.* No, I should not.

577. *Q.* Do you think that ought to be allowed in a mine—to examine a waste with a naked light? *A.* No ; I think it should be done with a safety-lamp.

578. MR. BRUCE SMITH.] I should like your Honor to note paragraph 71 of the Commission’s report.

579. *Q.* Now, I want to ask you a question about the standing places : Will you tell his Honor why it is necessary to examine those places as well as the working-places? *A.* Well, in case of a mine in which inflammable gas is known to be given off, the intake air, which is conducted into any temporarily idle or standing-place, will also necessarily have to go into the places which the workmen are occupying during the shift ; and, if any fire-damp is given off, or if there is any brattice in the faces which requires attention, that can only be done by regular inspection.

580. *Q.* Now, you gave evidence to the effect that, four days after the explosion, you found, on that No. 1 heading, an accumulation of gas, which, I think, measured up to about 10,000 cubic feet? *A.* Yes ; some thousands of feet.

581. *Q.* Now, presuming that that accumulation had taken place before the disaster, and had not been discovered, what would be the danger of that? *A.* Well, a portion of it might have been carried along with the air current from those places to the other working-places on the return side of those particular places—carried round the working-places in which the men were working.

582. *Q.* Now, the top of the No. 1 heading is where you found the 10,000 feet of gas four days after the accident? *A.* Yes.

583. *Q.* Of course, the ventilation was not in good order? *A.* No ; it was deranged.

584. HIS HONOR.] *Q.* Where were you standing when you detected it? *A.* About 4 or 5 yards on the outbye side of the last cut-through.

585. *Q.* I mean was this 10,000 cubic feet of gas entirely within the standing-place? *A.* Yes, your Honor.

586. *Q.* It was entirely within the fence which is placed to keep people from the standing-place? *A.* So I understand, your Honor—yes.

Witness—A. A. Atkinson, 22 July, 1903.

587. *Q.* You say that because you did not know where the fence was? *A.* Well, of course, the fence, if there had been one, was down when I made the inspection; but I understood the fence had been up, and all this accumulation was on the inside of that.

588. *Q.* Of course, that is material, and I wanted to know whether all that accumulation had taken place in that part which used to be left uninspected? *A.* Yes, that is so.

589. *MR. BRUCE SMITH.] Q.* Your Honor will see—is this so, Mr. Atkinson—that the air went up into that heading and round the end of a brattice, and then down again away to the west, along the working-faces where a number of men were engaged? *A.* Yes; the air went first into Morris's place, which is marked on the plan, and from there it went into the face of the front heading, and then round past a lot of working-places.

590. *Q.* Now, assuming that that accumulation had gone on there, and had not been detected through the want of examination, what would be the effect, in time, of that accumulation? *A.* A portion of the inflammable mixture might have been carried round to the working-places where the miners were using naked lights.

591. *Q.* Then the accumulation there, if it did occur, would be a positive danger? *A.* Quite so; yes.

592. *Q.* And is not this so, if you had a large body of gas there it would tail out first with the air down to a naked light—I mean if it followed the course that the Commission find this explosion did—it would tail out, catch alight, flash back, and the whole body explode? *A.* That is, assuming that the brattice became disarranged near the face, that would happen.

593. *HIS HONOR.] Q.* I suppose that, as long as the ventilation and brattice were working in good order, there could be no accumulation, though there might be a discharge? *A.* There might be a discharge.

594. *Q.* But there could be no accumulation in any one place? *A.* No, your Honor, there should not, if the ventilation arrangements were in perfect order.

595. *Q.* But part of the examination, I suppose, is to see that the brattice is in good order? *A.* Yes; that is so.

596. *Q.* And unless he went into the standing places he could not be sure whether the brattice there was in good order? *A.* No; he could not.

597. *MR. BRUCE SMITH.] Q.* You heard the evidence of Mr. Rogers, and you have read it since; you heard the evidence of Morrison, at all events? *A.* Yes.

598. *Q.* And you heard him say that he did not examine that for a considerable time? *A.* Yes.

599. *HIS HONOR.] Mr. Rogers also spoke about it. He was quite aware that there was no examination made.*

600. *MR. BRUCE SMITH.] Yes.*

601. *Q.* Well, do you consider that good management of the mine, Mr. Atkinson? *A.* No, I do not.

602. *Q.* Now, with regard to the dust and the watering, what opinion would you express with regard to the state of things that existed before the disaster? I want you to put the disaster out of your mind altogether, because it points a big moral, and I do not want you to bring that in as an element in the formation of an opinion as to the condition of things before the accident. You heard all the evidence of the witnesses as to the discovery of gas in that mine? *A.* Yes.

603. *Q.* And you heard Mr. Rogers speak of certain matters that had been brought under his notice? *A.* Yes.

604. *Q.* Now, in your opinion, supposing that that evidence is correct, do you consider it was good management to go on with the flare-light, and to take no greater precaution than was taken for laying the dust in that mine? *A.* Well, I think if Mr. Rogers had a knowledge of the occurrences with reference to gas which have been given in evidence, he should have worked the mine with safety-lamps as a precaution.

605. *Q.* And was watering necessary as well? *A.* Well, the principal thing in connection with the prevention of explosions is to get at the root of it, and that is, in the first place, to use safety-lamps to prevent any ignition of gas. So far as the question of dust is concerned, it is a very debatable one at the present time, your Honor, as to what should be done with dust. Certainly, where any shot-firing takes place, it is very essential that the watering should be attended to; but to prevent the ignition of fire-damp the precaution is to use safety-lamps.

606. *HIS HONOR.] Well, of course, you see, if that is the only precaution used, Mr. Atkinson, it may break down. You may always have an accident. You may have a defective lamp, or a man may take a liberty with it and open it, or half a dozen things may happen.*

607. *WITNESS.] Yes; and an extra precaution in the event of a defective lamp causing any ignition of fire-damp in the presence of dust would be, if practicable, to water the dust.*

608. *HIS HONOR.] There is no doubt that would be an extra precaution; but that does not take it quite far enough.*

609. *MR. BRUCE SMITH.] Q.* As a matter of good management, you think that one or other should have been done, and you think that the safety-lamp was the better precaution? *A.* Yes, I do.

610. *Q.* You heard the evidence, did you not, at the inquest, of the method spoken of for watering this mine, the tanks taken and filled at certain places? *A.* Yes.

611. *Q.* Do you consider that was a proper or even sufficient means of watering the dust in that mine? *A.* No; it could not be so, in that it did not touch the more dangerous dust which rests near the roof and on the sides.

612. *HIS HONOR.] Q.* In this particular case I thought that you agreed that in this case the explosion of gas was reinforced by a series of explosions of dust? *A.* That is my opinion, your Honor.

613. *Q.* And I suppose it follows from that that if there had been no explosions of dust—if there had been only explosions of gas—the damage done, the loss of life, would probably have been much less? *A.* Yes; it would have been quite local in its effects.

614. *Q.* Does it not follow from that that the question of dust is an important one? *A.* Oh, it is an important one. I do not wish to in any way underestimate its importance.

615. *MR. BRUCE SMITH.] Q.* You might explain to His Honor what you mean when you say that this dust question is still debatable? *A.* Well, in the British Coal Mines Act, of which what we have here is practically a copy, your Honor, the only regulation in force at the present time in regard to the treatment of dust is dealt with in General Rule 12.

616. *Q.* What does that provide roughly? *A.* That bears more particularly on the precautions necessary when blasting takes place.

617. HIS HONOR.] Yes; I have read that.

618. WITNESS.] That is the only rule in which coal-dust is mentioned.

619. HIS HONOR.] *Q.* When was that Act passed? *A.* In 1887.

620. HIS HONOR.] But there have been new developments since then.

621. MR. BRUCE SMITH.] *Q.* But no new regulations have been made for the treatment of coal-dust? *A.* No new regulations.

622. HIS HONOR.] *Q.* Is it a part of the Act itself? *A.* Yes.

623. *Q.* I think there has been a development of the knowledge of the danger of dust since then? *A.* Yes; and there have been, and there still are, great controversies as to what is the best way to deal with it. One of the British inspectors, Mr. Hall, in his 1901 report, stated that in his district the system of watering the roads had been abandoned practically. He pointed out the particular necessity of watering in the presence of shots. On the other hand some of the Inspectors have reported where the watering has actually stopped an explosion.

624. *Q.* Well, if the dust is watered it is no longer dust, and, I should think, could not produce or assist an explosion. I can understand in a mine that is all dry and where you have an immense quantity of passages to water, it would be altogether out of the question? *A.* Yes; impracticable.

625. *Q.* That may be an element; but that it would be an advisable thing to do where that feature does not exist seems quite another question? *A.* Quite so. In some cases watering damages the roof to such an extent that it causes heavy falls, and on that account it is not practicable.

626. MR. BRUCE SMITH.] *Q.* And there are cases, are there not, in which it has been shown that the explosion had jumped the watered places and still carried on through the mine? *A.* Yes; there is great debate about that, too.

627. *Q.* We had a tremendous lot of matter about that which is all in the Commission; but the conclusion you arrive at is that here, if there was no watering, there should have been safety-lamps in use, from Mr. Rogers' knowledge of the nature of the seam, and the evidence of gas? *A.* Yes.

628. HIS HONOR.] I thought that in this case the defence was that they actually did water; not that it would bring down the roof, or that there was too much of it to do to make it practicable, or anything of that kind; but that they actually did it.

629. MR. WADE.] There was no suggestion on our part at all that it was necessary.

630. MR. BRUCE SMITH.] Does your Honor mean at the Inquest or the Commission? At the Inquest they began by contending that the emptying of those tanks was for the purpose of watering the road; but cross-examination showed that the primary and only purpose of that was to get rid of the water where it accumulated; and Mr. Rogers had to admit that there was no allowance to the contractor for watering at all, and that all the contractor was paid for was getting rid of the water as it accumulated.

631. HIS HONOR.] That does not get rid of what I say. The passages you pointed out to me show me that the Company said, "We admit that we ought to have watered, and we did water," and then you, in cross-examination, suggested that they did not do that duty in a proper way. None of the evidence suggested that it was a duty that was not recognised as a duty. On the one hand there was an assertion that it was carried out, and on the other a suggestion that it was not properly carried out. There is no suggestion that it was debatable whether it should be done at all.

632. MR. BRUCE SMITH.] Not if safety-lamps were used.

632½. *Q.* If you prevent the ignition of the gas by the open lights, and presupposing that there is no accident such as His Honor suggested, viz., a defect in the safety-lamps or something of that sort, then the coal-dust has no chance of being lighted? *A.* And if watering is done when shot-firing.

633. MR. BRUCE SMITH.] I do not know whether your Honor sees that the shot, itself, in sending out a tongue of fire, is a tremendous element, and the shock itself of the shot raises the dust and it ignites.

634. MR. BRUCE SMITH.] In this very case the Commission say that the accident was the result of a combination of circumstances that nobody could have foreseen, an extraordinary and peculiar combination of circumstances which all happened, in a singular way, at the same time to bring about this accident. Well, if you rely upon safety-lamps alone and nothing else, the time will come when there will be another combination of circumstances.

635. MR. BRUCE SMITH.] Your Honor will see that there was an accumulation of gas up in the higher cavity, and it was only when the fall came to drive out the gas, and the tongue of gas travelled up the roadway and met this open light, that it ignited, and the fire then travelled down and lit the body of the gas; but if there had been a safety-lamp there the accident would not have happened.

636. HIS HONOR.] If the safety-lamp had been there, and if there had been the third combination of circumstances that the safety-lamp was out of order, the accident would have happened all the same.

637. MR. BRUCE SMITH.] All the evidence on these questions occupied some days. Of course it could not be gone into again before your Honor, but it is there. But the conclusion arrived at by Mr. Atkinson, whilst admitting that the watering of dust is still in the debatable stage, is that safety-lamps would be a practicable prevention, and would have been in this case.

638. HIS HONOR.] I can quite understand that.

639. *Q.* But now, with regard to this dust: Were there, in the case of this mine, any of the practical objections you speak of—danger to the roof, or an excessive area of roadway to be watered—to prevent the watering being done? *A.* Well, there is a considerable length of roadway, and I think that the experience of watering since the accident has been that the roof, although it fritters, and causes small falls of stone, does not prevent the watering being carried on on the haulage roads.

640. HIS HONOR.] The evidence of the mine people is that it was not a dusty mine, and that there were very few places that were dusty, so I thought; I must read the evidence again.

641. MR. BRUCE SMITH.] *Q.* You have been to the mine since the disaster and since the watering has been carried on? *A.* Yes, I have.

642. *Q.* There is a complete system of watering carried on now? *A.* They are using tanks with a circulating pump travelling round and spraying water.

643. There was a complaint made since that it was affecting the roof, and when you were there you had it shown to you? *A.* Yes.

Witness—A. A. Atkinson, 22 July, 1903.

644. Q. From what you saw then did you form an opinion to express to His Honor as to whether there was anything in the watering to affect the roof? A. I think the watering, when it is commenced, would cause small falls of stone, but not sufficient to impede the watering afterwards; and so far as I know it is now being done. It was the last time I was there.

645. Q. Then your opinion is that there was nothing in the nature of the roof or the supply of water to prevent watering being adopted; and you think that safety-lamps ought to have been used, if the nature of that mine, as evidenced by the statements of those different men, had been known to Mr. Rogers? A. Yes, that is my opinion.

646. HIS HONOR.] I would like you to consider this aspect of the matter. It may be that there was ample excuse, from Mr. Rogers' point of view, and from the point of view of the particular thing that I have to investigate, that is his competence, for his not using safety-lamps at all. In that case, what about the dust?

647. MR. BRUCE SMITH.] Q. If lamps were not used in that mine, Mr. Atkinson, was not watering in your opinion necessary? A. Presupposing that Mr. Rogers knew the nature of the seam and the gas.

648. MR. WADE.] Your Honor's question was: Supposing there is ample excuse for his not using safety-lamps.

649. HIS HONOR.] That is what I mean. I am taking the case of a mine in fact worked with naked lights; what about the dust then?

650. WITNESS.] I should like to know, your Honor, is it presupposing that the Manager of that mine, although it is worked with naked lights, knows anything of gas being given off by the seam?

651. HIS HONOR.] That does not come into the question at all. It is a question of what ought to be done in the mine.

652. MR. BRUCE SMITH.] Well, your Honor, Mr. Atkinson, might fairly say that, if one does not know of any gas in the mine then it would not be necessary to water at all.

653. HIS HONOR.] Well, assuming it is a gassy mine, which, for some good reason or other, is worked with naked lights, what about the dust then? You see, so far as what Mr. Atkinson has said now, it seems to me that I must dismiss the question of dust altogether, because Mr. Atkinson says it is a debatable matter, and he will not say anything ought to be done about the dust. What he says is that safety-lamps ought to be used. Well, it may be, as to the safety-lamps, that Mr. Rogers has got a good answer.

654. MR. BRUCE SMITH.] I see your Honor's views.

655. Q. If safety-lamps were not used, ought the roads to be watered? A. Well, it would be a practice which has never occurred in any mining district.

656. Q. What—to water the roads and not to have safety-lamps? A. Yes.

657. HIS HONOR.] But that is what was done here. As I understand it, what was done was this: water used to accumulate in certain places in the mine, and it had to be taken out. A contract was made with a man to take that water and discharge it in some place where it would run out of the mine. Advantage was taken of that fact to water the dusty parts of the mine, and the dusty parts of the mine were watered. That is what I thought was the effect of the evidence that I had my attention directed to on Monday. And now Mr. Atkinson comes and says that the watering of the dust was a very debatable point, and apparently he does not say that Mr. Rogers was at all to blame in not doing more; and the Commission seemed to think that up to that time Mr. Rogers was not at all to blame for not using safety-lamps, although it would have been better if he had.

658. MR. BRUCE SMITH.] Well, of course, I am only asking Mr. Atkinson now on what he calls good mining management.

659. Q. Supposing you had been Manager of that mine—that is the most realistic way to put it—supposing you had been Manager of that mine, and I will put it first that you had a knowledge of the gas to the extent that Mr. Rogers had, knowing of the Gallagher case, and knowing that it was a gassy seam—

[*Interrupted.*]

660. MR. WADE.] There is no evidence that it was a gassy seam.

661. HIS HONOR.] There is the evidence of a previous Manager.

662. MR. WADE.] A "gassy" seam is a distinct technical term; and his evidence was not that he knew it was a gassy seam, but "I knew that it was a seam that produced gas."

663. HIS HONOR.] I did not know that that had a technical meaning. I took it to mean that it was a seam which did produce gas.

664. MR. WADE.] That is not a gassy seam.

665. MR. BRUCE SMITH.] Q. Mr. Atkinson, has that term "gassy seam" a technical meaning? A. I do not think the expression has ever been defined in any technical book that I know of.

666. HIS HONOR.] In paragraph 47 of the Royal Commission's Report there is a statement by Mr. Ronaldson, a former Manager of the mine:—

5264. Q. Does the mine give off any fire-damp? A. Very rarely, in cracks.

5265. Q. It does give off a little? A. Yes, from fissures, rarely.

5266. Q. It either gives it off or does not give it off? A. It gives it off rarely.

5267. Q. In what section of the mine is this? A. All sections."

So that, as a matter of fact, at that time the Mount Kembla Mine was a mine which gave off gas in all sections rarely from fissures, from cracks. Of course, that rare discharge, if favourable circumstances occur, may accumulate. Now, take a mine of that kind.

667. MR. BRUCE SMITH.] I referred you to Mr. Rogers' own admission: "I knew that it was a seam that produced gas"; and then the burning of Gallagher, which is shown by a report, occurred in a mine, Mount Kembla, of which he was under-manager at the time. Now, I take the three circumstances: Mr. Rogers knew it was a seam that produced gas; he knew of the evidence of Mr. Ronaldson—

[*Interrupted.*]

668. HIS HONOR.] I do not say that Mr. Rogers knew that. I put that as a matter of fact, not as a matter of Mr. Rogers' knowledge.

669. MR. BRUCE SMITH.] I think Mr. Rogers knew that.

670. MR. WADE.] He said he did not know that.

671. MR. BRUCE SMITH.] Q. If you knew it was a mine that gave off gas, would you consider it good management to go on with that mine without safety-lamps? A. No, I think not.

672. Q. You had no power of ordering safety-lamps? A. No.

673. Q. You were absolutely without power? A. Yes.

674. Q. You said if you were managing that mine, with that knowledge, you would have used safety-lamps? A. Yes.

675. Q. Whether you would have watered in addition you are not prepared to say? A. No.

676. Q. But supposing you did not use lamps, would you have thought it necessary to water that mine? A. Well, that brings a condition of things which I do not know to exist in any country, and, therefore, it is impossible to say what I would do.

677. HIS HONOR.] Q. Very well, then, take what was actually existing here, which you say was a state of things that you do not know to exist anywhere else. The state of things which actually existed here was that they did water the surface of the roadway, not the walls and the roof, and they did not use safety-lamps;—was that good management? A. No, your Honor, it was not.

678. MR. BRUCE SMITH.] Q. I will put it in another way: if they thought it necessary to water the roads, ought they not to have used lamps? A. I think they ought to have used safety-lamps.

679. Q. Now, there is just one other question, with regard to the northern side of the goaf—you heard Morrison admit that there were four or five openings there? A. Yes.

680. Q. Will you explain to His Honor the course which the air took along that northern side, preparatory to expressing an opinion as to the propriety of those openings? A. [Witness explained the course of the ventilation on the colliery plan].

681. HIS HONOR.] Q. I suppose air becomes return air after it has passed the last naked lights? A. As soon as it has passed the last working-place.

682. Q. It may even then pass naked lights? A. Yes.

683. MR. BRUCE SMITH.] Q. Now that air passes along the northern side—there is a scale from that split? A. Yes, the greater portion of the air is diverted into the working-places, from Nos. 90 to 101; a scale of air travelled along the 5th Right rope road.

684. Q. Why is that scale taken along there? A. In order to ventilate that road.

685. Q. That is a rope-road through which the coal that comes down from these faces (90 to 101) is carried out of the mine? A. Yes; the haulage rope comes entirely round that 35-acre block.

686. Q. And the coal, as it comes down from these working-places, is put on to that road? A. Is put on to that rope on the 5th Right.

687. Q. So that that scale ventilates that road along which horses go? A. No; the workmen engaged there.

688. MR. WADE.] There are no horses on that road.

689. [Witness further explained his evidence on the plan.]

690. MR. BRUCE SMITH.] Q. As a fact, you saw those openings? A. I saw some of them.

691. Q. You heard Morrison admit there were four or five? A. Yes.

692. Q. I ask you, is that proper mining management, to allow openings from a goaf into an intake air-way? A. Well, in the first place, you must have regard to the requirements of General Rule 1, which says, "The intake air shall travel free from all stagnant water, stables, and old workings."

693. Q. Now, apart from the question whether it is a breach of the General Rule, which is for His Honor to determine, in your opinion is that good mining management? A. No; it is not good management to have no stopping between an intake and a goaf.

694. Q. They ought to have been stopped up, in your opinion? A. Yes.

695. Q. Built up? A. Yes.

696. MR. WADE.] Q. Do you mean air-tight, Mr. Atkinson?

697. HIS HONOR.] Could it be pointed out where these are?

698. MR. BRUCE SMITH.] It is admitted that they are on the northern side.

699. HIS HONOR.] But if they were past the place which was pointed out by Mr. Atkinson where there is a split, one portion of the ventilation going to the men in the working-places and the other down the 5th Right rope road to the No. 1 Right return air-way, then anything coming from the goaf would not get into the workings at all.

700. WITNESS.] I see what your Honor means. There were no working-places on the intake side of that air, except when they were working in the 4th Right pillars. These two currents joined here [indicating on the plan], and went down this air-way to the 4th Right, where the men were working.

701. HIS HONOR.] This air—this red air, if I may call it so—seems to be all return air, because it goes to no workings.

702. WITNESS.] It went into these workings here [indicating the 4th Right] when they were working.

703. HIS HONOR.] Q. How? A. It would come along here [along the 5th Right rope road to the junction with the No. 1 Right travelling road, then down the travelling road to the 4th Right rope road], and be conducted into these workings here [the 4th Right].

704. MR. WADE.] Q. Did you see that;—can you swear that? A. No, I did not.

705. MR. WADE.] I object to the evidence altogether—random statements like that.

706. MR. BRUCE SMITH.] It is not a random statement. I will prove it.

707. HIS HONOR.] What you have said, Mr. Bruce Smith, is that there were openings on the north side, from the goaf, into the intake air-way—that is to say, to air that went to the workings.

708. MR. BRUCE SMITH.] And to places where men were constantly working and moving about.

709. HIS HONOR.] It seems to me, therefore, that, to make out your point, you must show that there were connections on the intake side of the split.

710. MR. BRUCE SMITH.] This is a state of things that existed for months before the accident, and Mr. Atkinson says that during the time that it was so arranged men were working here at the 4th Right who would get that air.

711. MR. WADE.] I object to that, because it is not proved.

712. HIS HONOR.] I will not take it unless there is evidence of it.

Witness—A. A. Atkinson, 22 July, 1903.

713. MR. BRUCE SMITH.] *Q.* Apart from that, was it necessary that that air should be left uncontaminated for other reasons? *A.* So far as I know, men travelled along that road, and for that purpose it should have been ventilated.

714. *Q.* And kept pure? *A.* Yes.

715. *Q.* What would men travel along that road for? *A.* The men who looked after the rope would travel along that road; some of the workmen would travel along that road.

716. *Q.* This was used as a travelling road, was it not?

717. MR. WADE.] Mr. Atkinson cannot say that. He does not know it. I take an objection. Mr. Bruce Smith is now asking Mr. Atkinson about whether this is used as a travelling road. The term "travelling road" is applied to a place that may be used as a travelling road this quarter, and next quarter it is not. The fact that it is called "travelling road" on the plan does not necessarily show that it is used as a travelling road now.

718. MR. BRUCE SMITH.] *Q.* Is there any other road along there on which people pass but that one? *A.* No; it is a haulage road, primarily.

719. *Q.* And there is no special travelling road with it, as there is in these other places? *A.* No.

720. *Q.* So that anybody going round there would have to travel along that road? *A.* Unless they went round the working faces.

721. *Q.* Well, then, for that purpose it was necessary to keep this air pure? *A.* Yes.

722. *Q.* Then, for those two reasons, supposing it is established that work did go on in the 4th Right, is it good mining management to give a chance of any impurities coming from that waste to get on to that intake air-way? *A.* No, it is not.

723. Now, your Honor, I will direct my attention to show that work did go on there, at the 4th Right. My friend puts me to the proof of it.

724. MR. WADE.] I did not say anything about the 4th Right. I said the 5th Right.

725. HIS HONOR.] Of course, the reasons why the impurities should not be allowed to get into that air-way apply equally to a return air-way. Here is a return air-way in pink, used as a travelling road, and people must be going along that.

726. MR. BRUCE SMITH.] But there must be some return air-way.

727. HIS HONOR.] Yes.

728. MR. BRUCE SMITH.] That plan is a copy of a mine plan, and it shows that (the 5th Right) as an intake air-way, and intake air-ways are things which are specially recognised in the Special Rules as things which have to be kept as sweet as possible; and if it could be said, as your Honor suggests, that because men have to travel along return air-ways, therefore it does not matter if you turn an intake which has gone through all the working-places into a further return air-way.

729. HIS HONOR.] That may be. You do not quite see my point. Taking the distinction between an intake and a return to be that intake is air which is going to be used by the workers, whilst the return air is air which will not be used at all, or only used by people going along the roads, then this bit of 5th Right rope road which you have pointed to ought to be a return airway.

730. MR. BRUCE SMITH.] Then it ought to be treated as a return. They themselves, on the plan, show it as an intake. And the Act, of course, could be completely ignored, except as far as working-places are concerned, by a mine manager turning all his air-ways into return air-ways, so as to justify him in doing anything he liked with them by merely colouring them red on the plan.

731. HIS HONOR.] If you put yourself in my place, I cannot go and say that a mining manager is incompetent because air—foul air, we will say—has been allowed to be turned into an air-way, which, in reality, is a return air-way, but which, by somebody's mistake, has been marked blue, as an intake. You make him responsible for some bit of colouring, which is going too far.

732. MR. BRUCE SMITH.] Mr. Atkinson, in his evidence, says that he regards it still as intake air, if it is carried along a road along which people travel; and, if it is, as well, going to some place where people are working. Your Honor will see, too, that I do not rely upon any one of these isolated instances; it is the cumulative effect of them all. When you are going to apply the question of competence to some one thing the weights seem to be all down. It is only by applying all my weights at once that the question is to be considered.

733. I understand Mr. Leitch has given evidence on the working at the 4th Right?

734. MR. WADE.] I admit that they were working at the 4th Right until the last pillars were taken out.

735. MR. BRUCE SMITH.] I think the number of men was given.

736. MR. WADE.] I think it says six or seven men were working there.

737. MR. BRUCE SMITH.] It might be taken that way, as admitted.

738. HIS HONOR.] But I want to get the evidence on that.

739. [The evidence of Mr. Leitch, page 674 of the Royal Commission, was referred to, and it was found that the names of six men were given as those of men who were working in the 4th Right pillars within a few weeks of the disaster.]

740. MR. BRUCE SMITH.] *Q.* Well, assuming that there were six men working there, was it, in your opinion, good management to allow those four or five openings from the waste into that heading? *A.* No, it was not, in my opinion.

741. [Exhibit No. 74 in the Commission, a plan showing how the 4th Right pillars were ventilated about three weeks before the disaster, was then referred to. On this the air coming down the No. 1 travelling road from the 5th Right junction was found to be shown with blue arrows, and the air leading away from the pillars with red arrows. The plan was signed by John Morrison, deputy, and by S. H. Warburton, surveyor to the Mount Kembla Company.]

742. MR. BRUCE SMITH.] Your Honor sees that those arrows are all marked blue.

743. MR. WADE.] And it is not return air until then.

744. MR. BRUCE SMITH.] That is my contention. That is signed by John Morrison, and it shows how they were ventilated.

745. *Q.* Now, any impurities that might have come out of those four or five openings on the north side of the waste would be carried round to these men in the 4th Right? *A.* The quantity of air that was taken to these men would be mixed with whatever came from the north side of the 35-acre waste.

746. Q. Do you remember seeing the reports of the examination of the waste in the deputies' books when you were before the Coroner's Inquest—those that were on the butts? A. I think I did.

747. Q. You are not sure of that? A. No.

748. Q. You remember the deputies' books were in the Court at the time the Coroner was making the inquiry? A. Yes; I saw one of them.

749. Q. You saw that the report of the examination of the wastes was on the butt of one of the ordinary deputies' report books? A. Yes.

750. Q. Would you call that good management?

751. MR. WADE.] I object, your Honor, to this. Mr. Atkinson is not trying this case. Your Honor has to say whether it is good management. Your Honor has to decide on the interpretation of those rules. It is distinctly intruding on the province of your Honor.

752. MR. BRUCE SMITH.] Mr. Atkinson is an expert. My friend's objection might apply to all expert evidence.

753. MR. WADE.] It does, in the interpretation of legal documents or statutes.

754. HIS HONOR.] But I think he might give evidence as to whether a thing is good management.

755. MR. WADE.] The rule says that a thing is to be done and put in a book; and it is not in Mr. Atkinson's province to say whether it is good management to put it in this book or in that book. He is asked whether it is good management to put it in that deputy's book, rather than in some book with gold lettering and leather cover, I suppose.

756. MR. BRUCE SMITH.] My friend seems to think that all Mr. Rogers has got to do is to observe all the rules, and that is good management; but there are many things in coal-mining that a man has to be examined in to get his certificate, and they are not mentioned in the rules at all. And the question now is: Was he competent, or, as the section says, was he grossly incompetent, or grossly ignorant?

757. HIS HONOR.] What is the particular thing you were asking?

758. MR. BRUCE SMITH.] I was asking whether it was good management to allow a subordinate to enter a report of an examination of the waste workings upon the back of a book intended for another purpose.

759. Q. That is my question. What do you say to that?

760. MR. WADE.] That is begging the whole question.

761. WITNESS.] Well, having regard to the fact that according to the rule it should have been kept in a separate book, I think it was bad management.

762. MR. WADE.] Q. Which rule says that it should be in a separate book from the deputy's book? A. Rule 10.

763. Q. Does the rule say that;—a separate book from the deputy's book, as you say now? A. It says, "A book to be kept at the office for the purpose."

764. HIS HONOR.] Of course that is a question as to the construction of the rule, as to whether it ought to be for that purpose only.

765. *Cross-examination by MR. WADE.*]—Q. Did you ever supply a book for recording waste inspections? A. No.

766. Q. To any colliery in the Colony? A. No.

767. And, I understand, you authorised, or the Department authorised, these books that are used for the ordinary reports of the deputies? A. Well, I might say, in connection with that—[*Interrupted.*]

768. Q. Yes or no, first of all, explain afterwards. Is that so, that your Department authorised the issue of those books with words printed on them, "for the use of deputies"? A. I think I have a right to give an explanation.

769. HIS HONOR.] You have a perfect right to do that; but first answer the question, and then make an explanation.

770. WITNESS.] Well, in connection with that matter, I might say that these reports are in forms which are usually adopted in the Old Country; and in order to have the legal authority for them, I suggested that the Crown Solicitor might be asked to say whether these forms might be used in accordance with certain of the rules. That was done, and afterwards copies of the forms of report under the Act were sent out to the several managers with a request in order to have some uniformity, more particularly in reporting that they would adopt these report books.

771. MR. WADE.] Q. And they did? A. Most of them did.

772. Q. Mount Kembla did? A. Mount Kembla did after some time; I do not know how long.

773. Q. Do you want to make any qualification about that;—did they refuse? A. No; I do not remember any refusal. I do not remember having received any communication in reply to the letter with the forms enclosed.

774. HIS HONOR.] But, Mr. Wade, I thought the point of your question turned on the use of those words "for the use of deputies."

775. MR. WADE.] No; it is this: Mr. Atkinson says it is bad mining management not to keep a special book for this purpose. Now, I ask him—

776. Q. Did the Department take any steps to suggest that the mines should have special books for this purpose? A. No.

777. MR. WADE.] Your Honor sees this: that the Mines Department did go so far as to send out a book with printed words in "For the use of deputies"; but there was no form sent out in any special book at all for the incorporation of the waste reports.

778. Q. Now, you got the Crown Solicitor to prepare a form for the reports of deputies, or to authorise a form? A. Yes; I sent copies of similar forms used in the Old Country.

779. Q. Now, the rules you had in mind were General Rule 4? A. That was one of them.

780. Q. And the Special Rule, which is now Special Rule 8 in the Mount Kembla Rules, is it not? A. No. The Rules which the Crown Solicitor dealt with are all under the Act itself.

781. Q. Are those what you had in your mind, at the time you asked for these books to be authorised, General Rule 4 in the Act, and the Rule which corresponds to Special Rule 8 in the Mount Kembla Rules? A. I had in my mind the Rules in the Act.

782. HIS HONOR.] Q. Which one? A. General Rule 4 of the Coal Mines Act.

783. MR. WADE.] Q. That is General Rule 4 altogether? A. Yes.

Witness—A. A. Atkinson, 22 July, 1903.

784. Q. Now, I ask you to answer this question, yes or no: Did you have in your mind's eye a rule that corresponds to Special Rule 8 of the Mount Kembla Rules? A. I do not know whether I had or not. I referred more particularly to General Rule 4 in the Act.

785. Q. Now you draw a distinction between places men are to work in or to pass during the shift, and those that are idle? You draw a strong distinction; now, do you not.

786. HIS HONOR.] Special Rule 8 does not speak of an entry at all.

787. MR. WADE.] No. General Rule 4, subsection 1, speaks about the inspection about a certain time before the commencement of the work; and then Special Rule 8 refers to the same thing, specifies the time as four hours, and gives certain details. What I want to ask you now is—

788. Q. Taking General Rule 4, subsection 1:—

“A competent person or competent persons, appointed by the owner, agent, or manager, for the purpose, . . . shall, within such time immediately before the commencement of each shift as shall be fixed by Special Rules made under this Act, inspect every part of the mine situate beyond the station, or each of the stations, and in which workmen are to work or pass during that shift;”

now, you knew yourself that those words in themselves excluded standing-places? A. Yes.

789. Q. Now, I suppose you know from experience that it is quite a common thing in every mine to have certain places standing idle any day of the week? A. Yes.

790. Q. And they may have a working-place on one side of them, and another working-place on the other side? A. Yes.

791. Q. Did you ever take any steps to point out to the officials of these mines in the use of these books that, besides the set words of the Rule, they were supposed, in your opinion, to inspect the standing places too? You gave them a General Rule:—“Inspect where men are to work”; but did you explain to the officials that you wanted more done, or that more was supposed to be done? A. Well, the question was never raised as far as I remember.

792. Q. I do not want that; did you point it out or explain it? A. No.

793. Q. Did it ever suggest itself to you? A. No. If I had been asked about it I should have been pleased to discuss the question with Mr. Rogers or any other manager.

794. Q. Or your own Inspectors? A. Yes.

795. HIS HONOR.] The fourth paragraph of the General Rule, speaking of what is to be recorded after this inspection, says:—

“A report specifying where noxious or inflammable gas, if any, were found present, the condition of the ventilation, and what defects, if any, in roofs or sides, and what, if any, other source of danger were or was observed, shall be recorded, &c., &c.”

Well, although the first paragraph does speak of the places “in which workmen are to work or pass during that shift,” yet the reason of the thing, looking at what this examination is to be for, would seem to include standing-places as well as other places.

796. MR. WADE.] No, for that very reason that no workman has any right to go into a place that is standing:—

“General Rule 6.—Every entrance to any place which is not in actual use or course of working and extension shall be properly fenced across the whole width of the entrance, so as to prevent persons inadvertently entering the same.”

797. HIS HONOR.] Of course, a place may be dangerous without a workman going into it.

798. MR. WADE.] No; if the rules are carried out properly, no man is allowed to go into a place which is dangerous, because the deputy comes along in the morning and examines every working-place, or every place along which workmen are to travel; and if he finds it dangerous, he bars it off, so that men cannot go in; and so no men are allowed to go into a place that has not been seen before.

799. HIS HONOR.] Yes, but the danger may come to the men.

800. MR. WADE.] But the rule provides that once a man gets into a place, he is responsible for the safety of that place. The workman coming in new in the morning, after being away perhaps ten or twelve hours, to a place where the regulations allow the use of a naked light, unaware of any danger existing, may cause an explosion to himself; and so the Act says this, that before the workman goes in you must send round the deputy or fireman into every working-place not more than four hours before the men come in, and if the deputy finds gas, he will remove it; and then when the workman comes in there is a certificate that the place is safe; and then the obligation is cast on the workman to keep that place safe. And there is a further provision that the deputy, during the course of the shift, has to go in again and inspect each place where they are working or passing.

801. HIS HONOR.] In the evidence I was reading there was an instance given of one of the deputies saying to one of the men, “If you had gone in before me, you would have had your head blown off; she was standing full of gas.” That, of course, was a place which he had examined. Supposing it had been a standing-place which he had not examined, then there would have been a quantity of gas standing there, and he would not have detected it. True, the man would not have gone there either; and so he would not have been in the immediate danger of having his head blown off; but there would have been gas there which might have come out to him.

802. MR. WADE.] I might explain that the conditions depend on the circumstances of the mine. If the mine is known to be giving off gas, then inspections should be made of every place with safety-lamps; but if the mine is not giving off gas, then, if you do not inspect with the safety-lamp at all, there is no danger there.

803. HIS HONOR.] I was going to ask Mr. Atkinson some questions myself. I want to know what this inspection is for, because it seems to me that the main object of going into these places is to see if the brattice is all right. If the brattice is all right, and the ventilation is working, any discharge of gas must be carried on, and may be detected elsewhere; it would keep on moving.

804. MR. BRUCE SMITH.] But if it were discharging, the management would not allow men to go in until proper ventilation was provided.

805. HIS HONOR.] If he does not go in, he does not know whether the brattice is in good order.

[At 4 p.m. the Inquiry was adjourned until 10 a.m. next day.]

23 JULY, 1903, 10 a.m.—DISTRICT COURT, KING-STREET, SYDNEY.

Present:—

HIS HONOR JUDGE HEYDON, who was directed to hold the Inquiry by the Minister for Mines.

MR. BRUCE SMITH, instructed by Mr. H. D. Wood, of the Crown Solicitor's Office, appeared to conduct the case on behalf of the Department of Mines and Agriculture.

MR. A. A. ATKINSON, Chief Inspector of Coal Mines.

MR. C. G. WADE, instructed by Messrs. Curtiss and Barry, appeared on behalf of Mr. W. Rogers.

MR. WILLIAM ROGERS, Manager of Mount Kembla Colliery.

MR. J. GARLICK, Shorthand-writer to the Public Service Board, was present as Secretary and Shorthand-writer to the Inquiry.

MR. ALFRED ASHLEY ATKINSON, previously sworn, was further examined as under:—

806. *Cross-examination by MR. WADE (continued).*] Q. Have you got your copy of the Act there?
A. Yes.

807. Q. Look at section 47, General Rule 1, and subsection 1, and subsection 2? A. Yes.

808. Q. Look at sub-section 2? A. That is as to inspection during shifts.

809. Q. You see the Act provides, first of all, for an inspection before the men go to work, and then for a further inspection whilst the men are actually at work? A. Yes.

810. Q. Now, you notice in subsection 2 you get those same words, "All parts of the mine in which workmen are to work or pass during that shift"? A. Yes.

811. Q. You will admit this, will you not, as a practical man, that the wording of the Act is distinctly confined to working places? A. Yes; that is so.

812. Q. And what you say is, that the Special Rule 8 makes it perfectly general? A. I think that is the correct interpretation, as far as I can understand it.

813. Q. Now, look at the special rule with it? A. Yes.

814. Q. I want to ask you what your interpretation of "old workings" is as a practical man?

815. MR. BRUCE SMITH.] Surely this is the very question which my friend raised yesterday.

816. MR. WADE.] Which I withdrew after your argument.

817. MR. BRUCE SMITH.] Yesterday I was asking Mr. Atkinson on a question of practical mining, and Mr. Wade at once took the objection that that was a question which you were to try. I differentiated that from finding on matters which involved the interpretation of rules, special or general. Now my friend is asking Mr. Atkinson what interpretation he puts upon certain provisions under the Act. I submit that is a matter entirely for your Honor. My question was one on practical mining. I do not see how Mr. Atkinson can come here and guide your Honor on the interpretation practically of the work of the legislature.

818. HIS HONOR.] That is quite true, Mr. Bruce Smith. As a mere matter of interpretation the matter is for me; but, at the same time, I think Mr. Wade is right, Mr. Atkinson having expressed a certain opinion, in calling his attention, which, of course, at the same time, is calling my attention, as I follow the matter as it goes on, to these rules, and their wording, to see whether Mr. Atkinson holds the same opinion. At any rate I find it of some assistance to myself at present, and I will allow Mr. Wade to ask the question.

819. MR. WADE.] I do not want to go beyond leaving the legal interpretation to your Honor, but the element involved in this inquiry is gross negligence; but the question may arise further whether a practical man or practical men may take different views of the interpretation of that, and if, therefore, that is gross negligence.

820. HIS HONOR.] Yes, no doubt, Mr. Wade; but, to a certain extent, that practical man view is against you, because I can see no reason why there should not be an inspection, putting these rules on one side altogether. If there were no rules at all, common-sense says there should be an inspection.

821. MR. WADE.] I will show your Honor that even the rules do not show this.

822. Q. Now, take the word "workings"? A. Yes.

823. Q. As a practical man, knowing the workings of collieries, would you use that word workings as applied universally to all workings? A. I think it is; but if I might be allowed to give some explanation—

824. Q. Yes? A. I should say that the word "workings" applies to the whole of the workings.

825. Q. You mean the whole of the mine? A. Whether standing or otherwise. The words "working place," so far as I take it, being the present tense, I should say that that refers to a place actually in course of extension or at present working.

826. Q. And you would not call the main air-ways part of the workings of the mine, would you?
A. Yes; certainly.

827. Q. You would? A. Yes.

828. Q. You are clear about that? A. I should do so.

829. Q. Then you see here this provides for the main air-ways, which are part of the workings, being daily examined? A. Yes.

830. Q. Look at Rule 10. Does not the Special Rule speak of the inspection of the air-ways once week? A. It does.

831. Now, you see, you yourself, with all your experience, have interpreted "workings" in contradiction to the express words of Section 10, have you not? A. Well, I cannot say that. It is a matter of interpretation which is not quite decided.

832. Q. Now, I ask you, as a practical man, if the word "workings" includes main air-ways?
A. Yes.

833. Q. And those have to be done every morning? A. Yes.

834. Q. How can you reconcile that with Special Rule 10, which speaks of inspecting main air-ways once a week? A. I cannot reconcile it.

835. HIS HONOR.] Of course, it is only by implication that they conflict each other. They can both be done. They can be done daily and they can be done weekly. 836

Witness—A. A. Atkinson, 23 July, 1903.

836. MR. WADE.] Yes; but the question of negligence involves a question of duty. It is perfectly clear, from what Mr. Atkinson says, that it is a duty to inspect the main air-ways daily, and the Special Rule says "weekly."

837. HIS HONOR.] But you see there is no provision for recording the inspection under Special Rule 8 by itself. Special Rule 8 does not say anything about the recording, whereas Special Rule 10 says that a "true report of the state thereof" is to be entered in a book to be kept at the office.

838. MR. WADE.] Special Rule 9 provides for the conditions of the inspection under Special Rule 8. Special Rule 8 is the inspection, and Special Rule 9 provides for the report of the inspection, and that is the same as General Rule 4 of the Act.

839. Q. Now, Mr. Atkinson, I understand you to say that, whatever the inspection is before the shift commences, you should follow out the same inspection during the course of the shift? A. Yes.

840. Q. Now, look at Special Rule 9, and see about that. Special Rule 9 deals, first of all, with the entry of the report which is made before the commencement of the shift? A. Yes.

841. Q. Then look at page 64, Royal Commission, as to the duty of the deputy and fireman:—"He shall fix danger-signals when and where necessary, and shall continually, during his shift, inspect the working-faces," and that is all? A. Which rule is that?

842. Q. It is here "working faces"; it is narrowed down there to working-faces distinctly? A. Yes; I notice that.

843. Q. Well, what do you say about that? If the man complies with Special Rule 9 he will still leave out a part of the work which you say he ought to do? A. Well, it is rather involved—that rule. I do not pretend to be able to interpret it, but—[*Interrupted.*]

844. Q. I ask you this: Would you, as Chief Inspector, complain, either under General Rule 4, or under Special Rule 9, that a man had broken the provisions of the Act if, during the course of the shift, he examined working-faces only?

845. MR. BRUCE SMITH.] You mean actually working?

846. MR. WADE.] Q. Working-faces. I take the words here in the Act? A. I think the rules might be taken to include faces not actually in work.

847. Q. Do you think that Rule 9 means that: that "working-faces" means places being worked and places not being worked? A. Rule 8 says—[*Interrupted.*]

848. Q. I am talking of Rule 9, inspection during the course of the shift;—Can you tell me that that rule makes it the duty of the deputy to inspect the standing-places? A. It says the "working faces" there.

849. Q. And that is distinct from the standing-places? A. Yes; and it also says that he is to inspect the doors, stoppings, brattice, and ventilating appliances.

850. HIS HONOR.] Well, it does seem to me that this matter of the cross-examination has become simply a question of the meaning of the words in their ordinary sense. I have to interpret these things, and I must interpret them in the light of the circumstances, in the light of things generally known to experts in mining and not known to me: but, unless there is something special of that kind that Mr. Atkinson can point out to me to assist me, the mere fact that these things are in contradiction to one another is merely a matter of interpretation.

851. WITNESS.] I can only point out to your Honor the paragraph of the Commission's Report which comments upon the vagueness of Rule 9.

852. HIS HONOR.] Yes; I read that. They certainly seem to think that the condition of legislation is unfortunate.

853. MR. WADE.] They refer here entirely to Special Rule 8, and they do not seem to have considered Special Rule 9. Special Rule 9 was not brought to their attention during the inquiry.

854. HIS HONOR.] No doubt, they considered them all.

855. MR. WADE.] Now, I want to ask, Mr. Atkinson, when was it that your attention was first drawn to the fact—or, rather, your attention was drawn to the fact, was it not, at some time, that the form prescribed in the deputies' books did not cover all you really wanted;—is not that so? A. I have not discovered it; it does cover all that I require—all that the rule requires.

856. Q. Which rule? A. General Rule 4. That was all that it was intended to cover.

857. HIS HONOR.] What covers that?

858. MR. WADE.] Those printed forms in the deputies' report books.

859. HIS HONOR.] Those I have not seen?

860. MR. WADE.] I have got them here (producing one).

861. Q. That is the form, is it not, prescribed by the Department? A. Yes.

862. [Mr. Wade then tendered the form, and it was put in and marked *Exhibit* No. 2. It is as follows, the words which are in print on the form being shown in this copy in capital letters, and the words written in by the deputy in small letters]:—

"FORM NO. 8.—COAL MINES.

MOUNT KEMBLA COLLIERY.

GENERAL RULE 4.

REPORT OF INSPECTION BEFORE COMMENCING WORK.

AT MOUNT KEMBLA PIT OR TUNNEL. DISTRICT OR DISTRICTS EXAMINED: No. 1 Right.
COMMENCED INSPECTION AT 9 p.m. O'CLOCK ON THE 6th OF May, 1902.

I (OR WE) THE UNDERSIGNED, BEING THE COMPETENT PERSON (OR PERSONS) DULY APPOINTED FOR THAT PURPOSE, HAVE CAREFULLY INSPECTED (AS REQUIRED BY GENERAL RULE 4) WITH A* LOCKED SAFETY-LAMP AND REPORT AS FOLLOWS:—

GAS PRESENT:—None.

VENTILATION:—Good.

ROOF AND SIDES:—Safe.

IF ANY OTHER SOURCE OF DANGER:—

ANY OTHER REMARKS:—

TIME OF MAKING REPORT:—6 a.m.

* HERE INSERT "LOCKED SAFETY-LAMP," OR "NAKED LIGHT."

BAROMETER,

BAROMETER, THERMOMETER, AND WATER-GAUGE INDICATIONS AT TIME OF DESCENT:—

TIME OF DESCENT.	BAROMETER.	THERMOMETER.	WATER-GAUGE.
9 p.m.	29.30	59	

SIGNATURE OF COMPETENT PERSON,—Francis Dungey.

(Initialled) W.R. G.L."

863. Q. And that sets out this [*the form was read*]? A. Yes.

864. Q. Is this what you say, that there is a distinction between the inspection under the Act and under the rule? A. Yes, I think so.

865. HIS HONOR.] Q. You mean under the Special Rules and the General Rule?

866. MR. WADE.] Yes.

867. Q. You remember seeing Mr. Rowan's report on Mount Kembla? A. Yes.

868. Q. It is page 225, *Exhibit 30*, Royal Commission. It says here: "I examined the Report Books and found that the colliery was examined in accordance with the Coal Mines Regulation Act"? A. Yes.

869. Q. I suppose you saw that? A. Yes.

870. Q. Did it occur to you then to point out that something more was wanted? A. Well, it did not occur to me then, because in other reports Mr. Rowan says that he finds that the Act and Special Rules were being complied with. Perhaps it is in the same report.

871. Q. That is your explanation: that Mr. Rowan led you to believe from his examinations that the Act and Special Rules had been complied with? A. That is so.

872. Q. Now, with regard to these faces of No. 1 Headings; you will admit this, will you not, that at the time of this explosion the brattice in that heading was in good order? A. Prior to the explosion?

873. Q. Yes, just prior to the explosion? A. I think so. Yes.

874. Q. And you will also admit this, will you not, that no evidence has come before you to show that there was any accumulation of gas in that No. 1 face? A. No; I have no evidence of that prior to the explosion.

875. Q. And you have said this, have you not, that there may have been some gas in that heading which could not be detected with the ordinary safety-lamp? A. I do not know whether I have said so; but I say so now.

876. HIS HONOR.] Q. Well, it comes to this: that the ordinary safety-lamp will not detect gas if it is in minute quantities? A. That is so, your Honor.

877. MR. WADE.] Q. And this is recognised amongst mining men, is it not, that, for the practical purposes of safety, the ordinary safety-lamp is sufficient? A. Yes, it is.

878. Q. That is showing 2½ per cent. only? A. Yes, it is.

879. HIS HONOR.] Q. That is all it will show, 2½ per cent.? A. Well, some authorities say from 1½ per cent. to 2½ per cent.

880. MR. WADE.] Q. Well, up to only quite recently it would only show 2½ per cent.? A. 2 per cent. to 2½ per cent.

881. HIS HONOR.] Q. And that is quite sufficient? A. Well, under certain conditions it is dangerous.

882. MR. WADE.] Q. Supposing a man is working at the face with a naked light, he is safe if there is 2½ per cent. of fire-damp in the current? A. Well, I can quote one authority who says that 2 per cent. is safe with a naked light, but you require to be very watchful with it.

883. Q. That is, you would want to keep your current going? A. Yes.

884. Q. Well, if the current is going, then it is safe with 2½ per cent.? A. It is safe with 2 per cent.

885. HIS HONOR.] I suppose that means that the current diminishes it below 2 per cent.?

886. MR. WADE.] The current of ventilation.

887. HIS HONOR.] The current of ventilation that goes through a mine picks up the discharge of gas. It has arrived, say, at a certain point; it has picked up, say, sufficient gas to give it 2½ per cent. of gas mixed with air. Assuming that the discharge of gas is at all regular, the current, as it arrives there, will arrive there so charged, and keeping the current going will not diminish the quantity unless you make more air.

888. MR. WADE.] Q. Well, what is the minimum required by the Act? A. One hundred feet for every man, boy, and horse.

889. Q. And the discharge may be a good many cubic feet, and still the current will dilute it? A. Yes.

890. Q. And will do that all day long? A. Yes.

891. Q. Take the case of the Metropolitan? A. Yes.

892. Q. That is nearly always giving off gas in nearly every working-place? A. Yes.

893. Q. And the current there is sufficient to dilute that day after day and keep it safe? A. Yes.

894. Q. Whether the face of No. 1 was examined or not, if the air goes on past No. 1 on to the men in the next working-place, and there is gas coming from No. 1 faces, if it is traceable at all it would be traced in the adjoining working-place, would it not?

895. HIS HONOR.] On the return side, you mean?

896. MR. WADE.] Yes, on the return side.

897. A. I do not quite understand Mr. Wade.

898. HIS HONOR.] Q. If gas comes into that working-place it will be swept by the current of air into the next working-place? A. Yes.

899. MR. WADE.] Q. And if there is as high as 2 per cent. mixed with the air it can be detected? A. Yes, if there is 2 per cent. or more.

900. Q. So that, if that was the condition of affairs on the early morning inspection, if the man had missed the No. 1 faces, but went to the adjoining face on the return side, then, if gas was being brought from the No. 1 face, and there was 2 per cent. of it, it would be found in the adjoining face? A. Yes.

901.

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901. Q. And even if the brattice had been knocked down in the face of No. 1 for a considerable time, would not the air current still take the gas on, if there was any, to the place on the return side? A. Not altogether. There might be an accumulation of a more explosive mixture left beyond the brattice, and next the face.

902. Q. Yes; but as the air sucks away portion of that, and carries it on with it to the next place, you would still get the mixture of gas in the air? A. Yes.

903. Q. And you would detect that with the examination with the safety-lamp in the adjoining place? A. Yes.

904. HIS HONOR.] Q. I may interpose here, on the same point, I suppose, of course the ventilation is going on while the men are not working there? A. Yes, your Honor.

905. HIS HONOR.] Yet there is that piece of evidence, Mr. Wade, of a man going in to examine a place, and saying to one of the men afterwards, "If you had been in before me you would have had your head blown off; she was standing full of gas." Well, if that is true, it shows that the gas can accumulate, notwithstanding the ventilation.

906. MR. WADE.] If that is true; but that is a statement about a man who is dead. The only statement of that nature that is made by a man who is living, is that by Broadhead, and that is largely discredited. Heron said that Dungey told him that; but Dungey is dead, and matters are left *in statu quo*.

907. Q. There was this to be said, if the brattice is broken, if the ventilation is broken down, and the current is then a long way from the face, then you may get gas near the face? A. Yes.

908. Q. If you have the brattice down, or if the brattice is a long way from the face, and there is a long heading past that, and the current is sweeping past that, then you might have gas beyond that in the heading? A. Yes.

909. Q. But in this case the brattice was quite close to the face? A. Within a reasonable distance.

910. (Mr. Wade explained this evidence to His Honor on the plan of the mine).

911. Q. The brattice came up No. 1 back heading, past that cut-through, within 3 or 4 yards of the face? A. Yes.

912. Q. Now, in giving your evidence to Mr. Bruce Smith you said this: "It is necessary to examine standing-places where gas is known to be given off"? A. Yes.

913. Q. You put in those qualifying words, did not you for a purpose, I suppose? A. Well, I think it is good mining practice—[*Interrupted.*]

914. Q. Well, did you have any purpose in putting those words in?

915. MR. BRUCE SMITH.] Let him answer the question.

916. HIS HONOR.] I understood that to mean "in a mine where gas was known to be given off"; not "in a standing-place where gas was known to be given off."

917. MR. WADE.] Q. Which did you mean, either or both of them? A. In either of them it is a good practice.

918. Q. Then, if gas is not known to be given off, do you say it is a bad practice not to examine a standing-place, but to comply with the words of the Coal Mines Act literally? A. Well, to comply with the words of General Rule 4 it does not require you to inspect idle places.

919. Q. Quite so? A. But I think the Special Rules do require it.

920. Q. Well, that is not an answer to my question, unfortunately; I asked you, in the case of a mine that is known to give off gas, do you say it is bad practice to omit to inspect the idle places? A. Yes.

921. Q. And what is the risk you run—you say it is bad practice? A. Well, you do not know when gas may be found, and, although a mine has not been known to give off gas for years, it may afterwards be found; and such places are amongst the most likely places where it may be found.

922. Q. Now, Mr. Atkinson, if a place is being worked, and no gas has been traced in that during the working down of the coal, do you think it is likely that, after you had ceased to work it, you would find gas in that working? A. It is more likely during the working.

923. Q. Do you think it is likely when gas is not found during the working, that you would find gas after they had ceased to work it? A. No, it is not likely.

924. Q. Then take that case: in places that have been worked, where gas has not been found, do you say now it is bad practice not to examine those when they are idle? A. Yes, I do.

925. Q. What is your reason—the question of gas is gone now—what is your reason;—the reason you gave before was that gas may occur? A. Well, these places will probably be timbered, and may be required to work again, and their condition should be inspected.

926. Q. What for—re-starting? A. For the purpose of observing their condition as to roof and sides.

927. Q. But for the purpose of re-starting? A. Not necessarily for the purpose of re-starting.

928. Q. Why? A. In accordance with good mining practice.

929. Q. That is not an answer to my question;—it may be the perfection of mining practice to do it, but I am asking you what is your reason for saying it is bad mining practice, so far as the question of gas is concerned? A. Well, I cannot add anything more to what I have said,

930-1. Q. I want the specific question answered: if there is no gas known to be there, and it has not been found in the working, on what ground, so far as the question of gas is concerned, do you say it is bad practice not to examine a standing-place;—can you give me any grounds? A. I cannot give you any further than what I have already said.

932. Q. You will admit that you have not answered the question I put to you? A. No, I will not.

933. Q. Can you answer it, then;—you gave me the answer that there may be danger of gas occurring in a place that is idle;—I am putting to you a case where gas has never been known during the working? A. Yes.

934. Q. What is the objection, then? A. Well, I say that gas may accumulate in such places, although it has not been seen. The time may come when it may be seen.

935. Q. Do you know of any cases in your own experience where a place has been worked and has shown no sign of gas, and after it became idle the gas issued—I mean any one case in your own experience? A. I cannot state a particular case at the present time.

936. Q. Now, when you came out to this Colony, Mr. Atkinson, was some six years ago? A. Yes.

937. *Q.* And I suppose you, as far as you could, made yourself thoroughly acquainted with, at all events, all the bigger mines of the Colony? *A.* Yes.

938. *Q.* And you made yourself acquainted with all the material conditions of Mount Kembla, did you not? *A.* So far as I reasonably could do so.

939. *Q.* Well, is there anything that you omitted, do you think;—any important thing you omitted in your inspection of Mount Kembla? *A.* Not that I am aware of.

940. *Q.* Now, first of all, will you not admit this, that Mount Kembla is one of the best equipped mines in New South Wales? *A.* In regard to haulage and the laying out of the roads, I should say it is.

941. *Q.* Now, there are great difficulties to contend with there in getting the coal away from the mine, are there not;—there is an awkward incline to deal with? *A.* Yes, there is some difficulty there, I understand.

942. *Q.* And Kembla had one of the largest outputs in the Colony, had it not, before this disaster? *A.* Yes.

943. *Q.* And do you not think it would require some skill in management to keep that output up? *A.* Yes.

944. *Q.* And who has been the manager during the whole of the time you have been in the colonies? *A.* Mr. Rogers.

945. *Q.* Now, you have heard something about this day-book that Mr. Bruce Smith said was written up beforehand by Evans?

946. *MR. BRUCE SMITH.]* I said nothing of the kind.

947. *MR. WADE.]* You said so distinctly; but if you withdraw it, I know where I am.

948. *HIS HONOR.]* Well, the passages referred to, Mr. Wade, were passages that might be relied upon as raising suspicion; but, in my opinion, there is nothing else to justify me in drawing the conclusion that it was actually done, unless, of course, there is something more. I must not go upon suspicion.

949. *MR. BRUCE SMITH.]* I brought that under "lax management," that Mr. Rogers allowed that sort of thing to pass.

950. *MR. WADE.]* Did you know that the question was raised at the Inquest, that these reports were written up in anticipation days ahead? *A.* I do not think so.

951. *MR. BRUCE SMITH.]* I did not suggest that at all.

952. *HIS HONOR.]* I think Mr. Wade has a right to bring out any explanation in regard to that. I think the points you brought forward revealed circumstances that raised suspicion that the book was written up beforehand.

953. *MR. BRUCE SMITH.]* Evans was cross-examined in regard to that, and that was the evidence he gave. Now, in formulating the paragraphs of this statement under "lax management," I quoted that to show that books which are required to be very strictly kept under the Act, and under the Rules, had been allowed to be kept in that very lax way; and Mr. Rogers was prepared with no explanation of why this had all been done. An explanation was given by Evans, I think, afterwards, that he had turned over some leaves wrongly, but the matter was allowed to drop. But there it stood in evidence. That is the only thing. My friend has no right to say now, having everything reported, that I have charged him with writing these things up beforehand.

954. *HIS HONOR.]* If it is a part of your case, then Mr. Wade has a right to deal with it; but if it is not a part of your case, Mr. Wade, at my request, will say no more about it.

955. *MR. BRUCE SMITH.]* It is only a part of my case as showing that Mr. Rogers' supervision was lax in allowing the books to be written up in that way.

956. *HIS HONOR.]* Quite so.

957. *MR. BRUCE SMITH.]* But my friend says I had charged that this had been written up beforehand. I cross-examined for the purpose of getting an explanation of it. There is a charge here of laxity.

958. *HIS HONOR.]* I think that under that heading Mr. Wade is entitled to bring in other facts before me.

959. *MR. WADE.] Q.* You remember that question being raised at the Inquest that Evans had written up these books days ahead? *A.* Yes.

960. *Q.* Now, did not he produce those books and show the jury them, myself on one side, and Mr. Bruce Smith on the other?

961. *MR. BRUCE SMITH.]* Did not who produce them?

962. *MR. WADE.] Q.* Evans. Did not he get out of the witness-box and show these books to the jury and explain them? *A.* I believe he did.

963. *Q.* And you remember a statement was made that he had made some alterations? *A.* Yes.

964. *Q.* Now, was not this the fact: Did not this appear in the books, that he had got up to August the 7th, by July the 30th? *A.* Yes; I think he was a week wrong.

965. *Q.* Did not he say that he had found out that he had turned over just a week in the book by taking two leaves together? Your Honor knows the diaries show a week at a time—a week at an opening? *A.* If I remember rightly, that is the explanation.

966. *Q.* And did not he say that Mr. Rogers had pointed out the mistake to him, or the under-manager had?

967. *MR. BRUCE SMITH.]* Is that in the evidence at all?

968. *A.* I do not remember who pointed it out.

969. *MR. WADE.]* It is not in the evidence, but it was said to the jury.

970. *MR. BRUCE SMITH.]* Is that fair?

971. *HIS HONOR.]* I think it is fair, because the book cannot be found now.

972. *MR. BRUCE SMITH.]* But Mr. Wade asks whether Mr. Evans did not point out to the jury that Mr. Rogers called his attention to that. I have no recollection of that, and that would not be shown in the book.

973. *HIS HONOR.]* Mr. Wade is asking Mr. Atkinson if he recollects it.

974. *MR. BRUCE SMITH.]* If Mr. Evans was here, of course it would be a complete answer as far as Evans was concerned if he had pointed out that he had missed a week; but I am putting this forward under the charge against Mr. Rogers of laxity in administration; and, therefore, it does become very important

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important whether Mr. Rogers pointed this out to Evans, or whether he simply let it go without any comment or any correction. Now, it becomes very important to know whether Mr. Evans said this. I have no recollection of it. It is for Mr. Wade to show in the evidence.

975. HIS HONOR.] Mr. Wade is asking it, because it is not in the evidence.

976. MR. WADE.] Q. I made a mistake, I believe, in saying "Mr. Rogers"; I believe it was Nelson. Did not he say "Nelson, the under-manager"? A. I do not remember whom he said; but I know the matter was pointed out.

977. MR. BRUCE SMITH.] There is evidence, your Honor, that the under-manager pointed it out to him.

978. MR. WADE.] It appears in the book, your Honor. I am right in saying that.

979. HIS HONOR.] Of course somebody must point it out—the first who notices it.

980. MR. WADE.] Q. Is it not a fact that in this book, under the dates, there are names of certain absentees—Brown, Jones, and Robinson; do you remember seeing that? A. Yes, I do.

981. MR. BRUCE SMITH.] Q. Do you remember seeing that, that, as he came to the real date, those absentees which appear a week ahead were transferred back to the first date? A. I did not notice that. It was possibly done.

982. HIS HONOR.] Was there any gap in the book between the dates?

983. MR. BRUCE SMITH.] Will your Honor understand that I am not charging now that this was an attempt to write up ahead; but that Mr. Rogers failed to supervise it properly.

984. MR. WADE.] It is on page 32 that Mr. Bruce Smith cross-examined:—

"It is not a fact that I used to write up my reports three or four days ahead. My last entry is under date of the 7th of August. I never wrote two reports at once. If I made an entry in the book before the proper day, I did it by mistake. After having entered up what I had done I used sometimes to have to scratch it out and write across it 'No work.'"

985. HIS HONOR.] If I remember rightly, there were two parts referred to—one where he entered a week ahead.

986. MR. WADE.] In the last paragraph of page 32, down to "no work."

987. HIS HONOR.] That is what I was referring to; but I understand that Mr. Bruce Smith says now that he is not charging the man with deliberate misconduct in entering up the book beforehand, but that mistakes of that kind were made, and Mr. Rogers did not discover them.

988. MR. WADE.] That is it, your Honor.

989. Q. Now, Mr. Bruce Smith said just now that he charged that these books, required by the Act to be kept carefully, were supervised in a lax manner by Mr. Rogers; you heard that, did you not?

990. MR. BRUCE SMITH.] Or not supervised at all.

991. MR. WADE.] Q. Well, that he was lax in looking after the books that the Act required to be kept carefully? A. Yes.

992. Q. Do you not know perfectly well that this book in question was not required by the Act to be kept at all? A. I do.

993. Q. It is a book kept at Mr. Rogers' own suggestion, for the use of his deputies and anybody who wanted to see it? A. Yes.

994. Q. That was a book kept to record the work done by the day-deputies during their work each shift? A. Yes.

995. Q. And is not this the practice, that the under-manager is the man who is primarily supposed to examine all these books that are kept at the mine? A. No; I think it is the usual practice for the Manager to do it as well as the under-manager.

996. Q. Exactly; but is it not the primary duty of the under-manager to do it day by day, to examine the books required by the Act to be kept? A. Yes.

997. Q. Then, of course, if he had the time, the Manager is supposed to see these books, too? A. Yes.

998. Q. You do not lay it down that he is supposed to look at these books every day? A. No.

999. Q. Because he has in his place the under-manager? A. Yes.

1000. Q. Now I come to the letters you wrote to Mr. Rogers—that letter of May, 1898. I understand your complaint here is that he did not answer the correspondence? A. Yes.

1001. Q. Is there anything else with regard to these letters? A. Oh, I think that is the only thing.

1002. Q. Do you complain of his not carrying out your suggestions? A. Yes.

1003. Q. Then, do you think he ought to carry out your suggestions? A. Well, I think he either ought to have done so or explained why not.

1004. Q. I want to know this: whether you think he ought to carry out your suggestions when you make them or not? A. No. I have no power to suggest means or remedies under the Act.

1005. Q. You have no power to suggest remedies? A. I am not supposed to suggest remedies.

1006. Q. In the case of danger? A. I can serve a notice, under section 20, in a case of danger.

1007. Q. Suggesting to them to alter the practice that is dangerous;—is not that so? A. An inspector is not supposed to suggest a means of remedy.

1008. Q. Under section 20 of the original Act—I do not know what it is in the Consolidated Act—if you:—

"In any respect which is not provided against by any express provision of this Act, or by any special rule, find any mine or any part thereof, or any matter, thing, or practice, in or connected with any such mine, or with the control, management, or direction thereof by the Manager, to be dangerous or defective, so as, in your opinion, to threaten or tend to the bodily injury of any person, you may give notice in writing thereof to the owner, agent, or manager of the mine. . . . and require the same to be remedied."

You can call upon that Manager to remedy that defective practice? A. Yes.

1009-1109. Q. If he does not do it you can call upon him to submit to arbitration;—is not that so? A. Yes.

1110. Q. If he does not comply with the award he can be prosecuted for a breach of the Act? Yes.

1111. Q. And none of these questions that arose in the letter of 13th of May were of that character, were they? A. I do not remember the subjects now.

1112. Q. The matters are "The old Davy lamps, out of date now, and illegal" —[*Interrupted*].

1113. HIS HONOR.] Would not the use of Davy lamps come under section 20?

1114. MR. WADE.] Q. That is what I want to find out. If it is a danger, or tends to the bodily injury of any person, section 20 will apply? A. If it is not specially provided for.

1115. Q. If it is not it can be provided for by prosecution under the Act, or else it is a mere suggestion which has no binding force.

1116. HIS HONOR.] I thought you were suggesting that none of the matters mentioned in the 13th of May came under section 20 of the Act. Well, it occurs to me, the first subject in the letter is the use of old Davy lamps; and it would seem that that comes under that section.

1117. MR. WADE.] Q. Is that so, Mr. Atkinson, this matter of the Davy lamp. Did you consider that that did or did not come under section 20 in your opinion? A. No; in my opinion, no.

1118. Q. And if there was a remedy it was by a prosecution? A. Yes.

1119. Q. If he had broken the Act? A. Yes.

1120. Q. Did you prosecute him for a breach of the Act? A. No.

1121. Q. I suppose when you find a man breaking the Act, a manager, you take some steps, do you not, to deal with it? A. Yes.

1122. Q. Now, do you know anything about the history of these Davy lamps? A. In what way do you mean?

1123. Q. How they were used, if at all, after the letter of May the 13th? A. By the deputies in making their inspection under General Rule 4, so I understand.

1124. Q. Yes. Now, this is the fact, is it not, that for the purpose of testing for gas, if there is gas, the Davy lamp is the best lamp you can use, or it was until a couple of years ago? A. Well, I could not say that; but it was considered a good lamp for testing purposes.

1125. Q. Going back five years ago, was not the Davy lamp looked upon by most mining men as a good lamp as you could have for testing; that is, for examining places? A. Well, it depends so much on what you mean by "good for testing purposes," because, although it might be useful for testing in a place, in travelling between places without a shield, and—[*Interrupted*].

1126. MR. WADE.] That is not testing.

1127. MR. BRUCE SMITH.] Let him finish.

1128. MR. WADE.] Q. Keep to the question of testing alone, and come to the travelling afterwards? A. Well, I think I have explained that, for testing purposes, the lamp is a good one; but the official who had the lamp would have to travel between the places whilst he was inspecting, and possibly might have to go through places where the velocity of the air was great, and in such a case as that the Davy lamp has been condemned, and was condemned in the Commission of 1886.

1129. HIS HONOR.] Q. What was the fault for which it was condemned? A. That it was unsafe in inflammable mixtures at a high velocity. General Rule 9 refers to the matter.

1130. MR. WADE.] Q. That is, that the flame might get through the wire, is not that it? A. Yes.

1131. Q. And so come in contact with the gas of an inflammable mixture? A. Yes.

1132. Q. Now, just take Kembla. You knew perfectly well yourself, did you not, or you believed then honestly that there was no danger in carrying a Davy lamp in any current in Mount Kembla, did you not? A. Yes.

1133. Q. And do not you know this, as a matter of fact, these Davy lamps did have shields? A. Not all round.

1134. Q. They had shields on half the side, half the circle? A. Yes; but that Royal Commission considered that half a shield is worse than none.

1135. MR. BRUCE SMITH.] Q. That is the same Commission, in 1886? A. Yes.

1136. MR. WADE.] Q. But the reason you did not prosecute in this case was because there had been no breach of the Act in Mount Kembla; was not that it? A. No. If I might explain, after I wrote that letter to Mr. Rogers I wrote a letter to Mr. Rowan, the District Inspector, calling his attention to the matters that I had referred to the notice of Mr. Rogers, and asked him if he would let me know if they were not attended to. Not having received any reply from Mr. Rowan, I took it for granted that they would be, or had been, attended to.

1137. Q. What I mean is this, quite apart from that: You say here in your letter of May 13th "These lamps are illegal under General Rule 9"? A. Yes.

1138. Q. Now, will not you admit this, that in Kembla you could not say they are illegal, because you believed Mount Kembla to be free from gas? A. Well, I say wherever they were used I think they were illegal. Of course it is for His Honor to interpret General Rule 9.

1139. Q. I know that. I am talking of what your view was at the time. Very well, we will leave it. You do not complain now that he did not observe your request as to the old Davy lamps;—is that so or not? A. I should like that again.

1140. Q. Do you complain now that he did not observe your request as to these old Davy lamps? A. Yes.

1141. MR. BRUCE SMITH.] I drew attention to it as unanswered correspondence.

1142. HIS HONOR.] Yes; unanswered correspondence, and uncomplied with.

1143. MR. BRUCE SMITH.] I did not put in the other at all.

1144. MR. WADE.] Is there no charge of that character?

1145. MR. BRUCE SMITH.] No; I never made such a charge. I gave that as part of the correspondence which he simply neglected.

1146. HIS HONOR.] I thought you did; because I remember several times yesterday pointing out that I had noticed and noted the matters going to show that it was not complied with; and I wanted to see the evidence that it was not answered.

1147. MR. BRUCE SMITH.] I do not think so, your Honor. I should have enumerated it specially.

1148. HIS HONOR.] Yes; you pointed out the evidence that safety-lamps were sent up by Dr. Robertson, and Mr. Rogers knew nothing about them, and did not know they were wanted.

1149. MR. BRUCE SMITH.] But I did not include that in my charge at the time.

1150. HIS HONOR.] I certainly did have it in my mind, and the passage is noted and marked that

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that he never did use the safety-lamps, and he was not even aware that the safety-lamps which had been sent up by Dr. Robertson were at the mine; and he said he was surprised when they were sent up because they were not wanted, and he did not use them. You referred me to these passages.

1151. MR. BRUCE SMITH.] Yes; but I did not make any specific charge that he did not do what he was asked by Mr. Atkinson.

1152. HIS HONOR.] Then you put it that he did not do what he ought to have done?

1153. MR. BRUCE SMITH.] Yes; under lax management, but not as a breach of the Act.

1154. HIS HONOR.] If it is not relied upon as being against him at all, I will not consider it.

1155. MR. BRUCE SMITH.] Your Honor will see that under the Act there is such a thing as good management; and I put this under the head of lax management. I pointed out that this correspondence had been sent to him, and that he had done nothing—not as a breach of the Act, but he had not answered the correspondence, and he had not interested himself in the lamps which were at the mine. I did not put that as a breach of the Act.

1156. HIS HONOR.] It is not a question of a breach of the Act; but in what way do you put it, that lax management; because I cannot see that it is lax management, if the Davy lamp is as good as the safety-lamp, and if Mr. Rogers, knowing or believing that, when the safety-lamps came up, said, "I will not use them."

1157. MR. BRUCE SMITH.] Your Honor is now really arguing on an assumption. I have not charged him with not drawing a distinction, or with drawing a distinction, between the Davy lamps and other lamps. I said that he did not answer this correspondence from the Chief Inspector, and on the question of the lamps that either were or were not important to have in the mine he took so little interest in them that when other lamps came up he says he felt surprised; he did not know whether he wanted them.

1158. HIS HONOR.] He was quite sure that he did not want them. I cannot say that that is not paying attention to it, because it is paying attention to it, and coming to the opinion that they were not wanted.

1159. MR. BRUCE SMITH.] I do not charge him with using a Davy lamp when he should have used another. That is no definite charge of mine; and, if your Honor thinks that what he did in connection with the lamps, and that the correspondence does not support, or help to support, the charge of lax management, I cannot help it. I can only put it before you. Your Honor will see I have no paragraph in this statement under which that can be brought. That would have to be alleged specifically.

1160. MR. WADE.] Q. Supposing Rogers had said this, "You complain of my Davy lamp; now I will go back to the naked light," could you have stopped him? A. Under the Special Rule, he is bound to use safety-lamps for inspections before the men go in to work.

1161. Q. Are not there Special Rules like that all over the Colony? A. No.

1162. Q. What? A. No.

1163. Q. There are not? A. No.

1164. Q. Do you mean to say in no other mine worked with naked lights have they got a rule like that with regard to the inspection? A. I did not say that.

1165. Q. Is there another mine? A. Yes.

1166. Q. Tell us where they are? A. Well, I can get a copy of the Special Rules of all the collieries.

1167. Q. I do not want you to go to all that trouble;—I want you to tell us some mine that you know of. Tell us those you have in your mind's eye at present? A. Well, I think the—

1168. Q. Yes? A. I could not say which collieries have rules exactly similar to those at Mount Kembla; but if it is desired that I should find out, I will do so.

1169. MR. WADE.] If you do not know, I will not bother you.

1170. MR. BRUCE SMITH.] They vary a good deal.

1171. MR. WADE.] Q. Now, the other matter referred to is, "Reports being made at the station before each shift commences"? A. Yes.

1172. Q. Now, that was a notice you sent round to all the collieries, was it not, pretty well in New South Wales, about making the reports at the station before the shifts commence? A. No; I do not think so.

1173. Q. Was not that in consequence of some question that arose in the Dudley inquiry? A. We sent a circular about the ventilation.

1174. Q. Did not this very question arise in the Dudley inquiry? A. It did.

1175. Q. And did not you send round circulars to all the mines that they should be careful that reports were made at the stations before the work commenced?

1176. MR. BRUCE SMITH.] Mr. Wade is evidently under the impression, judging from the course he is taking, that I am charging Mr. Rogers with disobedience of those three instructions contained in that letter.

1177. MR. WADE.] I am not under that impression at all.

1178. MR. BRUCE SMITH.] I am not charging him with a breach of that (reports being made at the station before each shift commences). I am not concerned with it. I have not included it. But what I charged him with was that that was an important letter, and that he did not answer it, and that his attention had to be drawn, I think it was with regard to that letter. Oh, no; I charged that there was no answer, but I did not make that a charge that he did not comply with the request.

1179. HIS HONOR.] I did not understand with regard to those two last matters that Mr. Bruce Smith made any charge at all that they were not complied with; but still, if you want to show that these things are intrinsically unimportant, that would have a bearing on the charge of not answering the letter.

1180. MR. WADE.] If my friend says now he makes no charge of disobedience or infringement of the Act with regard to any of those three matters, I will leave it.

1181. MR. BRUCE SMITH.] That is so.

1182. HIS HONOR.] Q. Then I suppose it follows that these Davy lamps that were in use at the mine were so constructed that they might be safely carried against the air current ordinarily prevailing in that part of the mine in which the lamps were for the time being in use, even though such current were inflammable (General Rule 9)? A. I do not think so, your Honor. If the current was inflammable, I think those lamps were not in accordance with the Act.

1183. MR. WADE.] Q. Did you have any reason to suppose that the current was inflammable? A. No.

1184. MR. WADE.] That is your guiding point.

1185. HIS HONOR.] Oh, no; it is not a question whether you have any reason to believe. Special Rule 8 says that the fireman, before the shift, has to examine with a safety-lamp. There is no doubt about that.

1186. MR. WADE.] Yes.

1187. HIS HONOR.] Then General Rule 9 says:—

“Wherever safety-lamps are used, they shall be so constructed that they may be safely carried against the air-current ordinarily prevailing in that part of the mine in which the lamps are for the time being in use, even though such current should be inflammable.”

Now, that is perfectly definite, too. It does not depend on the presence of gas in the mine at all. It says wherever they are used you are to guard against that particular danger. Well, now, Mr. Atkinson says that, in his opinion, the Davy lamp in use did not comply with General Rule 9.

1187½. MR. WADE.] Q. Now, Mr. Atkinson, there is no harm, is there, if, in a non-inflammable atmosphere, the flame of the Davy lamp is blown through the gauze? A. No.

1188. Q. No harm whatever? A. No.

1189. Q. So the only point in this Rule 9 is when the lamp is carried in the presence of an inflammable atmosphere—that is the whole danger? A. That is the whole danger. I leave the interpretation of the rule to his Honor.

1190. HIS HONOR.] Q. In other words, if there is no gas, the provision of the Special Rule and the General Rule that I have read may be disobeyed, and no harm will result? A. That is so.

1191. HIS HONOR.] Whether they ought to be disobeyed is another matter.

1192. MR. WADE.] Q. And you know General Rule 4 gives you the right, if there has been no gas found for twelve months previously, to examine in the morning with a naked light? A. Yes.

1193. Q. And nobody can complain? A. Yes.

1194. HIS HONOR.] General Rule 4 says:—

“The inspection shall be made with a locked safety-lamp, except in the case of any mine in which inflammable gas has not been found within the preceding months.”

Well, of course, the meaning of that to a careful manager will have to be considered. I take it that before he changed from locked safety-lamps to naked lights he would make careful inquiries. However, that is another matter.

1195. MR. WADE.] Q. Well, Mr. Atkinson, you made careful inquiry as to the gassy capabilities of Mount Kembla? A. Yes.

1196. Q. You inquired personally, yourself? A. Yes.

1197. Q. You tested, yourself, with a safety-lamp? A. Yes.

1198. Q. You inquired of the Inspectors? A. Yes.

1199. Q. And you were even open to any communication anonymously? A. Yes.

1200. Q. And you came to the conclusion honestly that there was not gas detectable in Mount Kembla? A. Yes; I had not heard of any, and I was not able to find any myself.

1201. Q. And that opinion was indorsed by the opinion of your Inspectors? A. Yes.

1202. Q. Now, on this question again, General Rule 9;—in practical working, that rule is taken to apply to a case where the mine is worked with safety-lamps, is it not? A. Oh, I think it could apply to a case where the inspection is made with a safety-lamp as well.

1203. HIS HONOR.] Q. Is it an unusual concurrence of circumstances, that which existed here, where the examinations were with safety-lamps, but the working was with naked lights? A. Oh, it is not an unusual thing.

1204. MR. WADE.] Q. It generally indicates, does it not, a little extra care on the part of the management? A. Yes.

1205. Q. The Act only requires a naked light? A. Yes.

1206. Q. Now, those Special Rules of Mount Kembla were framed by the management? A. Yes.

1207. Q. They did not come out of the Mines Department's brain? A. No.

1208. Q. They came from the management themselves? A. Yes.

1209. Q. And the Mines Department or the Minister adopted them? A. Yes.

1210. Q. May I take this: up to the 30th July, if the rules with regard to firing shots in dusty places were observed, you saw no reason for using safety-lamps in Mount Kembla? A. So far as my own knowledge is concerned?

1211. Q. Exactly? A. Yes.

1212. Q. Now, let us come to the question of coal-dust. Coal-dust is only a danger under certain special conditions, is it not? A. Yes.

1213. Q. You want, first of all, the dust to be in the air, do you not? A. Yes.

1214. Q. In suspension in the air? A. Yes.

1215. Q. It has to be of a certain fineness, has it not? A. Yes.

1216. Q. It wants very fine dust? A. Yes.

1217. Q. And of a certain purity? A. Yes; stone-dust would not explode.

1218. Q. If it is mixed with stone, or mixed with a thing like horse-dung, or anything like that? A. It would render it less explosive.

1219. Q. And explosibility depends also on the time it has been exposed to the action of the air? A. To some extent, yes.

1220. Q. And the guiding element is, after all those things, a concussion;—is not that so? A. Well, you may have dust in a quiet atmosphere. If it is mixed with gas, of course, to a small percentage, the mixture is more readily inflammable with a little gas when there is an admixture of dust than without any dust in the atmosphere.

1221. Q. Then you come back to this point, that you either want an initial explosion of gas, or else you want the heat and energy caused by the shock from a blast;—one of those two things, is it not? A. Yes.

1222. Q. Now, I will take the question of the prevention of the spread of an explosion from coal-dust first of all;—you will admit this, will you not, that it is absolutely impossible to remove all the dust from a mine? A. Yes.

1223. Q. You cannot cart it outside;—that is impracticable? A. Yes.

1224.

Witness—A. A. Atkinson, 23 July, 1903.

1224. Q. And the amount that becomes dangerous under those conditions you have mentioned need be only about one two-hundred and twenty-eighth part of an inch thick? A. Yes.

1225. Q. It is thinner than paper;—it is one two-hundred and twenty-eighth part of an inch? A. Yes.

1226. HIS HONOR.] One two-hundred and twenty-eighth part of an inch is evidently very thin. That is taking the roadway all round.

1227. MR. WADE.] Q. Now, you said yesterday that experts differ as to the efficacy of watering? A. They do.

1228. HIS HONOR.] Q. As to the efficacy or the practicability? A. Well, the efficacy, as well as the practicability.

1229. MR. WADE.] Q. And Mr. Hall, that is a name you have mentioned? A. Yes.

1230. Q. He is a very well-known Imperial Inspector? A. Yes.

1231. Q. And has charge of a large coal-mining district in England? A. Yes.

1232. Q. You remember an explosion at a colliery called the Pen-y-craig? A. Yes, I do.

1233. Q. Did not he report upon that? A. I do not know that he reported; but he visited it and referred to it in his report of 1901.

1234. Q. And did not he point this out, that the explosion in Pen-y-craig had apparently crossed over wet lengths of road, and not been stopped? A. He did say so, yes.

1235. Q. And as a matter of fact he has discontinued the practice of watering in his district? A. Well, the collieries have discontinued.

1236. Q. And he has approved of it? A. Evidently.

1237. Q. Now, you remember the case that Mr. Daniel Robertson referred to—I think it was in Fernie Colliery? A. Yes.

1238. Q. Where was that? A. British Columbia.

1239. Q. That took place the year before last? A. Last year, I think.

1240. Q. Now, did not the evidence show there, that although the road had been damped in a number of places it had not checked the explosion? A. Well, it was so reported; but, personally, I am not satisfied that they could describe it really as a properly watered wet length; and I do not think there was any evidence to show that it had been watered with any intention to water the dust.

1241. HIS HONOR.] Mr. Wade, you say that it had not checked the explosion; do you mean that it had been a factor in the explosion?

1242. MR. WADE.] That it had passed over a wet length.

1243. HIS HONOR.] That is one thing; but what is charged against the dust is that it reinforces the explosion; not that it fails to stop it, but that it carries it on.

1244. MR. WADE.] Q. Is it a fact that the explosion had evidently died out, as far as you could see the action of it, in the dusty parts of Mount Kembla;—that the last you saw of it was where it was driest up in the 4th Left? A. Well, there is no doubt—[*Interrupted*].

1245. HIS HONOR.] Well, there is the finding of the Commission.

1246. MR. WADE.] Do you remember whether the Commission referred to that?

1247. HIS HONOR.] The finding as to the cause.

1248. MR. WADE.] The cause, your Honor, was an ignition of fire-damp, reinforced by coal-dust.

1249. HIS HONOR.] [*Reading from paragraph 62 of the Report of the Royal Commission.*] "The fire-damp and air exploded, and, in turn, started a series of explosions of coal-dust." You see it is one thing for a damp part of the mine not to check it; and another thing to find that that damp part carried it on.

1250. MR. WADE.] Of course, the case put by Mr. Bruce Smith was this: that you ought to water; perhaps you cannot water the whole mine, but you ought to water certain dry lengths, where there is likely to be a dry and dusty district. Now, I am putting Mr. Hall's view of his experience, and the experience and the report of the Fernie explosion, which is, that this watering of wet lengths did not stop the explosion, but that the explosion went on in spite of it.

1251. HIS HONOR.] No. As I have gathered of this mine, it is a mine which requires almost no watering, because it is damp, and not a particularly dusty mine. But there are parts which are dusty, and there are parts where the water accumulates, and from which it has to be pumped up and carried to other places from which it will run out; and that water does not appear to have been used in an intelligent way to damp the dust.

1252. MR. WADE.] I will go further and say it was not intended to be used for the purpose. It was not required.

1253. HIS HONOR.] I was going to ask Mr. Atkinson whether, in his opinion, the failure to damp or moisten the dust was bad management at all in Mount Kembla.

1254. MR. BRUCE SMITH.] Mr. Atkinson has granted that; he says that they ought to have used safety-lamps.

1255. HIS HONOR.] In view of that, do you withdraw the case as to the dust; because, after what Mr. Atkinson said, I can hardly find against Mr. Rogers. Mr. Atkinson has not laid his finger on anything in regard to the dust which, in his opinion, is bad management.

1256. MR. BRUCE SMITH.] Not if you take the dust as an isolated charge. Mr. Atkinson, you see, took dust and gas together. He said that, having regard to the dust there, and to what evidence had been given of the presence of gas in the mine, he thought it was preferable to use safety-lamps, and stop the danger at its initiation.

1257. MR. WADE.] He did not say that. He said he might, as to what he knows now.

1258. MR. BRUCE SMITH.] He did not say that as to what he knows now. I was very careful to get him not to say it on what he knows now. I would not be so absolutely childish.

1259. HIS HONOR.] The question is, under the circumstances of the case, as known at that time, was it or was it not bad management to water the dust in the insufficient way it was alleged to have been watered? Well, that is the thing that I do not understand Mr. Atkinson to say yes to. I was going to ask him about it, because it seemed to me to be an important point.

1260. MR. BRUCE SMITH.] I am not seeking to make a charge against Mr. Rogers. I am very careful. I have only to use the material I have got. I have asked Mr. Atkinson this, "You have heard the

the evidence about gas"? And I said, "Assuming that to have been known to Mr. Rogers"—I was very careful to put it in that way. I am not going bald-headed, so to speak, for Mr. Rogers; I am not instructed to do it. I have not any feeling at all in the matter.

1261. HIS HONOR.] You have shown no feeling.

1262. MR. BRUCE SMITH.] I said to Mr. Atkinson, "You heard the evidence given as to frequent discoveries of gas in that mine;—now, assuming that was known, or a great part of it was known, to Mr. Rogers, what should he have done with regard to safety-lamps or with regard to dust"? That is my point. Mr. Atkinson said, "I consider that, under the circumstances, a good manager would have adopted safety-lamps, and then," he said, "I should have considered the watering unnecessary."

1263. HIS HONOR.] And then, when I put the matter to Mr. Atkinson again, "Well, but taking the case where they worked with naked lights, was it not bad management"? and his answer was that he never knew of such a case.

1264. MR. BRUCE SMITH.] I understood him to say that he never knew of a case in which it would be safe to work with naked lights where there was no watering done.

1265. HIS HONOR.] I could not get an answer as to the dust.

1266. MR. BRUCE SMITH.] I would like Mr. Atkinson to answer that question.

1267. MR. WADE.] The question, your Honor, was this: "If you were manager, and knew of the gas that Rogers knew of in the case of Gallagher, was it good management to use a flare-light"? That was the question put, and Mr. Rogers never answered it. I took a note of it at the time.

1268. Q. Now, Mr. Atkinson, I come back to this question: supposing there was no watering done at all in Kembla up to July the 30th would you say that it was bad management in the light of your knowledge of Kembla as to gas? A. No.

1269. Q. Now, you knew that Gallagher had been burnt twelve years ago? A. I would like to qualify that answer with the requirements of General Rule 12.

1270. Q. As to blasting of course? A. Yes.

1271. Q. I am speaking of gas alone; I know there are two possibilities, gas which might ignite coal-dust, or a shot from a blast which might ignite coal-dust. I am dealing with gas only. Now, on the question of gas, I say that you knew that Gallagher had been burnt by the ignition of gas some ten or twelve years ago? A. Yes.

1272. Q. And you were aware of the evidence Ronaldson had given about gas being given off rarely in all sections? A. Yes.

1273. Q. And that, of course, was referring to a period some seven or eight years back, too? A. Yes.

1274. Q. As far as you knew, between those dates, 1896 and July last year, you had no reason to believe that gas was being given off? A. No.

1275. Q. So that the watering of coal-dust is only a necessary precaution to prevent the spread of an explosion brought about by gas, or by a shot from a blast? A. Or a defective lamp.

1276. Q. Of course it is perfectly clear in this case that this disaster is in no way traceable to a shot being fired in a dusty place? A. No.

1277. Q. And in Kembla pillars have been worked to a very large extent, have they not? A. Yes.

1278. HIS HONOR.] Pillars?

1279. MR. WADE.] Yes. Your Honor knows that first of all a heading is driven, or a passage, and after that bords are driven, and then between the bords, the solid pillars of coal remain, and after that they proceed to work out the pillars.

1280. WITNESS.] Yes.

1281. MR. WADE.] Q. And, after a time, when you have taken out the pillars, you take the timber away and allow the roof to fall down? A. Yes.

1282. Q. That is good mining practice? A. Yes.

1283. Q. Do you know of your own knowledge how long they have been working pillars in that way at Mount Kembla? A. Well, since I came; and some years before.

1284. Q. You can speak of your own knowledge for six years? A. Yes.

1285. Q. During all that time you have never heard of gas being displaced by a fall of the roof of Mount Kembla? A. No.

1286. Q. And you had no reason to anticipate, from what you knew of Kembla, that a fall of the roof would release gas? A. No.

1287. HIS HONOR.] You are confining your questions to Mount Kembla?

1288. MR. WADE.] Yes, I am referring to Mount Kembla only.

1289. Q. And you had not heard of gas being found in the strata that exist above the seam in Mount Kembla? A. No.

1290. Q. And although you were expecting a fall of the roof did you see any reason why you should use safety-lamps in anticipation of gas possibly coming out of the fall? A. No.

1291. Q. But, of course, what you have learned since then has shown it is possible? A. Yes.

1292. Q. I mean, to put it shortly, that the system, as far as you knew on July the 30th of working with naked lights and allowing the roof to fall the way it did, was safe? A. Yes, so far as I knew the conditions.

1293. Q. And even if there had been no watering at all on the roads you could not have said under those conditions it was a bad practice not to water? A. No.

1294. Q. Then the whole question of the management of Mount Kembla might be resolved into this fact, might it not, that so long as they watered in the vicinity of a shot if it was dry and dusty they could have worked with naked lights and need not have watered anywhere else? A. Well, I do not quite understand that.

1295. Q. That is if they are firing a shot in a dry and dusty place; now, assuming that the management water that place near the shot in accordance with General Rule 12, as far as you knew it was perfectly safe to work the mine with naked lights, and without watering the main roads at all? A. Yes.

1296. MR. BRUCE SMITH.] As far as he knew.

1297. MR. WADE.] Q. He says, "As far as you knew"? A. Yes.

1298. Q. Now, did not you make every endeavour to make yourself acquainted with the conditions and dangers of the mine? A. I did.

Witness—A. A. Atkinson, 23 July, 1903.

1299. *Q.* Now, I want to make this clear that the mere presence of gas in years gone by would not necessitate safety-lamps being used if you have not found gas for a number of years? *A.* No.

1300. HIS HONOR.] *Q.* The mere fact that there had been gas then, in former times, would not make it necessary to stick to the use of safety-lamps? *A.* Not necessarily, your Honor, but it would imply that diligence should be used in looking for gas.

1301. MR. WADE.] *Q.* And if you found, for a number of years, that gas was not discoverable, you could fairly assume that it would be safe to work with naked lights? *A.* Yes.

1302. *Q.* And that is recognised by the Act, is it not, that you may work with naked lights, although gas may be found from time to time? *A.* Yes.

1303. *Q.* I understand you gave a definition of the word "gassy" before the Royal Commission; do you remember;—that was that it was a mine that is always giving off gas more or less than could be found with an ordinary safety-lamp? *A.* Well, I would like to refer to the exact definition before I answer.

1304. *Q.* It is Question No. 16277 [reading]: "*Q.* What is your definition of a gassy mine? *A.* I should say a mine which is giving off, more or less constantly, fire-damp from the working-places in such a quantity that it can frequently be detected by the ordinary safety-lamp"? *A.* I think that may be described as the generally accepted definition of a gassy mine, although the Royal Commission—
[Interrupted.]

1305. *Q.* They want to narrow it down? *A.* Yes.

1306. HIS HONOR.] *Q.* Well, they recommend that wherever there is gas there ought to be safety-lamps used? *A.* Yes.

1307. MR. WADE.] *Q.* Well, of course, as the world goes on, we get more knowledge of these things? *A.* Yes.

1308. *Q.* Especially of coal-mining? *A.* Yes.

1309. *Q.* And there are a number of mines now being worked, and so far safely, with naked lights where gas is found from time to time? *A.* Yes.

1310. *Q.* Both in this country and in England? *A.* Yes.

1311. HIS HONOR.] How does the expression "gassy mine" become important;—is it used in the Act or Rules at all?

1312. MR. WADE.] No. The Act, I think, says, "Where the gas is likely to be dangerous"; and I think the question cropped up then, "What is the standard of danger"? And the Commission then said that the only safe standard is to take one instance. If you multiply it you cannot bind a man down; but the only safe test is to take one manifestation of gas only. The Act says:—

"No lamp or light other than a locked safety-lamp shall be allowed or used (a) in any place in a mine in which there is likely to be any such quantity of inflammable gas as to render the use of naked lights dangerous; or (b) in any working approaching near a place in which there is likely to be an accumulation of inflammable gas.

And when it is necessary to work the coal in any part of a ventilating district with safety-lamps, it shall not be allowable to work the coal with naked lights in another part of the same ventilating district situated between the place where such lamps are being used, and the return airway."—(General Rule 8.)

1313. HIS HONOR.] *Q.* Is there any definite percentage of inflammable gas which makes a naked light dangerous? *A.* No, your Honor; there is no definite quantity referred to in the Act.

1314. *Q.* But, in fact, by scientific investigation? *A.* Yes, your Honor. I think it is generally accepted that 10 or 15 cubic feet, if it is a highly explosive mixture, is dangerous.

1315. *Q.* But what constitutes a "highly explosive mixture";—what percentage of gas in the air makes it an explosive mixture? *A.* Well, the highest explosive mixture would be about 9·4 volumes of air to 1 of fire-damp. This is the most highly explosive.

1316. *Q.* About 10 per cent.? *A.* About 10 per cent.

1317. MR. WADE.] *Q.* And up to 4 or 5 per cent., is it inflammable at all? *A.* Well, some say it will pass a flame through the body of the atmosphere at about 4 per cent.

1318. *Q.* And there are differences of opinion about that? *A.* Yes; the explosibility ranges from 5 to 15 per cent. of gas, with the rest air; the highest being about 10 per cent.

1319. *Q.* Now, you remember Broadhead, in his evidence, talking about the gas lighting up in the bottom of the floor, in the middle of the face, and on the top of the seam, and always giving a red flame? *A.* Yes, I remember that.

1320. *Q.* Now, what is the colour from the ignition of gas: is it not blue? *A.* Pale blue.

1321. *Q.* And red comes from the discharge of gunpowder? *A.* I think so.

1322. *Q.* Since the mine has got to work again they have worked with safety-lamps? *A.* Yes.

1323. *Q.* And, of course, that is a wise precaution, you think, under the circumstances? *A.* Yes.

1324. *Q.* Now, since they have got to work with safety-lamps again, have you found fire-damp in the working-places? *A.* No.

1325. *Q.* Have you searched for it? *A.* Yes.

1326. *Q.* With the ordinary lamp, or the hydrogen flame? *A.* Well, I have had the ordinary lamp there. I do not remember whether I have had the hydrogen lamp since they got to work; but Mr. Watson, the other Inspector, has.

1327. *Q.* Well, he has reported none to you, has he? *A.* I do not think he has reported any.

1328. *Q.* Now, with regard to the intakes going past the edge of the goaf, you know this 35-acre waste at Mount Kembla? *A.* Yes.

1329. *Q.* How long have you known that to be working, the whole time you have been in New South Wales? *A.* I do not remember when they commenced.

1330. *Q.* I think the evidence was that it was somewhere about five years ago? *A.* Well, that would include the time since I have been here.

1331. *Q.* You see, according to the plan, the intake air comes in from what they call the Daylight Heading? *A.* Yes.

1332. *Q.* And then goes along the east of that waste, and then round the north? *A.* Yes.

1333. *Q.* And back again on the west side? *A.* Yes.

1334. *Q.* Now, did you ever make any investigation as to the way these wastes were worked, and the ventilation of them in Mount Kembla? *A.* I do not quite understand the meaning of the expression "working wastes."

1335. *Q.* Take the ventilation: did you make any inquiry as to ventilating either the wastes themselves, or the areas surrounding the wastes? *A.* I do not remember having done so; but I think it is likely I have discussed the ventilation with Mr. Rogers at some time or another.

1336. *Q.* Now, you say that it is sometimes desirable to take the air from an intake through a waste; do you remember saying that yesterday—no, before the Royal Commission, I think? *A.* No, I do not remember saying that.

1337. HIS HONOR.] Through a waste?

1338. MR. WADE.] *Q.* Let me put it this way: sometimes fresh air may be necessary for a waste? *A.* Yes, it may be necessary to use a split of fresh air.

1339. *Q.* That means taking a split of fresh air through the waste? *A.* Well, to the edge of the waste, rather than through. It may be necessary.

1340. *Q.* It means taking the fresh air inside the waste, whether it is the edge or the body, I do not care? *A.* Quite so.

1341. *Q.* So that the point is to see that the air on the intake side is going into the waste, and coming out on the return side? *A.* Yes, without passing over men in the meantime.

1342. *Q.* Leave the men alone: I am talking about the current of the air at present; now, supposing—take this plan for a moment: you see this return air on the No. 1 travelling road is drawn up to the furnace by this red passage (the 2nd Left and other roads)? *A.* Yes.

1343. *Q.* And if there was an opening in the north of the 35-acre waste, and an opening again at the 4th Right, would not the suction of the furnace draw the air from the north side of the waste through the waste out of the 4th Right, and up to the furnace? *A.* If there was any opening in the waste, that is the natural direction of the pressure.

1344. *Q.* That is, the pressure would tend to draw the air inwards? *A.* The pressure is from the intake towards the return.

1345. *Q.* So long as you have that current there is not much fear of anything coming out of the waste on the north side? *A.* If there is a passage through the waste.

1346. *Q.* And if you have an opening round the edges of the waste you would get your current would you not? *A.* Yes, if there is an opening all the way round the edges.

1347. *Q.* Do you remember some evidence being given that there was an opening round the edges of the 35-acre waste? *A.* I do not remember.

1348. *Q.* Well, assuming there was, then there would be no harm done so far as the air going in at the 5th Right and at the north side of the 35-acre waste, and coming out at the 3rd or 4th Right, and going to the furnace? *A.* No, I did not know that there would be any harm at all in it.

1349. *Q.* There would be no harm to the men working at the 5th Right? *A.* No.

1350. HIS HONOR.] But then, of course, there was something said about the ventilation here, Mr. Wade, and there was a plan in the book showing how it was done. It was that which made it intake air, you said, the fact that it was required for these men, Mr. Atkinson.

1351. MR. WADE.] *Q.* You know it is absolutely impossible to ventilate all the pillars without passing over some fallen roof? *A.* Yes.

1352. *Q.* That is one of the impracticabilities of coal-mining, that the air must pass over some old workings? *A.* Yes.

1353. *Q.* And the reason is this, that you generally go to your farthest boundary and work your pillars backwards towards the tunnel mouth? *A.* Yes, that is the usual thing.

1354. *Q.* So that they start on the north side of the 35-acre waste working their pillars, and they would gradually get back to the 4th Right? *A.* I do not know where they actually did start; but that would be the usual way.

1355. *Q.* So that it would be nothing unusual if it turned out when they were working back through these pillars that they had to give the men air which did pass over some old workings in that very section? *A.* Well, you cannot prevent some of the air passing along the edge of the waste.

1356. *Q.* In fact it is supposed to be good practice when you have a number of pillars close to the waste to let the air play round the edges of the waste? *A.* Yes, to let the air play round the edge of the waste is good practice.

1357. *Q.* Can you say when it becomes, in your opinion, a goaf pure and simple—at what stage;—when the whole thing is finished; when the whole of the roof has fallen? *A.* No. It is a goaf during the process of pillar extraction. The area of the goaf would extend as the pillars are extracted.

1357½. HIS HONOR.] *Q.* As they go on with the working the part they leave behind is the goaf? *A.* Yes.

1358. MR. WADE.] *Q.* As they work towards the tunnel they allow the roof on the inbye side of them to fall from time to time? *A.* Yes.

1359. *Q.* And it is over the edges of this roof that had from time to time fallen that you are compelled very often to take the air for the men who are working on the outbye side of that waste? *A.* Well, you cannot prevent it going round the edges; in fact it is good mining practice to ventilate the edges of goafs. It is also good mining practice to have stoppings between intakes and goafs.

1360. MR. WADE.] That is a different thing.

1361. WITNESS.] In the centre of a large area where the coal has been extracted, your Honor, it becomes almost as close as the natural strata; but towards the edges, that is round the edges of that [indicating on the plan] there would be an apex, or you would be able to travel up the stones which are lying at an angle, the fallen stone; but you would not be able to get into the centre of that large area.

1362. MR. WADE.] *Q.* What I mean is this: [drawing a rough sketch with pencil] supposing these shady lines are pillars and these are bords between: it may happen that you would have these pillars down and you would be working here, and the air would have to travel over the top of that fallen roof? *A.* No, that would not be good practice. You should have some other method of getting your air in than depending upon a road where the pillars have all been extracted.

1363. *Q.* Does not that sometimes happen unavoidably? *A.* Well, it does sometimes happen, and I think the qualification of the words before the rule would permit such a thing; but it should be avoided where it is possible.

1364. HIS HONOR.] *Q.* What is the objection, Mr. Atkinson, prompting the rule, that the air should

Witness—A. A. Atkinson, 23 July, 1903.

should be kept free from a waste place;—what is the objection to the air in a waste place? A. Well, a goaf is a place where you may frequently meet with either black-damp, or, if fire-damp is given off in the seam, fire-damp also.

1365. Q. Then the objection is that gas may be in it? A. Yes.

1366. Q. Does that objection still remain when the coal has all been extracted;—I thought when the coal was all extracted it became a goaf? A. Oh, you may find gas round the edges of the goaf. Of course, there may be in the higher parts of the goaf, which you cannot reach, accumulations there also; but it is good practice to keep, if you can, return air circulating round the edge of a goaf, in the same way as you see on the west side of that 35-acre goaf, where you have a return between an intake and the goaf edge.

1367. Q. Then anything that is taken out of the goaf is in the return airway? A. And it goes straight away to the upcast.

1368. MR. WADE.] Q. Now, when did this become an important matter in your mind, about having the openings on the north of this 35-acre waste sealed off from the intake from the Daylight Heading? A. Well, the principle involved has always been important in my mind.

1369. Q. But did you make any inquiries to see if this had been actually done in practice? A. No, I cannot say that I did.

1370. Did your Inspectors ever tell you that there had been this what you say now is a violation of the Act? A. No, they did not.

1371. Do you know this: that, for years and years, this goaf has been worked by a split brought in from the north side of the waste? A. So I have heard since.

1372. Q. And that has been seen by your Inspectors, presumably? A. Presumably so.

1373. Q. Do you not know this: that in other mines in the same State that principle has been adopted without objection of any kind? A. Oh, there have been objections raised to it, but it is sometimes, as I have already said, impossible to avoid it; and in such cases I think that the qualification in the Rules would allow of it being done.

1374. HIS HONOR.] Q. Well, wherever the men are working they get intake air; as they work on, the worked out place becomes a goaf, and may be allowed to fall? A. Yes.

1375. Q. And still they may be getting their air from the same place, at any rate for a time? A. Some portion of the air may pass over some portion of the edges of a goaf and go to men, which you cannot avoid.

1376. HIS HONOR.] I can see that.

1377. MR. WADE.] Q. But if this case arises: if you know that that goaf is giving off gas it is a very different question then, if you conduct air through that goaf on to men who are working on the return side of it? A. Yes; it becomes then necessary to have some other means of ventilating it.

1378. Q. Then, if there was no reason to believe that there was fire-damp being given off in this 35-acre waste, under the circumstances, do you see anything wrong in taking the air in from the north side of that waste on to men working on the intake side? A. Well, I think it would be better to have a return between the goaf edge and the intake airway; and I think, also, that it would be better practice to avoid taking it over the goaf if you can reasonably do it in other ways.

1379. Q. But my question was, do you say that is wrong under the conditions which were supposed to exist in the 35-acre waste? A. Well, it just depends as to whether it would be considered reasonably practicable to have done it in another way. I could not say whether it was actually so or not; and I think His Honor would have to judge as to that.

1380. HIS HONOR.] Well, that is an expert matter. I would want guidance on that from you.

1381. MR. WADE.] Q. Can you, as a practical man, say that this is wrong under the conditions I have pointed out to you, that this goaf was supposed to be free from inflammable gas? A. I cannot say that it was absolutely wrong; but if it could have been ventilated in another way it would have been better.

1382. HIS HONOR.] Q. The danger, you say, is gas? A. Yes.

1383. Q. If it were quite certain that there was no gas, then, I suppose, the air in the goaf would be like the air in a roadway? A. Yes.

1383½. MR. WADE.] Q. It is hotter? A. Well, it is hotter generally in working out pillars than in the actual workings, due, to some extent, to the heat caused sometimes by the difficulty in ventilating the workings.

1384. Q. I can give you an instance;—you know this Manager's Daylight Tunnel? A. Yes.

1385. Q. Now, the air-course is intake along this blue line right up here [pointing to the plan], and at the time of the disaster that was supplying men at the 7th Left [meaning No. 7 Left] with air? A. Yes.

1386. Q. Now, that air was perfectly pure, was it not? A. I should think so.

1387. Q. But, as a matter of fact, it crossed over what is called "old workings";—is not that so? A. Yes.

1388. Q. What is marked here as "goaf pillars taken out, 9 acres";—it passed over that? A. Yes.

1389. HIS HONOR.] Q. That is given as a straight line;—is there a road through there? A. This is a road which is maintained through the goaf. This is the way a number of men were rescued from the mine.

1390. MR. WADE.] Q. It is not an air-tight roadway? A. No; it is a road through the goaf.

1391. Q. You have been advised, have you not, by a gentleman in the Crown Law Offices that you have to shut that up? A. No; not to shut that up.

1392. Q. Well, to block that air coming through here over these long-wall faces? A. No; not to block it either.

1393. Q. But you have been advised that you have to cut this air off from these men at No. 7 Left? A. Yes.

1394. Q. Although the air, to your knowledge, is perfectly pure? A. Yes.

1395. Q. Just through some technical section of the Coal Mines Regulation Act? A. Yes.

1396. Q. And it is recognised by all mining experts that it is perfectly legitimate to take the air the way it is shown on the plan? A. Yes.

1397. Q. So the alternative you are reduced to is this: to bring the air which comes in at the manager's house right straight to the return to the furnace? A. Yes; conducting it round the faces, but not to men who are working.

1398. *Q.* That is to say, no man is allowed to use the air that comes through this Daylight Tunnel?
A. Yes.

1399. HIS HONOR.] Not "the air from the Daylight Tunnel," but air that has come through these old workings.

1400. MR. WADE.] *Q.* Practically it means that this Daylight air cannot be used for the men, although you know it is perfectly pure? *A.* Yes.

1401. *Q.* And although you know it would be better for the men themselves? *A.* Yes.

1402. HIS HONOR.] *Q.* I suppose, as a matter of fact, there is less danger of gas where the coal has been extracted than where there is still coal? *A.* I might explain that the advancing places in the virgin coal may give off gas, but in such a case as that you would also expect to find gas at goaf edges occasionally.

1403. *Q.* But still what I mean is this: it is the coal which gives out the gas, is it not? *A.* Yes.

1404. *Q.* Then, if you get a part of the mine from which the coal has been extracted, you are less likely to get gas from that part of the mine than from a place where there is coal? *A.* Well, pillar workings is a place where you very often meet fire-damp if fire-damp is given off by the seam.

1405. *Q.* Yes; but as these pillars are there there is coal there;—the pillars are pillars of coal?
A. That is so.

1406. *Q.* Then the gas comes from the coal? *A.* Yes; and when the pillars are taken out any gas rises into the higher parts, and may at times be seen round the edges of the goaf.

1407. MR. WADE.] *Q.* The first step in the operation of the virgin coal is driving a heading?
A. Yes.

1407½. Then you are more likely to find gas in the first openings of the headings than at any other time? *Yes.*

1408. *Q.* Then, once you open up the coal, the coal begins to bleed, and drain off any gas that is in it? *A.* Yes.

1409. *Q.* And then, when you open up the bords, you get a further drainage of gas? *A.* Yes.

1410. *Q.* And when you come to work the pillars you come to work a body of coal that has been exposed on three sides or four sides? *A.* Yes.

1411. *Q.* And when you take the pillar out the only prospects of gas are what may be contained in the strata over the coal seam? *A.* And any gas that may have formed and risen to the higher parts during the process of the extraction of the pillars.

1412. *Q.* Quite so. Now, with regard to the whole of Kembla, you had no knowledge that gas was ever found in that strata that lies above the seam? *A.* No.

1413. *Q.* So if this gas that caused the explosion came from the strata it was unprecedented?
A. Yes.

1414. *Q.* Now, let us come to the gas that rises up above the level of the seam;—there are several falls take place, are there not, before it becomes absolutely solid? *A.* Yes, I think so.

1415. *Q.* How many would there be? *A.* I would not attempt to say.

1416. *Q.* At all events it finally gets absolutely solid, like the virgin rock? *A.* Yes.

1417. *Q.* And whilst the roof over above the seam is falling there is a certain amount of leakage of gas through the strata right away up to the surface, is there not? *A.* Well, it naturally ascends to the highest part at whatever point the roof may be broken.

1418. *Q.* But even then you have cracks above the highest dome of the roof, in the superincumbent strata, do you not? *A.* Sometimes, yes.

1419. HIS HONOR.] If there are, at any rate, the gas would go up.

1420. MR. WADE.] Yes.

1421. *Q.* And these falls of the roof very often do leave a subsidence to the actual surface? *A.* Yes.

1422. *Q.* And in that way the gas may escape to the surface? *A.* It may, yes.

1423. *Q.* Now, on this question of wastes, Mr. Atkinson, I think you said, did not you, this morning, that these Special Rules of Kembla were drawn up by the Management, and not by the Mines Department? *A.* Yes.

1424. HIS HONOR.] *Q.* Were there sample rules or anything of the kind issued? *A.* No, your Honor. As a matter of fact these rules were in force when I came into the Colony.

1425. *Q.* There probably would be some form, I suppose, because there would be some similarity in the rules of the different collieries? *A.* In the South there are some collieries with somewhat similar rules to Mount Kembla. Of course the Metropolitan and Corrimal rules are very different.

1426. MR. BRUCE SMITH.] *Q.* They differ according to the circumstances of each mine?
A. Well, it depends on the framers of the rules.

1427. HIS HONOR.] It is like municipal rules, I suppose; they vary to a certain extent, but they are much according to a common form.

1428. MR. WADE.] *Q.* Even the period of the examination of the waste workings varies in different rules, does it not? *A.* No, I think it is universal.

1429. *Q.* It is universal now; but is not that in consequence of some circular that you sent out lately, that it is all once a week? *A.* Well, some of the collieries in the North had not a Special Rule, although they were inspecting the wastes; and I sent and proposed a rule, which has been adopted at all the collieries, making it once a week.

1430. *Q.* It is compulsory now and uniform? *A.* Yes.

1431A. MR. BRUCE SMITH.] *Q.* That is, to go in as far as practicable? *A.* "To inspect as far as practicable," I think, are the words used.

1431B. MR. WADE.] *Q.* Now, is not this a fact that this question of the examination of the waste workings has been regarded as of importance only during the last few years, say, the last four years?
A. Oh, I think it was regarded as of importance at the Stockton inquiry.

1431C. *Q.* That is the first time? *A.* And subsequently to that.

1432. *Q.* Well, the Stockton inquiry was the first time it was raised in New South Wales? *A.* I think so. Of course that was before my time.

1433. *Q.* That was about nine years ago? *A.* Stockton inquiry was in the beginning of 1897, I think—nine months before I came here.

1434. *Q.* And there is no provision for it at all in the Coal Mines Act, the inspection of waste workings? *A.* No.

Witness—A. A. Atkinson, 23 July, 1903.

1435. Q. And a number of collieries until quite recently had no Special Rule with regard to the inspection of wastes at all. A. That is so.

1436. Q. Well, did you give your Inspectors any instructions to inquire into the matter of the inspection of waste workings at Mount Kembla? Q. Well, they have general instructions to see that the Act and Special Rules are carried out, and—[*Interrupted.*]

1437. Q. And if they are not carried out? A. And report any breach.

1438. Q. And then you will either inform the Manager, or they may verbally tell him? A. Yes.

1440. Q. Now, you know—you saw yourself, did you not—that these Deputies' reports books, which contain the inspection of the waste also, were actually initialled by your Inspectors as having been seen? A. I think I saw that.

1441. Q. That was during the inquest, was it not? A. Yes.

1442. Now, with regard to the actual inspection itself, no rule could be laid down as to how far any man is to go inside the edge of the waste once the roof has fallen? A. No.

1443. Q. You must leave that to his own discretion?

1444. HIS HONOR.] No rule could be laid down in feet. The rule says, "As far as practicable."

1445. WITNESS.] As far as practicable.

1446. MR. WADE.] Q. It depends on a man's good sense, I suppose, and to some extent on his nerves? A. Well, I should say "as far as practicable" means, to a large extent, "as far as is safe."

1447. Q. Then, we have been told that whilst the pillars were being worked in the 4th Right during the process of extraction, the deputy would go round the circle where the work had been done every morning? A. Yes; I suppose so.

1448. Q. And in that way it would be his duty to examine the edge of this falling place, would it not? A. Yes.

1449. Q. And by holding the safety-lamp just above his head the probability is that if there was gas there it would show? A. Yes; if there was gas there.

1450. HIS HONOR.] Why would it be his duty to examine the edge of the goaf?

1451. MR. WADE.] Because it is a place along which men have to travel in the course of their work. He would probably follow the ventilating current.

1452. HIS HONOR.] That is, if it happens to go through the edge.

1453. MR. WADE.] I am speaking of the morning inspection. If the road happens to go along the edge of fallen bords he would examine that, because it is a place where the workmen have to travel.

1454. Q. Then, when you get to the actual working-place you may have an angle cut out of the solid pillar of coal? A. Yes.

1455. Q. You may have a solid pillar on one side, and on the other side you may have an open space where the roof has fallen? A. Yes.

1456. Q. And he may examine that open space alongside the pillar? A. Yes; he should.

1457. Q. So that, in that respect, if a man does his work properly, you can get a very good idea of the condition of the waste places as to the presence of gas, can you not? A. Not in the ordinary inspection; he would not go up the edges of the goaf.

1458. Q. He would not climb up? A. No.

1459. Q. No; but you say if gas is present it is fairly sure to manifest itself on the lower levels? A. Oh, no; I did not say that. I say that if gas is where he inspects with the lamp he will find it; but gas is more likely to be in the higher parts of the goaf than in the working places.

1460. Q. Then it is more likely to be in the place that is out of reach? A. Yes.

1461. Q. But if it is in the part that is accessible, within reach, he will find that morning after morning, when he inspects? A. Yes.

1462. Q. So that it really comes to this, as a matter of practice, if a man is inspecting these wastes adjoining working places generally, he gets as good an idea of the condition of the waste as if he makes the special inspection once a week? A. I could not say that, really, because a man making the usual inspection in the morning is not supposed to go on to the edge of the fall, which another man, making an inspection of the wastes, might fairly be expected to do, if it was safe.

1463. Q. Quite so. But if gas came down from the level of the top of the seam, he would find the gas in the ordinary daily inspection? A. Quite so.

1464. Q. But if it means climbing, then the gas would be beyond his reach even if he does climb? A. It might be; yes.

1465. Q. Then, whatever the meaning of the rule may be, you admit that the non-inspection of this waste had nothing to do with the disaster at all? A. No; it had nothing to do with it.

1466. HIS HONOR.] I am happy to say that I have not got to inquire into the cause of the disaster. That has been very fully gone into by another tribunal.

1467. MR. WADE.] I am getting out these various circumstances regarding the inspection of the waste by way of mitigation. I do not intend to contend that Mr. Rogers' understanding of that rule was correct.

1468. Q. Now, with regard to this plan, Mr. Bruce Smith claimed that it did not show the air-current—the intakes and returns? A. I do not think Mr. Bruce Smith said that.

1469. MR. BRUCE SMITH.] I have not made a complaint of that.

1470. MR. WADE [*reading from a note of Mr. Bruce Smith's remarks.*] "The plan ought to show the salient features of the mine; it does not show the air-currents on the plan."

1471. MR. BRUCE SMITH.] I have not put it in.

1472. MR. WADE.] Do you withdraw it, then?

1473. MR. BRUCE SMITH.] No; I did not put it in. In formulating these, I omitted it. I had a piece of evidence from one of the witnesses which shows that, in travelling certain roads—it was young Frost—he met a current coming the opposite way to that shown on the plan; but I am inclined to think, from a conversation which I had with Mr. Atkinson, that it may have been a derangement of the ventilation.

1474. MR. WADE.] Q. There is a complaint made about the ventilation-book, Mr. Atkinson;—do you remember that? A. Yes.

1475. Q. Now, you saw both those books at the Inquest? A. Yes.

1476. Q. And you examined them? A. Yes.

1477. Q. And you satisfied yourself that the ventilation-books had been kept consecutively? A. I do not remember whether there was not one month omitted.

1478. Q. There may have been one in how many years? A. I do not remember the dates.

1479. Q. Did not the book go back to the beginning—one of these books?

1480. MR. BRUCE SMITH.] Do you mean the beginning of the history of the mine?

1481. MR. WADE.] Q. The beginning of the present Coal Mines Act? A. I think so.

1482. Q. That is all you need go back to? A. Yes.

1483. HIS HONOR.] That is the book, Mr. Bruce Smith, with regard to which you spoke of the loose sheets, and a month omitted, and so on?

1484. MR. BRUCE SMITH.] Yes.

1485. MR. WADE.] Here it is, your Honor. From the 12th of October, 1896, to the 8th of August, 1899, was omitted. The book that was before the witness was Exhibit O. That is on page 40. It does not say they were recorded on sheets of paper. That is where there is another mistake. The question was put to him in cross-examination, and it is put by the deposition clerk here in this way:—

“The book [*Exhibit O*] is the only book I have for recording the ventilation in. I do not know whether there is any other book regarding ventilation; I believe there was another book kept before that. When the Coal Mines Regulation Act was passed, we got the book [*Exhibit O*]. The ventilation may have been recorded sometimes on sheets of paper.”

Your Honor sees, on page 42, he refers to this book [*evidence of Mr. Rogers*], “Those omissions are supplied in the book I now produce,” and the reasons are given. The reason for the omission in the first book is:—

“The reason that the omissions appear in the first book is that there was no room in it for certain particulars that were required, and I gave an instruction that they were to be supplied on certain forms, and then the old book to be returned to. The two books together make a complete record.”

1486. MR. BRUCE SMITH.] He apparently produced another book which had never been produced before.

1487. MR. WADE.] That question that my friend relies upon is evidently a question that has been put in leading form, and the deposition clerk has put it down in this way, which means nothing, “The ventilation may have been recorded sometimes on sheets of paper.”

1488. I would like to refer your Honor to section 2, which deals with the Manager's duties, which provides that he shall ascertain periodically, personally or by deputy, the ventilation passing in the mine, and he has the right, under the Act, to have a deputy to take these readings; and he says that in recent years they have been taken by Mr. Warburton, the surveyor.

1489. HIS HONOR.] That is simply a question of the book.

1490. MR. WADE.] No; Mr. Bruce Smith said he did not do it himself, and he ought to.

1491. MR. BRUCE SMITH.] Oh, no; my friend has misconstrued what I said.

1492. MR. WADE.] Oh, no; I have it here in the shorthand notes.

1493. Q. Now, since the mine re-opened you have been down several times to examine? A. Yes.

1494. Q. Now, have you had any fault to find with Mr. Rogers' management since it re-opened with the safety-lamp.

1495. MR. BRUCE SMITH.] I will ask your Honor whether you will go into matters subsequent to the explosion.

1496. HIS HONOR.] I do not think that is material.

1497. MR. WADE.] Here the Crown say, “Here is a man who is not fit to work a naked-light mine.” Now, he is managing a safety-light mine, which requires more care, more foresight, more skill. It becomes an important question to know how he is carrying on his management under present conditions.

1498. HIS HONOR.] Well, I admit there is a difficulty about the section under which I have got to make the inquiry; but it does seem to me, looking at the fact that I have power to suspend, as well as to cancel, and that the case relied upon must be past acts, “gross negligence,” which must be a past act, that I can look simply at the past, and deal with this as a question of what penalty really in regard to the certificate should be imposed upon Mr. Rogers for his former conduct in regard to the management of the mine.

1499. MR. WADE.] But your Honor sees that the words of the Act are “Gross incompetence,” that is, continuing.

“If at any time representation is made to the Minister . . . that any Manager . . . holding a certificate under this Act or under any Imperial Act is by reason of incompetency or gross negligence unfit to discharge his duties . . .”

1500. HIS HONOR.] Unfitness is the thing I have to see. *Prima facie* that would mean present unfitness to perform the duties of manager.

1501. MR. WADE.] But he is there carrying them out.

1502. HIS HONOR.] Unfitness would mean unfitness at the present time; but at the same time it is evident that what must be relied upon is past acts: that “negligence” shows it, and then there it the power to suspend; and certainly it is an inconsistent thing if I find that a man is now unfit to be the Manager of a mine, it is a very peculiar thing that I should allow him to go and work after a period fixed by myself. Therefore, I do not think I can consider anything since the accident.

1503. MR. WADE.] I cannot admit that your Honor. It may be said on the other side that Mr. Rogers has been managing this mine for the past twelve months since the accident, and it has been worked with safety-lamps, and it is admitted that a mine worked with safety-lamps is more difficult to manage than one worked with naked lights, and more responsible; and what I ask is, if the Department consider he is incompetent, can they point to any instance of his incompetence of which they have had to complain during the past twelve months, since the disaster. If the Crown thought him incompetent, why did they not take action sooner? Has anything happened in the last twelve months to make the Crown say he is incompetent? The Crown have not fixed the time at all.

1504. HIS HONOR.] Let me put an illustration: suppose the case of a manager of a mine who had been guilty of gross negligence through habits of intoxication; the matter came on to be inquired into some

Witness—A. A. Atkinson, 23 July, 1903.

some considerable time after, as is the case here, and it is shown, or attempted to be shown, that he has taken the pledge, and has been perfectly sober for the last twelve months, would that be a thing to be looked at?

1505. MR. WADE.] Yes, for this reason, that, if it is proved to the Court that, for a long time, take two years for the sake of argument, the man had reformed, the Court would say, "In the light of the present reformation I will make the penalty as light of possible," and the measure of the penalty is the measure of the reformation.

1506. HIS HONOR.] I think, as it lies with the Court as to whether it may be a suspension or a cancellation, I might accept that, if Mr. Bruce Smith has no objection.

1507. MR. BRUCE SMITH.] I have no objection.

1508. MR. WADE.] Q. Well, Mr. Atkinson, have you made any complaint to him against his management since he restarted with safety-lamps? A. Well, I have had reason to write to Mr. Rogers a few times.

1509. Q. That is not an answer to my question. You know what a complaint is; and you can make suggestions. Have you any complaint to make against him of bad management? A. Well, I may not be quite clear in the distinction between what is a complaint or a suggestion. I can bring correspondence showing what I have referred to.

1510. Q. Tell us what you have referred to, and save all the trouble? A. Well, some of the doors—not getting the doors doubled, for instance, at the 4th Right.

1511. Q. What else did you complain of, Mr. Atkinson, besides the doors not being doubled? A. Well, I have written with reference to putting stoppings in on the north side and down the travelling-roads, where the intake air passes over old workings.

1512. Q. That is the same as before, the stoppings in between the intake and the old workings. That is the old question.

1513. MR. BRUCE SMITH.] But he has written about it again.

1514. MR. WADE.] I am aware of that.

1515. Q. And that is a question of contest between you and other people, is it not;—the mining world is not unanimous on that point by any means, are they? A. I think they are.

1516. HIS HONOR.] That is the question of the waste workings?

1517. MR. WADE.] Yes, sealing off the waste workings from the intake.

1518. HIS HONOR.] Well, of course there is a rule. The mining world may be divided about it; but there is the rule, which says that the intake shall be free from the wastes.

1518½. MR. WADE.] It says, "The air shall travel free from old workings."

1519. HIS HONOR.] No, waste workings.

1520. MR. WADE.] In the General Rule, your Honor.

1521. HIS HONOR.] I was thinking of the Special Rule.

1522. MR. WADE.] The General Rule is, "The intake air shall travel free from . . . old workings."

1523. Q. Now, that is an old matter now; the double doors is a new thing? A. Yes.

1524. Q. Is there anything else? A. I do not remember. I would have to look it up.

1525. Q. Here is a man on his trial in this matter;—you would not forget anything you brought under his notice of mismanagement? A. I do not remember. I did not know that these things would be asked for. If you wish to know I will bring the correspondence.

1526. Q. Is there anything else you could think of? A. No.

1527. Q. Have not you written about these double doors to other people besides Mr. Rogers? A. Yes.

1528. Q. Is not that in consequence of something that occurred before the Royal Commission? A. No.

1529. Q. During the inquiry? A. I think the whole thing was proposed before the Commission commenced to sit.

1530. Q. The question has cropped up since the disaster at Mount Kembla? A. Yes, that is true.

1531. Q. From information received some time either at the inquest or between that and the Royal Commission? A. Yes.

1532. Q. And that is a circular that you sent round to every Manager? A. It is not a circular.

1533. Q. Well, a request? A. It is a rule proposed by the Minister and adopted by the collieries.

1534. Q. Now, I ask you is not that a rule that has been sent round to every Colliery Manager? A. To all the large collieries.

1535. HIS HONOR.] A. And to Mr. Rogers, in common with others? A. To Mr. Rogers, in common with others.

1536. Q. MR. WADE.] Q. Now, before the disaster there were a number of single doors in Mount Kembla where you think now there should be double doors? A. Yes.

1537. Q. Now, did you make any complaint before the disaster? A. No.

1538. Q. Did any of your Inspectors complain to you about it? A. No.

1539. Q. And in other collieries there were numbers of single doors where you now recommend double doors? A. That is so.

1540. *Re-examination* by MR. BRUCE SMITH.] Would your Honor mind looking at the evidence by Mr. Atkinson with regard to the watering? Your Honor remembers that in Mr. Wade's examination just now Mr. Wade said that I had asked Mr. Atkinson whether, with his present knowledge, he would not recommend watering.

1541. MR. WADE.] I beg your pardon. I did not say that, or anything of the kind. I said over and over again that the question that was interposed was these words: "If gas was given off."

1542. HIS HONOR.] What is the passage you are referring to?

1543. MR. BRUCE SMITH.] It begins on page 120. [Mr. Bruce Smith then read Question 602 of these notes, together with the succeeding evidence.] You will see what I was very careful to say to Mr. Atkinson about the nature of the assumption in asking the question,

[There was some further informal discussion on this subject.]

1544. HIS HONOR.] It seems to me that, on that evidence, the dust case falls to the ground. I admit that it does not agree with the view that suggested itself to me *prima facie* about the dust; but Mr. Atkinson is an expert, and I know very little about these things.

1545. MR. BRUCE SMITH.] *Q.* You have told us that, on that evidence that has been given of things which have taken place before that, you think it would be good management to use safety-lamps in the mine; and you have heard His Honor put certain contingencies that might arise;—now, were they so far possible, practically possible, that you think watering ought to have been done in addition to using the lamps?

1546. MR. WADE.] I object to that. We are not dealing with possibilities.

1547. HIS HONOR.] You say "In addition to using the lamps." I take it that the lamps were only used in that mine for the purpose of making the examinations.

1548. MR. BRUCE SMITH.] But Mr. Atkinson said that, on the knowledge which the evidence suggests, he thinks good management would require the use of safety-lamps.

1549. HIS HONOR.] Yes.

1550. MR. BRUCE SMITH.] I am asking him now whether the contingencies which you suggested were so reasonably practicable or possible that good management would require watering in addition to the lamps.

1551. MR. WADE.] I object to that.

1552. HIS HONOR.] I admit that, because I should think, if good management called for watering in addition to lamps, then I should think, *a fortiori*, good management would call for watering whether lamps were used or not.

1553. WITNESS.] With safety-lamps in use, I consider that it would have been an extra precaution to water.

1554. MR. WADE.] I object to that answer.

1555. HIS HONOR.] *Q.* If I am walking along the road and there is a banana-skin on the pavement, it would be an extra precaution if I walked across the road; but it is not a necessary precaution. If I walked round the banana skin it would be sufficient? *A.* I consider it would be an extra precaution; but I do not consider that it would have been bad management not to have watered.

1556. MR. BRUCE SMITH.] *Q.* Now, you have been asked by Mr. Wade as to Mr. Rogers management of that mine since the disaster, and I understood you, not very clearly, to say something about double doors;—did you request him since the accident to adopt the double-door system? *A.* Yes.

1557. *Q.* Has it been done? *A.* It has been now.

1558. *Q.* How long after your request? I mean did you get immediate attention to your letters?

1559. MR. WADE.] Next morning.

1560. *A.* Oh, yes; the letters were—[*Interrupted*].

1561. *Q.* How long afterwards? *A.* Oh, within a reasonable time.

1562. *Q.* Within a reasonable time after the accident you asked him to adopt the double doors?

1563. MR. WADE.] He has not answered the question at all, within a reasonable time after the request.

1564. MR. BRUCE SMITH.] *Q.* I asked you, "How long after the accident did you ask him to adopt the double doors"—months or weeks? *A.* Two or three months, perhaps. I do not remember exactly.

1565. *Q.* I understand you to say that they were not adopted until you did write? *A.* No.

1566. *Q.* They were recommended by the Commission, were they not? *A.* I suggested the special rule prior to the Commission.

1567. *Q.* You were asked by Mr. Wade just now whether you ever suggested the adoption of the double doors until after the inquiry? *A.* I was.

1568. *Q.* Is it not a fact that—[*Interrupted*].

1569. MR. WADE.] I object to his being led like this.

1570. MR. BRUCE SMITH.] *Q.* Did you yourself see something in the mine before the inquiry which showed you the necessity for the double doors? *A.* Yes.

1571. *Q.* What did you see—tell his Honor?

1572. MR. WADE.] Then all the more neglect for not reporting it if it is so.

1573. WITNESS.] *A.* On the 5th Right rope-road on the occasion when Mr. Bruce Smith, myself, and the District Inspector, Mr. Watson, visited the mine about Christmas. On arriving at the 5th Right rope-road, we found that a set of tubs operated by the endless rope round the 35-acre goaf—the rope stopped, and the set of tubs kept the door open until the rope commenced again.

1574. MR. BRUCE SMITH.] *Q.* How long was that standing to your knowledge? *A.* Five or ten minutes.

1575. *Q.* And that destroyed the use of the door—the single door? *A.* Yes.

1576. *Q.* And if that door had been used for the purpose of stopping the air from coming in a certain direction in order to divert it, it became useless for the time being? *A.* Yes.

1577. *Q.* And the idea of a double door was that if one were kept open by a string of trucks, the other would be closed and effect the purpose? *A.* Yes.

1578. *Q.* And that is why you brought it before the Commission? *A.* Yes.

1579. *Q.* And the double doors were not adopted until after you again wrote to Mr. Rogers? *A.* No.

[At this stage the Inquiry was adjourned from 1 till 2 p.m.]

AFTERNOON SITTING.

1580. MR. BRUCE SMITH.] *Q.* With regard to those double doors with respect to which I was asking a question when we adjourned, that question was gone into before the Commission, was it not? *A.* Yes, it was.

1581. *Q.* I think you mentioned then what you had seen when you went into the mine, that you found a line of trucks blocking the door open? *A.* I do not remember whether it is in my evidence.

1582. *Q.* Now, how long after the explosion was it before those doors were altered—doubled? *A.* Some time at the beginning of this year, so far as I remember. I would have to look at reports before I could give you a definite answer.

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1583. Q. Was not the question gone into before the Coroner ;—did not Mr. May give evidence that, in his opinion, the Dudley explosion had resulted from the need of double doors? A. Yes.

1584. Q. Now, you say the doors were not doubled until this year? A. Yes.

1585. You have some correspondence, have not you? A. Yes.

1586. Q. Just give it to me? A. Well, there are three copies of letters.

1587. Q. These are letters from you to Mr. Rogers, January, January, March ;—have you Mr. Rogers' answers to those? A. They will be in the Records of the Department, I expect.

1588. Q. You can get those, cannot you, so that the correspondence can go before His Honor? A. Yes.

1589. Q. I see your last letter is dated 30th of March, 1903? A. Yes.

1590. Q. Well, were they converted then? —————

1591. MR. WADE.] The letters speak for themselves ; most of them were.

1592. (Mr. Bruce Smith read the letter of the 30th of March, 1903).

1593. HIS HONOR.] There is a reference there to the new Special Rule. I suppose that can be put in with the letters?

1594. MR. BRUCE SMITH.] Q. When was that rule made? A. It was proposed about the end of October, I think ; and I think it was finally established, so far as Mount Kembla was concerned, some time in March.

1595. Q. Who proposed the rule? A. The Department.

1596. MR. WADE.] Q. After the rule became operative, it was done within a reasonable time? A. After the rule was established, it was done within a reasonable time.

1597. MR. BRUCE SMITH.] Q. Quite apart from the rule, did not you give evidence of the danger in connection with these single doors months before? A. Yes ; I pointed out that it was advisable to have double doors.

1598. Q. Did not you point out that the single door, as you had seen for yourself, was liable to be kept open a considerable time by the stopping of the cable or the wire-rope? A. Yes.

1599. Q. Did not you think that an element of danger? —————

1600. MR. WADE.] This question was, first of all, that it was a danger, not "an element of danger."

1601. WITNESS.] A. It may give rise, under certain circumstances, to dangerous conditions.

1602. MR. BRUCE SMITH.] Q. And you pointed that out, did you not? A. Yes.

1603. MR. BRUCE SMITH.] I will tender those letters, subject to the others being added. [The letters were put in and marked *Exhibit* No. 3. They are not copied here, as they were afterwards withdrawn, as shown in paragraph No. .]

1604. HIS HONOR.] And if the Special Rule is at all material, that might be obtained and attached.

1605. MR. BRUCE SMITH.] Q. You can get copies of that? A. Yes.

1606. Q. You were asked this—whether you ever pointed out the necessity for examining the standing-places ;—did you know they were not being examined? A. No ; I did not.

1607. Q. How many mines have you to visit from time to time yourself? A. Over 100.

1608. MR. WADE.] That is not material.

1609. HIS HONOR.] I think it is material, to my mind, in this way—you were asking Mr. Atkinson if he was aware that there was any gas in this mine, and he said he was not, and he had made inquiries, of course, and he had his Inspectors ; and I made a remark at the time that I thought that was important, that he knew nothing ; but still, at the same time, I think it is material to show that he would not have the opportunities that the Manager on the spot would have, because he has a lot of mines to look after.

1610. MR. WADE.] I should contend that he had just the same opportunity.

1611. HIS HONOR.] Of course, that would be a fair contention ; but the facts bearing on it that he has so many other mines to look after, and so on, are material.

1612. MR. WADE.] Of course, his opportunities of personal observation are not so great as those of the Inspectors.

1613. HIS HONOR.] If you wanted to find out about a particular mine, the man of all the men in the community whom you would expect to be able to tell you about that mine would be the Manager.

1614. MR. WADE.] If a mine is giving off gas, you can go this day or this day month, and, somewhere in the mine, you will find gas being given off.

1615. HIS HONOR.] That is so ; but the fact in my mind is this : Mr. Rogers, in defending himself against certain changes, sets up something that requires proof, that is his ignorance. His predecessor was able to say, that all parts of the mine gave off gas from fissures. He was there a good many years, and he thought it gave off no gas, whereas the fact, it seems now, is established, that it was giving off gas.

1616. MR. WADE.] It gave off gas on this occasion. That is all I will admit. Most of these occasions referred to in the evidence, I will contend were not gas.

1617. HIS HONOR.] The Commission examined and found gas given off.

1618. MR. WADE.] A half per cent., which you cannot find with the ordinary safety-lamp.

1619. HIS HONOR.] But still they have laid down their opinion, that whatever quantity, however small, this necessitates the use of safety-lamps. But now I am on the question of Mr. Rogers' previous knowledge. Mr. Rogers' predecessor knew that there was gas given off, a state of things which apparently continued. Well then, how is it that Mr. Rogers did not know. I can understand, where there is a question of ignorance of it, Mr. Atkinson being ignorant of it ; but how is it that the Manager is ignorant? If gas is given off in small quantities, where is there any man in New South Wales to tell you that except the Manager?

1620. MR. WADE.] The Manager has the deputy to do that specially ; and there is the under-manager, supposed to take his place underground every day in the week ; and the Manager's duties are more of a supervising character, and his chief reliance is on his officials. He has to see the rules enforced and carried out in all respects.

1621. HIS HONOR.] I can see that he must rely on his officials, but at the same time, with a fact of that kind, and of that importance, you would think that, with the continual inquiries he would make, and

and the investigations he would make, if it existed he would know it. At any rate, I think the ignorance requires explanation. I do not say it cannot be explained, but it seemed to me that it calls for explanation, assuming that the gas was given off in small quantities.

1622. MR. BRUCE SMITH.] That statement by my friend, that Mr. Rogers cannot know all about that mine, has a very good bearing on this assertion of his, that Mr. Atkinson should know all about it.

1623. Q. You have a number of Inspectors working under you, inspecting these mines? A. Yes.

1624. Q. And you supervise all these Inspectors? A. Yes.

1625. Q. And they visit each mine about once in three months? A. Yes.

1626. Q. And, considering the number of mines they have to inspect—how many are there in each district? A. There are about 100 mines altogether.

1627. Q. And how many Inspectors? A. Three.

1628. Q. And so each Inspector has about thirty? A. Yes, more than thirty.

1629. Q. Which he visits as a rule, about once in three months? A. Yes.

1630. Q. So that gives about three days to each mine once a quarter? A. Well, there are some mines that they can do in a day.

1631. Q. You said just now, that the fact, that the smallest quantity of gas is given off necessitates the report; that very same thing was drawn attention to in the Stockton report? A. No; in the Dudley report.

1632. Q. When was that? A. The explosion took place in March, 1898. The Inquiry, I think, was in August, 1898.

1633. Q. Well, the report of the Dudley explosion does not stand on the same footing as the reports of the English explosions. They can be obtained by anybody, can they not, I mean any Manager in New South Wales can obtain a copy of the report of any accident? A. Yes; as a matter of fact they were sent to each Manager.

1634. *Re cross-examination* by MR. WADE.] Q. Mr. Atkinson, you were asked this question by Mr. Bruce Smith, if these single doors are not a danger. I want to know your answer definitely with regard to that; do you say they are a danger, or not;—can you answer that question, yes or no?

1635. HIS HONOR.] I do not want to stop you at all, Mr. Wade, but it seemed to me that his answer was definite. He said that it might, under certain conditions, give rise to danger, the existence of single instead of double doors.

1636. MR. WADE.] Yes.

1637. Q. Now, as a matter of fact, Mount Kembla has an unusual amount of air going through the working-places, has it not? A. Oh, no; not that you could call it unusual.

1639. Q. It has three or four distinct openings? A. It has considerably above the minimum required in General Rule 1.

1640. HIS HONOR.] Q. Do you know how many men and horses altogether were working there, because I see it was over 80,000 cubic feet that was going through? A. Yes, it was usually between 80,000 and 100,000 cubic feet.

1641. Q. And the men down below were less than 300? A. Yes, I think so.

1642. Q. So that, unless there was a large number of horses, or something of that kind, it would be a great deal above the minimum?

1643. MR. WADE.] Q. The measurement was 400 cubic feet for each man, boy, and horse? A. Yes, I think so.

1644. MR. BRUCE SMITH.] Q. There were a number of horses in there? A. Yes; not a great many.

1645. MR. WADE.] Q. Was there anything in the working of these single doors before the explosion that called upon you to direct the Manager's attention to them? A. No; I do not know that I was aware of the single doors before the explosion; but if I had been, I think I should have directed his attention to them.

1646. Q. I suppose your Inspectors would know, if you did not? A. Yes.

1647. Q. They could not help knowing? A. I suppose they would.

1648. Q. Now, with regard to this door you complain of at the 5th Right—was it not the 5th Right? A. That was the first one that was the subject of correspondence.

1649. Q. What was the width of the pillar there? A. Sixteen yards, I think.

1650. Q. Was there room for another there as things stood? A. No; they had to make other arrangements.

1651. Q. That was something that would involve loss of time? A. Yes.

1652. Q. And they had to drive something like 30 yards in the coal before they could arrange it? A. Yes, they had to drive so far; I do not know how far.

1653. Q. Because, if you have double doors, you must have them so far apart that a full train of skips can stand between the two doors? A. Yes.

1654. Q. So it is a necessary condition precedent to have a sufficient distance available to put the other door in? Yes.

1655. HIS HONOR.] Will these other letters be produced?

1656. MR. BRUCE SMITH.] Yes, and the copy of the rule attached. I only referred to that question because Mr. Wade had asked Mr. Atkinson how Mr. Rogers had conducted himself in the management of the mine since, and then Mr. Atkinson said that with regard to the double doors and some other questions.

1657-8. HIS HONOR.] Q. Can you tell me whether these idle faces that were not examined were on a rising level? A. The No. 1 Right headings are rising, your Honor. I understand there are 30 or 35 feet rise from about the 4th Left to the face of the headings.

1659. Q. Then I take it it was rising in that direction (North). A. Yes.

1660. Q. Well, of course, if there is a rising level, ending in a dead face, gas not discharged there in that face might possibly find its way there? Q. It might, your Honor, yes.

Witness—A. A. Atkinson, 23 July, 1903.

1661. *Q.* Can you tell me any reason for examining an actual working face which would not apply to a temporary working face—going outside rules altogether; suppose there were no rules on the subject. This daily examination is made for certain purposes before the men go in. Now, can you tell me, is there any reason applying to the examination of a working face in the working parts of a mine which does not apply to a temporarily idle working face? *A.* Yes, your Honor; the reason that the men are going to work in a certain place requires that the roof and sides be in a safe condition: that would not apply to an idle place.

1662. *Q.* The condition of the roof and sides? *A.* Yes.

1663. *Q.* Now, is there any other reason? *A.* No, I think not.

1664. *Q.* Now, with regard to Special Rule 10, can you tell me why it is advisable to examine the state of the waste workings? *A.* In order to ascertain if there are any accumulations of either fire-damp or black-damp, especially as some of the travelling roads in this colliery are return air-ways.

1665. *Q.* Now, to examine a waste working, as it is called in that rule, for the presence of fire-damp at any rate, the examiner would want to get to the highest places of the roof? *A.* Yes.

1666. *Q.* Can he do that where there have been falls? *A.* Well, he must use his own judgment in order to keep himself safe. He should not go where it is unsafe to do so.

1667. *Q.* If the examination is made, as you say it is made, for the purpose of detecting fire-damp or black-damp, ought it to be made with the safety-lamp? *A.* Well, particularly so far as fire-damp is concerned, it ought to be made with the safety-lamp.

1668. *Q.* That will detect the presence of fire-damp when a naked light will not? *A.* Yes.

1669. *Q.* I do not know how it does. I will not trouble you to explain it to me; but it does in some way or other, when a naked light will not. I suppose it is something about the burning of the flame or the appearance of the lamp which reveals the presence of the fire-damp? *A.* It is a blue halo on the top of the flame, which shows the presence of fire-damp.

1670. *Q.* Do they ever do such a thing as put the lamp at the end of a pole and lift it up in that way to the high places where the gas might be supposed to collect? *A.* No, I do not think it is necessary to do that here at all. One has heard of that practice being carried out years ago with the naked light, when they used to burn the gas; but that practice has been abolished many years.

1671. *Q.* Well, I should have thought, if the object was to find out if there was gas in a given portion of the roof, and you could not get there yourself, because it was too dangerous, or you could not climb, I should have thought the natural way would have been to have put it up upon the end of a stick? *A.* You could not see the halo. You must have it close to you to see the halo.

1672. HIS HONOR.] Oh, I see. That answers it at once.

1673. MR. WADE.] Would your Honor ask this, whether there were any places to the left of the main heading which were higher than that?

1674. HIS HONOR.] I was not asking so much with reference to the No. 1 Heading, because that is the heading where the disaster occurred; but my purpose was to ask about the management.

1675. *Q.* Were there still higher places to the left?

[Mr. Wade pointed out the area to the west of the No. 1 Back Heading on the plan.]

1676. WITNESS.] *A.* I could not say, your Honor, but I should say that this place, at the top of Stafford's going bord, would probably be on about the same level, although as a matter of actual figures the colliery people can only tell by levelling.

[Examination concluded.]

1677. MR. BRUCE SMITH.] If your Honor will take all that evidence I referred to, I only put it in as an opening previously, and let me take that evidence and refer to it, that will complete my case.

1678. HIS HONOR.] Yes; taking it that you are not confined to the passages you have quoted.

1679. MR. BRUCE SMITH.] Yes; and I would ask that I be allowed to refer afterwards to the other parts of the report.

1680. HIS HONOR.] I take it that this blue book—the Report of the Royal Commission and of the Coroner's Inquest—is before me.

1681. MR. BRUCE SMITH.] Yes; and that is all I want to put before your Honor.

1682. HIS HONOR.] Yes; and it is not unjust to you, gentlemen, because you were both in the case throughout, and your minds are saturated with the whole thing.

1683. MR. WADE.] I have no objection, with this provision, that my friend confines his references to the report of the Commission to the specific charges. I should object, and I object now, to his referring to anything under this Charge 6 to any special finding of the Commission.

1684. HIS HONOR.] That is clear.

1685. MR. WADE.] I should like an expression of opinion about this watering, because if I have to go into that it will take many days.

1686. HIS HONOR.] I am prepared to listen to Mr. Bruce Smith on that question; but it seems to me that the dust question is gone.

1687. MR. BRUCE SMITH.] I have directed your Honor to all the evidence I wish to put before you.

1688. HIS HONOR.] On the evidence you referred me to, I should think there was a case; but on what Mr. Atkinson said it seems to me it goes. He said he would not consider it bad management to leave the dust unwatered if safety-lamps were used. When pressed as to a case where safety-lamps were not used he would not give any answer. He said it was an unheard of condition; and, practically, I take it that his evidence comes to this: that if the Manager knows there is an escape of gas going on in the mine calling for precautions, the thing mainly he should do is to have safety-lamps, and the other becomes an entirely secondary matter. The main thing is the use of safety-lamps. He could not understand a man having no safety-lamps and watering the dust, because if the conditions were such as to call for watering the dust, they would call still more loudly for safety-lamps; so that the main question, as he puts it, is, "Was he or was he not guilty of bad management in having no safety-lamps?"

1689. MR. BRUCE SMITH.] Your Honor will have regard to the distinction between the general watering of the mine and the watering of the vicinity of shots.

1690. HIS HONOR.] But I do not understand that you have made any point about the non-watering of shots.

1691. MR. BRUCE SMITH.] Well, I read the evidence of Mr. Rogers that they had never watered in the vicinity of shots.

1692. MR. WADE.] But it does not say that the places were dry and dusty.

1693. HIS HONOR.] I must confess that I had not it in my mind that that particular point was being made. I would be glad to look at the evidence now.

1694. MR. BRUCE SMITH.] Mr. Rogers said he never watered in the vicinity of shots.

1695. MR. WADE.] There are two things to prove beyond that, that it was a dry and dusty place, and that it was in a haulage road. If the places are not both dry and dusty he need not water at all. If it is dry and dusty then you are bound to.

1696. HIS HONOR.] We had better clear that up. What are the pages?

1697. MR. BRUCE SMITH.] Pages 37 and 38. The words Mr. Wade used just now are the words, I think.

1698. HIS HONOR.] I do not see anything like that in pages 37 and 38.

1699. MR. WADE.] Questions 13775-8 are the numbers of the questions in the Commission evidence.

1700. HIS HONOR.] That is the evidence of Mr. Atkinson himself.

1701. MR. WADE.] On that very question, your Honor; and Question 14986 about the other question.

1702. HIS HONOR.] What is the rule that refers to this?

1703. MR. WADE.] General Rule 12, subsections (h) and (h1):—

“If the place where a shot is to be fired is dry and dusty, then the shot shall not be fired unless one of the following conditions is observed, that is to say:—(1.) Unless the place of firing and all contiguous accessible places within a radius of 20 yards therefrom are, at the time of firing, in a wet state from thorough watering, or other treatment equivalent to watering in all parts where dust is lodged, whether roof, floor, or sides, &c., &c.”

1704. MR. BRUCE SMITH.] Your Honor will see, in the middle of page 40, Mr. Rogers says:—

“For nine or ten months for the best of my memory we have never watered in the immediate neighbourhood of a shot. We have no apparatus for doing that, and it has never been done.”

I have already referred to evidence showing what is the minimum quantity of dust that becomes dangerous. Mr. Wade referred to it just now, one 228th part of an inch per linear foot, 7·2 ounces per foot; and, seeing the evidence of Mr. Rogers and Morrison about the dust I leave it to your Honor to say whether there was not sufficient dust to make the practice of never watering in the vicinity of a shot careless and negligent management. That is all I can do.

1705. HIS HONOR.] As well as I can remember, the effect of the evidence was that the mine was not what could be called a dusty mine, that there were a good many places in it that were always damp, certainly not very dusty; but there were some parts that were dusty.

1706. MR. BRUCE SMITH.] I should like it to be left open for argument by-and-by that on the evidence before your Honor it became a matter of good management to water the shots. I submit, and shall submit by-and-by, that there was a sufficient quantity of dust in this mine to make it bad management not to water in any case; but as to the general watering question, I understand your Honor thinks that Mr. Atkinson's evidence—[*Interrupted.*]

1707. HIS HONOR.] As to the general dust outside that I think that Mr. Atkinson's evidence disposes of it. Just on this question I would like to call your attention to (h) and (i) of General Rule 12; and it seems to me that this is not like the other things, like examining the idle working faces and some other matters, where there are considerations entirely outside rules that a man ought to have regard to; the whole danger here depends upon a place being dusty.

1708. MR. WADE.] And dry.

1709. MR. BRUCE SMITH.] The word “dusty” is an expression which is very vague.

1710. HIS HONOR.] Having dust to the extent of 7·2 ounces per foot, to an average thickness of one 228th of an inch all round.

1711. MR. WADE.] It does not mean that.

1712. HIS HONOR.] I may assume it to mean that, because it is dangerous when that exists, so that it is dangerously dusty when that is so; but it may not be dangerously dusty when there is a smaller amount of dust. If it is not dry and dusty to the extent I speak of there is no danger, while it seems to me that before I can say Mr. Rogers was incompetent from not watering in the working faces I must have some affirmative evidence before me that it was a dry and dusty place. This is, of course, subject to what you may say about it; but at present that is how it appears to me. If it were a place with no dust at all, wet, and the walls and everything damp, surely it would not be bad management not to go and put water on water. There must be some affirmative evidence.

1713. MR. BRUCE SMITH.] I want to go into this matter further than I have done. I have only just mentioned this evidence. I do not want to give up my right to a contention by-and-by that there was a sufficient knowledge as to the dusty conditions of that mine, and that there was a dangerous minimum of coal-dust, sufficient to induce Mr. Rogers, as a matter of good mining practice, to have watered at all events, in some places, and to have had the apparatus there for the purpose. As to the general watering, I am quite prepared to abandon that altogether so as to save the necessity of calling evidence on the general question of watering.

1714. MR. WADE.] I am entitled, as a matter of law, as they have not given any evidence upon this point, to ask your Honor for a ruling upon it. My friend has no right here to give a vague kind of insinuation that there may be something coming out by-and-by, and to ask the Court to reopen this if he has better material coming out by-and-by.

1715. HIS HONOR.] I do not understand that Mr. Bruce Smith takes that position. There is certainly evidence before the Court. On that evidence, and only on that evidence, he intends to argue that there is a sufficient presumption that these headings were dry and dusty, or might be dangerously dry and dusty, seeing the small quantity wanted, or sufficiently so to make it good management to water them, or some of them, at any rate, before firing a shot. Well now, that is his position. 1716

Witness—A. A. Atkinson, 23 July, 1903.

1716. MR. WADE.] It might be so, first of all. Now, the evidence has come out to rebut that at once that Kembla is not a dry and dusty mine. In parts it is dry and dusty. So that the onus is thrown on my friend to show that where these shots have been fired the place was dry and dusty. Now, Mr. Atkinson himself says that this is not an admission that shots were fired in dry and dusty places. He was pressed by Mr. Lysaght: "Did not that show neglect?" and Mr. Atkinson said that there was no admission that this omission to water in the neighbourhood of a shot was also in a neighbourhood that was dry and dusty; and unless they can prove these things we ought not to be called upon to give any kind of answer. It is the same with regard to the watering generally. I shall be here a good deal longer than I otherwise would be unless things that my friend has not made a *prima facie* case of are dismissed. If your Honor will look at the way this passage runs it looks very much on the face of it as if he was referring at the time he gave the evidence to watering the roof and sides, because it was common ground, from the very first days of the Inquest, that there were watering-tubs which were used to lay the dust, or which had the effect of laying the dust on the roadway where the plugs were pulled out. He is asked here first of all whether there was dust on the roof or sides, and he says:—

"There is no dust on the roof or sides, but there is a little on the floor. There was very little dust on the roof and sides before the disaster, but there is much more now. We have no apparatus at all for watering the roof, sides, and timbers; and we never have watered them,"

and Mr. Atkinson says now that there was no occasion to do that.

"We have not fired shots in the roads for a considerable time. For nine or ten months, to the best of my memory, we have never watered in the immediate neighbourhood of a shot."

Now, as that stands, it is perfectly consistent with Mr. Bruce Smith's explanation that he is referring to firing shots in the roads. "We have no apparatus for doing that." Now, Mr. Atkinson's letter, if your Honor will refer to that for a moment, on page 935 of the Royal Commission (paragraph 485 of these notes), distinctly refers to watering in those cases where they are firing on haulage roads [*the letter was read*], so that the attention of Mr. Rogers was drawn to this rule with regard to the blasting on haulage roads, and the question had certainly been asked Mr. Rogers only a moment before as to the firing of shots on the roads, and this question follows immediately afterwards. Then, if it is consistent with that version, it still lies with my friend to show affirmatively that there was a firing of shots on haulage roads in places that were dry and dusty. Now, the evidence is that these haulage roads were in many parts wet; only in exceptional parts were they dry and dusty. So, in these circumstances the onus is certainly thrown on the Crown to show that on these occasions when these shots were fired in the roads they were fired in the neighbourhood of dry and dusty places. So, if your Honor says on this that there is a case to answer, it is putting a man upon proof of things of which there is no evidence whatever in the first instance. The thing is in the vaguest possible form to start with. Mr. Atkinson himself points out twice that there is no allegation there at all that the shots were fired in dry and dusty places; and the evidence is perfectly consistent with what Mr. Rogers speaks of, that the shots were fired in the haulage roads alone.

1717. HIS HONOR.] The only thing in connection with that is, when is blasting along haulage roads necessary;—is it necessary in all haulage roads?

1718. MR. WADE.] No; only in case they want to make manholes.

1719. MR. BRUCE SMITH.] But it does take place sometimes on haulage roads.

1720. HIS HONOR.] What I had in my mind was this: these haulage roads were partly damp and partly dry and dusty. If the blasting on haulage roads necessarily takes place at intervals all along, then it would be a fair inference that some of them took place in the dry and dusty part.

1721. MR. BRUCE SMITH.] The manholes are all along.

1722. MR. WADE.] Yes; the manholes are made as the road is made.

1723. MR. BRUCE SMITH.] My friend does not seem to want this argued.

1724. HIS HONOR.] He wants it settled at once.

1725. MR. BRUCE SMITH.] I can refer your Honor to every paragraph in the statement.

1726. MR. WADE.] Why not do it. If you have your case prepared and at your finger's ends, why not do it.

1727. MR. BRUCE SMITH.] I will have to take your Honor to the evidence about the dust.

1728. HIS HONOR.] I suppose where dust, in a mine of this kind at any rate, is most likely to appear is where the traffic takes place. The coal that drops about gets ground up, and it rises and clings to the walls and roof. Well, that would not be so much likely to be the case in a working-place. There is a certain amount of traffic; the men go in every day to do their work there, and some small coal is made, I suppose, by the blasting and the shovelling; but there is nothing like the same cause of dust as there is in the haulage road.

1729. MR. BRUCE SMITH.] It is evident the coal falls in the working-place; and there is small coal; and necessarily dust is made in the working-place; and when you come to a quantity of dust one 228th part of an inch all round it is very small indeed.

1730. HIS HONOR.] I see by the evidence of the report that there is a wide difference between the dust at Mount Kembla and that at Helensburgh. It does not seem to be such a fine dust.

1731. MR. BRUCE SMITH.] It gives rise to the second most violent explosion.

1732. HIS HONOR.] Yes; that is when it is formed.

1733. MR. BRUCE SMITH.] When the coal is hewn it is allowed to fall forward and smash up, and that must cause a large amount of dust.

1734. HIS HONOR.] I cannot infer that to be the case.

1735. MR. BRUCE SMITH.] Your Honor has seen the dust in a yard where the coal has been broken up.

1736. HIS HONOR.] I do not think that I can infer that in every place where the men are blasting and working there is necessarily a dangerous quantity of dust. I should have thought that when Mr. Atkinson was asked these questions which I have been referred to—[*Interrupted*].

1737. MR. BRUCE SMITH.] I was going to refer your Honor to the danger in the mine of the dust. I refer your Honor to Frost's evidence on page 12 [*see* paragraph 235 of these notes]. Now, will your Honor just look on the plan where the cabin is. The cabin is more than half-way out of the mine. I am only arguing now that I have evidence to argue on. Your Honor will see by the plan that the cabin is down at that junction [*pointing to the junction of the No. 1 Right with the main tunnel*]. I am not trying

trying now to prove my case, but just to show the material I have to work upon. Now, that is the travelling road [*indicating it on the plan*] where there is no traffic of the trucks of coal. That is a travelling road simply, along which men walk. *A fortiori* in the haulage road, which is where the trucks are running, there will be a quantity of dust.

1738. MR. WADE.] Just the opposite. You cannot draw inferences. You want the evidence.

1739. MR. BRUCE SMITH.] Now Morrison, on page 18, says:—

“The section of which I was Deputy was not a dusty section. It was rather inclined to be damp. The 4th Left was the only part of it, I think, that was at all dry.” [*Continued reading the evidence, which is copied in paragraph 235 of these notes, and paragraph 245.*]

And then the next part I referred to was the evidence of Evans on page 30 [*reading evidence already quoted in paragraph 235 of these notes*].

1740. HIS HONOR.] Of course, so far as this inquiry is concerned, it does not matter what section of the mine it is. I am not dealing with the cause of the disaster, but with the management.

1741. MR. BRUCE SMITH.] And the absence of watering in the vicinity of shots was universal.

1742. MR. WADE.] I beg your pardon.

1743. HIS HONOR.] You said “I beg your pardon” as if you disputed that. I thought, certainly, that that appeared from Mr. Rogers’ evidence.

1744. MR. WADE.] That, I think, appears to have reference only to this blasting on main roads. I will call evidence to prove that the question of blasting in the faces is entirely a different thing to blasting on the main haulage roads.

1745. HIS HONOR.] Let me look at that again.

1746. MR. WADE.] Page 40, at the middle of the page.

1747. HIS HONOR.] Well, but even if it does, he says, “We have no apparatus for doing it.” Well, if they had not apparatus for doing it in one place, there would be no apparatus for doing it in another.

1748. MR. WADE.] The apparatus is a pannikin and a bucket of water.

1749. HIS HONOR.] Then he had not a pannikin and a bucket of water.

1750. MR. WADE.] It is clear from that that he had in his mind the previous question. It is so hard to tell from this condensed kind of evidence of the deposition clerk what the exact form of the question and answer was.

1751. MR. BRUCE SMITH.] Of course, I do not admit my friend’s statement about a dipper and a bucket of water, because 20 yards is the recognised distance along the road to be watered where a shot is going to be fired, and how is a man going to water 20 yards of road with a dipper?

1752. MR. WADE.] Well, a bucket then.

1753. MR. BRUCE SMITH.] Now, I want to direct your Honor’s attention to one sentence in that portion your Honor was looking at, in which Mr. Rogers says, “I do not know what quantity of dust would be considered dangerous,” and then, also, to page 788 of the Commission, Questions 26320–2 (copied in paragraph 241 of these notes). That is Mr. Rogers’ opinion of danger, and of course it has an important bearing upon Mr. Rogers’ action or inaction in the mine, because, if he regarded 1½ inches as the dangerous quantity, it will affect your Honor’s judgment of his opinion.

1754. HIS HONOR.] I have not seen any mine, of course, and people who are mining experts, or are acquainted with mines, have a number of things in their heads which are not in mine; and that fact which Mr. Bruce Smith referred to just now, which would be well known to people who know mines—that is, that there would be these manholes all along the roads—would have a bearing on the statement that they never water the roads, and have no apparatus for doing it.

1755. MR. WADE.] They drive the manholes when they are making the roads, and it is only in exceptional cases that they make them afterwards.

1756. MR. BRUCE SMITH.] The manholes have to be every 20 yards by a rule.

1757. MR. WADE.] The manholes have to be put in when the road is first made, as soon as the road is used for haulage purposes; otherwise it is an offence against the Act. General Rules 14, 15, and 16 refer to the manholes. I would refer your Honor to Mr. Atkinson’s evidence, Questions 13775 to 13780, and 14986–7 [*reading the evidence*].

1758. HIS HONOR.] You see it follows from that evidence, Mr. Bruce Smith, that Mr. Atkinson could not say that a place that has been blasted in was dry and dusty.

1759. MR. BRUCE SMITH.] Mr. Atkinson was confining his opinion then to the data within his own knowledge. I am not confining myself to that. I only quote the evidence for the purpose of showing that the failure to water anywhere, and the failure to have apparatus to water anywhere, and taking the evidence as to dust of Frost, who practically lived in the mine, raises a fair inference that Mr. Rogers had been guilty of bad management. Mr. Rogers says, “We have fired no shots in the roads for a considerable time—nine or ten months.”

1760. Of course, if, nine or ten months ago, he had been guilty of negligent mismanagement, it appears to me it is a thing I should take into consideration. At the time of the Commission, they were simply inquiring into the cause of the accident, and who was to blame for it.

1761. MR. WADE.] They were inquiring into the whole discipline of the mine under the terms of the Commission.

1762. HIS HONOR.] The Commission were appointed “to make a diligent and full inquiry into the causes of the explosion . . . and to investigate all the surrounding circumstances, in order to ascertain whether blame attaches to any person or persons . . . and to make recommendations,” so that you see they only had to find out whether blame attached to anyone, and I take it that blame there means in reference to the explosion, that is to say, they would find out the cause of the explosion, and who was to blame for it. Well, that would have nothing to do with a thing that occurred nine or ten months ago; but for the purpose of inquiring as to the management, a thing that occurred nine or ten months ago, is a thing I can take notice of.

1763. MR. BRUCE SMITH.] If they had gone into that they would have been going into matters that your Honor has to go into. They only went into the cause of the explosion, and whether anyone was to blame in connection with that explosion.

1764. HIS HONOR.] I do not think I ought to go into the cause of the explosion; and, indeed, looking

Witness—A. A. Atkinson, 23 July, 1903.

looking at the report, I do not remember any passage in which the blame for the explosion is laid upon Mr. Rogers' shoulders. There is certainly censure expressed in one or two parts; but, I think, they go on to say that the explosion is not due to that.

1765. MR. WADE.] They reported on specific breaches of the Act, apart from the cause of the explosion; so that they did go into the management.

1766. MR. BRUCE SMITH.] The object of that report is to prevent a similar occurrence. If a man is only to be censured when he produces an explosion, why, the section would become an absurdity. This mode of inquiry is a precaution against men who are likely to cause an explosion, or may possibly cause an explosion, from having a certificate in order to retain the position of Manager. I can show your Honor, page 12 of the Inquest, where Mat. Frost was examined [*Mr. Bruce Smith then read again the evidence of Frost, which is quoted paragraph 235 of these notes.*] I think they are the principal references I made to the presence of dust in certain parts of the mine; and then I referred your Honor to page 396 of the Commission as to the quantity of dust which is dangerous [*Questions 12994 to 13006*].

1767. HIS HONOR.] I suppose that means that it is dangerous when in the air.

1768. MR. BRUCE SMITH.] Dangerous when raised by concussion.

1769. HIS HONOR.] A shock would detach it and get it into the air, and then it becomes dangerous. Still, it does not follow that a shock would detach every part of the dust. But in this mine, I gather from the Commission, the dust requires to be raised; it does not hang in the air. The Commission compared it with some other mine—the Metropolitan—and said that at that mine the dust hung in the air, it got in the eye-lashes, and got all over your clothes, whereas in this mine you only got dirty if you touched something, so that it did not hang in the air, and it requires to be detached by a shock.

1770. MR. BRUCE SMITH.] The firing of a shot itself would raise the dust, and then the tongue of flame would ignite it. Now, your Honor, this is my evidence, and if your Honor thinks it is not sufficient to justify me in arguing by-and-by, that is the point. Mr. Rogers admitted that he watered nowhere, and that he had no apparatus for watering. It is admitted that the manholes required this shot-firing to get the coal out.

1771. MR. WADE.] I did not admit that. I said occasionally you may have to blast on a haulage road. It is a very different thing to say that you must do it if manholes are required on a haulage road.

1772. MR. BRUCE SMITH.] It is admitted that there was no watering and no apparatus; and then Mr. Atkinson said that the dust on haulage roads was more dangerous than on travelling roads; and then you have Morrison's admission as to the dust on the travelling roads, along which there is no wheeled traffic at all. I submit to your Honor that it must be evident that, to universally neglect to water the mine, and to neglect to provide even the apparatus for the purpose in a mine in which there is that quantity of coal-dust, which is obviously far beyond the quantity which is generally admitted to be dangerous, I say it is open to me to argue that that is a factor in Mr. Rogers' incompetence as a mine manager. That is all I have to say. If your Honor thinks it is not arguable, even with that material to base it upon, of course, I shall have nothing further to say; but I do submit that there is material there for an argument, because I am not going to submit it as an isolated fact, but I am going to submit it as one of a number; and it is in this sense that I ask your Honor to reserve it for me as one of a number of actions or omissions which it is open to show to the result for which I am here.

1773. MR. WADE.] I should like to reply to my friend. Now, I take the position first of all that the proper basis to look at this matter is, as in any criminal or quasi-criminal matter, that you must start with the presumption that the man is guiltless; and you start with the presumption here, as he has to obey certain rules, that he has obeyed them, and amongst these rules is General Rule 12, which provides for watering dry and dusty places when about to fire a shot. Very well, then, with that presumption that it is done as a rule, my friend has to bring some specific case that shows it has not been done, and my friend has the onus on him to produce a specific or a general admission that the watering has not been done when shots have been fired in a dry and dusty place. If he does that, then I am called upon to answer it, I admit. Now, all my friend has done is to refer to these passages in the evidence of Matthew Frost, and Evans, and Morrison. Now, my friend has quoted evidence on one aspect only—that is, that there was dust. It is perfectly clear, from the wording of the Coal Mines Regulation Act, that dust alone is not sufficient. There must be dust, and that dust must be dry. You must take it as a fair inference that the Legislature does not use "dry and dusty" unless they intend to give effect to both those words. None of these witnesses say that the place was dry and dusty. They say that in parts the mine was—I do not know exactly the word Frost uses — [*Interrupted.*]

1774. HIS HONOR.] Well, dust is necessarily dry.

1775. MR. WADE.] Not at all, your Honor.

1776. HIS HONOR.] To be in the air it must be.

1777. MR. WADE.] No, not that; because in many mines they send down a spray of water across the intake air, and that is carried along with the air into the mine, and if any dust is in suspension in the air that dust is moistened, and that is the reason why you must get these two words "dry and dusty." Now, in the Metropolitan Mine the dust is so fine and infinitesimal that it gets into your eyes, and it takes a long time to wash it out; and in those mines where they water the air with sprays, that dust still remains in suspension, with a certain amount of moisture in it.

1778. HIS HONOR.] They are both in suspension in the air, the dust and the vapour; but the dust is dry—it would not float in the air if it were not dry.

1779. MR. WADE.] It is so infinitesimal that it still floats in the air; the spray goes through the air so fine—it is as fine as a pin's point. That is in suspension in the air, and that damps the dust. I use that illustration to show that a meaning is to be attached to the expression "dry and dusty." Take a particular spot in the mine: there is dust there, but the dust is damp. Somebody may say, "Under these conditions, this dust is here, you must water and saturate the place for yards and yards, and if you do not, you are liable for a breach of the Act." But although the dust itself is about the place, it is not in a condition of being dry and dusty, and you would be entitled, under those circumstances, to fire a shot, although the dust is in suspension, although the dust is very fine, and although you have the dust in the locality. But if the dust is in the locality, and dry, and free of all vapour, then there would be a tendency to explosibility; and then the Act comes in and says that under those conditions you must water this particular

particular place before you fire a shot. Frost further says this, on page 12 (Inquest), "That there was," as he puts it, "an accumulation of dust' in the travelling road." Now, this morning Mr. Atkinson told us in his evidence that when you get impurities mixed with the dust, it ceases to have that degree of explosibility that fine pure dust has; and that when it is mixed up with the stone grit, as he refers to here in his evidence before the Commission, it loses its explosibility, which otherwise it might have when it is perfectly clean [*Questions 12995-6 of the Commission*]:—

12994. *Q.* Will you just say where, in your opinion, the most dangerous class of dust is found in the roadway of a mine? *A.* Generally on the haulage roads, and on the — [Interrupted.]

12995. *Q.* What part of the haulage roads? *A.* And on the timbers and upper parts rather than on the floor.

12996. *Q.* Why do you regard that as the most dangerous kind of dust? *A.* Well, it is the finest and the purest. The floor dust is very often mixed with stone impurities."

So that he confines it to the roof and sides, actually of haulage roads, and if you have travelling roads where men travel to their work, passing backwards and forwards, and where there are horses travelling backwards and forwards, there is no dust there on the roof and sides, because there is no coal travelling in the roads; and the dust there is innocuous, because it is mixed up with the dust and impurities caused by the horses travelling and the tramping of men's feet. The only other evidence is that of Morrison, where he says that the main road is always damp, and that the 4th Left is in parts dusty. He does not say that it is both dry and dusty. [*Mr. Wade continued reading from Morrison's evidence, as quoted in paragraph 235 of these notes*].

1780. HIS HONOR.] I should certainly assume in my mind that a witness giving evidence in that way meant "dry and dusty" when he said that a place was "dusty." I am quite sure, if I were giving evidence, I should take "dust" to mean "dry dust." I should not call a place where the dust had been churned up and damped a "dusty place."

1781. MR. WADE.] There are all the degrees between slush, through the lesser degrees, till it is absolutely dry.

1782. HIS HONOR.] Well, "dry" is a relative term always, and, in the case of relative terms, there is always a difficulty in drawing the line. But we have no difficulty in drawing the line when saying a place is dry.

1783. MR. WADE.] But the section of the Act says that a place must be both dry and dusty, and my friend must produce evidence that the place is both dry and dusty before he can bring this penal section into force at all. There are many places where dust floats on the pools of water itself. The dust is so impalpable that even when it is wetted it does not sink.

1784. HIS HONOR.] That is because it is dry on one side, and it floats.

1785. MR. WADE.] That may be, but I have in my mind cases where it is so absolutely fine that it floats even when it is wet. Now, it is perfectly clear that Mr. Rogers, on page 40, was referring to shots in the haulage roads only. Then there comes this statement: "For nine or ten months we have not fired a shot; we have never watered in the neighbourhood of shots." Now, that must be all taken in conjunction with the other matter, the firing of the shots on the roads, because the firing goes on in the other parts of the mine, in the faces, that goes on every day, every shift. It is continually going on; there is no question about that. That point has never been raised, and the only matter is this suggestion of Mr. Atkinson's that Rule 12 should be observed; and these questions are based on that communication of Mr. Atkinson to Mr. Rogers. Here is what he says on page 39, the last six lines:—"Before 1898 we used to blast on haulage roads." So that shows what the context is. It is all cross-examination by Mr. Bruce Smith. [*Mr. Wade continued reading Mr. Rogers' evidence, as quoted in paragraph 259 of these notes.*] Then he was asked if he did not write to say that there was no dust, protesting, and so on. Then that is followed up with regard to the apparatus that there may have been in hand for protection when he did blast on haulage roads, and he said, "We did not water whenever we fired a shot"; and I say that clearly means "We did not water when we fired a shot on haulage roads"; and I say that brings it down clearly that the other side have to show that when we did not water in a haulage road when we fired a shot the place was dry and dusty. There is no admission at all that he fired shots on the haulage roads, which were both dry and dusty. It is apparently a suggestion. Mr. Atkinson says that when you are firing on haulage roads you should observe General Rule 12 with regard to this matter. Now, with regard to the occasion I mentioned, I said there may be occasion to blast in a haulage road after the thing is in operation as a haulage road. My friend seemed to think that I stated that you make the manhole after the haulage road is completed, and therefore you have got to blast; but it is perfectly clear, from General Rules 14, 15, and 16, that these manholes must be in existence for the protection of the men travelling on the road when it is first used as a haulage road. So that it is apparent that before you can have vehicles upon that road, you must have the manholes for the protection of the men passing over there. In the case of a road worked by endless rope, windlass, or gin, then the manholes must be every 20 yards, or, if there is not room for a person to stand between the side of a tub and the side of the plane, then, unless the tubs are moved by an endless chain or rope, the manholes must not be more than 10 yards apart. Then Rule 15 provides that on a road operated by a horse they must not be more than 50 yards apart. Now, those are all conditions precedent before a horse can be used on a horse road, or a rope on a rope road or an engine plane; but I say this, that it may happen through some accident, or some unforeseen necessity in the circumstances of the mine, that you may have to go back to make manholes after the road is made; and, in those exceptional circumstances, you have to blast; and that is how it is that you may have to blast on a haulage road, and that is an exceptional case. The onus is thrown on my friend to show that the blasting was done in a dry and dusty place. The evidence is that the bulk of the main No. 1 road was damp; and I say that there is nothing at all of an affirmative character here that we ought to be called upon to answer at all. Morrison says the main road was always damp, and the dust was not dangerous. Evans says, "there was dust in my section." Well, was there anything in that? If there was dust in his section, if there was one two hundred and thirtieth of an inch in that section, there is no proof that there was dust in Evans' section which would be of a character to necessitate that the place should be watered before a shot was fired. It is no use saying that in occasional places there was dust in a large or small quantity. There may be occasional places where there was dust, a heap of dust a foot thick and a yard long; but that does not throw the onus upon me. I say they must show the affirmative proof that the places were dry and dusty, and that those places were not watered before firing shots. I submit to your Honor that the case has not reached that state where a *prima facie* case has been made out.

Witness—A. A. Atkinson, 23 July, 1903.

1786. HIS HONOR.] I have felt a good deal of doubt about it; but I think that there is a case to be answered here. The rule says that certain precautions must be observed where a shot is fired in a dry and dusty place. I should certainly take it, where the evidence speaks of a place being dusty, that it means dry and dusty, looking at the ordinary meaning of the word "dusty." I cannot, for the moment, think of any case in which a person would speak of a place or thing being dusty if it was not dry. It seems almost included in the meaning of the word "dusty." At any rate, I am sure, in the average ordinary use of the word dusty, it would be taken as meaning dry and dusty; and I do not think, unless an argument was raised to that effect, that anyone reading over the evidence here would form any other opinion or impression than that wherever "dust" and "dusty" are used, they mean "dry and dusty." In Mr. Rogers' own evidence, at the bottom of page 39, he says [*reading evidence as quoted in paragraph 259 of these notes*], "I believe my attention was called then to the danger of that practice on account of the dust." He does not say, "On account of the dry dust." Of course, he means it. Of course, that being so, the evidence seems to show, as far as I have been referred to it, that this is a mine damp in parts—dry and dusty in parts; in other places it is wet, and, as is put by the witnesses, therefore, not dusty. They seem to speak of the damp parts as being free from all danger of dust. Well, in this mine, which is dry in parts—the character of which is to be dry in parts and wet in parts—Mr. Rogers says that he has no apparatus at all for watering the roof, sides, and timbers, and they never have watered them. "We have not fired shots in the roads for a considerable time" [*continued reading Mr. Rogers' evidence, as quoted in paragraph 240 of these notes*]. Well, that, it seems to me, calls for some explanation in the face of the fact that the mine is patchy in this way; and I am more led to this conclusion because I am not entering upon this inquiry with expert knowledge. There are a great many things in an inquiry of this sort as to which no evidence is given, because no evidence is necessary—everybody knows them. It may be that, to an expert, or a practical miner, that statement that they have no apparatus for watering, and that they never did it, would require nothing more—it would be enough. I think I shall have, in order to understand some of the evidence that has been given, to go down and have a look at the mine; and it may be that, when I see the mine, that piece of evidence will be very eloquent indeed. At any rate, it seems to me that there is something that calls for explanation there, so that I do not strike out that ground, limited in that way to the absence of watering in the vicinity of blasts. Of course the other, as to the roadways, that goes.

1787. MR. WADE.] I understand there was no ground of that kind.

1788. MR. BRUCE SMITH.] I take the general ground.

1789. MR. WADE.] That is what I object to. I was led by my friend to believe that the ground was taken specifically.

1790. HIS HONOR.] It is not put in that way, certainly; but there are two matters here:—

"Charge 6 (c). In neglecting to ascertain whether dust was accumulating to a dangerous extent in the Mount Kembla Mine. Charge 6 (d). In neglecting to inform himself as to the dangerous character of coal-dust accumulation, or of the quantity required to become an element of danger in a mine."

1791. MR. BRUCE SMITH.] It would come in under the first.

1792. HIS HONOR.] But, of course, you see in form that is not the same thing as "neglecting to comply with the conditions of General Rule 12."

1793. MR. BRUCE SMITH.] Well, of course, he would not do the watering himself; he would see that it was done.

1794. MR. WADE.] I give my friend fair warning that any ground that is not taken specifically I shall take objection to.

1795. HIS HONOR.] What do you say, Mr. Bruce Smith? I do not see the ground taken.

1796. MR. BRUCE SMITH.] I should bring it under those two sub-heads of Charge 6. I shall bring the evidence which I have quoted under those.

1797. HIS HONOR.] I can understand that an argument might be used in this way: neglect to ascertain whether dust was accumulating to a dangerous extent.

1798. MR. BRUCE SMITH.] And the next one too. If he had done that, he would have probably taken this step.

1799. HIS HONOR.] Of course, what I have to inquire into is the question of competence; and what I have to consider is, first of all, whether he did neglect, and next, whether it was material that he should know it. To show that it was material that he should know it, Rule 12 is pertinent, and the fact that he did not comply with Rule 12, that could only be used as an illustration.

1800. MR. BRUCE SMITH.] I should take his action or inaction as a proof of his ignorance under those two heads. I am quite satisfied to let it rest on those.

1801. HIS HONOR.] You say you did not comply with Rule 12, and, therefore, it follows that he neglected to ascertain.

1802. MR. BRUCE SMITH.] Yes; and I will show it by his own evidence. I am quite content to rest it on this.

1803. MR. WADE.] I will take the objection when the point comes.

1804. HIS HONOR.] Well, of course, I cannot anticipate the way in which you are going to argue those two sub-heads of Charge 6; but it seems to me, certainly, on Mr. Wade's objection, that there is no ground taken of disobedience of General Rule 12; and therefore, in that way, it cannot be gone into.

1805. MR. BRUCE SMITH.] No; I do not want that. I shall bring all the evidence I have already quoted under one or other of these heads, or under both.

[At this stage the inquiry was adjourned until next day.]

24 JULY, 1903, 10 A.M.—DISTRICT COURT, KING-STREET, SYDNEY.

Present :—

HIS HONOR JUDGE HEYDON, who was directed to hold the Inquiry by the Minister for Mines.

MR. BRUCE SMITH, instructed by Mr. H. D. Wood, of the Crown Solicitor's Office, appeared to conduct the case on behalf of the Department of Mines and Agriculture.

MR. A. A. ATKINSON, Chief Inspector of Coal Mines.

MR. C. G. WADE, instructed by Messrs. Curtiss and Barry, appeared on behalf of Mr. W. Rogers.

MR. J. GARLICK, Shorthand-writer to the Public Service Board, was present as Secretary and Shorthand-writer to the Inquiry.

MR. D. A. W. ROBERTSON, was sworn and examined, as under :—

1806. *Examination-in-chief* by MR. WADE.] Q. What is your full name? A. Daniel Alexander Wilberforce Robertson.

1807. Q. And what are you by profession? A. Mining engineer.

1808. Q. And what is your present position? A. General Manager of the Metropolitan Coal Company.

1809. Q. And what has been your experience of coal and iron mining—how many years? A. About thirty-four years.

1810. Q. And how many years have you been in the position of Manager, or responsible positions? A. I have been connected with the management of collieries, as Manager, for about twenty-seven years.

1811. Q. In what parts of the world? A. In North Wales and in Scotland, and in this State.

1812. Q. Now, have you had experience of mines that continually give off gas? A. Yes; I have continually been through that phase.

1813. Q. You were a member of this Royal Commission that inquired into the cause of this disaster at Kembla. A. Yes.

1814. Q. And you were also a member of the Royal Commission that inquired into the Stockton disaster? A. That was an inquiry, not a Commission.

1815. Q. An inquiry under the Coal-mines Act? A. Yes.

1816. Q. Now, you know Mr. Rogers? A. I do.

1817. Q. How long have you known him? A. I have known him since 1874.

1818. Q. Where did you first come across him? A. In North Wales. He was under-manager there at one of the collieries under my superintendence. He was there till, I think, about 1881. Then he filled the position of under-manager at extensive coal and ironstone works in Scotland, till about 1887; and he subsequently filled the position of Manager, under me, of Greta Colliery for, I think, about eighteen months or so.

1819. Q. That is in this Colony? A. Yes.

1820. Q. And what were his movements after that, do you know? A. He then went to Mount Kembla; and, of course, I was not connected with Mount Kembla.

1821. Q. But during this period you have spoken of, since 1874, up to the time he came to Mount Kembla at all events, could you say you were in frequent contact with him? A. Oh, yes, frequently. He was in my confidence.

1822. Q. Now were any of these mines fiery mines?

1823. MR. BRUCE SMITH.] Do not answer that question. I will ask your Honor. I presume by that question, my friend is now going to speak of the conduct of Mr. Rogers in other mines than this one. Now, I submit that it cannot throw any possible light on this question your Honor has to inquire into.

1824. HIS HONOR.] The question of experience.

1825. MR. WADE.] It is a recognised rule of law, as my friend knows perfectly well, and has known for many years, no doubt, that, when you are charging a person with general incompetence, you are entitled, by way of answer, to go into the whole career of that man as to competency. The distinction is drawn by every text-book which is known to a beginner: if you are charging a man with a specific act, then his general experience or action in other respects is no answer to that specific charge; but here the charge is one of general incompetency; and I say, apart from the law, it is only a fair thing to say, "We will not strangle this man's opportunities of justifying himself"; and I think we are entitled to show what has been his experience in the way of competency as a practical man in years past. I submit this goes to the whole of the question, because here they are opening up the whole of his history as Manager of Mount Kembla. The charge is one of incompetence and gross negligence; and I submit that I am absolutely entitled, as a matter of law and as a matter of fairness, to go into these matters. Putting it on the lowest possible grounds, if the law is against me, I am entitled to go into this by way of mitigation. Your Honor may take a very severe course, cancellation or suspension; and, to determine the degree of punishment you would determine upon with regard to Mr. Rogers, in case the charge is proved, I should think your Honor would be guided by his career generally, and the evidence of his competency or fitness.

1826. MR. BRUCE SMITH.] Of course, I am not going to refer to any insinuation about attempting to strangle this man, or any rubbish of that sort. Will this evidence enable you, as a Commissioner, to determine the issue which the Act places upon you to determine? The question is: Has Mr. Rogers shown that he is incompetent and grossly negligent? I think those are the words.

1827. HIS HONOR.] And whether, by reason of those things, he is unfit.

1828. MR. BRUCE SMITH.] Yes. Now, yesterday my friend tried to put some evidence before your Honor; he did, to some extent, with regard to Mr. Rogers' conduct in the management of the mine since this disaster; and your Honor's first impression was that that could hardly throw any light upon his conduct before, because a man may, up to a certain point, have been perfectly incompetent for certain work, and some shock of that sort caused him to turn over a new leaf, and that new leaf cannot be endeavoured to be used as throwing light upon his previous conduct. Suppose, for instance, Mr. Robertson is able to show that, for a period of thirty-four years or more, Mr. Rogers has always seemed to him to be a highly competent person; still that does not get over these specific charges which are now being made against him. It is quite possible that a man, at a younger stage of his life, or at a more energetic, active stage of

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Witness—D. A. W. Robertson, 24 July, 1903.

life, may be thoroughly competent and vigilant; and then, at a later stage, he may be indifferent or lax to an extent that may be dangerous to people whose lives are placed in his hands. And I submit to your Honor, whether it be matters that took place after, or years before, they cannot throw any light on the question, not whether he had at one time the brain-power to do this work, nor whether he has been aroused by some great shock, but whether, at the period of this explosion, he had the life, intelligence, vigour, and knowledge to carry out the duties entrusted to him, having reference to the very great responsibility attached to them. Where is it to end? My friend yesterday talked about what certain lines of evidence are likely to lead to. I say, "Where is this likely to end?" We may have here, just like Mr. Robertson, *sui generis*, half-a-dozen Managers of mines from the south who are interested in this question, and, if biassed at all, quite unconsciously, who may come here to—[*Interrupted.*]

1829. MR. WADE.] My friend is making most unfounded charges about the Managers.

1830. MR. BRUCE SMITH.] I say we may have half-a-dozen Managers come here to give a sort of certificate as to Mr. Rogers' competence. One may have seen him in this capacity, and another in another capacity; but I submit it throws no light upon the question before your Honor. These are specific charges—it is not a vague general statement; but certain admissions by himself are put before your Honor, the evidence of other people, with his contradictions, or qualifications, or admissions, and on those separate or distinct charges you are asked to find on that issue, whether he was—not whether he had been, or whether he is now, for that matter—but whether he was fit, by reason of his ignorance and incompetence, to continue to occupy this position. If your Honor thinks it has any bearing, I am not going to show any feeling at all. I have no desire here, except to do my duty fairly and calmly, and put the evidence before your Honor.

1831. HIS HONOR.] The question I have to inquire into here is whether Mr. Rogers, by reason of incompetence—that is one thing, or gross negligence—that is another thing, is unfit to be a Mining Manager. Well, one of those things is incompetence. Now, I take it that, if evidence converse to that which is tendered by Mr. Wade could be given, if it could be shown that he had never had any experience, that he had never done anything at all to qualify himself for such a position, that he had accepted it rashly and in perfect ignorance, that evidence would clearly be admissible on the question of whether, for incompetence, he was fit to be a Manager. On the other hand, it seems to me to be admissible, although I do not think, under the circumstances of this case, it helps me very much; but I think it is admissible to show that he did qualify himself, that he was qualified by reason of long experience of coal-mining and dangerous coal-mining—experience which may be supposed to operate upon him as an education, that he was in that way an educated, experienced man, fit to take up such a position, and to form a judgment about the difficulties as they arose from time to time. No doubt, there is the fact that I have got to judge of the fitness, of the question of fitness, from his conduct in this mine—that is really the main thing. However well-qualified he may have been, if he was guilty of gross negligence, it will be for me to look into; or if, being really a well-qualified man, he behaved himself like an unqualified man on these occasions, then I suppose I should have to find the unfitness. There is also the what to my mind is an inconsistency in the Act, which I have pointed to already, that, whilst I have, on the one hand, to try the question of the man's fitness, as to which one would think that a finding against him would involve the preventing him for ever, until he became a qualified man, from holding a position he was not fit for, I have the power given to me of simply suspending his certificate, which seems to show that the investigation is not so much one into his fitness as to whether he has conducted himself in such a way that he should be punished. However, for the reasons I have given, it seems to me that this evidence is admissible, although, candidly, I do not see that it has very much bearing, because I thought it had been assumed, pretty well all through, that Mr. Rogers was an experienced man. The very fact of his having a certificate is itself a certificate of fitness—a certificate of character to that extent. He has not been attacked. His competence at the time he undertook the management has not been attacked. It is only his conduct in that mine that has been attacked; so I do not think this evidence, though I think it is admissible, is worth very much. However, you can go on, Mr. Wade. I do not shut it out.

1832. MR. WADE.] I intend to show afterwards that it is necessarily involved in a proof of these specific charges that are made.

1833. Q. Now, are any of those mines, in which Mr. Rogers was under-manager, mines where safety-lamps were in use? A. Yes, in North Wales and in Scotland, to a limited extent.

1834. Q. What was the opinion you formed of him then, whilst he was in England, or Wales, or Scotland?

1835. MR. BRUCE SMITH.] I will take objection to that whether that does not come under an entirely different heading, what opinion Mr. Robertson formed of the man.

1836. HIS HONOR.] This, of course, is a question of character, not of competence or experience.

1837. MR. WADE.] It is a question of experience, your Honor. It is a practical man speaking of the experience of another man.

1838. HIS HONOR.] In criminal cases the question of character is, by statute—[*Interrupted.*]

1839. MR. BRUCE SMITH.] And that would merely go to the extent of punishment, I take it.

1840. HIS HONOR.] I will not shut it out, but really I do not think it will have any effect upon me, because I have assumed all through that Mr. Rogers was a man without any mark against him up to this time. I was bound to assume that, because no evidence was given of it.

1841. MR. BRUCE SMITH.] Your Honor knows Mr. Rogers got the certificate because of his experience in the service; that is what he got it for.

1842. HIS HONOR.] I do not think it right in an inquiry of this kind to shut out anything that he may think important.

1843. MR. WADE.] Q. Well, from what you say, Mr. Robertson, what would you say as to his competency to manage a mine? A. Well—[*Interrupted.*]

1844. Q. Just taking England and Wales alone at present? A. Well, I always found the man had a very sound knowledge of the practical operations of a mine—perfectly competent to manage large bodies of workmen. I do not know of any of the practical operations of a mine with which he is not thoroughly conversant, and he is a man with a good knowledge of men; and I have always found, in his relations with the workmen, he is exceedingly fortunate; and that, I consider, is of great importance towards making a man a success as a manager.

1845. HIS HONOR.] *Q.* As a practical man, and as a man who can successfully deal with other men, you can speak well of him? *A.* Yes, I can. I found him an exceedingly cautious man. I always found him a cautious administrator. I am perfectly certain that if ever Mr. Rogers did anything wrong it would be by an error of judgment; it would not be by a reckless spirit.

1846. MR. WADE.] *Q.* Now, how was it he came out to this Colony? *A.* He came out after me, and he was appointed under me to be Manager of Greta Colliery.

1847. *Q.* Since he went to Mount Kembla have you seen him from time to time? *A.* Oh, yes, repeatedly.

1848. *Q.* And have you also been to the mine itself at different times? *A.* Not very often. Still, in the few visits I did make, it was very patent that Mr. Rogers had very much improved the operations, particularly in the matter of haulage; and the general arrangements of the mine, I consider, were very creditable.

1849. *Q.* Have you had opportunities of discussing mining questions with him? *A.* Yes.

1850. *Q.* Even up to the time of the disaster? *A.* Yes.

1851. *Q.* Did you see any falling off or mental failure? *A.* No, I did not. I thought that Mr. Rogers had very much improved in his general knowledge of mining questions. In the first instance, he is not a very well educated man, but I considered he had improved himself very much; he had availed himself of the opportunities he had to improve himself in the general knowledge of mining, apart from the practical matters that he was particularly conversant with.

1852. *Q.* Well, working under safety-lamp conditions, where gas is being given off in the mine readily, does that require more severe discipline than naked light conditions? *A.* It does. It follows, as a matter of course, that wherever safety-lamps are being used the discipline is of a totally different character. That is one very cogent reason why I am particularly strong on the necessity for using safety-lamps in nearly all mines. Personally, I would have them used in all mines, and there is no doubt about it that the discipline of a mine worked with safety-lamps is much better than in mines worked with naked lights.

1853. *Q.* Is that a recognised thing? *A.* Oh, yes; all over the world. It is very well understood. There is a certain laxity of discipline at all mines worked with naked lights.

1854. HIS HONOR.] *Q.* How is that, Mr. Robertson? *A.* Well, in a mine worked with naked lights, there are practically no dangers anticipated, except, perhaps, through a fall of roof; but where you work with safety-lamps there is an idea that danger is to be apprehended at any time; and, in regard to the rules specially bearing upon the matters connected with the issue of gas, and so on, people are very strict, and that affects the observance of the rules generally all round. There is no doubt about it that the general discipline is improved.

1855. *Q.* The use of safety-lamps creates a general idea of danger;—is that it? *A.* It does. And they have to be very strict, and officials have to be, to some extent, martinets, and the men, having been brought up to the scratch in regard to the rules bearing upon safety-lamps, it undoubtedly affects their observance of the other rules not specially referring to the safety-lamps. Of course, it is well known that a mine worked with safety-lamps is much better disciplined than a mine not worked with safety-lamps.

1856. *Q.* Then, of course, the use of safety-lamps makes the mine safe? *A.* Yes; I advocated the use of safety-lamps years and years ago, and that is one of my principal reasons—that the discipline all round is improved.

1857. *Q.* I can hardly see that that is an excuse for lax discipline, when the danger is really greater? *A.* Yes, but the workmen especially, and in some cases the management, do not seem to realise the danger until it becomes necessary to use safety-lamps.

1858. *Q.* Unless they have the word "danger" written up continually before their eyes in the shape of a safety-lamp? *A.* As a matter of fact, really, all parties concerned do not seem to realise their responsibilities.

1859. *Q.* Can you say that there is a divergence of opinion, even at the present day, amongst experts as to the necessity for safety-lamps? *A.* Yes, I am sorry there is. There is no doubt about it. Possibly one manager amongst a hundred would insist upon safety-lamps being used in mines giving off a small percentage of gas; and the other ninety-nine would disagree with him.

1860. *Q.* Do you give that as indicating the proportions of opinion on the matter? *A.* I do.

1861. *Q.* The great bulk of opinion, then, of experts is against the use of safety-lamps in mines giving off a small quantity of gas? *A.* I do not speak with egotism, but I will say that I am the only man in this State that advocated the use of safety-lamps in mines that are now using them.

1862. MR. WADE.] *Q.* Do you remember the agitation at Bulli with reference to the safety-lamps? *A.* Yes. There were mixed lights in Bulli before the explosion—a very dangerous thing, and, to my mind, worse than no safety-lamps at all. Very well, then; they had an explosion, and they adopted the safety-lamp, and after some time nothing occurred. They found it irksome to pay miners for working with safety-lamps, and the lamps were withdrawn, and withdrawn with the consent of the Department.

1863. *Q.* That is the Government? *A.* Yes. I think it is a very discreditable thing to the officials then in charge of the Department; and now they have to be reintroduced. They ought never to have been withdrawn from the Bulli Colliery; and there is no doubt about it that they ought to have been in many collieries that are now working with them many years ago; but five or six years ago, or three or four years ago, anyone that would have proposed that safety-lamps should be used in some of these mines that are now working with them would have been thought a madman—a crank; but, unfortunately, there have been explosions which have been object lessons, and opinion has very much changed of late, I am very glad to say. You see it has never been actually determined yet what constitutes a dangerous mine in respect of gas. It has all been a matter of opinion, and, perhaps, one man's opinion is as good as another's. Take Kembla, for instance; there are plenty of the highest in the profession who would have laughed at the idea of using safety-lamps in Kembla. There are many mines of precisely the same character now working in Great Britain.

1864. *Q.* With naked lights? *A.* With naked lights, particularly in Scotland. Now, you can scarcely pick up a report from the Inspector there, Mr. Ronaldson, I think, without some reference being made to the danger of working with naked lights in those mines giving off gas in small quantities. People do not seem to recognise that the ignition of gas in inconsiderable quantities may, by some contingency not foreseen, become a dangerous quantity, and may initiate an explosion. Under normal conditions, no doubt, the emission of gas, even in considerable quantities, is not to be feared. Take our own circumstances: The mine (Metropolitan) is notoriously gassy; perhaps it is one of the most gassy mines in the world. You

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Witness—D. A. W. Robertson, 24 July, 1903.

might go round that mine with a naxed light and not cause an explosion. Nevertheless, it is worked with safety-lamps, because it is not the normal condition of the mine that we have to think of; it is the contingency of a door being left open, or a brattice being knocked down, or some of the hundred and one contingencies that may be expected in the best-managed mine.

1865. MR. WADE.] Q. Now, Mr. Bruce Smith said just now that Mr. Rogers was presumably competent through having received a service certificate when this Act came into force. Now, bearing that in mind, there is a charge made that the certificate should be cancelled because he is ignorant of the nature and quality of the gases met with in mines. Now, as an expert, and a practical man, I want to know your views on that, as to how far it affects, or if it does affect, his competency to manage even a gassy mine?

1866. MR. BRUCE SMITH.] I will ask your Honor whether that has any bearing? My friend really puts to Mr. Robertson questions which you are to determine, and asks Mr. Robertson to express his opinion upon them.

1867. MR. WADE.] No.

1868. HIS HONOR.] What I understand Mr. Bruce Smith is asking is this: One of the charges against Mr. Rogers is that he was ignorant of the nature and quality of the gases met with in mines. Now, practically, I understand the question to come to this: Does his ignorance of the nature and quality of the gases met with in mines make him unfit to manage a mine? I have got to try the question of fitness, you see.

1869. MR. WADE.] Yes, that is it.

1870. HIS HONOR.] The answer, I suppose, Mr. Wade expects to get, or is looking for, is, that that is a piece of knowledge of a scientific character which it is not necessary for a man to have to make him a competent Manager.

1871. MR. BRUCE SMITH.] The question is as to Mr. Rogers' ignorance. Well, the extent of Mr. Rogers' ignorance becomes a factor in this question. You count ignorance in a general sense, by the extent of it; and the extent of Mr. Rogers' ignorance with regard to gas is a matter which your Honor will have to determine. Therefore, Mr. Robertson's answer would be, "His ignorance so far as I know."

1872. HIS HONOR.] His ignorance I should look for in his own evidence that has been put before me.

1873. MR. BRUCE SMITH.] I do not think that Mr. Robertson has spoken of his ignorance.

1874. HIS HONOR.] What is the evidence you have put before me?

1875. MR. BRUCE SMITH.] Mr. Rogers' own evidence before the Inquest and the Royal Commission.

1876. HIS HONOR.] That is what I asked.

1877. MR. BRUCE SMITH.] I thought you said Mr. Robertson.

1878. HIS HONOR.] If you like, I will have that evidence read over again, so that we will have the extent of his ignorance before us.

1879. MR. BRUCE SMITH.] When one reduces it to that, you will see that it makes the question which Mr. Robertson is asked to answer identical with the one which your Honor is asked to answer; and then there is a further objection: Mr. Robertson is asked to answer as to whether that ignorance of gas, taken as an isolated fact, constitutes ignorance as defined by the Act. Your Honor has to determine whether that, combined with other things, constitutes incompetency. The objection is, that Mr. Robertson is practically called in to determine the question which your Honor has to try; and it is taking another mind to try what your mind has to try.

1880. HIS HONOR.] Here is a matter of coal-mining management, of which I am ignorant, and Mr. Robertson knows a great deal about it. Now, supposing it was an astronomical question, and the question was whether it was necessary, in order to predict eclipses accurately, to have a knowledge of the laws of gravity. As a matter of fact, eclipses used to be accurately predicted long before the days of Newton. Observations, empirical knowledge, enabled people to do it long before the days of Newton. Now, Mr. Robertson may say that, so long as a man knows that a something called fire-damp is liable to come out of the coal, and that it is very dangerous to let it come into contact with flame—as long as he knows that, and knows how to go about preventing it, then it is not necessary for him to know the chemical qualities of the gas. It is an expert question, on which I would be guided by the expert opinion.

1881. MR. BRUCE SMITH.] I appreciate that, and your illustration; but my objection cuts under that. The Legislature here has determined that, when a person occupying the position of Manager of a mine has shown himself to be guilty of ignorance or incompetence, certain things shall follow.

1882. HIS HONOR.] "Whether, by reason of incompetence or gross negligence, he is unfit."

1883. MR. BRUCE SMITH.] That question is deputed to your Honor in a judicial capacity—I do not say in a legally judicial capacity—and it is for you to determine whether he is incompetent in the sense in which the Legislature looked at it. Whether he is incompetent in the sense in which a mining manager looks at it is a different thing. You have to take, in your own mind, what was intended by the Legislature as incompetence, not what a mining manager understands as incompetence; and, therefore, I say that, although Mr. Robertson might be prepared to say that, as a mining proprietor, he would not mind engaging Mr. Rogers, although he knows of the evidence that has been given, it is not in his sense that that issue has to be determined, but in the judicial sense, according to the meaning of the Act which your Honor has to interpret. I do not want to press it, your Honor. I only want to feel that I have done my duty.

1884. HIS HONOR.] I feel the weight of what you have said. It would be better, perhaps, if, instead of saying generally that ignorance to the extent shown by Mr. Rogers would not unfit him, it would be as well, perhaps, if it were explained—if the reasons for that opinion were explained—because possibly I might not agree with the reasons.

1885. MR. WADE.] Yes. Of course, there are two things I want to get at. First of all, to answer this Charge 5, and I go to the farthest extent I possibly can—first, as to whether absolute ignorance of the chemical qualities of the gases met with in coal mines interferes with a man's competence; and, further, the Act recognises two classes of certificates—certificates of service and certificates by examination. And now, if I can show by my evidence that certificates of service were granted to men with regard to whom it was notorious that they could not pass an examination, and that they had not passed an examination, and that the bulk of them had no scientific knowledge of gases, but all these men had a sound practical knowledge, they knew the indications of danger—they knew the signs of this kind of gas or that kind

kind of gas—and, under those circumstances, the Legislature thought fit to give them certificates of competency, the fact must be borne in mind when your Honor is called upon to deal with their competency on this particular ground—the want of scientific knowledge.

1886. HIS HONOR.] In regard to that it seems to me that you need not trouble about that, because, when actual service and experience were accepted as a reason for granting or preserving a certificate in lieu of passing an examination, it seems quite clear that the possibility that those men might not be able to pass an examination was accepted. That seems to me to be absolutely clear; but I would just like to refresh my mind by the evidence of Mr. Rogers.

1887. MR. WADE.] See page 35 of the Inquest.

1888. MR. BRUCE SMITH.] About twenty lines from the bottom of the page:—

“I do not know what light carburetted hydrogen is; I do not know what after-damp is; I do not know any of its constituents; I know fire-damp when I see it in a lamp; I do not know any of its constituents; I do not know what methane is; I have heard of light carburetted hydrogen, but I do not know its composition; I have heard talk of people meeting with it in mines, but I do not know that I have met with it; I do not know whether there are any means of discovering it in mines; I have never tried to discover it; I have never read any scientific works upon it; I do not know whether it is explosive or non-explosive; I do not know whether it is life-supporting or not; I am a practical, and not a theoretical, man.”

1889. And on page 37, too. Is your Honor looking merely for evidence of abstract knowledge of gas for admissions as to his knowledge of gas in the abstract?

1890. HIS HONOR.] I was looking for the questions showing that he was ignorant of gas.

1891. MR. BRUCE SMITH.] On page 37 your Honor will see evidence as to gas in connection with particular explosions.

1892. MR. WADE.] That follows on the other.

1893. HIS HONOR.] [*Reading from Mr. Rogers' evidence, page 37 Inquest, as quoted in paragraph of these notes, from the words "I do not know anything about the composition of the Bulli seam," down to the words "I believe a report of the result of the analysis was sent to me."*]

1894. MR. BRUCE SMITH.] And then, on page 40 of the Inquest:—

“I do not read the reports on different explosions which have taken place in England. I do not read much of anything that happens at other mines.”

1895. MR. WADE.] Q. Now, you know the evidence about Mr. Rogers saying he did not know the chemical constituents of the gases found in mines? A. Yes.

1896. Q. What I want to know is this: Assuming that a man is absolutely ignorant, entirely ignorant of the chemical constituents of the gases met with in mines, but he has the practical knowledge of the way to detect these, the way to guard against any evil consequences, would you hesitate to trust the man with the practical knowledge under those conditions with the management of a mine?

1897. HIS HONOR.] That is hardly right. It comes to the same thing, but it is objectionable in form.

1898. MR. BRUCE SMITH.] I shall not object to it.

1899. MR. WADE.] I can see it is a little bit vague.

1900. Q. Would that absence of scientific knowledge in your view interfere with his fitness to manage the mine? A. No, it would not. I think there is a good deal of nonsense talked about the importance of a knowledge of the chemistry of gases. No doubt, as a test of general intelligence, it is important; but, after all, if a man knows the physical properties of the gases that are ordinarily met with in mines, what more is required? You might as well say that, because a Manager has to supervise many departments in a mine, he has to supervise engineers, he ought to know the chemistry of the composition of iron and steel. No doubt all knowledge of that sort goes to add to the efficiency of a Manager; but, after all, a Manager's success depends upon a number of different qualities, and each Manager is not perfect in every one of them. Some subjects one man is more conversant with than another. I know at the present moment I want a Colliery Manager, there have been several applicants to me that have passed the examination, and no doubt they could talk very easily about the chemical nature of the gases met with in mines, I daresay, but they did not come up to my standard of knowledge.

1901. HIS HONOR.] That really is not the point. It is not whether an examination guarantees a man's all-round efficiency. Of course it does not. We all know that. It only guarantees a certain amount of knowledge.

1902. Q. But the question here is whether the absence of certain knowledge makes Mr. Rogers unfit to manage a mine? A. No, your Honor, it does not. Mr. Rogers knows very well the nature and qualities of gases.

1903. MR. BRUCE SMITH.] Do not you say what he knows.

1904. WITNESS.] I know because I have tested his knowledge. He perfectly knows how to test all the gases met with in a mine.

1905. MR. BRUCE SMITH.] Q. So does a deputy? A. Quite so.

1906-7. MR. WADE.] Q. You would not read a book by Mr. Bruce Smith on political economy, would you? A. No. The law, by giving them certificates of service, says “We do not require that knowledge from you.”

1908. HIS HONOR.] Q. But the law requires it in future? A. Yes, but the law has said, “We do not require you to pass an examination. We know you cannot pass it.”

1909. MR. BRUCE SMITH.] Q. The law says he must pass it? A. The law says nothing of the kind. The law says, “We recognise your services as a guarantee of your efficiency, and we do not require you to pass an examination.”

1910. Q. I suppose it admits him on the assumption that he has the knowledge? A. I say distinctly it concludes that he has not that knowledge; otherwise, if he could pass that examination, there would be no reason why they should give them certificates of service.

1911. HIS HONOR.] Q. Still, that was only a temporary measure? A. The same practice obtains in Great Britain to this day.

1912. Q. But I suppose the experience which is taken in lieu of the examination is experience in the position of Manager? A. No, your Honor, not necessarily. As a matter of fact most people who go up for examination have no experience at all—they have got some experience in a subordinate capacity; some of them not even that.

Witness—D. A. W. Robertson, 24 July, 1903.

1913. Q. I am not speaking of people who go up for examination; I am speaking of people who get certificates without examination? A. Oh yes; they must have had experience as manager for a certain time.

1914. Q. So that in future that class of managers who have only got practical experience will disappear? A. Oh, they are rapidly disappearing, and they are mostly given to men of mature years.

1915. Q. So it is evident that that state of things was only tolerated by the Legislature as a temporary matter, and with the knowledge that it would disappear in time? A. Quite so. No doubt. But I say that the law has given those men certificates of service, presuming that they had not the knowledge to pass an examination, and you cannot by a side wind declare him incompetent because he did not pass an examination.

1916. Q. I am not asked now to declare him unfit because he did not pass an examination; the question is that there is a class of knowledge which he does not possess—is that material to a manager or not;—you say it is not;—if he has the practical knowledge to detect the presence of these gases, and of how to deal with them, you say he is a fit manager? A. He has a perfect knowledge of the method of detecting them.

1917. Q. I suppose the method of detecting them is with a safety-lamp? A. Yes.

1918. Q. I suppose every miner knows that? A. It only requires a very little experience to be able to detect gas.

1919. Q. What about the hydrogen lamp; had he any knowledge of how to detect it with the hydrogen lamp? A. Oh well, the hydrogen lamp, your Honor, is quite a new innovation. As a matter of fact, I think when I got my first out there was not a single one in the Colony.

1920. Q. It would be advisable for a manager to understand it? A. Oh, yes; but, your Honor, I am confident that many of the managers have not got one now.

1921. Q. Of course that is a different question to the question of a man being unfit because he does not know anything about it? A. Oh, he has sufficient knowledge of the nature and properties of gases to enable him to detect them, and to deal with them when he finds them.

1922. MR. WADE.] Q. Just listen to these questions:—

25930. Q. Can you account for the carbon monoxide poisoning in the mine? A. No; only through coal-dust being heated.

25931. Q. Without any flame? A. Without any flame.

25932. Q. Do you know what would cause the carbon monoxide? A. The heated coal.

25933. Q. I suppose you would call it after-damp. I do not want you to misunderstand the term I am going to put to you, because it is a technical term: do you know what is meant by carbon monoxide? A. It is a very dangerous damp, a poisonous damp.

25934. Q. It is a gas that follows on what? A. On heated coal.

25935. Q. That is all you know about it? A. That is all I know; I am no chemist, you know.

25936. Q. Speaking generally, you would call it after-damp, would you not? A. Yes.

25937. Q. I want you to tell me where did that after-damp come from? A. I believe it comes from heat and distillation of coal.

25938. Q. From what? A. Heated coal.

25939. Q. Without any flame? A. It might happen without any flame.

25940. Q. And without any combustion? A. Yes.

Now, taking that statement which he gave there as to carbon monoxide, is that substantially correct? A. It is. Of course he talks there of carbon monoxide being after-damp. It is not. Carbon monoxide is a constituent in the after-damp, and a deadly constituent. But otherwise the man is perfectly correct.

1923. Q. Now, I suppose you know the responsibilities attached to the management of a mine like the Metropolitan? A. I do.

1924. Q. From what you know of Mr. Rogers, I want to know this: whether you would be prepared to take him on to-morrow there? A. I would. I want a manager, and I should consider myself fortunate if I got a manager to act under me—if I could secure his services.

1925. Q. I want to ask you another question about the gas: do you know, of your own experience of miners, whether these accidental, or I mean incidental discoveries of gas, as a rule, are kept quiet? A. Well—[*Interrupted.*]

1926. MR. BRUCE SMITH.] I ask your Honor if that can have any possible bearing.

1927. HIS HONOR.] If, as a rule, they are kept quiet, then all the greater vigilance should be exercised by the management. If they cannot find it out from the miners, then, of course, they must find it out for themselves.

1928. MR. WADE.] If there is no report of gas, then he is entitled to assume, if the officials exercise their duties—[*Interrupted.*]

1929. HIS HONOR.] You are asking a question as to the general practice of miners to conceal discoveries of gas by themselves. I do not see that we can have evidence of that; and if that was known it would throw a much stronger duty on the Manager, to my mind, because he could not trust anybody.

1930. MR. WADE.] The officials are different from the miners.

1931. HIS HONOR.] The officials are under the head official, and he has to watch them, as they have to watch the men.

1932. MR. WADE.] The Act says that the Manager must see that the rules are carried out. The Manager cannot do more than tell his officials what their duty is and how they must carry it out.

1933. HIS HONOR.] The Act says that the Manager is responsible for the management of the mine.

1934. MR. WADE.] But the Act says that he is responsible for the management of the mine, but if he show that he has taken every step to enforce the observance of the rules, he is exempt.

1935. HIS HONOR.] I must say that I am very much impressed with Mr. Rogers' ignorance of the existence of gas in a mine which, for many years, has had gas in it. His predecessor was able to say what was exactly true then and since, that the mine gave off gas in small quantities from cracks and fissures. His predecessor knew; Mr. Rogers did not know it. How is it that he did not know it?

1936. MR. WADE.] Mr. Rogers knew that years ago there was gas.

1937. HIS HONOR.] Coal is coal you know, and gas comes from coal, and it is the same seam.

1938. MR. WADE.] Then it comes to this then, that you are bound to use safety-lamps, and the Act says differently.

1939. HIS HONOR.] You are bound to look for the gas. I cannot understand a man simply sitting down, and simply reading the morning reports, and being content with that. I cannot understand his not being fussy about it, to use the expression, and inquiring "Well, has anything been heard about gas"? Although men may be careless, and negligent, and lazy about not reporting things, yet they talk and can be talked to. A thing known by so many men. How was it his predecessor knew it?

1940. MR. WADE.] If we had him here we could tell. The conditions were entirely different years ago. The conditions of the detectability of the gas depend to a large extent on the ventilating current; and the evidence is that, in those days, ten years ago, they were working with a small furnace of an inadequate character compared with present knowledge; and at that time the gas was detectable. And they were working in a district where there was a fault, too.

1941. HIS HONOR.] That was in my mind; but the existence of a better ventilating current now does not make the seam a bit better. It does not make it give out less gas. It simply gives it a greater sweeping away power. It does not alter the character of the seam.

1942. MR. WADE.] But if, your Honor, the ventilating current is there, and it dilutes the gas to less than $2\frac{1}{2}$ per cent., you cannot find it, and that is all you require. Mr. Atkinson said yesterday that all you require in inspecting for gas is the use of the safety-lamp. The ordinary ones show $2\frac{1}{2}$ per cent., and the better ones $1\frac{1}{2}$ per cent., and he does not require the use of the hydrogen lamp; and it is understood, according to the Act, that the ventilating current is to dilute the gas; and if you cannot find in any part of the mine the indications of gas on the safety-lamp, you are entitled to assume for practical purposes that there is no gas; and if he had gone round every day in the year with the same results as the deputies produced in their examination, it may be he would have said to himself "In the abstract it is possible there is some given off, but I cannot find it, and how can I assume it if I cannot find it"? On the other hand, the deputies carried out the same examination, and they could not find it, according to the reports, day after day and year after year; and the Government Inspectors could not find it. Everybody believed—according to the report of the Commission now it is a mistaken belief—but everybody believed that there was no gas given off, and all the evidence showed that there was no gas; and, under those circumstances, I submit that if a man is to be held responsible and to take the consequences because he did not know that which a number of miners say they knew and did tell, then there are mighty few men in this country and in England in naked light collieries who could escape those consequences.

1943. WITNESS.] I would just like to say, with respect to this detection of gas, of course it is obvious that any increase in the ventilation makes the detection of gas more difficult.

1944. MR. BRUCE SMITH.] Q. It would require greater vigilance to detect it? A. No. If you with the bad ventilation, can just find $2\frac{1}{2}$ per cent. on the ordinary lamp, and you improve your ventilation and bring it down to $1\frac{1}{2}$ per cent., the effect of the better ventilation is to render the detection of gas more difficult.

1945. MR. WADE.] Q. And 100 cubic feet per man, boy, and horse is recognised as the sufficient quantity to dilute the gas, and render any gas that is there harmless? A. That is an assumption.

1946. HIS HONOR.] That depends on the quantity of gas? A. That is just the reason why I object to this minimum quantity in the Act at all, that it does not meet all conditions, and it is a danger. There is just a danger with that minimum quantity of 100 feet per man, per minute, that a Manager may sail too close to the wind.

1947. HIS HONOR.] It is perfectly evident from the fact that it is 100 feet per man, that what the Legislature had in their minds was for breathing purposes, because if you had less men you could reduce your ventilation; and yet there would be the same amount of gas in the mine, and the less ventilation might be insufficient to dilute the gas.

1948. WITNESS.] That is what is in my mind all along.

1949. HIS HONOR.] However, it seems that here there were 18,000 feet and about 300 men.

1950. MR. BRUCE SMITH.] There is no question, your Honor, that the ventilation exceeded the requirements.

1951. WITNESS.] If it had not exceeded the 100 feet the chances are that they might have been able to detect gas.

1952. HIS HONOR.] It is evident that the 100 feet a minute is to give the men pure air, and leaves the question entirely open to the intelligence of the Manager as to whether he is sufficiently diluting gas; that is another question altogether. It depends on his intelligence and watchfulness.

1953. MR. WADE.] Q. Now, with regard to the question of dust, Mr. Robertson, it is stated by Mr. Atkinson in the Royal Commission that Galloway says one two hundred and twenty-eighth part of an inch in thickness of dust is a possible danger. Now, I want to ask you to bear that in mind with regard to the question of firing shots;—and I want to know what your opinion is with regard to that statement? A. Well, of course, we all pay great respect to Professor Galloway; but I should like to have some information on that point. First, is that a fact, or has it been demonstrated by experiment or trial of any kind; and I would like to know what relation that one two hundred and twenty-eighth bears to the area of the road, because it is quite obvious if this were done on a purely experimental scale, perhaps a tube —

[Interrupted].

1954. HIS HONOR.] The size is given in the evidence.

1955. MR. BRUCE SMITH.] It is a deduction, really, from the weight.

1956. HIS HONOR.] And it was worked out then that it would be one two hundred and twenty-eighth thick on the walls, sides, and roof of a passage 12 feet x 6, which was the actual passage in this mine.

1957. MR. WADE.] In Question 12999 Mr. Atkinson says that Professor Galloway has stated that 1 lb. of dust for 160 cubic feet in an air-way, with a sectional area of 40 feet, may be dangerous, and sufficient to carry on the explosion. Then that is worked out in another way by Mr. Atkinson, who says that that means 7 oz. per linear foot, and that means a thickness of one two hundred and twenty-eighth part of an inch? A. Well, that is virtually the thickness of paper, and I do not myself consider that one two hundred and twenty-eighth part of an inch would be dangerous. If so, then we must have had explosions every other day in the past, because we know very well that there are many mines where the atmosphere is thoroughly charged with dust, and that dust, if it settled, would cover more than one two hundred and twenty-eighth part of an inch. Now, the shot-firing was carried on in the past with gunpowder with impunity, and there have been scores, thousands, of blown-out shots; and if that is so, then we must have had a serious explosion many times.

Witness—D. A. W. Robertson, 24 July, 1903.

1958. HIS HONOR.] *Q.* Is not that the very reason why it has to be damped near the shot? *A.* Quite so, your Honor, but you are talking about a particular thickness. No doubt, I do not dispute the danger of dust. I do not wish to minimise for a moment the importance of the dust question; but you ask me whether one two hundred and twenty-eighth part of an inch —?

1959. Mr. WADE.] *Q.* Necessitates, in your opinion, as a reasonable precaution, watering if you are going to fire a shot? *A.* No, I understood you to put it as a danger.

1960. *Q.* As a danger, yes? *A.* I do not say it is a danger. I do not see how it could be a danger. It might be prudent to water. And then we must also bear in mind this, that Galloway no doubt made his experiment with what I may call explosive dust; and you must bear in mind this, that dust such as you kick up with your foot, or pick up in the mine, is not explosive. There is only a very small proportion of the dust that is explosive. It is really the impalpable dust that is explosive. We proved that in Kembla. I am sure Mr. Atkinson would bear me out that after the explosion we picked up dust, very fine, like blacklead, on the coal or skips, and so on. Now, that was dust that had been in suspension; it had been in the explosion, and it did not explode, showing that there must have been something very much finer than that. And I proved by my own experiments—I have been firing shots into accumulations of coal-dust, and I find it is quite an infinitesimal proportion of dust that explodes.

1961. HIS HONOR.] *Q.* But is the fact that it did not explode, say, nine hundred and ninety-nine times out of a thousand, a reason for not taking a precaution to prevent it exploding the thousandth time? *A.* I do not think you quite grasp what I mean. That is to say, you have an explosion, and dust is stirred up, but it is not all the dust that is stirred up that explodes. It is only a very infinitesimal portion of the dust that is explosive. Take, for example, if you had an inch of dust, in the ordinary acceptation of the term, on a road, possibly only a very very small percentage of that would actually be explosive; I should not be surprised if it was less than 1 per cent.

1962. *Q.* Is it the dust itself that is explosive, or is it a fact that the dust gives out an explosive gas? *A.* It is first of all heated by something, either by a blown-out shot, or by the ignition of gas, and that distilled the gas in the dust, and that again in its turn heats more dust, and so on.

1963. *Q.* What I had in my mind when I made my interjection was your statement that there are many mines in which there is dust which is in your opinion more than one two hundred and twenty-eighth part of an inch thick, and, if that were dangerous, with the great number of blown-out shots that have taken place there would have been a great many explosions? *A.* Yes.

1964. *Q.* Well, Galloway has made experiments, and has said, not that it would always explode, but that it might explode. The existence of that danger calls for precautions, does it not? *A.* Oh, no doubt. I may say I do not wish for a moment to suggest that precautions should not be taken.

1965. *Q.* And, for the purpose of taking precautions, it calls for knowledge of the fact that it is a danger? *A.* Oh, yes, no doubt.

1966. *Q.* And that is a part of the charge here, that Mr. Rogers did not keep himself up to the mark in regard to this question of dust; that he had not this proper knowledge of the danger of dust, and of the cases in which precautions should be taken, and so on, that a mine manager ought to have? *A.* But, your Honor, I do not think that you would hold that a manager must necessarily be acquainted with, say, Professor Galloway's opinion. If he has a knowledge of the danger of the dust, it is not necessarily to be expected of him that he is in touch with all the authorities.

1967. *Q.* Well, there, of course, I am in a certain difficulty from my want of expert knowledge. If it were a matter of law, I should say that there were certain text books that a barrister ought to know, and if he had not read them or corresponding works he would not be fit for his position; but what text books or what sources of information are the elementary sources, the necessary sources, that a man should necessarily acquaint himself with in mining I do not know so well; but it does look as if the question of dust is one that a man should fairly keep himself abreast with; it seems to be notorious that dust is dangerous? *A.* Oh, no doubt, your Honor.

1968. *Q.* And in this very case probably the principal part of the danger was caused by the dust? *A.* Yes; although no one would have said that Kembla Mine was a dry and dusty mine.

1969. *Q.* No. The evidence is that, taking it all round, it was not; but still in this case it was so. I am only giving that to show that dust is a source of danger, and, apparently, it has been notorious that dust is a source of danger? *A.* Oh, yes; I think everyone is conversant with that.

1970. *Q.* A mine manager who did not know that would certainly not be fit to be a mine manager; and the question is whether he ought not to keep himself abreast of the times? *A.* Well, your Honor, I have a pretty extensive literature. I think I read nearly everything; but I could not possibly say that I knew the opinions of every authority, because there are many. Galloway is only one.

1971. *Q.* Oh, it is impossible? *A.* So I do not think it could be expected of the ordinary manager —[*Interrupted.*]

1972. *Q.* Still, I take it that, in coal-mining, as in every other business, science, I may call it, discoveries, sooner or later, become general knowledge amongst people who are fairly alert? *A.* Yes, your Honor; but still it takes many years before everyone, or even the majority, are seized with the importance of a particular danger. For instance, this coal-dust question is only a matter of the last few years; and yet some authorities, fifty years ago, I suppose, pointed out that explosions had happened from coal-dust; and for forty years very little attention was paid to it; now this last five or six years it has become a burning question.

1973. *Q.* And the question is how long a man, when the importance of a thing has been discovered in the profession of which he is a member, may, allowably, and without fairly being chargeable with incompetence, remain ignorant of that matter? *A.* But, your Honor, some of the very best authorities, some of the most eminent men in the profession, up to a year or two ago would dispute the danger of the coal-dust. I daresay they do it to this moment.

1974. *Q.* Well, of course, as far as I am concerned, I have the finding of the Commission as to the cause of this accident, in which coal-dust played a considerable part, so that the fact of the danger of the coal-dust seems to me concluded, as far as I am concerned, by the finding of the Commission; in fact, it does not seem to have been contended at all that it was not? *A.* I do not think so. I do not think there is anyone who does not admit that coal-dust is dangerous.

1975. HIS HONOR.] It is a matter of degree, and it puts me in some difficulty.

1976. MR. WADE.] *Q.* Now, just take this case : supposing you had a roadway, say, 2 or 3 inches thick with dust, and you were firing a shot there, would there be any question what should be done in that case? *A.* No. No question in that case.

1977. HIS HONOR.] *Q.* Even then, when you think of it, the dust might be lying on the floor ;—where is the shot fired?—On the level of the floor?—And how is the shot coming out, upwards or downwards?—There are fifty things to look at ; you may stir scarcely any of that dust by that blast ; in any case you would not blow it all up ; it will be only a proportion of that dust on the ground that will be thrown up? *A.* Still, if there are 2 or 3 inches of dirt on the ground, it does not matter which way the hole is placed, it would be very imprudent to fire a shot without watering.

1978. HIS HONOR.] The Regulation is that it must be damp in all those cases.

1979. MR. WADE.] *Q.* It is only the finest of dust that becomes a danger at all? *A.* Yes ; as a matter of fact, it is the degree of fineness that is the most important factor.

1980. *Q.* Where are you most likely to find that impalpable fine dust? *A.* Most authorities say on the haulage roads. You can quite understand that the dust is taken from the faces, and the coarser part is deposited in the vicinity of the working-places, and the finer parts are carried on by the ventilation current till they meet some obstacle, and the further you go from the working-places you will find the finer dust.

1981. *Q.* What is the nature of the dust that you usually find in the faces? *A.* The coarse ; I call it non-explosive.

1982. HIS HONOR.] *Q.* Of course the fine dust is there too, but there is a lot of coarse with it? *A.* Yes ; no doubt there is some fine dust.

1983. *Q.* It must be, because that is what is sifted out, as it were, by the current of air, and is possibly found at very long distances from the face? *A.* It is generally recognised, all authorities recognise that the dangerous dust is found in the haulage ways. In the working-faces very rarely you get dangerous dust.

1984. *Q.* In the haulage ways, because it is there it falls and gets crushed? *A.* It depends a good deal upon the system of haulage. We have systems of haulage where the speed is something like 10 or 15 miles an hour, and ———[*Interrupted.*]

1985. *Q.* The reason why I asked the question was because you spoke of the air being what carried the fine dust along, and ultimately deposited it ; from that I thought it would be in the return airways ; then you said the haulage-roads ;—are they the same? *A.* I just remarked before, that most authorities say the dustiest parts of the mine are on the haulage-ways. I find in our own experience at Helensburgh that the dustiest parts are in the return airways ; but you must bear in mind that a good deal depends on the system of haulage. Where the coal is hauled at 10 or 15 miles an hour against the incoming air the coal is shaken up, and dust is caused and deposited on the haulage-road. But where there is a slow haulage system the finest dust is deposited on the return airways.

1986. *Q.* I thought there would be a certain amount of dust fall on the way, and then it would be crushed up? *A.* Yes, and then with the speed of the haulage, you can quite understand that with a speed of 10 or 15 miles an hour there would be a great deal of commotion and a great rush of air, which makes a lot of dust ; but where the haulage is only about 2 miles an hour no dust is produced.

1987. MR. WADE.] *Q.* If the coal falls in the haulage road, is that the coal from which the impalpable dust is produced? *A.* The coal produces the dust.

1988. *Q.* The coal falls in a lump? *A.* Yes.

1989. HIS HONOR.] *Q.* Dust is not formed from a lump ; but if it falls in a lump, it is ground up, and then the dust will rise? *A.* Yes.

1990. MR. WADE.] *Q.* What is the usual course when the coal falls off a skip? *A.* Well, it is filled up ; but, of course, in many mines the cleaning-up of dust is absolutely impracticable.

1991. *Q.* But I mean the large coal? *A.* Oh, it is cleaned up ; but, talking about dust, as we pointed out in the Commission, Kembla dust is particularly coarse, and also of rather a damp nature. If you take the Kembla dust up, it feels quite damp, not from water—I do not know whether it is from water—but from something exuding from the coal.

1992. MR. BRUCE SMITH.] It caught fire notwithstanding.

1993. MR. WADE.] We will enlighten you on that point.

1994. *Q.* Can you tell us from what you saw in the mine at what points the explosion seemed to leave off?

1995. MR. BRUCE SMITH.] *Q.* Is this as an individual witness or as a member of the Commission that you speak now?

1996. MR. WADE.] I do not care how it is, as long as he saw it.

1997. WITNESS.] *A.* The explosion stopped in several places where dust was abundant, and it travelled out direct through the tunnel where the roads were in many parts moist, wet.

1998. MR. WADE.] *Q.* So that, even in the face of the explosion itself, it seemed to have stopped where there was dust to feed it? *A.* Yes, that is so.

1999. HIS HONOR.] *Q.* It stopped where there was dust? *A.* Yes, and travelled over wet sections.

2000. *Q.* It travelled over wet sections? *A.* And stopped where there was dust to feed it.

2001. *Q.* You mean that at the place where it appeared to have stopped it was a dusty place? *A.* Yes.

2002. *Q.* You do not mean to say that that is the rule of the explosion? *A.* Oh no, I do not say it is a rule.

2003. *Q.* I understand of this explosion that it was carried on by a series of coal-dust explosions ;—I think that is the finding of the Commission? *A.* That is so ; but nevertheless it stopped at certain points where the dust was abundant.

2004. *Q.* That only shows that, although there is a danger from dust, it is not a danger that is always realised? *A.* And it also shows that the watering of the roadways is not in all cases efficacious as far as stopping an explosion is concerned.

2005. *Q.* Well, I think there is a distinction to be drawn there ;—I do not think the watering was done to stop the travelling of the explosion so much as to prevent the supply of travelling dust which might feed the explosion? *A.* Well, your Honor, I think that——[*Interrupted.*]

2006. *Q.* Was there any evidence that these damp lengths contributed to the explosion? *A.* Oh no, your Honor, not at all.

2007.

Witness—D. A. W. Robertson, 24 July, 1903.

2007. Q. The explosion of coal-dust spoken of in the Commission—[*Interrupted*]. A. It would travel from one dusty patch to another.

2008. Q. It is the dust, actually, which implies dryness, that feeds the explosion? A. Yes; it could not, in my opinion, have extended to the tunnel mouth unless it had been fed by dust at a certain point; but, on the other hand, the explosion undoubtedly stopped where there was abundant dust to feed it.

2009. Q. That only shows that, although it is dangerous, it is not inevitable that dust will explode; it may, and under certain circumstances, it will? A. And it may have been that the dust where it stopped was too coarse: just bearing out what I have said a little while ago.

2010. Q. Does it not follow, from what you have said, that, inasmuch as there is no evidence that the damp places fed the explosion, it was the dusty places that fed the explosion; does it not follow from that, that, if those dusty places had been kept damp, they could not have fed the explosion? A. Yes, that is perfectly true.

2011. Q. And does it not follow from that, that, if it was practicable, if it was not a matter of too much expense, they ought to have been kept damp? A. I think that the way to prevent explosions is to wet, not damp, but wet in the vicinity of shot-firing. You must remember this, that this explosion was perfectly unique. It was due to a combination of circumstances that were unparalleled, and I do not know another instance of an accident having occurred in anything like the same way. They usually occur in connection with shot-firing; and, if you want to prevent explosions, water in the vicinity of shots. You will then stop it at its initiation. Of course the watering of most mines efficiently is impracticable. Besides, it might be injurious in many ways. It brings about complications.

2012. Q. One can easily see that there ought to be watering in the vicinity of shots; the question is whether there ought not also to be watering elsewhere? A. You see, your Honor, the thing is impracticable.

2013. Q. That is an answer, if it is impracticable? A. In some cases it might be practicable, but in others it is impracticable.

2014. Q. Where it is practicable, what then? In this case they seem to have been under the impression that they were doing it?

2015. MR. WADE.] I beg your Honor's pardon, Mr. Rogers said afterwards in the Commission that, even although they altered the system of watering, and put in further appliances, his view was that it was not necessary to water all the roads.

2016. HIS HONOR.] That may have been his view, but the case put before the Commission was that that was being done.

2017. MR. WADE.] Yes; but the persons who brought that matter out were the other side, Mr. Lysaght.

2018. MR. BRUCE SMITH.] Mat. Frost first said it.

2019. MR. WADE.] Yes; then, as the question was brought out as to what was being done, and whether it would be any use, and whether it could possibly, as a matter of fact, have stopped this explosion, it was followed up by my showing, as far as I was concerned, that what was done would tend to stop the explosion. And their contention was that even what was done was useless. That was the only point of contention at the Inquest, whether what was done did or did not tend actually to stop what happened.

2020. HIS HONOR.] I cannot see any trace in the Inquest at all of the point being taken which is taken now, that the watering was impracticable and unnecessary. It must have been a contest on one side, "We did it: Frost did it"; on the other side, "What Frost did was imperfect, and insufficient."

2021. MR. WADE.] Will your Honor see why? At the Inquest the question of the cause of the disaster was not gone into. It was specially excluded by agreement on both sides because it was a matter for the Commission.

2022. MR. BRUCE SMITH.] I do not admit that.

2023. MR. WADE.] Over and over again it was said, "It is no use going into this question of the cause of the accident; leave that for the Commission."

2024. MR. BRUCE SMITH.] I do not admit it.

2025. HIS HONOR.] It must have been gone into, because they have given a finding.

2026. MR. WADE.] And now the Commission find a different thing, and if all the evidence had been given in detail, the jury would probably have found what the Commission found.

2027. HIS HONOR.] Was there any difference between the Inquest finding and the Commission finding that the explosion was carried on by dust?

2028. MR. BRUCE SMITH.] Will your Honor look at what Mr. Rogers says about watering on page 37. He claims that an effectual system of watering was carried on. [*Mr. Bruce Smith read a portion of the evidence, which is quoted in paragraph 249 of these notes.*]

2029. MR. WADE.] And that is his cross-examination by Mr. Lysaght; and it makes all the difference, the way the answer appears in print.

2030. HIS HONOR.] You can understand, Mr. Wade, that when I read that over it forms an impression on my mind; and it may be explained in that way, that it was brought out by cross-examination; but there certainly is not anything in the nature of the present aspect of the case brought forward, that watering was unnecessary.

2031. MR. WADE.] Allow me to say this: there was no address to the jury of any kind whatever; the inquiry was of the most comprehensive character, into every question of mine management; and your Honor will see that was my case before the Commission. I have followed up exactly the same line of examination, now, that Mr. Lysaght and myself took, from different points of view, no doubt, of Mr. Atkinson. Your Honor will see that I followed up all these questions about the impracticability and the uselessness of watering the roadways of a mine, and that the only necessary precaution was to water in dry and dusty places in the presence of a shot; and Mr. Atkinson agreed with me; and he had previously said to Mr. Lysaght that, under the conditions as he knew Kembla, he could not say that they ought to have watered the haulage roads generally. The Royal Commission is a far better record of what did take place than the Inquest is. In the first place the evidence was not taken down at the Inquest as question and answer.

2032. HIS HONOR.] Of course, if that appears in the Royal Commission, that settles it.

2033. MR. WADE.] Yes, that point was taken.

2034. MR. BRUCE SMITH.] Which point was that? In the early part of the Inquest Mr. Rogers contended that "The effectual means of watering was by tanks." [*See paragraph 249 of these notes, page 37 Inquest.*]

2035. MR. WADE.] And it appears in Mr. Bruce Smith's cross-examination.

2036. MR. BRUCE SMITH.] No, in Mr. Lysaght's.

2037. HIS HONOR.] Q. Did the Commission make any recommendation as to the dust? A. Yes, that the dust should be watered in the vicinity of shots without exception, and that other parts of the mine where the Chief Inspector thought necessary should be watered. They were seized with the fact that the thing was impracticable.

2038. Q. In many cases impracticable, and, not only impracticable, injurious.

2039. Q. However, that was left to the discretion of the Chief Inspector? A. Yes.

2040. Q. And this point that was taken about "dry and dusty"—you said it should be done in all cases wherever there was a blast? A. Oh, yes, with one exception, where watering would be injurious to the roof, that, with the consent of the Chief Inspector, brushing the dust from the roof and sides would suffice.

2041. Q. Getting rid of it in a different way? A. Yes.

2042. Q. I see you have retained the words "dry and dusty" [*reading from the Commission's Report, paragraph 121*]:—

"The Commission have in their proposal to alter Rule 12 (*vide* suggestion No. 25) embodied the proposal that, in every dry and dusty place, where shots are to be fired, the roof, floor, and sides shall be thoroughly saturated with water, within a radius of 20 yards from the shot-hole, provided that, where the roof may be injured by watering, and where the Chief Inspector concurs, the roof, instead of being watered, may be thoroughly brushed free from dust."

2043. MR. WADE.] Q. Now, I want to ask you, from your own observation of Mount Kembla, which you saw directly after the explosion? A. Yes, I was there—[*Interrupted*].

2044. Q. What was the condition of the No. 1 main road? A. Well, the No. 1 main road seemed to be damp in places; but of course many places would be covered up by falls; and I could not state the condition there; and in one place, about the 4th Left, there was a stretch, I dare say, of perhaps 20 or 30 yards dusty, and in the 4th Left itself was dusty; and in the return airway nearer to the 5th Right seemed to be dusty in patches.

2045. Q. Now, what about the No. 1 main road going outbye from the 4th Right—what was the state of the road, generally speaking? A. It seemed to be damp and wet. I could not say that there was any portion of it that could be designated dry and dusty within the meaning of the Act.

2046. Q. And what was the condition of the 4th Right entrance itself? A. That was wet—well, not exactly a stream of water, but it was quite damp—slopping under your feet.

2047. Q. Do you remember how far the junction of the 4th Right No. 1 main road was from the edge of the goaf where the fall took place? A. About perhaps 50 to 60 yards.

2048. Q. And does this expression "wetness" apply to that whole 60 yards? A. Yes, particularly to the part close to the goaf.

2049. Q. Well, you said there were patches of dust in the 5th Right return? A. Yes. That is where the explosion stopped, because I remember going in there after the explosion, and I found that the explosion had ceased, and I did not go up there—I turned to the left again. [*Witness explained this evidence to His Honor on the plan of the mine.*] From the No. 1 Right junction right out to the tunnel mouth was wet, and yet the explosion passed over it. It shows your Honor that the idea that has prevailed that a short wet length of, perhaps, 50 or 100 yards would stop an explosion is wrong. My impression is that, if you have sufficient, it will travel a quarter of a mile or half a mile over a wet length.

2050. HIS HONOR.] But it has this advantage, that it does not supply a feeding ground? A. Yes.

2051. Q. And the carrying power of the explosion has been underestimated? A. Yes. And there is one point—the watering of roads has been confined to haulage roads, but, if you have a number of parallel exits from a particular district, and you water one, what is the good of it? If it can find a path by some other parallel road, the watering of one is practically useless; and if the watering is not to be thorough, and if you are not to water the whole of the mine, it is useless—it is practically a useless expenditure of money. If you had only one road into a particular district, and it was reasonably practicable to water, and if it would not be injurious to the roof or floor, then I would say water it. But where you have more than one road to a district, and it is impracticable to water throughout, it seems to me that it is simply throwing away money. The real security is to water in the vicinity of shots, because I suppose 99 out of 100 explosions originate from a shot.

2052. HIS HONOR.] It is a question here, how far he kept himself up to the mark in his knowledge of the danger of dust.

2053. MR. WADE.] Now, a question was raised that it was a question of neglect that Mr. Rogers was not in the mine as often as suggested—on one occasion it was suggested that he must be in the mine three times a week.

2054. Q. Can you say anything about that from your own experience?

2055. MR. BRUCE SMITH.] That suggestion has never been made here.

2056. MR. WADE.] It was made by Mr. Atkinson.

2057. HIS HONOR.] What was the suggestion?

2058. MR. WADE.] That Mr. Rogers did not go to the mine sufficiently often—that he was not there often enough to know what was going on.

2059. MR. BRUCE SMITH.] My friend said that one of the charges that was made against Mr. Rogers was that he did not go into the mine three times a week.

2060. MR. WADE.] I did not say that.

[*The Shorthand-writer was then asked to read the record, which he did, reading paragraphs 2053–6.*]

2061. MR. BRUCE SMITH.] The evidence I read was that he had never been into the mine from the 1st of July up to the date of the explosion.

2062. MR. WADE.] You know yourself, Mr. Robertson, what was going on during the month of July? A. Yes, I do.

2063. Q. With regard to all the mine managers? A. Yes; for months we were practically taken off our proper duties, and preparing statistics and information for this arbitration case, which occupied so many months—I think seven or eight months.

2064. HIS HONOR.] Q. Is that the arbitration that was going on at the time of the explosion? A. Yes.

Witness—D. A. W. Robertson, 24 July, 1903.

2065. Mr. WADE.] *Q.* It was actually sitting on the day the explosion took place? *A.* Yes, it was. It is a fortunate thing it was, because we were all there.

2066. *Q.* How long had the hearing been going on then? *A.* Many, many weeks; and of course I had a certificated manager under me, but it is quite conceivable, if I had not, that I could not have gone underground for two or three weeks at a time at that time.

2067-8. *Cross-examination by MR. BRUCE SMITH.*] *Q.* I understand you to say that you have been about thirty-four years coal-mining. *A.* Yes.

2069. *Q.* And you have been a student, I take it, almost all your time? *A.* Yes.

2070. *Q.* And you keep yourself current with everything almost that takes place which immediately touches the mining industry? *A.* Oh, fairly well. Of course you cannot read all the literature nowadays.

2071. *Q.* But you read a great deal of it? *A.* Yes, I do.

2072. *Q.* Any new text-book by a recognised man you make yourself acquainted with? *A.* Possibly, not every one.

2073. *Q.* Do you interest yourself in the reports of explosions in other mines? *A.* Yes.

2074. *Q.* And you read them? *A.* I do.

2075. *Q.* You have made yourself acquainted with gas? *A.* Oh yes.

2076. *Q.* And you carry out experiments from time to time in order to test certain theories that are advanced by specialists? *A.* Oh, well ————

2077. *Q.* You have made experiments with dust? *A.* Yes, I have.

2078. *Q.* And with compressed air, in order to ascertain what heat can be produced? *A.* No; I have not done that.

2079. *Q.* I thought you had. Now, you were a party of course to this report, and I take it that it is just as much the result of your deliberation as of the other Commissioners? *A.* Oh, no doubt it is a composite report; but I think on the whole we were fairly unanimous, and necessarily it does not reflect the individual opinion.

2080. *Q.* And you indorse the results which are put forth in that report? *A.* Yes.

2081. *Q.* Now in regard, first of all, to watering: is any shot ever fired in your mine which is not preceded by watering? *A.* No, none. I have adopted all those precautions long before it was required by legislation.

2082. *Q.* As, in your opinion, necessary in the management of a mine? *A.* Yes, although we have used safety explosives; and, whatever the nature of the explosive, although coming within the requirements of the Act, we look upon it as as dangerous as gunpowder, and we take all the precautions.

2083. *Q.* That is to say, you assume that your explosive is as dangerous as gunpowder? *A.* At one time it was considered that safety explosives were absolutely safe. Well, I never was of that opinion.

2084. *Q.* I would like His Honor to have this information from you, that in England the character of the explosives which are allowed is prescribed? *A.* Yes.

2085. *Q.* And gunpowder is not allowed? *A.* No.

2086. *Q.* And you know that gunpowder was used in Mount Kembla Mine? *A.* Yes? I have heard that.

2087. *Q.* You do not allow gunpowder in your mine? *A.* No.

2088. *Q.* You use the explosives which are allowed by the Board of Trade in England—one or the other? *A.* Yes, that is so.

2089. *Q.* And they are regarded as safer than gunpowder? *A.* I used it before the Board of Trade made any regulations on the subject.

2090. *Q.* And you did it, although you were not compelled, because you considered it a proper precaution to take in the interests of your mine, and the people who worked in it? *A.* Yes.

2091. *Q.* As a matter of good management? *A.* Yes.

2092. *Q.* And even now, quite apart from regulations, there are no prescribed explosives here? *A.* No.

2093. *Q.* Anybody may use anything? *A.* Yes.

2094. *Q.* Well, notwithstanding that liberty, you have confined yourself to the safer kinds of explosives which are prescribed in England? *A.* Yes.

2095. *Q.* And you did so before they were prescribed in England? *A.* Yes.

2096. And, notwithstanding that you adopt these safer explosives, you insist upon watering in every case? *A.* In every case.

2097. *Q.* In every part of the mine? *A.* Yes, wherever a shot is to be fired.

2098. *Q.* Not merely, as required by the rules, in haulage roads, but in every part of the mine? *A.* In every part of the mine shot firing means watering.

2099. *Q.* What distance do you water? *A.* Twenty yards; but we give a very liberal interpretation to that.

2100. *Q.* And have you a regular apparatus for doing this work? *A.* Yes; we have a pump for spraying, and we have also—we introduced at a very considerable expense into a section of our workings where we expect to require to use explosives; I may explain that we do not use explosives in the getting of the coal; our coal is so friable that it is not necessary to use explosives to get it; shot-firing is only used in firing stone, getting through faults; and in our shot-firing we introduced, at a cost of £1,200, a system of piping in order to thoroughly saturate all the places; because, although when firing shots, perhaps half a dozen every day, in perhaps isolated places, the carrying in of water in barrels, and spraying, and so on, may be perfectly practicable, and a perfectly good method, we recognise that where shot-firing is to be carried on regularly and extensively there is only one way to ensure that it is properly done and effective, and that is to carry the water in in pipes; and at a very considerable cost we have put in pipes with the object of reticulating the workings and spraying.

2101. *Q.* But you are carrying your water from outside the mine to the mine;—you had to spend some thousands of pounds to get water? *A.* That was during the drought.

2102. *Q.* I want His Honor to know that. You even expended some thousands of pounds in carrying water to the mine in order to carry out this system of watering in the vicinity of shots? *A.* Yes, of course. The cost last year was £2,500 to bring water from Sydney. That was for our boilers, and some of that, but comparatively an inconsiderable quantity was used for shot-firing.

2103. *Q.* You would not have stopped your watering in the vicinity of shots, because you had not water at the mine? *A.* If there had been no water, there would have been no shot-firing. 2104.

2104. *Q.* You think it of sufficient importance to water in the vicinity of shots, even to do it with water you bring in from outside? *A.* Oh, certainly.

2105. *Q.* Then I take it that you lay down as a sort of axiom in coal-mine management that in every case there should be watering in any place in the vicinity of shots? *A.* Yes; that is so.

2106. *Q.* I think you said just now that the real security lies in watering where shots are fired? *A.* Yes. I say, "You water in the vicinity of the shots, and leave the rest of the mine unwatered, and you are perfectly safe."

2107. *Q.* Now, there have been several explosions in this State, have there not, in which gas and coal-dust were considered to have been elements? *A.* Yes.

2108. *Q.* I think the Dudley was one? *A.* Yes.

2109. *Q.* And the Bulli? *A.* Yes.

2110. *Q.* Well, I suppose you considered it necessary, in your position as Mine Manager, when those reports came out, to possess yourself of a copy and read them? *A.* Oh, yes.

2111. *Q.* And you are quite familiar with the nature of the evidence given and the report of the Commission? *A.* Yes, no doubt. Of course, in the case of, say, Bulli, a very extensive thing, I could not be prepared to say that I was seized with everything.

2112. *Q.* I do not say that you agree with everything that is in them; but, at all events, you thought it necessary to familiarise yourself with them as they came out from time to time? *A.* Yes.

2113. HIS HONOR.] *Q.* Of course, the Bulli Disaster had a peculiar interest to all mines working the same seam? *A.* Yes.

2114. MR. BRUCE SMITH.] *Q.* I would like to read to you the two last paragraphs in the Dudley explosion report:—

"Side by side with the precautions taken to prevent the ignition of inflammable gas, strict measures should be adopted to prevent the possibility of small local explosions becoming extensive through the agency of coal-dust, and some method, either of removing the dust or of damping it, is essential where the dust exists in any quantity. However, the true interests of the mine cannot be effectually safeguarded unless all concerned strictly comply with the requirements of the Act and the Special Rules. Special Rules 15 and 71 impose upon the deputy and the miners respectively the duty of informing those in charge of the existence of fire-damp whenever found. The tendency seems to have been for the individual to constitute himself the judge of what should be reported and what not. Mr. Humphreys said that in 99 cases out of 100 there was no occasion to make a special report, as the quantity of gas was insignificant. A manager should clearly understand, and likewise impress upon those under his control, that every discovery of gas of any quantity must be reported in compliance with the Special Rules under pain of instant dismissal. Had this course been universally adopted throughout the mine, it is possible that we should never have heard of the Dudley explosion."

You can endorse that, "Some method, either of removing the dust, or of damping it, is essential where the dust exists in any quantity"? *A.* I do.

2115. *Q.* Of course, generally, I may take it that you endorse that report? *A.* No doubt.

2116. *Q.* Now, I suppose you do not read those things just for amusement merely;—but you consider it necessary that you should know them? *A.* Yes, I do.

2117. *Q.* I mean apart from your position of coal-mines Manager, would they interest you, suppose you were not in this position at all;—you read them, I take it, because your work and your career lie in that particular direction? *A.* Certainly; I must be conversant with the nature of every explosion.

2118. *Q.* You consider it necessary? *A.* Oh, yes; certainly.

2119. *Q.* And so far as any event which takes place in another mine is concerned you interest yourself in it? *A.* I do.

2120. *Q.* As throwing a light on your own? *A.* Yes; I consider it is necessary to know your own business, and to know other people's, too.

2121. *Q.* Exactly, so far as it throws a light on your own? *A.* Oh, whether or not.

2122. *Q.* You consider it more necessary, I suppose, in the case of mines in which the same seam is being worked as the one in your own mine? *A.* Well, yes, I daresay.

2123. *Q.* The nearer the parallel is, I suppose, the more important you would regard it, as throwing light on your own mine? *A.* I do not know that it would make very much difference, the fact of it being the same seam, because, so far as the circumstances of nearly all those explosions are concerned, they are pretty nearly identical, no matter what the seam is, whether it is the same seam or not, an explosion will develop the same conditions or show the same conditions afterwards in any seam.

2124. HIS HONOR.] No doubt that is so; but that is hardly quite the point. The danger of an explosion, or the circumstances producing danger, and so on, are more likely to be the same, if you have identical conditions.

2125. MR. BRUCE SMITH.] *Q.* In regard to the mines working the seam that you are working in yours, would you regard accidents in those as more important than accidents in mines so far removed from your own that there could be no parallel? *A.* There is no doubt that an explosion in the same seam would naturally direct your attention to your own circumstances, perhaps, more than an explosion in another seam at a distance.

2126. *Q.* I mean this, that the Bulli explosion would be more directly interesting and more directly to be studied by a person working near the Bulli seam than by a person working, say, in Wales or in England? *A.* Yes, no doubt; but still, in some respects, the explosion in the Bulli Colliery had as little relation, say, to the working of the seam at Kembla as an explosion in Wales, in this way, because the conditions were entirely different. At Bulli it is deeper, and it has met with a lot of igneous intrusions, and so on, so that no doubt they produce more gas than you would expect in another seam freer from that.

2127. *Q.* But you would expect on account of the Bulli disaster to throw some light on the working of all the southern collieries? *A.* Well, I would say if an explosion occurred at Bulli, where gas was not supposed to have existed before in the Bulli seam, it would naturally make managers more alert.

2128. *Q.* And it would be necessary reading?

2129. HIS HONOR.] The experience of men working in the same seam in the same district must be of more importance to one another than the experience of different people working in different districts. That must be so.

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2130. MR. BRUCE SMITH.] That was my contention.

2131. Q. You were asked by Mr. Wade as to whether you considered it was necessary for a manager, apart from his practical knowledge, to have a knowledge of the chemistry of gases—[*Interrupted.*]

2132. MR. WADE.] That is not my question. The question was whether the absence of scientific knowledge is a bar to his fitness.

2133. MR. BRUCE SMITH.] Q. Now, I want to ask you some practical questions about gas and managers. I ask you, first of all, this general question: with all the knowledge of gas that was revealed in this Commission in regard to the presence of gas in the Mount Kembla Mine, would you, if you had been in the position of manager, have thought it necessary to use safety-lamps in that mine? A. Yes, I would; but you must bear this in mind—I am not saying it in any boastful respect—I am one man, perhaps, in a thousand in regard to this—I would go to the extreme; I would have safety-lamps in every mine; and if I had suggested that they ought to have been used in Kembla Mine before the explosion, they would have thought I was a madman; and men who are quite as high, perhaps higher, in the profession than I am, would have thought I was, and that it was quite unnecessary.

2134. Q. But you do not admit that you would have been? A. No.

2135. Q. You think it would have been a sound view of the situation? A. Yes; but you cannot ignore—supposing half a dozen experts were sent down to Kembla to inspect, and to report upon the necessity of safety-lamps, and five men equally eminent as myself, I could not disregard their opinions.

2136. Q. I want to know what your view is? A. I have very extreme views. I say that, in that respect, I am twenty-five years ahead of the times, because twenty-five years ago I had put in safety-lamps in mines giving off very little gas at the time, and people really thought I was mad.

2137. Q. You say in your own mine it is possible that you might go right round with an open light, and nothing might happen?

2138. HIS HONOR.] He said that nothing might happen, not that it would be an advisable thing to do.

2139. WITNESS.] A. The old opinion of safety-lamps was this, that they were constructed for the purpose of working in gas. Well, of course, that is exploded now-a-days, and people recognise, and they ought to recognise, that safety-lamps are not for the purpose of working in gas, but for the purpose of providing against contingencies.

2140. HIS HONOR.] Q. And for the sake of discipline? A. Yes.

2141. MR. BRUCE SMITH.] Q. What sort of lamps do you use? A. Cambrian.

2142. Q. Have you any Davy lamps in use now? A. I think it is fourteen years since we used Davy lamps for testing purposes. We never used them for miners.

2143. MR. WADE.] I thought my friend said that there was no implication as to the use of these Davy lamps for inspections. There were three things in Mr. Atkinson's letter. I was about to ask Mr. Atkinson if there was any question of the violation of the rules with regard to those specific matters, or whether the complaint only was that he did not attend to the correspondence; and my friend said that as to the infringement of the Act in those respects he made no complaint.

2144. HIS HONOR.] Is that so, Mr. Bruce Smith? I am under that impression.

2145. MR. BRUCE SMITH.] I submit that I have a right to ask Mr. Robertson what sort of lamps he uses; and I am not going to found a charge upon the use of these lamps. Still I am entitled to ask him what sort of lamps he uses. I shall show that Mr. Robertson has not only adopted lamps, and would adopt lamps, but that he has adopted the most approved lamp. I mean it heightens the argument as to the care which should be exercised. I am going to contrast that with the condition of things allowed to go on by Mr. Rogers.

2146. HIS HONOR.] Naked lights.

2147. MR. BRUCE SMITH.] Yes; and, when lamps were used this exploded kind of lamp; not to make a charge, but to show the tremendous chasm which exists between the course adopted by Mr. Rogers and the scrupulous care adopted by men of Mr. Robertson's stamp. Your Honor cannot say it has no bearing. That is what my friend wants to argue.

2148. HIS HONOR.] Of course the safety-lamps are only used in Kembla for examinations.

2149. MR. WADE.] Yes; and in the Metropolitan they are used for the ordinary work of the mine.

2150. HIS HONOR.] You see the point, Mr. Bruce Smith, that Mr. Robertson says that nineteen managers out of twenty would have used naked lights, and he is a voice in the wilderness.

2151. MR. BRUCE SMITH.] It is for your Honor to say whether they ought to have used naked lights.

2152. HIS HONOR.] Mr. Robertson puts himself in a very small minority, one in a hundred, I think, and if I am to find that the other ninety-nine ought to have their certificates taken away it is going a long way.

2153. MR. BRUCE SMITH.] I have only to repeat that it is one of a number of things which I have to bring to your Honor's mind.

2154. HIS HONOR.] It is a strange thing how these accidents happen, and nobody is to blame at all.

2155. MR. WADE.] It happened at Dudley.

2156. WITNESS.] This explosion, your Honor, was of a very unusual character.

2157. HIS HONOR.] I can see that there is a concurrence of circumstances; but it is a concurrence of circumstances that would not have happened if the door had not been open to their concurrence.

2158. MR. BRUCE SMITH.] Q. In a mine like Kembla, would you think that the fact of not having the presence of gas brought to your knowledge as manager sufficient to justify you in not looking for the gas in the mine as manager? A. No, it would not. Is there any suggestion that Mr. Rogers did not?

2159. Q. I did not ask you that. If you had been manager you would have looked for gas from time to time? A. Yes.

2160. Q. How often? A. I would have looked every time I went into the mine.

2161. Q. Do you mean with a hydrogen lamp, or with an ordinary safety-lamp? A. It all depends; you must remember that the hydrogen lamp is only a thing of yesterday. It is very important, no doubt, to use the hydrogen test occasionally; but I take it that if the inspectors of mines did not think it was necessary to use the hydrogen lamp in Kembla, therefore I do not consider —

2162. *Q.* Therefore you do not think it was necessary? *A.* Possibly I would have had a hydrogen lamp.

2163. *Q.* I am not going to test you on that high, scientific level;—but, with the ordinary safety-lamp, if you had been manager, you would have thought it necessary to look for gas from time to time *A.* Yes, without a doubt.

2164. *Q.* And you would have done that, not only frequently, but every time you went into the mine? *A.* I would.

2165. *Q.* And then, I suppose, you would choose different parts of the mine to test? *A.* Yes.

2166. *Q.* And you would not think that the mere fact that gas had not been reported was sufficient to do away with the necessity for your looking for it? *A.* No, I would consider some inspection would be necessary.

2167. *Q.* Would you expect every careful manager to do that? *A.* I would expect every careful manager to examine for gas where there was the slightest suspicion that gas might exist.

2168. *Q.* Where for instance, an accident like the Gallagher accident had taken place during your term as under-manager, would you consider that sufficient to suggest to you the importance of looking from time to time? *A.* It goes without saying.

2169. *Q.* Now, the Bulli seam is well known as a seam, is it not? *A.* Yes.

2170. *Q.* And that is the seam, is it not, that is worked in the Kembla Mine? *A.* It is.

2171. *Q.* Do you think that the manager of a mine in which that seam is being worked ought to make himself acquainted with its nature so far as he can—its gaseous nature? *A.* In what way?

2172. *Q.* So far as he can? *A.* In what way?

2173. *Q.* Well, with all the circumstances that surrounded it and revealed themselves in other mines, we will say, in connection with the same seam? *Q.* Well, I take it that he would.

2174. *Q.* Do you think he ought? *A.* I do not know the circumstances you are thinking of.

2175. *Q.* Well, whenever anything happens in connection with a mine in which the Bulli seam is being worked, would you think it necessary that a manager in another mine in which the Bulli seam is being worked should know all about it? *A.* He would naturally interest himself, as a matter of course.

2176. *Q.* Do not you think he ought to? *A.* Yes, so far as it possible for him to acquire information.

2177. *Q.* From any reports of what had taken place elsewhere? *A.* Yes.

2178. *Q.* Now, with regard to coal-dust, you remember the time when Mr. Atkinson sent for samples. Your mine was among the number? *A.* Yes.

2179. *Q.* Were you interested in the result of those experiments at Woolwich? *A.* I was.

2180. *Q.* And you studied the report? *A.* Yes.

2181. *Q.* Whether you agreed or not with it, you were interested, and took an interest in knowing how they had all turned out, and their relative explosibility with one another? *A.* I did not agree with it, because my own experiments disproved the Woolwich experiments.

2182. *Q.* At all events, you interested yourself in it? *A.* Yes.

2183. *Q.* And would not you expect another manager to interest himself in it? *A.* Well, any manager knows that dust is explosive.

2184. *Q.* Would not you expect every manager to read and study it in order to see how the dust out of his own mine stood in relation to others? *A.* I can only speak for myself, that the Woolwich experiments threw no light whatever on it.

2185. *Q.* And you experimented for yourself? *A.* Yes; but apart from that, there was nothing in the Woolwich experiments to give any additional information.

2186. MR. BRUCE SMITH.] When did you find that out;—only after you had read that and made experiments of your own? *A.* My experiments were not made at that time.

2187. *Q.* May I take it then, that you thought that there was no need for any manager to read or study it at all? *A.* I do not say that. I say that every sort of information that you get on the subject is important.

2188. *Q.* Especially with regard to the dust out of your own mine, it is important, is it not? *A.* Yes; but still if the man knows that the dust in his own mine is explosive, in one sense, he does not require anyone to tell him so.

2189. *Q.* Was there any reason for knowing it before that? *A.* I do not know if I quite follow you? I am not in Mr. Rogers' mind; but I take it that he does know the dangers of coal-dust.

2190. *Q.* Then I understand you to mean that he would know it to that extent, and that there was no need for him to read that at all? *A.* Yes; I would expect him to be in touch—[*Interrupted.*]

2191. *Q.* And to know whether it came among the range of the higher explosive dust, or among the lower;—can you say that you would expect him to know, without experiment, how the dust of Mount Kembla compared with other mines? *A.* No, I could not; but I say that if a man knows that the dust is explosive, the comparative degree of explosibility is a different thing.

2192. *Q.* Would not you, as a manager, have taken an interest in these experiments at Woolwich, apart from your own experiments.

2193. HIS HONOR.] *Q.* Surely it is a matter of public interest to the profession, to know the relative degrees of explosibility. It is one of those general things that a mine manager would take an interest in, and inform himself about? *A.* No doubt, your Honor, but if you are seized with the dangers of coal-dust, really their comparative degrees of explosibility are to some extent of no consequence; because we know that all dust is dangerous.

2194. *Q.* Yes, I quite understand that; but all investigations about it, from the very fact that it is dangerous, would be matters of interest? *A.* Yes, that is correct; but we recognise that the experiments were not made under identical conditions to the work in the mine. Every mine must be taken on its own merits.

2195. *Q.* It would be necessary for a competent man to know such things? *A.* I did not say that it was not necessary, your Honor.

2196. *Q.* I mean the results of tests of this kind;—but surely a man who acquaints himself with a thing that comes under his own door like this, is a man who takes more interest, at any rate, in things, a man of more active mind, than one who does not bother his head about it in any way whatever;—why was the experiment made at all; why did you make experiments? *A.* That was made at the instance of the Department of Mines.

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2197. HIS HONOR.] If it is enough to know that the dust is dangerous, and sit down and be content with that, why, the whole profession stagnates.

2198. MR. BRUCE SMITH.] Q. Do you not think it was a very proper thing on Mr. Atkinson's part to forward copies of that to the different Managers? A. Yes, I do; although I took exception—
[Interrupted.]

2199. Q. I want you to put out of your mind the fact that you made experiments. A. I myself took exception to the manner in which the tests were made. I thought it was useless; and I do say now it was absolutely useless.

2200. HIS HONOR.] Q. That is all right enough; but do you not see it is, because you took an interest in it, and investigated it, that you were able to take that exception? A. Oh, yes.

2201. MR. BRUCE SMITH.] Q. Supposing, as I said, just now, you took no interest to make experiments, put that out of your mind: do you not think that Mr. Atkinson did the right thing in sending that dust Home to be tested? A. Oh, yes.

2202. Q. And in communicating the results to the different managers? A. Yes; I do not find any fault at all with the action of Mr. Atkinson. It was very proper.

2203. Q. I do not think you did; but you think it a useful thing to let the managers have a copy? A. Oh, yes, certainly.

2204. Q. Now, you are a member of the Board by which the Examiners for Managers' certificates are appointed. A. Yes, I am.

2205. Q. And, I think, you have, from time to time, to make yourself acquainted, or to be acquainted, with the law which determines the subjects to be examined upon? A. Yes.

2206. Q. Did not you actually make those regulations? A. Yes; I am one of a Board who make those regulations.

2207. Q. And is not this one of the subjects of the examination for a Manager's certificate, "Theory and practice of ventilation, and nature and properties of gases met with in mines, and precautions against danger from the firing of coal-dust"? A. Yes; and it is due to my persistence that that very phrase was put in there; and I met with most unexpected opposition from an unexpected quarter; and I can assure you that the man who combatted that the men should be examined in the coal-dust question was the then Chief Inspector of Mines.

2208. Q. And would not that question involve the ability to classify the causes of explosion, and what their different natures were? A. Yes, unquestionably.

2209. Q. Is that mere surplus knowledge on the part of a manager, or would you consider that he ought to know it? A. Certainly, we expect that the colliery manager of the present day, with his training, must know these things.

2210. Q. But you think he ought to know them? A. Yes; I think that any man who presents himself for examination at the present day ought to know them.

2211. Q. Do you not think, to manage a mine at the present day, a man ought to have that knowledge? A. Well, it depends. I say that a knowledge of the nature and properties of gases is indispensable, but I cannot admit that a knowledge of the chemistry of gases is indispensable.

2212-13. Q. I say, "The nature and properties";—what are the properties? A. I say if he knows, for instance, that fire-damp is explosive, that it is light, and that he will find it in the roof, and that it explodes in certain proportions, it is not indispensable that a man should know it is CH₄ in the chemical formulæ.

2214. Q. Why do you say "Nature and properties";—how do you distinguish between the nature and the properties of gases? A. Well, possibly, the "nature" might be interpreted to mean "the chemical nature."

2215. Q. Are not they, as a fact, examined in the chemistry of gases? A. Oh, no doubt. We expect it of a manager trained at the present time.

2216. Q. Now, is it not a fact that, in order to get a second-class certificate for under-manager, those very subjects are provided; "Theory and practice of ventilation, and nature and properties of gases met with in mines, and precautions against danger from the firing of coal-dust";—that is required in under-managers even? A. Yes; but I do not think that an under-manager would be plucked for his ignorance in that subject.

2217. Q. But, at all events, it is described—that very thing? A. It does not say so.

2218. Q. Oh yes, it is in "The subjects of examination for second-class certificates, &c."? A. Yes.

2219. Q. So that no man is now provided with a certificate which would enable him to get a manager's position unless he has passed an examination in those things, or an under-manager's position even? A. Yes.

2220. Q. And you will admit that it is a necessary provision? A. Yes; but, logically, if a man's certificate is to be taken from him for his ignorance of those subjects, I may say that every man who is ignorant of those subjects as Mr. Rogers must have his certificate taken from him.

2221. Q. Do you not think a man who got a certificate by service, some years ago, ought at least to acquire that knowledge which other men are being disqualified for not having? A. You must know, Mr. Bruce Smith, that when a man arrives at 40 or 50 years of age and is in an important position his time is occupied, his mind is not receptive, and he cannot—and, perhaps, he has never studied chemistry in his youth, and he could not learn chemistry if he tried.

2222. Q. I am not speaking of chemistry;—would not you expect a man who has got a certificate by reason of service to make some sort of effort, it may be ineffectually, to make himself acquainted with the things that other men are required to know? A. Well, specifically state in what other respect, except the chemistry of gases, Mr. Rogers is ignorant.

2223. Q. I will tell you now. [Mr. Bruce Smith then read Mr. Rogers' evidence as quoted in paragraph 1888 of these notes.] A. Quite so; what is wrong with that Mr. Bruce Smith?

2224. Q. I am not in the witness-box;—I ask you whether you think that that is a proper condition of mind for a man to be in, and a proper condition of intention, "I took no interest in it; I made no effort"? A. Of course, what does he take no interest in, light carburetted hydrogen;—he does not know fire-damp by that name, but you ask him what fire-damp is.

2225. Q. I only want you to tell his Honor whether you think that that is a proper condition of mind for a man at the head of a large mine to be in? A. Do you think it is a fair question to put to a man who is admittedly not a chemist, and does not know fire-damp by its chemical name or symbols. The only thing

thing there that I will take exception to is that he does not know what after-damp is. Well, I am perfectly certain that when Mr. Rogers made that statement he was not in his right mind, because he knows very well what after-damp is.

2226. Q. I will take another question:—"I had no interest in knowing the result of the analysis: I mean that I took no interest in knowing the result. I would like to have known the result of the analysis. I believe a report of the result of the analysis was sent to me"? A. No, put yourself in Mr. Rogers' position.

2227. Q. Mr. Robertson, I am not contending anything: I am only asking you to tell his Honor what you think about it. I am Counsel, you are the witness. You are under oath: His Honor is the Judge: and I ask you to tell his Honor what you think about it? A. I told you what I think about it. The man was not in his right mind: and I ask you to put yourself in his place.

2228. Q. Now, I will read you another part on the same page:—"I do not know anything about the composition of the Bulli seam, so far as its gaseous nature is concerned. I have never made any study of the gaseous properties of that coal. I have no idea how long it would take for, say, 100 cubic feet of gas to accumulate in the Bulli seam? A. That was a very sensible answer to a very foolish question, a very silly question.

2229. Q. The latter part of it is. He says: "I do not know anything about the composition of the Bulli seam, so far as its gaseous nature is concerned. I have never made any study of the gaseous properties of that coal"? A. Of course he does not know the chemical nature of the seam. You are always harping on the same thing

2230. I am not harping at all? A. Mr. Lysaght there is harping on the same thing, tripping up his ignorance. Mr. Rogers does not know the chemistry of mine gases, that is all. That is all he is ignorant of.

2231. Q. Now, here is another part: "I knew that it was a seam that produced gas. I relied on there being no gas by reason of the superior ventilation, and my not finding any gas at any time. I did not suppose that the character of the seam had changed"? A. Well, there is nothing wrong in that.

2232. Q. "I did not see the danger of using naked lights in the mine as we had found no gas"? A. There is nothing wrong in that.

2233. Q. "I do not read the reports of explosions which have taken place in England"? A. That is a fairy tale. I am quite certain that Mr. Rogers has read reports.

2234. Q. That is on page 40 of the Inquest. On page 36, I will read you this: "I knew that gas was found in the mine years ago. I knew that there was no gas there during the last ten years, because the deputies would have reported it if there had been, and I would have heard about it." What do you say to that?

2235. MR. WADE.] He said more; he said he did not find it.

2236. MR. BRUCE SMITH.] And he said he never looked for it.

2237. WITNESS.] Where does he say that?

2238. HIS HONOR.] I suppose you put that as an inference.

2239. MR. BRUCE SMITH.] Yes; and I did come across it.

2240. Q. "I knew that gas was found in the mine years ago. I knew that there was no gas there during the last ten years, because the deputies would have reported it if there had been, and I would have heard about it"? A. It is hardly fair to read out of that book, because you want to know the question.

2241. MR. WADE.] And who put it.

2242. WITNESS.] Yes.

2243. MR. WADE.] There is no doubt about it that Mr. Lysaght was most unfair throughout the whole of that Inquiry.

2244. MR. BRUCE SMITH.] Q. Then, do you think those are all compatible with good management? A. No; not at all. Take them one by one, and I will answer them; but I say that some of the answer would seem, to say the least of it, peculiar. But I know the man; I saw him there. I was with him from the moment of the explosion, almost.

2245. HIS HONOR.] I said myself, when some of this evidence was read, I forget what the passage was, that it was incredible, and that it was untrue.

2246. MR. BRUCE SMITH.] Q. You knew all the circumstances when you were a Commissioner, and you found against Mr. Rogers in some respects? A. We did not find him incompetent.

2247. HIS HONOR.] Q. What you had to find was who was to blame, if there was anybody to blame? A. Yes.

2248. HIS HONOR.] Of course a man might be perfectly incompetent, and yet not to blame; and he might be quite competent, and yet be to blame.

2249. MR. BRUCE SMITH.] Q. On one occasion you say here that Mr. Rogers is certainly deserving of censure? A. Well, that does not mean that he must have his certificate taken away.

2250. HIS HONOR.] It is very carefully worded, and it simply says that he was deserving of censure.

2251. WITNESS.] I saw the man after this explosion, and there is no doubt that a man confronted with this appalling disaster, and losing his son—the man was really *non compos mentis*, and badgered and baited, as he was by Mr. Lysaght; and I think everyone knows that his manner with a witness is particularly irritating.

2252. MR. BRUCE SMITH.] You know that, when the Commission was going on, Mr. Rogers was asked if he wanted to correct or qualify any part of the evidence he gave before the Inquest? A. Yes.

2253. Q. And you were there, as one of the Commission, to not only invite him, but to ask questions of him with regard to any of those matters? A. Yes.

2254. Q. Now, was anything of the sort done, or any answers given which had the effect of cutting down his confession of ignorance? A. I am satisfied that Mr. Rogers did not understand his position as a witness, and he was under the disadvantage of not having a good command of the English language; and I am perfectly certain if he had been asked a specific question, "So-and-so, do you agree to that"? he could have answered. It was put in a vague way.

2255. Q. Now, months after this, you were one of a Commission before whom Mr. Rogers came A. Yes.

2256. Q. And you then had an opportunity of asking Mr. Rogers to qualify any admission he the made? A. Yes.

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2257. *Q.* Did he ever do it in the Commission; if he did, can you point it out? *A.* I have not the least doubt, if Mr. Rogers had been asked specifically, "Do you agree to that statement," he would have altered it.

2258. *Q.* You recommended, I understand, that these subjects should be required in the examinations? *A.* I was one of many, but in respect to the dust I took up that point, and I insisted upon it against the wish of many.

2259. *Q.* You brought that forward because you thought it was necessary in Managers and under-managers? *A.* That is so.

[At 1 p.m., the Inquiry was adjourned until 2 p.m.]

AFTERNOON SITTING.

MR. D. A. W. ROBERTSON was further examined, as under:—

2260. Re-examination by MR. WADE.] *Q.* You said that no shots were fired in your mine without watering. Take the conditions generally between the Metropolitan and Mount Kembla Mines, as they were known before the disaster, what was the main point of difference? *A.* Do you mean in respect to dust?

2261. *Q.* Yes, or anything else? *A.* Well, in Kembla you will find dust in patches, and it is, generally speaking, damp, and in some places wet; but, in the Metropolitan Colliery, the dust is everywhere.

2262. HIS HONOR.] *Q.* That is mentioned in the report. In the Metropolitan the air is full of it, and you get it in your eyelashes, and your clothes, and everything; but in Mount Kembla you only get dirty if you touch something? *A.* Quite so, but not only is it in suspension in the atmosphere in the Metropolitan, but it is everywhere throughout the mine, on the floor, roof, and sides, and everywhere; whereas, at Mount Kembla—well, I would not like to say it is exceptional, because you would find dust here and there, but in no sense of the term would we call it a dry and dusty mine. Then, in respect to gas, of course, in the Metropolitan we have gas being given off in great quantities everywhere; and in Mount Kembla you can only find gas in quite inconsiderable quantities. I was unable to find it without the hydrogen lamp. An hour or two after the explosion I was examining everywhere, and for two or three days afterwards, with the ordinary lamp, and I could find nothing.

2263. MR. WADE.] *Q.* The ventilation was deranged then? *A.* Yes; and I could find nothing.

2264. HIS HONOR.] *Q.* It was found, but not by you;—some very large quantity was found? *A.* No, not any large quantity.

2265. *Q.* MR. BRUCE SMITH.] *Q.* In No. 1 Headings? *A.* Yes, a quantity of gas was found there where the air was cut off; but when the Commission visited those same headings we found, I think, it was $\frac{1}{2}$ per cent. or $\frac{3}{4}$ per cent., I am not quite sure which, while the heading were being worked.

2266. *Q.* That, of course, was while the ventilation was going on? *A.* Yes; but it would be absolutely impossible, to my mind, under ordinary circumstances in Kembla to have detected the presence of gas without the aid of the hydrogen lamp. It could not have been found with the ordinary lamp.

2267. MR. BRUCE SMITH.] *Q.* You did not find it;—do you mean it could not be found? *A.* It could not be found. I am convinced that, in the ordinary atmosphere of the mine, it never existed above, perhaps, $\frac{1}{2}$ per cent.; and then it would only be in the working faces. To get that $\frac{1}{2}$ or $\frac{3}{4}$ per cent. we had to go right up to the face, and right into the cut, where the gas was issuing from it. Well, of course, under those circumstances of a mine giving off a small quantity of gas, if you put in your lamp and shield your lamp from the air you may get a higher percentage from that; but in the ordinary circumstances of the mine, I am sure it did not average more than $\frac{1}{2}$ per cent.; but still, I am one of those that believe that even an $\frac{1}{8}$ or a $\frac{1}{4}$ per cent. is a danger that ought to be provided against; but then that is where the difference between myself and other competent men who do not recognise that a minute percentage is a danger to be guarded against. You see there has never been a standard definition of what constitutes a "gassy mine." The best authorities fail to agree on that point. It is a matter of opinion.

2268. *Q.* Has not a gassy mine been defined as a mine in which safety-lamps ought to be used? *A.* Yes; but there come the point — [Interrupted.]

2269. *Q.* How do you define a gassy mine? *A.* That is what we would like to know. We have made a suggestion in the Commission there that there should be a conference in order that we should come to some understanding as to what constitutes a gassy mine,—what constitutes a dangerous atmosphere.

2270. HIS HONOR.] What is the importance of defining that expression, "a gassy mine." It is not used in the Act anywhere, is it?

2271. MR. BRUCE SMITH.] I suppose Mr. Robertson means with the view of determining the mines in which you would put safety-lamps, and which not.

2272. HIS HONOR.] *Q.* Take the definition of a gassy mine as a mine in which safety-lamps ought to be used? *A.* Yes, your Honor. Well, I say that a gassy mine is a mine where the seam gives off gas, I don't care what the quantity is; because I know perfectly well that circumstances may arise in a mine giving off a slight amount of gas that may cause a considerable accumulation. The slight emission of gas may become a large accumulation by certain circumstances, such as the opening of a door that ought to be closed, and so forth.

2273. MR. WADE.] *Q.* You say that for any single manifestation of gas, however small, from the point of view you speak of, you would put in safety-lamps? *A.* I would. At the Metropolitan Colliery, when I went there, naked lights were being used, and the condition, to say the least, was awful; because it is a mine that should never, for a moment, have been worked with a naked light. I was simply amazed. So that, to that day, that condition of affairs was sanctioned by the Department of Mines, because their Inspectors visited there, and took no objection.

2274. HIS HONOR.] *Q.* I suppose the objection to using safety-lamps is the same in kind, though perhaps not in so great a degree, as the objection to the watering of passages—the trouble and expense? *A.* Well, the miners object to the use of safety-lamps.

2275. *Q.* That is because of the trouble? *A.* The trouble, they say.

2275½. MR. BRUCE SMITH.] Your Honor knows that the Arbitration Court has refused to give any extra money for the use of safety-lamps.

2276. HIS HONOR.] Yes; And I believe that is why the miners object to it. It is a trouble and annoyance to them, and it causes more expense to the proprietors. Well, of course, that objection is the

the same in its nature as the objection to watering the passages. It may not be as great in degree. The impracticability may not be so great; but it does not give everybody more trouble, and it does cause more expense; and, if it is not necessary, those are things to be avoided, and consequently there is a certain amount of resistance to the unnecessary use of safety-lamps.

2277. MR. BRUCE SMITH.] *Q.* I think Mr. Robertson will show that the expense of lamps is not very much? *A.* No; I do not think objection should be taken to the first cost, or even to the cost afterwards, though in our mine the cost amounts to £1,000 a year for the upkeep; but in former years there was a demand from the miners for an extra 3d. a ton.

2278. HIS HONOR.] *Q.* You must understand that unnecessary expense is objected to by anyone; it does not follow that he is unfeeling; you have to make a good case to a man before he will incur unnecessary expense;—and if a competent mine-manager says, “I do not think that safety-lamps are necessary,” I do not see why the employers should incur the expense? *A.* I am quite sure of this, that had, say, Mr. Rogers reported to his proprietors that, in his opinion, safety-lamps ought to be used in Kembla, they would have received the report with amazement. They may have called in experts to confirm or otherwise his reports; and I am quite sure those experts—I do not care who—any man in the State you might mention would have reported that it was absolutely unnecessary; because I am quite certain that not another man in the State would have suggested that safety-lamps should be used. Of course, as I say, this is an object lesson.

2279. *Q.* Now, what extent of ignorance of the existence of gas are you assuming on Mr. Rogers' part in making that statement;—are you assuming that he had no knowledge of gas since the accident to Gallagher, or are you assuming that he was acquainted with the issuing of gas from the coal in small quantities? *A.* Well, my impression is that, Mr. Rogers having been aware that the coal, in former years, gave off gas, may have thought it was given off now, but in such inconsiderable quantities as to be negligible.

2280. You are assuming that it was in his mind that gas was issuing in small quantities with a fine system of ventilation? *A.* Yes.

2281. *Q.* And you say you are sure that there are many competent men who would have said that they did not need safety-lamps? *A.* I may say this, that, in my capacity of Consulting Engineer, I have had occasion, not very long ago, to report on a certain mine to the directors that safety-lamps, in my opinion, should be used, although the quantity of gas was not very great; but, still, it was infinitely greater than at Kembla; and I was met, of course, with the opposition of the management, who thought it was not necessary, “We cannot get it in our lamps.” “Well,” I said, “I can get it in the hydrogen lamp, and I can get so much per cent., and, in my opinion, that is dangerous.” And I advised the proprietors, and they thought (they were naturally advised by their Manager) that there was no necessity for it; they would put down another shaft, and get abundant ventilation, and they would not be put to the expense of all those safety-lamps. Very well, time went on; and I think the men opposed it, bitterly opposed it, went in a deputation to the Minister, if I am not mistaken; and, what between the owner and the Manager and the miners, the thing remained in abeyance. And then they had a little flare up after the Kembla explosion, and they made haste to put in lamps then. Now, I am absolutely certain, I know it, and I believe that the Chief Inspector can confirm my view, that the issue of gas in that mine was ten times greater than Mount Kembla; and yet it was a danger that was not recognised there. And I can tell you another instance where I was called in by the Government to give my opinion as to the necessity of safety-lamps in a certain mine; and the Manager of that mine is very eminent—he stands at the head of his profession—and he said there was no need for it. I recommended that safety-lamps should be put in that mine, and after a good deal of trouble they consented to put them in a certain section of the mine. Well, we were glad; we thought half a loaf was better than none, and we accepted that, although we would have liked to have seen lamps put on all sides. Well, time went on, and there was an explosion, and a certain number of men were killed in the section where safety-lamps were not put in. I mention that to show that, even in mines where gas is given off, even a considerable quantity of fire-damp, the competent men object; they think the quantity is not sufficient to warrant the use of the safety-lamp. You see the whole trouble has arisen from the want of a standard definition of what constitutes danger in a gassy mine. It has been a matter of opinion, and one man's opinion is as good as another's.

2282. MR. WADE.] *Q.* And there is this fact standing out, that a number of mines where gas is given off are worked by competent managers with naked lights? *A.* Oh, unquestionably.

2283. HIS HONOR.] *Q.* Even now, after this explosion? *A.* Well, there are not so many now, your Honor. A good many made haste to put them in.

2284. *Q.* But have they all done so, do you know; because it would be interesting to find out the point at which it will be recognised to be bad management to have naked lights in a gassy mine? *A.* I am just thinking. I think now that nearly every mine where gas is supposed to exist is now using, or about to introduce, safety-lamps, after this explosion. I confess myself that I thought that the explosions at Dudley and Burwood would have been an object lesson that every one would have taken to heart; but evidently that was not sufficient.

2285. MR. BRUCE SMITH.] *Q.* You know there are some mines in the North where they have refused, even now, to use safety-lamps? *A.* Oh yes, now I remember the mine.

2286. *Q.* And more than one? *A.* Yes, and they ought to be there. So that you see it has been a matter that has been left to the opinion of the individual Manager unfortunately; and that is why the Commission suggested that there should be a conference in order that we should come to some common agreement on the point, because it is very important.

2287. MR. WADE.] *Q.* Very well, you have said, Mr. Robertson, that every mine should be watered in the vicinity of a shot. Is that statement absolute, or are there any conditions attached to it? *A.* No. Of course I thought it would have been understood that the watering presumes dust.

2288. HIS HONOR.] *Q.* Where nature has already watered it then you need not put water on water? *A.* Oh, of course not; you are drowning a dead mouse. It is only where dust is found that watering is necessary, of course.

2289. MR. WADE.] But, when you say dust, is there any qualification or limitation to the word “dust,” or the nature of the dust? *A.* Oh, well, if the dust is there, and you can knock it up with your foot, and so on; I should say you must water; but if it is in the form of small coal of course I do not think it necessary to water it.

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2290. *Q.* That is what I want to get at. In every working-place there is a large amount of small coal, is there not? *A.* Yes; but it does not follow that, because there is small coal to be found there, it is necessarily a dusty place within the meaning of the Act.

2291. HIS HONOR.] *Q.* Never mind the Act; please get away from the Act. Look at it as a matter of good management. The Act is not complete. Take that matter of ventilation; there is no provision whatever for diluting the gas? *A.* I think, if you will read the recommendation of the Commission, you will find that very point is mentioned (see suggestion No. 8 in the report of the Commission).

2292. *Q.* It is not enough for a mine manager to take the Act and Rules and read them and nothing more. He has to manage the mine properly, apart from the Act. He has to exercise his knowledge in other directions. I mentioned that question of the ventilation just to show that. The Act provides for 100 feet of air merely because he must provide sufficient for the man to breathe; and it is left entirely to the Manager to provide sufficient to render the mine safe, and to dilute gas? *A.* Yes. I have always said that a negligent or careless manager might take refuge under that.

2293. *Q.* I only mention that as an illustration. What we were on was the question of dust.

2294. MR. WADE.] If a man observes the conditions of the Act, the non-observance of which means a penalty, he can scarcely be said to be grossly negligent.

2295. HIS HONOR.] It will all depend on circumstances. Take the case of the ventilation as an illustration again. There is one man in the mine say. I am putting, of course, an extreme and absurd case. He gets 100 feet a minute, and it complies with the Act. It is ridiculous.

2296. MR. WADE.] I admit that. But there, of course, he has to satisfy the Court that he has complied with the words "adequate," and if he does not do that it is an infringement of the Act.

2297. HIS HONOR.] It is evident of course that a manager has to exercise wise management apart from the Act altogether.

2298. MR. WADE.] I admit that a man has certain obligations outside the strict working of the Act. All I say is that when it comes to a question of gross negligence, which means the cancellation of the certificate, the statutory provisions of the Act are a guide to gross negligence.

2299. HIS HONOR.] The point you are on seems to me to illustrate that—that a man is to take the rule up and say, "I am to water here in all dry and dusty places; well, there is dust here, and I do not think it is dry, so I will not water"; and for a man to discharge his duties in that kind of spirit is simply ridiculous.

2300. MR. WADE.] No doubt if a man sees that a place is dry, and says, "I will tell myself it is damp," there are no words too strong to condemn it.

2301. HIS HONOR.] It seems to me that a dusty mine is necessarily a dry and dusty mine.

2302. MR. WADE.] If your Honor uses the words in that sense, there is no question about it. If a man sees dust here, and says, "I will say that is not dry dust," it seems to me that he cannot shelter himself under that.

2303. WITNESS.] It is very clear that if it is not dry dust it would be mud. You could not have wet dust. It would be mud.

2304. MR. WADE.] *Q.* What I want to know is this; whether you would say, under all circumstances, that a man should water when he was firing in the face, or whether he is to be limited to those cases where there is this dust that becomes a reasonable danger? *A.* Yes, he must. He is not called upon, nor is there any need for watering, unless dust is present.

2305. HIS HONOR.] *Q.* Well, you have seen the mine, and you have seen the coal in the face;—the coal in this mine has, I believe, to be won by blasting? *A.* Yes.

2306. *Q.* In your mine, it is won with the pick, or tools? *A.* Yes.

2307. *Q.* In this mine, it is won by blasting;—now, you have seen the mine and seen the coal? *A.* Yes.

2308. *Q.* Was it good or bad management not to water when they were blasting at the face—never to water? *A.* I would not say never to water.

2309. *Q.* I will read you the evidence: "We have never watered in the neighbourhood of a shot; we have no apparatus for doing that";—now, there it is not done at all, and they win the coal by blasting at the face? *A.* Well, there are places on the haulage roads where dust exists, and where it would have been, of course, reckless to have fired a shot without watering; but speaking generally of the faces—of course, I am not speaking of the whole of the mine, because I have not been through it—but speaking generally of the faces, I cannot say that I have seen any face that was dry and dusty in the sense of requiring watering. It could not be designated, except in those dry and dusty patches, a dry and dusty mine.

2310. MR. BRUCE SMITH.] That is, within the meaning of the rule? *A.* No; even in the ordinary sense I do not think any expert would declare the Mount Kembla faces as dry and dusty. Of course, I am only speaking about certain sections of the workings; I am not speaking about the others.

2311. HIS HONOR.] *Q.* Of course, that is only referring to the Act, which says, "Dry and dusty"? *A.* Well, I am giving a very liberal interpretation to the "dry and dusty." I do not think there were places that I know of that were sufficiently dry and dusty to render it necessary to water shots. Speaking generally, from the faces I have seen, I could not say that they were faces where the vicinity of shots should have been watered.

2312. *Q.* You see he had not the apparatus for doing it at all? *A.* No; I suppose he had not the apparatus.

2313. HIS HONOR.] He said he had no apparatus.

2314. MR. WADE.] Evidently that question was put in cross-examination,—“Have you got an apparatus?” and he said “No.”

2315. HIS HONOR.] I have allowed for all that. Of course, as every member of the Bar has, I have read thousands of cases; but, put the question in whatever way you like, he must have said “No.”

2316. MR. WADE.] Yes. He is asked, “Have you an apparatus?” and he said “No”; but it does not require an apparatus. You might as well ask the old question, “Have you left off beating your mother-in-law?” The answer must be “Yes” or “No”; but it does not follow that you ever did it.

2317. HIS HONOR.] Is an apparatus necessary? *A.* You do not want anything more than tanks and a bucket. That is precisely the same apparatus that I used up to a few years back.

2318. MR. BRUCE SMITH.] *Q.* But you have a spray on yours, and a pipe? *A.* No; there was no spray up till a few months ago. I maintain that, provided you water the place sufficiently, it is quite immaterial what apparatus you use.

2319. MR. BRUCE SMITH.] *Q.* How did you distribute the water from the tanks? *A.* With buckets, and splashed it about.

2320. *Q.* Well, he had no apparatus? *A.* He had.

2321. HIS HONOR.] Well, taking it that way, that he had no apparatus specially for the purpose, but that he had the means of doing it. He says it has never been done. Taking the whole thing together, it conveys to my mind the irresistible conclusion that it was not done at all, that it was not considered to be necessary, and that they had made no preparation for doing it. No doubt, having tanks and buckets, they could have used them for the purpose if they wanted to; but, as a matter of fact, they never used them for the purpose, and they never made them into an apparatus for watering shots; and, as a matter of fact, they never did so.

2322. WITNESS.] Well, my opinion is that they did not need to do so, and I think I am confirmed in that opinion by the fact that they were never called upon by the Inspectors of Mines. If the Inspectors of Mines had noticed that the places where shots were fired were dry and dusty, the attention of the management would have been drawn to it.

2323. HIS HONOR.] Their attention was drawn to it.

2324. MR. WADE.] Yes; but only on haulage roads. Mr. Atkinson had the question of the General Rule before him evidently, and, for some reason before him, he saw no reason to mention anything but haulage roads. He could tell them this: "You have dusty faces; you have dusty haulage roads; General Rule 12 says you must water in the vicinity of shots in every case"; but, for a remarkable reason, if the faces are dusty, he carefully excludes them, and draws the attention of Mr. Rogers to the haulage roads only. It is evident from that that Mr. Atkinson had seen the mine, and the faces in the mine. Then, why does not he draw Mr. Rogers' attention to it?

2325. HIS HONOR.] From what Mr. Robertson has said, I think if he had been at Mount Kembla Mine he would have had the faces watered in the presence of shots.

2326. MR. WADE.] *Q.* As a matter of fact, if you had been there, would you have done it? *A.* In my opinion, from my inspection of the working-places of Mount Kembla, if I had been asked my opinion before the explosion I would say the places were not dry and dusty.

2327. HIS HONOR.] *Q.* That is getting to the words of the Act? *A.* Well, if I considered that the places were not dry and dusty, I must necessarily consider that the watering was not required; and I think the inspectors have taken up precisely the same position as I have. They have seen the mine and the working-places, and they did not feel called upon to require Mr. Rogers to water there.

2328. MR. BRUCE SMITH.] I do not think Mr. Robertson should refer to the inspectors generally.

2329. MR. WADE.] It is the inspectors who went to Mount Kembla.

2330. HIS HONOR.] People who manage mines are not to be like a pack of cards leaning up against one another. You get rid of all responsibility if you do that. The Manager must be responsible.

2331. MR. WADE.] And if you have to decide a question of neglect you must have some standard. If competent men say they have no fault to find with it, can you say it is gross negligence? You can only test the charge of gross negligence by the attitude of qualified and scientific men upon this question in actual practice.

2332. HIS HONOR.] Of course, what we are really upon is the question of his knowledge of the dangerous quality of this dust. I must say that very strongly impressed me—that statement that Mr. Rogers did not properly realise the danger from dust.

2333. MR. WADE.] He has not said that—that he did not realise the danger from dust. The question was asked if he knew what Galloway thought, and if that is correct, and then he said, "I do not." He said that $1\frac{1}{2}$ inches of dust may be dangerous.

2334. HIS HONOR.] Of course, his answers on that point, if no allowance is to be made for his being heckled and, in a sense, at bay, his answers as to what amount of dust constituted a danger are most unsatisfactory:—

"We had not that much dust at Kembla that I thought it was dangerous. I never tried to find out how much coal-dust was dangerous, but I found out how much coal-dust there was in the mine. I knew that there had been instances where coal-dust had exploded without any gas at all."

Unless allowance is to be made—and a very considerable allowance—as to his general attitude of mind at that time, that is not satisfactory; and then he had no apparatus at all, and he never did it, and altogether the attitude of his mind seems to have been one of indifference to the subject of dust.

2335. MR. WADE.] Of course, your Honor, we will give evidence that he was not indifferent, though, in the circumstances under which the evidence was given and extracted, it may appear that he was indifferent. He was there almost charged with manslaughter, and he may, mistakenly, have become obstinate and refused to give any answers.

2336. HIS HONOR.] Yes, I have had some experience of witnesses, and, as I have said before, I could not believe that some of his answers were correct. They could not possibly be so.

2337. MR. WADE.] *Q.* Now, with regard to your haulage roads, and return roads, and travelling roads, is there any depth of dust on them? *A.* Yes; in some places I daresay it may be 3 or 4 inches.

2338. *Q.* And you never watered them? *A.* No, it is never watered. Well, I may say that here and there—there is one road in particular which is pretty steep which is a travelling road for men and horses, and occasionally when we have water we water it, but it is more for comfort than anything else.

2339. HIS HONOR.] *Q.* It is more a matter of convenience, not for protection? *A.* Yes; besides we find that in a very high temperature such as we have—83 degrees, the watering of roads and a moist roadway is very disagreeable and very exhausting, and that is one of the objections. It does not apply in the same degree to Mount Kembla, because the temperature there is comparatively low; but, after all, a moist or a wet road is very disagreeable, and I very much prefer the dust.

2340. HIS HONOR.] I do not think that, so far as the dust on the road goes, you need labour that, Mr. Wade; there is an end of that, I think.

2341. MR. WADE.] Yes, but I take it this way, that no doubt there is no suggestion that the non-watering was not bad management; but there is this argument, that as this air current of high velocity

Witness—D. A. W. Robertson, 24 July, 1903.

velocity passes over these roadways and stirs up a certain amount of impalpable dust, and that is carried round, and it is to guard against that danger that Mr. Robertson waters at the face in the presence of a shot. Well, if you have not got that impalpable dust, that in itself is one reason less why you should water at the face.

2342. HIS HONOR.] There is no evidence before me as to the velocity of the air, or whether that velocity would stir up the dust; and there is one point before me, for the Commission themselves say that you do not get dirty with the dust.

2343. MR. WADE.] That is my point. In the Metropolitan you have high velocity, and that high velocity does pick up the impalpable dust, and that is deposited in the return airways; and if that dust is in the workings when a shot is fired, that is a reason for watering. In Mount Kembla, on the contrary, the velocity is less, and you do not have that thickness of dust, and you do not have that element of the impalpable dust carried into the face the same as you have at the Metropolitan.

2344. HIS HONOR.] Well, I suppose I must take that as in Mr. Rogers' favour—the statement by the Commission that the dust at Mount Kembla is not of the same impalpable nature as at the Metropolitan, and you do not get dirty with it—if it is not contradicted.

2345. MR. BRUCE SMITH.] And that whatever dust helped the explosion at Mount Kembla was raised by the blast.

2346. HIS HONOR.] Yes.

2347. MR. WADE: Q. Do you know, from what you have read, the conditions under which these artificial experiments were made in England?

2348. HIS HONOR.] Q. Is not there a certain amount of dust comes in the faces from the men going in and out and blasting out the coal, and so on? A. Do you refer to a particular colliery?

2349. Q. I am referring to Mount Kembla? A. No, the face of the Kembla coal is rather moist, and it is only when it is exposed to the atmosphere and the coal is dry that dust is produced.

2350. Q. What I am speaking of has been exposed to the atmosphere;—the men have been working in these headings for some little time, and they are walking in and out and tramping about and using their tools, and they drop them down with a crash, and do not those things produce dust? A. Not in Kembla, unless you take a considerable distance from the face. The dust increases in direct proportion to the distance from the face; but at the vicinity of the face, say 20 or 30 yards, I cannot recollect any dust to any extent. It is all moist generally. Of course there are many faces in Kembla that I have not seen. I am only speaking from general knowledge.

2351. MR. WADE.] That is, the continual tramping may make the dust fine; but the face is continually advancing, and as you advance with each fresh fall of coal you get the big lumps, and by the time it is trampled down by traffic you are then beyond the reach of 20 yards? A. Yes, you see, your Honor, the face is advancing, say, a yard a day, and you are continually advancing into fresh coal, and there is no time for dust to be produced.

2352. HIS HONOR.] Q. There are two men working together? A. Yes.

2353. Q. If there are only two men working together and they are tramping about all day, then the tramping about must be within a small surface? A. At the Metropolitan the coal is very brittle and dry and friable, and you can get dust in any quantity at the face.

2354. Q. I interpreted this evidence that it was the rule not to water in the vicinity of blasts in Kembla? A. Evidently it was. I do not suppose they watered in the vicinity of any shot.

2355. Q. Now, is it good management to lay down a rule like that? I can understand a rule with perpetual exceptions to it; but to lay down a rule that you need never water—[*Interrupted*].

2356. MR. WADE.] That is not the rule.

2357. HIS HONOR.] I say that I read that as meaning that that was the rule.

2358. MR. WADE.] It happened, because there was no occasion for it; but, *non constat*, if there had been occasion it would have been done.

2359. HIS HONOR.] That is what suggested itself to my mind.

2360. MR. WADE.] I take it that this, as to the watering of the roads, is the point that was raised yesterday. My friend has not raised the question of the non-watering of the faces. Yesterday, when that question was discussed, he said he would produce some evidence about not watering in the vicinity of shots on the haulage roads. It has only arisen incidentally.

2361. MR. BRUCE SMITH.] My friend said the only part where they would require to blast on haulage roads was at the manholes, and that is why I directed my attention to it.

2362. MR. WADE.] You will admit that you confined your attention to the haulage roads.

2363. MR. BRUCE SMITH.] No.

2364. MR. WADE.] I am surprised at that.

2365. MR. BRUCE SMITH.] I shall confine myself to my statement and my evidence in support of it.

2366. MR. WADE.] And you never raised that question?

2367. HIS HONOR.] It was raised and you pointed it out that the point was not taken; so that the only question is whether or not that shows that Mr. Rogers—[*Interrupted*].

2368. MR. WADE.] You remember that I argued yesterday that this part of the case as to Mr. Atkinson's letter as to not watering the haulage roads did not call for an answer. Your Honor said that you were inclined to agree with me. Mr. Bruce Smith then said, "Oh, but this must not be forgotten," reading this passage out from page 40. And then I said, "That evidently refers to the watering of the sides and the roofs in the haulage roads," and I gave the reason in answer to a question by your Honor as to where shot-firing was necessary in a haulage road. I said, "It does happen, and it may happen that blasting is required on a haulage road after the road is completed for a hauling road," and then I said "If you want to rely upon this you ought to give it specifically, and if you do not I shall take advantage of it;" and then Mr. Bruce Smith said, "What I want is stated sufficiently in those two sub-heads."

2369. MR. BRUCE SMITH.] Yes.

2370. HIS HONOR.] What I understood was that, after the matter was argued and I thought that the evidence was admissible, you then pointed out that it had not been specifically taken, and you repeated what you said before, that you would tie Mr. Bruce Smith down to what he had specifically taken, which was perfectly fair. I did not mention that in any way as censuring you; it was perfectly fair; and

I agreed with you then, and said that it must be limited to the grounds taken; and Mr. Bruce Smith said that he would so limit it, and that he would only make use of the other matters, which could not, under that ruling, be looked at, subsequently as breaches of the Act, and he said he would only use them as arguments in support of these sub-grounds c and d of charge 6.

2371. MR. WADE.] I admit that; but what I want to point out is this: that the argument was confined to the blasting on haulage roads; it has never been raised in any part at all that this passage here on page 40 (Inq.) refers to the blasting in the working faces.

2372. HIS HONOR.] I do not remember the exact words; but I am certain it was in my mind that it referred to the working faces as well as the haulage roads.

2373. MR. WADE.] I do not want to take any point that that has not been raised at all; what I want to say is, this is an entirely new matter—the Crown did not make any point of this at all; because, if there has been any neglect in regard to not watering in dusty places, they could easily have said “We will apply this charge both to the haulage roads and the working faces.”

2374. HIS HONOR.] Do you not remember Mr. Bruce Smith arguing yesterday that there would necessarily be dust in the working faces;—that the operation of causes such as I have mentioned just now would necessarily produce dust in the working faces?

2375. MR. BRUCE SMITH.] I said the coal fell forward.

2376. MR. WADE.] Yes; and Mr. Atkinson said, in his own evidence, that you could put the working faces on a different basis in relation to the question of dust to the haulage roads.

2377. HIS HONOR.] That may be, but the fact of its being on a different basis is not, by itself, enough, I think.

2378. MR. WADE.] Q. I was asking you if you knew the conditions under which they made these experiments as to the ignition of coal-dust, and so on? A. Yes.

2379. Q. In what state was the air at the time the flame was propelled into it? A. The chamber had been dried previously.

2380. MR. BRUCE SMITH.] Is that referring to his own experiments

2381. MR. WADE.] To what he has read.

2382. WITNESS.] A. You mean Professor Bedson's experiments?

2383. Q. In what was written by Professor Stokes? A. I do not remember it.

2384. MR. WADE.] There is one thing, your Honor, in regard to the question of the waste workings.

2385. Q. Do you know of your own knowledge when that first became a question of any consequence in the coal-mining world? A. Well, I believe I may claim, with all modesty, to be the discoverer of old workings. At all events, I was the first to formulate a rule making it a statutory obligation to examine old workings. Old workings, your Honor, have been examined in a perfunctory manner when it was convenient up to a certain time. Then, after the Stockton inquiry—of which I was a member—very particular importance was attached, not only to the ventilation, but the inspection, of the old workings. Up to that time there had never been a rule, except in my own colliery, requiring the inspection of old workings. Now, that is not so many years ago, and if you searched in the principal Act you might come to the conclusion that such a thing as an old working did not exist, because, except in one place, they are not referred to at all.

2385½. HIS HONOR.] Q. In one place in the Act? A. In the principal Act. It all goes to show that importance was only attached to the examination of the working-places—the working parts of the mine; and it is only of quite recent years that any importance has been attached to old workings at all. As I say, I was the first to formulate a rule. Others have followed suit, but I do not know if they have all got such a rule now.

2386. *Re-cross examination by MR. BRUCE SMITH:—*Q. I take it, from what you have said about wastes, that you regard it as very important that wastes should be examined? A. I do.

2387. Q. To what extent do you think that wastes should be examined;—I mean to what extent should a man go into the wastes? A. As far as is safe.

2388. Q. And that must depend on the judgment of the man who is there? A. Yes. Well, just the other day I had a difference of opinion with one of my officials. I went into a place, and I did not see his mark in the old workings. Certainly it was a little dangerous; the timber was broken and the roof dangerous. I hauled him over the coals, and he said, “It is not safe; I do not care to go in there,” and I could not force the man, because he declared, and undoubtedly, it was not safe, although I went in myself.

2389. Q. Still, it is a loophole for a man not to do it? A. It is a loophole in this way: that a man might get out of the examination of a few yards of the old workings, but he could not possibly get out of the examination of the old workings sufficiently far not to be able to determine their safety.

2390. Q. I understand you went 50 yards further than he had gone? A. Yes.

2391. Q. How far had he gone? A. He had gone a fair distance in and under a roof that was not particularly safe; but I could not say to him, “You must go in, I am determined that you shall,” because it would be taking a responsibility I had no power to take.

2392. Q. How far did he go in? A. I daresay I went 80 yards in, and the man may have gone 30. I am only speaking in round figures.

2393. Q. How often do you consider that ought to be done? A. Well, I do it once a week.

2394. Q. And you insist on having it done? A. Oh, yes; I insist upon it. But then, again, that is only something new. The old workings did not have any existence up till a few years ago.

2395. HIS HONOR.] Q. But they did become important a few years ago? A. Well, I did my best, in that report of the Stockton inquiry, to draw attention to the importance of it, and my suggestion that the old workings should be examined and ventilated did not meet with the support from the then Chief Inspector that was to be expected.

2396. Q. That may be; but the matter at that time did assume importance from the action which you took about it; attention was directed to the importance of it? A. Attention was certainly directed to it; but I merely state this to show that old workings, not only here, but in Great Britain, did not receive the attention their importance deserved.

2397. Q. Was it after that time, do you know, that these Special Rules were drawn up, containing this Special Rule 10? A. Yes, your Honor.

Witness—D. A. W. Robertson, 24 July, 1903.

2398. *Q.* Then your action did, as a matter of fact, come home to the knowledge of the mining world, and, in the case of Kembla, came home to their knowledge sufficiently to induce them to draw up this rule about examining once a week, as far as practicable? *A.* Yes.

2399. *Q.* So that, whether it was recent, or whether it was ancient, it was a thing known? *A.* Yes. I understand, your Honor, that the old workings at Kembla had been inspected once a month, but that there was no rule.

2400. *Q.* That was stated in the evidence, once a month? *A.* Oh, yes; but previously, in times past. But my impression is that the examination of the old workings in former years, if it ever was done, was done in a very very perfunctory sort of way, whenever it was convenient, and as far as convenient.

2401. *Q.* However, the examinations, as they used to take place, seemed to you to be an insufficient sort of thing, and it seemed to you that there ought to be more attention directed to these places? *A.* Undoubtedly. My impression is that the old workings were not, in the ordinary sense, inspected at all. They were neglected.

2402. *Q.* The question to my mind is, and it seems to have been realised by others too, because it says "as far as practicable," what were the old workings to be inspected for? *A.* Well, really, the principal factor in the examination of the old workings is the possible presence of gas that may be carried on to the working-places. Of course the matter of the security of the roof and sides does not directly affect the safety of the persons employed, because they are not working there; but if you have gas, explosive gas, or any other noxious gas, lodging in the old workings, there is just the possibility that it may be brought in contact with a light, for instance, as in the case of Dudley. Now Dudley explosion was after that Stockton inquiry, and I have no knowledge of Dudley, and I do not know whether the old workings were properly examined or not—I cannot say—but I think it is clearly understood there that the explosion there was the outcome of gas in the old workings coming in contact with a naked light.

2403. *Q.* I would be very glad to get a little explanation from you about those old workings; as I understand the matter, from what has been said, as the miners win their way into the coal, at a certain distance behind them the pillars are, from time to time, withdrawn and the roof allowed to fall? *A.* Yes.

2404. *Q.* So that, as they progress with their actual workings, the air of old workings or goafs comes along behind them? *A.* Yes, your Honor.

2405. *Q.* And when it is sufficiently old it becomes consolidated and compact; but, in the early stages, while the falling is still taking place, there are open spaces in which gas may collect? *A.* Yes, your Honor; but, in addition to the goaf where the pillars have been extracted, the term "old workings" also embraces parts of the workings where the pillars are upstanding, but, for some reason or other, are not removed. Old workings are places where gas may accumulate—reservoirs. Of course, in the goaf, you cannot examine that, where the roof has fallen in there may be cavities that you cannot reach. Goafs are examined along the edge.

2406. *Q.* You apply "old workings" to the interval between the workings and the goaf, in which the pillars have not yet been withdrawn?

2407. MR. BRUCE SMITH.] Your Honor, I think Mr. Robertson means that in some cases the pillars are permanently abandoned.

2408. WITNESS.] *A.* Permanently or temporarily abandoned. Of course there are often pillars that are left for forty years and ultimately worked. They may not be abandoned. But if your Honor will look at the Commission there is a definition of old workings that may be useful to you.

2409. Note: In paragraph 106 of the Royal Commission's report, suggestion No. 4, the Commission say:—

"106. In view of the varying constructions placed by different witnesses on the term "waste workings," the Commission recommend that it be defined in the interpretation section of Act as follows:—"Waste workings" shall be taken to mean parts of the workings of any mine (1) where pillars have been extracted, whether the roof has fallen or not; and (2) workings that have been permanently abandoned."

2410. HIS HONOR.] *Q.* It is not so much the word but the thing itself. I cannot understand the inspection leaving out a place where coal is still standing; but I can quite understand that people might have been a long time finding out that it was important to inspect a place where the coal was all taken out? *A.* Well, gas finds its way to the goaf from the surrounding coal.

2411. *Q.* That was the very thing I wanted to ask about;—when the roof begins to fall you get a higher place into which the gas can escape? *A.* Not escape, accumulate.

2412. *Q.* Having been discharged in other parts, not in the goaf itself, and floating, going up to the roof, being lighter than the air and going to the roof it might find its way to those higher places in the roof? *A.* That is what does happen.

2413. *Q.* How can inspection find that out? *A.* You can only inspect along the edge. Sometimes there is a space along the edge where a man can crawl up, incurring a little risk; and we often do climb up along the falls; and other times the fall is quite close, and you can only put your lamp in some little hole close to the roof.

2414. *Q.* Do I understand, then, that the practice used to be not to inspect old workings, meaning disused places in which there was still coal? *A.* Yes.

2415. *Q.* Still pillars of coal? *A.* Yes, practically, your Honor.

2416. *Q.* I can understand that the importance of that might have been pointed out? *A.* Of course, there is a difference, your Honor. There are old workings in which there are pillars of coal standing, and there are also places sandwiched in between working-places that are temporarily abandoned, and it is a common practice not to examine those places.

2417. *Q.* Although still supported by pillars of coal? *A.* Yes, although sandwiched in between working-places, and the air is passing from one to another; and that is a practice that some mines' rules prohibit.

2418. *Q.* Now, in the case of this mine, I suppose there were standing-places or old workings of the kind you have spoken of? *A.* Yes.

2419. *Q.* And the rule as to giving a weekly examination would apply to those? *A.* Yes; any standing-place not examined in the ordinary course of examination of course should have been included.

2420. *Q.* Now, those places could have been examined just as easily as a working-place and just as thoroughly? *A.* They could.

2421. Q. There is no difficulty or danger in examining them? A. No; still, a great many—well, most mining people—would have held that they were not required to examine those places.

2422. Q. That is another case of a thing that ought to have been done, but nobody is to blame for not doing it. However, in this case we have the rule that it should be done every week? A. Oh, yes.

2423. MR. WADE.] Q. There is another question still, that you are in doubt whether you are to class them under the examination of wastes or whether they come under the daily inspection rule? A. One of the recommendations we have made—I may say there is such a rule at my own colliery—is that all places, whether working or not, on the intake side of a working-place are to be examined in the daily examination of the deputies.

2424. MR. BRUCE SMITH.] Q. You mean from which the air is coming? A. Yes. Of course, any place after the last working-place is treated as old workings.

2425. Q. That would apply to the top of the No. 1 heading, because the air went by there to go to the working-places? A. Yes; if the rule had been the same as at the Metropolitan Colliery, these places must necessarily have been examined.

2426. HIS HONOR.] I can see the reason of what you say about the intake, but the rule draws no distinction.

2427. MR. BRUCE SMITH.] I understand Mr. Robertson now to say that he would regard all places on the inbye side of places in which men were working as working-places, because the air must pass by them to get to the working-places.

(Mr. Bruce Smith then explained the matter to his Honor on the plan of the mine.)

2428. MR. BRUCE SMITH.] If your Honor will look at Special Rule 8, that is really what Mr. Robertson's present evidence is based upon—that, although they are not working-places, they would be regarded in his mine as working-places.

2429. WITNESS.] No. Our rule says that a place on the intake side of a working-place shall be examined daily.

2430. MR. BRUCE SMITH.] Q. We contend that, under this rule, "workings" would include them; but they (the Metropolitan Mine) have a special rule directed to it? A. Well, of course, I cannot admit that the Kembla rules require that to be done.

2431. HIS HONOR.] That is a matter of the interpretation of the rules, and that is a matter for me.

2432. WITNESS.] Those are generally considered to be places that need not be inspected, generally speaking; but I say it is wrong.

2433. MR. BRUCE SMITH.] Q. Because they are inbye of working-places? A. Yes.

2434. Q. And, therefore, they ought to be inspected? A. Yes, as a matter of good mining management. Of course, that would impress itself more particularly on the mind of the manager of a gassy mine, because the only danger to be apprehended from the neglect to examine those places would be the danger of gas accumulating and being brought into contact with a naked light in a working-place.

2435. HIS HONOR.] Q. Is it not a sufficiently good reason to make it bad management not to examine them? A. It depends from what standard you view it. If you view Kembla Mine as a recognised gassy mine it would.

2436. Q. I take the same view as the Commission took. The Commission said:—

"The Commission cannot but characterise the omission to make a daily examination of such faces as, at least, very bad management; and they regret to have found the practice prevailing at Mount Kembla."—(Paragraph 82 of Royal Commission Report.)

? A. Yes. I concur in that. But still I only wish there to point out that you can look upon this from two different points of view—that is, a manager of a recognised gassy mine will certainly be guilty of neglect of his duty if he fail to inspect these places.

2437. Q. Of course, I can understand quite that a duty may in some cases be much more urgent than in any other cases; but here is your report that it was, at least, very bad management? A. Yes; although, of course, it was not in contravention of any rule.

2438. Q. That is a matter for me. At the same time, if there were any common-sense in the matter—no man would be found guilty of a quasi-criminal charge because he had made a mistake in a fine legal point—but it is a matter of common-sense. There are two reasons why the workings should be examined; and one is to see that the walls and roof, and so on, are in good order, so that there is no danger of the men being injured; and the other is to see that the ventilation and brattice are in good order, and that there is no accumulation of gas; and one of the reasons applies to these places? A. Yes.

2439. Q. So, as a matter of common-sense, I do not see how it could be omitted, and it is a most deplorable spirit for a man to take a rule, and because he thinks, in a legal view of it, that he is not bound to do a thing, then omit doing it, when common-sense says he ought to do it—it is a most unfortunate thing? A. You see, your Honor, Mr. Rogers is not alone. Your Honor must bear in mind that the same censure as applies to Mr. Rogers would apply to many others.

2440. HIS HONOR.] There is an old Latin saying, *Deprendi miserum est*—it is a very unfortunate thing to be caught. Of course, I cannot look at the fact that Mr. Rogers has been unfortunate enough to have been caught, when other managers not really so competent have escaped.

2441. MR. WADE.] Q. You said you went into an old working 80 yards. Had the roof fallen there, or was it standing? A. It was fallen and very much broken, and the timbers were crushed.

2442. Q. When you speak of waste workings, would you call an idle place a waste working? A. No.

[Examination concluded.]

MR. JACOB CARLOS JONES was sworn and examined, as under:—

2443. *Examination-in-Chief* by MR. WADE.] Q. What is your name? A. Jacob Carlos Jones.

2444. Q. What are you? A. Mining Manager.

2445. Q. Where? A. Mount Keira.

2446. Q. That is near Wollongong? A. Yes.

2447. Q. How long have you been there? A. About two years.

2448. Q. What were you doing before that? A. Manager of South Bulli for about eleven years, and North Bulli, prior to that, five years, and Assistant-Manager in Lambton seven years. That is my experience in this Colony. Then I was Manager for twelve months in Monmouthshire, on the borders of South Wales.

Witness—J. C. Jones, 24 July, 1903.

2449. *Q.* And what is your total experience of coal-mining? *A.* Thirty-three or thirty-four years.

2450. *Q.* Now, have you known Mr. Rogers any time? *A.* Ever since he came to Illawarra, about thirteen or fourteen years ago.

2451. *Q.* You have been to Mount Kembla Mine from time to time? *A.* Oh, yes, frequently; I suppose a score of times, at the very least, during the last eighteen years.

2452. *Q.* Have you had an opportunity of seeing the way the mine is managed? *A.* Yes.

2453. *Q.* And conducted generally? *A.* Yes.

2454. *Q.* Have you seen Mr. Rogers;—have you had any conversations with him about mining matters? *A.* Oh, yes, frequently. I used to go and see some things there to gain some little knowledge of the engineering and haulage capabilities there. During the last two years they have made great improvements there.

2455. *Q.* Who was the first one to introduce the endless rope? *A.* Kembla—in the Southern District.

2456. *Q.* From what you have seen, and your experience of Mr. Rogers, what can you say in regard to his general competency to manage a coal-mine? *A.* He is thoroughly competent indeed. I believe the mine has improved considerably under his management—from all appearances, at all events.

2457. *Q.* And as to his cautiousness and carefulness? *A.* He is a very careful—an extremely careful—man, and a very attentive man to his duties, as far as I have known, all these years. He has a thorough practical knowledge of all necessary to a mine-manager, at all events.

2458. *Q.* Now, there has been something said that he does not know anything about the chemistry of gases met with in mines;—I want to know from you whether the ignorance of the chemistry of gases necessarily unfits a man for the practical management of a coal-mine? *A.* I do not see it at all. If he knows the practical defect and nature of gases, I think it is quite as much as he is ever required to be called upon for. The actual chemistry of the gases is no help to a man at all if a man is in the mine, as long as he knows their effects, and how to deal with them in a practical way. If every manager must know chemistry, well, there is a very poor opportunity for training managers, because there are no chemistry classes that a man can go to in mining districts—until the last few years, at all events. Technical education has improved opportunities considerably.

2459. *Q.* There have been opportunities in the last few years? *A.* Yes; otherwise, in my time, I am sure I would have to travel 50 or 60 miles by road before I could get to any place where I could learn chemistry in South Wales. You can only learn from text-books, and then you would not get any practice in fifty years, in mixing one gas with another. You only read it, and deal with it accordingly.

2460. *Q.* Now, first of all, in regard to the condition of Mount Kembla;—from what you knew of Mount Kembla did you form any opinion as to its safety as a mine with naked lights? *A.* I always considered it as one of the safest mines in the Illawarra District. I never saw the slightest trace of gas at any time I have been there, or ever heard of any, only some ten or twelve years ago, when a man struck into old workings.

2461. *Q.* Do you mean Gallagher? *A.* He struck into old workings, and some gas lit there and burnt him. That was the only time I ever heard of gas being there. I was in Kembla since—six months before the disaster—in some pillar workings there, and there was no trace of any gas there then.

2462. *Q.* Now, I want to ask you this: whether you would say that safety-lamps were necessary or not before the disaster? *A.* I should say certainly not—not as regards gas. Of course, it has come nowadays that safety-lamps are a safety anyway, whether there is gas or not; in preventing fires, of course, they are a safety—to prevent the ignition of bark, and props, and timber; but as far as gas is concerned, I would never dream of putting lamps into Mount Kembla; I would never think it was necessary.

2463. *Q.* Yours is the next mine to Mount Kembla? *A.* Yes, at present.

2464. *Q.* Did you notice the ventilating current at Mount Kembla? *A.* Yes, in a casual way. I never took the measurements; but, everywhere I was, there was very good ventilation, especially since they put that new ventilating shaft down some years ago.

2465. *Q.* I suppose this disaster has been an eye-opener to a great many people? *A.* Well, it is. And most of these disasters are mysterious; and very unsatisfactory explanations are given to them at any time.

2466. HIS HONOR.] *Q.* You mean these disasters generally? *A.* Yes. Colliery disasters generally are explained very unsatisfactorily, to my mind. No definite explanation is given to them.

2467. MR. WADE.] *Q.* In this particular case, you know there were various theories put forward as to the origin and the locality of the origin—in this very case of Mount Kembla? *A.* That is so; and in all other cases there have been many theories by the best men. In nearly all these cases the unfortunate position is that the only proof positive is gone in the dead. There is no doubt about it.

2468. *Q.* I suppose you see the annual departmental reports of the Mines Department? *A.* Yes.

2469. *Q.* Do you know whether the finding of gas is recorded in those reports of the different collieries? *A.* I do not know. I do not remember seeing any, only when an accident occurs.

2470. *Q.* Taking the general knowledge that people had before this disaster, I want to know this: whether, after the finding of gas, even, say, in several instances, at different times, would you call it bad management or negligent management not to put in safety-lamps? *A.* Certainly not, unless 90 per cent. of the present managers would be called negligent, because there are very few mines in this Colony that have not got more or less gas.

2471. *Q.* You mean gas discovered? *A.* Yes—occasionally discovered and reported; and then it disappears.

2472. *Q.* At the time of this disaster do you know what were the safety-lamp collieries? *A.* In the south.

2473. *Q.* In the south? *A.* I think the Metropolitan was the only one.

2474. *Q.* Out of ten, is it not? *A.* Out of eleven it was the only one that exclusively used them.

2475. *Q.* Take this case—where you cannot discover gas with the ordinary safety-lamp? *A.* When it is in so small a proportion that you cannot detect it with the ordinary safety-lamp?

2476. *Q.* Yes, although you may believe that there is some gas being given off from the seam? *A.* Yes.

2477. *Q.* Would you say it was negligence in a case of that kind not to use safety-lamps? *A.* Certainly not. That has been the practice ever since coal-mines began—that when it is not discoverable with the ordinary safety-lamp it cannot be dangerous.

2478. Q. Now, with regard to the statement made that one 228th of an inch in thickness of dust may be a danger—that statement is deducted from a statement of Professor Galloway's that 7 ounces of dust to a foot linear in a 40 foot section is dangerous—have you ever heard of dust of that kind being met in a mine? A. No.

2479. Q. You know the report of the Royal Commission on Coal-mines in England? A. Yes.

2480. Q. The Chamberlain Commission? A. There have been several.

2481. Q. Do you remember the account of the tests and how they were made? A. Yes; I have seen several tests; but the most recent, I do not remember exactly who made it, but only recently it came out in some of the papers, where they have tested it. It says that the dust must be so thick that nobody could breathe it—no human being could exist in it.

2482. HIS HONOR.] Under what circumstances?

2483. MR. WADE.] Q. When the flame is propelled into it? A. By a shot from a cannon.

2484. HIS HONOR.] Is that the result of experiments?

2485. MR. WADE.] I can get the experiment for you. It is in the evidence of Mr. Hall, question 3496 in the English Royal Commission.

2486. HIS HONOR.] It does not seem to agree with the evidence of this other gentleman that has been mentioned.

2487. MR. WADE.] I can show your Honor the passage. There is no doubt about it that opinions differ upon this point. Professor Galloway gives his opinion, and Mr. Hall, the Government Inspector, states that as an objection to these artificial tests as compared to the actual operations of coal-mining. He points out that these tests cannot be taken as a reliable guide, because they are made in air which, in the first instance, has dust so thick that human beings could not breathe in it, and that is a condition that does not prevail in the mine.

2488. HIS HONOR.] It surely cannot mean that that condition must prevail in the mine before the dust can become explosive?

2489. WITNESS.] That is the result of the last experiments, before it becomes explosive in itself, without the aid of gas.

2490. HIS HONOR.] That is a different thing—we are not speaking of its becoming explosive in itself. In this particular case the Commission have found that gas first exploded and started a series of explosions of coal-dust—so that it was started by gas.

2491. MR. WADE.] Yes; but the point I was on was not that; it was on this new point that has cropped up, as to whether the existence of dust in the working faces is therefore a real necessity for watering. I am on that point only, your Honor, where you fire a shot of gunpowder, which, we will assume, throws out a tongue of flame. Of course, I will admit that that is how it all happens—if you have a rush of flame, which comes and throws up dust, you have then got your dust in suspension in the air so thick that probably a human being cannot breathe it; but I say that you do not get those conditions in the working-places, and that is the reason why this test of one 228th of an inch in thickness cannot apply to the ordinary conditions in the ordinary working of a mine.

2492. HIS HONOR.] If you do not get it in a working-face, neither would you get it in any of the roadways—coal-dust so thick that you could not breathe it; so that watering in the vicinity of blasting would become quite unnecessary.

2493. MR. WADE.] No; because, first of all, the condition, age, and fineness of the coal-dust in the haulage road is quite different from the coal-dust in the working-face: and those three attributes Mr. Atkinson said yesterday all contribute to make coal-dust explosive.

2494. HIS HONOR.] I quite understand that; but I cannot imagine that, in any part of the roads, coal-dust is so thick that a human being could not breathe it, nor anything like it.

2495. MR. WADE.] Quite so; but if there is, a shot stirs up a heap of dust into a cloud, there may be a sufficient quantity of dust, among a heap of dust, of sufficient fineness, purity, and age, to become explosive; but I want to show you that those conditions do not apply to a working-place.

2496. HIS HONOR.] I do not imagine that shots are put in in such a position that, if the thing shoots out, instead of exploding properly, it will shoot out into a quantity of dust, and raise such a cloud as you speak of. I cannot understand it at all.

2497. MR. WADE.] Q. Give us your evidence about that? A. I contend this, that even a heavy fall in a mine—say you cannot detect more than 2 per cent. with a safety-lamp, and a heavy fall disturbs the dust, until it becomes so thick (it does it often), and then it might possibly ignite, and it might be caused in that way. And from these experiments—most elaborate experiments they have made—I think it was in Woolwich—[*Interrupted*].

2498. HIS HONOR.] Q. Well, of course, a fall takes place every time there is a blast? A. But I mean a fall of the roof of perhaps an acre or half an acre drives the air out with force, and picks up all the dust there may be about the place; but, as far as one 228th of an inch in thickness is concerned, I do not know. I would like to work out what that would be when it was distributed in the area.

2499. Q. That would be very small? A. Would you find it often in a room when you sweep up the room?

2500. MR. WADE.] Q. Well, does the action of the air have any effect on the coal-dust? A. Yes, undoubtedly. The fresher the air, and the greater the current going into any mine, the more dust there is. It dries up much more rapidly. There was a Commission appointed in America to investigate that about two years ago, to investigate an explosion, and they distinctly brought in a report and said that too much air is a danger in a mine where there is any dust, because it makes the dust not dry.

2501. HIS HONOR.] Then, perhaps, it was this unnecessary quantity of 80,000 cubic feet of air that was responsible for this accident.

2502. MR. WADE.] It could not be.

2503. HIS HONOR.] If it is bad to have too much air, because it renders the dust more inflammable, and it is good to have too much air because it wets the dust, it is absurd.

2504. MR. WADE.] In that case it would be awkward for a mine manager; if he has too much air he is responsible; and if he has too little he is responsible.

2505. WITNESS.] After it passes a certain point it becomes humid, and the moisture damps the dust.

Witness—J. C. Jones, 24 July, 1903.

2506. HIS HONOR.] Q. And in that case the more air you have the more damp the dust will be?
A. No. The fresher the air is the drier the dust will be.
2507. MR. WADE.] Q. What makes the air damp? A. The breathing of the human beings.
2508. Q. Well, on the haulage roads there are no men to make it damp? A. Yes (meaning, apparently, "there are none"). If you go into any of the old workings and pick up a shovel or pick-handle you will find it covered with a kind of dew.
2509. MR. BRUCE SMITH.] Q. That is not from the men's breath? A. But if you go on the main road you will not see it where the current of air is fresh; and in most mines, where there is not a drop of water to be seen, you will find the brattice-cloth dripping wet with moisture from the atmosphere.
2510. MR. WADE.] Q. Now, at Keira, did you have any watering before the disaster? A. I do not think so; no.
2511. Q. Not in the working-faces? A. No; we had some pipes in the main roads, but not in the working-faces.
2512. Q. How did you get your coal down? A. Shooting it in most of the places, a blast now and again.
2513. Q. You mean you shoot where it is necessary? A. Yes.
2514. Q. Can you say whether it is negligence on the part of a Manager, either at Keira or Kembla, to shoot in the working places without watering? A. Certainly not—not if it is not dry and dusty; I do not see any danger at all there.
2515. HIS HONOR.] Q. If it was wet and dusty he would not be required to do it then? A. Well, he may have dust that is wet; but you would not call it dusty.
2516. Q. No, I do not think so; it seems to me that the word "dry" is an unnecessary word there; do you water before you shoot in your working-faces? A. We do now, your Honor. We have only recently put safety-lamps in the mine.
2517. MR. WADE.] Q. But only then;—take until the Kembla disaster? A. No.
2518. HIS HONOR.] Q. Used you not to water before shooting in your working-places before the Kembla disaster? A. No, not in South Bulli nor Keira.
2519. MR. WADE.] Q. And that goes back about how many years? A. About fourteen years now.
2520. HIS HONOR.] Q. Then, I suppose, your working-faces were not dusty? A. No. In some cases we prevented them from blasting the coal because it was very dry coal, right on the intake, where the intake comes first into it.
2521. MR. BRUCE SMITH.] Q. You mean prevented it altogether? A. Prevented it altogether for a time. We could not get the water. The places were so heavy that we could not take the water up; the grades were so great.
2522. MR. WADE.] Q. Now, another matter is this—you know this 35-acre waste? A. Yes.
2523. Q. There is an opening on the 4th Right? A. Yes.
2524. Q. And there is an opening on the north side of that goaf, one of these openings up here (pointing it out on the plan)? A. Yes.
2525. Q. Now, supposing the air from the daylight opening, the cross-cut heading, scaled through that opening on the north side of the goaf, and travelled round the edge of the waste and out of the 4th Right, could there be any possible harm or danger to men working in the faces here of the 5th Right? A. Certainly not, nor any other place if this was a return side here; it would go straight to the furnace.
2526. MR. WADE.] The only point in the charge is that the contents of the waste came out, and were thereby a danger to the men here.
2527. MR. BRUCE SMITH.] No, not that it came out. We could not trace that it did come out. But we do say that, by leaving an opening to the waste, there was a danger that something might come out.
2528. HIS HONOR.] Do you not remember when, I think, Mr. Bruce Smith was putting in evidence, my pointing out that at that corner (north-east) the air was practically return air; and then it was pointed out that there were people working here (4th Right), and I was referred to two plans showing the nature of the workings and ventilation, and on that account it was said to be still intake, and not return air. I said this air must, although coloured blue, evidently be practically return air, because it cannot go back and get to the working-faces; and then it was said, "No, it is not return air, because it came in here, and it had to be used for men working here (4th Right), and it is intake air on that account"; and it only became return air when it left there.
2529. MR. WADE.] That is not the point I am on. Your Honor will see in the notes that I said there were no men there on that road (5th Right). Mr. Bruce Smith endeavoured to point out that the men on that road—the clipmen and the wheeler—were there and the air would go along here into the return of the main No. 1, and then go into these men (4th Right), and to them it would be an intake.
2530. HIS HONOR.] Oh, but it could not hurt the roadway men. It is quite clear that it could not hurt the road, because, before it turned in (to the goaf) it could not have got anything out of the goaf, and after it turned in it would be entirely off that road. It is when it comes out again that it may possibly hurt anybody if there are any men there. But then that seems to be the case with all return air. A certain number of men have to breathe the return air, but then they are men going along the road.
2531. MR. BRUCE SMITH.] It is no reason, because of that, that the air should be contaminated carelessly.
2532. HIS HONOR.] No. When this thing was pointed out, it only referred to the possible injury to those men (4th Right), and the men walking along here on the return road. [*Exhibit 74 at the Royal Commission was referred to. Mr. Wade explained it to the witness.*]
2533. MR. WADE.] Q. Now, supposing this air scaled off on the north side of the goaf, and came down the return air-way, the travelling-road of No. 1 main heading, and came then into the 4th Right to ventilate those last pillars, as it appears on this plan here, would there be anything improper in that? A. Certainly not. That is the only way you can ventilate. There is no other way.
2534. Q. Is there anything improper in the men working there getting that air? A. Certainly not.
2535. Q. Getting the air that has gone outside, on the north of this goaf, and down the 5th Right, as appears on this plan here, Exhibit 74?
2536. HIS HONOR.] With great respect, Mr. Wade, I do not think you need bother about that, because it must come along there; there must be a return.
2537. MR. WADE.] Q. Now, if you had had in this waste no indications of gas during the whole time
it

it was worked, supposing the air came through the north side to the west along the edge of the goaf, and mixed with the air that had gone down the return to these men at the 4th Right, would there be any harm in that then? *A.* I do not see that it would at all. After you take a certain piece of coal away, the air must come round there. It is the only way you can do it.

2538. HIS HONOR.] *Q.* Do not say it is the only way, because, if there was a piece of canvas put across those headings, then the air would have to go round this way, down the 5th right? *A.* Certainly.

2539. MR. BRUCE SMITH.] Your Honor will remember that Morrison said there were four or five openings on the north side of the goaf from which any gas could escape from the goaf on to that intake.

2540. HIS HONOR.] Very well; that is the point.

2541. MR. WADE.] That is the point. Morrison never said that.

2542. MR. BRUCE SMITH.] I quoted it to his Honor. I will quote it now for you, if you like.

2543. MR. WADE.] Well, of course, if it is taken piece by piece, it may be so. It cannot come out if there is any current of air going.

2544. HIS HONOR.] It will not come out against the wind, that is clear; but it might be carried over there [*meaning to the 4th Right.*]

2545. MR. WADE.] Yes.

2546. *Q.* You work your pillars backward, starting at the northern boundary? *A.* Yes.

2547. *Q.* Now, in a case of this kind, take this area of 25 acres, when you are drawing your pillars back from the northern boundary, is there any other way of ventilating those men except by passing over the pillars previously drawn? *A.* Not for a place like that.

2548. MR. BRUCE SMITH.] There is no question that those were not ventilated in the proper way; but what is complained of is that four or five openings were left on the northern side of the waste, contrary to the rule. The rule says there shall be no openings.

2549. MR. WADE.] There is no rule of that kind. The rule says the intake air shall travel free from old workings.

2550. MR. BRUCE SMITH.] And I gave evidence of Mr. Morrison and Mr. Rogers himself as to the openings from the waste on to that intake air, and then your Honor thought it was practically a return.

2551. HIS HONOR.] I think we are disputing really about words. Mr. Wade apparently has it in his mind that your objection is this: that, these openings adjoining an intake here, the gas could escape from this place into this intake air, whereas the motion of the air would be from the intake into these openings.

2552. MR. BRUCE SMITH.] No.

2553. MR. WADE.] My friend a moment ago quoted Morrison's evidence to that effect.

2554. MR. BRUCE SMITH.] My contention is that that is an intake, because it serves these men (4th Right), but the rule says it must travel free from old workings. Now, these are old workings, and I have Mr. Rogers' and Morrison's admissions that there are four or five openings here (5th Right) from which things can escape from this waste into this intake.

2555. MR. WADE.] That is what I say.

2556. HIS HONOR.] Is that so?

2557. MR. BRUCE SMITH.] Yes.

2558. HIS HONOR.] When the air, the intake current, if it gets there at all, will get there by a short cut?

2559. MR. BRUCE SMITH.] I will show your Honor that that is not the case. I will show your Honor that it is an intake, and it is connected with the old workings.

2560. HIS HONOR.] Still I am not limited by the way it is put by Mr. Bruce Smith, and even if it is intake air which comes to these men, and if intake air comes across this goaf here to these men, not free from the old workings, if it takes the short cut — [*Interrupted*]

2561. MR. BRUCE SMITH.] It might push the gas from here (inside the goaf) to these men.

2562. HIS HONOR.] Gas or not, it is not free from old workings.

2563. MR. BRUCE SMITH.] It must not be assumed that there is a way across there (in a direct line between the openings on the north and the opening at the 4th Right); that may be a solid block, so that it cannot get across. It must not be assumed that there is a way across there.

2564. HIS HONOR.] That is only a matter of degree. If it cannot get through there (the centre of the waste), it will come round here (round the edge).

2565. MR. BRUCE SMITH.] The rule is that no intake shall have openings from which gas can escape from old workings into the intake air.

2566. HIS HONOR.] The intake "shall travel free from old workings."

2567. WITNESS.] That is a different thing.

2568. MR. BRUCE SMITH.] No, it is not.

2569. HIS HONOR.] The fact of "stagnant water and stables" being put in the rule shows to my mind, subject, of course, to what may be said, that what is meant is that the intake air is not to have taken up in it any emanations from stagnant water or stables or old workings.

2570. WITNESS.] That is right. That is the accepted explanation; but you see there are generally two roadways. You see here the 4th Left. You might call that an intake going through old workings, but the general intake is that the main intake shall not be driven through old workings, and this main intake does not go through old workings.

2571. HIS HONOR.] The rule does not say "as far as practicable"; but Mr. Atkinson says that sometimes it is unavoidable. The question is, is it unavoidable here?

2572. WITNESS.] *A.* In pillar workings, your Honor, it is unavoidable.

2573. MR. WADE.] *Q.* Do you know from your own experience that that has been done, that the air has been taken through fallen ground on to men? *A.* Oh, in all pillar workings you must naturally go through old workings before you reach the pillars.

2574. HIS HONOR.] I cannot see that you can fritter away the rule altogether.

2575. MR. WADE.] But the question is whether the rule means that literally.

2576. HIS HONOR.] Means what?

2577. MR. WADE.] That the rule is so worded that you really cannot work old pillars.

2578. HIS HONOR.] The rule is absolute; and Mr. Atkinson says that sometimes it is unavoidable. Well, I think a fair reading of the rule is that it must be done, except when it is unavoidable.

2579. MR. WADE.] The Crown must rely upon the rule absolutely or not at all. 2580.

Witness—J. C. Jones, 24 July, 1903.

2580. HIS HONOR.] Subject to what you may say, I think not. A man must not, because he cannot always carry out a rule in the terms in which he finds it, absolutely disregard it.

2581. MR. WADE.] Then he must observe the rule and cease to work his mine: and, therefore, I say this rule cannot bear the interpretation that is put upon it.

2582. MR. BRUCE SMITH.] Your Honor will see that the General Rule says, "These rules shall be observed as far as is reasonably practicable." That shows it is qualified.

2583. MR. WADE.] If your Honor will see, on that side of the mine (west), the longwall side, the workings have ceased, and there is no occasion to draw the coal out from that area. Then Mr. Atkinson says you must not draw the intake air through that area, and that is altogether different from bringing the air from an area which you are working. Your Honor sees in both these cases the area is bounded by a solid pillar of coal. This had been worked out and left for a number of years, and the complaint was that the air was brought through this, which was not being worked, and was not required for the purpose of working that section, to give air to some men working up here (No. 7 Left). But in the case now under notice, the air was taken through a certain section which was in the process of being worked, and it was necessary for the working of that part of the mine commercially to take the air over some parts where the roof had fallen.

2584. MR. BRUCE SMITH.] It is rather a matter of comment.

2585. HIS HONOR.] It is a matter of argument as to the construction of the rule.

2586. MR. WADE.] Q. Do you know have there been any workings examined in the different mines you have been connected with in connection with the wastes? A. Just as far as possible to examine. They are making it once a week now under the new rules. The new rule was promulgated after the new Act was passed, but prior to that it was a monthly examination. I am almost certain in the old rules it was once a month.

2587. Q. Up till when? A. 1896.

2588. Q. Do you mean there were actually rules in force then? A. Yes; we had rules prior to 1896, and in those rules there was an examination of waste workings once a month.

[At this stage the Inquiry was adjourned until Monday next at 11 a.m.]

27 JULY, 1903, 11 a.m.—DISTRICT COURT, KING-STREET, SYDNEY.

Present:—

HIS HONOR JUDGE HEYDON, who was directed to hold the Inquiry by the Minister for Mines.

MR. BRUCE SMITH, instructed by Mr. H. D. Wood, of the Crown Solicitor's Office, appeared to conduct the case on behalf of the Department of Mines and Agriculture.

MR. A. A. ATKINSON, Chief Inspector of Coal Mines.

MR. C. G. WADE, instructed by Messrs. Curtis and Barry, appeared on behalf of Mr. W. Rogers.

MR. WILLIAM ROGERS, Manager of Mount Kembla Colliery.

MR. J. GARLICK, Shorthand-writer to the Public Service Board, was present as Secretary and Shorthand Writer to the Inquiry.

MR. WILLIAM ROGERS was sworn and examined, as under:—

2589. *Examination-in-chief* by MR. WADE.] Q. Your name is William Rogers? A. My name is William Rogers.

2590. Q. And you are the Manager of the Mount Kembla Mine? A. Yes.

2591. Q. How many years? A. Manager about seven years.

2592. Q. And before that you were under-manager? A. Yes.

2593. Q. How many years? A. About the same. I have been there about fourteen years now.

2594. Q. What is your experience of coal-mining—how many years? A. I have had an experience of coal-mining of about over forty years.

2595. Q. That is since you first began, I suppose? A. Yes.

2596. Q. And when did you first start underground—at what age? A. It would be about 12.

2597. Q. Before you came to Mount Kembla, had you had any experience of safety-lamps? A. Yes.

2598. Q. Where was that? A. At Home—in Wales and in Scotland.

2599. Q. Where the whole of the mines worked with safety-lamps in Wales? A. Two mines at Home were worked with safety-lamps. I was underground manager there.

2600. Q. And what about the mine in Scotland? A. The mine was not worked with safety-lamps there, but it was examined with safety-lamps.

2601. Q. I am speaking of the actual working, where the whole mine, or part of the mine, was worked with safety-lamps? A. Part of the mine was worked with safety-lamps in Scotland.

2602. Q. How long were you under-manager in these safety-lamp collieries? A. Seven years in one place, and twelve months in another.

2603. Q. And what was your age when you first became underground-manager? A. 25 or 30—about 30, I think.

2604. HIS HONOR.] Q. You say you were seven years manager of a mine with safety-lamps? A. Underground manager seven years in one place and one year in another.

2605. MR. WADE.] Q. Were either of those collieries with which Mr. Daniel Robertson was connected? A. One of them.

2606. Q. Which one? A. The one I was in for seven years.

2607. Q. I suppose you had fire-damp in those collieries? A. Yes.

2608. Q. And they were worked with safety-lamps? A. Yes.

2609. Q. Can you tell me how old you were when you first examined with a safety-lamp? A. About 16 years of age.

2610. Q. Were there Government Inspectors in those days? A. If you would allow me to explain how it was I examined workings when I was 16 years of age—I was what they call "Deputy's Company" going

going through the workings in the morning; and I remember of one case when the deputy was sick, and on those mornings I went round myself, and the men thought I was rather young to examine the workings, and they spoke about it.

2611. *Q.* You would make examinations in company with the deputy at that time? *A.* Yes.

2612. *Q.* Now, apart from working for Mr. Robertson, have you any certificates from managers that you obtained in England, or Scotland, or Wales? *A.* I have not got them with me. I have got them at home.

2613. *Q.* I mean characters? *A.* Yes, characters.

2614. *Q.* Mr. Charlwood spoke well of you? *A.* Yes.

2615. *Q.* Who is he? *A.* He is the master of a colliery in England.

2616. *Q.* And William Jones? *A.* He was the Manager of the same colliery—Ffrith Colliery.

2617. *Q.* Then David Cowan, Manager for the Carron Company? *A.* That is the works in Scotland.

2618. *MR. WADE.]* I tender these.

2619. *HIS HONOR.]* Very well.

2620. (The following letters were then put in, and marked *Exhibit* No. 4:—

“Ffrith Colliery, near Wrexham, October 30th, 1874. The bearer, William Rogers, has been in my employment for nearly three years, and during that time he has given me the most complete satisfaction. He has always shown very great attention to his duties as Under-looker, has always been at his work, and has also manifested considerable intelligence and a complete acquaintance with his duties. I can confidently recommend him to anyone as a most industrious and trustworthy servant. (Signed) *Geo. W. Charlwood.*”

“Ffrith Colliery, near Wrexham, October 31st, 1874. I have great pleasure in recommending Wm. Rogers as a steady, honest, and active person, and quite competent to take the situation of Underlooker, having filled that office for about three years at the above colliery. (Signed) *William Jones, Manager.*”

“Memo. from Carron Company. Manager’s Office, Carron, Falkirk, 18/8/1887. To Mr. William Rogers, Birkenhead. I trust to hear of your falling in with a good situation before long. Yours truly, (Signed) *David Cowan.*”

“From Manager’s Department, Carron, Stirlingshire, N.B., 18th August, 1887. This is to certify that Mr. William Rogers was in the employment of Carron Company as Chief Overman at their Cadder Ironstone Works for about five years, and during that time he conducted himself to my satisfaction. I found him steady, sober, obliging, and industrious, and to have a good knowledge of his business. (Signed) *David Cowan, Manager for Carron Company.*”

2621. *MR. WADE.]* Now, I want to ask you this: during the whole of your experience as under-manager or manager, leaving out this Kembla disaster, has there been any serious accident in any mine you have been in charge of? *A.* No, none.

2622. *Q.* In your experience in Scotland or Wales? *A.* No serious accident at any of those collieries during my time as under-manager.

2623. *Q.* Now, you have heard something said about a deputies’ day-book or the day deputies’ book? *A.* Yes.

2624. *Q.* Do you know what is meant by that? *A.* Yes, the day deputies’ book.

2625. *Q.* Now, that was kept at Mount Kembla? *A.* Yes.

2626. *Q.* Who introduced that? *A.* Myself.

2627. *Q.* When was that? *A.* After I took the management.

2628. *Q.* Was that required by the Act? *A.* No.

2629. *Q.* It was something outside of it? *A.* It was something outside of the Act. My reason for that was that the morning deputy used to make the proper report, and the second deputy was supposed to do that, but not supposed to report it; but I made them keep a report book to show that they were doing it. I had two books.

2630. *Q.* Did you see those books? *A.* Yes.

2631. *Q.* I mean did you examine them—look at them? *A.* I examined them.

2632. *Q.* Now, with regard to the deputies, did you do anything else besides having this book kept by them? *A.* Yes, I did. I examined all the report books, and also inside the mine.

2633. *Q.* How many deputies did you have when you took charge? *A.* Three.

2634. *Q.* Was the number of men the same or did you increase them? *A.* The number of men was the same.

2635. *Q.* No—the deputies? *A.* I increased the deputies—two at night time and two in the day.

2636. *Q.* Now, whilst you were under manager did you see the Government Inspectors from time to time? *A.* Yes; and often accompanied them through the mine.

2637. *Q.* Who would go round the mine with them? *A.* I would go round the mine with them.

2638. *Q.* And how long, in more recent years, did the Government Inspector’s inspection last—how many days? *A.* I do not quite follow you there.

2639. *Q.* How long would the Government Inspector’s inspection last? *A.* Oh, about five or six hours—sometimes more.

2640. *Q.* Would he do the whole mine in that time? *A.* No.

2641. *Q.* How long would he take to do the whole mine? *A.* I do not suppose he would do it under three or four days.

2642. *Q.* I want to know—I want to get it more specific—how long would he take as a rule.

2643. *MR. BRUCE SMITH.]* Does your Honor think we are concerned with the time it took the inspectors.

2644. *HIS HONOR.]* I do not know for the moment that it is material, but it may be asked to explain something else.

2645. *MR. WADE.]* My object is not to shunt responsibility for a moment; but if I can show hereafter that men of acknowledged authority, experience, and skill, who do their work thoroughly, recognised certain practices as being regular, it is some element by-and-by, when one is asked to say whether these practices are equivalent to gross negligence, because you must determine the question of gross

Witness—W. Rogers, 27 July, 1903.

negligence by the standard adopted amongst practical men, to a certain extent. A person who is a stranger to the operations of coal-mining altogether might say, on paper, or in theory, so-and-so looks dangerous—
[Interrupted.]

2646. HIS HONOR.] Oh, I think there is a difference between a thing which Mr. Rogers did, and everybody else left undone, and a thing which he adopted in common with everybody else; because there is a question here, when I come to give my decision, of what should be done; and, to put it at the lowest, it is a mitigating circumstance. If you want to show that certain things were seen and not objected to by the Government Inspectors, I will admit that.

2647. MR. WADE.] That is it. I mention the three days for this reason: to show that the examination was not a superficial, hurried one.

2648. HIS HONOR.] Of course, I would assume that the Government Inspectors did their work properly.

2649. MR. WADE.] Q. Since you have been Manager, who went round with the Inspectors then—yourself in all cases, or what? A. Sometimes myself, and sometimes the under ground manager.

2650. Q. Do you know whether they examined the report books? A. Yes. They would not examine them every time they came.

2651. Q. But have you seen them examining them? A. Yes, I have seen them examining them. I have stood alongside them when they were doing that.

2652. Q. Do you remember Mr. Bates making an inspection not long before the disaster? A. Yes.

2653. Q. Do you remember being shown some initials in the report book at the inquest? A. Yes.

2654. Q. Whose initials were those? A. Mr. Bates'.

2655. Q. "T.L.B."? A. Yes.

2656. HIS HONOR.] Q. Was Mr. Bates a Government Inspector? A. Yes.

2657. MR. WADE.] Q. And before Mr. Bates, the Government Inspector was Mr. Rowan? A. Yes.

2658. Q. He went to England, and I believe he has died since then? A. Yes; and there were other Inspectors who visited the mine as well as Mr. Bates. Mr. John Dixon, of Newcastle, visited Kembla.

2659. Q. What position did he hold? A. Government Inspector.

2660. Q. He is a very old Inspector?

2661. MR. BRUCE SMITH.] Q. Was he Chief Inspector? A. Yes; he was second Inspector.

2662. Q. Acting Chief Inspector? A. Yes; Acting Chief Inspector.

2663. MR. WADE.] Q. You know this question that has been raised about the openings of the waste adjoining intake air? A. Yes.

2664. Q. How long have you been carrying on the practice of taking air which passes over fallen ground whilst you are drawing pillars? A. It has always been the practice.

2665. HIS HONOR.] To what?

2666. MR. WADE.] To bring in to the men who are drawing pillars air which passes over ground which has fallen. Your Honor remembers Mr. Atkinson said that after you had driven the bords the full length, then you work back and take the pillars out, and as you go back the ground falls on the inby side of you, and by degrees this solidifies; and it is stated that some air came along from the north of this goaf, and came along the edge, and came down to the 4th Right pillars before the disaster. I was asking whether it had been the practice for any length of time to allow air to come along to men drawing pillars, which air, before it got to them, had to pass over fallen ground.

2667. HIS HONOR.] You are only alluding to this as an illustration?

2668. MR. WADE.] Yes.

2669. HIS HONOR.] And you want to show that it was a general practice, as the men worked forward, and the ground fell behind them, to take all the air to them over the fallen ground, or only to allow some to go that way? I should think there would be a difficulty in fully supplying them over fallen ground.

2670. MR. WADE:] I will examine about that now.

2671. Q. We have been talking of the 35-acre waste. Has that practice been adopted in the other wastes? A. Yes.

2672. HIS HONOR.] Q. There is an illustration here, very much to the point, in the Longwall faces;—there is an air-passage there, running right through that? A. Yes.

2673. HIS HONOR.] And that is blue. That is intake. But that is a thing that has been recently stopped. I think it was mentioned.

2674. MR. WADE.] It has not been stopped. Mr. Atkinson said, in answer to me, that there had been a proposal to close that within the last month or two.

2675. Q. I want to know whether it is practicable to ventilate your pillar-workings otherwise than by bringing air over the fallen ground? A. No. That was the practice.

2676. Q. Can you do it otherwise? A. No; you cannot do it any other way.

2677. HIS HONOR.] You cannot? Well, of course, I do not know much about coal-mining; but I do not see how it can be said that it could not be done.

2678. MR. WADE.] Q. What I mean is this: is it reasonably practicable? A. No, it is not.

2679. HIS HONOR.] You say "over the fallen ground." Do you mean making a passage through the fallen ground?

2680. MR. WADE.] Q. You begin to work your pillars back from the farthest point? A. Yes.

2681. Q. And, as you work your pillars, the timbers which support the roof are taken out, and the roof falls? A. Yes.

2682. Q. And it goes on falling, from time to time, as you go on? A. Yes. There is air comes over these falls—some of them—and other air comes other ways as well. We do not force it all over the falls, but there is air comes other roads as well.

2683. Q. When you say "other roads," do you mean actual passages? A. Yes.

2684. HIS HONOR.] Q. Men are working along headings, and air is brought into those headings by brattice? A. A certain distance.

2685. Q. That air comes along an air passage, and then is brought along to the face by a brattice? A. Yes.

2686. Q. And when the heading has gone sufficiently far for ground to fall, and for pillars to be withdrawn,

withdrawn, and the props taken away, and the ground allowed to fall between the heading and the airway, that airway then must be disused;—you get a fresh airway, do you not? You cannot carry a brattice from that airway when the roof has fallen between the airway and the heading? *A.* No, that cannot be done.

2687. *Q.* You must shift your airway nearer the heading? *A.* No; we have other passages provided for that.

2688. HIS HONOR.] I have no doubt you are right, because you know all about it.

2689. MR. WADE.] *Q.* Have the Inspectors been through these pillar-workings with you? *A.* Yes.

2690. HIS HONOR.] *Q.* I suppose, Mr. Rogers, when I go and look at the mine, illustrations of what you have said can be shown to me? *A.* Yes.

2691. *Q.* Places where it is not reasonably practicable to ventilate the mine faces without taking the air over fallen ground? *A.* Those can be shown to you.

2692. HIS HONOR.] Then I shall understand it better than I do now.

2693. MR. BRUCE SMITH.] Give the names of the Inspectors you mentioned.

2694. MR. WADE.] *Q.* Give us their names? *A.* Mr. Rowan and Mr. Bates.

2695. MR. BRUCE SMITH.] Who did what?

2696. MR. WADE.] Whom he has been with, and who have seen these openings—this system of ventilating the pillar-workings.

2697. MR. BRUCE SMITH.] *Q.* Mr. Rowan and Mr. Bates? *A.* And I believe I have been going through the pillars with Mr. Atkinson.

2698. MR. WADE.] *Q.* Well, did you ever have any complaint about that system of ventilation? *A.* Never.

2699. *Q.* Did they ever say anything in the way of praise? *A.* Yes.

2700. *Q.* Who was that? *A.* I remember Mr. Rowan praising me, and I remember Mr. John Dixon praising me, and I remember Mr. Bates praising me. Mr. John Dixon, I remember very well, came down to visit Kembla while Mr. Rowan was sick, and just on our way out of the mine he said, "Well, Mr. Rogers, I have heard a good deal about you, and I am very pleased to meet you."

2701. MR. BRUCE SMITH.] Does your Honor think this is material?

2702. HIS HONOR.] Not any general terms of praise. It seems to be admitted by everybody that there was a fine body of air going through this mine, and it was very well ventilated, so far as the supply of air was concerned.

2703. MR. BRUCE SMITH.] What I object to is the evidence of this conversation being given.

2704. HIS HONOR.] It is very natural that Mr. Rogers should give it; but attention is called to it that it is not the proper way.

2705. WITNESS.] There was something else explained at the time Mr. Dixon was there.

2706. MR. BRUCE SMITH.] Mr. Dixon is dead too.

2707. WITNESS.] That did not happen between him and me. It was between Mr. Ronaldson and Mr. Dixon. Mr. Ronaldson did not happen to be at the mine at that time.

2708. MR. BRUCE SMITH.] All I am objecting to is the repetition of an alleged conversation when the person is away from Australia.

2709. MR. WADE.] And my friend has asked to be allowed to use the conversations of dead men given at the inquest.

2710. MR. BRUCE SMITH.] I have done nothing of the kind.

2711. MR. WADE.] I will give one instance which is relied upon particularly, where Heron says Dungey, who is now dead—killed in the disaster—told him on one occasion that a heading was standing full of gas.

2712. HIS HONOR.] As a matter of fact, I do not think Mr. Bruce Smith ever mentioned that. I mentioned it several times. Mr. Bruce Smith never mentioned matters, except those which were brought to Mr. Rogers' notice. The evidence was that they were brought to the attention of Mr. Rogers.

2713. MR. WADE.] Yes, quite true—that referred to Broadhead; but on the second day he referred to the evidence of Heron, Quinn, Stafford, and Smith, and Meurant, as to the manifestations of gas, and part of the evidence he relied upon was a statement by Heron that Dungey said that there was a heading standing full of gas.

2714. MR. BRUCE SMITH.] I do not remember it at all.

2715. HIS HONOR.] I do not remember your doing that, Mr. Bruce Smith. But I referred to it myself; and I said I could not understand how a vigilant, inquiring, active-minded man, when a thing was, in that way, a matter of common knowledge, did not find it out. I said it, and in that way it becomes a matter for Mr. Wade to deal with.

2716. MR. BRUCE SMITH.] I say now I should not rely upon any conversation by any dead man against Mr. Rogers.

2717. HIS HONOR.] Of course, that is a matter of degree. If it had been shown before the Commission that the great majority of the miners knew there was gas, and that on many occasions they had mentioned it to the deputies, so that it would have been clear that it was a matter of general knowledge for years, then it would have been impossible to come to any other conclusion than that either Mr. Rogers knew there was gas, or that he was culpable for not knowing it. It becomes a matter of degree. The question is, under these circumstances, and in the face of Mr. Rogers' denial, whether it was sufficiently general.

2718. MR. WADE.] Yes, your Honor, that is so. I might mention, your Honor, in fairness to Mr. Rogers and myself, that that aspect was not raised by the Commission—the only question was whether he did know. There was no question whether he ought to know, or whether he was culpable for not knowing.

2719. HIS HONOR.] Yes. The Commission assumed that it was not brought to Mr. Rogers' notice.

2720. MR. BRUCE SMITH.] I might say that I never during the Commission directed my attention to putting this blame on any particular person, merely letting the Commission ascertain what was the particular cause, because I knew very well that on those proceedings subsequent proceedings might be taken against the different parties considered to be blamable.

2721. HIS HONOR.] As a matter of fact, it was not necessary for the Commission to give a decision

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decision on that particular point, because what they had to do was to ascertain whether any person was to blame in reference to the disaster. Although the terms of the Commission were a little more general, that was the interpretation they put upon them, and I think it was a proper interpretation; and they say that, even assuming that Mr. Rogers had known of these things, it was very unlikely, in view of the condition of mining opinion about safety-lamps, that he would have done the one essential thing in their opinion—that is, the using of safety-lamps.

2722. MR. BRUCE SMITH.] The Commission have been very careful in considering the question of affixing blame, and what led to the disaster. The question now is, is Mr. Rogers as Manager guilty of gross negligence or not; and whether it contributed to the disaster or not is beside the point. I am not going to contend that anything Mr. Rogers did or left undone had anything to do with the disaster.

2723. HIS HONOR.] I am certainly not going to try that. It has been tried. It has nothing whatever to do with the matter. A man might do some very very proper thing, and it might very well cause a disaster; and he might go on doing improper things for years, and not cause a disaster at all. That is a very different thing altogether.

2724. MR. WADE.] What I say is, I have not been asked to direct my attention to what he ought to have known. That question has never been raised at the Commission. It has been raised here.

2725. Q. Now, while you are on the question of this particular 25-acre waste—do you know how long there had been any openings on the north side of the 35-acre waste? A. Yes.

2726. Q. How long? A. They had been there all the time.

2727. Q. What is that—since when? A. About three or four years.

2728. Q. That is since you first began to work? A. Since we first opened the 5th Right heading the openings were on to that road.

2729. Q. Were those openings used for any purpose when you were working that 35-acre waste? A. Yes.

2730. Q. For what? A. For bringing coal out of some of those places in the 35-acre goaf on to No. 5 rope road (meaning the 5th Right).

2731. Q. After a certain period the coal went out some other way? A. Yes; it went out through the 4th Right.

2732. Q. Were the openings used then for any purpose? A. The openings were used for the purpose of letting the air go into the 35-acre goaf.

2733. HIS HONOR.] Q. Let me understand. Now, for a time the ventilation was directly from this 5th Right? A. Yes.

2734. Q. Then, as you worked in and got some distance in, your direct ventilation came from the 4th Right? A. Yes.

2735. Q. But you still allowed those openings? A. Yes, to assist the others as well.

2736. Q. To allow the air to go in from the 5th Right through these openings into the waste? A. Yes.

2737. HIS HONOR.] That is the thing, of course, that is complained of.

2738. MR. WADE.] No, your Honor, it is not the thing complained of.

2739. HIS HONOR.] The thing complained of is the disobedience of the rule, which says, "The intake air shall travel free from all old workings."

2740. MR. WADE.] Yes, that is the complaint, literally; but the reason given for it in the evidence by Mr. Atkinson was that from the old workings impurities would come out into the intake. That is the ground alleged for the complaint here. If your Honor will remember, Mr. Bruce Smith was asked again on Friday afternoon, and he repeated it distinctly.

2741. HIS HONOR.] What is the difference between their coming out into the intake and the intake going in and picking them up itself?

2742. MR. WADE.] There is every difference, for this reason: your Honor asked the difference between these two cases—that depends on the condition the waste may be in; but the complaint made is made on the basis of the rule. The rule says certain things in plain English, and if you do not comply with those you have broken the rule; and that is the only charge made—it is in writing—that there was the opening on the north side of the 35-acre waste, the intake going past it, and impurities might come out of that waste and contaminate the intake; and, therefore, the rule has been broken.

2743. MR. BRUCE SMITH.] I object to any paraphrase of my complaint. My complaint is in writing.

2744. [Charge No. 4 was read.]

2745. MR. WADE.] Now, the reason given was perfectly clear in the evidence by Mr. Atkinson [Questions 713 to 722 of these notes were read.] There is the charge made by Mr. Bruce Smith, and there is the evidence upon it.

2746. HIS HONOR.] Then it went on, and there was a good deal of discussion. The Commission have recommended, I think, that old workings should be ventilated, but not ventilated into intake airways.

2747. MR. WADE.] They are not ventilated into intake airways. The current of air is from the intake to the return airways, not into the intake. The air is taken from the intake, not into the intake. The suction is towards the 4th Right.

2748. HIS HONOR.] That is all right if it came out into a return airway; but it had to pass these men who were working there first.

2749. MR. WADE.] The charge is perfectly clear, and the evidence is clear in support of it; and on Friday afternoon your Honor said that there was another question to be raised here, whether it was reasonably practicable to take this air without taking it through the goaf; and your Honor asked Mr. Bruce Smith what his case was, and he distinctly said then that his case was that the intake went past the north side, and there were openings on the north side, and impurities might come out from that goaf into the intake.

2750. MR. BRUCE SMITH.] There is the rule. His Honor points out that there is no difference between the impurities coming out into the intake air or the intake air going in and picking up the impurities.

2751. MR. WADE.] But the rule does not provide that. The rule provides no penalty for the alternative. I am prepared to show that the alternative is perfectly safe in this case.

2752. HIS HONOR.] The question arose, in consequence of this split being noticed in No. 101 heading, as to whether the air which abutted on these openings was return air or intake air, and it was pointed out that it was intake, because the workers at the 4th Right were ventilated from it.

2753. MR. WADE.] That is it.

2754. HIS HONOR.] That being so—that being intake and not return air—does it matter (I think I suggested to you) how it got to those men; whether it got to them along the air-way, or whether it got to them round the edge of the goaf?

2755. MR. WADE.] Yes; it does. It makes a very great difference, because, whatever the results are, the Act says, in one case there is a prohibition, which is that the waste shall not drain into the intake, and on the other hand if we can show that the waste does not actually drain into the intake, but actually takes pure air from the intake to dilute the air in the waste, and that air does not go to the men at all, there is no breach of the Act; there is a gain to the men if anything, and there is no breach of what I may call the common law of the case.

2756. HIS HONOR.] It is intake air until it gets to the return air-way, so that it is intake air whilst it is passing these men, 4th Right, and it is intake air while it is passing through these workings.

2757. MR. WADE.] That is not the meaning of an intake—intakes are main air-ways.

2758. HIS HONOR.] If it is not intake air it is quite evident that the men ought not to have it. It is evident that they ought to have nothing but intake air.

2759. MR. WADE.] (*After explaining his contention to His Honor on the plan of the mine.*) The intake air in that Act means the first passage of air before it comes to the first man. After that it must pass through old workings of some kind. If it does not mean that, then we are not at one as to the meaning of "old workings." The Commission have suggested a definition of "old workings." There is a difference between "waste workings" and "old workings." A "waste working" is one that is done with; it is useless; you may have an old working, that is left for the present, but it may be worked in the future.

2760. HIS HONOR.] Suppose there are a large number of working-faces. As the air goes through those working-faces it becomes contaminated, and the men at the end of the workings must get, to some extent, bad air. It is to meet that condition that the Act provides that the mine shall be divided into ventilating districts, so that better provision may be made to give the men pure air. It is intake air whilst it is supplying the workings, and the rule must apply to it, I think.

2761. MR. WADE.] *Q.* Now, I want to ask you this, Mr. Rogers—is it necessary, in your opinion, to have some air going round the edge of the goaf? *A.* Yes.

2762. HIS HONOR.] *Q.* For what purpose? *A.* To keep the place clear while the men are working in there.

2763. MR. WADE.] *Q.* Take a case where the roof has fallen solid in some parts, as this 35 acre waste was shortly before the disaster? *A.* Yes.

2764. *Q.* Is it an advantage, or is it necessary to have a current of air circulating round the edge of that waste that has been described? *A.* Yes; it is.

2765. HIS HONOR.] *Q.* In what way is it an advantage?

2766. MR. WADE.] *Q.* Explain the way it is an advantage, or desirable? *A.* As long as there are men working there, until the place is finished, I think the air should travel round the edge of the goaf so as to take everything that is impure from it. If it was stopped up, it is hard to know what might happen inside there while the men were working to bring it on to them; but if you have the air travelling round while the men are there, I consider that the men working in there are safe, otherwise they are not.

2767. HIS HONOR.] There is a great deal of common-sense in that, I think, to say that such places should be ventilated, and the Commission recommend that they should be ventilated, but they should not be ventilated from an intake air-way.

2768. MR. WADE.] *Q.* Take it first of all that it is desirable to do this, because it prevents the accumulation of impurities—next I want to ask you whether it is practicable, or whether you reasonably could, when they are working the last few pillars in the 4th Right, do anything else than what you were doing, that is bringing in a split from the 5th Right, and allowing this air to circulate round the goaf? *A.* Yes.

2769. *Q.* What? *A.* Take it into the 4th Right, and around some of the last places that were working, which was what we were doing.

2770. *Q.* You do not understand my question. Here is a plan drawn by Mr. Leitch [*Exhibit 73*], which illustrates the ventilation of the 4th Right six weeks before the disaster. This space between these two black lines on the right hand side of the words "5th Right," is solid pillar? *A.* Yes; a solid block of coal.

2771. *Q.* Now, supposing you did seal up those openings, whatever they were, on the north side of the waste? *A.* Yes.

2772. *Q.* And you had your opening round the edge of the waste still—do you follow me? *A.* Not quite. Will you explain that again?

2773. *Q.* Here is the waste. You have told us that when it falls, it falls solid in the middle and the edges are not quite tight? *A.* Yes.

2774. *Q.* And the air had been coming round from this opening round the edge of the goaf, and would get out of either the 4th Right or the 3rd Right? *A.* Yes.

2775. *Q.* Whilst you were working these last few pillars supposing you had sealed up these openings on the north side what would have been the effect of the suction of the air going round this solid ground;—would it not have prevented things coming from there? *A.* If it was blocked up it would prevent anything coming along here to keep this place clear.

2776. *Q.* What would be effect of the air coming round here, these blue lines here, upon the air lying along the edge here (indicating the space at the goaf edge impinging upon the area last worked at the 4th Right)? *A.* No effect at all. The air coming there and the air coming here would adjoin one another and come out.

2777. (Mr. Wade then explained to the Witness on the plan, that the air coming in from the 4th Right would act on the air lying along the edge of the goaf, and the two would be taken round and out at the return air-way).

2778. WITNESS.] It would draw upon the air lying round the edges of the goaf.

2779. MR. BRUCE SMITH.] That applies to the north edge, too.

2780.

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2780. HIS HONOR.] I suppose that is always the case where a moving body of air acts upon a still body of air.

2781. MR. WADE.] Q. There are two cases now: first of all you have got your air going round these standing pillars? A. Yes.

2782. Q. And out again at the 3rd Right? A. Yes.

2783. Q. That applies in both cases; but in one case you have the opening on to the north side, and air scaling through.

2784. Q. And joining that this air going round the pillars? A. Yes.

2785. Q. In the other case, the opening on the north side of the 4th Right is closed? A. Yes.

2786. Q. And this air at the edge of the goaf is still? A. Yes.

2787. Q. But the air going to the edge of the pillars draws upon it? A. Yes.

2788. Q. Which is the preferable plan of the two: is it preferable to have the opening sealed on the north side, letting this 4th Right air draw upon it, or have the openings on the north side open? A. Have the openings on the north side open.

2789. HIS HONOR.] What the rule says is, that it is to travel free from the old workings. If it draws upon the air at the edge of the goaf, it is not free from old workings.

2790. MR. WADE.] It says more, if your Honor puts that forward: it says "if reasonably practicable." Now, I am going to show your Honor, that if you close the openings on the north side you cannot shut off the stagnant air which is lying round the edge of the goaf from going round these 4th Right pillars with the current.

2791. HIS HONOR.] Plan 73 shows the falling ground?

2792. MR. WADE.] Yes.

2793. HIS HONOR.] And the plan shows it coming quite close up to the pillars; would not it be best to put brattice all round here and cut it off?

2794. MR. BRUCE SMITH.] It is recommended to leave it open to return air-ways.

2795. HIS HONOR.] It is recommended by the Commission to have goafs ventilated; but that is careful ventilation into the return air-ways; so that you have your choice of two things, either seal up or ventilate into a return air-way, in order to carry out the rule that the intake air shall travel free from old workings.

2796. MR. WADE.] That is so for the future; but, before this rule was framed, a mine was worked in a certain way; and it is impossible, with a large area like this, to ventilate that goaf with intake air and keep it clear of the men whilst the pillars are being worked. If you seal it off you have a certain amount of air along the edges lying stagnant that may accumulate and cause trouble in the end.

2797. HIS HONOR.] Could these men working in the 4th Right have been ventilated from the No. 1 main right rope-road? There are two roads; one is intake and the other return air.

2798. MR. WADE.] It would make no difference in the end; because we would assume that the air coming down the 5th Right is practically pure—the complaint before your Honor is that something may come from the waste.

2799. HIS HONOR.] You would not want to seal up all this place then; you would only want to block this little place here [*indicating on the plan the space between the goaf edge and the western pillar of coal*] and the problem would be solved. The goaf would be kept free of intake air, and the men working at the 4th Right pillars would have got intake air.

2800. WITNESS.] We had another intake from another opening about the 5th Right, and there was air coming down the 5th Right road so as to come from the north side into these places, and the air along the No. 1 road went into another place.

2801. HIS HONOR.] Q. I do not think you understand the matter. Would it not have been practicable to ventilate these men working at the 4th Right from the No. 1 main level? A. I cannot see how it can be done. I do not think any man would think about such a thing; it would not be practicable.

2802. Q. I thought you had lots of ways of taking air currents across air currents, and so on?

2803. MR. WADE.] Q. Now, it comes to this, that if you had canvas all round the edge of this waste just on the other side of these solid pillars at the 4th Right, would that be good management? A. No, I do not think it would, because it would be keeping whatever was here from coming into the return air-way, blocking it there, sealed up.

2804. Q. All these fallen pieces close round the remaining pillars at the 4th Right would not be tight? A. Not quite tight.

2805. Q. Air could get through them? A. Yes, because in falls of big rocks it would not be blocked right up.

2806. Q. Take that intake coming from the cross-cut heading on the extreme east of the plan. How many men would that supply with air? A. About a dozen places, about twenty-four men.

2807. Q. And how many were there in the 4th Right, latterly? A. About six or seven.

2808. Q. I want to know whether you consider that ample or not? A. Oh, ample, yes.

2809. Q. How many men was the air coming in the cross-cut heading capable of supplying? A. It would give more than what seventy men would require. It would supply 150 men.

2810. HIS HONOR.] There are, apparently, openings on the east side; but they are not in the charge and I have nothing to do with them.

2811. MR. WADE.] Now, what would be the amount of air that scaled round the edge of the goaf to the 4th Right? A. I could not exactly say.

2812. Q. Would it be large? A. It would not be very large, and it would not be very small.

2813. Q. Now, I want to know whether it would be desirable or not; what do you think? Oh, minute now;—do you remember saying at the Inquest that you heard of Gallagher being burnt—"For all I know he may have been burnt with gas"? A. Yes.

2814. HIS HONOR.] The way he was burnt has struck me he was burnt through driving his pick into an old working where gas had accumulated.

2815. MR. WADE.] Q. Just tell us what you can say about that; you gave your answer here as if, remember the occasion of his being burnt? A. Yes. What I meant was this, that I did not exactly know because I had not seen it; and I had not seen any there before, and I did not see gas there after the accident that had happened to Gallagher.

2816. Q. What did you do? A. I went in and examined the place, the first thing I did, and I found it was clear. I took a safety-lamp in and examined it, and I found it was safe. Well, I had an idea. I thought it was gas that had burnt him, but I was not certain; I had not seen it. I had not seen any there before, and I did not see any there afterwards; and I could not make out what had happened.

2817. Q. What were these old workings;—did you see them? A. No, I never got into them. They were workings that had been done years before I got into Kembla.

2818. Q. What was the condition of them? A. They were full of water.

2819. Q. Was there any discussion about the matter at the time with Mr. Ronaldson? A. Yes. Mr. Ronaldson was the manager then, and we did not expect that we were going into a place with an empty space; we thought we were going into a place with a little water in it, and we did not think we were so near on to it as we were, because the plans did not show it.

2820. HIS HONOR.] It is not a question of blaming anybody about that accident to Gallagher. I only refer to the accident as showing the way that gas does accumulate in old workings.

2821. MR. WADE.] Q. Do you remember a discussion with Mr. Ronaldson about that matter? A. Yes, the place was blocked up with water. Going into this place, it went into a swallow, and the water was up to the roof in this place; and we were thinking that there would be water in the place whenever we broke through into it, and we talked about it; and Mr. Ronaldson said, "Oh, there will be no danger there, because it will be all water there."

2822. Q. Did you have any discussion with Mr. Ronaldson after this man had got burnt as to the explanation of it? A. Yes. He said it must have been—I think it was something like this: he said it must have been something; if it was gas—[*Interrupted.*]

2823. MR. BRUCE SMITH.] Q. Who said this? A. Mr. Ronaldson.

2824. MR. BRUCE SMITH.] I object to this conversation with a dead man, your Honor.

2825. MR. WADE.] It is on Mr. Rogers' knowledge of gas.

2826. MR. BRUCE SMITH.] Mr. Rogers said he did not know about it.

2827. MR. WADE.] He said, "I did not know he was burnt with gas."

2828. MR. BRUCE SMITH.] He said, "I have heard about it."

2829. WITNESS.] I was there with Mr. Ronaldson when it occurred. If I said that, I did not know rightly what I was saying at the time when I was at Wollongong. I was only fit to be in bed. I was not fit to be in the Court, and the way Mr. Lysaght was getting at me and trying to corner me in any way at all—it did not matter what it was—he was trying to get me to say things that he knew that I knew better.

2830. HIS HONOR.] And apparently he succeeded, because in many cases you said a great many things, and you knew a great deal better than what you said.

2831. MR. WADE.] And the same thing with Mr. Morrison. He lost two children in the explosion.

2832. WITNESS.] And I lost a son.

2833. MR. BRUCE SMITH.] And Mr. Rogers was asked at the Commission if he wanted to modify his evidence in any way.

2834. MR. WADE.] And my friend put the question in a most gentle, vague way, "Do you want to modify your evidence?"

2835. MR. BRUCE SMITH.] Yes. You had an opportunity of examining him other than genteelly; you might have done it roughly, and you might have got more out of him.

2836. MR. WADE.] It was not part of my case. I told you at the time I was going to cut my case short after what Mr. Atkinson had said.

2837. HIS HONOR.] I do not think it is very material to the case as to Mr. Rogers' knowledge about the Gallagher case. There was certainly quite enough evidence to suggest that he might have been burnt by gas, and it would put him on his inquiry.

2838. WITNESS.] It could not have been much, because there were two men there, and one of the men was not burnt at all.

2839. MR. WADE.] Q. Now, I am coming to this question of making inquiry;—I want to know whether you ever took any steps to use a safety-lamp when you were under manager? A. Yes.

2840. Q. Tell us all about it—how often, and for what purpose, and when and where? A. I used to do my examination with a lamp that I brought with me from the Old Country, my own. I used to take it into the mine very often, and sometimes I would be with the deputy, and he would have a lamp if I did not have my own, and we used to examine the places with that lamp; many scores of times I did it.

2841. Q. Take the case, now, of being with the deputy, and he carrying his lamp and you not? A. We would go, perhaps, into a waste working, or a place that had been fenced off, a standing-place stopped for some reason or other, perhaps a heading, perhaps a bord; and we would go into these places. I have been going very often by myself, and I would have the safety-lamp, and examine it by myself. I did not always use to go with the under-manager, nor did I always use to go with the deputy; sometimes I went in with the contractor.

2842. Q. Have you made examinations with the safety-lamp since you became Manager? A. Yes, many and many a time.

2843. Q. With what result, as to finding gas or not? A. I never found any gas, never found any gas at all; never found any gas only the times I said, about ten years ago. That was before the new ventilating shaft was put down, and before the new furnace was made; and the reason why, I used to think—well, I was certain about it—that why there was no gas seen was because we had such good ventilation, and the place had improved so much through putting this shaft down, and the thing had played away. I would not say but what the place was making gas; I know that it would make a little gas; but what I meant to say was that I never saw any; not that it never made any, but that I never saw any by trying with the ordinary safety-lamp.

2844. Q. Explain what you mean by "making any"?

2845. HIS HONOR.] The discharge?

2846. WITNESS.] A. The discharge.

2847. MR. WADE.] Q. I want you to explain that? A. What I meant was that I would not say that the gas would not come out of the coal, but I never saw any.

Witness—W. Rogers, 27 July, 1903.

2848. HIS HONOR.] Q. Of course, the ventilation would not prevent the gas from coming out of the coal? A. No, but I never saw it.

2849. Q. It would sweep it away? A. Yes.

2850. MR. WADE.] Q. How long have the deputies been examining in the morning with locked safety-lamps? A. Ever since I have been in Kembla, that is about fourteen years; and I was always very careful with them in the morning. I used to see them four or five mornings out of every six; I used to meet them in the fireman's cabin, and I used to ask them, "How are things to day?" "All right." Many a time I told them, "Now, do not tell me things are all right for the sake of pleasing me if they are not all right. If there is anything wrong, let me know, so as I can deal with it; do not keep me in the dark. If you see gas, or if you see anything wrong, tell me and let me know about it, and then I know how to deal with it and what to do. If you report everything is right when they are not right, how am I to get on?" Many and many a time have I told them that, and, I am sorry to say, there is only one deputy now alive. If the other three had been here—I am speaking about the dead again—I am sure that everyone would endorse what I have said now, that I was very, very careful with them. And I used to congratulate myself about putting on one more deputy, two at night and two in the day, and keeping these extra report books. I used to congratulate myself upon doing these things. I thought I was getting on very well.

2851. MR. WADE.] Q. You told us you examined the books;—did Nelson keep a book when he was day-deputy? A. Yes.

2852. Q. And you examined them? A. Yes.

2853. Q. Would you put any mark in these books when you had examined or seen them? A. Sometimes I would, and sometimes I would not.

2854. Q. What would you put? A. Just "W.R.," my signature.

2855. A. Now, with regard to these waste workings, putting on one side this question of the monthly examination at present, do you know whether they are examined by the day-deputy apart from the monthly inspection? A. Yes.

2856. Q. Do you remember any of them? A. Yes, all of them used to do it, although perhaps they would not report it; but they would be doing it at the same time, and I know Nelson used to do it, and I think Nelson reported it. I have been with him when he was doing it, and I know he was doing it. The only time he used to report it was once a month when we made the whole inspection. That was made on what we call a pay Saturday, always once a month; but it was made every day some part of the workings as well as once a month, but we did not report it only once a month. It did not use to be talked about until lately about the once a week, and it used to be once a month. It was once a month when I was there first. This was spoken about by Mr. Ronaldson again; he is far away. It was done then, and I followed in his footsteps. He was a clever man. Mr. Atkinson knows him. I followed his way in the examinations of these places. We used to examine them every day, but we reported them once a month.

2857. Q. What would the deputy examine in his night examination;—how much of the so-called waste? A. He would go to the edge of the goafs in the pillars and examine the working-places.

2858. HIS HONOR.] Q. You are speaking of what somebody else did;—how do you know? A. Because I know it was the practice to do it, your Honor; they would not be doing their work properly if they did not do it. I did not know only by what they used to tell me, and what they used to write in the reports.

2859. Q. That is exactly what I cannot quite see, because you were aware that they did not go into temporarily idle working-faces;—if they did not every day go into a temporarily idle working-face, why should they go into the edge of an old working? A. That is not saying but what these idle places were examined by the day-deputy or by myself. I used to do it, and the underground manager used to go into these places; but the deputies that used to examine the places in the morning would not go into these places and report on them; but it would be done during the day either by the underground manager, by myself, or the day-deputy.

2860. Q. What places are you speaking of now? A. The whole of the mine, your Honor.

2861. HIS HONOR.] That is new.

2862. MR. WADE.] Q. Are you speaking of the waste workings or the id'e places? A. The idle places.

2863. Q. They were not examined by the night fireman? A. No.

2864. Q. There is no question about that, and you knew that? A. I knew that.

2865. Q. Now, I want to ask you about Nelson's examination of the wastes when he was day-deputy;—have you been round with him at any time? A. Yes; many a time around with Nelson, and around with David Evans; that is another day-deputy.

2866. HIS HONOR.] He has given his evidence.

2867. WITNESS.] They always used to have their safety-lamps in the mine.

2868. HIS HONOR.] I do not think it is disputed that they made their examinations, except that it seems to have been quite understood that they examined the waste places with the naked light.

2869. MR. WADE.] That is just what I am coming to.

2870. Q. Can you say whether Nelson examined with a safety-lamp or a naked light, of your own knowledge? A. I saw him do it many a time with a safety-lamp. We would never think about going into old workings with a naked light. I would never think of it, and I never saw anybody, either, with me who ever tried to do it. I am sure, if I were to see him do it, I would not have allowed it. I do not think I would have had him any longer as a deputy if I saw him doing such a thing, or trying to do such a thing.

2871. HIS HONOR.] The Commission used an expression from which I gather that they considered Mr. Rogers responsible really for that. In paragraph 69 of their report they had been discussing the examination of the wastes, and they say:—

"The Commission are thus led to the conclusion that not only were the wastes not examined once a week, as required by the rules, but even the monthly examinations, being made with naked lights, were of no use for the purpose of detecting the possible danger of the presence of a small percentage of fire-damp."

It is very curious if they made their daily examinations with safety-lamps, and then, when they made their monthly examinations, which had to be reported, they took a naked light with them. Then, in paragraph 71 of their report, the Commission say:—

"Whilst

“Whilst the Commission consider that Mr. Rogers has been guilty of a grave irregularity in allowing the provisions of Special Rule 10 to remain uncomplied with, and thus permitting so lax and ineffective a series of examinations of this particular waste, still they cannot say that this irregularity actually contributed to the disaster.”

Those words seem to me to be directed to the use of naked lights.

2872. MR. BRUCE SMITH.] Yes. Morrison said that he had made two examinations in his nine weeks as deputy with the naked light.

2873-6. HIS HONOR.] Yes; and the Commission seemed to think Mr. Rogers was responsible for that. It certainly suggests to my mind that they held him responsible.

2877. MR. BRUCE SMITH.] And in paragraph 65 of the Commission's report the same thing occurs.

2878. MR. WADE.] The only evidence was that Morrison examined these places with naked lights.

2879. HIS HONOR.] What Mr. Rogers has been saying has been very material. I have got the question marked on the margin of the report, “Did Mr. Rogers know it?” There are three members of the Commission—two of them men of very long practical knowledge, and one who has had a great deal of experience and acquired great skill in the examination of evidence—and they certainly do, in section 71, seem to think Mr. Rogers responsible for this examination being made with the naked light—these monthly examinations.

2880. WITNESS.] What I did know there, your Honor, was that it was a customary thing for them to do at times to carry a naked light with a safety-lamp, because the naked light gave a little better light than the safety-lamp, the Davy lamp; and when they would be going into the old workings from the rope-road they would leave the naked light there or put it out. And that is what I knew them to do, and that is what I understood Morrison to mean when he said that. He would be justified in carrying a naked light when they were examining along the airway, but I am sure Morrison would never think of going into a waste working or on top of a fall with a naked light, although he said that he examined the waste workings with the naked light; but the man would never think of going on top of a fall and examining with a naked light.

2881. HIS HONOR.] Q. There seems to be no doubt at all about it that he did make these monthly examinations of these waste places with the naked light? A. It is a mistake, I think.

2882. HIS HONOR.] He said so. The Commission find that it was so, from his evidence. You were not present at the time; but, if things like that prevail generally in a mine, it does reflect upon the Manager—of course, it does.

2883. MR. WADE.] There is no question that, in every mine that is worked in this country or in any other country, there are a number of technical breaches of the Act committed which no mortal man could check. There are something like seventy special rules, and the Act itself contains something like the same number of statutory rules, which have to be observed; and it is impossible for the Manager, or even the deputies, to guard against every infringement on the part of the men.

2884. WITNESS.] We were not bound to examine anywhere in the mine with safety-lamps, as far as that goes, because we had not seen gas for some time; but I would not allow that to be done. I said, “Whether you have seen gas or not, you use your safety-lamps.”

2885. MR. WADE.] Q. That is for the morning inspections? A. In the morning inspections, nor old workings, nor anywhere.

2886. Q. With regard to these idle places, you told us that you knew that the deputy, on his night inspection, did not examine them? A. The morning inspection.

2887. Q. The inspection before the men commenced work? A. Yes. I knew that he did not examine idle places, standing bords, or standing headings—only the working faces.

2888. Q. How long has this No. 1 heading been lying idle? A. Two or three months—to the best of my knowledge about two months; perhaps a little more.

2889. Q. You gave some evidence at the Commission about Hay asking to be allowed to go in and look for gas some ten days before the accident? A. Yes; and the reason why he wanted to go, and why he went there, was that on that particular day we were repairing the furnace, and they went to this place as well as other places in the mine in this section, thinking that through the furnace being off, if they would see gas in the mine at any time, that would be the time that they would find it, when the ventilating furnace was off, and not so much ventilation travelling through the mine as when the furnace was on.

2890. HIS HONOR.] Q. Are you speaking of any particular time? A. Yes. This Hay, as we are speaking about, was studying for his first-class certificate; and he wanted to go into the mine and see gas so that he could say something about gas; and he asked me if I would allow him to go into the mine with the underground-manager at some time, and I said “Yes.” He said, “You are going to repair the furnace on Saturday?” and I said “Yes.” He said, “Would not that be a good time to go in?” and I said, “You can go any time you like”; and so he went on this particular day—I think it was on the 17th of July, and they examined these places, and they never found any gas at all.

2891. Q. The Commission deal with that, and they doubt very much whether it was made at all? A. It was made, your Honor.

2892. Q. You were not there, and the Commission heard the witness? A. There was a book lost, and, according to what Hay said, it was a deputies' book; but through Nelson making the report on that day, he reported in the deputies' book; and it was in the deputies' book he has it mentioned that Hay was along with him; and that book could not be found.

2893. HIS HONOR.] That really amounts to nothing. You cannot depute examinations to people who want to get experience of gas; and the most that goes for is that at that time he could not find any gas there.

2894. There was some question before the Commission whether a book was not lost; but I have received a book since the Commission closed which deals with this particular date, and I will bring it up after lunch. It is an entry made by Nelson, I think.

2895. Q. Now, I want to ask a question about damping the ground before shooting;—the first question is in regard to the statement you made at the inquest that you had not been firing shots in the haulage roads for ten months before the disaster? A. Yes.

Witness—W. Rogers, 27 July, 1903.

2896. Q. And you had not watered when you were firing shots;—I want to ask you this, keeping yourself to the main roads, whether it is, as far as you know, a frequent thing or an occasional thing that shots were fired on the main roads or haulage roads? A. Not frequently; very rare.

2897. Q. As far as your knowledge goes, what kind of places were they fired in when they were fired some ten months before the disaster? A. In a damp place. I can show that to-morrow; I believe I can find that.

2898. Q. Do you remember where you were firing on the last occasion when you fired on the haulage roads? A. Yes.

2899. Q. Where? A. On the main tunnel.

2900. Q. Whereabouts? A. Near No. 4 Right and No. 4 Left, banking up a place where we had been through an upthrow fault, and there was water lying there; and we were brushing this and filling the hollow up, so as to lift it out of the water, so as to bank it out of the water.

2901. Q. Brushing means taking the roof down? A. Yes; and letting it lie on the floor.

2902. Q. Filling up the hollow? A. Filling up the hollow.

2903. Q. And that is in what? A. In stone.

2904. Q. The strata above the roof? A. Yes; a kind of freestone.

2905. HIS HONOR.] Q. And was it for that purpose that you had this blasting? A. Yes.

2906. Q. You were breaking the roof down by blasting? A. Yes.

2907. MR. WADE.] Q. How do you describe the working faces of Mount Kembla as to dustiness or dampness? A. I describe them as damp. It is not dusty at all. Just to show you that—like every other colliery—I have got scores and scores of blown-out shots in working-places; nothing ever happened; and that shows you that Mount Kembla is not a dusty place; and I am sure there were no shots fired in Kembla where it was dusty; and had it been a place where it was that—I said, of course, that I had not got appliances, but what I mean was that we had appliances if there had been anywhere that needed to be watered. I had plenty of appliances there that I could make applicable for that.

2908. Q. For what? A. Watering what was required.

2909. Q. Watering what? A. The haulage road or anywhere.

2910. Q. The floor, or the roof, or the sides? A. The floor, and the roof, and the sides—all parts.

2911. Q. You said, as a matter of fact, that you had none because it was never needed;—now, supposing you have a dusty place, which is the more dangerous, the ordinary shot that does its work or a blown-out shot? A. A blown-out shot.

2912. MR. WADE.] Does your Honor understand the difference between a shot that has blown out and one that does its work?

2913. HIS HONOR.] Yes.

2914. MR. WADE.] Q. Now, you have been round these working-places with the Government Inspectors? A. Yes, many a time.

2915. Q. Has any suggestion ever been made at any time that you should water the faces? A. No.

[At 1 p.m. the Inquiry was adjourned until 2 p.m.]

AFTERNOON SITTING.

MR. WILLIAM ROGERS was further examined, as under:—

2916. MR. WADE.] Q. I was about to ask you, in regard to the answer you gave at the Inquest, “I do not know what quantity of dust would be considered dangerous”; I want to know your own views about that;—when would you consider dust dangerous? A. When there would be a lot of dust about the floor and the sides and the roof; but if there is dust on the floor it just depends what the floor is made of to be dangerous, whether it is a coaly floor or a stony floor—a coal floor or a stone floor.

2917. Q. What is the difference? A. I do not think the danger would be so much with a stone floor, because there would not be so much coal-dust.

2918. Q. Well, supposing the dust to be dry, what would you do then—supposing you are shooting, I mean? A. Do you mean on the haulage roads or in the bords.

2918½. Q. The haulage roads? A. I would water it, of course.

2919. Q. In the working faces, supposing it is dusty there and dry? A. I would water that, too.

2920. HIS HONOR.] I understand you to say it would depend on the quantity as well as the condition? A. On the quantity, if it was a stony floor; and if it was a coaly floor I would consider it more dangerous than what I would dust off a stony floor.

2921. Q. Supposing it was a stone floor with a lot of coal-dust on it;—and supposing it was a coal floor with no coal on it, which would be the more dangerous? A. I would consider the coal-dust on the floor.

2922. Q. Just so, it is the quantity of dust—it is not whether it has got coal or stone underneath it? A. Yes, I consider that a little dust on the floor, well, say, a quarter of an inch, I would consider dangerous, if it was all coal-dust.

2923. MR. WADE.] Q. Well, what is the effect if you have coal-dust falling on a stony floor? A. It gets mixed up with the other dust.

2924. Q. With the stone dust? A. Yes.

2925. Q. And is that less liable to be explosive then? A. Yes; I should say it would be.

2926. Q. Now, do you remember getting some samples of dust for Mr. Atkinson, which he sent to England afterwards? A. Yes.

2927. Q. I want to know where you got that from—what part of Mount Kembla? A. We got it from where the coal is tipped—what we call the tippler, or the screen—where the coal is emptied out of the skips to go over some bars to go down in the trucks; and that makes the coal small, and it blows the dust up on a scaffold or staging, and that is where we collected this dust for Mr. Atkinson to send away to England. I remember the time when that was asked for. I spoke to Mr. Atkinson about getting it, and I said, “I do not think we will be able to get that much dust you are speaking about out of the mine,” and he said, “I do not care where you get it from, as long as it is coal-dust,” and that is the reason why we got it from outside, to get it as pure as we possibly could, and to make it better we put it through a sieve which I will be able to show your Honor when you are there, and we collected it from this sieve, and then put it into a canister and sealed it up.

2928.

2928. HIS HONOR.] There is no complaint as to the way the dust was collected for the experiment.

2929. MR. WADE.] It all bears on what I am coming to.

2930. WITNESS.] If it had been collected from the mine, it would not have been all coal-dust—there would have been stone-dust mixed up with it.

2931. MR. WADE.] *Q.* And was this dust you did collect fine or very fine? *A.* Very, very fine. It was what had been blown there by the wind previous to us collecting it, and putting it through the sieve. When the wind is blowing from the east it blows the dust from the coal that is tipped down on to the scaffold, and that is what we collected it for.

2932. HIS HONOR.] I suppose they did not want some dust at all—they wanted some coal that they could have crushed up.

2933. MR. WADE.] No. They want dust of a certain fineness and of a certain age.

2934. MR. BRUCE SMITH.] That does not appear in the evidence.

2935. MR. WADE.] I am taking the evidence of experts.

2936. MR. BRUCE SMITH.] Name them.

2937. MR. WADE.] Mr. Stokes and Mr. Atkinson, an English inspector.

2938. HIS HONOR.] No doubt, sent to England, it might acquire age; and so would coal broken up acquire age on the voyage to England.

2939. MR. WADE.] No. It is sealed up. I will be able to show these passages in Mr. Atkinson's own evidence before the Royal Commission. I asked him himself about it, and about the statement his own brother gives in his book.

2940. *Q.* When you got a letter or a circular from Mr. Atkinson, speaking about these experiments, did you have any conversation with Dr. Robertson after that? *A.* Yes, I did.

2941. MR. WADE.] I propose to ask what it was, your Honor.

2942. WITNESS.] I told Dr. Robertson, when he came up to Kembla, what we had done, and afterwards what I had got from Mr. Atkinson, and he knew where the dust was collected from.

2943. MR. BRUCE SMITH.] *Q.* Who did? *A.* Dr. Robertson. Well, he says, "That was not coal-dust out of the mine," and I said "No, it was not." So we passed it off like that without talking much more about it, as we did not get from out of the mine. It was got in the way I explained to you before.

2944. MR. WADE.] *Q.* Did you have any conversation afterwards, after you got the letter? *A.* Yes. Part of this was before we got the letter. That was at two different times. The first of all was letting him know what Mr. Atkinson wanted, and after I got a letter about the results of what had been done in London, we thought that it was not so important, being as it had not come out of the mine, being as we had got it from where we did get it, your Honor, about the tippler.

2945. *Q.* With regard to these different explosions we have heard of, the Bulli explosion and Dudley—were you in this country when the Bulli explosion took place? *A.* No, sir; I was in Scotland at the time.

2946. *Q.* When you came to the South did you have any talk or discussion about it then? *A.* Yes; speaking to men that had been working there, and men in the neighbourhood. We have talked about it lots of times, many a time.

2947. *Q.* Do you know what the cause was, or how it happened? *A.* Yes; from what I heard the men say it was a blown-own shot.

2948. *Q.* Igniting what? *A.* Igniting a little fire-damp and coal-dust, they thought. I was told by men as was working there. We have got some of them working at Kembla now.

2949. *Q.* With regard to the Dudley explosion—that was up in another part of New South Wales—do you know what that was supposed to be caused by? *A.* No, I could not say that I do.

2950. *Q.* But do you know? *A.* No, I do not know. I do not know whether it was ever made out what it was.

2951. *Q.* I do not want to know what was definitely proved;—what was supposed to be the cause, I will put it that way? *A.* I have heard some say that they thought it was a blown-out shot.

2952. *Q.* A blown-out shot doing what? *A.* A blown-out shot disturbing the coal-dust, igniting the coal-dust.

2953. *Q.* I believe Dr. Robertson is your viewer, is he not—what they call a viewer? *A.* Yes, that is what I call him.

2954. *Q.* I suppose he comes down to the mine from time to time? *A.* He does.

2955. I want to know whether you had any talk with him about different matters in the mine's management? *A.* Yes, I had.

2956. *Q.* And have you seen other mine-managers, and discussed these matters with them? *A.* Yes.

2957. *Q.* Who? *A.* Mr. Jones, Mr. Sellers, Mr. Johnstone, Mr. Robertson,—all of them; when we met we always talked about mine matters, or anything I intended doing or they were doing. We are always asking what one another are doing and what is going on.

2958. MR. BRUCE SMITH.] I do not know whether your Honor considers these conversations material.

2959. HIS HONOR.] It is not at all unusual for people in the same business to talk shop. I will assume that he did.

2960. MR. WADE.] The suggestion is that because he does not read all kinds of matter, that therefore he has not an up-to-date knowledge of the profession. I want to show that he has obtained the information without reading, although that is important.

2961. HIS HONOR.] I will assume that he did talk with others in the profession.

2962. WITNESS.] During the time of the affair at Corrimal I visited there. I visited South Bulli myself several times to see how things were going on, and the Managers of the South Coast Mines visit Kembla to see different things, the haulage and the ventilation.

2963. MR. WADE.] With regard to this question of double doors—I think you have told us that up to the time of the disaster you always had single doors in the main roads at Kembla? *A.* Yes.

2964. *Q.* Did you ever have any fault found with you by the Inspectors about that? *A.* No, not before the disaster.

2965. *Q.* Tell us when you first heard this mentioned? *A.* Some time after the disaster. I could not tell you exactly. I could not give you the day and dates.

2966. *Q.* By whom? *A.* By the Inspectors, by Mr. Atkinson and Mr. Watson.

2967.

Witness—W. Rogers, 27 July, 1903.

2967. Q. What parts of the mine was it that they referred to that wanted these double doors?
A. Some places in what we call No. 6 Right and No. 5 Right (meaning the 5th Right).

2968. Will you show us on this plan where it was in the 5th Right?

2969. MR. BRUCE SMITH.] Your Honor, there is correspondence about this. I will ask for the correspondence to be produced.

2970. MR. WADE.] It has taken the form of action only.

2971. MR. BRUCE SMITH.] He is trying to communicate what he was told to do, and that was by letter; and if it was by letter I object to the verbal evidence of it.

2972. MR. WADE.] I have passed away from that.

2973. Q. I want to know where were the places you mentioned?

2974. MR. BRUCE SMITH.] I object. My friend has got the witness to say that he was asked to put them in the 5th Right and No. 6 Right. I want to know whether he was asked by letter or not?

2975. WITNESS.] I was asked by letter.

2976. HIS HONOR.] I suppose he first spoke and then wrote a letter.

2977. MR. WADE.] Yes.

2978. MR. BRUCE SMITH.] I press this, your Honor. I have not got the letter, but I have got the rule which is made generally, and applies generally throughout the mine with regard to certain particular airways.

2979. HIS HONOR.] Is this a new rule?

2980. MR. BRUCE SMITH.] Yes.

2981. HIS HONOR.] Is it a recommendation of the Commission?

2982. MR. BRUCE SMITH.] No. It is a rule framed by the Department and now adopted as the result of the Chief Inspector's requirements. There is the rule.

2983. HIS HONOR.] I am quite prepared to take notice of the rule; but what bearing has it?

2984. MR. BRUCE SMITH.] My friend asked Mr. Rogers whether he had not been requested to put these in certain places.

2985. HIS HONOR.] But Mr. Wade has passed away from that, and he is going to ask what was done. He has merely referred to the fact of some request being made, and then he is going to ask what was actually done.

2986. MR. BRUCE SMITH.] Oh, very well.

2987. MR. WADE.] Q. Now, one door was in the 5th Right? A. There [*pointing out on the plan the position of the single door in the 5th Right rope road between the No. 1 Rope and the No. 1 Travelling road*]. We have taken this door away, and put double doors in that part, and I had to drive from here right into this bord, because I could not do it without [*explaining his evidence on the plan*].

2988. HIS HONOR.] Q. In the 5th Right itself you have two doors? A. I have two in now.

2989. MR. WADE.] Q. Were you able to get in two doors as things were when you were first spoken to about it? A. No.

2990. Q. What had you to do? A. I had to drive a few yards from this point in to here [*indicating on the plan*].

2991. HIS HONOR.] Q. From the corner of the waste to what? A. Into the Back Heading, the No. 1 Travelling Road.

2992. MR. WADE.] Q. How long did that take, some time? A. Yes; the mine was not working much at the time, and it took a little time to drive that 50 yards.

2993. Q. Why did you have to drive that 50 yards? A. For the sake of getting room for the two doors. There was no room there for the two doors, because the pillars were only 16 yards thick, and this part of the pillar is over 20 yards thick, so there was room there for the two doors, so that when the skips would be between the two doors they were shut, or when one door was open the other would be shut.

2994. HIS HONOR.] Q. How far apart must they be to give room—about 50 yards? A. About that.

2995. MR. WADE.] Q. How did the air go after you got that angular piece driven there? A. [*Pointing to the plan*]. There used to be a door as shown on the plan. When it became necessary to put in double doors they could not be put there because there was not room; so the doors were put here. That, of course, put two doors in the airway, so an opening was cut between this point and that so as to provide a fresh airway.

2996. Q. Was any time wasted improperly in doing that work? A. None whatever. I got the two best men in the mine to go on with that work so as to get it done quickly.

2997. HIS HONOR.] But that is since the accident.

2998. MR. WADE.] Q. It is a new idea; it is a new idea of everybody's;—now, you see, the reason urged is that this door which you had between the back and front headings of the 5th Right might be open and interfere with the ventilation? A. That is what it means.

2999. Q. Take the extreme case of that door being actually open? A. I explained that at the time.

3000. HIS HONOR.] Q. Explain it now? A. It would not matter supposing it was actually open.

3001. HIS HONOR.] That does not matter—this is a rule that there shall be double doors.

3002. MR. WADE.] It is a rule now; but it was not then.

3003. HIS HONOR.] I mean to say that it is a rule of mine management that you should have double doors instead of single doors in any case of that kind; and the Commission speak very strongly about it. In paragraph 90 they say:—

“With this system, no short-circuiting can begin unless both doors are open at once; and the Commission are strongly of opinion that it is time that there should be legal compulsion to adopt it, perhaps the reason for its not having, long before this, been made the subject of legislation is that it was assumed that, as a matter of course, every mine of any extent would adopt it. But experience, unfortunately shows that this is not the case. The Commission regret to have to call attention to the fact that, in Mount Kembla Mine itself, in this respect the management failed to a very noticeable extent.”

So what they are speaking of is the fact that it was not adopted although there was no legal compulsion to adopt it.

3004. MR. WADE.] Q. I am going to show there was no occasion for it;—take the case, Mr. Rogers, of the door being actually open? A. Yes.

3005.

3005. Q. Where would the air go to? A. It would go in here. (Into the No. 1 main heading and round with the intake air coming up that heading on to the faces to the west.) It would join the intake. I was not bound to take it that way, because it had not passed the number of men, that is seventy men; so that, even coming this way and passing through these places there was not the number of men there that was required by the Act; and I could take it that way if I liked. It was not very important. Supposing the skips came there and stood in this door, that would have blocked the discharge, but not as tight as the door would be; and that would make some of the air go to the return, and some would go to the intake. It would interfere very little with stopping the air, or taking it off there. A load of skips blocks the opening as well as the door did.

3006. HIS HONOR.] Q. These faces (to the left of No. 1) get their intake from the main tunnel adit? A. Yes.

3007. Q. This is the shortest way to the furnace (Down the No. 1 travelling road to the furnace by way of the 2nd Left travelling road and other roads)? A. Yes, but the other way is the easiest, because there are three or four roads to the furnace this way.

3008. MR. BRUCE SMITH.] I do not know of any complaint that this comes under.

3009. MR. WADE.] But my friend brought it up. Mr. Atkinson said he had no complaint against Mr. Rogers with the exception of this double doors matter.

3010. HIS HONOR.] In view of the passage I read, have you anything to complain of, Mr. Bruce Smith?

3011. MR. BRUCE SMITH.] No.

3012. MR. WADE.] Mr. Atkinson made the complaint that these doors were not adopted within a reasonable time within the accident. I only want to bring this out because Mr. Bruce Smith suggested that there had been an unreasonable delay in this matter.

3013. HIS HONOR.] I saw that passage in the Commission's report, and I then referred to the grounds of complaint in this Inquiry, and I saw no grounds dealing with that.

3014. MR. BRUCE SMITH.] Mr. Atkinson tells me that what he said was in answer to a question by Mr. Wade as to whether he had any complaint since the accident.

3015. HIS HONOR.] It really does not matter to me whether it is in the form of a charge or not, if it is a question I have to consider. Is it a question I have to consider?

3016. MR. BRUCE SMITH.] I do not think so.

3017. HIS HONOR.] Then we need not take up any time about it. The fact that the Commission have referred to it has nothing to do with me.

3018. MR. WADE.] Does your Honor say it is a charge or not?

3019. HIS HONOR.] No. It is shut out of the case; we have nothing more to do with it. The double doors are not in the case at all.

3020. MR. WADE.] Q. I want to ask you about this: the last six weeks before the disaster, we have been told that you were at Wollongong most days of the week attending the Arbitration Court? A. Yes.

3021. Q. What time did you have to leave home in the morning? A. About half-past 7 or 8.

3022. Q. At what time did you get home in the evening? A. About 7 or 8 in the evening.

3023. Q. And what time does the mine knock off work in the evening? A. Five o'clock.

3024. Did you do anything—do what you could—in the morning before you started for Wollongong? A. I never left in the morning without getting to know through the telephone what was going on at the mine, and what the deputies' reports were.

3025. Q. Did you see the deputies themselves in the morning? A. Not always; sometimes I did.

3026. Q. How far is your house from the mine? A. About three-quarters of a mile, not quite that, but between a half and three quarters.

3027. *Cross examination by* MR. BRUCE SMITH.] Q. I understand you to say that these openings on to the 4th Right had been open four or five years? A. On the 5th Right.

3028. Q. Yes; the north part of the 35-acre goaf? A. Yes; I believe they had been open that long.

3029. Q. And you actually used them to take the coal out? A. Yes.

3030. Q. And they had not been blocked up in any way? A. No.

3031. Q. How many were there? A. I would not be certain—yes, there were some of them blocked up.

3032. Q. Tell me how many were not? A. I could not say.

3033. Q. Four, five, six, or a dozen? A. There might be five or six.

3034. Q. And they were open right down to the floor? A. No.

3035. Q. How did the trucks come out of the road? A. After the coal was all taken out we chucked some rubbish down in the hole.

3036. Q. But you did not build them up? A. Some of them.

3037. Q. You told His Honor that it was not reasonably practical to take the air to the men at the pillars without letting it go over the waste.

3038. MR. WADE.] That was not quite the question. The answer was, "Without also turning some air over the waste."

3039. HIS HONOR.] Well, it would not matter whether it meant some of it or all of it.

3040. MR. BRUCE SMITH.] Q. Did not you say it was not reasonably practicable to bring ventilation down to the men at the pillars at the 4th Right without carrying it over part of the goaf, or all of the goaf? A. I say it was not reasonably practicable to block that place up without leaving some air to go through that place to keep it clean.

3041. Q. Did not you say this: that it was not reasonably practicable to take the air to the men at the pillars without letting it go over the goaf; I do not say all of it? A. Some of it; yes.

3042. Q. You saw the plan that was put in evidence after Morrison had given his evidence, showing how the air was supplied to the men at the pillars, with little arrows? A. Yes.

3043. Q. And you know that was put in to show how they were supplied? A. Yes.

3044. Q. Was any plan ever presented to the Commission showing any arrows carrying the air over the goaf? A. I could not say for certain.

3045. Q. You saw that plan when it was put in? A. Yes.

3046.

Witness—W. Rogers, 27 July, 1903.

3046. Q. I will show it to you again. [*Exhibit No. 74 was shown to the witness.*] That shows the intake coming down the travelling road and going into the 4th Right, and round here, through the middle, and down to the 4th Right again? A. Yes.

3047. Q. That was put in by Morrison to show the Commission how these men were supplied with air, was it not? A. That is Morrison's name there. [*Referring to the signature on the plan.*]

3048. Q. Was anything ever put before the Commission showing air going over this northern part; or did you ever give evidence that air was brought from the 5th Right over the goaf to those men? A. I do not know whether I did or not; perhaps I did not.

3049. Q. Have you not just told His Honor that it was not reasonably practicable to ventilate that part of the mine without bringing the air over there;—have you not said that;—are not you saying it now? A. No, I did not say that.

3050. Q. I will repeat your words, "That it was not practicable to carry air to the men working in the pillars without letting it go over the whole or part of the goaf?" A. What I said was that it was not reasonably practicable to sweep the places up without leaving your air to come through there to keep the place clear while they were working there.

3051. Q. Did not you tell His Honor this morning that the air was carried off across the goaf from the 5th Right to give air to the men at the pillars? A. I did not understand it like that.

3052. Q. Did you not say this morning, speaking of those openings, that the coal went out there, and then they were used to let the air into the 35-acre goaf? A. I said that the openings—*[Interrupted]*.

3053. Q. When I ask you whether you said a certain thing, you begin to tell me something else you said;—I want to know if you said that.

3054. HIS HONOR.] You see the difficulty it involves. Mr. Rogers is not a good witness, but there is a difficulty in getting him to repeat something he has already said.

3055. MR. BRUCE SMITH.] I want to bring it to his present recollection, to base something else upon.

3056. Q. I want you to tell His Honor what there was to prevent that intake, which ran along the north of the goaf and down the No. 1 and into the 4th Right pillars, from being kept pure if you had wanted to do it. You understand that on your plan the airway is shown blue along the top, that is the northern end of the goaf, and down the No. 1 to the pillars? A. Yes.

3057. Q. On that plan of Morrison's? A. Yes.

3058. Q. What was there to prevent that from being kept free from the possibility of anything getting on to it from the goaf.

3059. MR. WADE.] May I ask at what point?

3060. MR. BRUCE SMITH.] At any point.

3061. Q. What was to prevent you from shutting up those places on the northern side to start with? A. Because I do not think it would be practicable to block this 35-acre goaf while the men were working there.

3062. Q. Supposing you had done it, what would have happened? A. I do not know.

3063. Q. Then can you tell His Honor anything that prevented you from shutting up those openings? A. I do not see that it was practicable to do it.

3064. Q. What would have prevented you? A. If I had blocked the air from going into this place, with the men working inside—taking out those pillars—we had seen black-damp there, and I know that by blocking the air from going through the old workings it would not help the black-damp, but make it worse.

3065. Q. Then you deliberately let the air go through the old workings to let it go to the men? A. Some of it.

3066. Q. And you know that in passing to the men it passed over part of the old workings? A. Yes, part of the old workings.

3067. HIS HONOR.] Q. You say you had seen a little black-damp there? A. Yes, I had seen a little black-damp there.

3068. Q. MR. BRUCE SMITH.] Q. Then you cannot mention any other reason that would prevent you from blocking up those openings? A. No.

3069. Q. Because you wanted the air to go through there to the men? A. Not to the men, because I had air going the other way to the men.

3070. HIS HONOR.] It comes shortly to this; he did it to ventilate that portion of the goaf.

3071. MR. BRUCE SMITH.] He says to go to the men too.

3072. HIS HONOR.] Well, the air would, as a matter of fact, go to the men; and of course that is a thing which he, as Manager would know, and would bear in mind; but he says he did not do it for that purpose. I do not know whether there is any difference between doing it for that purpose, and doing it. As long as he does it it does not matter, whether it is his purpose or not; he knows he is doing it. But the thing that recommended the course is that it ventilated the open part of the old workings.

3073. MR. BRUCE SMITH.] Q. Now, with regard to that dust—you went outside the mine and got it. Did you ever tell Mr. Atkinson that that was not a fair sample of Kembla dust? A. No.

3074. Q. Did you ever tell him that if the dust had been gathered off the floor, there would have been more stone with it? A. No, I did not.

3075. Q. You did not tell him anything about it? A. No, I did not.

3076. Q. Did you ever tell him that Dr. Robertson had said that it really was not Kembla coal-dust at all? A. No, I do not think I did.

3077. HIS HONOR.] I am inclined to think that the course adopted by Mr. Rogers was a very proper one. The experimenter wanted to find out—*[Interrupted]*

3078. MR. BRUCE SMITH.] But now he says it is not a fair sample.

3079. HIS HONOR.] It was merely touched upon; but it is quite evident that you might have pure coal-dust in the mine.

3080. MR. BRUCE SMITH.] Q. When you received that letter from Mr. Atkinson, giving you the result of the Woolwich experiments, you did not in any way say that it unfairly represented the character of the dust in your mine, did you? A. No, I did not say anything against it.

3081. Q. You did not communicate with him in any way about it? A. I got it. I think it was merely to let me see the results of it.

3082. *Q.* I ask you did you communicate with Mr. Atkinson after you got it at all? I do not know that I did.

3083. *Q.* I would like to ask you one question: is there any of your evidence that you gave before the Inquest or before the Commission that you want to correct before His Honor now—any mis-statements that you made in cross-examination; you say you were very much worried and heckled and so forth. Is there anything you said which you now want to say was a mis-statement? *A.* Well, at the time when that was asked me by Mr. Lysaght, I told him if he had not asked me in these scientific ways, if he had asked me more in the mine ways about gases, I would have been better able to explain them to him.

3084. *Q.* Then, apart from any scientific questions put to you, you adhere to what you said? *A.* Yes.

3085. HIS HONOR.] *Q.* Have you read over the evidence that you gave before the Coroner's Inquest? *A.* Yes, I have, your Honor

3086. Have you read it over with a view to considering whether you wish to correct any of it before me? I read it this way: saying to myself that I ought to have answered these questions better than what I did when they were asked me about the gases. I do not know now exactly what they were.

3087. *Q.* Would you like it read over to you, so that you would be able to say, with reference to any part of it, that you consider it is incorrect? *A.* Yes, your Honor.

3088. HIS HONOR.] Well, we will do that.

3089. MR. BRUCE SMITH.] I only asked that because the general statement that he was led to say things that he did not understand is very unsatisfactory.

3090. HIS HONOR.] Yes; but I can see that Mr. Rogers is not well endowed as a witness; and a perfectly fair question, such as you have put, requires a man to remember all the parts of the evidence, to call them up before his mind, to consider whether there is any part that he wants to correct; but he probably cannot do that, and it is fair that it should be read out to him. Now, I will read out your evidence given at the Inquest, and if there is any part of it you want to correct, you may do it.

3091. MR. WADE.] Perhaps, your Honor, I might suggest, as I have a witness waiting, it will save time if Mr. Rogers reads this by himself.

3092. HIS HONOR.] As a matter of fact, I thought of this before; but I assumed that this was a matter that Mr. Wade would look after.

3093. MR. BRUCE SMITH.] I thought he would. I want to be able to use his evidence.

3094. HIS HONOR.] We had better have the other witness up now. Mr. Rogers, will you, while the other witness is here, read it over, and then you will be able to say whether you wish to alter your answers to the questions? *A.* Yes, your Honor.

[The Witness retired.]

DR. J. R. M. ROBERTSON was sworn and examined, as under:—

3095. *Examination-in-chief* by MR. WADE.] *Q.* What is your name? *A.* James Robert Millar Robertson.

3096. *Q.* And you are by profession? *A.* Mining engineer.

3097. *Q.* And I believe you act as viewer for Mount Kembla? *A.* Yes.

3098. *Q.* How many years have you been connected with Mount Kembla? *A.* Seventeen or eighteen—eighteen, I think.

3099. *Q.* And are you connected with other collieries in New South Wales? *A.* Yes.

3100. *Q.* Which are they? *A.* South Bulli, Keira, Waratah, and West Wallsend.

3101. *Q.* Well, Keira and South Bulli are both in the Illawarra district? *A.* Yes.

3102. *Q.* The others are in the north? *A.* Yes.

3103. *Q.* In what position were you connected with them—as viewer? *A.* Yes. In the north I have a power of attorney for conducting all the business.

3104. *Q.* Does that take you underground to examine the workings, and the working conditions, and so on? *A.* Oh, not necessarily; but I do so.

3105. *Q.* How long have you known Mr. Rogers, at Mount Kembla? *A.* I have known Mr. Rogers since 1875—twenty-eight years, about this time.

3106. *Q.* Did you have any knowledge of his practical ability in those days? *A.* Oh, yes, frequently.

3107. *Q.* Where was that? *A.* In North Wales, and in the large works of the Carron Company, in Scotland.

3108. *Q.* Were you able to form an opinion as to his practical ability, or his carefulness, or any of those things? *A.* Oh, yes; I always had a very high opinion of Mr. Rogers; and his superiors, both in Wales and Scotland, had the same opinion.

3109. *Q.* What do you say as to his practical ability to manage a mine? *A.* There is no better in New South Wales. I am confident about that.

3110. *Q.* Were there any difficulties about your haulage appliances for getting your coal down to the jetty at Kembla? *A.* Oh, very great difficulties—almost unheard-of difficulties in the early days.

3111. *Q.* How is the output; has it been progressing or stationary? *A.* It has been more than quadrupled.

3112. *Q.* During what period? *A.* During fifteen years. The capabilities of the mine, at all events, have been quadrupled.

3113. HIS HONOR.] *Q.* I may take it, then, so far as haulage questions are concerned, he has shown himself quite able to grapple with them? *Q.* All questions connected with mining; I make no qualifications.

3114. HIS HONOR.] I thought Mr. Wade was only dealing with hauling at present.

3115. MR. WADE.] *Q.* Yes. With regard to the actual opening up of the mine, opening up the coal-faces, what have you to say? *A.* Mr. Rogers is a most methodical and systematic man. We have had great difficulty with the Managers that the Company appointed in the early days, and could not knock system or order into them; but it was a very great relief when Mr. Rogers came down to the south.

3116. *Q.* You yourself know what the practical work of mining is? *A.* Yes.

3117. *Q.* You have been through all the phases? *A.* Yes.

3118. *Q.* What do you say as to the general system of the mine, so far as the safety of the men is concerned? *A.* In no mine that I have known is the safety of the men better conserved. The unexpected happened

Witness—Dr. J. R. M. Robertson, 27 July, 1903.

happened, no doubt. It could not have been foreseen. I think everybody in New South Wales that intimately knew the collieries always had the belief that Mount Kembla was the safest mine in the Southern Hemisphere. Mr. Atkinson was of that opinion himself.

3119. MR. BRUCE SMITH.] I object to other people's opinions. We do not want other people's opinions through Dr. Robertson.

3120. HIS HONOR.] I think it was generally accepted that Kembla was looked upon as a safe mine. Of course, *prima facie*, that is against the management for allowing such an accident to happen; of course, I say "*prima facie*."

3121. MR. WADE.] Q. From your knowledge of coal-mining as a practical man, Dr. Robertson, I want to know what you say in regard to that proposition, that, because it is presumed to be safe, the happening of an accident is against the management? A. Everything was thought of that man's mind could think of to conduce to the safety of the men; nothing was spared. If anything was suggested for the safety of the men, it was immediately done.

3122. HIS HONOR.] You need not go off on to what I said. The whole question here is as to the known facts. I have nothing to do with the cause of the accident. It is simply as to whether Mr. Rogers did or did not show unfitness for the position of Manager. That is the thing.

3123. MR. WADE.] Q. I suppose you go to Mount Kembla frequently? A. Oh, yes.

3124. Q. Have you been through the mine in company with Mr. Rogers? A. Hundreds of times.

3125. Q. Have you been with him when you were carrying a safety-lamp? A. Yes.

3126. Q. Frequently? A. Yes, I think so. Mr. Rogers at first generally did carry a safety-lamp.

3127. Q. Have you tested yourself? A. I always did it, simply because we might be going into places that had been fenced off. We always went in to examine places with a safety-lamp; in fact I would not go in any other way. I would not go into a place that was fenced off in any mine without a safety-lamp.

3128. HIS HONOR.] Q. For what reason;—because they are not fenced, or what? A. No. Men leave a place on account of a blown-out shot, for instance; or places that have been stopped—no men been in for some time—they would put a danger-fence up, and, of course, that was a notice to everyone not to enter.

3129. Q. Why? I wanted to know really for my own information, not at all as cross-examining question, why it is that you would not go into any part of a mine that was fenced off, or not being worked, without a safety-lamp? A. This was a mine in which gas had not been seen. It was a mine that it was not considered necessary to work with safety-lamps—it was worked with open lamps—but, of course, as a matter of pure precaution, when a place is disused, not working, and fenced off, it is simply upon principle that I would not enter without it being examined by the safety-lamp. I have no reason at all. It is just my way. I would not do it.

3130. Q. It is not your way to do things without a reason? A. Not as a rule.

3131. Q. In that case you did it? A. I did it.

3132. Q. Although there was no reason for it. I am quite sure you had a good reason for it. I am sure you would not do such a senseless thing as to do that without a reason. I have no doubt myself that it is a very wise and proper thing to do; but I wanted to have information as to your reason why it was a proper thing to do? A. I am sorry if I have not made it quite clear.

3133. Q. You said you would not go into any place that is fenced off without a safety-lamp? A. Without someone going in first and examining it with a safety-lamp.

3134. Q. That is the same thing. When you said that, it seemed to me to be a very sensible and wise thing; and I can see reasons why it is sensible and wise; and you told me there was no reason whatever for it? A. As a rule, in these places, where no one is working, anything may have happened—the roof may have fallen, or gas may have exuded and collected in the face—and it was only wise to make perfectly sure that none of these sources of danger existed.

3135. HIS HONOR.] I think those are very wise reasons. They are what suggested themselves to me; and I only wanted to know what was in your mind. That is a different thing from having no reasons at all.

3136. MR. WADE.] Q. Have you examined for gas yourself at Kembla? A. Yes, I have examined for gas. I have been present when Mr. Rogers was examining for gas.

3137. A. You have also examined personally? A. Yes, occasionally.

3138. Q. Have you ever found any indication of gas with the safety-lamp? A. No, personally never; and I am continually asking the firemen as to that.

3139. Q. Have you been through yourself with the Government Inspectors? A. Yes, I have been through the mine on several occasions when the Government Inspectors were there.

3140. Q. With regard to this suggestion that the working-faces should be watered before firing shots in Kembla, I want to know what your view is with regard to that matter, from your knowledge of the mine before the disaster, I mean? A. There was no necessity whatever. There was no dust.

3141. Q. How do you describe Kembla, generally speaking? A. A damp mine—essentially a damp mine.

3142. Q. You know that statement of Professor Galloway's, that an amount of 7 ounces of dust per linear foot in a sectional area of 80 feet may be dangerous? A. I know Mr. Galloway intimately—I was at school with Mr. Galloway. I do not care that (a snap of the fingers) for what Mr. Galloway says. It is impossible for anybody to tell 7 ounces a foot on the road. I know Mr. Galloway perfectly well, and all the girls.

3143. HIS HONOR.] Q. Was not he a smart boy at school? A. Oh, yes, but he was a funny boy.

3144. MR. WADE.] Q. That is reducing it to 1-288th of an inch in thickness? A. Yes.

3145. HIS HONOR.] No man is a hero to his own schoolfellow. Dr. Robertson, unfortunately, knew him at school.

3146. MR. BRUCE SMITH.] He probably knew Dr. Robertson at school, too.

3147. HIS HONOR.] But we have not got Mr. Galloway's opinion of Dr. Robertson.

3148. WITNESS.] He was flying in the air. He could never manage a mine to make it pay, sir. There are a good many of his sort.

3149. MR. WADE.] Q. Do you know under what conditions those experiments have been made with regard to exploding coal-dust? A. There have been so many experiments that one gets rather mixed up with them; but they are all under rather artificial conditions—under conditions that you would not expect to meet with in ordinary mining.

3150. *Q.* In what respect are they different? *A.* In this way, that the dust is artificially mixed with the air in a very small compass, and then the dust is specially prepared, as a rule. In a face, as a general rule in all the coal-seams here, the dust is rather gritty and coarse; there there is not any dust at all, and it does not hang about the roof or the sides.

3151. *Q.* And in these experiments? *A.* These experiments are really entirely artificial. They are under conditions that you could not expect to occur in ordinary mining.

3152. *Q.* In what form is the dust in these artificial experiments? *A.* Very finely triturated dust.

3153. HIS HONOR.] *Q.* I suppose the object of the experiments is to ascertain something or other with regard to the thing experimented upon which will be useful in the practical work of mining? *A.* No doubt.

3154. *Q.* Although the experiment is made under special conditions it is for a practical purpose? *A.* Out here, of course, the experiments are conducted so far away, and we have no opportunity of seeing them conducted, and sometimes we do not get a notice of them for a very long time, and they filter through left-handed channels, so that really you do not take the same interest in them as if you were on the spot. It is only when the scientific magazines come out that a few of us see about these experiments at all, and I do not know that the majority of the managers in New South Wales would have had any opportunity at all of ascertaining the experiments on coal-dust had I not prevailed on a very large number of them to allow me to propose them as members of some of the institutions at Home from which they would get the "Transactions"—but for that a very large number of them personally would never have heard of it.

3155. MR. WADE.] *Q.* I want to ask about the question of gas again. Let me put this case: supposing you were managing Mount Kembla itself, and supposing you actually became aware on different occasions that gas had been found, I want to know what your view would be as to the necessity or not for introducing safety-lamps in consequence of that knowledge? *A.* I think that would be a very good reason for considering the question of safety-lamps, provided that the gas was persistent, and in sufficient quantity, and could not be swept away with the ordinary ventilation. If it could not be swept away with the ordinary ventilation I think it would be quite a good reason for considering it.

3156. *Q.* I want to know what your view would be as to its necessity or not if there is just an occasional manifestation of gas? *A.* And the ventilation perfect? It would depend altogether on circumstances. It is hardly a question you could answer right off. It would depend altogether on the circumstances surrounding the case. But if it was only occasional, and in an insignificant quantity, then, of course, that would qualify it.

3157. *Q.* Would the ventilation be an important matter in considering it? *A.* Yes.

3158. *Q.* What is your view of the ventilation at Mount Kembla? *A.* That it is a very well ventilated mine; excellently ventilated mine.

3159. *Q.* Has it any advantage over other mines in the way of ventilation? *A.* No; except that it was an excellently ventilated mine.

3160. HIS HONOR.] I think that is common ground, Mr. Wade, that it is an excellently well ventilated mine.

3161. MR. BRUCE SMITH.] There was some evidence that occasionally in a westerly wind, the ventilation was reversed; but there was no weight of evidence.

3162. HIS HONOR.] There was no point made at all of that, and I have always understood that it was very well ventilated. The report refers to it as efficiently ventilated, and the quantity of air taken through, compared with the number of men working, goes to show that; and then, undoubtedly, the fact that if gas did occasionally show itself to the men, take it all round there were not large quantities, shows that it kept the gas down and supplied the men with good air.

3163. WITNESS.] I never heard of any men having found gas.

3164. HIS HONOR.] I am speaking, of course, of the evidence.

3165. WITNESS.] Yes. I have not read the evidence, your Honor.

3166. MR. WADE.] However, it never came to your knowledge, either directly or indirectly, that the workmen had found gas in Mount Kembla? *A.* No. I had never heard of it. They never communicated to me of such a thing—and I get a good many anonymous letters.

3167. *Q.* You know the 35-acre waste? *A.* Yes.

3168. *Q.* You see the cross-cut heading intake? *A.* Yes.

3169. *Q.* And those No. 1 headings, on the western side of the 35-acre waste? *A.* Yes.

3170. *Q.* Complaint has been made that there are some openings on the north side of this goaf? *A.* Yes.

3171. *Q.* And you know these openings at the 4th Right and 3rd Right? *A.* Yes.

3172. *Q.* You know, of course, that the intake from the cross-cut goes from east to west past the north end of that goaf? *A.* Yes, I remember that.

3173. *Q.* Do you see any objection, if the waste is open on the north side, and there is an opening to the return at the 4th Right, to allow the intake to go on the north side? *A.* There can be no objection to that at all. That is what it ought to be, because it would emerge from that into the return. That is exactly what ought to be.

3174. HIS HONOR.] *Q.* Well, of course, all air emerges into the return ultimately? *A.* But, as a matter of fact, that was the only way that the last of the pillars could be ventilated. It was the only possible way that the last of the pillars could be ventilated.

3175. *Q.* As a matter of fact, they were not ventilated that way, because some of the air came in here at the 4th Right, and plans have been put in to show it? *A.* There is no rule for ventilating the last of the pillars of a section, and there was no gas ever discovered by any man born among these pillars. No man born ever discovered gas in these goafs.

3176. *Q.* I suppose you mean explosive, dangerous gas? *A.* Yes. Of course, there was black-damp there.

3177. MR. WADE.] *Q.* When they were working the last of those pillars at the 4th Right, there would be waste all round them where the roof had lately fallen? *A.* Yes, and vacancies.

3178. *Q.* I want to know what your opinion is with regard to the question of air passing over that fallen roof;—would it be more desirable to have it pass over, or that the openings should be blocked up? *A.* Personally, I should like to see it passing over. I should be very much easier in my mind if it passed over it and kept it sweet.

3179. HIS HONOR.] *Q.* I can see, of course, great recommendations for that; but, at the same time, if a place like that is effectually sealed up, can there be any practical danger from the fact that gas is inside? *A.* I do not think that in Kembla there could be any danger.

Witness—Dr. J. R. M. Robertson, 27 July, 1903.

3180. Q. But suppose an accumulation of gas did take place inside, in a place hermetically sealed up with good solid sealing, is there any practical danger at all? A. Well, that is just a matter where there is a very great disparity of opinion; and it is one of those cases where possibly a layman would have just as much right to have an opinion as one well versed in mining. Really there is a great deal to be said in favour of it both ways.

3181. MR. WADE.] Q. Does your Honor mean sealing up after the work has been finished?

3182. HIS HONOR.] I am taking a place where a man would never want to go and work any more.

3183. WITNESS.] Now, of course, they are sealed up, and I would not like to say it is the best plan; but, as there has been a wish expressed by the Department, these stoppings have been put in, but I do not know whether it is the best plan. I think in Mount Kembla it would be all right, but, as a matter of general mining principle, I have great doubts of it.

3184. HIS HONOR.] Q. You think it is better to ventilate everything? A. I do, when it can be done; and, of course, we are able to do that with the great exposure of outcrops at Mount Kembla; but no gas has ever been seen among any pillars or old workings at Mount Kembla, never.

3185. MR. WADE.] Q. But whilst it is working, or whilst you were taking out the last dozen pillars at the 4th Right, would it be practicable to seal off all the openings? A. No, it would be distinctly bad practice.

3186. Q. And would it be better to allow the air to go through the north side? A. Yes, to filter through. There is no rule for ventilating the last section of the pillars; and, in our case, the pillars are always ventilated by the air filtering along the faces.

3187. Q. With all respect to you in that, I have not been referred to any rule which speaks in so many words of the last few men in a place where pillars are worked out; but there are general rules which would refer to those men as well as to other men;—the general rules are not to be held to exclude those men? A. I think, your Honor, the rules have to be taken in the spirit, not in the letter, because there are no rules that man could draw up that would apply to every case.

3188. Q. Take these workings in the longwall faces? A. Yes.

3189. Q. Of course, you know that the Company have been asked to take that intake direct to the furnace? A. Yes; and I think it is a most monstrous thing. But still it will have to be done.

3190. HIS HONOR.] Q. Is this a place that has fallen down, and is this a passage cut through the fallen ground? A. Yes. We intend to commence these faces very soon. I explained our intention to Mr. Atkinson.

3191. Q. Apart from your intention, for a good many years work in this section has been discontinued? A. Yes.

3192. Q. During that time this has been an open airway through the place where the material has fallen down? A. Not altogether, not through the material, but along the coal-face.

3193. Q. This part of it seems to go through the material that has fallen? A. Yes, but still, along these ultimate lines there, that is a coal-face that you can go through. These are longwall workings, and no air could go through the fallen matter, and there it goes along the face. But the moment Mr. Atkinson spoke I said, "Very well, it would be done," but I thought it was the most monstrous proposition that ever man proposed.

3194. MR. WADE.] Q. Can you say whether that air that goes there is good air for men to breathe? A. Absolutely pure air, and Mr. Atkinson admitted it.

3195. Q. Was that air used before the disaster for ventilating working-faces? A. A few men in this part here.

3196. Q. In the No. 6 or No. 7 Left? A. Yes, absolutely pure air. It was that air that saved so many of the workmen (in the explosion). There was practically no interruption to the ventilation by the accident.

3197. HIS HONOR.] Q. How long was it before you were able to get to the ventilating shaft? A. An hour. The furnace never went out.

3198. Q. I was wondering how long it took before you could get to it? A. Of course, I was in Sydney when it happened, but I was at the furnace about 10 o'clock at night. I should say about that time. I am not sure.

3199. HIS HONOR.] I should not have asked that. It was asked merely for my own curiosity. We will go back to the case.

3200. WITNESS.] The noxious gases took some time to get to the furnace. When I was at the furnace the very kerosene lamp at this split was burning brightly, and the horses neighing on the opposite side of a door on the other side of which men were killed.

3201. MR. WADE.] Q. What will be the effect if that air is carried straight to the upcast shaft;—will that be used at all for working men? A. No, not at all.

3202. HIS HONOR.] Q. I understood that this came out as a thing that had to be done, but simply because it was considered, on a close examination of the law, that it was necessary in order to strictly adhere to the law; not that, outside the law, it would have been a necessary thing to do? A. Yes; that was explained to me.

3203. MR. WADE.] Yes, but Dr. Robertson points out that if the law is observed in the spirit, it very often does less harm than if observed in the letter.

3204. WITNESS.] Mr. Atkinson explained to me that the Solicitor-General said that the absolute letter of the law must be carried out; and a fine ventilating column of air will just have to go to the furnace without doing any good at all.

3205. MR. WADE.] Q. Now, do you remember the occasion when this dust was taken from the screens at Kembla and sent to England? A. No, Mr. Wade; but I recollect Mr. Atkinson calling upon me and speaking about it, and asking if I had any objection; and I had none; and I told him I did not think it would be any good to get any at Kembla; in fact, I did not think he had got any at Kembla until after it had gone.

3206. Q. Whom did you hear from then? A. I think I referred to it once when I was down there; it occurred to me, and I asked, I think, some of the officials as to whether any had been sent to Mr. Atkinson, and they said, "Yes," that they had taken it from some of the leavings near the tip, and that, in my opinion, destroyed all its value.

3207. HIS HONOR.] *Q* Why would that destroy all its value? *A*. Because it was pure coal, and coal triturated over and over again, and simply the coal that you can see scintillating in the air on a hot day, a fine dust, that if you are standing with your watch open a few minutes, you will find the dial of the watch covered with dust; it gets into your eyes or anything.

3208. *Q*. I do not see that that destroys its value, because the purpose of the experiment was not to find out whether in Mount Kembla dust did accumulate; that could not be ascertained by an experiment in England;—it was to ascertain what the coal-dust of Mount Kembla was like—what its explosive qualities were? *A*. Then they did not get it, because they could have obtained their end so much easier if they had sent a lump of coal to England. But the coal-dust of a mine does not consist of pure coal. The coal-dust of a mine consists of the organic matter from horses and from human beings and from triturated stones, and part rubbish; it is not pure coal-dust.

3209. *Q*. Not in every case? *A*. Not in every case.

3210. *Q*. What about the faces? *A*. There is no dust in the faces.

3211. *Q*. But there may be in some seams? *A*. I am talking of Mount Kembla.

3212. *Q*. I am speaking of the purposes of the experiments? *A*. I may be wrong, but I do not think, in any case, did they get coal-dust from the faces, in almost any other mine. They are not dusty faces in New South Wales at all.

3213. MR. WADE.] *Q*. What I want to know is this: would the fact of the experiments coming out and saying that this dust was explosive, or very explosive, give you any useful criterion as to what you ought to do in the working-faces? *A*. No.

3214. HIS HONOR.] *Q*. Not by itself, certainly not; but certainly it is of importance to know that the impure coal-dust in the mine—that is, the coal-dust mixed up with other foreign matter, so far as it is composed of coal-dust, is dangerously explosive or not dangerously explosive? *A*. But if you get any dust at all, flour-dust is about as explosive as anything if it is fine enough. It has got to be fine enough, and properly triturated and mixed with air.

3215. *Q*. Then, do I understand that the mixture of coal-dust in a mine leaves it as explosive as before? *A*. No, not quite so explosive.

3216. *Q*. Then, you see, it is not explosive because it is dust—it is explosive because it is coal-dust? *A*. Yes; but, of course, the dust that is collected on the roads of a mine—[*Interrupted.*]

3217. *Q*. Would not be so pure, we can see that? *A*. No, and probably not explosive.

3218. *Q*. And probably not explosive? *A*. No.

3219. *Q*. But I say it is a material thing for a man who wants to be up to the mark in his profession to know whether the coal-dust constituent of his mine is explosive or not? *A*. Yes; but, at the same time, we know that any carbonaceous constituent, if fine enough, would be explosive; but where I say the experiments failed was this: that all the dust should be got from the mines under the same conditions—from the mine roads, if you will, or from the faces, if you will, if it were procurable; but we do not know where the dust of any particular mine was got, and we cannot compare them or place any value on them.

3220. MR. WADE.] I would like to refer your Honor to Question 15695. Mr. Atkinson himself deals with this very matter, and says that it was not a fair test to apply to Mount Kembla:—

“15695. *Q*. I say that, under the conditions under which this test was made at Woolwich, it would be fair to consider that the Mount Kembla dust was violently explosive? *A*. Yes, as the result of the experiment.

“15696. *Q*. You would not apply that remark, unqualified, to Mount Kembla coal-dust, under the ordinary working conditions, would you? *A*. Well, the conditions under which the tests at Woolwich were made were very severe, and would not be likely to occur even in a mine.”

3221. HIS HONOR.] That is a totally different problem. That was not the object of the experiment at all. The one thing is, “Let us find out with regard to the coal-dust of Mount Kembla what its condition as to explosibility is as compared with other coal-dust.” That is one thing by itself. The other question, as to the practical danger in a mine, where coal-dust of that description is mixed up with other kinds of dust, is a totally different question, which the man in England did not attempt to answer—he never set out to answer it.

3222. MR. WADE.] But Dr. Robertson says that, unless the dust is taken from the same spot, and under the same conditions, in the other mines, it is not a fair test.

3223. HIS HONOR.] For the purpose of the English experiments it ought all to have been pure coal-dust.

3224. WITNESS.] Yes; and that object could have been attained by sending a lump of coal from each mine.

3225. MR. WADE.] Coal-dust becomes more liable to explosion after it has been subject to the action of the air. If you have coal-dust lying on the haulage roads, finely divided, perfectly pure, and there for a number of months, or years, that is far more likely to be explosive than the coal-dust which, although equally fine, is quite recently deposited. But if you take a lump of coal from each colliery, and grind it down, then you will get some kind of explosion, I suppose, if you propel into that coal-dust a flame of great intensity. Then, of course, you will have a fair comparison between each of the collieries. Then, too, under those conditions, one compares with the other. I will show your Honor authorities for it, that the explosibility of coal dust depends, to some extent, on its age.

3226. HIS HONOR.] Yes; and I suppose it is pretty old in the roadways in the mine.

3227. MR. WADE.] That is why it has happened, over and over again, that explosions have taken place in haulage roads, where the dust has those conditions—it is fine, and old, and pure—and if you have dust which is fine and old, but contains impurities, then it detracts from its explosibility. Then Mr. Atkinson goes on to say, in Question 15704, that it is not more likely to explode, but that the experiments mean that, when an explosion does take place, it is more violent, not that it is more likely to explode under ordinary mining conditions.

3228. WITNESS.] It was got under different conditions.

3229. HIS HONOR.] I think it is intended to convey that, when it does explode, it is more violent than some other dusts. Well, other things being equal, the dust that, when it does explode, produces the more violent explosion, is the more dangerous dust.

3230. WITNESS.] Yes; but you cannot make a comparison.

3231. HIS HONOR.] Of course, not.

Witness—Dr. J. R. M. Robertson, 27 July, 1903.

3232. MR. WADE.] The conditions of the experiments are such as never arise in the practical operations of coal-mining. Mr. Atkinson says, in Question 15692, that dust was laid on top of the charge, a heap of dust, and the flame propelled into that, and a mound of dust was heaped up round the cannon itself. So there you are firing into a heap of dust some feet in thickness, really. Of course, if you stir up an enormous amount of dust, the conditions are very different from those in the mine.

3233. HIS HONOR.] The differences are thoroughly threshed out in Questions 15704-5.

3234. MR. BRUCE SMITH.] The conclusion from that is that Mount Kembla would not go off; but it did, unfortunately.

3235. WITNESS.] I do not think that is quite fair.

3236. MR. BRUCE SMITH.] I have nothing to ask Dr. Robertson.

[Examination concluded.]

3237. MR. WADE.] I have two or three other witnesses who are unavoidably absent to-day, whom I want to call in regard to Mr. Rogers' general practical competence to manage a mine; but I do not quite know what view your Honor takes of the matter in reference to some remarks you made on Thursday, whether you think the evidence should be given or not. If your Honor thinks it would carry no weight in the investigation in your Honor's mind, of course, I will not take up your time in the matter. It is the same as the evidence that has been called as to Mr. Rogers' general capacity to manage a mine.

3238. HIS HONOR.] I do not see any reason to doubt what all those witnesses have said—that he has had a great deal of practical experience; that he is a careful man; that he has been very efficient in regard to the carrying capacity of the mine, and that he is a practical man to manage other men.

3239. MR. WADE.] It is more than that. They spoke as to his method of working the mine from the point of view of safety.

3240. HIS HONOR.] Well, there was very good ventilation. The case really comes down to certain special things.

3241. MR. WADE.] It seems to me there are two parts of the case. There is, first of all, the question of incompetence, and then the question of gross negligence. Now, the two things are consistent; that is, you may have a man who is thoroughly competent, and in certain respects grossly negligent; but, I take it, that as the allegation here is of incompetence and gross negligence, that covers the whole of a man's bearings in connection with the management of a particular mine; it goes through the whole history of his actions, and it covers the whole ground; and I think your Honor said that the respondent is entitled to give evidence to show that, so far as his competence goes, he is fit to manage a mine. And the other question remains, assuming all that to be proved, there are indications here from time to time of gross negligence in certain particulars; and the evidence I have called, and I want to call, is really on the question of his general competence. The question of gross negligence, I admit, cannot be answered, though it may be palliated, by the evidence of any particular witnesses who say that, although in the cases of A, B, and C he is neglectful, yet in the cases of D, E, and F his action has been right. I intended these other witnesses to give evidence, as far as his competence was concerned, and as to his practical ability.

3242. MR. BRUCE SMITH.] I do not see how your Honor can relieve my friend of anything without depriving me of my opportunity of addressing you.

3243. HIS HONOR.] I was thinking of that.

3244. MR. WADE.] Then I would ask your Honor to allow me to do that on Thursday. One witness is holding an examination in Newcastle.

3245. HIS HONOR.] We must try to get through it on Thursday.

[The Inquiry was then adjourned until Thursday next, at 11 a.m.]

28 JULY.

3246. On the 28th of July, 1903, His Honor Judge Heydon, accompanied by Mr. Garlick, visited Mount Kembla Mine. Under the guidance of Mr. W. Rogers, the Manager, and Mr. D. Hotchkis, the Under-Manager, His Honor proceeded by way of the No. 1 Right travelling road, to the 2nd Right, along the 2nd Right travelling road to the cross-cut heading rope-road, along the cross-cut heading rope-road to the 5th Right rope-road. His Honor inspected these roadways with reference to dust, and was shown the present system of watering the mine by means of tanks on trucks, with a small pump operated from a crank on the axle. This pump throws the water up to the roof, and out on each side of the track. In a working-place off the cross-cut heading, His Honor was shown the apparatus provided for watering a place where a shot is to be fired. It consisted of a cask containing water, with a small pump clamped to the side of the cask, worked by a hand-lever with a hose and nozzle attached to the pump by which the water could be thrown in a forcible jet in any desired direction. Proceeding along the 5th Right, His Honor was shown the openings left between that road and the 35-acre goaf; and, entering one of these the manner in which the roof falls was seen. At the junction of the 5th Right with the No. 1 main level, His Honor was shown the double doors which have been put in since the accident on the suggestion of the Mines Department, and also the drive which it was necessary to make before this could be done. His Honor was then taken to the 4th Left rope-road, which was said by the witnesses at the Inquest to be one of the most dusty roads in the mine. This road was found to be now quite damp, in consequence of the system of watering now adopted. It was, therefore, not practicable to form an opinion as to its condition prior to the watering being introduced. Returning to the No. 1 travelling road, His Honor was shown the 4th Right and 3rd Right rope-roads, but could not enter them as stoppings have been erected since the accident. His Honor then returned to daylight by way of the No. 1 main level from its junction with the 2nd Right.

29 JULY.

On the 29th of July, 1903, His Honor Judge Heydon again visited Mount Kembla Mine, going down the travelling road of the main tunnel, and by a cut-through into the main tunnel to inspect the place where an upthrow fault occurs which necessitated blasting on the haulage road, as referred to in Mr. Rogers' evidence. His Honor was shown how stone, falling on the roadway, and being ground into dust, reduces the proportion of coal-dust in the dust of the roads. Returning to the travelling road His Honor proceeded to the

the ventilating shaft by way of the overcast, and was shown the works in progress for enlarging the overcast in order to carry straight to the furnace the intake air from the old longwall workings. The furnace, the dumb drift, and the ventilating shaft were next visited; and then His Honor was taken, by way of No. 6 Left, to the 1½-acre longwall goaf, where the longwall system was explained by Messrs. Rogers and Hotchkis. The party then returned to the surface by the No. 6 Left and the main tunnel.

30th JULY, 1903, 11 a.m., DISTRICT COURT, KING-STREET, SYDNEY.

Present:—

HIS HONOR JUDGE HEYDON, who was directed to hold the inquiry by the Minister for Mines.

MR. BRUCE SMITH, instructed by Mr. H. D. Wood, of the Crown Solicitor's Office, appeared to conduct the case on behalf of the Department of Mines and Agriculture.

MR. A. A. ATKINSON, Chief Inspector of Coal Mines.

MR. C. G. WADE, instructed by Messrs. Curtiss and Barry, appeared on behalf of Mr. W. Rogers.

MR. WILLIAM ROGERS, Manager of Mount Kembla Colliery.

MR. J. GARLICK, Shorthand-writer to the Public Service Board, was present as Secretary and Shorthand-writer to the Inquiry.

3248. MR. BRUCE SMITH.] I understand from my friend that his evidence will finish to-day, so that to-morrow will be merely addresses; and I understand that Mr. Garlick is wanted to-morrow at the Water Police Court as a witness. I also understand that it is not usual to report addresses, so, I suppose, your Honor, there will be no difficulty about that?

3249. HIS HONOR.] No; I will be able to take notes of the points mentioned in the addresses.

MR. A. E. O. SELLERS was sworn and examined, as under:—

3250. *Examination-in-chief* by MR. WADE.] Q. What is your full name? A. Alfred Ernest Oswald Sellers.

3251. Q. At present you are manager of South Bulli Colliery? A. Yes.

3252. Q. How does that compare with other collieries in the south—is it large or small? A. It is a large colliery—larger than most of them.

3253. Q. How long have you been there? A. About six months.

3254. Q. And before that you were manager at Corrimal? A. Yes.

3255. Q. How long were you there? A. Nearly four years.

3256. Q. How long have you been in the Illawarra district? A. About thirteen years.

3257. Q. How long have you known Mr. Rogers? A. I have known him all that time, and about two years previously, I think, if I recollect aright.

3258. Q. Where did you know him before that? A. At Greta.

3259. Q. Were you both engaged at Greta at the same time? A. Yes.

3260. Q. What position was he in then? A. He was under-manager for a while, I think, and he was manager for a while—some part of that period.

3261. Q. Were you able to form an opinion as to his abilities to manage when you saw him at Greta? A. Oh, yes; I think so.

3262. Q. What was that? A. I think he always did his work correctly, in accordance with good practice.

3263. Q. According to what? A. According to good practice.

3264. Q. Since you have been in the South, have you been at Mount Kembla from time to time? A. Yes; I have been to Kembla a few times.

3265. Q. Were you there in the early days of his management? A. I was down there in the early part of 1890.

3266. Q. Taking the general appearance of the mine as a whole—that is, underground—how does it compare in recent years with the earlier years? A. I was not underground in that year at Kembla. I was underground in 1898—I think it was the first time,—and I always considered the mine to be well looked after, and worked on good principles as far as I could see.

3267. Q. I suppose you understand the principle of working pillars? A. Yes.

3268. Q. Which is the most difficult part of coal-mining—the bord work or the pillar work? A. I think you would get most difficulty in taking the pillars out in the Southern coal.

3269. Q. In what? A. In that district, the most of the difficulties are with the pillars.

3270. Q. From what you saw, was there a good amount of pillar work being done in Mount Kembla? A. Yes.

3271. Q. From the point of view of safety and carefulness, how would you say the mine was worked with regard to those pillars? A. So far as I can judge, it was worked on good principles and safe principles, and principles generally in accord with the recognised practice of the district.

3272. Q. From what you know and have seen of Mr. Rogers, I want to know what you can say as to his competency and fitness generally to manage a mine? A. I think Mr. Rogers is competent to manage a mine. He has shown himself to be so, I think, by the creditable way in which he has carried on his work at Mount Kembla.

3273. Q. Assuming he does not know the chemical combinations of the gases in mines, I want to know what you say about that—whether that would affect his competency as a manager or would not? A. I do not think it would affect it very much. I have had under-managers working with me who knew nothing whatever about the chemistry of gases, but were practical, competent men to deal with them, and knew when they found them without knowing anything about the chemistry of them.

3274. Q. You, at present, are one of the Examiners for certificates of competency under the Coal Mines Act? A. Yes.

Witness—A. E. O. Sellers, 30 July, 1903.

3275. *Q.* I suppose you do not mean to say that the presence of that knowledge is useless? *A.* Oh, no. It is useful. It has an additional utility, but it is not essential in order to know how to detect gases in a mine.

3276. *Q.* I suppose there are certain well-known physical indications? *A.* Oh, yes; that is the main thing, with the safety-lamp.

3277. *Q.* Do you know the general condition of Kembla as to dampness or dryness? *A.* Yes; I have been in Kembla enough to notice that.

3278. *Q.* How would you describe Kembla? *A.* Well, portions of Kembla are wet; and the major portion is damp. There are some parts where dust was existing, but it could not be designated a dusty mine.

3279. *Q.* I want to know, was there anything you saw in the working-faces that would necessitate damping before firing a shot? *A.* Well, since the Mount Kembla explosion we have had a more systematic watering all through the district.

3280. *Q.* I am talking about the conditions before the explosion? *A.* No. My attention was not arrested by the necessity for that. The places that were not damp were not drier than the places where, at Corrimal for instance, we were firing without taking the precaution of watering.

3281. *Q.* I suppose this Kembla disaster has been a great surprise, in many ways, in the mining world? *A.* Oh, yes.

3282. *Q.* You say you yourself at Corrimal did fire at the faces without watering? *A.* Yes, at the faces. We used to simply water in the hauling roads.

3283. HIS HONOR.] *Q.* I suppose that was up to the time of the Kembla disaster? *A.* Yes.

3284. *Q.* Was that practice continued after the disaster? *A.* Yes; it was continued until we introduced safety-lamps in October. It was continued right on until I left, in Corrimal; and after the first three months of this year they commenced to water in Corrimal. The mine is becoming dry.

3285. MR. WADE.] *Q.* When did safety-lamps go in? *A.* In October.

3286. *Q.* Last year? *A.* Yes.

3287. *Q.* And you were firing at the faces, I understand you to say, without watering, until January of this year? *A.* Yes. I might say that when we commenced to use safety-lamps we issued shot-firing instructions, and one of the instructions in the shot-firing order was that no shot should be fired if dust was present except with watering; but there was no necessity to give that practical attention, or to actually water, until the first three months of this year, as the mine became drier. More development ceased and ———[*Interrupted*].

3288. HIS HONOR.] *Q.* And until it became dry in that way it was about the same as Kembla, I understand you to say? *A.* Yes; about the same as Kembla.

3289. *Q.* Well, you see, although Kembla is not a dry and dusty mine, this accident has demonstrated that it was dusty enough to make the coal-dust a danger—the accident has proved that;—I suppose a “dry and dusty mine” means a mine where the dust is bad enough to be dangerous; and, though it may not have been thought so before, it has been demonstrated now that the dust was dangerous there? *A.* There has been more attention drawn to the dust by the Kembla disaster.

3290. *Q.* But I thought you said that they did no more after the disaster at Corrimal than they did before? *A.* That is so—not until the first three months of this year, when watering became necessary because the mine became drier. I might mention that after the Kembla disaster we bought a lot of pipes to put along the haulage-roads to keep them damp.

3291. MR. WADE.] *Q.* From what you saw and knew of Kembla before the disaster, what opinion did you form of it as to being a safe mine or not? *A.* I considered Kembla the safest mine in the district, by repute, and by observations of it.

3292. HIS HONOR.] *Q.* Are you speaking of the present or before the disaster? *A.* Before the disaster; and I shared that opinion with numerous other people.

3293. MR. WADE.] *Q.* There was a statement Professor Galloway made about a certain amount of dust in a certain area that might be a danger, and that is worked out by Mr. Atkinson to be a layer of dust one-228th of an inch in thickness? *A.* Yes.

3294. *Q.* I want to know what you say about that—whether you can get those conditions literally in the mine, or whether that can be taken as practically correct, or theoretically, or what? *A.* The question of dust depends a great deal upon the nature of the dust. That might be the most highly combustible dust that caused that explosion. In all the haulage roads in any mine, now, that is not considered dusty, you would probably have that small quantity of dust; and it would be rather a stretch of the imagination to say that it was dusty; and probably they would not accept that.

3295. *Q.* Accept what? *A.* That small thickness as meaning “dusty.” To carry that out literally, it would mean that every mine would have to thoroughly water every road in it, and then it would become impracticable in every case.

3296. HIS HONOR.] *Q.* Do you know, then, what amount is dangerous, if you think Mr. Galloway’s conclusions go too far; how much dust do you think in the atmosphere is dangerous; because, I suppose when these very violent explosions take place, on account of the extreme speed and extreme heat, whatever dust there is in the passage along which the explosion passes is at once driven into the air, whether from the floor or from the beams or anything;—well, now, how much in the air does constitute a danger when blown into a state of suspension under those circumstances? *A.* I have not gone into that question; but I know this, that in testing in England Mr. Hall said he put vast quantities of dust down shafts to get explosions, and much more than Mr. Galloway estimates.

3297. *Q.* Now, this explosion was a practical test; this mine, Kembla, is said not to be a dry and dusty mine—so, I suppose, you would say there were not vast quantities of dust? *A.* There were not vast quantities of dust.

3298. *Q.* And yet you see there were a series of coal-dust explosions in it; so, if Mr. Galloway’s conclusions are disputed, I would like, if I could, to get something more positive than a mere criticism of his experimental conclusions? *A.* You see, a lot depends on the quality of the dust that is used. If you take the very light dust from the screens, the lightest of the dust, and containing the greatest quantity of hydrocarbons, that is more explosible than the ordinary mine dust.

3299. *Q.* You mean more sensitive—more likely to explode? *A.* More combustible.

3300. *Q.* Not necessarily more violent when it does explode? *A.* I should say it would be more violent too, because of the greater rapidity with which the combustion would go through these lighter particles.

3301. *Q.* Yes; because that is the distinction that is drawn between these kinds of dust—some are more sensitive to the influence of the explosion, others are less sensitive, but when they do explode they work the greater destruction? *A.* You see, there were a lot of dusty places in Kembla that the explosion did not travel down, and possibly it may be due to the difference of the dust in those particular parts they were not so readily burnt by the main explosion.

3302. *MR. WADE.] Q.* But do you think that statement can be taken without qualification—that one-228th of an inch in thickness of dust is a danger? *A.* Yes; I should say it would depend on the degree of fineness of the dust and the quality of the dust, and the conditions surrounding its deposition.

3303. *Q.* Then it wants some qualification? *A.* Yes. I think if that applied in every mine—blown-out shots are not infrequent,—and I should say that in most mines where these blown-out shots occur there is at least that amount of dust that would give that proportion. Well, following Galloway logically, each of those shots will cause an explosion.

3304. *HIS HONOR.] Q.* I do not see that; it is not said that dust will always explode; it is said it is liable to explode—it may? *A.* Yes; but you have the conditions of the explosion. You have this dust thrown violently into the air, and you have the hot blown-out shot, and you have unique opportunities to ignite it.

3305. *A.* Whereabouts are the shots put in the coal? *A.* Sometimes blown-out shots do cause explosions.

3306. *Q.* I quite understand that they do; but you say that a necessary result of a blown-out shot would be to throw the dust into this violent condition of agitation? *A.* Yes.

3307. *Q.* I do not see that it necessarily follows;—where is the shot put in? *A.* In varying places; sometimes in the middle, sometimes at the top.

3308. *Q.* One that is put in the middle would not throw up the dust? *A.* Yes; it might blow the dust off the roof.

3309. *Q.* But there must be other conditions than a blown out shot;—it would have to be directed to, and to reach a deposit of, dust to blow it up? *A.* Yes. You see, in most mines worked with naked lights there is always that minimum quantity of dust, and if it occurred with blown-out shots there would be an explosion every time there was a blown-out shot.

3310. *Q.* That would depend under what conditions it was present; if it is present in rather a damp condition about the place, that is very different to having it blowing about in the air? *A.* That is not the case. I have in my mind cases where it is dry about the places where the shots are fired.

3311. *Q.* According to the rule, in all those cases it would have to be made wet before the shot is fired? *A.* Well, you see, people have different ideas about the degree of dryness. It was never accepted before the Kembla disaster that that degree of dust was dangerous.

3312. *Q.* It simply comes to this: that they did not believe Mr. Galloway until this explosion took place? *A.* Mr. Galloway is not taken as the only authority at all. There are other authorities besides Mr. Galloway.

3313. *Q.* I quite understand that. In the face of the rule or section of the Act about watering 20 feet away from the shot in dry and dusty places, I should have thought you would always water where there was dust such as you have spoken of in a place; you would not be guided merely by the fact that there was a small quantity of it—it was dust, and there would be some dust in a dangerous condition? *A.* Well, they are all doing that now, since Kembla explosion happened; but a great deal of them have never done it before.

3314. *MR. WADE.] Q.* Take that quantity;—can you say, from what you have seen in the different mines, that you could always get it anywhere? *A.* You could not get it anywhere, but in the haulage roads you could get it always.

3315. *Q.* One-228th of an inch thick? *A.* Yes. It would rise with a few sets of coal and cover the roof and sides to that small quantity. Helensburgh has been considered the only dusty mine in the South Coast, and shot-firing is prohibited there practically, or under such restrictions as would render the removal of the dust necessary. That is a dusty mine. But none of the other South Coast mines were ever interpreted as dry and dusty mines.

3316. *Q.* Can you say whether, before the Mount Kembla disaster, there was any unity of opinion as to the amount that was dangerous;—do experts hold different views? *A.* Different experts and some people have different ideas of their own about the thing; but everybody is inclined, I think, since Kembla happened, to water more systematically now in a place where a shot is to be fired.

3317. *Q.* Let us come to this question of using safety-lamps; supposing you, as manager of a naked-light colliery, had from time to time discovered the presence of fire-damp;—I want to know whether you would, therefore, think it necessary to introduce the safety-lamp? *A.* That depends on the extent of the fire-damp that was discovered. At Corrimal, before we put in safety-lamps, we occasionally, if not frequently, had discoveries of very small quantities of fire-damp, which were in themselves not dangerous, and we worked the mine with naked lights.

3318. *HIS HONOR.] Q.* I suppose it was worked with naked lights up to the time of this disaster? *A.* After the disaster, too.

3319. *Q.* I mean, the change has been since the disaster? *A.* Yes. We brought the change about in Corrimal, when we discovered that we were getting gas in the goafs; I mean that it was coming from the lower seam.

3320. *Q.* Have you the lower seam there as it is at Kembla? *A.* Yes; it is the same series of seams, your Honor.

3321. *Q.* And you have ascertained, then, lately, since the disaster, that gas comes up into the goafs, which can be traced to the lower seam? *A.* I did not say it could be traced, but my idea is that it comes from there, because all the coal has been taken out of the upper seam. I think it possibly comes from the 4-feet seam. Of course, it is a heavy gas.

3322. *Q.* That would seem a natural explanation of it; it would be very hard to explain it otherwise, would it not, rising from the floor?

3323. *MR. WADE.] Q.* When did you first notice that? *A.* In September,

3324,

Witness—A. E. O. Sellers, 30 July, 1903.

3324. *Q.* Last year? *A.* We had some men working near pillars, and they went away from their work for some time, and they came back after being away a certain time and threw a cap with a naked light on it on the pavement, and this struck a blower of gas and the gas ran into the goaf and set fire to some wood work in the goaf under the fallen stones, and got hold of the bark on some of the props and caused a fire in the mine.

3325. *Q.* That was your first experience of this gas coming from the lower seam? *A.* Yes; and before we started again we put in safety-lamps.

3326. *Q.* You had some trouble at that time about this fire? *A.* Yes.

3327. HIS HONOR.] Well, really, if that had been extensive enough at that time, and produced an explosion, it would have looked very much like Kembla over again—the whole thing.

3328. MR. WADE.] *Q.* Had you any reason at that time to anticipate an occurrence of that kind? *A.* No. I was there the day before with the Government Inspector, and I got only $\frac{1}{2}$ per cent. with the hydrogen lamp.

3329. HIS HONOR.] I was assuming that, Mr. Wade, in my remark. That is what I meant by saying "Kembla over again." A mine which had only given evidence of possessing very small and occasional quantities of gas suddenly became explosive.

3330. WITNESS.] It was only an ignition. It simply caught like a squib, and ran to the bark, and the bark caught. There was no accumulation of gas at all. There might have been perhaps a cubic foot of gas altogether. I did not form my opinion just then; but when we were putting out the fire, we found that the water that went on the floor went into the cracks in the pavement, and as it went down it displaced gas and the gas came up, showing that the gas was coming up through the pavement. The water displaced the gas. The water went down the hole where the gas was, and the gas came up.

3331. MR. WADE.] *Q.* You know this Kembla plan pretty well? *A.* Yes.

3332. *Q.* Here are the 35-acre waste and the No. 1 main road, and the 4th Right opening, and that is an intake from the cross-cut? *A.* Yes; the 5th Right rope road.

3333. *Q.* I suppose you know that there were some men working in the last pillars of the 4th Right just before the disaster took place? *A.* Yes.

3334. *Q.* And we have been told that some air, or rather the main air, came on to them from this 5th Right, down the No. 1 Return, in to the men in these pillars? *A.* Yes.

3335. *Q.* Here is a plan showing the exact way it went during the last few weeks [*Exhibit 74*]; now, we are also told that there was an opening on the north side of this waste, and that there was a scale of air along the edge of the goaf down to the 4th Right again? *A.* Yes.

3336. *Q.* I want to ask you, first of all, whether it is good or bad mining practice to have that opening on the north side and the scale of air passing through or round the goaf? *A.* Well, if it can be avoided it is usually done; but it is impracticable to ventilate the pillars without taking the air past the goaf—round the edge of the goaf. We aim at that, but that is impracticable always to do it, because the air frequently scales over the goaf to the next pillar.

3337. *Q.* I do not think you quite understand what I mean; taking two cases, and dealing with them separately: supposing the major portion of this goaf had gone solid—that the fall had been sufficient to consolidate it—and the air could only scale round the edge? *A.* Yes.

3338. *Q.* Is there any objection to that? *A.* No; that is the ordinary way of working pillars.

3339. *Q.* And take the other case, where the fall had not become absolutely solid, would there be any objection to the air scaling through the interstices of the fallen roof? *A.* There is some objection to that, and an effort is made sometimes to try and save that air from going through the goaf; but that is impossible, because you cannot block up the openings and the cracks, and some of the air naturally goes that way. And it has this advantage, it prevents any accumulations lying in the goaf in these particular pockets, and does more good than harm.

3340. *Q.* You see, according to that plan, that this scale may, and we will assume it did, come down along the edge of the goaf and meet the actual intake air coming round from the 5th Right? *A.* That is the ordinary practice, and the recognised practice too, to ventilate these pillars by this air; and so long as this air does not go to any other working-place after it has been through the goaf the practice is excellent.

3341. *Q.* I want to deal with more than that; first of all, would you call it bad practice to allow this scale that comes through the goaf here to mingle with the main air coming round the pillars? *A.* No, if I were satisfied, as I probably would be, of the condition of that air coming past the goaf—of its purity, and of its freedom from fire-damp. If it is a gassy mine, that is a different thing. If you had a lot of gas in the mine, and this scale was impregnated with gas, then you would never think of putting that scale on to these men here; and that is found by the hydrogen lamp.

3342. *Q.* And if gas had never been found in that particular district? *A.* Well, I do not think there is any objection to the practice.

3343. *Q.* Let us take the alternative: supposing you closed up the opening on the north side through which the air came in the first instance; would that, in itself, prevent the intake air of the 4th Right drawing on this empty space in the goaf? *A.* Meaning to seal all those? [*indicating the openings on the 5th Right.*]

3344. *Q.* Yes; supposing you sealed this off at the top, so that there was no current of air through the waste; at the same time the intake air of the 4th Right goes against this end of the goaf, around which the air would circulate, if you had the current? *A.* You mean the air to work back this way, then?

3345. *Q.* No, no; there is one thing I am dealing with first of all: the air to these men from the 5th Right goes round the No. 1 return into the 4th Right and round the 4th Right workings? *A.* Yes.

3346. *Q.* If you had the opening on the north side, and the opening on the 4th Right, you would get a current of air round the goaf which would mingle with the air coming from the 5th Right? *A.* Not mingle with the air from the 5th Right. The air from these openings would go round and mingle with the air at the 4th Right, yes.

3347. HIS HONOR.] *Q.* But if it were sealed off at the top, would the current in the 4th Right draw any of the air out of the goaf? *A.* Yes; it would pick up some of it.

3348. *Q.* Where one body of air works along another body of air, a certain amount of mingling must take place? *A.* Yes. We always try to keep the air from a goaf from going into other air.

3349. *Q.* You take it into a return air-way? *A.* Yes.

3350. MR. WADE.] *Q.* The only way to shut the air off altogether would be to put in a stopping on the north side of the waste, and build up some kind of wall to stop the air coming again around the goaf edge at the 4th Right? *A.* No, that would be impracticable, because the roof would be always breaking down.

3351. *Q.* I will not mislead you by saying a wall—say a partition of wood, canvas, or brick? *A.* No, I do not think it is a good practice.

3352. *Q.* And you think it is better, if you find this waste clear of gas, to allow the current to go through? *A.* Yes, I think so. That is the ordinary practice. That is to scale along the edge of it.

3353. MR. WADE.] Yes.

3354. *Q.* Now, supposing you had a wall or partition along the edge of the waste to shut off anything that might come from the inside of the waste, would a man be able to examine that on the inside of the partition? *A.* No. Of course, it is possible to examine it by lifting it up; but the men working that particular pillar would not be able to see how the goaf away from them was acting. The men when they are working want to be able to see the condition of the goaf alongside of them.

3355. *Q.* In what way? *A.* So far as affecting the broken timber and the loose stones, and that sort of thing.

3356. *Q.* And that is another objection to shutting it off? *A.* Yes. It is never done in practice. I have never seen it done in practice.

3357. *Cross-examination by MR. BRUCE SMITH.] Q.* I suppose you apply the term "intake" to any passage of air until it has reached the last man? *A.* Yes.

3358. *Q.* Looking at that plan, you see the air is passing along the north side of that goaf, goes down No. 1, and into the 4th Right? *A.* Yes.

3359. *Q.* That is intake air, is it not? Well, excuse me, that definition of intake air is scarcely correct under these circumstances, because you might have an intake mixing with a body of return. You might have your intake split.

3360. *Q.* Is there any mixing there? Is not that a split of the intake in order to supply the men at the 4th Right? *A.* But there is another little split sent to the south here.

3361. *Q.* I am not talking of that. Is not the air that goes along that goaf and then down No. 1 into the 4th Right to supply those men—is not that intake air? *A.* It is part return and part intake.

3362. *Q.* Why is it return? *A.* Well, it is on this return air-way.

3363. *Q.* Which return air-way?

3364. HIS HONOR.] That is only the same thing in other words. If it is in a return air-way, it is return air; and if it is return air, then the air-way is a return air-way.

3365. *Q.* As long as you are supplying men working at the faces it is intake air? *A.* Yes; you can take that as a general application.

3366. *Q.* Until it leaves the last man working? *A.* The last man on the split.

3367. *Q.* Who? *A.* The last man on that road.

3368. *Q.* There may be a man at the end walking in it? *A.* We have not got that fine definition.

3369. *Q.* Is it not, say, that until it is past the last man working at the face, or the last man working on the road, it is intake air? *A.* In some cases it would not be return air until it got to the fan in that case, because there would be men working on the roads all the way.

3370. MR. BRUCE SMITH.] *Q.* You would call it intake air until it got to those men working at the pillars? *A.* Yes.

3371. *Q.* Do you approve of taking intake air over a goaf before it reaches the last man? *A.* No.

3372. *Q.* Do you approve of taking any large part of it, if you can help it, over a goaf until it reaches the last man? *A.* No; but you cannot work pillars— [Interrupted.]

3373. *Q.* I will come to that afterwards. I am not examining you with regard to that at all. I am asking you now as an expert a general principle? *A.* Yes.

3374. *Q.* Do you approve, or do you not approve, of taking an intake air-way over a goaf before it reaches the last man? *A.* No.

3375. *Q.* Do you approve of taking more than you can possibly help over a goaf? *A.* Well, that all depends on conditions.

3376. *Q.* If you have your intake air-way running along the side of a goaf which you can stop up, would you stop it up, or would you let the air escape over the goaf to the men? *A.* Well, I think I should stop it up if I could. It would depend, of course, upon other conditions.

3377. *Q.* Well, if that is an intake air-way, is it not good management to stop it up—I do not say hermetically seal it—but to stop it up so as to prevent as much as you can of that air going over the goaf? *A.* As a principle it is right enough; but so far— [Interrupted.]

3378. *Q.* I am taking an intake air-way going past the goaf. Now, you tell His Honor you would leave openings so as to allow the air to go over the goaf? *A.* That depends upon conditions. As a general principle, I would not do it.

3379. *Q.* Tell me the conditions it depends upon? *A.* Take a case in which it was impracticable to divert return air to keep that goaf clear.

3380. *Q.* You mean by all other courses in the mine it is impossible to ventilate? *A.* Suppose there is some difficulty in the way.

3381. *Q.* Now, I will come down to the actual case. You have an intake air-way along here, down No. 1, and into the 4th Right;—would you approve of four or five holes or openings being left in the north side of that goaf, so that the air passes over the goaf to these men, or so that it could pass over the goaf to these men? *A.* If I could ventilate these men here another way, I would have done it.

3382. *Q.* Suppose these men are ventilated as it is shown here, would you allow some of that air to escape through four or five openings across that goaf to the men? Never mind Rogers, or anybody else? Would you, as a practical man, allow it to be done in your mine? *A.* I do not think I would.

3383. *Q.* Do you call it good management? *A.* It all depends on conditions.

3384. *Q.* On those conditions? *A.* Well, supposing that is stopped off in that way, then there is this difficulty: how to keep this goaf clear. Now, you get a condition in a mine frequently where you have a small area of pillars left in and you have lost your air-way, and you have to do something as a temporary expedient to keep the mine right generally; and I take it that that system would keep this part generally right until that was done.

Witness—A. E. O. Sellers, 30 July, 1903.

3385. Q. Are you in a position to say that that goaf could not be ventilated in any other way? A. No.

3386. Q. Can you see any reason for taking this intake air-way over that goaf? A. Only for this reason.

3387. Q. You cannot see any feature on that plan which would require that? A. Excepting the feature that goafs should be ventilated generally.

3388. Q. And, therefore, you take that air over that goaf to these men? A. How else would you do it?

3389. Q. Would you leave four or five openings on the northern side, and let the air go over that goaf? A. Excepting that, that may be the reason.

3390. Q. Would you not know of any reason; and, in the abstract, you would renounce it as bad management? A. Yes, in the abstract, as a general principle.

3391. Q. Do I understand that, in the Corrimal Mine, you never watered any shots? A. Only on the haulage roads.

3392. Q. And you had apparatus for it? A. No; we simply baled water out of places, and used buckets and material of that description to wet the dust when we were going to fire a shot.

3393. Q. And this was before the Kembla explosion? A. Yes.

3394. *Re-examination by MR. WADE.* Q. You have been asked about an intake being taken from that north side over the goaf to the men? A. Yes.

3395. Q. Now, take this case, where there is a good intake to the 4th Right, and only a small scale coming through from the north side; could that small scale do any harm at all to the men? A. That depends on the condition of the place. If there was no gas in that goaf, if the condition of that air that went through the goaf was ascertained, and it contained no fire-damp, then there was no harm in it at all.

3396. Q. It depends on the condition of the goaf? A. Yes. We have certain abstract principles which guide us in our work; but frequently those principles have to go on one side in a condition like this, where the principles that have been laid down for working have not been altered by exhaustion. A difficulty is always reached when the pillar-workings are nearly finished, and you have to do something to meet that difficulty. And coal-mines are not gold-mines; you cannot spend thousands of pounds making overcasts. The arrangements for ventilating a district are lost as you exhaust the mineral, and a certain stage does come when you lose your air-ways, and you are forced then to take that course.

3397. Q. When does that happen? A. Towards the end—towards the finishing up.

3398. *Examination by HIS HONOR.* Q. I would like to ask you some questions about this, to assist me, really. The rule, General Rule 1 of the Act, says that the "intake air shall travel free from all stagnant water, stables, and old workings." Why? I am really anxious to know, as a matter of information, why it is important that the intake air should travel free from old workings. I assume you agree with that rule? A. No, I do not agree with that rule. I say it would be better expressed in this way: Let us travel intake air as we like, let us have our proper roads to travel it; but, if we can take advantage of old workings to increase the general ventilation of the mine, and if that air reaches the men in a state of purity, there is no harm done. It is a question of the purity of the atmosphere. It depends on the condition of the old workings. If the old workings are clean, and give off no bad vapour, there is no harm in taking the intake air through the old workings, and if, by doing that, you could increase the general ventilation of the mine.

3399. Q. Yes, if that condition always exists? A. Yes.

3400. Q. But you can always depend on the existence of that condition? A. Not in every mine, you cannot; but in a shallow mine working near the out-crop the air comes in as pure as it is outside, nearly.

3401. Q. But the air has to be tested in every mine daily, and, so far as the working-places go, it can be tested satisfactorily; but, so far as the old workings go, I suppose it is difficult to test the edges satisfactorily? A. No. It is just as easy. You can test down to a quarter per cent. with the hydrogen lamp.

3402. Q. But speak of something practicable? A. But those are in general use in the mines.

3403. Q. In the hands of the deputies for making their daily inspections? A. No, in the hands of the under-managers. The deputies do not have them.

3404. Q. Is it commonly done now in the mines with the hydrogen lamp, for a daily inspection? A. Yes; my under-manager daily has a hydrogen lamp. All the mines have.

3405. Q. Well, I am guided, to some extent, by the report of the Commission here. The report says that unless it is very, very carefully used it introduces a greater danger? A. It is not put into the hands of the deputies. You could tell by going to the edge of this goaf whether the air contained fire-damp. If that air was good or pure it was no particular danger; it was doing something to increase the general ventilation of the mine.

3406. Q. As long as it is good it is not dangerous, clearly. The question is whether the practice is a good one, because the air may be good to-day and bad to-morrow? A. In practice it is not good. But no matter what foresight you use in time you come to a position like this—[*Interrupted.*]

3407. Q. You are getting back to the old point. You said you did not agree with this rule entirely? A. No.

3408. Q. You think if that rule, "The intake air shall travel free from old workings," were abolished, the thing might be just as well done as now? A. No.

3409. Q. Then just tell me if it is a rule that you would preserve; if the intake air, as a general rule, ought to travel free from old workings, why is it a good rule? A. It is good in the case of old workings that contain black-damp or fire-damp, or bad gases.

3410. Q. But, my dear sir, it is a good rule not to take the intake air through any place that has got fire-damp or black-damp, whether an old working or not? A. Yes.

3411. Q. Well, that is equivalent to saying that that intake air shall not be taken through any place where there is fire-damp or black-damp; but what the rule says is that it shall travel free from old workings. Why is it a good rule? A. Well, old workings may contain those gases.

3412. Q. They may or do contain them? A. They have the possibilities of containing them.

3413. Q. But have not new workings got the possibility of containing them too? A. Yes, your Honor

3414. *Q.* Well then, why is this distinction drawn between old workings, which have the possibility of containing dangerous gases, and new workings, which have the possibility of containing dangerous gases; because intake air can travel through new workings? *A.* You see there is a qualification to it. There are certain parts of these mines, like Kembla down the coast, shallow in portions, where I know from experience there is no gas, black-damp, or anything in the outcrop, and there is no harm in taking intake air through the old workings there.

3415. *Q.* I want to know why the general rule should be laid down that the intake air should travel free from old workings;—you say because the old workings may have gas in them? *A.* Yes.

3416. *Q.* Well, a working-place may have gas in it? *A.* Yes.

3417. *Q.* If that is the reason, the rule should be “the intake air shall not travel along the working-places”? *A.* Not necessarily.

3418. *Q.* Well, the reason applies in working-places;—why is it, because an old working may have gas in it, that the intake air is to travel free from it? *A.* I should say that intake air should be in a certain condition of purity, and should contain that condition of purity before it reaches the working men.

3419. *Q.* You do not seem to be able to see the precise difficulty that is operating in my mind; I can quite understand that, although a working-face may give off gas, and, therefore, may impart gas to the intake air that is travelling through it, no rule is needed about that, because that place can be examined regularly and every day; now, a rule is laid down with regard to the old workings, which, so far as giving off gas is concerned, are probably less dangerous than a working-place; they probably do not give off as much gas;—they are old workings? *A.* Yes.

3420. *Q.* Yet the rule is laid down that the intake air is to travel free from old workings;—is not that because you cannot examine the old workings in the same way as a working-face? *A.* To a certain extent.

3421. *Q.* Then, why did not you tell me;—for information, I want to know why that rule is laid down that intake air shall travel free from old workings? *A.* The intention of the Act, no doubt, was to see that the air travels through roads that men could inspect and examine.

3422. *Q.* Then there is a difficulty about inspecting old workings? *A.* There is some difficulty, your Honor. If the workings have fallen you cannot examine them, but the condition of the atmosphere coming through those adits I am speaking about could be ascertained—the adits that admit air to the old workings.

3423. *Q.* Were you often down underground in Mount Kembla? *A.* I was down one day.

3424. *Q.* You were once down through the underground workings? *A.* Once through the underground workings before the disaster.

[Examination concluded.]

MR. D. McGEACHIE was sworn, and examined, as under:—

3425. *Examination-in-chief by MR. WADE.] Q.* What is your name? *A.* Duncan McGeachie.

3426. *Q.* You are Manager of the West Wallsend Colliery in the Newcastle district? *A.* Yes.

3427. *Q.* What has been your experience of mining;—how many years? *A.* Twenty-eight years altogether.

3428. *Q.* In what countries? *A.* In Scotland and here.

3429. *Q.* You have had experience of the practical side, actually working, using the pick in the mine. *A.* Yes; I started when I was 9 years of age in a mine.

3430. *Q.* Do you know Mr. Rogers? *A.* I do.

3431. *Q.* How long have you known him? *A.* About twenty-two and a-half years now.

3432. *Q.* Where did you first come across him? *A.* In Scotland.

3433. *Q.* In what place was that? *A.* Carron.

3434. *Q.* What position did he occupy there? *A.* He was assistant manager.

3435. *Q.* How long were you with him there? *A.* I was with him for seven years, I think, in Scotland; and then I have known him, more or less, ever since in this colony.

3436. *Q.* I want to know, from all your experience of him, what you would say as to his competency and capability in managing coal-mines? *A.* I have always found him a very capable man. He is a man who has always taken a great interest in his duties as a manager. He always took a great interest in trying to show other people the duties as well, everyone under him. He seemed to take a delight in trying to shove people along, and also to assist them. He did so with me, and I know he did so with a great many others. I know of one particular instance in Greta, in this colony, where he saved the lives of several men through his very prompt action. It was in the case of a fire there one evening, about 7 or 8 o'clock, after we had all gone off. The afternoon shift was all knocked off, and, through some unexplained cause, the brattice took fire. I think there were about eight or ten men there; and only for the very prompt action of Mr. Rogers in cutting the ventilation off, and sending the return air there, these men would have lost their lives. That is one instance. I was there with him.

3437. *HIS HONOR.] Q.* He deprived the fire of air? *A.* Yes. He got the smoke turned the moment it passed the fire through the manipulation of the doors—got it turned straight to the shaft, instead of going past those men. It showed his presence of mind for the moment; in fact, Mr. Rogers, ever since I have known him, both in Scotland and here, has always improved the mines very much after he went there, both above and below ground. Anyone who knew the collieries before Mr. Rogers took charge of them and saw them afterwards could not help seeing the great improvement Mr. Rogers used to make in them. That is my opinion of Mr. Rogers—a quiet, unassuming, and very capable man.

3438. *MR. WADE.] Q.* Have you yourself been underground in Kembla of recent years? *A.* Yes.

3439. *Q.* Before the disaster? *A.* I was in Kembla before Mr. Rogers was in it, and I have been in Kembla since he was in it. I used to go there on various occasions, and I had an opportunity of seeing the condition of Kembla both before he went there and after he went there, and I must say that Mr. Rogers has worked very great improvements in Kembla as well as in other mines he has been connected with.

[Examination concluded.]

MR. WILLIAM ROGERS, previously sworn, was further examined, as under :—

3440. MR. WADE.] Q. There were some passages in this book that you wanted to refer to? A. Yes.

3441. Q. There is something you want to say about this passage, page 36 of the Inquest, in your cross-examination by Mr. Lysaght :—

“I have certainly made what may be fairly called an inspection of the mine. I have often made an inspection. I took the report of the fireman as sufficient for me, with my own examination. When I have made inspections during the last ten years I was not looking for gas only along with other things.”

? A. I did not mean that. I meant that I was looking for gas along with other things.

3442. HIS HONOR.] I read that as having meant this: “I was not looking for gas, only along with the other things”; that is, he was not looking for everything at once.

3443. MR. WADE.] Yes, I think it amounts to the same thing. It is practically a double negative. He means that he was looking for gas as well as other things.

3444. HIS HONOR.] What I thought it meant was “I was not looking for gas in an incidental way along with other things; but I was looking for gas specially.” It is an instance where question and answer would make it clearer.

3445. MR. WADE.] Q. Is that all you want to refer to in that passage? A. Yes.

3446. Q. The next portion of your evidence is :—

“When I said yesterday to Mr. Lysaght that gas was found many years ago, I meant that it was about ten years ago that I saw fire-damp—that was before the present ventilation shaft was put in.”

What do you say about that? A. That is what I did mean. I meant that I saw gas at that time, before the ventilation shaft was put down.

3447. HIS HONOR.] Then there is nothing in that passage to correct.

3448. MR. WADE.] Q. Well, have you looked for it since? A. Yes, certainly, I have looked for it since. I have always looked for it.

3449. Q. Have you found it? A. I have never found any since then. I am always looking for it. There is something there about the appliances for watering the mine that I want to speak about.

3450. Q. What have you to say about that? A. When Mr. Lysaght asked me about the appliances, I thought he meant machinery like we have now. I thought he meant some machinery similar to what we have got now. That is what I thought he meant. We had things in the mine, tanks, and buckets. What I thought he was asking was if we had something special to do that, and not to do other work. The appliances we had were for taking water out of the places, and for watering the places that required it as well.

3451. HIS HONOR.] Q. Mr. Wade, I think Mr. Rogers has got in his mind that passage of the evidence in the middle of page 40.

3452. MR. WADE.] Q. Is this it :—

“We have no apparatus at all for watering the roof, sides, and timbers; and we never have watered them. We have never watered in the immediate neighbourhood of a shot. We have no apparatus for doing that.”

? A. Yes, that is the passage I mean. I never watered, because it did not require watering.

3453. Q. You say here, “We have not fired a shot for nine or ten months to the best of my memory”? A. To the best of my memory, we have not fired shots on haulage roads.

3454. Q. For nine or ten months? A. Well, it was a little more than that since we did it. It was a little more than that at that time since we fired a shot in a haulage road.

3455. Q. Now, there is something here about the inspection of the face of No. 1 on the day of the explosion, page 40 of the Inquest :—

“No one would examine the two faces right up to the end of the No. 1 Right on the morning of the 31st July.”

? A. I will explain that. Everybody knows the jig and the jig-wheel. One of the carpenters and one of the engineers were down on the 30th, the day before the accident happened, working at this wheel; and they were there and saw Nelson, the underground-manager, go up to the No. 1 faces to examine them. He went up one way and down the other. He went up the main heading and down the back heading. The way this has come round is through the men hearing that nobody had been up the No. 1 faces. The engineer says, “Well, I saw Nelson going up while I was fixing the jig-wheel; that was the day before the accident,” and the carpenter says, “I saw him too.”

3456. HIS HONOR.] Q. That is what they have told you since? A. That is what they told me, by them hearing that nobody went up to the No. 1 faces.

3457. HIS HONOR.] I do not know that that is material. Of course, if it is material, it ought to be proved by people who saw it, not by hearsay statements made by Mr. Rogers; because it might be a very different thing if they were subjected to the usual methods of the witness-box; but I do not know really that it matters much, because, according to the other evidence, it was an accidental inspection. According to the evidence, if that inspection was made, it was quite an accidental inspection.

3458. MR. WADE.] The inspection that the Crown call an accident was the one on the 19th July, the time when Nelson went round with Hay; but this is an inspection I did not know about, and it might be material to show it. Mr. Rogers' evidence before the Royal Commission has been that it would be the duty of the under-manager to inspect that place frequently, but it would not be the duty of the night deputy. It would be the duty of the under-manager or the day deputy to inspect that place several times a week.

3459. HIS HONOR.] Can you show that it was the duty of someone to examine those faces, and that it was done?

3460. MR. WADE.] Yes. I remember Mr. Rogers giving that evidence before the Royal Commission—that it was their duty.

3461. HIS HONOR.] Then the Commission, in their report, have entirely misunderstood the evidence; because, in dealing with that, they have certainly put it that it was nobody's duty to do it; or, rather, they put it in this way: that it was not done, and that Mr. Rogers admitted that it was not done, and that he knew it.

3462. MR. WADE.] The Commission found that it was nobody's duty to do it in the early morning, and that has not been contested. However, I will try to find this passage.

3463. HIS HONOR.] On page 41 of the Commission's report there is something about it [*reading paragraph 77 of the Royal Commission report, and paragraph 78.*]

3464. MR. WADE.] Your Honor sees the Commission are talking of the morning inspection before the men commenced work. Mr. Rogers says it was a duty imposed on the under-manager, or the day deputy, in the course of their daily work, to see the condition of these idle places.

3465. HIS HONOR.] You see what the Commission say. There is no distinction between the daily inspection and the night inspection. I am pointing out that what is now brought forward was certainly not in the mind of the Commission.

3466. MR. WADE.] Does your Honor take that to mean that the attention of the Commission was not directed to the morning examination only, or to any examination?

3467. HIS HONOR.] Any examination at all.

3468. MR. WADE.] On page 788 of the Royal Commission it is pointed out that the under-manager would go there to examine it, and he would go there himself (Mr. Rogers). He said there was no stipulated rule about it; but it was an understood thing.

3469. HIS HONOR.] We will go over that evidence now. [*Qs. 26323 to 26325 were then read.*] You see that negatives all other examinations except the monthly one. [*Qs. 26326 to 26334 were read.*] That seems to me very clear. There was no duty upon anybody, and no rule as to examining those standing faces. They were not included in the waste workings to be reported upon every month, or every week, as the rule says; nor were they considered as working-faces to be examined in the daily round; so there was no rule at all. This that you are speaking of now appears to have been an accidental thing. It may, as a matter of fact, have been done; but it does not follow, to my mind, really affect the question, because it was an incidental, an accidental, thing.

3470. MR. WADE.] Well, there is no rule that the under-manager has to go into every part of the mine on his shift; but he does it.

3471. HIS HONOR.] On that part of the case the point is this—I do not know whether Mr. Bruce Smith will agree with the way I put it, but this is what has struck my mind—there is a rule or a section of the Act which speaks about the faces having to be examined; then there is a rule that speaks about working-faces; and on the construction of the Act and the Rules, and the whole thing taken together, it may be argued whether there was what may be called a statutory duty on anybody to examine places in the condition of temporarily unused working-faces; but, as a matter of common-sense and good management, whether there was a statutory rule to that effect or not, or whether an argument could be raised on the statutory rule or not, they ought, as a matter of fact, to be examined. As a matter of fact, they were not examined, and as a matter of fact Mr. Rogers knew they were not examined, and made no rule about the case. The fact that there was a casual examination now and then does not affect that argument in any way.

3472. MR. BRUCE SMITH.] The ground is, that a regular ordinary examination should be made.

3473. MR. WADE.] My friend is relying on the Rules and the Act.

3474. HIS HONOR.] No; on common-sense, too. Do you not remember the witnesses said there were two things for which these examinations were made—one is as to the state of the walls and roof, and the other is as to the presence of gas. Now, as to the state of the walls and roof, it is not necessary to examine those, because the men are not going to work there; but, so far as the presence of gas goes, it is just as necessary to examine there as anywhere else, though, if gas accumulates there, it may be detected in other places.

3475. MR. WADE.] Surely the question that there is no formal rule which carries a penalty does not affect the fact that the under-manager or Manager did this duty. It is rather hard upon Mr. Rogers that it should be said that this is a casual examination and not a proper examination.

3476. HIS HONOR.] If you can show me that it was the duty of some responsible official to examine those places every day, and that Mr. Rogers knew, that will throw a totally different aspect on that part of the case. That certainly could not have been in the mind of the Commission, because one of their strongest expressions of censure with regard to Mr. Rogers is in connection with that very matter. [*Paragraph 82 of the Commission's Report was read.*] That is what they say about it. That is what was in their minds.

3477. MR. WADE.] That evidently refers to the daily examination by the deputy in his daily rounds, because they cite this Rule 9 which speaks of the deputy making an examination of the faces within four hours of the men entering the mine in the morning. But what I was speaking about was whether the examination was made by the under-manager or the day-deputy on their rounds after the men commenced work; and that is why the statement Mr. Rogers has made just now about what the carpenter told him becomes material, because Nelson was seen, according to that statement, to have gone up in the direction of this particular place on July the 30th.

3478. HIS HONOR.] Well, an examination after the men had begun work would be quite a different thing.

3479. MR. WADE.] Putting it on the very lowest ground, it is very important, I take it, on the ground of mitigation. Supposing the view that the Commission took of this rule is the correct one, this fact that the examination was made some time during the day gives it some importance.

3480. HIS HONOR.] I do not think any man ought to be condemned on a point of law in a matter of this kind; but if there was no reason at all for doing this thing, if it would not suggest itself to a man's common-sense that a thing ought to be done, but, upon some strict reading of a statute the tribunal came to the conclusion that it ought to be done, I do not think a man would be condemned for that; but if there is common-sense to back it up, then to read the thing strictly in order to avoid doing what common-sense suggests, it is just the other way about.

3481. MR. WADE.] Yes; but then there is the intermediate position that although the examination is not made before the men start work, it is done during the day, the condition of the brattice is seen to during the day—may I ask that question to see what Mr. Rogers says about it?

3482. HIS HONOR.] I do not say that it is quite immaterial, but it does go to show that the places were not absolutely neglected and taken no notice of.

Witness—W. Rogers, 30 July, 1903.

3483. MR. WADE.] *Q.* Do you know, as a matter of practice, that this place would be seen during the day? *A.* Would be seen during the day by the underground-manager and myself and by the deputies, too, but not in the morning. The deputies, even if they did not go there in the morning, would go there during the day; the underground-manager would go there during the day; I would go there during the day. The place was not left without being examined at all. Even if they were not examined in the morning they would be examined during the day.

3484. MR. BRUCE SMITH.] *Q.* Do you mean they would be examined by you? *A.* By me and by the underground-manager, and by the deputies; because I have been with them and seen them doing it; and I know that they did do it, and that they used to report these places in the monthly examination. They used to go through them then and report them along with the other places. But I am sure that they were examined during the day, because I was with them and did them and saw them.

3485. MR. WADE.] Your Honor, there are two small diaries which Mr. Rogers has found in the last few days. I would like to put them in in the morning.

3486. MR. BRUCE SMITH.] I would like to see them. It might be springing very important evidence on us.

3487. MR. WADE.] It is an old diary he has found as far back as 1899, showing that the day-deputies did examine the wastes with a locked safety-lamp, at no fixed period, but quite apart from the examination every month.

3488. HIS HONOR.] And he reported it in a book?

3489. MR. WADE.] That is one of the books that the Act did not require to be kept. It is a kind of diary for the information of the Manager.

3490. HIS HONOR.] I think the best way will be to let Mr. Bruce Smith see these things; and then in the morning, when it is put in, he will have had time to get a full knowledge of what you are referring to.

3491. MR. WADE.] I have no objection to my friend, if he goes on with Mr. Atkinson now, calling further evidence to-morrow.

[Examination concluded.]

MR. ALFRED ASHLEY ATKINSON, previously sworn, was further examined, as under:—

3492. *Further examination by MR. BRUCE SMITH.* *Q.* In regard to the evidence that has been given concerning the intake air-way passing the northern side of the 35-acre goaf, you heard what Mr. Sellers said? *A.* Yes.

3493. *Q.* He said that there might be circumstances under which it might be advisable to carry part of the intake air over the goaf to the men? *A.* Yes.

3494. *Q.* From what you know of that mine, and what you have before you, is there any justification under good management for allowing these openings to remain open so that that intake air could go over the goaf to the pillars? *A.* No; I think not.

3495. *Q.* Do you know of any reason which would justify it? *A.* So far as it is practicable, the intake should be separated from a goaf by some sort of stopping; and, so far as it is practicable, the air to the workmen should be taken free of that goaf. As a matter of ventilation, of course, the pressure is always from the intake towards the return, and, even though you put stoppings in those openings, there is a certain pressure and a certain leakage of air over the goaf which it is impossible to stop.

3496. HIS HONOR.] *Q.* Would it go right through the stoppings themselves? *A.* Through the stoppings themselves.

3497. *Q.* Supposing they are bricked up? *A.* Well, even an ordinary brick stopping is not hermetically sealed.

3498. *Q.* There is a little leakage even there? *A.* There is always a little leakage, which does useful work in going round the edges of a goaf. It is impossible to avoid that little air going through the working.

3499. MR. BRUCE SMITH.] *Q.* But, so far as you can practically prevent it, you say that good management requires it to be prevented? *A.* Yes.

3500. HIS HONOR.] That is the rule distinctly.

3501. MR. BRUCE SMITH.] You heard Mr. Sellers say he did not agree with that rule?

3502. MR. WADE.] He did not say that.

3503. HIS HONOR.] He said it, but did not quite adhere to it, I thought.

3504. MR. BRUCE SMITH.] I put it down as "I do not unconditionally approve."

3505. HIS HONOR.] Yes; that may be taken as a summary of it.

3506. MR. BRUCE SMITH.] *Q.* You heard him say that he did not approve of that rule? *A.* Yes.

3507. *Q.* You heard Mr. Rogers say that those openings were left because the coal had originally come out of there? *A.* Yes.

3508. *Q.* And he said that the openings were left so that the air could go in? *A.* Yes.

3509. *Q.* Have you any hesitation in saying that is bad management? *A.* No; I have not.

3510. *Q.* Have you heard Mr. Sellers say that they were left open to let air go round the goaf? *A.* Well, a certain scale cannot be prevented.

3511. *Q.* So far as you can prevent it, I take it good management commands that you should prevent it? *A.* Yes.

3512. *Q.* So that the air goes round to the pillars as pure as possible? *A.* Yes.

3513. *Q.* Do you remember Mr. Rogers telling us about the source of that coal-dust, and that it was not a fair sample of the dust that you would get in the mine? *A.* Yes.

3514. *Q.* And you heard Dr. Robertson say something about it? *A.* Yes.

3515. *Q.* When that sample was handed over to you, did you at any time receive a verbal or written communication that it was not a fair sample of Mount Kembla coal? *A.* No.

3516. *Q.* Was any exception ever taken to it at any time either before it was sent to Woolwich or after the report came back? *A.* Not that I remember.

3517. HIS HONOR.] I do not think there is very much in that.

3518. MR. BRUCE SMITH.] A lot of time was taken up with that.

3519. HIS HONOR.] It seems to me that the proper course was taken. It was afterwards stated that the mixture of stone-dust with coal-dust has not got the effect of rendering it non-explosive, which the mixture of certain substances with gunpowder has, but simply diminishes the proportionate quantity of dust, so that if you have half-an-inch of coal-dust on one passage, and you have a whole inch of half stone-dust and half coal-dust on another passage, the two passages are equally dangerous if you have a blast which puts the dust up in the air.

3520. MR. BRUCE SMITH.] All I wanted to show was that no exception was taken then. We had half an hour on this subject.

3521. MR. WADE.] It was never stated that that was told to Mr. Atkinson. When it was first spoken of, Mr. Atkinson was told, "We cannot get pure coal-dust at the mine." That is all.

3522. MR. BRUCE SMITH.] Q. I want to ask you whether, in a case in which there was not sufficient gas to necessitate safety-lamps, it was necessary to water? A. I think, your Honor, that I did not make myself sufficiently clear. If I remember rightly you put to me a suppositious case of a mine which was dry and dusty, but with no gas, and, therefore, safety-lamps were not used.

3523. HIS HONOR.] Oh, no; I was not putting that case to you. That was not in my mind. That would turn upon the possibility of coal-dust exploding at all without gas, a problem that I never had in my mind at all.

3524. MR. BRUCE SMITH.] Your Honor may have had in your mind the fact that shots cause explosion.

3525. HIS HONOR.] Q. I had in my mind the actual thing that happened at Kembla. It was worked with naked lights, and there was an explosion which was carried on by a series of coal-dust explosions. If there had been watering in that mine, and the coal-dust had been reduced to such a condition by watering that it could not explode, then the explosion would have been much less disastrous than it was; and I wanted to get an opinion, if I could, whether, as a mine worked with naked lights, and having so small a discoverable escape of gas as to justify working with naked lights, it would be good management to water the dust or bad management to omit to water the dust? A. Well, I should like to say that, with small quantities of gas occasionally seen in a dry and dusty mine it would be good management to use safety-lamps; but I could not say that it would be bad management not to have watered the dust.

3526. Q. I take it, practically, that you do not condemn Kembla for not watering the dust? A. Yes, your Honor.

3527. Q. If they are to be condemned at all, it is to be for not having safety-lamps? A. With the knowledge that they had of gas.

3528. MR. BRUCE SMITH.] I think your Honor, perhaps, misrepresents Mr. Atkinson's opinion—that he would not condemn them for not watering if they did not know of sufficient gas to render safety-lamps necessary. Mr. Atkinson himself did not know. He had not that sufficient experience of the gassy character of that mine.

3529. HIS HONOR.] But if they had had safety-lamps, professional opinion so differs as to the necessity for watering dust that he could not lay down the rule that they ought to water.

3530. MR. BRUCE SMITH.] Quite so. If there was so little gas as to justify them in not using safety-lamps, then he would not condemn them for not watering.

3531. HIS HONOR.] What was in my mind was this: a mine may have a very small escape of gas, and the people may be justified in working with naked lights; yet you may get an occasion when there will be a small explosion of gas. Well, I was under the impression that professional opinion was that you might have a small explosion of gas that would start very destructive explosions of dust.

3532. WITNESS.] That is so.

3533. Q. Then, so far as gas is concerned, you may be justified in working with naked lights, because the gas alone will never give you a bad explosion; and if there was no dust that could explode at all you could work with naked lights and despise the small explosions, but with the dust there, which you do not keep down, it is a different matter altogether.

3534. MR. BRUCE SMITH.] Q. Do you understand that position? A. Yes; I think His Honor grasps the case.

3535. HIS HONOR.] But I want to have an opinion about it.

3536. MR. BRUCE SMITH.] Q. But do you grasp His Honor's question;—His Honor points out that if a very little gas may produce a small explosion which becomes dangerous to the whole mine by reason of the presence of unwatered dust, would you still say that the management was justified in neglecting watering, seeing that there was dust there that should be watered? A. A dry and dusty mine, with a small quantity of gas, should be worked with safety-lamps.

3537. HIS HONOR.] Mr. Atkinson comes back to what he said before.

3538. WITNESS.] A wet mine with small quantities of gas might be worked with naked lights with comparative immunity; but when there is the added danger of dry coal-dust, it should be worked with safety-lamps.

3539. MR. BRUCE SMITH.] Q. You say really that with the knowledge that Kembla was giving off gas it should have been worked with safety-lamps? A. Yes.

3540. Q. You say with the knowledge of that evidence that has been given they ought to have used safety-lamps? A. Yes.

3541. Q. But supposing they did not use safety-lamps, would you say there was no necessity for watering, with that knowledge. Supposing those instances of gas, of which evidence has been given before the Commission and the Inquest, were known to the management, and they yet did not use safety-lamps, would you still say that there was no need to water the dust? A. Well, I could not say that it was bad management not to do so.

3542. HIS HONOR.] That is the same thing. I am not an expert at all; but I can perfectly understand it if a man comes and says, "Whether it would be safer to water the dust or not it is, as a matter of fact, impracticable. I have got miles and miles and miles of roads; and it is simply out of the question; it cannot be done." I can understand that position. But I cannot understand the position of a man who says, "It could be done easily, and I know coal-dust is an extra danger, and yet I do not think it is bad management not to do it." But I am not an expert, and Mr. Atkinson is an expert, and has devoted his life to this question; and his opinion is worth infinitely more than mine on that point; and I must be guided by the evidence.

Witness—A. A. Atkinson, 30 July, 1903.

3543. *Further cross-examination by Mr. WADE.*] Q. With regard to this opening in the waste on the northern side, you would not think of partitioning off the edges of the waste where the pillars were being worked? At the mouth of the 4th Right there were two or three pillars being worked, and all round them would be fallen ground? A. Yes.

3544. Q. And perhaps one fall or two falls? A. Yes.

3545. Q. And you would not advocate shutting off those falls from the men who were working the pillars, would you, by any form of partition? A. No.

3546. Q. And you think they ought to be open? A. Yes.

3547. Q. If they are open, and there is any scale of air coming through from the north side, the current of air in the pillars would necessarily draw some of the still air with it? A. Yes. The pressure of the ventilation is from the intake towards the return, and it would have that effect.

3548. Q. And if you have the actual current of air blocked, you are liable to get the air more or less stagnant on the edge of the waste, are you not? A. Do you mean by the air being blocked when you put the stoppings in?

3549. Q. You first of all say you would not shut off the fallen roof round the pillars from the men who are working at the pillars? No.

3550. Q. So that any air that had come over the fallen ground could come to the men? A. Yes.

3551. Q. And I say this, if you have not got a regular current of air through, assuming the air is more or less stagnant round the edges of the waste, still the current of air going to the pillars themselves would draw some of that air through the waste, would it not? A. Yes, it would.

3552. HIS HONOR.] I think that is quite clear. Where one face of air moves along another face of air there must be some mingling, that is absolutely certain.

3553. WITNESS.] There would be some mingling.

3554. MR. WADE.] Q. Would it not come to this, that the less air you have going through the waste the more chance of impurities in the waste becoming a serious question? A. Yes, I suppose that follows.

3555. Q. Then would it not be an assistance if you had a fair scale of air going through the edge of the waste and keeping the waste fairly pure? A. Yes. It is inevitable, from the fact that the pressure is from the intake to the return, there must be a scale of air.

3556. Q. It is a question of degree after all. You admit under any circumstances that there must be some scale of air through from the north side to these pillar workings? A. Yes, unless the goaf is absolutely sealed, which is quite unusual.

3557. Q. That is impossible? A. Well, it is almost impossible to.

[At this stage the Inquiry was adjourned until the following day.]

31 JULY, 1903, 11 a.m.—DISTRICT COURT, KING-STREET, SYDNEY.

Present:—

HIS HONOR JUDGE HEYDON, who was directed to hold the Inquiry by the Minister for Mines.

MR. BRUCE SMITH, instructed by Mr. H. D. Wood, of the Crown Solicitor's Office, appeared to conduct the case on behalf of the Department of Mines and Agriculture.

MR. A. A. ATKINSON, Chief Inspector of Coal Mines.

MR. C. G. WADE, instructed by Messrs. Curtiss and Barry, appeared on behalf of Mr. W. Rogers.

MR. WILLIAM ROGERS, Manager of Mount Kembla Colliery.

MR. J. GARLICK, Shorthand-writer to the Public Service Board, was present as Secretary and Shorthand-writer to the Inquiry.

MR. ALFRED ASHLEY ATKINSON, previously sworn, was further examined, as under:—

3558. HIS HONOR.] Mr. Bruce Smith, have you got the answers to those letters of January and March about the doors?

3559. MR. BRUCE SMITH.] Yes.

3560. [Mr. Bruce Smith handed the letters in, and they were attached to Exhibit No. 3. They were then shown to Mr. Wade.]

3561. MR. WADE.] I thought my friend was not going to put any reliance on this question about the doors, your Honor, and I have not bothered about that. I would like to know what my position is to be with regard to the point of view of the Crown, and whether they do rely on that or not. As they are offered in evidence, at all events, of course they are a matter before the court; but I thought my friend said that he did not rely on any charge with reference to this particular correspondence. May I take that, Mr. Bruce Smith?

3562. MR. BRUCE SMITH.] Yes.

3563. HIS HONOR.] They are not relied upon then.

3564. MR. BRUCE SMITH.] No, your Honor.

3565. HIS HONOR.] Then I need not trouble to read them. Would not the best plan be to take them out as exhibits, because I have to consider the evidence before me, and if evidence is before me I do not know that I can omit to deal with it, although it is not relied upon. But if it is taken out, it is not before me.

3566. MR. BRUCE SMITH.] When my friend spoke about this I went through my grounds, and found I had not included it, and, therefore, I took it out.

3567. HIS HONOR.] That exhibit is withdrawn, then?

3568. MR. BRUCE SMITH.] Yes.

3569. *Further cross-examination by Mr. WADE.*] Q. You said yesterday afternoon that it would not be good practice to shut off a waste when men were working at the pillars in the 4th Right? A. Yes.

3570. Q. Then you said that a scale of air in any case would come from the north side down towards these pillars in the 4th Right? A. Yes.

3571. *Q.* Then, if the goaf or the waste was fairly free from impurities, naturally, then, the scale of air going through would tend to keep that air still pure? *A.* Yes.

3572. *Q.* And, so far as that goes, really the greater the amount of air going through in that way the more certain would you be of keeping the air in the waste pure? *A.* Yes; that is so.

3573. *Q.* I think your objection to shutting it up altogether was that it might be a breeding-ground for all kinds of impurities stagnating and accumulating, if you shut the north end and also the other end near the pillars? *A.* If I understand you rightly, you mean practically sealing off the goaf?

3574. *Q.* Yes? *A.* Yes; in that case it might be a breeding-ground for either black-damp or fire-damp.

3575. MR. BRUCE SMITH.] *Q.* That is sealing-off on the four sides, you mean? *A.* Yes.

3576. MR. BRUCE SMITH.] But Mr. Wade asked you about two only.

3577. MR. WADE.] *Q.* Well, on one side there is a solid wall of coal—on the left-hand side? *A.* Yes.

3578. *Q.* And the right-hand side is practically solid ground from the fall? *A.* I do not know that it is any more solid than the north side, say.

3579. *Q.* Well, the north side is solid too, is it not? *A.* Well, there is always a certain amount of space at the edge of a goaf.

3580. *Q.* Exactly; that is what I want to get at—there is space at the edge? *A.* Yes.

3581. *Q.* But going to the middle of the goaf—say, 50 yards in—you will probably find fall upon fall, and that the ground there is practically consolidated? *A.* Yes, that is so.

3582. HIS HONOR.] From what I saw in the mine I do not think you would have to go 50 yards.

3583. MR. WADE.] Yes, your Honor, I take it that 50 yards is the limit.

3584. HIS HONOR.] From what I saw at the mine I take it that it would be very much less than 50 yards, from what I saw at the longwall face.

3585. MR. BRUCE SMITH.] Your Honor means before you come to the solid ground above the fall.

3586. HIS HONOR.] The pressure of the solid mass above would make the goaf solid long before you got as far in as 50 yards.

3587. MR. WADE.] *Q.* So far as you knew, Mr. Atkinson, I think you said that there was no gas in the strata above the coal seam at Mount Kembla? *A.* Yes. I have not heard of any.

3588. *Q.* And supposing you had been manager and had not, during the working of the bords and pillars, found gas in the seam, do you think it would be a fair inference to draw that fire-damp was unlikely to be found in the waste afterwards? *A.* Yes; I think it would be a fair inference to say that it would be unlikely to be found.

3589. *Q.* With regard to this intake from the Manager's house going over the old longwall faces, am I to understand this, that you knew of that intake air going in that direction? *A.* I knew that some air went in there; but I do not know that I knew that it was ventilating working-places. I may have known so.

3590. *Q.* Then, at all events, you know it now? *A.* I do.

3591. *Q.* I mean for the practical purposes of mining, that air, which went through those longwall workings was perfectly good for men to work in, was it not? *A.* Well, it may be so, but several places are open to old workings—old workings open on the course of that air-way, and, therefore, any impurities which might collect in those old workings might be carried along by that air.

3592. *Q.* Yes; but I thought you said the other day that, as a matter of fact, that air which came from the daylight near the Manager's house through this longwall working was pure? *A.* I do not remember having said so, although I remember Dr. Robertson having said so, I think.

3593. *Q.* Do you remember saying this, that the air was pure, and that really by following out these instructions you got from the Crown Law Offices you would be depriving a number of men of air which it was quite safe to breathe? *A.* Well, I do not remember having said so.

3594. HIS HONOR.] When I was round the longwall workings, and was at the face of the coal itself, it was pointed out to me, I think by Mr. Rogers, that there was a draft of air passing along the face of the coal. Well, that draft of air, as there was a draft of air, must have gone somewhere. I do not know whether it went into a return or not.

3595. MR. WADE.] That is what he told us was used to ventilate these workings.

3596. HIS HONOR.] Would it not be a dangerous thing to utilise a draft of air passing along a face of coal to ventilate working-places?

3597. MR. WADE.] *Q.* Well, Mr. Atkinson, you know the longwall faces? *A.* Yes.

3598. *Q.* You know they have been idle for a number of years? *A.* Yes.

3599. *Q.* Do you think, as a matter of fact, there would be any perceptible gas, even tested with a hydrogen lamp, carried off from those faces? *A.* Well, I think it is unlikely; but in addition to passing along the longwall faces that air travels through a number of old workings composed of bords and pillars, the ends of the bords being open, and on part of the road I understand there are considerable falls; and, another thing, this road is not travelled every day, and there might come a serious fall which would interrupt the ventilation, and therefore the quantity of air which was being supplied to any men.

3600. *Q.* But that is a different question to the purity. That is because the air might be cut off. That might happen anywhere—a fall to cut the air off? *A.* Yes.

3601. HIS HONOR.] *Q.* Because it is not a question of fact; it is not a question of whether at any particular time the air was impure. It is a question of practice whether there is a possibility, a liability, of the air becoming impure. That is the thing. It is a general rule. You say, then, that if a face of coal is of considerable age, there is no danger in taking intake air along the face? *A.* No, your Honor, if it is properly conducted.

3602. *Q.* I am glad to hear that, because I was under the impression that that was one of the dangers about old workings? *A.* If I might explain, the same might happen in any intake which is resting on pillars.

3603. *Q.* Yes, of course, the ventilation air has got to pass through coal—it has to pass through coal that is being worked? *A.* That is so.

Witness—A. A. Atkinson, 31 July, 1903.

3604. *Q.* But that is unavoidable, because the men have to have air taken to them, and they are working amongst coal;—and that is absolutely unavoidable? *A.* Yes; and it is also unavoidable, as I might point out, that the air must pass along the sides of coal, whether it is old pillars or a longwall face—that is also unavoidable.

3605. *Q.* But if it could be avoided? I thought a coal face, however old, was liable to give off gas? *A.* Well, it is more unlikely as time goes on.

3606. *Q.* Yes. Until at last you think it becomes absolutely safe, and ventilation can be taken along there? *A.* I think so, your Honor.

3607. HIS HONOR.] I am glad to know that, because it corrects an impression I had in my mind.

3608. *Q.* I should like to get a definite answer to this question: I would be glad if you would go back to the time before this disaster happened;—Kembla was not the only mine then in New South Wales that was working with naked lamps? *A.* Not by any means; in fact there were very few mines worked with safety-lamps.

3609. *Q.* Now, were any of those mines known to be giving off small quantities of gas? *A.* Yes, your Honor.

3610. *Q.* Yet they were worked with naked lights? *A.* Yes.

3611. *Q.* Assuming then that Mr. Rogers did know this mine was giving off small quantities of gas—going back now to before the disaster, putting the lesson of the disaster out of your mind—was it bad management in the light of practice and the knowledge at that time to work the mine with naked lights? *A.* I think it was so in that case and in all the others.

3612. *Q.* Yes, you see, the disaster has shown that; the disaster has been an object lesson that has taught the necessity; but I want you to go back to before that time. It was known then to the mining world, to the managers, and to you, that mines that were giving off small quantities of gas were nevertheless worked with naked lights—I suppose because it was considered that small quantities of gas could be efficiently dealt with by ventilation? *A.* That is the usual reason given.

3613. *Q.* In your opinion, then, were any of those managers to blame for doing that in the light of the then opinion, the then views existing about mine management, before the disaster? *A.* The opinion prevailing amongst managers, your Honor, generally in the State, or— [Interrupted.]

3614. *Q.* The opinion prevailing amongst them, as shown by the fact that they worked their mines with naked lights? *A.* Yes, that is so.

3615. *Q.* Well, going back before the disaster, here were all these mines known to be giving off small quantities of gas and worked with naked lights, and amongst them was Kembla. Now, were those managers to blame? *A.* I think so, your Honor.

3616. *Q.* And they all stand on the same footing as Mr. Rogers then, as far as that particular thing is concerned? *A.* Yes.

3617. *Q.* And he is to blame, then, so far as that is concerned, only in the same way as they were all to blame, to the same extent? *A.* Yes.

3618. *Q.* Do you know whether any steps were taken to bring about a change and compel them to use safety-lamps? *A.* Well, in several cases, I have had considerable correspondence with collieries about the use of safety-lamps. Some of them have absolutely refused to use them. Others, after—well, in one case, an unfortunate accident at Burwood. They now use them throughout the mine.

3619. *Q.* I can quite understand that you would certainly not err on the side of rashness, because your duty is to keep the management up to the mark if it is possible; and, of course, in regard to this particular mine, you did not know that it was giving off gas in small quantities? *A.* No; we had no official knowledge.

3620. *Q.* But would it not have been a matter of degree;—it is a question of opinion when the discharge of gas is sufficient to make it dangerous to use naked lights? *A.* It is no doubt a matter of opinion.

3621. *Q.* I am going back to before the disaster, because now the rule seems to be laid down, at any rate, the Commission have made that recommendation, that if you have got any escape of gas you should use safety-lamps. That is since the disaster, because here you have a mine which everybody thought was a safe mine, the discharge of gas in which has been only small, and yet there has been a terrible disaster. If you can, will you put your mind back to the time before that disaster. It was, I suppose, even to you, a question of degree. If you were satisfied that the quantities of gas given off were small, really small, then you would have considered them justified in using naked lights? *A.* Yes, your Honor.

3622. *Q.* Of course, as long as a thing is a matter of degree, it is a question of opinion, too—you cannot lay down a hard-and-fast rule.

3623. MR. BRUCE SMITH.] Does your Honor understand Mr. Atkinson to say that those attempts by correspondence to get lamps used were before the accident?

3624. HIS HONOR.] Yes. Of course those are not things that I can attend to really. They have nothing to do with Mr. Rogers. They are only mentioned by Mr. Atkinson with reference to himself—with reference to his own view about matters.

3625. MR. BRUCE SMITH.] I want your Honor to see that Mr. Atkinson has not formed that opinion since the disaster.

3626. HIS HONOR.] Oh, no, I can see that quite clearly.

3627. *Q.* I want to ask you about this General Rule 1 with regard to the intake air—"the intake air shall travel free from old workings." I suppose, in your opinion, that was an advisable rule to lay down? *A.* I think so, your Honor.

3628. *Q.* Well, now, why? I am asking for information; I am not cross-examining you at all. I want to find out why the intake air ought to travel free from all old workings? *A.* Well, old workings are a part of the mine for which there is no special provision for thoroughly ventilating, nor yet is there any provision in the Act for inspection, and, in consequence of falls, there may be accumulations of fire-damp. On the other hand, on account of ventilation not being provided for, there may be accumulations of black-damp; and it is desirable to have the air as pure as possible when it reaches the working-places. I think, those, your Honor, are the principal reasons.

3629. *Q.* Well, now, in regard to the black-damp;—does that come in any quantity sufficient to be dangerous to life? *A.* Very seldom, unless men work amongst it for a long time, and unless there is a very large percentage of it.

3630. *Q.* But, then, there comes the fire-damp. Now, in the case of fire-damp, the danger is of an explosion? *A.* That is so, your Honor.

3631. *Q.* And under this rule there is no provision that the return air is to travel free from old workings—it is the intake air that is to travel free from old workings? *A.* Yes.

3632. *Q.* I think it is considered advisable to ventilate old workings? *A.* Yes.

3633. *Q.* So long as you do it into the return air? *A.* Yes.

3634. *Q.* But return air does not mean air that passes no lamp at all, does it? *A.* Well, I think the general interpretation of the return air is air after it leaves the last working-place.

3635. *Q.* Yes; but after it has left the last working-place it may, and probably will, still pass a lamp—there will be a man on the road? *A.* Working in the return air-roads?

3636. *Q.* Yes? *A.* Yes, quite possibly.

3637. *Q.* Well, one lamp in the case of an explosive gas is quite enough to create the danger? *A.* One naked light?

3638. *Q.* Yes. *A.* Yes.

3639. *Q.* Then, so far as the reason for the provision that intake air shall travel free from old workings is based upon the danger of picking up an accumulation of fire-damp, that reason applies also to the return air travelling free from old workings? *A.* Yes; I see what your Honor means, and that is so; but it is good practice to ventilate old workings.

3640. *Q.* But what are you to ventilate them into? *A.* Into a return air-way.

3641. *Q.* Then, if it is a mine worked with naked lights, is not there still the danger, not as great, perhaps, because it will not pass as many naked lights? *A.* Yes, there is a danger of passing naked lights, no doubt, your Honor.

3642. *Q.* In view of that, would not the best practice in a mine worked with naked lights be simply to wall the old workings all round, so that nothing could get out at all? *A.* It is practically impossible to do that.

3643. *Q.* Impossible before you have arrived at a certain stage: if you have a large area absolutely abandoned, and nearly all fallen down, except just a little bit at the edges, the openings into that could be stopped up, could they not? *A.* I would not say it is impossible.

3644. *MR. BRUCE SMITH.]* Does not your Honor think that the principal purpose of that rule with regard to the intake is to secure pure air to the men who are working?

3645. *HIS HONOR.]* Yes; but I wanted to know the nature of the impurity it would get from the old working. Ordinarily the air in the old working would be, I should think, very pure in the absence of discharges of gas as in a goaf—the air in a goaf is ordinarily very pure. The discharge is what is dangerous.

3646. *MR. BRUCE SMITH.]* But Mr. Atkinson speaks of the falls.

3647. *HIS HONOR.]* *Q.* The fall itself would not make the air impure? *A.* No.

3648. *Q.* But it may be accompanied by or release an amount of gas? *A.* Yes; as a general practice, unless there is a danger of fire, it is not good practice to seal off old workings.

3649. *Q.* I do not see why, because what is the possible danger;—supposing there is an accumulation of gas there, it exerts no pressure upon the stoppings to burst them open or anything of that sort? *A.* With a reduction in the atmospheric pressure no doubt there would be leakages from these stoppings, which you frequently see from sealed off areas; even where they are attempted to be sealed off hermetically you get small discharges or leakages from stoppings.

3650. *Q.* It is because, in fact, the sealing cannot be made complete? *A.* That is so, your Honor.

3651. *MR. WADE.]* *Q.* As a matter of fact, Mr. Atkinson, is not this the position: that, until this Coal Mines Act was passed, there was no recognised practice for dealing with waste workings at all? *A.* No, not in the Act.

3652. *Q.* So that since the Act came into force it has been the practice in many parts, say, of New South Wales, to make some provision for the ventilation of the wastes and so purify the air that may be in those wastes—that is so, is it not? *A.* Yes.

3653. *Q.* So that if you get the purification of the air then it may happen that you have not got the same risks in taking your air past old workings as you had at the time the Act was passed? *A.* I do not exactly follow you.

3654. *Q.* Supposing the Act lays down a batch of rules for your guidance in mine management? *A.* Yes.

3655. *Q.* There is no provision in the Act of 1896 for dealing with the ventilation of old workings? *A.* No.

3656. *Q.* But there is this provision here about the intake air going free from old workings? *A.* Yes.

3657. *Q.* Now, the next step is this: as a matter of fact, in practice, in New South Wales, steps have been taken since this Act came into force to ventilate the old workings? *A.* Yes.

3658. *Q.* And to keep the air, as far as possible, pure? *A.* Yes.

3659. *Q.* And when you have that practice, then the mere fact of the intake air passing old workings does not carry with it the same risk as if no steps were taken at all to ventilate the old workings? *A.* No.

3660. *HIS HONOR.]* I do not quite follow that.

3661. *MR. WADE.]* It is this, your Honor: that, inasmuch as the Act had no provisions for the ventilation of old workings, and the old workings may therefore have been more or less stagnant, and possibly without a current of air through them, there was an opportunity of impurities being collected and afterwards escaping. It then became important, from the point of view of the Legislature, to provide that intake air should not come in contact with the air from the old workings. But if, as a matter of practice, quite apart from the requirements of the Act, people do take steps to ventilate the old workings and keep the air pure, then, if the intake air does come in contact with the old workings under existing conditions, there is not the same risk as there would be if the old workings were not ventilated at all, and the intake air travelled past them.

3662. I do not quite see that at all. You see, if you ventilate your old workings with intake air, then you are running the risk of getting the impurities into your intake air.

3663. *MR. WADE.]* There is not the same risk, for this reason—and I am going to draw a distinction between a mine that is known to be giving off gas in appreciable quantities and one that is not

Witness—A. A. Atkinson, 31 July, 1903.

not—if a mine is known to be giving off gas in substantial quantities, like the Metropolitan, for instance, where you can get gas any time in the day, any day in the year, then you have gas present after you have taken out the actual coal. That goes on while the waste is in process of consolidation. Then, of course, if you leave this large area of abandoned or worked-out ground, where accumulations of gas may take place that may escape on to an intake in such quantities as to be above the point of dilution, and therefore, being an inflammable mixture, the gas would ignite. But, if you have a waste in a district where gas has not been found with a safety-lamp or a naked light, as in Kembla, according to the evidence, and gas is not known to be given off from the strata above the seam, then, when the coal-seam is extracted, there is no probability of gas being released by a fall of the roof, and if the air is taken through the waste under those conditions, being comparatively pure to start with, then the current of air circulating through that from day to day tends to keep it free from noxious impurities, and, if it did mix with an intake in that case, there really is no risk in that as a matter of fact. And that is the contrast between that case, where a mine is not known to give off gas, and the case where the mine is known to give off gas. In a mine that is known to give off gas it is advisable to observe that portion of General Rule 1. But in the case of a mine that does not give off gas, *de facto* the risk you run is practically nothing by letting the intake air go past a waste, or even through it.

3664. Q. As a matter of fact, the return air-ways have been used at Kembla as travelling roads?
A. Yes.

3665. Q. For a number of years? A. Yes.

3666. Q. I mean to say that there has been no objection? A. No.

3667. MR. BRUCE SMITH.] Q. You have been asked by Mr. Wade this question, which is rather an important one, "Whether there is the same danger now, under this Act, in taking an intake air-way past a waste that there was before the provision was made for ventilating wastes on to return air-ways?" and you said, "No, there is not the same danger." I ask you now, has that any application to this 35-acre goaf whatever;—is there any provision made for ventilating it on to a return air-way?

3668. HIS HONOR.] Mr. Wade's question referred, I understood, even to ventilating it on to an intake air-way.

3669. MR. BRUCE SMITH.] Yes, your Honor, now, as compared with before this Act, because Mr. Wade asked Mr. Atkinson this: "Before this Act there was no provision for ventilating wastes on to return air-ways, and now there is"; and, therefore, he argues that there is less danger in taking an intake air-way past a waste. But it is not so in the Act.

3670. HIS HONOR.] Forgive me. I may have misunderstood Mr. Wade, and you may be right. I thought Mr. Wade's question did not introduce the question of ventilating into a return air-way at all, and that he was dealing simply with the question of the ventilation of wastes—he did not say what into.

3671. MR. BRUCE SMITH.] That is the only way it could be—into a return; it cannot be into an intake.

3672. MR. WADE.] I said that, under existing conditions, it could be done; and, as a matter of fact, there was no risk at all.

3673. HIS HONOR.] It was put in this way: they used not to be ventilated at all, and then there was a risk of accumulation, which might be thrown out by a fall, or in half a dozen ways, and be dangerous. Since the Act they have been ventilated. Being ventilated, is there the same danger in turning their contents into an intake air-way as there was before?

3674. MR. BRUCE SMITH.] Q. Now, I want to ask Mr. Atkinson is there any way of ventilating that 35-acre goaf into a return air-way? If not, your Honor sees that the intake going by is not a small danger because of the purity of the goaf. If it could be shown that the 35-acre goaf had been ventilated into a return air-way, it might be very fairly contended that taking this intake air-way past it is a small danger, because it is a ventilated goaf; but I want to ask Mr. Atkinson now is there any provision for ventilating that goaf, except into that intake.

3675. MR. WADE.] Intake?

3676. HIS HONOR.] Into the air-way shown on the plan?

3677. MR. BRUCE SMITH.] Q. Yes? A. Only by any leakage which may leave the intake at the 5th Right rope road, and go along the edge of the goaf, and so out of the 4th Right and on to the return air-way.

3678. Q. So that it would have to go across the waste, past the men, to get on to the return air-way?
A. Across or along the edge.

3679. Q. So that the ventilation is right past the men's heads? A. Yes.

3680. HIS HONOR.] That is so. That is what I understood Mr. Wade referred to.

3681. MR. WADE.] Yes.

3682. MR. BRUCE SMITH.] Mr. Wade was pointing a moral with regard to the present method of managing mines, that now that there is provision for ventilating the goafs, they are purer, and therefore there is less danger from taking an intake past them.

3683. HIS HONOR.] Or in letting their contents go into an intake air-way.

3684. MR. BRUCE SMITH.] Exactly. And there is no provision for ventilating that goaf at all, except by doing the very thing that that rule is supposed to prevent, by taking the ventilation to these men.

3685. HIS HONOR.] As I understand, the whole of the north part of that goaf had been worked out and left some considerable time before; and from what I saw in the mine there was nothing left where air could go, except a passage round the edges. No doubt where they were actually removing the last pillars there would be a larger space.

3686. MR. WADE.] Your Honor cannot say what there may be in the middle. Your Honor sees that, if that is the level [*indicating*] inside, it may have fallen higher in places than in others. It may have fallen in two places, leaving a passage between.

3687. HIS HONOR.] In the absence of evidence to the contrary, I should presume that it had fallen everywhere and solidified.

3688. MR. BRUCE SMITH.] The evidence is that it would fall very unevenly in parts.

3689. HIS HONOR.] I should say it never holds itself up.

3690. MR. BRUCE SMITH.] Q. I will ask Mr. Atkinson, as an expert, would you be able to say,
without

without actually going in there and seeing it that there would be no air passages in the middle of that waste? A. Well, you could not actually prove it without going there; but I think that is highly improbable.

3691. Q. Now, am I right in this, that there is no provision made in regard to this waste for anything getting from it on to a return air-way, except by, first from the intake and then round the goaf? A. That is so.

3692. HIS HONOR.] I suppose the plan speaks of that.

3693. MR. BRUCE SMITH.] Then I do not see the point that my friend puts that there is less danger now.

3694. HIS HONOR.] It struck me in this way: assume that it is ventilated by an intake air-way—put the case at once as badly as you can put it from your point of view, that it is ventilated by intake air which goes out into intake air. Then Mr. Wade puts it this way: Before the Act was passed the practice was to leave it unventilated; there might be accumulations from various causes, accumulations to a dangerous extent; and they might, having accumulated to a dangerous extent, find their way out in dangerous quantities from various causes, in consequence of there being no ventilation; but since the Act the air has not been allowed to stagnate there, but has been kept in motion, and the old workings have been cleared out, and therefore the dangerous accumulations are not allowed to take place. Then he asks the question: Is there as much danger then from their proximity to or their connection with an intake air-way as there was before? And the answer is "Less."

3695. MR. BRUCE SMITH.] I quite understand that. But your Honor sees that the general principle to which my friend is referring as reducing the danger of wastes is the practice of ventilating them into return air-ways, so that, if an intake should go by, by any misfortune or by any bad management, it would not involve the same risk as if it was not ventilated; but when you come to a particular goaf, and you find that the ventilation relied on to make the danger to an intake less, is a ventilation from an intake right on to the men— [Interrupted.]

3696. MR. WADE.] That is where we differ. My case is all through that the substantial ventilating current for those men in the 4th Right pillars came down the return road of the No. 1 heading and into the 4th Right; but, at the same time, a scale of air did come through the edge of the waste and mingled with this intake air, and went along past the men.

3697. MR. BRUCE SMITH.] We only differ as to quantity.

3698. MR. WADE.] Exactly.

3699. MR. BRUCE SMITH.] Q. I will ask Mr. Atkinson to say, assuming there were five openings on the north side of that waste, would it be a very small portion of the intake air that would go round the edge of that waste to the 4th Right? A. It would depend on the tightness of the goaf along the edge of the pillar.

3700. Q. I am speaking of those openings along the northern side.

3701. HIS HONOR.] The openings along the northern side were into a part of the goaf that had been worked out, as I understand, some time before; and, therefore, there was plenty of time for the falls inside to take place as much as they could take place; and, in looking at the mine when I was down there, it seemed to me that, when time was given for the falls, the falls took place close up to the supporting pillar. They do not pack right up to the solid wall; they do certainly leave a small passage.

3702. MR. BRUCE SMITH.] Q. Now, Mr. Atkinson, you know the condition of that goaf? A. Yes.

3703. Q. Would it be a small proportion of that air that would go round to the men over the edge of the waste? A. I think it would only be a small portion.

3704. MR. WADE.] I think Mr. Atkinson answered a question some days ago, and said that there was never a request to Kembla to use safety-lamps?

3705. MR. BRUCE SMITH.] Q. I meant to ask you that;—you told the Commission that up to the time of the disaster you were not aware of the extent to which gas is said to have revealed itself? A. No, I was not.

3706. Q. You have no power under the Act to compel them to use safety-lamps? A. No.

3707. MR. WADE.] That is entirely a question of law. The Act speaks for itself.

3708. MR. BRUCE SMITH.] Q. You have never attempted to exercise any power of ordering? A. No.

3709. Q. You have requested frequently? A. Yes.

3710. Q. Did you ever have any correspondence or verbal communication with either Mr. Rogers or Dr. Robertson about Kembla? A. Not in regard to safety-lamps.

3711. Q. And you did not, with the knowledge you had before the disaster, regard it as one of the mines where—? A. I did not think I was justified in taking action.

3712. HIS HONOR.] Of course, Mr. Atkinson did not know anything about these small escapes of gas.

3713. MR. BRUCE SMITH.] Q. But the idea of getting lamps in many of these mines is not a new one at all? A. No.

[Examination concluded.]

3714. MR. WADE.] Your Honor, here is this book. I have shown it to my friend, and I have just turned down the pages that I want to refer to. The pages turned down at the top are references to where the day-deputy examined waste workings with the safety-lamp, and those turned down at the bottom are where Mr. Rogers initialled the book as having seen it.

3715. [The book, a W. E. Smith's "Australasian Scribbling Diary for 1899," with the name, "William Nelson, Mount Kembla Colliery," written in ink on the front cover, was put in, and marked Exhibit No. 5.]

3716. HIS HONOR.] What is this to show an examination of?

3717. MR. WADE.] That is a book that we have heard of that was kept, not under the requirements of the Act, but purely as a matter of convenience, of mine discipline, and that shows the record of the work done by the deputy each day he is in the mine; and it appears there that periodically he examined

examined the waste workings in his district with a locked safety-lamp, which was a matter quite outside the ordinary inspection of the waste workings, which are required, under the contention of the Crown, once a week.

3718. HIS HONOR.] He examined certain waste workings mentioned?

3719. MR. WADE.] It is only important on this part of the case against Mr. Rogers, that he took no steps to ascertain the condition of the waste workings, and that, if he had taken steps to ascertain the condition of the waste workings and the possibilities for the presence of gas, he must have known that gas was given off. To answer that, that is the only book I can pick up at this length of time. Mr. Rogers has made search for some time. But at all events that book shows that the day-deputy, in accordance with his duty, as Mr. Rogers was aware, did make an examination in these waste workings for the presence of gas, and he used for that purpose a locked safety-lamp. And I shall argue that if these steps were taken, even as far back as 1897 or 1896, and the continual result was "no gas," and that was done in addition to the ordinary examination by the deputy every morning of the working-places, it was a fair thing to assume that there was no gas.

3720. MR. BRUCE SMITH.] It is only fair for me to say that I shall argue, from the production of that one book, the probability of subsequent books, which ought to be in Mr. Rogers' possession.

3721. MR. WADE.] We are suffering from the loss of a number of books that were produced at the Inquest, and I admit that Morrison says at all events, that he made his examinations with the naked light. I cannot get behind that.

3722. HIS HONOR.] I thought all the examinations were made with safety-lamps?

3723. MR. WADE.] Which, your Honor?

3724. HIS HONOR.] Here is an entry: "I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order." I thought that examination would be made with a safety-lamp?

3725. MR. WADE.] No, your Honor. The Act says that the inspection shall be made with a locked safety-lamp, except in the case of a mine where inflammable gas has not been found within the preceding twelve months. That is in General Rule 4, regarding the examination of the working-faces in the morning before the men commence work. Then it goes on to say that another inspection shall be made during the shift, "a similar inspection." But there is no question about it, it is admitted to be a regular practice, unless it is known that the mine is giving off gas, to make this second inspection with a naked light. That is the inspection which appears under subsection 2 of General Rule 4. Of course, if the mine gives off gas in the quantity which requires the use of safety-lamps, you use your safety-lamps on that occasion too.

3726. MR. BRUCE SMITH.] I should like my friend to say how many places there are in that book which indicate the examination of wastes, because I went through it and it only showed working-places.

3727. MR. WADE.] Oh, no. The report shows working-places, and, about once a fortnight, roughly speaking, there are these inspections of the waste workings with the safety-lamps.

3728. HIS HONOR.] It goes in this way. Take the first one, Friday, 10th March, 1899. [*His Honor read the entry, which is copied with the Exhibits at the end of the notes. It will be seen that it is not the first.*] [*His Honor then continued reading the entries in the book to which his attention was drawn by the leaves being turned down. They are copied in the Exhibits.*]

3729. HIS HONOR.] I want to see this that you are pointing out that shows that the examinations need not be made with a locked safety-lamp. Does not this Rule 4 require the examination to be with a locked safety-lamp? I read it so. [*His Honor read the rule, which contains the following: "The inspection shall be made with a locked safety-lamp, except in the case of any mine in which inflammable gas has not been found within the preceding twelve months."*] That would imply, I suppose, that if there is nothing at all found there ought to be a report saying so. Then, do you rely on that, simply that this examination should have been made with a safety-lamp if inflammable gas had been found within the preceding twelve months?

3730. MR. WADE.] It is compulsory under the Act, if it is found and reported within the preceding twelve months. I do not contend there is the compulsion to make the first examination with a locked safety-lamp, which is beyond all doubt, that you ought to examine with a naked light in the second inspection. What I say is that as no gas had been found in this mine for twelve months there was no compulsion under the Act to use safety-lamps in the inspection at all; and if there is no compulsion in that case, there is certainly no compulsion in the second examination during the shift. But if, as a matter of precaution, for the purpose of safety, in examining before the men start, they use the safety-lamp and they then find no gas, there is no necessity to make the second examination with the safety-lamp. Your Honor sees the difference. There is no necessity to make a report of that inspection in a book, and the first one is to be in a book. So that my argument is that if, as a matter of precaution, they do make the first inspection with a safety-lamp, there is no compulsion at all, either by law or in any other way, to make the second inspection during the shift, when men are actually at work with naked lights in the face, with the locked safety-lamp. Because it is inconsistent that, if you are able to work with a naked light at the face, you should be compelled, under a penalty for neglect, to make that examination with a locked safety-lamp while men are working there with naked lights at the face.

3731. HIS HONOR.] And these that are mentioned here in this book are the second inspections?

3732. MR. WADE.] Yes. He says "between 8 and 4 o'clock."

3733. HIS HONOR.] Yes; and the Act certainly does not say they are to be recorded; it says that they need not be recorded. I see. You are drawing a distinction between the two inspections?

3734. MR. WADE.] Yes.

3735. HIS HONOR.] Is there any book at all recording the result of the inspections before the men went into work?

3736. MR. WADE.] Those are the books that were mislaid. They are the books which were before the Coroner's Court, and they are in that form of which I showed your Honor a blank sheet the other day.

3737. HIS HONOR.] As a matter of fact, were they made with safety-lamps?

3738. MR. WADE.] Yes.

3739. HIS HONOR.] Of course, if they were not so made that would be equivalent to a statement that there had been no inflammable gas found for twelve months.

3740. MR. WADE.] Yes; but, of course, the converse does not hold good, that, because you use safety-lamps, therefore, gas has been reported.

3741. HIS HONOR.] Oh, no; it does not; I quite admit that.

3742. MR. WADE.] Because these lamps had been used for a number of years.

Mr. Wade then addressed the Court.

[At 1 p.m. the Court adjourned till 2 p.m.]

AFTERNOON SITTING.

Mr. Wade continued his address.

[At 4 p.m. the Court adjourned until the 3rd August, at 11 a.m.]

3 AUGUST, 1903, 11 a.m.—DISTRICT COURT, KING-STREET, SYDNEY,

Present:—

HIS HONOR JUDGE HEYDON, who was directed to hold the Inquiry by the Minister for Mines.

MR. BRUCE SMITH, instructed by Mr. H. D. Wood, of the Crown Solicitor's Office, appeared to conduct the case on behalf of the Department of Mines and Agriculture.

MR. A. A. ATKINSON, Chief Inspector of Coal Mines.

MR. C. G. WADE, instructed by Messrs. Curtiss and Barry, appeared on behalf of Mr. W. Rogers.

MR. WILLIAM ROGERS, Manager of Mount Kembla Colliery.

MR. J. GARLICK, Shorthand-writer to the Public Service Board, was present as Secretary and Shorthand-writer to the Inquiry.

Mr. Wade continued his address, and concluded.

Mr. Bruce Smith then addressed the Court.

His Honor reserved his decision.

[Inquiry Concluded.]

Extracts from Exhibit No. 5.

REPORT BOOK—MOUNT KEMBLA COLLIERY.

Mount Kembla Colliery, Saturday, 14 January, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. I have also examined all waste workings in No. 1 Right and No. 5 Right, and found them free from gas. (Signed) W. NELSON.

Mount Kembla Colliery, Friday, 27 January, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right Districts, and found them all in good order. (Signed) W. NELSON.
Absentees.—No. 55, J. Muir; No. 87, R. McDill; No. 57, J. Carmine; No. 73, McCabe. W.R.

Mount Kembla Colliery, Saturday, 28 January, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right District and No. 5 Right District, and found them all in good order. (Signed) W. NELSON.
I have also examined all waste workings in No. 1 Right and No. 5 Right Districts, and found them free from gas. (Signed) W. NELSON.

Absentees.—No. 55, J. Muir; No. 57, J. Carmine; No. 87, R. McDill.

Mount Kembla Colliery, Saturday, 11 February, 1899.

I have this day, between the hours of 7 a.m. and 10 a.m., examined all the pillars and waste workings in No. 1 Right and No. 5 Right Districts, and found them free from gas and in good order. (Signed) W. NELSON.

Mount Kembla Colliery, Saturday, 25 February, 1899.

I have this day, between the hours of 9 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. (Signed) W. NELSON.
I have also examined with a locked safety-lamp all waste workings in No. 1 Right and No. 5 Right, and found them free from gas. (Signed) W. NELSON.

Mount Kembla Colliery, Friday, 10 March, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right, and found them all in good order. (Signed) W. NELSON.
I have also examined with a locked safety-lamp all the waste workings in No. 5 Right and No. 1 Right, and found them free from gas. (Signed) W. NELSON.
Absentees.—No. 67, J. Dunphy; No. 87, R. McDill; No. 93, McGeary Brothers; No. 92, E. Buck.

Mount Kembla Colliery, Friday, 17 March, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. (Signed) W. NELSON.
I have also examined with a locked safety-lamp all the waste workings in No. 1 Right and No. 5 Right, and found them free from gas. (Signed) W. NELSON.
Absentees.—No. 73, J. McCabe; No. 68, A. Stafford; No. 92, E. Buck.

Saturday, 18 March, 1899—W.R.

Mount Kembla Colliery, Thursday, 30 March, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. (Signed) W. NELSON.
I have also examined with a locked safety-lamp all the waste workings in No. 1 Right, and No. 5 Right and found them free from fire-damp. (Signed) W. NELSON.
Absentee.—No. , E. Buck.

Mount

Mount Kembla Colliery, Friday, 7 April, 1899.

I have this day, between the hours of 8 a.m. and 3 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order.

I have also examined with a locked safety-lamp, between the hours of 12 a.m. and 2 p.m., all the waste workings in No. 1 Right and No. 5 Right, and found them free from fire-damp. (Signed) W. NELSON.

Mount Kembla Colliery, Friday, 21 April, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. (Signed) W. NELSON.

Absentees.—No. 69, A. Stafford; No. 81, E. Robson

WM. ROGERS.

Mount Kembla Colliery, Friday, 28 April, 1899.

I have this day, between the hours of 10 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right and found them all in good order.

I have also examined all waste workings in No. 1 Right and No. 5 Right with a locked safety-lamp, and found them free from inflammable gas. (Signed) W. NELSON.

Mount Kembla Colliery, Saturday, 6 May, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order, unless a miss-shot in No. 76, and fenced off same. I have also examined with a locked safety-lamp all the waste workings in No. 1 Right and No. 5 Right, and found them free from inflammable gas. (Signed) W. NELSON.

Mount Kembla Colliery, Tuesday, 9 May, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. (Signed) W. NELSON.

Absentees.—No. 81, R. Bellies; No. 82, James Head; No. 83, J. McEwan.

W.R.

Mount Kembla Colliery, Saturday, 20 May, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. I have also examined with a locked safety-lamp all the workings in No. 1 Right and No. 5 Right, and found them free from inflammable gas. (Signed) W. NELSON.

Mount Kembla Colliery, Wednesday, 24 May, 1899.

I have this morning, between the hours of 7 a.m. and 9 a.m., examined with a locked safety-lamp the roadways where water-balers were working in No. 1 Right, previous to starting, and found them free from inflammable and noxious gases, and in good order. I also examined all the pillars in No. 1 Right and No. 5 Right, and found them free from inflammable and noxious gases and in good order. (Signed) W. NELSON.

Mount Kembla Colliery, Saturday, 27 May, 1899.

I have this morning, between the hours of 7 and 8 a.m., examined with a locked safety-lamp the places and roadways in No. 1 Right where shiftmen were working, previous to starting work, and found them free from inflammable and noxious gases and in good order. (Signed) WILLIAM NELSON.

Mount Kembla Colliery, Friday, 9 June, 1899.

I have this day, between the hours of 8 a.m. and 2 p.m., examined all the working-places in No. 1 Right and No. 5 Right, and found them all in good order, unless a miss-shot in No. 65, and fenced off same. I have also examined with a locked safety-lamp all the waste workings in No. 1 Right and No. 5 Right, between the hours of 2 p.m. and 4 p.m., and found them free from inflammable gas. (Signed) W. NELSON.

Mount Kembla Colliery, Friday, 23 June, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. I have also examined with a locked safety-lamp all the waste workings in No. 1 Right and No. 5 Right, and found them free from inflammable gas.

Absentees.—No. 86, Muir Brothers.

(Signed) W. NELSON.

Saturday, 24 June, 1899.—W.R.

Not work.

Saturday, 8 July, 1899.

W.R.

Mount Kembla Colliery, Friday, 14 July, 1899.

I have this day, between the hours of 8 a.m. and 2 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. I have also examined all the waste workings with a locked safety-lamp, between the hours of 2 p.m. and 4 p.m., in No. 1 Right and No. 5 Right, and found them free from inflammable gas. (Signed) W. NELSON.

Mount Kembla Colliery, Monday, 24 July, 1899.

I have this morning, between the hours of 7 and 8 a.m., examined with a locked safety-lamp all the working-places and roadways where shiftmen and water-baler was working in No. 1 Right, and found them free from inflammable and noxious gases, and in good order. (Signed) W. NELSON.

Mount Kembla Colliery, Saturday, 29 July, 1899.

I have this day, between the hours of 8 a.m. and 3 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. (Signed) W. NELSON.

WM. ROGERS, Manager.

Mount Kembla Colliery, Saturday, 12 August, 1899.

I have this morning, between the hours of 7 and 8 a.m., examined with a locked safety-lamp places and roadways in No. 6 Right District, previous to shiftmen starting work, and found them free from inflammable and noxious gases, and in a good state of ventilation and in good order. I have also examined with a locked safety-lamp, between the hours of 8 and 9 a.m., 4th Left District in No. 1 Right, previous to shiftmen commencing work, and found it in a good state of ventilation, and free from inflammable and noxious gases, and in good order. (Signed) WILLIAM NELSON.

Not work.

Friday, 18 August, 1899.

WM. ROGERS, Manager.

Mount Kembla Colliery, Saturday, 19 August, 1899.

I have this morning, between the hours of 7 and 8 a.m., examined with a locked safety-lamp all the working-places and roadways in 2nd Left and 4th Left Districts in No. 1 Right, previous to shiftmen commencing work, and found them all in a good state of ventilation, and free from inflammable gas, and in good order. (Signed) WILLIAM NELSON.

Mount Kembla Colliery, Friday, 8 September, 1899.

I have this day, between the hours of 8 a.m. and 1 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order. (Signed) W. NELSON.

I have this day, between the hours of 1 p.m. and 4 p.m., examined with a locked safety-lamp all the waste workings in No. 1 Right, and found them all free from fire-damp. (Signed) WILLIAM NELSON.

Mount

Mount Kembla Colliery, Tuesday, 12 September, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order.
(Signed) W. NELSON.
Absentees—No. 58, G. Oram; No. 92, H. Ramsay; No. 93, A. Stafford; No. 84, G. Brown.

W.R.

Mount Kembla Colliery, Friday, 20 October, 1899.

I have this day, between the hours of 9 a.m. and 5 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order, and in a good state of ventilation.
(Signed) W. NELSON.

I have also examined, with a locked safety-lamp, all the waste workings in No. 5 Right and No. 1 Right, and found them free from fire-damp.
(Signed) W. NELSON.

Mount Kembla Colliery, Friday, 3 November, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order, and in a good state of ventilation.
(Signed) W. NELSON.

W.R.

Mount Kembla Colliery, Friday, 24 November, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right and No. 5 Right, and found them all in good order, and in a good state of ventilation.
(Signed) W. NELSON.

W.R.

Mount Kembla Colliery, Friday, 8 December, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-faces and roadways in No. 1 Right and No. 5 Right, and found them all in good order, and in good state of ventilation.
Absentees—No. 74, E. Stafford; No. 96, Jones Bros.
(Signed) W. NELSON.

Saturday, 9 December, 1899.

W. ROGERS, Manager.

Mount Kembla Colliery, Tuesday, 19 December, 1899.

I have this day, between the hours of 8 a.m. and 4 p.m., examined all the working-places and roadways in No. 1 Right, and No. 5 Right, and found them all in good order.
(Signed) W. NELSON.
WM. ROGERS, Manager.

Evidence of Mr. Rogers at Coroner's Inquest, page 35, as referred to by Mr. Bruce Smith in paragraph 256 of these notes:—

Cross-examined by Mr. LYSAGHT.] I do not understand what you mean, when you ask me whether I have passed any examination for my position as manager of Mount Kembla Colliery; I obtained my certificate as manager of a colliery by service; I was never examined by a Board of Examiners for my certificate of competency; I remember a man named Michael Gallagher being burnt at Mount Kembla; I do not know that he was burnt from an explosion of gas; I do not know how he was burnt; I did not hear how he was burnt; I know he was burnt, and that is all; I was under-manager at the time; I did not inquire as to what caused his burns; for all I know, he may have been burnt with gas; I had no reason for not inquiring; when a man was injured in the colliery, when I was under-manager, I sometimes inquired; when a man got burnt, I did inquire as to what burnt him; I do not know of anyone who has been burnt in Kembla Colliery, except those who were burnt at the present disaster; if men were burnt in Kembla since I have been manager, I expect I would be sure to know of it; I expect also that I would be sure to know it, as none were burnt during the time I was under-manager; I do not know that a man named Blackett was burnt at Kembla, and have never heard of it; I do not know that a man named R. Walker was burnt at Mount Kembla, and have never heard of it; I have never heard of a man named Jubb being burnt there; I never knew a man of that name to be working at Kembla; I know that some of the victims of this disaster were burnt; Tom Purcell was burnt a little, and one of the Stafford boys, I do not know his name, John Clark, who was working outside the mine, a boy name Stone, and Stanley Richards, who were also working outside; I do not know that the two Aikens were burnt; I have not inquired as to who was burnt; I saw all the bodies, I think; Clark, Stone, and Richards were working outside, the others inside; I cannot say what burnt Purcell or Stafford; I have no idea what burnt them; I have no idea what caused the disaster; I have no theory; I have no suggestions to make; I have not thought as to what has been the cause of this disaster; I have no reason for not thinking about it; I have thought a good deal about it, but I cannot make up my mind about what caused it; I have no theory at all; the only thing I have thought about is, what we have heard a good deal about in the last fortnight, that is, that an area of waste fell in the 4th Right, causing a blast, and blowing everything upside down; I cannot say what the blast was; I have no idea; it appears to me that the blast has come from the 4th Right pillars; I do not suggest that it was a blast of gunpowder or of dynamite; I do not know what it was; I do not know how the men I have mentioned (Stafford and Purcell) were burnt; my idea is that when the blast came out it blew different ways, some inbye and some outbye; I could not say whether it was ignited or not; I have no idea whether that blast was ever ignited; I have no impression about it; I do not know that there was any after-damp in the pit after the disaster; when I went in I may have got a little; I felt a smarting in the eyes and nose, but I do not know whether it was after-damp; I do not know what after-damp is; I do not know any of its constituents; I know fire-damp when I see it in a lamp; I do not know any of its constituents; I do not know what light carburetted hydrogen is; I do not know what methane is; I have heard of light carburetted hydrogen, but I do not know of its composition; I have heard people talk of meeting with it in mines, but I do not know that I have met with it; I do not know whether there are any means of discovering it in mines; I have never tried to discover it; I have never read any scientific works upon it; I do not know whether it is explosive or non-explosive; I do not know whether it is life-supporting or not; I am a practical, and not a theoretical man; I do not know that, while I was under-manager at Kembla, fire-damp used to accumulate in the mine; I do not know that the ventilating shaft we have at the mine now was built as a result of a prosecution; I know that the shaft was built to improve the ventilation; I did not give evidence before the Royal Commission in 1896; I have given evidence on no Royal Commission; I do not know that gas is constantly exuding from the coal in Kembla, even in small quantities; I have not heard of gas of any kind at any time being in Kembla; I myself have looked for gas in Kembla Mine, that was many years ago—ten years ago; I did not find any gas when I looked for it at that time; I would have known it if I had found it; the firemen used the old "Davy" lamp in their inspection, not the "Marsaut"; there are from nine to a dozen "Davy" lamps at Kembla; the mine was examined every morning with them; they would require a lamp each; the others were in the store, in good order; I always kept them clean and tidy in the store; I do not know that the rescue parties could not get any decent oil at the mine; we keep two or three different kinds of oil at the mine; I was in the mine about a week before the disaster; I always inspect when I am in the mine; I made an inspection of the part of the mine I was in on that occasion; that was the shaft section, not No. 1; it was, perhaps, a fortnight before the disaster that I was in No. 1 section; I do not know what day of the week it was that I was there; I made a rough note of having been in the mine, and what part I had been in, perhaps; the note was made in a diary.

Cross-examined by Mr. LYSAGHT.] William Rogers, recalled, states: I produce the book I was speaking of last evening [Book put in and marked Exhibit N]; I made the last entry in that book on the 30th July, I think; after I had made that entry I left the book in a drawer at the office; I next took the book out this morning; the entries were made each day, in the afternoon or evening; on no occasion have I allowed two or three days to pass and then entered the book up for those days; the entries on the 28th, 29th, and 30th July were not written at the same time; I did not do any writing last night or this morning; they were written on the days on which they appear to have been written; I blot every entry as I make it; I cannot say whether I entered in that book my visit to No. 1 section of the mine about a fortnight before the disaster; I often visit the mine, and do not enter it in the book; when I made an inspection of the mine there is no other book that I report it in; the amount of ventilation in the mine is recorded in a book kept for the purpose; I have not got that book here; I am not certain when I last saw that book, but it was in the month of July;

in my inspection about a fortnight before the disaster I had a flare-lamp; Nelson was with me on that occasion; no one else was with me for the purpose of inspecting; Nelson had a flare-lamp; neither of us had a safety-lamp; we did not go into the 35-acre goaf at all; we went into the mine about 8 or half-past (about that), and came out about 2 o'clock perhaps; I do not remember how many hours I was in the mine; I see the entry in the diary on the 1st July; that is the inspection I have referred to; from then up to the time of the disaster I did not make any special inspection of the mine; I will not swear whether I did or not; there is no book anywhere to show a report of an inspection by me, only the diary [*Exhibit N*]; I did not think it of importance to write down the result of my inspection; I have certainly made what may be fairly called an inspection of the mine: I have often made an inspection; I took the report of fireman as sufficient for me with my own examination; when I have made inspections during the last ten years I was not looking for gas only along with the other things; I was looking for everything, gas included; I did not look for gas on my inspection of the 1st July even amongst other things; I cannot tell when it was that even amongst other things I was looking for gas; the waste workings were inspected once a month; if I had thought there was any occasion for it, it would have been practicable to have the waste workings inspected once a week; I was aware of Rule 10 of the Special Rules before the disaster; I read the rule like this: "Once a week, or as far as practicable"; I am not now of opinion that there was some occasion to have the waste workings examined once a week; I do not know now that I wrongly interpreted that rule (Rule 10 of the Special Rules); I could not inspect the underground workings every day, because I had other duties to do; there was nothing in the mine to prevent me inspecting them every day; when the words "went into the mine this morning" appear in the diary, it means that I inspected every part of the mine I went into; I know that part of Rule 2 of the Special Rules which you have just read to me; I never personally took the amount of ventilation passing in the mine at any time; I relied on the surveyor, Mr. Warburton, to take the amount of ventilation; Mr. Warburton had to take the air once a month; he had to take it at the beginning of each month; the volume of air going through a mine varies from day to day, one day more and another less; a hot day outside would interfere with the natural ventilation, and a cold day would assist it; there is nothing else to my knowledge that would vary the volume of air in a mine; I have never read any book to show what varies the volume of air in a mine; I do not want to change that answer; I know a little about mine surveying; I conclude that the blast came from the fourth pillars, because of the things I saw blown up and down inbye and outbye; I have not heard that Dr. Robertson has an absolute theory; I cannot say how often, within the meaning of Rule 2 of the Special Rules, I inspected the underground workings; I know the part of that rule which you have read relating to plans; the plans are regularly plotted every three months; the last plotting was done by Mr. Warburton; I said yesterday that I never knew of the existence of any gas in Kembla; I am speaking of fire-damp; I have seen some black-damp there; I saw some there a week ago last Saturday; before the disaster I remember seeing black-damp in Kembla; that was four or five months before the disaster; there was a little of it in the 4th Right; I discovered it by the way the flare-lamp was burning; it was in the 4th Right pillars, just at the edge of the waste; it did not put my light out; Nelson was with me, I believe, when I found it; I put canvases across the road to turn the air into it; I believe Nelson put the canvas up himself; having put up the canvas, I went on to another part of the mine; I did not wait there till the canvas was put up, but it was put up, I know, for I saw it afterwards; I did not report the discovery of that black-damp in any book; Nelson might have reported it in a book—I do not know; I did discover black-damp before that; I did not report it; that was six or seven years ago; that was in No. 4 Left, off the main tunnel, going to the shaft; from that time up till four or five months ago I did not find or know of any gas in the mine; those are the only two occasions I have known of gas to be in Kembla; I was in Court when David Evans gave his evidence; I did not hear him say that "he had often discovered gas, and had reported it to Mr. Rogers"; I never remember Evans reporting gas to me; I will not swear he did not report it to me; it would be in a report book if he did—in the deputy's report book; I do not remember gas being reported while I was under-manager; I cannot say as manager whether gas has been reported or not; everything dangerous I told them to report it and let me know; if gas were in the mine I would regard it as a matter of serious importance; during the time I have been under-manager, and the time I have been manager, it has been my honest belief that there was no gas in the mine; I knew that gas was found in the mine years ago; I knew that there was no gas there during the last ten years, because the deputies would have reported it if there had been, and I would have heard about it; I heard Morrison say that a week before the disaster he discovered black-damp and did not report it; in my opinion, if the fireman thought black-damp, which he discovered, was dangerous, he should have reported it, and not otherwise; I do not say that Morrison was the sole judge; I was at Kembla while Mr. Ronaldson was manager; the whole time; I was under-manager; when he left I became manager; I always thought that Mr. Ronaldson was a competent manager; I do not know what evidence Mr. Ronaldson gave at the Royal Commission; I do not know of my own knowledge that there is fire-damp in Kembla Mine; I will not admit that "in all sections in Kembla Mine fire-damp was given off rarely"; I never heard of the Royal Commission in 1895; I never knew that my own manager, Mr. Ronaldson, attended that Commission and gave evidence; I was manager before the Coal Mines Regulation Act, 1896, was passed; I have no recollection of two men having been burnt in Kembla Mine from gas while Ronaldson was manager—I never heard of it; I know William Green, who, I believe, was once manager of Kembla; he was not manager in my time; I do not know that I have ever read the report of the Bulli Disaster Royal Commission; I was not in the Colony at that time; I do not know whether we are working the Bulli seam; I have heard that we are; the words "In the main or Bulli seam" are on the plan of our colliery, but I do not know that we are working that seam, except from what I have heard; I do not know anything at all about Mr. Green's statement, that there was gas in Kembla when he was manager; I was not in the Colony at that time; I will swear that there has been no gas in Kembla to my knowledge during the last five years—that is, since we put in the air-shaft; I go by the firemen's reports; I do not know anything about the composition of the Bulli seam so far as its gaseous nature is concerned; I have never made any study of the gaseous properties of that coal; I have no idea how long it would take for, say, 100 feet of gas to accumulate in the Bulli seam—that is, in the Kembla Mine; I cannot say whether, in eight hours, 1,000 cubic feet of gas could accumulate; I am not prepared to dispute the statement made by Mr. Rowan, that 13,500 cubic feet of inflammable gas accumulated in the same seam that we are working in eight hours under certain conditions in a mine (not Mount Kembla) in this district; in view of that statement, I consider that I did my duty in trusting to the reports of Morrison; I know that samples of the coal-dust at Kembla were taken for Mr. Atkinson, the Chief Inspector, to have analysed twelve months ago; we collected the samples for Mr. Atkinson; the samples were supplied to find out the gases in the coal; I did not make any inquiry as to the result of that analysis; I had no interest in knowing the result of the analysis; I mean that I took no interest in knowing the result; I would like to have known the result of the analysis; I believe a report of the result of the analysis was sent to me; I do not remember what the result was with regard to the samples sent from Mount Kembla.

Evidence of Mr. A. A. Atkinson, Chief Inspector of Coal Mines, before the Royal Commission, as referred to by Mr. Bruce Smith in paragraph 253 of these notes:—

12988. Q. Now, will you say something to the Court about the characteristics of explosion by coal-dust? A. Yes.
 12989. Q. Quoting any authorities that you think will be of value to the Commission? A. Well, the theory is explained in many parts of the Chamberlain Royal Commission.
 12990. Q. What we have called the Chamberlain Commission is a Commission of which Mr. Chamberlain was chairman? A. Yes; correctly called, it is the Royal Commission on Coal-dust from 1891 to 1894.
 12991. Q. Have you that here? A. I am afraid not. We can send for it.
 12992. MR. BRUCE SMITH.] I will postpone, your Honor, the reference to that until I get the book here.
 12993. HIS HONOR.] Very well.
 12994. MR. BRUCE SMITH.] Q. Will you just say where, in your opinion, the most dangerous class of dust is found in the roadway of a mine? A. Generally on the haulage roads, and on the—[*interrupted.*]
 12995. Q. What part of the haulage roads? A. And on the timbers and upper parts, rather than on the floor.
 12996. Q. Why do you regard that as the most dangerous kind of dust? A. Well, it is the finest and the purest. The floor dust is very often mixed with stone impurities.
 12997. Q. And this, which has lodged on the sides and the roof and the timbers, is the lighter, finer kind, which has floated in the air and gradually accumulated on any shelving position? A. Yes; and it is regarded as most dangerous.
 12998. Q. Well, is there any theory of the power of this dust to absorb any chemical property? A. Yes. With constant currents of air passing over it, it is thought that it absorbs oxygen, and thereby becomes more dangerous, making it more sensitive to explosion.