

1899.

(THIRD SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

EAST GRETA COLLIERY DISASTER.

(RETURN RESPECTING, NOVEMBER, 1898.)



Printed under No. 6 Report from Printing Committee, 19 October, 1899.

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No. 1.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for Mines and Agriculture.

18 November, 1898.

MANAGER of East Greta reports three men buried by fall of roof in main incline drive. Am now going up to inspect, and therefore cannot return Sydney to-night. Will wire further information early to-morrow.

A. A. ATKINSON.

Particulars given to Minister. Register.—D.McL., 18/11/98.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for Mines and Agriculture.

18 November, 1898.

ACCIDENT (East Greta) has happened in main incline drive, dipping at an angle of 45 degrees; length of fall, approximately, 40 feet, and almost uniform height of 10 feet; top end of fall, 260 feet from face. Roof still uneasy, and consider inadvisable to allow any one to pass seat of fall until roof is secured, as little or no hope is entertained that any of the three men can be alive. Going down now, and will report later if you will kindly wire West Maitland station your private address.

A. ATKINSON.

Seen.—D.McL., 19/11/98.

No. 2.

Telegram from Mr. H. Winchester, Coal-fields Office, to The Under Secretary for Mines and Agriculture.

18 November, 1898.

MESSAGES received. Mr. Atkinson having spoken through telephone at Court-house, proceeded to Maitland, accompanied by Mr. Inspector Bates, per 3:30 train, and will probably communicate further information from West Maitland station. East Greta Colliery is on the Telephone Exchange.

HERBERT WINCHESTER.

Seen.—D.McL., 18/11/98.

Telegram



Telegram from Mr. Inspector Humble to The Under Secretary for Mines and
Agriculture.

18 November, 1898.

Just received your wire. Accident is at East Greta Colliery. Three men were buried by fall of roof in main dip incline. Chief inspector and Mr. Bates have gone to investigate. Chief will call upon me if he finds it necessary.

WM. HUMBLE.

Seen.—D.McL., 19/11/98. Copy sent to Hon. Joseph Cook, Katoomba, and the Under Secretary, William-street.

No. 3.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for Mines and
Agriculture.

19 November, 1898.

News from East Greta Colliery, per telephone, this morning is that good progress has been made during night in clearing away fall and replacing timber. Large quantity of stone yet to be shifted before men are reached. Am now going to colliery with Inspector Dixon. Am wiring Minister.

A. A. ATKINSON.

Seen.—D.McL., 19/11/98.

No. 4.

Telegram from The Chief Inspector of Coal-mines to The Secretary for Mines and
Agriculture.

19 November, 1898.

News from East Greta Colliery, per telephone, this morning is that good progress has been made during night in clearing away fall and replacing timber. Large quantity of stone yet to be shifted before men are reached. Am now going to colliery with Inspector Dixon. Am wiring Under Secretary.

A. A. ATKINSON.

Telegram from Mr. Inspector Humble to The Secretary for Mines and Agriculture.

19 November, 1898.

CHIEF Inspector, who is at East Greta, asks me through telephone to inform you that work is progressing satisfactorily. Having regard to the safety of workers, timbering will be finished some time to-morrow, after which removal of the fallen *debris* will proceed as fast as possible. Am wiring Under Secretary to same effect.

WM. HUMBLE.

Telegram from Mr. Inspector Humble to The Secretary for Mines and Agriculture.

19 November, 1898.

RECEIVED your wire last night too late to get reply through. I mean buried. The fall of roof occurred in a dip slope of one in one, and would slide with great force to face where men were at work. No hope of men being found alive.

WM. HUMBLE.

No. 5.

Telegram from The Colonial Secretary to The Secretary for Mines and Agriculture.

19 November, 1898.

VISITED East Greta this afternoon. No fresh developments. Atkinson considers chance of discovering entombed miners hopeless.

JAMES N. BRUNKER.

No. 6.

Telegram from The Secretary for Mines and Agriculture to The Under Secretary.

19 November, 1898.

EAST Greta accident. Wire to relatives in my name expressing sympathy.

J. COOK.

Wires (568-571) sent to—1. Mrs. D. Gronow; 2. Mrs. Bertie Monteith, or Moncrieff; 3. Mrs. and Mr. Barnes; 4. The Minister.—19/11/98.

David Gronow, wife; Bertie Monteith, or Monerieff, wife; Richard Barnes' parents.

East Greta.

PERMIT me to express my great regret at the accident which has happened, and my sympathy with you in the anxiety you are suffering. My fervent hope is that even yet your husband will be rescued.

No. 7.

Telegram from The Under Secretary to The Secretary for Mines and Agriculture.

19 November, 1898.

HAVE sent the following wire to wives of Gronow and Moncrieff and parents of Barnes in your name Permit me to express my great regret at the accident which has happened, and my sympathy with you in the anxiety which you are suffering My fervent hope is that even yet your husband (son) will be rescued.

D. C. McLACHLAN.

No. 8.

No. 8.

The Chief Inspector of Coal-mines to The Under Secretary for Mines and Agriculture.

Coal Fields Office, Department of Mines,
Newcastle, 19 November, 1898.

Sir,

In order that you may afford information to the Minister with reference to the accident at East Greta Colliery, I have the honor to give you the following brief particulars:—

The coal is won at this colliery by means of two main tunnels, and as the seam dips at an angle of 45 degrees, these tunnels approach more nearly to shafts than level drives. The rails are laid down about 4 ft. 8 in. apart, on which runs a trolley or cage on wheels, and which forms the receptacle to carry the tubs or skips in and out of the mine.

The coal-seam is about 10 feet thick, and overlaid near the surface by hard conglomerate rock, so hard, in fact, that it was unnecessary to timber a considerable length of the tunnel.

For some short time, however, the character of the roof appears to have been changing, and shale of a somewhat friable nature has come in immediately over the seam; and the conglomerate, at the point where the fall has taken place, appears to be about 10 feet above the top of the seam.

The fall took place, at a point about 670 feet from the mouth of the tunnel, or about 127 feet from the lowest pair of levels.

It is evidently about 40 feet long, 10 feet wide, and 8 feet thick, occupying a space of about 3,200 cubic feet, and the fallen material would weigh somewhat over 200 tons, probably. This material as soon as released would, in consequence of the heavy inclination, gradually run in to the face of the drive, which is about 90 yards further down to where the men were working, who would thus have little or no chance of escape.

There were three men in at the time of the fall, and it was just about the usual hour when they should have been relieved by another shift.

The timbering in this portion of the drift has been of a very substantial character, the roof, floor, and sides all being timbered.

I examined the seat of the accident yesterday evening, and considered, with the colliery managers who were present, that it would be highly dangerous to allow anyone to pass beyond the fall until the timber has been renewed and all made safe where the fall has occurred.

The rough sketch enclosed shows the method of timbering, and further particulars you will receive by wire as the work progresses.

After conferring with the Minister, if you think it desirable that the Crown should be legally represented at the inquest, which I do not think necessary, I hope you will be good enough to advise me as to what has been decided upon. So far as I am able to judge, it is a pure accident.

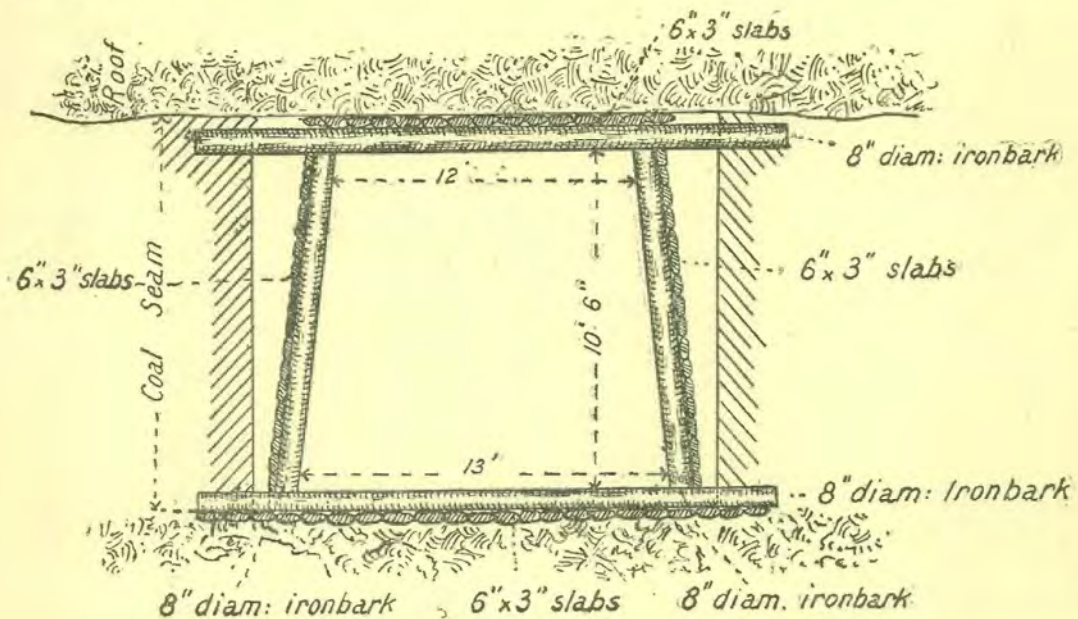
I will remain here until the bodies are recovered and the inquest has been held, unless I receive other instructions.

I have, &c.,

A. A. ATKINSON,

Chief Inspector of Coal Mines.

For Minister's information,—Mr. Atkinson may be informed that it is not necessary to have the Crown represented at the inquest. An inspector should, however, watch the proceedings.—D.McL., 21/11/98. Read.—J.C. It was decided this morning with Mr. Atkinson that it would be better to be represented at the inquest if one is held.—D.McL., 22/11/98. Mr. Atkinson. Crown Solicitor (with papers), 28/12/98.



Main sets of timber are 5 feet apart

No. 9.

Telegram from Mr. Inspector Humble to The Under Secretary for Mines and Agriculture.

19 November, 1898.

CHIEF Inspector, who is at East Greta, asks me, through telephone, to inform you that work is progressing satisfactorily. Having regard to the safety of workers, timbering will be finished some time to-morrow, after which removal of the fallen *débris* will proceed as fast as possible; am wiring Minister to same effect.

WM. HUMBLE.

Seen, 21/11/98.

Telegram from The Chief Inspector of Collieries to The Under Secretary for Mines and Agriculture.

21 November, 1898.

Work going on well at East Greta. Have wired Minister. Please say if I could see Minister to-morrow, as I propose going Sydney to-night. Please wire Winchester, who will forward message by telephone to colliery, where I am going by 9:25 train.

A. A. ATKINSON.

Reply to Mr. Winchester, Coal Office, Newcastle:—Minister will see Mr. Atkinson to-morrow; please let him know, 21/11/98. Wire (573) to H. Winchester, 21/11/98.

No. 10.

Telegram from The Chief Inspector of Coal-mines, Newcastle, to The Under Secretary for Mines and Agriculture.

21 November, 1898.

Work of retimbering temporarily suspended in consequence of fall out of original hole, which displaced the three last sets of renewed timber. No one hurt, but men somewhat alarmed. Will examine place again before men resume work, and wire result; please repeat to Minister if not in town.

A. A. ATKINSON.

Repeat to Minister at Hawkesbury College. Wire (575) to Minister, 21/11/98.

No. 11.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for Mines and Agriculture.

21 November, 1898.

It has been decided to further strengthen back timbers in order to ensure safety to workmen; this will delay recovery of bodies. Returning to-night; will be in Department to-morrow.

A. A. ATKINSON.

Minister informed, 22/11/98.

No. 12.

Telegram from Mr. Inspector Dixon to The Chief Inspector of Coal-mines.

22 November, 1898.

DOUBLING of the sets above seat of fall finished, and the men are now proceeding to timber further down towards the opening, in accordance with decision arrived at yesterday. Place quiet, with the exception of two small pieces of stone, which have fallen within the last two hours in advance of the timber.

JOHN DIXON.

Noted.—A.A.A., 22/11/98. For information of Under Secretary. Seen.—D.McL., 22/11/98.

Telegram from Mr. H. Winchester, Coal-fields Office, to The Chief Inspector of Coal-mines.

22 November, 1898.

INSPECTOR DIXON just returned from below, and reports there has been no serious falls since last night. The place is now very quiet; they have doubled five sets, making eight in all.

H. WINCHESTER.

Seen by Minister, 22/11/98.

No. 13.

Telegram from Mr. H. Winchester, Coal-fields Office, to The Under Secretary for Mines and Agriculture.

23 November, 1898.

MR. ATKINSON desires me to wire that the work of securing the timbering is going on satisfactorily.

H. WINCHESTER.

Seen by Minister, 23/11/98.

Telegram

Telegram from the Chief Inspector of Coal-mines to The Under Secretary for
Mines and Agriculture.

23 November, 1898.
WORK of renewing timber at East Greta going on satisfactorily; no further serious falls.
A. A. ATKINSON.
Seen by Minister.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for
Mines and Agriculture.

24 November, 1898.
EVERYTHING going on satisfactorily at East Greta Colliery; nothing new to report.
A. A. ATKINSON.
Seen by Minister.

Telegram from Mr. H. Winchester, Coal-fields Office, to The Chief Inspector
of Coal-mines.

25 November, 1898.
THE seventh set now in and lashed back with ropes to sill; fifth and sixth sets doubled and propped; slabs put on, and ti-tree now being put on; no further falls; everything going on satisfactorily.
HERBERT WINCHESTER.

Under Secretary.—J.C., 25. Noted.—A.A.A., 25/11/98.

Telegram from Mr. Inspector Dixon to The Chief Inspector of Coal-mines.

26 November, 1898.
THE eighth set of timber has been completed, and the ninth started with, at East Greta. During last night the third and fourth sets of timber on in by-end of fall gave way, and a fall took place. The strata below the original fall opening is uneasy, and may break the other cap-pieces. The roof is quiet where men are working. Have wired the Minister at Lithgow.
JNO. DIXON.

Noted.—A.A.A., 26/11/98.

Telegram from Mr. H. Winchester, Coal-fields Office, to The Chief Inspector of
Coal-mines.

28 November, 1898.
MR. INSPECTOR BATES reports: The whole of the cavity made by the fall is now secured by timber. Men are now engaged filling cavity with ti-tree. When I and Inspector Dixon were down a short time since everything was quiet, and work progressing satisfactorily.
H. WINCHESTER.

For the information of the Under Secretary.—A.A.A., 28/11/98. For Minister's information.—
D. McL., 28/11/98. Seen.—J.C., 28.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for
Mines and Agriculture.

29 November, 1898.
ALL the timbers knocked out by original fall have been renewed, in addition to being made much stronger than before. Cavity from which the stone fell has been completely filled with ti-tree and other timber. In proceeding below fall it will be necessary to continue strengthening to keep everything safe. Since cavity has been filled men work with much more confidence. Considering work to be done, little chance of reaching bodies before next week.
A. A. ATKINSON.

For Minister's information.—D.McL., 29/11/98. Read.—J.C., 29.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for
Mines and Agriculture.

1 December, 1898.
WORK at East Greta proceeding satisfactorily. Hole made by second fall will be filled up in few hours. To ensure safety to workmen, work is necessarily slow.
A. A. ATKINSON.

Seen.—D.McL., 1/12/98.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for
Mines and Agriculture.

2 December, 1898.
WORK proceeding satisfactorily at East Greta. About 20 yards remains to retimber up to where *débris* from fall can be seen, which will occupy about four days; after which, *débris* will be filled out. There appears to be another fall, extent of which cannot be ascertained. Returning to-night.
A. A. ATKINSON.

Seen.—D.McL., 3/12/98.

Telegram from Mr. Inspector Dixon to The Minister for Mines and Agriculture.

3 December, 1898.

At East Greta three sets of timber have been doubled and trebled below second fall. The third fall shows about 4 feet in height, and there are four sets out at this point. Timber can be seen standing beyond the point of third fall. Work proceeding satisfactorily.

JOHN DIXON.

J.C., 5.

Telegram from Mr. Inspector Bates to The Chief Inspector of Coal-mines.

5 December, 1898.

TIMBER completed down to edge of fallen *débris*. Cage now being taken off to allow filling *débris* away. Timber will be strengthened as progress is made. Good progress made since Saturday.

T. L. BATES.

For the information of the Under Secretary.—A.A.A., 5/12/98.

Seen.—D.McL., 6/12/98.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for Mines and Agriculture.

8 December, 1898.

TIMBERING at third fall going on satisfactorily but slowly, on account of having to cut out bent rails. Impossible to say when bodies will be recovered.

A. A. ATKINSON.

For Minister's information.—D. McL., 8/12/98. J.C.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for Mines and Agriculture.

14 December, 1898.

WORK at East Greta proceeding satisfactorily, but of necessity slowly. About 75 feet more of tunnel to be cleared to extreme end. This distance is full of water and fallen material.

A. A. ATKINSON.

For Minister's information.—D.McL., 14/12/98. J.C.

Telegram from Mr. Inspector Dixon to The Chief Inspector of Coal-mines.

21 December, 1898.

VERY little headway made in East Greta last night, as very many of the cap-pieces in the place where the dirt is being cleared are found to be broken and have to be renewed. The working party is still 40 feet from the face.

JOHN DIXON.

For the information of the Under Secretary.—A.A.A., 21/12/98. For Minister's information.—D.McL., 22/12/98.

No. 14.

Telegrams from Mr. Inspector Bates and Mr. Inspector Dixon to The Chief Inspector of Coal-mines.

BODY of Barnes recovered at 1:45 this afternoon. Found about 8 feet from face between last pair of sets. All work in tunnel now suspended.

T. L. BATES.

Noted., A.A.A. For the information of the Under Secretary, 28/12/98.

BODY of Gronow recovered 10:40 Saturday night. I am going to colliery this morning.

26 December, 1898.

T. L. BATES.

INQUEST opened this afternoon by Coroner Martin, and adjourned to Wednesday, 4th January, at Court-house, West Maitland, 10:30. Body identified as Albert Moneriff.

24 December, 1898.

T. L. BATES.

ONE body recovered 11 o'clock last night. Found on right-hand side of tunnel about twenty-five (25) feet from face, evidently sheltering behind prop. No coroner available, and no arrangement yet made as to inquest.

24 December, 1898.

T. L. BATES.

BODY found in East Greta this morning very much decomposed. Inquest will open this afternoon. Mr. Inspector Bates now at East Greta.

24 December, 1898.

JOHN DIXON.

For Minister's information. The inquest has been adjourned to Wednesday, the 4th proximo. I have asked the Crown Solicitor to see that the Department is represented.—D.McL., 28/12/98. Approved.—J.C., 29.

No. 15.

The Under-Secretary for Mines and Agriculture to The Crown Solicitor.

Subject:—East Greta Colliery Accident.

Sir,

Department of Mines and Agriculture, Sydney, 28 December, 1898.

For your information, I have the honor to send herewith all official papers bearing on the fatal accident which happened at the above colliery on 18th November causing the death of three miners, [see Appendix X]; also the Inspector's reports on the colliery since August, 1897.

The Chief Inspector of Coal-mines hopes to be able to call at your office on Friday or Saturday next to discuss the points which require to be brought out at the inquest.

I have, &c.,

D. C. McLACHLAN,
Under Secretary.
(Per H.B.S.)

No. 16.

Extract from *Newcastle Herald* containing Reports of Inquest on body of Albert Moncrieff.

[*Newcastle Herald*, 26 December, 1888.]

THE EAST GRETA COLLIERY DISASTER.

THE INQUEST OPENED.—GRONOW'S BODY FOUND.

MR. MARTIN, of Newcastle, opened an inquiry at the colliery surgery, East Greta, on Saturday afternoon into the circumstances attending the death of the man whose remains were recovered from the tunnel at the colliery on the previous evening. A jury of twelve was empanelled and sworn in, and evidence of identification was given. Mr. T. L. Bates, colliery inspector, represented the Mines Department, and Mr. James Curley, Miners' General Secretary, was present in the interests of the relatives of the three victims of the disaster—Moncrieff, Gronow, and Barnes.

Arthur Morrison, a wheeler, engaged at East Greta, deposed that he recognised the knife produced as the property of his brother-in-law, Albert, or Bertie, Moncrieff. He could not identify the body as it was too much decomposed. Moncrieff was 25 years of age, was married to witness' sister, and had one child—a daughter. Moncrieff was born in Sydney, where his mother resided.

Constable W. T. Doran deposed that he received the clothes of the deceased, also the corpse, from Constable Townsend. On searching the trousers pocket he found a knife, which was identified in his presence by the previous witness, and also by William Tiedeman. He had shown the clothes to the relatives of Barnes and Gronow, and they declared that they did not belong to them.

At this stage the Coroner announced that sufficient evidence for identification purposes had been given, and he issued a certificate for the burial of Albert Moncrieff.

After consulting the jury and Messrs. Bates and Curley, Mr. Martin adjourned the inquest until Wednesday, the 5th January, at the West Maitland Court-house.

On Saturday most sensational rumours were circulated in town concerning the alleged finding of the bodies of the three victims of the disaster, and telegrams were sent to all the immediate relatives of the late Daniel Gronow, informing them that his body had been found. Needless to say, unnecessary grief and pain were given the bereaved relatives when it was discovered that only one body had been recovered.

The members of the four exploring parties, encouraged by the recovery of Moncrieff's remains, redoubled their previous efforts on Saturday, and at about 10:40 p.m. discovered a body on the floor of the tunnel between two sills. It appears that they had forged their way right over the body before they realised that it was beneath them. After about an hour's work they had the *debris* cleared, and the body prepared for removal to the surface. The body was lying between the middle of the road and the right side of the tunnel. It was on its left side, with one leg extended down the tunnel, and the other bent up towards the body, which was inclined towards the centre of the road under a steel rail. The body was facing down the tunnel, and the head was drooping towards the breast. The left arm was stretched down the tunnel, and the right rested on the body. The head was close to the upper sill. Just above the sill, at his feet, Gronow's clock, which was of the one-day Bee pattern, was found, uninjured. It had evidently continued going after the fall of conglomerate, which occurred



ALBERT MONCRIEFFE.

at 7:5 a.m., as the hands pointed to 1:20 p.m. when the clock was found. Gronow always kept his change clothing in a small bag, which he usually left above where he was working in the tunnel. This bag was found above the sill at the head of the body. The panel in which the remains were found is 20 feet from the bottom. A number of iron rails and some heavy timber extended from sill to sill over the body, but did not press on it.

The members of the shift who discovered and unearthed the body were George Price, Samuel Searston, John Tiedeman, Jack Jones, Phillip Degail, Herbert Davis. The men who completed the preparations and removal of the body to the surface were Dan Genge, Herbert Genge, Frank Genge, James

James Henny, John Lishman, J. Farnham. During the progress of this sad and necessary work Mr. R. St. V. Heyes, colliery engineer, Mr. Dave Lewis, deputy, and Constable Townsend were present in the tunnel. The body was not so much decomposed as that of Moncrieff, but the features were beyond recognition. Owing to the peculiar formation of the teeth in the upper jaw the relatives had no difficulty in identifying the body as that of Daniel Gronow, leader of the ill-fated shift.

Yesterday morning Dr. R. G. Alcorn, Government Medical Officer, examined the bodies at the colliery surgery, and failed to discover any fractured bones. He expressed the opinion that death probably resulted from shock to the system and suffocation. There could be no doubt, in view of the great mass of débris over them, that the men died almost instantaneously.

There was a sad scene at the surgery when Gronow's aged father and younger brother viewed the body for identification. The poor old man was warned by Constable Doran that the sight would be a terrible one, but he insisted upon being allowed to see the body. The constable permitted him to enter the room for a few moments only. He bore himself bravely while viewing his son's corpse, but completely broke down when he retired from the room.

The funeral of the late Bertie Moncrieff took place yesterday afternoon, moving from the colliery surgery at 1 o'clock for the Church of England cemetery at East Maitland. Although the funeral was held at a very inconvenient hour, it was well attended.

During the five weeks that have elapsed since the date of the disaster, the colliery officials, Messrs. A. Thomas (manager), R. St. V. Heyes (engineer), and H. Cartwright (under-manager), have been in close attendance supervising the work of exploration in the tunnel. Yeoman service has also been done by one of the deputies, Mr. Dave Lewis, who was always ready to lead the shifts where danger had to be faced. His many friends will regret to learn that the severe strain to which he had been subjecting himself had the effect of preventing him from taking his usual position at the tunnel.

West Maitland, Monday, 1-17 a.m.

The exploring party were engaged for several hours timbering below where Gronow's body was found, and it is expected that they will finish about 3 o'clock a.m. When this necessary work of precaution is completed, the party will resume the work of exploration.

[*Newcastle Herald*, 5 January, 1899.]

EAST GRETA COLLIERY DISASTER.

OPENING OF THE INQUEST.

THE inquiry into the circumstances concerning the death of Albert Moncrieff, one of the victims of the East Greta disaster, on the 18th November, was resumed before Mr. Martin, Newcastle District Coroner, and a jury of twelve, at the West Maitland Police Court yesterday morning. Mr. J. V. Tillett represented the Crown Law Department. Mr. Millard appeared for Mr. Thomas, manager of East Greta Colliery; Mr. F. A. S. Bowden for the East Greta Coal Company; Mr. James Curley for the relatives of the victims of the disaster; and Sub-inspector Fowler for the police. Messrs. A. A. Atkinson (Chief Examiner of Coal-fields) and T. L. Bates (Colliery Inspector) represented the Mines Department.

Robert George Alcorn, a duly qualified medical practitioner, residing at West Maitland, deposed that he examined the body of Albert Moncrieff. The body was in an advanced stage of decomposition. He came to the conclusion, from information received and from the examination made, that death was caused primarily from shock and suffocation. He was almost certain that death was instantaneous. There were no bones broken.

Ada Emily Moncrieff deposed that she was the widow of Albert Moncrieff, and identified the singlet and trousers produced as her husband's. She did not see the body of her husband after death. She had one child—a girl, Evelyn May—aged 7 months.

Azariah Thomas, manager of the East Greta Colliery, residing at Mount Dee, West Maitland, deposed that he instructed certain work to be done in a part of the pit. The work was let to David Lewis, Joseph Thompson, John Griffiths, and Daniel Gronow, on an understanding that they should make good wages at driving or sinking a tunnel, or what he would call extending No. 1 tunnel. He was to see that it was done to his satisfaction, and he was responsible for the work being done well. The work was done by continuous work of three eight-hours shifts, and the five extra men required were engaged by witness at the mine, and transferred to the tunnel as necessity occurred. He did not tell them what the strata was composed of, as he understood they knew themselves. He considered everything was perfectly safe there, and that the work of cutting through was safe for them. He did not go there every day, but when he did go he was satisfied with the work. He was deceived in the thickness of the conglomerate in that part where the accident occurred. He never found a thickness of conglomerate less than 50 to 60 feet at right angles. He considered that to be the average thickness where the men worked. The men never asked him about the safety of the tunnel.

To Mr. Tillett: The work was commenced from the lower level. They commenced to clear the old sump out on the 22nd June, 1897, preparatory to proceeding with the driving, and had got nearly to the end of the job when the accident occurred. The fall occurred 127 feet from the lower level, and 260 feet from the face. The tunnel had passed the place where the fall occurred some months previously. He went through the tunnel many times, and did not see any indications where the fall occurred. He did see indications in other parts of the tunnel, about 40 yards from the face. He noticed pressure on the timber there. The caps were bending, but that did not indicate to him a change in the roof. He did take precautions to examine the caps, but as they were not considered dangerous the timber was not strengthened. The same timbering was not maintained right through the tunnel, because they considered that the greater the depth the stronger the timbering should be. He was last in the tunnel on the Tuesday before the accident, which occurred on the Friday. That was one of the occasions on which he noticed the pressure on the roof. No complaints whatever concerning the roof had been made by anybody. He heard of none. The men were not to make, if they worked to his satisfaction, less than miners. They were paid at per yard, and extra for anything extra asked for. They had not to do the work in a certain time. No time was fixed. There were to be three in each shift. The four men were to have assistance if required, and the assistants were to be paid out of a lump sum. There was no written agreement. Under General Rule 4 of the Coal Mines Regulation Act, the four men—Lewis, Thompson, Griffiths, and

Gronow—were appointed as competent persons to make the inspections as required by the rule. Before they were paid the work was measured up, and they were supposed to settle with the others. He considered he was responsible for the wages of the other men. The model produced would show how the timbering was done in the tunnel. He also produced a tracing, showing the position and dimensions of the tunnel. The props and caps were from 8 to 10 inches in diameter, with a minimum of 8 inches. The sets were placed 5 feet centres apart, and were slabbled over the roof, by the sides, and under the sills. The slabs were 6 feet long, 2½ inches to 3 inches thick, and from 6 inches to 9 inches wide. The height of the tunnel from the top of sill to bottom of the cap was 10 ft. 6 in., and the mean width 12 ft. 6 in., or 12 feet at the cap and 13 feet at sill. The timber which fell had since been taken out, and some of the caps were found broken. He could not say whether those caps showed signs of having been bent before they were broken.

To Mr. Atkinson: The timber used was ironbark for sets and ordinary hardwood for slabs. The sills and caps were let into the sides. The caps were 15 feet long, and there was 15 inches outside of the prop on each side. They were let in from 8 to 10 inches. The sills were 16 feet long, and were let into the coal. They avoided the roof. The floor was moderately soft, and became softer from wet and exposure. The timber used was newly cut. It was not seasoned timber. The props were mortised into the sills and caps about 4 inches deep. The timber above the lower level was of the same dimensions, but the sets were farther apart, being 8 feet centres instead of 5 feet. He had occasion to renew some of the sets above the lower level some years ago, but not recently. The sills breaking rendered this renewal necessary. There was very seldom any fracture of caps or props. All pressure came from below. This pressure was probably due to the expansion of the floor by exposure to water and air. All timber for some time used was ironbark. He could not compare it with other timber, as he had used it almost exclusively. He had used, recently, as miners' props, ordinary hardwood. He had no fall previous to the late one in any part of the mine to indicate that the conglomerate had disappeared. The conglomerate at the lower levels was proved at 7 feet thickness at right angles. He did not know how much more it was proved. The station, under General Rule 4, was on the surface. The men commenced work on a Monday at 7 o'clock. David Lewis made the examination before they commenced work on Monday morning, and then took the night shift at 11 o'clock. He made a report every day in writing. None of the other men made a report. Reports on the condition of the tunnel were made every week by the engineer, under General Rule 5. The engineer's inspection had regard to the condition of the timber and other things. No defects had been reported by the engineer. There were refuge holes made in the tunnel at intervals of 20 yards. He did not know if any of the intervals exceeded 20 yards. The last refuge hole should have been made on the night of the disaster, within 10 feet of the face. It was generally instructed and understood that the refuge holes had to be cut at every 20 yards, and to be made immediately after securing the bottom corner of the intended manhole. None of the deceased were found in the refuge or manholes. They were found in the tunnel. All manholes found below the débris were completely blocked up. The tail end of the débris was 130 feet from the face of the tunnel. Under General Rule 39 the workmen did not make any inspection of the whole mine. He would estimate that caps he saw bent were bent from 2 to 3 inches. They did not require renewing, but would require strengthening ultimately. No strengthening was required below the lower level.

To Mr. Curley: He had a copy of the Special Rules of the colliery. Before the work was commenced he had an interview with the four men separately. He saw Lewis first, and told him he would like him and his party to take the work, as they had done a similar work so satisfactorily. They conversed about terms, and it was agreed that they should have a certain price, which he considered would be sufficient for them to make good wages, provided the ground proved the same as it did at the commencement; but should it alter and become worse he would give them more, and see that they would get wages equal to the miners. The price agreed upon was £3 19s. per yard. Nine men were engaged; three in each shift. He engaged all men at the colliery, and engaged all the nine men working in the tunnel. Before they began the work at the tunnel they were working at the East Greta Colliery in a general way. The assistants, that is those five men working, with the four who had the job, came to him and asked to be transferred from the mine to the tunnel, and he gave them permission. Moncrieff and Barnes were assistants. He considered both men sufficiently practical to work as assistants. He could not tell how long they had worked in the mine. Moncrieff was onsetting in the No. 2 tunnel when he asked to be allowed to work in No. 1. Barnes was last engaged in No. 2 in filling coal from a miner. He did not regard his arrangement with the men as a contract. He would not call it a daily wage pay, but an arrangement satisfactory to both parties. It was a verbal, not a written, arrangement. There was nothing binding in any way. The payment arranged was carried out, and was satisfactory. He last noticed the bent caps on the visit previous to the one on the Tuesday before the disaster. He made no note of the date. He could not tell whether he went into the tunnel once a week or once a month. The report books were kept at the colliery office, and were either examined by him or read to him. He saw nothing in the report books about the caps being bent. He did not consider it of sufficient importance to find the matter missing from the report-book. There were no extensive falls in the colliery prior to the disaster.

At this stage the inquiry was adjourned for an hour and a half.

On resuming, in reply to Mr. Curley, the witness, Mr. A. Thomas, deposed that he believed the tunnel was inspected by David Lewis on the night prior to the morning of the accident. That was previous to the deceased men entering the tunnel. He believed the three were working at the coal face that night, but one should have been making the manhole. Thompson and another man worked with Lewis on the shift timbering nearly all the time. Lewis and his men worked at the face when they were not timbering. Griffiths and Gronow, as well as Lewis, inspected the tunnel in the ordinary way. Griffiths and his men worked at the face. He considered it was complying with General Rule 4 for those men working at the face to be inspectors. He appointed them to inspect, but had no record of the appointment. He had some knowledge of the thickness of the strata overhead at the colliery. It could be seen on the surface. Some years ago he had a place driven from the lower to the upper seam off No. 1 level in the same tunnel, and that gave him an idea of the thickness, which was from 50 to 60 feet at 212 feet perpendicular from the surface. He had never seen it of a less thickness at the colliery. It was hard and strong. He had no knowledge of the stratification of the Maitland Colliery. They had no slow movements coming down and crushing pillars. He attributed cracks in the surface of the ground to subsidences after removal of pillars. The cracks occurred in old workings. From surface indications there was subsidence. He knew of no fall there. In No. 2 tunnel they

they had some floor upheavals. They had not done much extra work in the way of timbering since the disaster—not more than usual. He had the inspectors there. They drew his attention to the deeper workings and to the timbers and pillars. They advised him to use more timber in the mine, having regard to the altered state of the roof as revealed by the fall. They suggested that larger pillars should be left in the lower working. He had some communication in writing from the inspector, and was willing, with Mr. Atkinson's consent, to produce it. [*The letter was read, and, at Mr. Curley's request, was put in as evidence.*]

Mr. Bates was the inspector who usually inspected the colliery, but he never drew attention to anything of a very serious nature. He did make suggestions regarding the fencing of the machinery, and of the opening of the tunnel; also regarding ventilation, methods of signalling, security of roof in No. 2 tunnel on No. 1 level. He did not suggest that new timber should be put in. He drew attention to some timber broken by floor-pressure about two months ago. Attention was also directed to some timber in No. 2 level of No. 2 tunnel, showing evidence of pressure, two or three weeks ago. He did not suggest that more timber should be put in there. He sent no written communication about the matter, nor about any defect in the colliery. He had no objection to the men having two inspectors from their number, under Rule 39, as regards examination. He had never asked them to do it, nor to exercise the privilege. The face where the men were working at the time of the disaster was 387 feet away from any opening branching off the tunnel. A parallel drive was started, and was being worked by another gang of men at the time of the disaster. The depth the men were down gave him no anxiety as to their safety. The fact of the tunnel being near its present destination did not influence him in any way with regard to ordering additional timber to be put into the level. The fact of the inspector having drawn his attention to bent caps in other parts of the mine had no influence with him in attempting to get more timber into the tunnel before he considered it was required. He could not say how much coal, &c., came out in a shift, and the men placed no token on the tubs. No information was needed of that nature. The weighman could not tell. Gronow, Moncrieff, or Barnes never at any time complained of broken timber or of danger in the tunnel.

To Mr. Millard: He could have stopped the sinking of the drive at any time he wished. There was no agreement that they were to sink so many hundred feet in a certain time. The same four leaders had sunk the drive in No. 2 tunnel, and the pay was satisfactory to them, and the work to him. The rate of pay paid in No. 2 assisted in arriving at a right figure for No. 1. The leaders had good experience of the kind of work to be met with in the tunnel, and were well qualified for it. No ordinary miner, unless experienced, could do the work. He knew of no men anywhere better qualified to do the work than Lewis and his three mates. He could produce a general plan of the working of the colliery. [*The plan was produced.*] The seam at No. 1 tunnel was at an angle of from $45\frac{1}{2}$ to 47 degrees. In No. 2 tunnel the length was 1,132 feet. Both seams crop out at the surface, and owing to the inclination the seams crop out close together. The stratum between the two seams is composed of conglomerate. As they drove No. 2 tunnel they found the same conglomerate roof, and had no indications prior to the fall of the conglomerate having thinned out. From indications in other places he found this conglomerate associated with the seam in the roof. When prospecting for the crop, the conglomerate was the indicator to where the seam lay for many miles from East Greta Colliery. It was a very hard conglomerate, and was very expensive to remove. It was an excellent roof for a coal-mine, having strength and cohesion. When working in No. 1 tunnel there was no indication of the conglomerate thinning out. At the seat of the big fall the top end of the conglomerate showed from 2 feet tapering to 2 inches and back to 2 feet at the bottom of the fall. Thirteen feet above the roof there was a band of conglomerate 2 feet thick, and a few days after the first fall this band also fell. Between this band and the band on the roof, and also above it, was mudstone, a soft weak substance. From what he had seen since the fall, he was of opinion that the mudstone and the very thin shell of conglomerate fell suddenly. From the top of the fall water is now coming. There was a subsequent fall on the 26th November, which proved 2 feet of conglomerate with mudstone above it. Very little of the roof lower down was broken. The place where he saw the caps bent was away from the fall, and they were still in the tunnel, only bent more. There was no timber bent at the seat of the fall. Pressure from below would bend the caps. The floor was a soft stuff, of the nature of fire-clay. The seam was about 10 ft. 6 in. thick in No. 1 tunnel. The tunnel was about 13 feet high when excavated. The fact of the timber being to a certain extent green was in its favour. He knew of no better timber that could be got than that which he used. It is recognised as being the best timber for strength and durability. The particular manner in which the tunnel was timbered has been recognised as the best. He went down the mine almost daily. He had been at No. 2 level several times a week, and from there the tunnel was straight, so that he had a good view to the face, and frequently held a conversation with the men below. In his opinion the cause of the accident was the change of roof, which was not apparent from the usual conglomerate to a soft mudstone, that being in a big pothole in a strong conglomerate roof, from which it shelled away.

At 4:30 p.m. the inquiry was adjourned until 10:30 this morning.

[*Newcastle Herald*, 6 January, 1899.]

EAST GRETA COLLIERY DISASTER.

THE inquiry was resumed at the Court-house, West Maitland, yesterday morning, before Mr. Martin, Newcastle District Coroner, and a jury of twelve. The following gentlemen were in attendance at the solicitors' table:—Messrs. J. V. Tillet, Millard, F. A. S. Bowden, Jas. Curley, A. A. Atkinson, and T. L. Bates.

The Coroner announced that he would not be able to sit this morning.

Continuing his evidence, which was interrupted by the adjournment on the previous evening, Mr. Thomas, manager of the East Greta Colliery, in reply to Mr. Millard, said he knew of no reasonable precaution not adopted by him that could have prevented the accident. The place where Mr. Bates drew attention to timbering was at the other side of No. 2 tunnel, and 28 chains from the seat of the fall. As No. 1 tunnel was cut no coal was worked on either side, so that extra strength was given to the roof. The pressure which caused the timber to bend in No. 2 could not possibly have caused the accident in No. 1 tunnel. The conglomerate has been standing between the surface and the top level without timbering for over seven years, and is still good and strong. There was no one in the colliery whose inspection

inspection of the tunnel would have been better than that made by Lewis, who worked for witness in the old country, and was skilled in that class of timber, and in timbering in mines with very bad roofs. That was in South Wales, in a mine 3,000 feet from the surface, and with the worst roof in the world. The caps and props were carried away by the fall, and only the sills remained. Probably 100 tons of stuff went down in the first fall, but it continued falling for days. After the fall the last set standing was made secure, and every effort was made, with safety of those working in rescue, to recover, if possible, those below before death. No expense was spared in the work of rescue. Four gangs of six hours' shifts each were engaged, and he was assisted by the advice of other colliery managers and Government inspectors. In the general working of the mine the amount of timber used was left to his discretion. He held Colonial certificates under the Act, and certificates of competency under the Imperial Act. He served his time as a mining engineer after receiving his certificate, and had experience in working coal at an angle in America and in England.

To Mr. Bowden: He had been over seven years with the company, who had never restricted his expenses at the mine. He selected the timber, which was dressed at the surface of the mine, and was seen by the Government inspectors, who, if not satisfied with, it would have condemned it immediately. The timber when put in was in the best condition. The timber removed after the accident was in a perfectly sound condition, and could be seen by the jury at any time. He believed the Government inspector went down the tunnel when it was in course of construction. The inspector did not find any fault with the timbering in the tunnel, or make any suggestions concerning the same. Where the inspector drew his attention to bent timber he had previously had the place strengthened. Whenever the inspectors did draw his attention to anything he did attend to it. The tunnel was intended as a permanent job, and any break in it would incur extra expense, so that he endeavoured to make it extra strong, as it was intended to be the main artery of that portion of the mine. It would have been a false move to have been economical with timber.

To Mr. Millard: When they continued down the extension in No. 2 tunnel they had a conglomerate roof right through.

To the Jury: The parallel drive would have been a safety to the men going in and out after its completion. The tunnel was thoroughly ventilated. When driving the tunnel under the seat of the fall no false sets had to be removed.

To the Coroner: No mention was made to the four men of the distance it was intended to drive the tunnel, as the distance would depend on the dip.

To Mr. Curley: Occasionally the top coal had been worked, and he had known bits of the roof to fall after the tops were removed. It fell after the timber was pulled out. He had known some to fall behind miners. It did not occur in more than one in ten of bords where they were working tops in. At present they had no tops to work, but would work them when it was safe to do so. It would be dangerous to work tops where there were bad roofs. They worked bords of 8 yards at the outside, and pillars from 5 to 11 feet. Mr. Heyes, colliery engineer, gave him intimation of the accident at about 7:30 on that morning.

John Jones, a wheeler, engaged at East Greta Colliery, and residing at East Greta, deposed: That he knew the three deceased men, and also that the inquiry was being held concerning the death of Albert Moncrieff. He was working in the jig just off No. 1 tunnel on No. 1 level on the morning of the disaster. Mr. Cantwell and his son Thomas were working with him. He saw the light in the tunnel at 6:35 a.m., where Moncrieff was working at the face. He called out to Moncrieff, who replied. He went down the jig to work, and between 5 and 10 minutes to 7 heard a noise like thunder. He went towards the tunnel, as he was startled, and heard the noise of falling stuff. He called out to those on top that the tunnel was falling in, and asked them to send the "alligator" down. He called the names "Moncrieff," "Gronow," "Barnes," and got no answer. The Cantwells clambered up the tunnel, and he remained at the level. He also helped in the search for the bodies, and found Gronow and Moncrieff. They found Moncrieff with his face to the slabs, and Gronow just below Moncrieff's, on his side. He was working at the colliery two years, but had never been below the level in No. 1 tunnel before the fall. Where he had worked the roof was composed of coal and conglomerate. He had only seen little indications of the roof working. He had noticed timber bent, but not broken. He thought it was a safe roof, or he would not have gone into the tunnel. He never heard any of the men complaining of the roof.

To Mr. Atkinson: He went to work at 11 o'clock on the Thursday night before the fall. He went down with Moncrieff to work, but had no conversation with him. In the bords in the steam jig of No. 2 tunnel he had seen a soft stone fall with the conglomerate. That was a long way from the fall. He remembered no falls nearer to the big fall. He never saw any falls of roof in the model jig when he worked there. The jig he was working in on the day of the disaster was 40 yards from No. 1 tunnel. He was working 30 yards from the level, and coal was left in the roof nearly the whole way. He thought the seam was 8 or 9 feet thick. He had a copy of the Special Rules.

To Mr. Curley: He never saw broken timber above or below the fall before the fall occurred. The caps he saw broken after the fall were broken in halves. He occasionally heard cracks and shakes in the levels and bords, but they never came to anything. That was at the other side of No. 2 tunnel. He could not say whether they were cracks from wood or coal. He noticed the coal a bit loose sometimes on the pillar sides about three months ago in No. 2 tunnel. He never noticed any timbers broken. In different parts of the pit he noticed caps bent. He never heard any of Griffiths' or Thompson's parties complaining of the roof.

At this stage the inquiry was adjourned for an hour and a half.

On resuming, at 2:30 p.m., John Jones, in reply to Mr. Millard, said he knew conglomerate when he saw it. With the conglomerate in the last fall there was some ironstone and some soft stuff. He saw the soft stuff in the mine before lying along the roads in the levels. It might have come from the roof. It was of a whitish colour. It was of a pebblish nature. He never noticed any of the soft stuff without the pebbles in the mine. He never saw any of this soft stuff in the roofs where the falls occurred after removal of props. The stuff there was a white stone. At 6:35 a.m. on the morning of the disaster, when he was at the level, and when he heard Moncrieff reply "Hulloa" to him, everything was all right. When he heard cracks and shakes in the mine he never reported to the manager or under-manager. The cracks he heard did not indicate danger. He had two years' experience in the mine, and other experiences at Home.

To

To the Jury: The white stuff he saw in the bords above where the conglomerate fell was sandstone. He never heard of Moncrieff saying anything to anyone about the roof. He could not say if Moncrieff and his mates would take the fall in the tunnel for the sound of coal falling into the alligator.

David Lewis, a miner, residing at East Greta, deposed that he was employed in the East Greta mine for about four years, and on the date of the accident was engaged sinking the No. 1 tunnel from the lower level. He was on the shift relieved by deceased. Thomson and Weller were with witness. The job of sinking the tunnel was between them. No distance was mentioned, as the manager could stop them at any time. They were to be paid by the yard, and were to be paid extra if there was extra trouble, so as to get fair wages. They had to do the timbering as well as driving. Nine of them were employed, three in each shift. Four of them took the job, and there were five assistants. The assistants were paid by the four, and were paid a daily wage. Those five were not included in the arrangement with Mr. Thomas of getting a daily wage. He was one of the deputies, and made his last inspections at 10.30 and after 11 p.m. on the Thursday night before the accident. He entered the report in the report-book at the office some time after 12 o'clock that night. The deceased men were then at work. The result of his inspection was that he believed all was safe. He inspected the roof right through the tunnel, and saw no indications of danger. A few sets were bent at the caps about 40 yards from the face. He did not consider these sets dangerous. He had seen those caps slightly bent on previous occasions. The sills might have risen and bent the caps. He never saw a move in the roof of No. 1 tunnel. He had seen no other falls or movement of roof in any other part of the mine.

To Mr. Atkinson: He was appointed a deputy about the end of June or the beginning of July, when the No. 1 tunnel was about to be extended below the lowest levels. He had a copy of Special Rules, and had read the "duties of deputies." He never had occasion to report any danger or defect. There was nothing dangerous to report. His inspection included No. 1 tunnel as far as the dam, but not the back place or the parallel jig. On the Monday before the accident, as on every Monday, he went to work at 4.30 a.m. and stopped until the men went to work. He examined No. 1 tunnel each Monday morning thoroughly, and made reports in the book at the office. No workman ever asked to be allowed to see the report-book. If they had done so he would have allowed them. Where the caps were bent the pressure in the floor would cause the caps to bend first, if the end of the caps were not tight. There was no space left between the slabs on the caps and the roof. He had no occasion to renew any of the sills in that or any other tunnel. The caps would be bent about 3 inches. Some sills were bent a little at the same place. Pressure from the floor and slight pressure from the sides would cause them to bend. He would not expect to get much side pressure in a single drive. He had seen no evidence of the coal being off the sides. In his capacity as deputy he did not think such bending of sufficient importance to discuss it with the manager. If he had seen similar bending in a sinking shaft he would consider it necessary to report it. In the No. 1 tunnel he did not deem it necessary, because he did not think there was the least danger of the timbers giving way. In consequence of illness after the second body was recovered he was prevented from knowing exactly where the body of Moncrieff was recovered. He never thought it necessary to ask for more timber or stronger timber to be put in. It required three men to fix a set. It would cause no inconvenience to fix in timber of a larger diameter. He was at the tunnel seven or eight minutes after the fall, and he went down with Messrs. Thomas, Hayes, and Cartwright to the edge of the fall. He shouted out to the three men below, but got no reply.

To Mr. Curley: When he made the reports on the Monday morning he returned the same night for another inspection. He commenced work at 11 p.m. on the Monday night, and worked eight hours. Some weeks he began work at 3 p.m., when another shift would come out. He inspected for the first shift at 4.30 a.m., and went home when the shift went to work at 7 a.m. He returned at 3 p.m. with his own shift, and made his next inspection before the 11 p.m. shift. He would make another inspection at 1 a.m. on the Tuesday morning, and that was sufficient on his part for the 7 a.m. shift. The other leaders had to inspect as well. He did not report in a book. When he started as deputy, Mr. Thomas told him to examine the tunnel and report every morning in the book at the office, and if he saw any sign of danger to withdraw the men and report at once. In the book produced, his first report appeared on 1st September. He made a mistake in saying it was in June or July. He worked at the coal face with one shift, but most of his time he was timbering. He very rarely got coal. He never noticed any breaks or falls in any other part of the mine. Gronow never spoke to him about the bent sets. He drew Thomson's and Weller's attention to the bent caps in a casual way. He did not remember the time. He never thought of placing other sets in where the caps were bent. When the work was commenced he was instructed to have sets 5 feet centres apart, and could have put others even less than 5 feet apart. It was left to him by the manager. If he saw there was the least danger in the bent caps he would have strengthened the caps. In the absence of the manager, he gave official orders to the other men in the tunnel. In a fortnight they took from 9 to 12 yards of stuff out of the drive. He did not consider it singular that he did not report the bent caps to the manager, as he did not believe there was any danger.

[*Newcastle Herald*, 11 January, 1899.]

THE EAST GRETA DISASTER INQUIRY.

THE inquiry into the circumstances connected with the death of Albert Moncrieff, on the 18th November, 1898, in East Greta Colliery, was resumed yesterday morning, at the West Maitland Court-house, before Mr. Martin. Mr. J. V. Tillett represented the Crown Law Department. Mr. Millard appeared for Mr. Thomas, Manager of East Greta Colliery; Mr. F. A. S. Bowden for the East Greta Coal Company; Mr. James Curley for the relatives of the victims of the disaster; and Sub-inspector Fowler for the police. Messrs. A. A. Atkinson (Chief Examiner of Coal-fields) and T. L. Bates (Colliery Inspector) represented the Mines Department.

David Lewis, continuing his evidence, in reply to Mr. Millard, said that the roof generally in the mine was conglomerate. Before the accident he never saw any sign of that conglomerate running out or ceasing. The conglomerate continued all the way down No. 1 tunnel. The stuff that came through at the fall was a sort of a mudstone, a soft stuff. Before the fall he had never seen any sign of that soft stuff in the roof. There was no indication that would lead him to suspect the presence of mudstone there. Conglomerate made a good roof. It was a hard conglomerate. He got the extra depth by cutting out of the

the bottom, it being softer than the roof. In some places he cut into the roof, perhaps from 1 to 4 inches, and always found it very hard. He had some experience in cutting drives of that description, but not of exactly the same angle. He had experience over thirteen years in timbering. The system of driving and timbering in No. 1 tunnel was the best. He was stinted in no way for timber. The arrangements for wages worked satisfactorily. The place where he noticed caps bent was about 40 yards from the face, and not at or near the seat of the fall. So far as he could judge, the force which bent the caps was not the same as that which caused the fall. Had he strengthened the caps that were bent, it would not have prevented the fall. In his opinion, the bent caps gave no indication of what was the real danger. The caps under the fall must have been broken by the fall. He made an inspection from two to four times every twenty-four hours, but only one that he reported. He made one inspection at the end of his own shift. He never saw any sandstone in the roof of the seam. Since the fall he had been working in the tunnel very long hours. He worked without sleep until his health broke down, just before the last body was found. Since then he had been very ill.

To Mr. Bowden: He could not say when he first saw the bent caps. They were put in about two or three months before the accident. They drove from 9 to 12 yards a fortnight. Those were the only bent timbers.

To the Jury: According to regulations he was only required to make one inspection in twenty-four hours. He had no special reason to make more than one inspection other than that he always considered it his duty to keep a look-out. His first report and others which followed showed that all was safe. The cap-piece between the props was 12 feet long. With the cap sagging 2 or 3 inches the pressure would still be on the props. Four of the caps were bent together, but that was no indication of something being wrong in the roof. He saw the inspector at the top of the tunnel once. He could not say whether he was there oftener, because he (witness) mostly went down on the 11 p.m. shift. His mates never told him that the inspector was down the tunnel. His shift put timber in when sufficient coal was removed. When there was no room his shift would slab the bottom some sets back. When there was no timbering or slabbing to be done his shift worked at the coal.

To Mr. Bowden: It was his duty to maintain constant supervision over the tunnel. The timbers which he noticed bent were there still, but were broken since by the weight from the roof. That place was retimbered since.

To the Jury: When he inspected the caps before the accident they were bent, but after the accident they were broken. It took him about half an hour to inspect the tunnel.

To Mr. Curley: Thompson and Weller worked on his shift. The skip he went down in moved slowly. He never timed it.

To Mr. Millard: The bending of the caps was caused by the floor. He had experience of caps bent by the floor in other parts of the mine. There was a sort of swelling in the floor.

To Mr. Tillet: The caps were bent before the accident by the pressure from the floor, and were broken afterwards by the fall.

Thomas Cantwell, a wheeler, residing at East Greta, deposed that he knew Albert Moncrieff.

To Mr. Tillet: He was working in the lowest level in No. 1 tunnel with his father and Jones. He was working on the level. He went to work at 11 p.m. on the 17th November, and the three deceased went down with him. During the shift, at 6.30 a.m. on the 18th November, he called out to the men below for the "alligator," and they replied, "You can have it directly." After that he got the "alligator," filled it, and sent it on top. After that it went down to the deceased men, who filled it, and it had not reached the top when the fall commenced. He was about 5 yards from the tunnel in the level, and stepped back a few yards, because he thought the "alligator" had broken away. He then went in towards the jig, and met his father. His father, Jones, and he came out. Jones and his (witness') father shouted down to Moncrieff and Gronow. They then rapped for the "alligator." He also called on top for the "alligator," but it did not come down. He and his father then walked up the tunnel. He was working for five years in the mine. He had seen small falls in the mine in the old levels. He noticed movements in the roof of the steam jig bords, where the roof was of coal, but never reported it. He never heard of complaints of the dangerous nature of the roof from other miners.

To Mr. Atkinson: He worked in the back drive, or parallel jig, off the bottom level, before the accident. All the coal was not being worked. Some portion of the seam was left next the roof. He had no opportunity of seeing what the roof was there, except in one spot at the top of the jig, where it was pebbly conglomerate. The coal next the roof in the back drive stood well. Prior to the accident he had never been below the lower level in No. 1 tunnel.

To Mr. Curley: He noticed the roof down in the steam jig. It was a sort of white sandy stone, with little pebbles in it. It had fallen when he noticed it, and was mostly in fragments. The width of the level where he saw this was 9 or 10 feet. It had fallen out between the bars or cap-pieces. The bars there were 6 or 7 feet apart. It fell during daytime, on a shift in which he was working. About a couple of skips fell. Skips carried half a ton. He saw such falls on more than one occasion. They stopped work while it was cleared away. It would leave a space of a foot or 18 inches in the roof. He noticed no retimbering there. None of the deputies went in to see it. He did not know who the deputy was. It occurred two or three years ago. The deputies could see the stone on the side of the road. They used not to report such falls. Mr. Thomas was the manager of the colliery at that time. He noticed coal working about six or seven months ago in the steam jig in the bords. He saw some timber bent and broken. He saw much timber broken. The props were in some cases bent, and in others broken in three bords. The bords were about 9 yards in width. He did notice coal shelling off the pillar sides, sometimes five or six skips. He did not see top coal fall out. There is no board at the outside of the tunnel; no deputy's board. He had seen roof down in different places at different times in "slippery" level, and in the old bottom level. It fell between the timber in the "slippery" level, and in a similar manner in the old bottom level. The stone was damp in some places. It was not soft, but crumbled. He heard none of the deceased make any remark about the tunnel. He saw Gronow, Barnes, Moncrieff, and others at the mouth of the tunnel when they went to work. The last fall he saw occurred about two years ago. He had worked in No. 1 tunnel for three weeks before the accident. He never saw Lewis at the mouth of the tunnel at any time he went to work. He saw him of an afternoon coming up after they went down. During the three weeks he never saw Lewis standing at the mouth of the tunnel. They went down the tunnel on the "alligator" in about two minutes. For four years he had never walked in

or

or out of the tunnel. At the speed he went down in the "alligator" he could not have examined the tunnel very carefully. He would have time to see whether caps were bent, but he saw none. Where he saw the falls on the levels he also saw bent and broken caps.

At this stage the inquiry was adjourned for an hour and a half.

Cantwell resumed his evidence, in reply to Mr. Curley, at 2:40 p.m.: He had often conversed with the men down the tunnel, down which he had looked. He had seen bent caps 100 feet or more from the level. There appeared to be four or five. He noticed them a fortnight before the accident. They appeared about 9 inches below the others. He never heard the men talking about this matter.

To Mr. Millard: He never worked in any colliery other than East Greta. He was never lower down No. 1 tunnel than the level. At certain times, between a quarter and ten minutes to 3 in the afternoon, one could see down the tunnel nearly to the bottom. In the morning one could not see lower down than about 70 feet. He had worked four night shifts that week. He was 5 yards along the level from the tunnel when the accident took place. He heard no timbers straining before the fall, which took place quite suddenly.

To the Jury: He heard someone on the cricket-ground, two or three days before the accident, say they had heard some of the deceased complain of the state of the roof. He did not know who said it. The caps he saw bent were splintered on the under side. The noise made by the "alligator" might prevent him from hearing the cracking of the timber. He never saw any of the inspectors down the tunnel or in the new jig.

To Mr. Millard: If he saw anything dangerous where he was not working he would not report. He had never made any report. He had no idea a fall was going to take place.

To the Jury: He trusted to the deputy going round to see that all was safe. If the deputy said all was safe he would work then.

To Mr. Tillet: He read the Special Rules but he did not know Rule No. 70, which obliged anyone in the mine to report any insecurity in the roof, &c., to the person in charge.

To the Jury: He would trust to his father, who was working with him, to see that they did not stay in any danger.

Henry George Curtis, banksman, at East Greta Colliery, and residing at West Maitland, deposed that he went into work at 11 p.m., on the 17th November, with the three deceased men. He did not speak to any of the deceased after that, but got coal from them—several skips. He received the last skip at about ten minutes to 7 o'clock. He heard someone sing out, "The tunnel's falling in." He could not say at what hour. He ran and looked down the tunnel, and heard some one call out, "Send the alligator down, the tunnel's falling in." He sent the alligator down. He was four months at the colliery, and had never heard any complaints from the men about the roof.

To Mr. Atkinson: His duties were confined to the surface. He never at any time went down the tunnel. He could not say whether the signal for the pulling up of the last skip came from the level or from the face.

To Mr. Curley: The signal was in the engine-house. He could hear the signal at times. When the last coal was brought out he could not say what signal was given. He got to his post at the mouth of the tunnel at twenty minutes to 11 that night. He saw Moncrieff, Gronow, and Barnes go down the tunnel. The two Cantwells and John Jones went part of the way down. He saw no one else go in or come out that night. A board with signals on it was at the mouth. There was nothing else on that board but signals. When he got the report of what occurred in the tunnel, he sent the "alligator" down. John Jones was the first out of the tunnel, and he said the tunnel had fallen in. Witness sent some one to go and call Mr. Heyes, the engineer, who came to the tunnel about ten or fifteen minutes later. He (witness) had not been down the tunnel since the accident.

To the Jury: He had seen the inspector going down No. 1 tunnel, but how often he could not say.

John Downie, timberer, in East Greta Colliery, deposed that he was working in the jig alongside No. 1 tunnel at the time of the accident. He took part in the search for the bodies, and saw Barnes' body when it was found, lying on the left-hand side of the tunnel, standing or stooping on the last set of timber. The nearest manhole was twenty yards from him. They did not clear away the débris to the face. He was working in the colliery between three and four years. He was never down No. 1 tunnel before the accident lower than the bottom level. He never looked down the tunnel. He had known slight falls to take place in the roof along the levels. Conglomerate fell from the roof. It was not the same as the stuff which went down in the big fall. Conglomerate, ironstone, and mudstone were in the big fall. The falls in the levels occurred a good while ago, in the slippery jig. He noticed caps bent in the tunnel. They bent from the weight of the floor, but in some cases from the roof. When they bent from the floor the sills bent up also. The sets below the fall were broken in No. 1 tunnel from roof pressure. Before the fall he never heard anyone complain of the state of the roof, or timbering in the tunnel.

To Mr. Atkinson: The jig he worked in was parallel to No. 1 tunnel. He put the timber in there. The timber was under the coal. He had no opportunity of seeing the roof above the coal. Michael Byrnes worked with him on the shift. In the back drive the sets were put 6 feet apart. The timbers were 6 inches in diameter. The timbers seemed to stand in the back drive, and did not bend. Cantwell made no remark concerning bent caps in No. 1 tunnel. No one else did. When he recovered Barnes' body he could see the coal face. The body was about 6 feet from the face. From the position of the body it appeared Barnes got there for refuge. He did not see Moncrieff or Gronow recovered.

To Mr. Curley: The deputy or the underground manager always gave him his instructions to timber. Hoskings and Higgison were the deputies, and Cartwright was the underground manager. He was never told to do any special timbering in No. 1 tunnel. He was instructed to go to No. 4 bord, in Armstrong's jig, on the day of the disaster, to timber. The jig was in No. 2 tunnel. He had to timber the top rib, which was all broken away. That timber was set under the coal roof. A good amount of props had been broken there lately. They were broken from floor pressure, and in some cases from the roof. He had done a good deal of timbering in No. 1 tunnel from the fall to the face. Some caps below the fall were broken. Pretty well all caps from the fall to the face were broken. The timber was iron-bark. He never measured the distance the sets were apart. He had since put new sets in, and they were about 15 inches from the broken sets. Two sets were put between each pair of broken sets. He never knew of any extensive fall in the colliery. He did know of rails being bent by floor pressure. He had been sent to do some timbering in broken places—slight falls—along the level. The falls extended from

from 1 foot to 3 feet into the roof. The stuff that fell in those places was conglomerate. Slight falls had occurred on the bottom level on the Scotch heading side. He had done no timbering in the bords, and had seen no falls when they were taking the top out. Scotch heading was on the right-hand side of No. 1 tunnel. He knew of other deputies, Mr. Jowitt and Mr. Higginson. He knew of no others.

To Mr. Millard: He had worked in no other colliery. None of the falls were very near to No. 1 tunnel. Armstrong's jig was near No. 2 tunnel. He had nothing to do with the timbering of No. 2 tunnel.

To the Jury: The tunnel was slabbed all round. He never looked down the tunnel when passing into the level. He timbered all through the jig with the other shifts.

[*Newcastle Herald*, 11 January, 1899.]

THE EAST GRETA DISASTER INQUIRY.

THE inquiry into the circumstances connected with the death of Albert Moncrieffe, on the 18th November, 1898, in East Greta Colliery, was resumed yesterday morning at the West Maitland Court-house, before Mr. Martin. Mr. J. V. Tillett represented the Crown Law Department. Mr. Millard appeared for Mr. Thomas, manager of East Greta Colliery; Mr. F. A. S. Bowden for the East Greta Coal Company; Mr. James Curley for the relatives of the victims of the disaster; and Sub-inspector Fowler for the police. Messrs. A. A. Atkinson (Chief Examiner of Coal-fields) and T. L. Bates (Colliery Inspector) represented the Mines Department.

Edward Weller deposed that he worked at East Greta Colliery. He knew the deceased, Albert Moncrieffe, and was working in No. 1 tunnel on the 18th November in Lewis' shift. He left the tunnel at 11 p.m. on the night of the 17th November. He was timbering in the tunnel, fixing a set 5 feet from the face. He worked in the tunnel between four and five months. There was no fall of roof while he was working there. While timbering he had a good opportunity of noticing the roof, and had neither seen nor heard the roof working that night. He did hear the roof working at other times, but did not report it, as he did not believe it to be dangerous. He noticed caps bent about 100 feet from the face. There were cracks in them. He took no notice of it. Either the roof or the floor could have caused it. The roof was of conglomerate mixed with slaty stuff. The slaty stuff was soft to work. Sets were kept 5 feet apart right through, whether under conglomerate or under the slate. He had been in the tunnel since the fall, and the stuff that came out was a mixture of conglomerate and slaty stuff.

To Mr. Atkinson: He had no conversation with his mates about the bent caps. He did not remember mentioning it to any one. Some of the caps were cracked—split. They presented broken splinters on the bottom side of the caps. He had no idea of how much the caps were splintered through. The big fall took place where the caps were bent. He could not say how far the big fall was from the face. He had taken no means to find out whether the place where the timbers were bent coincided with the site of the fall. There were three or four bent caps. They were bent about 3 inches. The broken splinters were not of any great length. He noticed slaty stuff in the tunnel previous to the fall. There were spots or patches of it all the way down the tunnel. He could not say how much of the tunnel was made while he was there. He worked from the bottom of the sump. He had no conversation with his mates relative to the change of roof. He saw no danger in the bent caps. He remembered instructions being given for a manhole to be made. Gronow, Barnes, and Moncrieffe were given those instructions. His shift started the manhole. He knew it was his duty to report any defect in the roof or any danger of any kind.

To Mr. Curley: (*Witness showed by bending a pen handle how the caps were broken.*) He saw the caps bent six weeks before the accident. Lewis worked on his shift. He never saw a board placed at the tunnel mouth for notices, and never saw that any report was made on a board concerning those bent caps. He did not know how he located the bent caps with the seat of the fall. There were no distinctive marks to help him. David Lewis told him they were 100 feet from the face last Thursday. They were speaking about the case outside the court, and he asked Lewis what distance the bent caps were from the face. He noticed no other bent caps in the tunnel. Thompson also worked in his shift. Thompson did not mention the bent caps. He never saw Mr. Thomas down the tunnel. He did not see Mr. Cartwright there. Lewis went down with him to the face to work, and stayed the whole of the shift. They worked on the coal. Lewis never warned him to go out on account of danger. Neither Thomas, Cartwright, nor Lewis ever warned him. Lewis paid him his wages, 6s. 6d. per day. He worked in the mine just the time the tunnel was being driven, but worked on top before.

To Mr. Millard: The bent caps were above the water cask, but could be seen from it. David Lewis told him the big fall was 100 feet from the face; also that the bent caps were 100 feet from the face. That was how he knew the fall was at the place where the bent caps were. If the fall was 200 feet from the face the bent caps could not have been at the fall or in the position he said they were. He could see that the bent caps were 20 or 30 feet above the cask. He saw the soft stuff all the time they were driving the tunnel. The first 10 feet from the sump he thought was conglomerate. He could not say whether there was anything else but conglomerate in the first 50 or 100 feet. He only knew there were patches of the blue-stone right through the tunnel, but could not say where it began. He had to go up and down the tunnel very often to get timber. Lewis went with him for the big stuff.

To the Jury: He had experience in mining. He never noticed any danger in the roof. He worked in the Co-operative mine for three years previous to going to East Greta. Lewis never said anything to him about change or danger in the roof. He knew Lewis was appointed deputy to look after the tunnel, and depended upon him, if there was any danger, to withdraw witness from the tunnel. He never saw or heard of the inspector being down the tunnel. He was on the night-shift for a month before the accident. He would know the inspector if he saw him. He never saw a false set put in the tunnel. He did not know what a false set was. He never saw a set put in and removed. He did not consider himself a practical miner. The caps and posts were mortised and tenoned together.

To Mr. Millard: He would not have gone into the tunnel if he thought there was danger, even if Lewis said otherwise. The roof of the Co-operative Mine was of conglomerate and blue-stone.

To Mr. Curley: The water-cask was there to catch water coming down, and prevent it from going to the face. He used to go to the cask to empty it. He could not say how far the cask was from the face. It was down from the bent caps. The cask was, perhaps, about 80 feet from the face.

Josiah

Josiah Thompson, a miner, residing at East Greta, knew the deceased, Albert Moncrieff. He worked in No. 1 tunnel with Lewis and Weller, and went in to work from 3 p.m. to 11 p.m. on the 17th November, and was not timbering. They worked on the face that night. He was one of the four who took the job, and he was appointed a deputy for the shift by Mr. Thomas. As deputy, it was part of his duty to inspect the roof of the tunnel. The roof, so far as he knew, there was conglomerate all the way down. They found muck under the conglomerate. The muck was from an inch to 4 inches thick when it came down. They never took any stuff down that would stop up. He worked in the tunnel from the commencement to the time the fall occurred. He noticed three or four bent caps. They were not splintered. The bending was caused by side and bottom pressure. There was a spring in the sill, but not what one would notice, travelling up and down. He would expect to find side pressure in such a drive. The bent caps were about from 70 to 75 yards from the top level. He had been in the tunnel since the fall; but the fall occurred above where the caps were bent. He did not regard the bent caps as indicating any danger. He made no report after inspection of the tunnel.

To the Coroner: When the muck came away he considered they had a thickness of 60 feet of conglomerate.

To Mr. Atkinson: He understood when he commenced work in the tunnel that he was held responsible for the shift. He commenced from the bottom of the sump. He read the special rules several times. He also read General Rule 4 of the Mines Act. He made his inspections every time he went up and down the tunnel. He would go up and down three or four times in nearly every shift, and in each he made a careful inspection. The inspection was made from the alligator, or tub, they went up and down in. The alligator never went up and down slowly, but not particularly slow. Taking heavy timber down they went very slow. He never saw a drop of water in the roof. The props were set with the lay of the seam, at right angles with the dip of the seam. They had a square, a straight-edge, and a spirit level, and used them on every third or fourth set. Lewis never mentioned the bent caps in a special manner, but did in a casual manner. They expressed surprise at the new timber bending so soon, and he expressed the opinion that side pressure assisted a little by bottom pressure had bent the timber. There was no talk about strengthening the bent timber so far as he was aware. As deputy he did not consider it of sufficient importance to report to the manager. If he thought there was danger he would have reported through Lewis to the manager. The bent caps and the appearance of muck did not lead him to believe there was a change of roof. The slabs set behind the props were wedged tightly between the props and the coal. If there was side pressure the slabs need not necessarily bend the props. He never thought of side pressure bending the props. The caps were wedged end-tight with hardwood, and the props with ti-tree, which would bend.

To Mr. Curley: The ti-tree was put in with the bark on. The ti-tree was put between the slabs and the sides, roof, and bottom. The ti-tree was not dressed. It was used to pack the space between slabs and the sides. The ground was a bit live. There was no great weight on the coal. He had seen chips of coal burst off the side as they drove. If the pressure had been severe enough to break the caps the posts would have been affected. The roof was hard. The caps were bent in the centre from side pressure, and in his opinion there was no pressure on the roof, notwithstanding that the fall had taken place. He had been working two and a half years at the colliery. He worked in the sinking of No. 2 tunnel, in slippery jig, bottom jig, and in a bord in Armstrong's jig, and never saw a case of roof pressure. He never saw falls of stone, and heard of none. He heard of no men being hurt in the mine from fall of roof. In No. 2 tunnel the sets were put in 5-foot centres. In that case they were paid by the yard as in No. 1 tunnel. There were four in that party, Lewis, Griffiths, Gronow, and himself. He saw no caps bent there. They took up the bottom there, and did the packing in the same, just the same as in No. 1 tunnel.

At this stage there was an adjournment until 2.30 p.m.

On resuming, the witness, in reply to Mr. Curley, said tenders were called for the work to be carried on. A notice was posted at the office. He and his party tendered for the work. The price they tendered at was not accepted. Their tender was £4 7s. 6d. per yard. They later on had a consultation with the manager about it. He objected to the price they put in, and asked them if they would do it for a certain price, at which he thought they could make wages. They came to an understanding with him to work for £3 19s. per yard, and they were to get more if they did not make good wages. The conditions were that they were to drive a tunnel similar to No. 2. They were to take out coal, put timber in after lifting the floor. It was explained to them that sills had to be 16 feet long, caps 15 feet over all, props 10 feet 6 inches. Timber had to be ironbark sills, caps, and props, and common hardwood slabs, the same as in No. 2 tunnel. The sills were about 9 or 10 inches, and some were 15 inches in diameter. The caps were about the same as the sills, say, 9 inches through in diameter. Sills and caps were in round timber. The props were also about 9 inches in diameter. He never saw any defective timber sent down; in fact, they always took it down themselves. Sometimes the timber would be a fortnight lying on top before being used. When he saw the caps bent the idea never occurred to him that the roof was weighty. He never thought of putting in a set between the bent caps. The tunnel had about 45 feet, or nine sets, further to go. Mr. Heyes and Mr. Thomas were down the tunnel measuring to see how much further the tunnel had to go. That was two or three days before the accident. He had no conversation with the manager about pushing on to complete the work. They got as much out as they could every day. He never said to the manager, under-manager, or to Lewis that it was necessary to put in fresh timber where the caps were bent. He did recognise himself as a deputy to make a report. There was an understanding with Mr. Thomas that he (witness) was to see that all was safe on his shift. Mr. Thomas did not say he was not to report. He did not consider he was bound under General Rule 4 to report. Lewis made reports. They started to drive the tunnel some time in June. He (witness) kept the record of the number of yards driven per fortnight. He knew Weller, who had every opportunity of seeing the cap-pieces as he went up and down. They used the ordinary pit lamp for a light. As a rule they all went down the tunnel in the alligator together, Weller, Lewis, and himself. He never saw any other caps bent but those he had mentioned. There were two casks on the road-side in the tunnel. The water ran down out of the levels, bleeding out of the coal. He never saw any come from the roof. One cask was between the third and fourth manhole from the level, and the other was lower down, perhaps 30 yards. The manholes were 20 yards apart.

To Mr. Millard: The muck under the conglomerate was a band. There was sometimes bands in seam, not always the same. The presence of that band in no way would affect the safety of the roof. The soft stuff never appeared above the conglomerate, or mixed with it; only below it. He noticed the roof very carefully as he went down, and had there been any soft stuff there he would have noticed it. The timber supplied was good. He never saw better, and knew of no better than ironbark for that kind of work. He had experience of timbering. He knew the tunnel was intended to be a permanent work. The bent caps he saw were further down towards the face than the big fall. The big fall extended about 60 feet in length. The lower end of the fall would be 15 or 20 yards from the bent caps. If fresh timbers had been put in under where the caps were bent the accident would not have been prevented. So far as he could judge, the bent caps had nothing to do with the cause of the accident. He had experience in other collieries. The East Greta roof, a conglomerate roof, was a good one. It was not an uncommon thing to find a mine where there was no small fall to be found. It was a very common occurrence to find enough fall to fill a skip or a skip and a half in any colliery. That would not indicate any special danger. In abandoned workings it would not be unusual for the roof to come down.

To the Jury: He carefully inspected the tunnel when he went up and down. He said before that there were three or four caps bent. The slabs averaged 3 inches thick. The slabs were not bent. He considered the roof a good solid one, and that the pressure did not come from it. He never saw anything wrong with the timber where the fall took place. The caps were wedged at each end. The slabs were wedged against the roof by ti-tree. The pressure mostly came from the sides, and the posts were not bent. Fresh cut timber would be equally as good as timber three months old. All that he knew about the thickness of conglomerate was from information received.

To Mr. Millard: Had there been pressure from the roof he would have expected to have seen the slabs bent. The overcast showed a thickness of conglomerate showing 7 feet.

To the Jury: He had seen unbroken cap-pieces taken out after the fall. He heard that the inspector was down the tunnel three weeks before the accident. Gronow told him.

To Mr. Curley: The slabs were from 7 to 10 inches in width. He heard Mr. Thomas and Mr. Heyes say that the conglomerate was 50 or 60 feet thick. The overcast was cut right through conglomerate. The piece of conglomerate produced was from the overcast. The stuff that came down from the fall was a kind of muck. Ironstone came from the top end of the fall. The rock he saw on the table he termed a soft conglomerate; the blue or slaty stone he called muck; and the whiter stone he called a fine conglomerate. The blue or slaty stone examined by the jury was somewhat like what they had taken up in the floor of the tunnel—sometimes softer than the specimen on the table, and sometimes harder.

John Downie, recalled, said, in reply to Mr. Tillett, that the stone produced, three pieces, had been brought from East Greta Colliery. One piece came from the big fall, and was marked Exhibit C. The other two pieces came from a skipful of muck from the colliery, and were marked D. The skip of muck had not been exposed to the weather.

To Mr. Curley: He made the selection of the stones for no particular purpose. He got them that morning, at the request of Senior-constable Brown, at the colliery. He considered the stone produced a fair sample of the stuff that fell. He could not tell from what part of the fall it came.

At this stage the inquiry was adjourned until 10:30 a.m. to-day.

In reply to Sub-inspector Fowler, the Coroner said that the jurymen could please themselves about going out to see the mine. If they wished they could do so.

[*Newcastle Herald*, 13 January, 1899.]

THE EAST GRETA DISASTER INQUIRY.

THE inquiry into the circumstances connected with the death of Albert Moncrieff, on the 18th November, 1898, in East Greta Colliery, was resumed yesterday morning at the West Maitland Court-house, before Mr. Martin. Mr. J. V. Tillett represented the Crown Law Department. Mr. Millard appeared for Mr. Thomas, manager of East Greta Colliery; Mr. F. A. S. Bowden for the East Greta Coal Company; Mr. James Curley for the relatives of the victims of the disaster; and Sub-inspector Fowler for the police. Mr. A. A. Atkinson (Chief Examiner of Coal-fields) and T. L. Bates (Colliery Inspector) represented the Mines Department.

James Cantwell, a miner residing at East Greta Colliery, deposed, to Mr. Tillett, that he was in the colliery at the time of the accident, and went into the tunnel on the night before at 11 o'clock with the deceased. He was working in the new jig running parallel to the tunnel, and his son and John Jones were with him. He neither saw nor had communication with the deceased during the shift after going down. The accident occurred at 6:55 on the 18th November. The first intimation they had of an accident was a rumbling noise like thunder. He listened for a while, and then ran over to the tunnel. He thought it was old workings falling on the opposite side. He looked up the tunnel first and could see nothing; then he walked round the shoot into the middle of the tunnel, and looked down the tunnel and saw the fall. He and Jones called out to the deceased men below, but got no reply. He then went up the tunnel. He had worked for seven years in the colliery, but had never been down the new tunnel. He never noticed any defects in the new tunnel. On a clear day he could see a good distance down. He never took any particular notice. He never heard a complaint about the roof. He had a conversation two nights before the accident with Moncrieff about the tunnel. He was alone with Moncrieff, who said some of the bars were bent and broken about 100 feet from the level down towards the face, and spoke of them as dangerous, expressing a wish that he was out of the place, as he was frightened. He did not speak of that conversation or report it to anyone. Moncrieff said nothing else about it to him.

To Mr. Atkinson: He knew the roof of the East Greta mine. Parts of it were conglomerate, and parts soft stone. The stones produced resembled the soft stuff in the roof, but he saw softer patches. There was no conglomerate at all where he saw the soft stone. That was along the middle level, then called the bottom level. It commenced 40 yards from No. 1 tunnel, and extended in patches along the level for 500 yards. The soft stone was not on the tunnel side of where the dam was fixed. He first observed the soft stone fair over the dam while the level was coming in and out. The patches were about 3 feet up, where it used to drop out between the sets. He was working with a deputy, Higgison, who used

used to repair each fall that would come. The sets were about 5 feet apart. The weight of the pillar broke a good many sets there. The pressure came from the coal pillars. The coal fell off the pillar sides occasionally, about a skip or a couple of skips at a time. The cap-piece or bar of the set got broken. The bars were 9 feet long and 9 to 10 to 12 inches in diameter, and were ironbark. The sets were slabbed only in places where they thought the roof bad. The slabs did not often break. They sometimes put packing between the props and the rib side. The packing was of ti-tree or short slabs, or anything they could get. He saw soft stone in other parts of the mine, in bord No. 2 above the present level, when taking down top coal. That would be about 500 yards from No. 1 tunnel. He never saw it nearer No. 1 tunnel. Top coal was taken down to within 5 or 6 inches of the roof along the level, and falls sometimes displaced that coal. He considered the roof more dangerous where the soft stone was. He reported the change only to the deputy, but to no one else, because there was a deputy with him. Had he considered those places dangerous he would have no need to report, because he presumed the deputy would report.

To Mr. Curley: It was three years ago since he did that timbering. He saw the manager (Mr. Thomas) down the mine, and he would certainly have a knowledge of the change of roof also. No 1 tunnel was an extension of the East Greta workings, that have been working for years. He knew the back drive or jig that was 30 yards from No. 1 tunnel. It was going at the same dip as the No. 1 tunnel. No place had been driven between the tunnel and the jig. The jig was down 130 feet, and was at work at the time of the fall. He had done timbering in the Scotch heading, which was to the right 200 yards from No. 1 tunnel, travelling south. He was working in a level and in bords. He never saw any conglomerate fall in that level. He did see top coal fall, but not stone. Pressure from the old workings above caused the top coal to fall. After the coal was taken out a creep would take place, and then there would be a fall of roof. There was one very large fall in No. 3 bord of Scotch heading over three years ago. He visited the bord with the deputy, and tried to secure it by extra timbering. He saw some of the roof that came down, and it was soft stone. He had done timbering on the left side of No. 1 tunnel in the north district in the left-hand bottom level. He saw no stone fall in that level. He was timbering there to keep the roof up and secure it. There was timber there before, and it was 5 feet apart. He had occasionally to put more timber in between those sets. There were 5 or 6 inches of coal left in the roof there. There were caps bent and broken. They were broken here and there, and new ones were put in. In the level where he worked prior to the accident he saw the manager three times in one week. The under-manager he saw twice in one week. He (witness) was there on day-shift once in the three weeks he was working there. He was two weeks on the night-shift there. He heard Deputy Jowitt there one night. Jowitt called down to him. Jowitt may have been there before, but he never saw him. Had they gone down the jig he (witness) would have seen them. He was sure that he only saw Jowitt once on that night-shift, and he did not go into where witness was working.

To Mr. Millard: The conversation with Moncrieff took place as he and witness were going from the cricket-ground to the pick-shop. It was at 6 o'clock in the evening. No one else was there. As a practical miner, he would not go to work in a place he believed to be dangerous. In the level when he was putting in new timbering and packing where the falls occurred, he considered he was in danger. He made a remark to the deputy about it being dangerous. The deputy said they should be careful, and not go underneath it till it was fixed. He could not say how many patches of stone he saw in the 500 yards. In some places there would be patches in every second set, and then there might be none for five or six sets. He believed there would be 100 patches in the 500 yards. The roof came away in small parts. Where the conglomerate came away there was conglomerate left. The flakes of conglomerate that came away were about 9 inches thick. Where soft stuff came away soft stuff was left, but how much he could not say, nor whether there was conglomerate above it again. It was very soft. He could not account for the soft stuff not continuing to fall once it began. It came away like potholes in the level, 3 feet high, higher in the middle. It was retimbered and packed in overhead. He saw at a distance the stuff falling from the big fall, and continuing to fall, but in the places he was speaking of the stuff did not continue to fall. Where the caps were bent and broken in the level the pressure came from the rib. He saw one big fall in the Scotch heading, which was being worked at the time. The pillars had not been taken out to his knowledge, and had not been worked since. If the pillars are out they must have been taken out before the fall. He was positive the pillars were not taken out before the fall. In the East Greta it was not usual to take pillars out. The roof generally in East Greta was patched. He believed there was more conglomerate than soft stone. Where he had been in the colliery, except on the left-hand side for 500 yards, he had always seen patches of soft stuff. There was no soft stuff in the overcast. The overcast was at the level, 30 or 40 feet above where the extension started, and showed the roof to be hard conglomerate.

To Mr. Bowden: He had worked in no other colliery. He was never stinted for timber or any stuff for packing by the company. The falls he referred to occurred three years ago.

To the Jury: Parts of the roof of the mine were safe. Where there was soft stuff he believed the roof was dangerous. He believed that the manager and all officials had done their best to safeguard the lives of the men in the mine. He never heard anything from anyone except Moncrieff about the roof of No. 1 tunnel being dangerous. He never heard of anyone being discharged for saying that the mine was unsafe. If Mr. Thomas said the pillars in Scotch heading were removed he would not be speaking the truth. The pillars could not be removed without his knowledge. The broken caps were not in the tunnel. In the level where the caps broke the slabs came down, but there did not appear to be any roof pressure on them. He saw Government inspectors down the mine. He was working contract in the jig with Jones, Morrison, Downey, and Byrne. He knew of caps being bent, broken, and replaced in the old No. 1 tunnel. Moncrieff slept in on the night of the conversation, but was at work next night. On the left-hand level, 400 or 500 yards from No. 1 tunnel, there was a fall. Shuffler worked there. Witness saw what fell. At least 80 tons fell. They did not continue to take out pillars after the fall. When he went to the Scotch heading with the deputy, to see if they could do anything to repair the fall and prevent further falls, they found they could do nothing with it, because it was too high. The men were called out on account of the fall. That was near the surface. He could not say whether the men there lost their tools or cans. He would not call those falls extensive. As an experienced miner, he would not take bent caps always as an indication of roof pressure. Caps did not always break from roof pressure. If the props and the sills were intact, and the caps only bent, then that would indicate roof pressure. If the props were

were wedged tight, the sills intact, and caps bent, it would not, in his opinion, be indication of side pressure. If there was side pressure enough to bend the cap, then it should also show in the prop. With bottom and side pressure the centre of the sill would go first, then the sides. The fact of the packing being between the slabs and the side would keep the side pressure off for a time.

To Mr. Tillett: He would expect side pressure in No. 1 tunnel.

To Mr. Millard: The legs were mortised into the caps and the caps were wedged into coal. If the caps were so wedged tightly and the props only packed, the pressure would come on the leg. When ti-tree packing is put in with the bark on it would give very little. The ti-tree would give sooner than the hard-wood wedge at the end of the caps. The ti-tree giving would ease the pressure on the props. If there was roof pressure he would expect to see an effect on the slabs, which would bend or give a little. The slabs were not so strong as the caps.

At this stage there was an adjournment until 2:30 p.m.

At 2:30 p.m. the inquiry was resumed, and James Cantwell was re-called.

To Mr. Curley: He repaired the timber in No. 1 tunnel midway between top level and the middle level. The caps were broke there. There were half a dozen removed by him. He passed in and out of the tunnel before he was sent to repair them, and could see they were broken. He noticed them like that for not more than a week. He did not notice the nature of the roof there, as the slabs were overhead. The cap-pieces were broken, and were from 9 to 10 inches in diameter. That was a little over three years ago.

To Mr. Millard: He had noticed sills bent up, but not broken right through in that tunnel.

To Mr. Bowden: When repairing timber he was under Deputy Higginson. None of the slabs above the broken caps were either bent or broken. He saw bent and broken slabs in a bord. Before he went to the colliery he was a fencer. He was employed on the surface for some little time before he went below—about six months, as near as he could think. He had of late had charge of a shift strengthening timber in No. 2 tunnel.

To the Jury: He and Mr. Thomas were on friendly terms. The bent caps he saw in the tunnel were not at the seat of the fall. He could not swear that there were bent caps under the fall before the accident. He had a contract to drive the jig. Roster was his partner. Tenders were called for the work; no distance was mentioned. Downey was one of his men, and was paid by him. When the fall took place he rang for the "alligator," but it was not sent down. When he rang for it, it should have been sent down. Jones rang for it after him. He knew a shift was coming down, and he ran up the tunnel calling out to them not to come down, as the tunnel was falling in. He never noticed any bent caps in the extension, but never looked at a time when he could see down well. At about 3 p.m. was the best time to see well down the tunnel. He never took the trouble to look down at that time.

To the Jury: He never saw falls from the sides. Falls took place where timbers had been strained, but not always. As a practical man, from seeing strained timbers, he would conclude a fall would take place.

To Mr. Millard: He put in whole sets in No. 2 tunnel, when sills were broken. He did that for 300 feet in No. 2 tunnel.

Henry Cartwright, under-manager at East Greta Colliery, deposed, to Mr. Tillett, that he knew the deceased, Albert Moncrieff. He was manager and under-manager since the inception of the colliery. He was manager before Mr. Thomas came, and under-manager since. He knew the extension of No. 1 tunnel. He was one of the first to enter the tunnel after the fall. Lewis and Heyes, the engineer, went down with him. That was at 7:10 a.m. on the 18th November. A fall had taken place, and they went right to the edge of the fall. He shouted out, and also knocked the rails, but got no reply. He could not say exactly when he was in the tunnel before the fall. As near as he could remember, it was a fortnight. He examined the roof all the way down then, and saw no indication of danger in the roof. He saw a couple of caps bent, but not broken. The bend was only just discernible, and was no indication of danger. Before the big fall took place he had not seen stone of the description of the exhibit in the colliery. The colliery roof was nothing but conglomerate for a good way. He had seen slight falls of roof in the colliery before the big fall after pillars were taken out. He had seen slight falls in the levels of half a yard thickness. The stuff that fell was a conglomerate. He went down to the bottom level every day since the level was driven, and did not remember having seen stone like the exhibit there.

To Mr. Atkinson: When he was called at the time of the accident he was at the top of No. 2 tunnel. He had not been down the mine that morning. The pit started to draw coal at 7 a.m. The usual time for him to go down was 8 to 8:30 a.m. He was not near the top of No. 1 tunnel that morning. He was under-manager for the whole mine. It would take him one day to examine in every working place in the mine. He read the rules concerning the under-manager's duties. [*The witness here read No. 3 of Special Rules.*] No. 1 tunnel was looked after by Mr. Thomas and Mr. Heyes (engineer) while it was being sunk. Mr. Thomas told him Lewis was put in charge as deputy, and Mr. Thomas was always there, and looked after No. 1 tunnel. He saw Mr. Thomas there. He did not look upon the extension of No. 1 tunnel as a particularly important place. He could not say when Lewis was given charge of the extension. Lewis was put in charge when they started to drive from the bottom of the sump. That was about July last. Jowitt, the night deputy, made the report at that time, for how long he could not say. It was until Lewis began to report—about a couple of months after they started. He did not think Jowitt continued to visit No. 1 tunnel after Lewis took charge. Pillars were taken out in the colliery; some of them on the north and south sides of No. 1, between the top level and the middle level. When those pillars were taken out there were falls of conglomerate, but he noticed no other stone. The fall would be up about 5 or 6 yards, and all the stone was conglomerate. He could not say how far No. 1 tunnel was to go. He knew a level was coming over from No. 2 tunnel to meet No. 1 when it got down to a certain point. He examined the roof in that level, and it was conglomerate. He remembered a drive being put from the bottom seam to the top seam. He could not say how far apart the seams were. The drive went through conglomerate and another stone. The latter was met just before they got to the top seam. There were distinct facings in the coal at East Greta. The facings ran east and west. He would expect coal to come off the side of a jig easier than in a level. There was not much evidence of side pressure at East Greta. They generally set timber in jigs. They always set timber in jigs. They generally wedged the cap-ends tight. In a mine subject to side pressure he would not consider it a good practice altogether to wedge the ends of the caps tight between the caps and the coal. He saw the big coal. He believed the cause of the fall was a leakage of water making its way into the mudstone, which swelled and broke

broke the cap-pieces. That was pressure from the roof. Side pressure had something to do with the fall. The sides of the coal were in good condition, and did not indicate much side pressure. The fall was influenced by floor pressure. They were troubled a lot with the floor, which was so soft. The bottom heaved up, forced the sill and the props up, and lifted the ends of the cap-pieces. The middle of the cap-pieces being wedged tight was some help towards breaking the caps. Generally the slabs were wedged tight right across. With pressure from the bottom he would certainly expect the sill to break first. Where he saw bent sills he noticed no props bent. He noticed no water dripping from the roof prior to the fall. During the work of exploration he noticed that a considerable number of caps were broken. He saw no broken slabs. That was a matter of surprise to him. He saw Moncrieff and Barnes recovered. Moncrieff's body was found about 20 or 25 feet from the face, and Barnes' between 5 and 10 feet from the face.

[*Newcastle Herald*, 18 January, 1899.]

THE EAST GRETA DISASTER INQUIRY.

THE inquiry into the circumstances connected with the death of Albert Moncrieff, on the 18th November, 1898, in East Greta Colliery, was resumed yesterday morning at the West Maitland Court-house, before Mr. Martin. Mr. J. V. Tillett represented the Crown Law Department. Mr. Millard appeared for Mr. Thomas, manager of East Greta Colliery; Mr. F. A. S. Bowden for the East Greta Coal Company; Mr. James Curley for the relatives of the victims of the disaster; and Sub-inspector Fowler for the police. Mr. A. A. Atkinson (Chief Examiner of Coal-fields) and T. L. Bates (Colliery Inspector) represented the Mines Department.

Henry Cartwright, under-manager of East Greta Colliery, was recalled.

To the Jury: They never put jigs the same distance apart. They considered the thickness of the pillar between the No. 1 tunnel and the jig, but he did not remember the thickness. He considered it his duty to know the thickness of the pillar for the safety of the men on account of No. 1 being the main tunnel of the mine. They did not work tops and pillars from the first jig. He could not remember the distance they worked the pillars from the first jig. It was seven years ago. They drove a jig further in than that one. It was between the first and second jig that they took the tops and pillars out. They did not continue to work the tops and pillars further in the workings. They worked them on the south side—the opposite side—in a similar manner to those on the north side. They did not continue to work the tops and pillars further south. They worked all the pillars they could out in Scotch heading, except No 1 on each side. He knew some of the men who worked the pillars there. John Hallan, John, David, and William Adder were some of them. None of them were now at the mine. He knew of a place being driven at right angles between the two seams on the Scotch heading side. Something occurred to induce them to make that drive. It was a fall. He could not remember the distance, although he himself measured it. A Mr. Hughes, who worked in it, would be able to give more particulars than witness. The work changed hands two or three times if he remembered rightly, and he could not say how long Mr. Hughes worked there. He could not say who worked there when the drive was finished, but he thought it was Jim Allen. The sides in No. 1 tunnel looked the same as when they were driven through, but they sounded a little different. A skip or two in one or two places fell. If the side pressure was sufficient to break a 6 or 8 inches bar he did not think it was necessary that the sides should fall there. Where that side pressure was it was not necessary that the coal should show broken on the sides. At the seat of the fall he did not remember having seen any splintered caps. It was about four years since the tops and pillars were removed in the Scotch heading.

To Mr. Millard: When the floor raised by swelling in No. 1 tunnel they tried to get the additional height by cutting the roof, but did not succeed, because it was so hard that blasting would be necessary, and Mr. Thomas would not allow that. The roof was too hard for ordinary working. No pillars were taken out to the north of the extension of No. 1 tunnel. It was all virgin coal from No. 1 tunnel north to the workings of No. 2. The only work done south of the extension of No. 1 tunnel was the beginning of Cantwell's jig. On each side of the extension of No. 1 tunnel they had the unworked virgin coal.

To the Coroner: When they were timbering No. 2 tunnel the floor kept good and kept good till they had finished. The sets there were put in 5 feet apart all the way. From the very start in No. 1 tunnel the floor was found to be very troublesome and soft. In the extension of No. 1 tunnel the sets were 5 feet centres apart. They considered No. 1 to be as good as No. 2 tunnel. When they were driving No. 1 extension they had no more trouble than in No. 2. They did not consider the floor of No. 1 any worse than that of No. 2, and considered sets, 5 feet centres apart, sufficient to well support the roof.

To Mr. Millard: At the present time they were replacing timber in No. 2. The floor of No. 2 was good, also No. 1. Both were kept good by timbering. Age and time have the effect of lifting the floor. In about ten years or so the floor ought to settle. In a couple of years it would begin to settle. The old part of No. 1 tunnel has been driven fully seven years, and No. 2 tunnel about two years.

To Mr. Curley: The stone produced was hard conglomerate, but it was not so hard as Exhibit B. It was not the same class of stone as the fine conglomerate produced, but it was as hard. One was as hard as the other. Exhibit D was the same as the first stone, and was as hard as it, and also as hard as the fine conglomerate. He would not be surprised to know the first stone came out of No. 1 tunnel. The overcast was in the level. He knew a door not far away from the tunnel on the north side, and examined the roof there. It was a conglomerate roof. It was soft, but if a foot was taken off, what was left would be hard. The piece of stuff produced was a very fine conglomerate, and was soft. It was soft from exposure. He would not be surprised to know that it came from near the doorway. It might have come from within 3 feet of the hard stone. The stone in his hand was a fine blue conglomerate, and could possibly have come from East Greta mine. It could be seen very often intermixed with conglomerate. It could have come from the mine, and from the floor of No. 1, but he could not say. He knew the position of the dam in the level. It was about 40 yards on the south side of No. 1 tunnel. His attention was never drawn by Lewis or anyone else to soft stone in the tunnel. When he went into the tunnel on the morning of the fall the stone that had fallen had mostly gone down the tunnel. There might have been a shovelful or two left in between the sills. He noticed about six or seven sets of timber knocked out. He saw a good part of the timber after it was recovered from the bottom of the tunnel, and noticed broken cap-pieces. He noticed props broken—some splintered, others broken in two. The road was relaid where

where the fall occurred. The rails were broken away by the fall, and partly went down the tunnel. Every pair of rails was put down fresh. Some of the sills went with the rails. The rails were laid on the sills, and were fastened with fishplates and bolts and dogs. He could not say how many sills went down. He saw some of the stuff brought out of the tunnel. It was pretty lumpy. It had to be broken up before it could be put into the skips. The largest piece was about 4 by 6 by 2 feet, looking down the tunnel. There were one or two others below that one, but he could not give dimensions. He could not say how much fine stuff there was in the fall. He thought there were many tons of it. The mudstone which had been referred to during the inquiry he would call soft blue shale. The stuff that was carried away in the fall was soft blue shale. He could not say what kind of stone the big one was. They had to break some of it to get deceased Barnes out. He considered that the stuff which fell in the big fall was conglomerate, like Exhibit D, but a little browner, soft blue shale, greyish shale, and ironstone.

To Mr. Millard: The action of water on the conglomerate would make it fret and crumble. The action of air would have the same effect.

To the Jury: If the hardstone produced were soaked in water for five years he believed it would soften. The fine conglomerate would go sooner.

To Mr. Curley: He could not say when the overcast was driven. It was driven since the extension had been commenced. It was driven more than a month before the fall. He had a record of it in the books, and could give the date. In driving the overcast the men had to blast all the way. The position of the drill-holes could still be seen. There had been no fretting there.

To the Jury: The No. 2 level, between No. 1 and 2 tunnel, was not in good repair. If anything happened there the men could get out on the Scotch heading side, or through the level.

At this stage the inquiry was adjourned until 2:30 p.m.

On resuming at 2:30 p.m.—

Ernest Marsh, a hay-presser, residing at West Maitland, deposed, in reply to Mr. Tillett, that he was working in East Greta Colliery at the time of the accident. He had worked for about two years on the surface, and had been underground about ten weeks when the accident occurred. His shift left the tunnel at 3 p.m. on the day before the accident. Jack Griffiths and Ted Parsons were on his shift. They were getting coal in the extension of No. 1 tunnel. He noticed the roof, and saw some of the caps bent and cracked. He only saw the roof working in one place, about quarter-way down the extension. The bent and cracked caps were there when the roof was working. He spoke to Jack Griffiths, and asked him if it was not dangerous, and he said he did not think it was. Moncrieff said that if something was not done to the cracked timber they would not see him there much longer. That was said a few shifts before the tunnel fell in. Dick Barnes and Gronow, the two deceased, Ted Parsons, and Jack Griffiths were present when Moncrieff made that statement, at the bottom of the tunnel. None of the others present said anything. The roof was composed of conglomerate and slaty rock. The conglomerate was the same as the Exhibit F, and the fine piece of conglomerate. The slaty rock was the same as the bluish stone marked C. He saw a little rock come down in the tunnel at times. Both conglomerate and slaty stone came down. He knew where the fall took place. He believed it was about the place where he saw the bent timbers.

To Mr. Atkinson: The stone found usually over the top of the coal was conglomerate and slaty stone mixed. He could not measure the thickness of conglomerate. He could not say how much broke away above the coal. The conglomerate was about 18 inches thick. About 150 feet of the tunnel was driven while he was working there. He could not say whether the bent caps were at the top, middle, or bottom of the fall. Griffiths was chargeman of the shift, and used to inspect the roof from the commencement of the tunnel to the face. Griffiths did that both going down and coming up. Witness worked with Lewis and Thompson also. He never saw water dripping from the roof where he saw bent caps.

To Mr. Curley: The bent caps were quarter-way down from the beginning of the extension, and 100 feet from the bottom level. He noticed some bent and some cracked, and could see them quite plain and distinct. He never counted them, but believed there were about four or five. He saw Mr. Thomas once in the tunnel, on the Tuesday morning before the accident. He only spoke once to Lewis about the bent caps and the roof. He was working down at the face when he heard the roof working. He could hear the timber crack occasionally, and it was then that he drew Griffiths' attention to the matter. He never saw anyone at the top of the tunnel when he was going to work to tell him everything was right. When he saw conglomerate 18 inches thick he also saw the blue stone. They had sometimes to chip the roof to get the roof fixed, and that was how he came to see the blue stone. He went into work on the Saturday after the fall and saw where the fall had taken place. The rails on the left-hand side were bent out, but he did not see them disconnected. He did not see that some of the rails went down the tunnel. He never saw the under-manager down the tunnel before the fall. When he worked with Lewis and Thompson they all went down together. He did not know if Lewis went down the tunnel before they went in. When Lewis went down with them he appeared to be making an inspection of the tunnel. When Lewis was below he sometimes worked at the face getting coal and sometimes timbered. Where the fall had taken place the sills appeared to be in the same position as they were before the fall.

To Mr. Millard: He saw the bent caps when he was coming up the tunnel in the skip five or six weeks before the fall. He told Griffiths five or six weeks later. The caps were bent about a foot. When he first noticed them they were bent a few inches, and it took them 5 or 6 inches to show a foot. He noticed that they did progress daily. Still he never spoke about it until a few shifts before the fall. He used to bale the cask out into the "alligator." One could see the bent caps from the cask. They were about 140 or 150 feet from the cask up the tunnel. The cask was about 120 feet from the face. He did not count the sets from where the caps were bent, and had no means of fixing the distance, but his impression was that the distances he had given were correct. He had seen three or four bent caps further down the tunnel, half-way between the first lot of bent caps and the face. They were bent 3 or 4 inches. He spoke to no one about them. He noticed them about two or three weeks before the accident. They were bending slowly. They were a bit above the cask, and could be seen from the cask. When he said he heard the roof working he meant nothing more than the timber cracking. It was loud at times, and could be heard at times when they were working. He believed it was the roof, not the sides, that was working. That was his idea. He did not know that pressure from the sides could cause the top timber to bend, nor that pressure from the floor would have the same effect. When he was at the face he was from

from 250 to 300 feet from where the fall took place. The cracking might have come from other places than the seat of the fall. He saw the caps bent a foot under the fall, and the slabs were sinking down with the caps. He did not notice if the slabs had sagged down in the middle between the caps. There were distinct cracks in the bent caps. He asked Griffiths if there was any danger of the timber coming in. He thought himself that it was dangerous. He referred to the bent and cracked timber when he spoke to Griffiths, who said he did not think it was dangerous. It was on another occasion that Moncrieff spoke, and Moncrieff began the conversation. He knew the band on top of the coal. It was a black stuff, like the patch on Exhibit C, and was 2 or 3 inches thick, and as black as coal, but harder. The conglomerate was next to the hard black stuff. There was no band of grey stuff between the black stuff and the conglomerate. When he went down the tunnel ten weeks before the accident he had never been underground to work before. He only had ten weeks' experience in the mine.

To Mr. Bowden: He saw the timbers bent in two places, and believed other men saw them too. They never spoke about the two places to him. When he went to work with Lewis the latter met him at the tunnel mouth. Sometimes Lewis was there first, and sometimes he was before Lewis. When they were getting coal they sometimes sent up some of the floor. Two feet were taken out in his shift. He had discussed the case outside the Court; but had not said anything about the timber. He had spoken to different people—to men who had been working in the tunnel. There were men in the Court with whom he had been conversing—Jack Griffiths, Alick Cameron, and W. Kerr. He could not say that Moncrieff was anxious not to miss the shift after his conversation.

To the Jury: He had never spoken to any of the jury about the case. The slabs were sagged down on the bent caps when he drew Griffiths' attention to them. They were down at the face at the time. He was sure Griffiths understood what he meant at the time. During the five weeks he noticed the caps bending he thought they were dangerous; but he trusted in those who had more experience. He would not mind going back to work in the mine again. He never saw the Government inspector down the tunnel. He mentioned the bent timbers to the deputy, Lewis, who said he did not think it dangerous. He was not on bad terms with Mr. Thomas.

To the Coroner: Had he not been earning money he would not have remained when he heard the timber cracking.

To the Jury: He did not see any bent sills in the tunnel. He did not take notice of the legs or props, and could not say whether they were bent or not. He thought they were not.

To Mr. Millard: He mentioned to Lewis about bent and cracked caps at different times while they were on shift together. He mentioned it first a week or two after he saw the bent caps, while they were going up and down the tunnel, and also while they were at work at the face.

[*Newcastle Herald*, 19 January, 1899.]

THE EAST GRETA DISASTER INQUIRY.

THE inquiry into the circumstances connected with the death of Albert Moncrieff, on the 18th November, 1898, in East Greta Colliery, was resumed yesterday morning, at the West Maitland Court-house, before Mr. Martin. Mr. J. V. Tillett represented the Crown Law Department. Mr. Millard appeared for Mr. Thomas, manager of East Greta Colliery; Mr. F. A. S. Bowden for the East Greta Coal Company; Mr. James Curley for the relatives of the victims of the disaster; and Sub-inspector Fowler for the police. Mr. A. A. Atkinson (Chief Examiner of Coal-fields) and T. L. Bates (Colliery Inspector) represented the Mines Department.

Edward March was recalled.

To Mr. Millard: He mentioned the bent caps two or three times to Lewis. Thompson and Weller were on the shift, and went down on the alligator with him, and would hear him mention about the bent caps to Lewis as they went up and down the tunnel. At that time the caps were bent and cracked, and the others could have seen them as well as he. They spoke of the bent caps also, at times, when in the alligator. He heard the other men speak about them first, about a week or two after he saw them bent, but he did not hear them say they were dangerous. Lewis spoke about them, but he did not remember what he said. There was a good deal of talk about those caps—the upper lot.

To the Jury: He heard Mr. Thomas tell Griffiths that he was speaking to Lewis about renewing the timber at the end of the week. That was on the Tuesday morning before the fall. Mr. Thomas viewed the bent timber on the Tuesday.

To Mr. Curley: Moncrieff said the bent timbers were dangerous. From what Moncrieff said, if something was not done he would not stay in the mine. He believed Mr. Thomas inspected the bent timbers, because he saw him stop there some time on the Tuesday. Witness was at the face, and saw Mr. Thomas's light. He was about 250 feet from the face. Mr. Thomas's words to Griffiths were: "I was speaking to Lewis about the cracked timber, and we agreed to attend to them at the end of the week." Griffiths made some remark. Mr. Heyes, Ted Howard, Ted Parsons, Griffiths, and witness were present at the time. That was said down at the face. He believed Mr. Thomas was measuring and examining the tunnel. He could not say whether or not Mr. Thomas had an instrument. He did not remember asking Lewis the distance from the fall to the face.

To Mr. Tillett: The conversations in the alligator were about the mine, and were casual ones.

To Mr. Millard: Nobody seemed to attach much importance to the timber except Moncrieff.

To Mr. Curley: He believed they all thought the timber should have been repaired.

To the Jury: Ted Parsons and Ted Weller said they thought the bent timber was dangerous.

To Mr. Curley: He never saw a false set or a slab and a prop put in after the tunnel was finished.

A slab and a prop were used at the face in places where the roof seemed bad. The slabs were let in the face to hold the roof up until the permanent set was put in, and then they were taken out. Lewis did that.

Edward Parsons, a labourer, residing at Morpeth, deposed, in reply to Mr. Tillett, that he knew deceased Moncrieff. He worked in East Greta Colliery, and was in the shift that came out of the tunnel on the day before the accident at 3 p.m. He was working in the mine from February. He had been down mines before with timber, but had no experience in mining. He was four months at work in the extension of the No. 1 tunnel. He noticed broken caps. They were about 100 feet or more from the lower level. He first noticed one six weeks before the fall. He was sitting down with Pike and Griffiths having tucker, when

when he heard something, which he took to be a cap-piece, crack. He asked Griffiths what it was, and they conversed about it. Griffiths said it could not be a sill, because when those sills went there would be something wrong. After that the caps went on working and breaking. He noticed them most while he was on the 11 p.m. shifts. There was a different kind of air, the damp air after midnight, which might have caused it. He heard Gronow and Moncrieff say that the roof was working. When one of them would notice a bad piece of roof he would tell the others of it. That would refer to the face all the way through. One morning they went down Gronow told them that they had spent the biggest part of the shift in the manhole, and were driven there by the timber above them working. He heard Moncrieff say that if something was not done to the timber he would not go into work any more. Witness often talked to Griffiths about the timber. March was with them sometimes, and sometimes Lewis, when a set of timber had to go in. The greater part of the roof was composed of soapstone and a conglomerate. The soapstone was like the bluish slaty stone on the table. The conglomerate there resembled the stones produced and marked D and F. Before a set was put in slabs were put from the last cap into a hole in the face, to prevent bits of roof coming down. When the set was put in those slabs were sometimes lowered down to the caps, and sometimes left up.

To Mr. Atkinson: He noticed five or six broken caps down a foot below their proper level. The slabs lowered with them, but were not broken. The sills were not bent or broken. He did not think the props were broken. He had been down the tunnel since the fall, working seven or eight shifts. The fall occurred where the caps were broken. Half an hour after the fall he could see that the broken caps were gone. He did not mention it to anyone, as the most of the time he was alone on the level at the rapper-wire. He came out at 6:30 p.m. that day. He did not remember mentioning it to anyone on the road home. He heard a conversation about renewing the bent caps on the Tuesday before the fall at the face where they were at work. March, Griffiths, Mr. Thomas, and a labourer, whose name he did not know, were present with witness. Mr. Thomas said to Griffiths that he was going to leave that timber up there [*pointing to the bent caps*] till the week end, so as it would not interfere with the contractors' work much. No more was said. His shift had never to retire to a manhole on account of timber cracking. They changed shifts about 20 feet from the face. The three, Griffiths, March, and witness, generally went down together. Griffiths was supposed to be charge-man of the shift. He made inspections of the tunnel going down mostly. Blasting was done in getting coal, powder being used. The shots never disturbed the roof to his knowledge, unless it was a shot in the top coal, when a bit of roof would come with the coal. Sometimes soft stone and sometimes a patch of conglomerate would fall away. The greatest distance he had seen into the roof before the fall was 6 inches.

To Mr. Curley: They did not fire many shots in working the coal. Sometimes in working the bottom coal no shot would be fired. They might fire two shots per shift. They all bored the holes for the shots. In the top coal the holes would not be a foot off the roof. He never saw any exceptionally soft roof there. The roof was fairly regular so far as he saw it. Whether shots were fired or not bits of the roof used to fall. He saw bent caps in the tunnel besides those that were broken. There were more than one. They were below the broken caps towards the face. On the Tuesday before the fall, when Mr. Thomas was speaking about the bent timber, he said he hoped that by the next time he was down the tunnel the cage would be run. Griffiths said he wished the tunnel was done then. Sometimes he heard cracks in the tunnel once or twice in the shift, and sometimes a dozen times. Griffiths would also be present each time. Lewis was on witness' shift occasionally when they had timber to put in. He would not swear Lewis was there when witness heard the timber crack, but he believed he was there. Half an hour after the fall he was down the tunnel as far as the last leg left standing. The rails were bent in all shapes. The first length of rails was not disconnected. The sills were the same as before the fall pretty well all through the tunnel as far as he went. Since the fall he had been right underneath the fall, no farther. He did not know what the sills and rails were like below the fall. He knew the band between the coal and the roof. It was sometimes a sort of a black stone, a dull black, not shining like coal. There was at times a very small grey band between the coal and the roof, sometimes like Exhibit H produced, and also like the piece of fine conglomerate. It would be up to an inch and a half thick, and sometimes would be in the coal. They called it out at the mine a fine conglomerate. It was not a very soft nor a hard roof, but a patchy roof. The bottom was mixed, too. They took a couple of feet out of the bottom to get the timber in. They had to dynamite the bottom sometimes to get it out.

To Mr. Bowden: The bent timbers were lower than the broken timbers. Three sound caps were between the bent and broken timbers. He saw several bent caps there—about four. They stood up after the big fall. When he went down after the big fall he thought there were about seven sets gone. The bent timbers below the broken ones were bent about 2 or 3 inches. Before the big fall he saw no bent timbers below the bent timbers already alluded to. A man had to look closely for bent caps.

At this stage the inquiry was adjourned for an hour and a half.

The inquiry was resumed at 2:30 p.m., and Edward Parsons was recalled.

To Mr. Bowden: When he heard the caps cracking he was at the face. He could not say the broken caps were cracking. It might have been other timber. He could have a good idea of where the cracking came from. His idea was that it came from the broken or from the bent timber. The cracking came from above the cask. The first crack he heard in the tunnel seemed about 20 feet above him in the tunnel. He reported that cracking to Mr. Griffiths. When he was at the face and heard cracking he could form a good idea of the place where it came from. He knew it came from a place up above him, but not near him, but how far up he could not say. He believed it came from the broken timber or from the bent timber.

To the Jury: He mentioned the first cap he heard go off to Griffiths, who said it was nonsense. Witness thought it was a sill. He was certain that Griffiths saw the slabs belled down on the bent caps. On the Thursday morning before the fall witness said they were looking bad. He said that on several mornings. In the big fall the legs and caps went down together. Some of the chocks used to wedge the caps were left in the ribs which stood. He was not down the tunnel since the bodies had been recovered, nor would he ever go down again. The reason he left the pit was because he was going to get better wages. He would work in any part of the mine except the tunnel. The air in the pit was good, and there was nothing to complain of about it. He noticed the sills in the extension before the fall, but never saw any bent. Had there been any bent the alligator could not have gone up and down.

Rudolph St. Vincent Heyes, engineer, residing at South Maitland, deposed that he knew deceased, Albert Moncrieff.

To Mr. Tillet: He was engineer at East Greta Colliery, and remembered the fall in No. 1 tunnel. He was in the tunnel 10 to 15 minutes after the fall, and went down to the edge of the fall. He was last in the tunnel on the Tuesday before the fall, measuring the distance from the second level down to the face. Mr. Thomas and Edward Howarth were with him. Griffiths, Parsons, and March were at the face at the time. He saw the timber as he was going down, and it was all sound. There were one or two bent caps about 130 feet from the face. He heard no conversation between Mr. Thomas and Griffiths about the timber. Mr. Atkinson, Chief Inspector, gave no directions since the fall about how the timbering had to be done nor about bigger timber, but he asked witness if he put any defective timber in, and he answered "No." He had not written to witness on the subject. The stone produced, called mud-stone, and marked J, came down in the big fall, and was given by witness to Senior-constable Brown. He gave him another piece, which he believed came out of the big fall.

At this stage Senior-constable Brown was called, and deposed that he received from Mr. Heyes the stones marked J and K, and he picked up two other pieces, now marked L, which Mr. Heyes said had been exposed to the weather.

Rudolph St. Vincent Heyes was recalled.

To Mr. Atkinson: They measured the tunnel, 565 links from the second level down to the last sill. That would be about 370 feet. His duties took him down the tunnel once a week to report on the general state of the tunnel. That included the condition of the timber and the timbering. The timber below the level was sound, except for the caps he had already mentioned and a few sills slightly bent. The sills were about 120 feet from the face, and the bent caps were a few feet off. He had been down the tunnel frequently since the fall, and had kept an account of the progress of the work as shown on the plan. He saw the timber which had been brought out since the fall. Two or three sills were knocked out by the fall. They were out of position altogether. The rails went down as well. The fall from the roof and the cap pieces coming away carried the sills and rails with it. He recognised the distance the bent caps were from the face by the position of the dam and the water-casks. He had not counted the number of broken caps that had come out of the tunnel. As an engineer, and from his knowledge of ironbark timber, he considered it a good timber for the purpose for which it was used. He made no experiment to see how much a bar would bend. They had electric signal bells in connection with their signal system. The signals were carried to within three or four sets of the face. When the accident happened the engineman was at his place. There were 4 ft. 6 in. from the back end of the cage to the under side of the caps. There was a clearance of 18 inches on each side.

To Mr. Curley: He examined the machinery, ropes, and everything in connection with the working of the tunnel and boilers. He made that examination once a day. They had safety valves on the boilers, also steam gauge. His examination of the tunnel included timber, and he made his examination once a week. He made no report about bent caps. The date of his last report prior to the fall was the 17th November, and that was the daily report. The report books were kept in the outer, or open office. He considered it his duty to report, and show any defects he saw in the timber. He made those examinations at all times during the day. The last one was made on the morning before the accident. The examination took two or three hours. He was quite sure he saw only two bent caps. They were bent about 3 inches. He saw no broken or splintered caps. He had examined the timber after the fall while rescue work was going on. He was down every day. A lot of the timbers were carried away. Of those left some were bent, and some were broken. He never counted them, nor did he regard it as part of his duty to do so. He kept a progress plan, but no report of the broken or bent caps. After the big fall they could get 127 feet down to the top end of the big fall, but there were no broken or bent caps in that 127 feet. They were all sound caps there. That was from the level to the top end of the fall. He went all the way inspecting the tunnel until the bodies were recovered. He did notice broken and bent caps below the fall during the work of retimbering. There were a number. It was no wonder to find a number of broken caps after the fall, because of the big fall hitting them and knocking them out of position. Some of the legs were also knocked out of position. He put nothing of that in his reports. The timber was mostly fresh from the bush. He had a fair knowledge of timber. He noticed sap circling the timber, and never saw green timber without sap. He had no idea of the thickness of the sap. He had examined it. He never suggested that stronger timber should be used for the tunnel. The Tuesday he was down the tunnel he was at the face the whole of the time the manager was there, and he never heard any conversation about timbering the tunnel at the weak end. Such a conversation might not have been carried on without his hearing it. Lewis never mentioned about any bent caps in the tunnel to him. None of the men did, nor the manager. If some of the men swore they saw four bent caps that would not make him see more than he did. It was possible that other men might see more than he would. Mr. Thomas gave the order for the supply of timber to the bushman. Witness looked upon it as his duty to see that the supply of timber was not defective. He had challenged and discarded timber, but only for being too small. There were no defects. They were props. The dimensions of the timber were given to him by Mr. Thomas. The tunnel timber was to be 8 inches in diameter at the small end. That was for legs, caps, and sills. He found one or two less than that, and rejected them.

To Mr. Millard: On the Tuesday before the fall he walked up and down the tunnel, and waited for the men some time. The spot where he waited was 132 feet from the tunnel. It was at the 2-chain mark, under the place where the big fall occurred. There were no broken caps over him. If there had been five or six broken caps sagging down a foot with the slabs down on them he would have seen them, and would not have stayed there. Had there been any broken caps further down the tunnel he would have seen them as he was inspecting the tunnel.

The inquiry was then adjourned until 10:30 a.m. on Monday.

The East Greta Colliery inquiry was adjourned from yesterday afternoon until Monday morning, at 10:30, at the request of Mr. Curley, whose duties as Miners' General Secretary will detain him in Newcastle to-day and on Friday. The jury, by a majority, consented to the adjournment.

[*Newcastle Herald*, 24 January, 1899.]

THE EAST GRETA DISASTER INQUIRY.

THE inquiry into the circumstances connected with the death of Albert Moncrieff, on the 18th November, 1898, in East Greta Colliery, was resumed yesterday morning at the West Maitland Court-house, before Mr. Martin. Mr. J. V. Tillett represented the Crown Law Department. Mr. Millard appeared for Mr. Thomas, manager of East Greta Colliery; Mr. F. A. S. Bowden for the East Greta Coal Company; Mr. James Curley for the relatives of the victims of the disaster; and Sub-inspector Fowler for the police. Mr. A. A. Atkinson (Chief Examiner of Coal-fields) and T. L. Bates (Colliery Inspector) represented the Mines Department.

Rudolph St. Vincent Heyes, engineer at East Greta Colliery, was recalled.

To Mr. Millard: He saw one or two sills bent in the tunnel, not to any great extent. That bending would not prevent the cage from running. After the fall the road was disconnected, fourteen or fifteen pairs of rails being knocked down the tunnel from the top edge of the fall. A person at the top end could see that the rails were gone. Those rails were bent and twisted in all shapes, and some of them were still at the pit mouth. On the Tuesday before the fall the manager made a stay at the second level when he went down first. They both stayed there, and the manager fixed his instrument, and took the angle, after which witness went down to measure to the bottom, and then walked back to 2 chains from the manager, right under the site of the big fall. The manager did not leave the level while witness was measuring down the tunnel. The manager on his way up did not stop under the fall. Witness was with him all the time. It is not true that the manager stopped under the site of the fall to examine the timber. The men at the face stopped working from the time the manager got to the level. Griffiths held the light for the manager. The bent caps he saw before the accident did not indicate any danger. It is not an unusual thing to see timber bent like those he saw. He would attribute the bending to bottom and end pressure. He had seen caps bent from side pressure, but not in that mine. He saw them in old Greta Mine, and they remained bent for years, and were taken out eventually, but the roof did not come down. The sides also stood there. He had a general knowledge of the roof of East Greta Mine, and of tunnels in particular. The roof was conglomerate, and proved a good one to a great extent. The timber and the method of timbering, in his opinion, could not be better. No precaution that he could think of could have been taken that was not taken to prevent the accident. The bent caps he saw were 130 feet from the face and 70 feet below the lower edge of the big fall. There were several slight changes in the grade of the tunnel. There was a change at 130 feet from the face. Anyone not understanding it would think they all had come down owing to the change of grade.

To the Jury: To affect the cage running the sills would have to be bent up 8 or 10 inches. He attributed the accident to the action of the water on the soft mudstone above the roof, which proved to be not so good as they at first believed. The bent sills had nothing to do with the bent caps. He replaced the legs that had been knocked out. [*Witness here showed where legs and caps had been replaced after the fall.*] Sixty pieces went down in the fall. After the fall he saw a bent cap 120 feet below the fall. If fresh timbers had not been put in where bent timbers were found there would eventually have been another fall. He revised report books, but never saw that any shift had spent the greater part of the shift in the manhole through the dangerous state of the tunnel. Gronow had worked two years in the colliery, and had experience in other mines.

To Mr. Curley: Before the fall he had not suggested the strengthening of the sets. With skips on the cage there would be 8 inches clear between them and the lower end of the caps. The sides of the skips ran 18 inches from the sides of the legs. There would be no space to put supports from legs to caps in that 18 inches. He received orders from the manager, who never suggested at any time the bricking of any part of the tunnel. Witness had not suggested that bricking to the manager, not even where the fall took place. The rails were 5 yards long. Fifteen new ones were put in after the fall. The sixty pieces that went down the mine did not include slabs. There were about 1,000 slabs. There were four sills.

To the Jury: The cage was not running in the tunnel.

To Mr. Millard: If the caps were bent down 12 inches the tunnel would not have been of any use for the purposes for which it was intended.

John Griffiths, a miner at East Greta Colliery, deposed that he knew deceased Albert Moncrieff.

To Mr. Tillett: He was on the shift that came out of the tunnel at 3 p.m. on 17th November. March and Parsons were with him, and he had charge of the shift. He had been working in the tunnel since the end of June or the beginning of July. He knew where the big fall took place. He saw no bent caps where the fall took place. He saw some about 150 yards from the face. There were three or four. He heard timber cracking in the tunnel. It was a usual thing when new timber was put in to hear it cracking. He believed someone spoke to him about the cracking. The roof of the tunnel was conglomerate and a little band, running from 2 to 6 inches thick, of soft bluestone, sometimes, but not always, across the face. Exhibit C was what he called soft bluestone. He saw Mr. Thomas in the tunnel on the Tuesday before the accident, and they were speaking about the grade of the tunnel, but not about the timber, to his knowledge.

To Mr. Atkinson: He worked at East Greta a little over five years as a miner. He had not got coal from the bottom level of No. 1. He had not worked along the level at any time. He had seen no falls where he had been working. While working in No. 1 extension he had seen stone fall 6 or 8 inches above the coal occasionally. That was bluestone. The cracking he heard came from six or seven sets back from the face. He never heard cracking away from the face. He attributed the cracking to the timber setting in the joints. The timber was always set right into the joints before the sets were left. There would always be a little grinding in the joints from bottom and side pressure. He could not form any idea of the cause of the accident. He had charge of the shift, to see everything was right, by inspecting the tunnel every day. His attention was never drawn to dangerous timber in the tunnel.

To the Coroner: It never struck him that there was danger in the tunnel.

To Mr. Curley: He had nearly thirty years' experience as a miner. He had not seen very many falls in mines. Where a fall takes place where there was timber used it is the sign of a bad roof. Bent timbers were not always the sign of a bad roof. Sometimes they were, and sometimes they were an indication of side pressure. With side pressure in the tunnel he would expect to see its effect on the timber. He would not expect to see the props bent, unless the pressure was extraordinary. With bottom pressure

pressure he would not always expect to see it in the sills. Where the caps were bent he saw no signs of bottom or of side pressure, any more than that the caps were bending. He could not say when he noticed the first cap bending. Hearing the cracks did not lead him to make an examination. The men did not speak to him about the bent caps. He made careful inspections going up and down. After he first saw the bent caps he always saw them. He could not say how far they were bent. They were not splintered; not cracked. Nothing drew his attention to the bent caps, only that he was looking about him. He had no conversation with Lewis about them. About a fortnight or so before the accident he was off work, and Thompson was in his place. His mates were with Thompson. No man, so far as he knew, was put into the tunnel to take his place. They had a spare man, Ernest March, there at the time. They could not have been more bent timbers in the tunnel without his seeing them. He saw the bent timbers before Mr. Heyes was in the tunnel. If there were other bent timbers they must have been bent very lightly. He did not know that any timber had been replaced in the tunnel before the fall. When the manager was in the tunnel on the Tuesday witness asked him how far they had to go, and the manager said he could not tell him until he went to the office. He said he believed they would be finished by Christmas. Witness replied that he wished it was finished then. Mr. Thomas said, "Why, Griffiths?" and witness replied because the water did not agree with him. Mr. Thomas did not say anything about having spoken to Lewis about the timbering, or about going to do timbering at the week end. Witness had no talk with any one about the timbering. He was acquainted with the deputies of the colliery. He never spoke to Lewis about the timbering at any time, nor to Mr. Thomas, nor to Mr. Heyes, nor to the under-manager, nor to any of the deputies, all the time he was at the colliery. He was down the tunnel the day the fall took place, and went right down to where the fall took place. He might have stayed five or ten minutes at the time. Lewis, Thompson, and Mr. Thomas were with him. He noticed nine or ten sets of timber gone. He noticed the roof down, nothing else. He noticed the road and the sills. The road was bent in all shapes. Two or three sills were knocked out. The rails had become disconnected. How much he could not say, as he could see very little. He had fairly good sight. He could not say how far the rails had separated. He had sometimes to put a slab up in the face before he got his set up. That was done to keep the stone up. They had to do that pretty often. He had never to chip the conglomerate to get sets in, but the timber men, Lewis and Thompson, had to do so. He saw the stuff that came down when they did chip. It was very hard to get down sometimes. He did not see particularly soft patches of conglomerate, but had seen some a little softer than others. He would not say from that that the conglomerate varied in places. The bottom, as a rule, was soft. They had occasionally to put a shot into it when they met a hard patch. He did not work after the fall clearing the stuff out. Some of the men spoke to him about the timbers cracking, and asked him if there was any danger, and he said no, it was always the same where new timber was put in. He often heard those cracks. The men did not speak to him often about the cracks. It might have been twice. He never heard the men speak to one another about the bent caps. When he was going up and down with them they never at any time drew his attention to bent caps. Gronow never spoke to him about them. He never heard the men speak about a statement made by Moneriff about the bent caps. He spoke to no one about the bent caps.

To Mr. Millard: He knew the colliery pretty well all over, and his experience of the roof was that it was a good one. No. 2 he saw from top to bottom, because he drove the tunnel, and the roof was a very good one, but the floor was soft. The extension of No. 1 appeared very much the same as far as they could see. There was nothing where the fall took place to indicate that it was a weak spot. The roof there appeared to be conglomerate, and appeared the same all the way down. Wherever the roof was cut into it always appeared to be conglomerate. The potholes he saw were small, and showed no break in the conglomerate which appeared above them. The potholes were something similar to the bands. There was nearly always a band between the coal and the conglomerate. Sometimes it went out just like a wedge. Where the fall took place there were no bent caps. If there had been bent caps down 12 inches with the slabs down on them he would have seen them. Nothing was ever said in the cage by the men about the caps being bent there. March never spoke to him about bent or broken timbers. Parsons did not. On the Tuesday before the accident when the manager was down the tunnel he went straight down from the bottom level. He did not notice him stop going up. He did not see him stop under where the fall afterwards took place to examine the timber. He had not much experience in timbering. The other men did the timbering. There was nothing in the tunnel before the accident to indicate to him any danger, or he would not have gone down. It was not unusual to see caps bent as he saw them. They were bent nothing out of the way. He saw timbers bent at old Greta Colliery. He saw caps there bent by side pressure. Those caps stood, and some of them were standing to-day, though the roof had come down and left them there. New timber cracked. It cracked all the way in No. 2. The fact that it was green timber would not make it crack more or less.

To Mr. Bowden: The sills were not put on the ground. A block of wood was put under each end, and from one leg to the other it was hollow under the sill. They used to put four or five sets in before they slabbled the bottom. Very often there would be 6 inches between the sill and the bottom when they left it. The bottom very often swelled up to the sills, and it was often necessary to use a pick or a drill to make the hole under the sills again. When the stuff had been removed from under the sill he had seen the sill spring back an inch. The slabs used at the face were only used to keep the loose stuff from falling. The loose stuff sometimes would be soft bluestone, and sometimes coal.

To the Jury: His mates were Edward Parsons and Ernest March. Nine men were working on the extension. A man named Pike worked on the extension. Pike was not working at the colliery at present. He left through sickness. The potholes of soft bluestone were not to him indications of danger. He would not call the roof of the tunnel a patchy one. It was regular. A live mine was one in which there was a good deal of cracking in the coal. That did not indicate danger. It was just what they liked to see. Mr. Thomas did not mention Lewis' name to witness on the Tuesday before the accident. He was present in Court when March and Parsons made statements about Mr. Thomas, saying that Mr. Thomas told him Lewis would repair the timber at the end of the week. Mr. Thomas did not tell him that. Mr. Thomas did not say the bent timbers were to be renewed at the end of the week. He was positive of that. One of those men did not call his attention to the caps being bent with the slabs sagging down on them. Before the fall they considered the timber strong enough to hold the roof. He saw the Government inspector down the mine. He saw him more than once.

The inquiry was at this stage adjourned until 2:30 p.m.

On

On resuming, John Griffiths was recalled.

To Mr. Curley: Some men besides those mentioned worked in the tunnel at odd times. He thought Gronow was away from work some time before the accident. Kelly took Gronow's place, so far as he knew. He did not know if Kelly was working at the colliery still. Witness was working five years at the colliery, and had no fall to speak of. He saw some little bits in the road on the level. They were generally coal. How much he could not say. He was never in places where they took tops out. He never had to go where falls had taken place to do any work. He never had to clear out of the mine in consequence of falls.

To the Jury: He was not a contractor. He was paid so much per yard, and did not consider that contract work. It was just an understanding between Mr. Thomas and them. He was not appointed a deputy, but was appointed by Mr. Thomas to take charge of the shift. He never heard Mr. Thomas make mention on the Tuesday about repairing timber. It could not have been said without his hearing it. Mr. Thomas might have stopped under the site of the fall without witness noticing him. When Mr. Thomas left the face they did not go on working. He saw Mr. Thomas going up the tunnel. They used a couple of shots of dynamite getting up the bottom. He had not been talking to anyone about the accident any more than mostly everybody else would be talking about it. Besides Kelly, March, and the nine men previously mentioned, other men worked odd times in the tunnel. He did not remember who they were. As boss of his shift, he had the power to withdraw his men if danger was reported to him, so as to remedy the danger. The late Daniel Gronow had the same power.

To Mr. Bowden: He had worked in other mines, and had heard cracking in them similar to that which he heard in the tunnel. That cracking did not indicate danger of a fall. He could not locate the timbers from whence the cracking proceeded. If Mr. Thomas stopped going up the tunnel he could not tell where he did stop. He could see his light; the reflection of his light, but not the light itself, unless it was held up a good bit, owing to the grade of the tunnel. When Mr. Thomas was taking the grade of the tunnel he held the light up on a stick, so as Mr. Thomas could see it.

To the Coroner: There was danger sometimes when timber cracked.

To the Jury: The tunnel was steeper in some places than in others. Grades were not shown in the plan.

To Mr. Bowden: The cracking of the timber would not make anything like the same noise as one of the 9-inch caps. The noise of breaking timber was much stronger than that caused by cracking. He never heard a 9-inch bar break.

To Mr. Curley: Timber was put in a mine to prevent it from breaking in.

David Lewis was recalled.

To Mr. Millard: He knew the seat of the fall. There were no bent caps there before the fall. It was not true that at that spot there were caps bent 12 inches, with the slabs sagging down on them. That was not the case in any part of the tunnel. Neither Parsons nor March drew his attention to broken or bent timbers. He heard none of the men speak of timber being bent or broken where the fall occurred. March asked him at the pit top how far it was from the level down to the fall, and he replied that he did not know exactly. Witness asked why he wanted to know, and March replied, "I should like to know, as there will likely be an inquiry after this." March said he did not know, and witness told him he ought to tell them he did not know. Witness also told him he did not know. March had been down the tunnel between the time the accident occurred and the time of the conversation. March was not down the tunnel after the conversation.

To Mr. Bowden: He heard Cantwell swear that Moncrieff slept in one night. Moncrieff slept at home on the Wednesday night. On the Tuesday night Gronow said he was a man short, and on top witness asked Morrison if he would call Moncrieff. Morrison said, "All right." Moncrieff called at witness' place as he was going to work. On Wednesday night he did not turn up, and witness spoke to Thompson, who said, "You had better leave him sleep to-night, and it will be a lesson for him." On Thursday night he did turn up, and witness said to him, "Hulloa, did you find yourself?" and Moncrieff said, "I made sure of it to-night. I came to the pit top at 7 o'clock, and had a sleep in the little skip on top." The skip was still at the tunnel mouth. Moncrieff slept there from 7 p.m. until 11 p.m., so as not to miss the shift.

To Mr. Tillett: He used to talk to the men about the mine going down in the cage. He did not pay particular attention to what was said at any time.

To Mr. Millard: Had anyone said that the timbers were dangerous or the caps were bent, he would remember that.

To Mr. Curley: If anyone said to him, "That timber has been cracking down there to-night," he would ask in a minute, "Where?" It would depend on the answer whether he put it in the report-book or not. He heard the timbers creaking, not cracking. He remembered being in the tunnel with the jury and being asked to get a sample of stone from the roof. The Exhibit F he got down below the fall. How far below the fall he could not say. The water had been over it. He did not know how far up the tunnel the water was. The Exhibit H was similar to that near the door in the level near the overcast. He did not hear Mr. Thomas say there was a soft patch there. The stone was a sort of a conglomerate. He had to fire three or four shots in the bottom. He never tested the roof by putting a hole up in it. He and Thompson set all the timber in the tunnel. If there was any defect in connection with the setting of the timber he would regard himself and Thompson responsible for it. The timbering was inspected by Mr. Heyes and Mr. Thomas. They sometimes found fault with some of the sets. Mr. Heyes would point out where a mistake had been made, and they would have to rectify it. Mr. Thomas on one occasion said some set was not at right angles to the seam. He said it was out, and witness said it was not out. Mr. Thomas said it was out a couple of inches. They got the square to see who was right, and neither was right. It was an inch out, and it was put right. He could not say the thickness of the cap on the timber. It was not possible for bent caps to be in that tunnel without his seeing them. When the jury were down the tunnel he saw bent and broken caps below the fall. He worked clearing out the fall from the time of the fall onward to the recovery of the bodies. The jury could not get to the face on account of water. There were 60 or 80 feet of water. He had been down below that when the water was not there. There were some bent and broken caps below the water. He noticed the bent and broken caps as soon as they took the dirt out as they went along. Before the fall he only saw four bent caps. He could not account for the bent and broken caps after the fall. The roof broke some of them. The

roof and the sides probably broke them. He did not know the names of all the men who took the stuff out with him. There were Dan, Frank, and Jack Genge, Jack Downie, Jim Hennie, Jack Leishman, Fred Cook, Ernest Nixon, and Gilson. He was there soon after the fall. The rails under the fall were gone, and could not be seen. The rails were hanging on to the top end of the fall. The dogs were sprung out. One of the sills was gone at the seat of the fall. Four sills went altogether. The first missing sill went from near the bottom end of the fall. All the rails from the fall to the face were gone. They were swept down the tunnel.

To Mr. Millard: The rails were found along the tunnel, some against the roof. They were not all in a heap.

Azariah Thomas, manager of East Greta Colliery, was recalled.

To Mr. Millard: He remembered being down the tunnel on the Tuesday before the accident surveying. He had a conversation with Lewis, but did not say a word about re-timbering or repairing. No reference was made to timber being broken or bent. He did not stop going down or coming up to look at bent timber. Timber could not be bent and broken as described by Parsons and March without his knowledge. He saw no timber bent except that already mentioned by him, near the cask.

To Mr. Bowden: He had heard timber crack in a mine. He heard it near him. The noise of timber setting could not be mistaken for the noise of cracking. The noise made by breaking caps 9 inches thick would be a very loud one.

The inquiry was adjourned until 10:30 a.m. to-day.

[*Newcastle Herald*, 25 January, 1899.]

THE EAST GRETA DISASTER INQUIRY.

THE inquiry into the circumstances connected with the death of Albert Moncrieff, on the 18th November, 1898, in East Greta Colliery, was resumed yesterday morning at the West Maitland Court-house, before Mr. Martin. Mr. J. V. Tillett represented the Crown Law Department. Mr. Millard appeared for Mr. Thomas, manager of East Greta Colliery; Mr. F. A. S. Bowden for the East Greta Coal Company; Mr. James Curley for the relatives of the victims of the disaster; and Sub-inspector Fowler for the police. Mr. A. A. Atkinson (Chief Inspector of Coal-fields) and T. L. Bates (Colliery Inspector) represented the Mines Department.

Hugh Humphreys, manager of Dudley Colliery was recalled.

To Mr. Curley: The cause of the fall was the mudstone taking the place of the conglomerate. Under the fall the conglomerate showed a shell from 18 inches to 2 feet thick on one side to 5 inches thick on the other. Lower down the conditions were reversed. It was 4 or 5 inches on the right side for about 30 feet, when it began to thicken. On the left side it began to thin out down to 15 or 20 feet from the bottom of the fall. In the strata of mines there were vertical and horizontal layers, and the facings often ran upwards. If there was water trickling through the strata at the fall he did not think it would come through the conglomerate, though it would affect it. It would certainly have affected it if the caps were broken, the slabs lying on the caps and the roof lying on the slabs. In a case of that kind he would, under such conditions, have expected to see water coming through. If the water did not come through he would not expect water above, but that did not show there was no water above. He would call Exhibit J a soft shale-stone; Exhibit K a fine conglomerate; Exhibit F a conglomerate. If he saw timbers bending below 500 feet down the tunnel he would put the sets closer together, as was apparently done in this case.

To the Jury: Leaving aside the fall, he considered the roof of the tunnel an exceptionally good one. He had seen the conglomerate above the top slabs on the ribs down below the fall. There may or may not have been patches of mudstone above the slabs.

To Mr. Millard: He noticed no band between the coal and conglomerate. Such a band would not be a source of danger.

To Mr. Bowden: While travelling up and down in the alligator he could not detect mudstone between the slabs. He could if the alligator went slow or stopped. It would be too high to examine off the floor. A proper inspection of the timber could be made from the alligator. From what he saw of Lewis he considered him in every way a competent, skilled practical man.

Duncan McGeachie, manager, Waratah Colliery, was called.

To Mr. Millard: He had twenty-seven years' experience in coal-mining in all its branches in Scotland and New South Wales. He was also an engineer and surveyor. He had a fair knowledge of all the Greta Measures. The roof over the East Greta seam was a hard conglomerate up to a depth of 40 feet. After the accident he noticed the method of driving and timbering in No. 1 tunnel, and in his opinion it was on most approved principles. The work was good. The timber was all good ironbark. He knew the conditions that existed before the accident, and considered the place well timbered. He made an examination, not a minute one, of the cavity of the fall. He found a thin casing or shell of conglomerate from 18 inches on one side to a few inches on the other. Immediately above the shell was mudstone, and above the mudstone was sandstone. That was not a usual thing to find in conglomerate. As a geologist he would never have expected to have found it there. He was not below the fall. He observed David Lewis work. Lewis was a thorough practical man, and one who deserved great credit for the work he had done. He believed the cause of the accident was the mudstone in the roof, assisted by water or something else. He thought the fall gave very little if any warning. If the timbers once began to go, they would not last five minutes with the weight that came away.

To the Coroner: He was very much surprised when he saw the mudstone there. It was a thing he had never seen before.

To Mr. Tillett: It was the first mudstone he had seen in that roof. If he did see any there before it would indicate to him a change in roof. If the mudstone appeared in potholes he would not expect a change of roof. A patch right across the face would indicate a change of roof, and he would make provision. He did not think the fall would gradually settle on the timbers, because the hard conglomerate would not yield, but would crack like glass, and the stuff above would break through.

To Mr. Atkinson: He had experience in steep measures in Scotland. The dip was 43 to 47 degrees. They were worked by shafts. The roof was rather bad. They drove down a certain distance and worked up the rise, the same as at East Greta. He was nearly two years under-manager at Greta Colliery. He remembered

remembered the depth of conglomerate at about 40 feet. It was bare, not bricked. He did not think side or bottom pressure had anything to do with the fall at East Greta. It was roof pressure. He examined the roof along the lower level, and it appeared to be a very sound conglomerate. That was in the overcast. He had been in no other part of the mine. He had experience of iron-bark caps. If he saw five or six of them bent in a tunnel he would think there was something wrong, and would look for the cause. If he found it was due to pressure from the roof, he would replace them. He would not take much notice of one or two bent caps. In that tunnel, if a cap were bent 6 or 8 inches, it would be perfectly useless. With side pressure he would expect to see the effect first in the props.

To the Coroner: The floor above the seat of the fall was soft and yielding, and the sills there were well put in.

To Mr. Curley: He would take no notice of one or two caps bent in that tunnel. If a cap was bent 6 inches it would be past the point where it would have any resistance. He would take notice of four bent caps, and if the pressure was from the roof he would be guided by circumstances. If the timber was too light he would put it closer together, or put in stronger timber.

To Mr. Bowden: There was no appearance of water when he examined the fall. It was a surprise to him to see the conglomerate narrow out to 6 or 8 inches. The timber was good; could not have been better for the purpose. If the caps had been bent 12 inches they would not bear their own weight. He had seen timber bent by side pressure. It would not have alarmed him to have seen three or four sets bent from side pressure. He would expect to see side pressure at all times show itself first on the props. It would have been impossible to have seen patches of mudstone at the fall.

To Mr. Tillet: He would not say no patches had been seen. He could only speak of what he had seen.

To the Coroner: He was at the fall on the Monday, Wednesday, and Friday after the fall.

To the Jury: He was asked by Mr. Thomas to go to the tunnel and to inspect the fall, with a view of getting over the difficulty. He saw no change of roof in the overcast. It was good conglomerate. He never saw changes in that roof before the fall. He had seen faults coming in the coal, and they were of common occurrence. He had a fair knowledge of the Greta Measures. What he knew of the East Greta roof he had seen since the accident. He would prefer seasoned to unseasoned timber, but the timber put in the tunnel was good, whether seasoned or unseasoned. The fact of the caps being bent below the fall was proof that they were not strong enough to stand the pressure after the fall.

To Mr. Millard: If he saw bent timbers he would be guided by past experience. If he had previously found the roof intact further up the tunnel after the removal of bent timbers he would conclude that side pressure had existed. He was requested by Mr. Thomas to go to the mine to assist by advice in recovering the bodies of the dead men.

To Mr. Curley: If caps were bent or broken and the roof remained intact, the pressure would be from some place other than the roof.

To Mr. Millard: There was no great danger in the bord and pillar system.

To Mr. Bowden: Patches of mudstone underlying the conglomerate would not indicate a certain change. All roofs were to a certain extent patchy. The patches were not thick.

At this stage the inquiry was adjourned for luncheon.

The inquiry was resumed at 2:30 p.m.

Richard Thomas, manager of the Duckenfield Colliery, deposed:—

To Mr. Millard: He had twenty-eight years' experience in mining, fifteen at Home and thirteen in the Colony. He knew East Greta seam, and had experience of it. He studied geology. He went over the whole field with Professor David. The roof was a hard calcareous conglomerate, and was generally found over the Greta seam. He had traced it from South Greta Colliery to 5 miles south of Richmond Vale, a distance of about 16 miles. That conglomerate roof was the best for coal-mining purposes. It was proved from 50 to 80 feet thick. He visited East Greta Colliery when it was being opened up, and on the day of the disaster. He had been there several times since the disaster. He noticed that the timbering was well adapted to resist pressure from roof, floor, or sides. It was a modification of the Welsh system. The tunnel was driven on scientific principles. The class of timber was good. Under conditions existing before the accident the timber was all that could be desired. He visited the scene of the fall, and noticed the strata disclosed by the fall. He noticed overlying the slabs a thin layer of conglomerate 18 inches thick on the left-hand side, and a foot thick on the right. Above that he saw 5 feet of mudstone, then a grey pebbly sandstone, 10 inches or a foot thick; above that, 4 feet of mudstone, and above the latter, dark brown sandstone. He went to the lower end of the fall in another visit. The conglomerate on the left-hand side prevailed right through, and on the right-hand side thinned out to almost nothing. He had no particular knowledge of the roof other than what he saw in the fall. He saw the overcast driven right through the solid conglomerate. He did not go into the level. The erosion of mudstone into that conglomerate was a freak of nature. Conglomerate was formed by a swift current, and mudstone was carried by a slow current. It was the silt deposited by the slow current. [*The witness here drew a sketch showing how mudstone was deposited in the conglomerate.*] In his opinion, the accident was caused by the erosion of mudstone in the conglomerate. It could not be guarded against because it was quite unexpected. To find timbers bending to any small extent in mines was a usual thing. If he saw in a tunnel like No. 1 timber slightly bent, that would not indicate any danger. A bend of 2 or 3 inches would be a slight bend. If he noticed the caps bent in that way, and the slabs did not follow the caps, there would be no roof pressure. With regard to what he would do with bent caps, he would be guided by his past experience in the same mine. If the roof higher up the tunnel stood intact after the removal of bent caps, he would assume that the bending had been caused by side and floor pressure. He believed the conglomerate shell under the fall burst away suddenly. He thought the fall would be almost instantaneous after the breaking of the conglomerate. Mudstone would be a dead-weight on the timber once the conglomerate had broken. It would not be possible for the caps under the fall to be broken, to have the slabs down on the broken caps, and the mudstone visible through the slabs. Caps 5 feet centres apart would each stand 20 tons. After a cap had been cracked and broken through, it would not support itself. Once a cap began to crack it would weaken. A cap bent 8 inches and cracked would not support 20 tons.

To Mr. Tillet: Mudstone had no cohesion. Had the tunnel not been timbered, the thin band of conglomerate would have been broken by the weight of the mudstone above. The fall did not take place earlier because the timber was there to support it. Had they known there was dead-weight of mudstone there

there they would have strengthened the timber. Any movement in the conglomerate would have shown in the caps. He saw no evidence of water there, either in the mudstone or conglomerate. The timber was sufficient for the conditions apparent before the fall. The mudstone showing above the coal would indicate no danger.

To Mr. Atkinson: He would not expect much side pressure in that tunnel. Side or bottom pressure had not much to do with the fall. Conglomerate geologically was a rock that varied little in its character. In making calculations of the strength of a cap piece he assumed that the weight was distributed equally over the cap. If four or five caps together were bent 5 or 6 inches he would be guided by his previous experience in the mine. He would see if the roof was intact. If pressure came from the sides he would expect to see them fall when the roof was taken away. The sides of the fall were to all appearances what they were when driven.

To Mr. Curley: He was in the mine in its early stages, ten years or more ago. He was in No. 1 tunnel then. He saw a hard patch of conglomerate there where there was no timber. It was 75 or 80 feet long. He saw timber after that, and patches without timber. Below that he saw timber continuous after that. He attributed the continuous timbering to the increased depth. Prudence and precaution were observed there against possible accident by roof or sides. Danger would increase as they went down. When he was there ten years ago the tunnel was down 100 or 150 feet, and some bords were going at the time. He had not been in the colliery from that time to the accident. He would not consider any serious falls with the roof they had there. If there had been certain falls in the colliery he would want to know the conditions of the falls. He would not put his limited experience of that mine against the manager's experience. It would be unreasonable. He would not say his experience was a closed book. It was a fairly open one. If he had conglomerate breaking, and mudstone showing above, he would conclude a change of roof indicated. If the mudstone appeared above a broken crust of conglomerate it would show a want of uniformity. There was practically no cohesion about mudstone. Exhibit J was mudstone, and it had practically no cohesion. It would want close timbering; and knowing the conditions of the fall as he knew them after the fall he would have the timbers not less than 3 feet apart. If he knew the mudstone to be of unknown quantity he would treat it all as mudstone. He made the first measurement on the first or second day of the fall, and he made the other when he was there last. They were not made by rule, but by observation. At the top end of the fall the nearest cap to the edge was good, and the second one was bent 4 inches. There was no break in the roof at the side. He was not in the colliery generally. He went there to help the rescue parties. Inspectors Dixon and Bates, Mr. Ross, Mr. Thomas, and Deputy Lewis were with him when he made his first measurement. On the second occasion Chief-Inspector Atkinson, Inspector Bates, Mr. Jonathon Dixon, and Mr. Thomas were with him. East Greta Colliery required more attention than one running on an even grade.

To Mr. Tillett: The roof was a coarse conglomerate. He knew "Geikie's Geology," and looked upon it as a standard work. He could not agree with Geikie's theory about conglomerate. Geikie could not have had a knowledge of our marine beds when he wrote it.

To the Jury: The second fall ran into the sides 3 feet. He visited the tunnel in the first instance to see if they could get the men out alive. When that was hopeless he went to assist in getting the bodies out. He was quite satisfied with what he saw in the tunnel to judge as to the cause of the fall. He already knew the nature of the roof. If there was a soft patch in the level near the overcast that would be no indication of danger lower down the tunnel. Calcareous conglomerate would be affected by exposure to water and air.

To Mr. Bowden: He had seen caps bent by floor pressure at Home, but not at Newcastle. It would bring the sides away. A body of stone with little cohesion could not hang for a time if it was depending on itself. A roof with little cohesion would stand until the limit of resistance was reached. If he saw a patch of shale in the roof he would not come to the conclusion that it was all through the roof. The presence of such patches was not an indication of change of roof.

The inquiry was then adjourned until Friday, at 10:30 a.m.

[*Newcastle Herald*, 28 January, 1899.]

THE EAST GRETA DISASTER INQUIRY.

THE inquiry into the circumstances connected with the death of Albert Moncrieff, on the 18th November, 1898, in East Greta Colliery, was resumed yesterday morning at the West Maitland Court-house, before Mr. Martin. Mr. J. V. Tillett represented the Crown Law Department. Mr. Millard appeared for Mr. Thomas, manager of East Greta Colliery; Mr. F. A. S. Bowden for the East Greta Coal Company; Mr. James Curley for the relatives of the victims of the disaster; and Sub-inspector Fowler for the police. Mr. A. A. Atkinson (Chief Inspector of Coal-fields) and T. L. Bates (Colliery Inspector) represented the Mines Department.

Azariah Thomas, manager of East Greta Colliery, was recalled.

To Mr. Curley: The dip of No. 1 tunnel from the bottom level to the face was 47 degrees. He instructed the timber setters to set the timber at right angles to the pitch or the dip of the tunnel. He did not know the term "underset." He was in the tunnel on the Tuesday before the fall, but not afterwards before the fall. The caps now bent and broken in the tunnel below the fall were broken after the débris from the fall had run down, and after the water had affected the calcareous conglomerate roof. It was evident they were broken after the fall, because they rested on the débris. The water had not affected all the broken caps. The water and débris filled up the tunnel to 130 feet from the face. They saw the timber between the débris and the big fall bending and breaking while they were down. They heard them cracking while they were putting timber in where the big fall took place. The timber by the side of the fall was in good condition. The first set near the fall was good. The second was good.

To the Coroner: Water was running from the lower end of the fall. No water was seen at the top end of the fall. The mudstone from the top end of the fall was dry. The mudstone that came down the tunnel was like Exhibit J.

To the Jury: It would be impossible to get timber from the bush without sap. The small ends of the caps had to be 8 inches in diameter. He knew ironbark with sap to last seven and a half years, and be then in good condition. They used it on account of its durability. Directly or indirectly, it had never been hinted, suggested, or reported to him that there was a dangerous roof approaching.

To

To Mr. Curley: The tunnel was commenced some little time over seven years. There was another tunnel near it down as far as the top level. The tunnels were 135 yards apart on the surface. The little tunnel was 120 yards down by horizontal measure. Two places were opened out of the bottom of it when he took charge. It was very little timbered—just a stick in here and there. It did not occur to him to do anything in No. 1 tunnel that he had not done. There was no restriction on him whatever.

William Kerr, engine-driver at East Greta Colliery, was called.

To Mr. Curley: He was working the 3 p.m. shift at the tunnel. He was at the colliery a year and nine months. He had shift about. He went on at 11 p.m., or at 7 a.m. at other times. The 3 p.m. shift finished at 11 p.m. Sometimes he sent the shift down, and sometimes the other engine-drivers did so. He was on the 3 p.m. shift at the time of the disaster. Lewis went down that week at 3 p.m. When the men went down they did not at all times go straight down to the face. Sometimes they did, and sometimes they stopped at the level. They went all together. He could not see the men at all from his handles. The alligator went down with the men. He knew by the signals men were going down. The tunnel men went down in one batch. When the jig was started, sometimes the jig and tunnel men would go together, and sometimes in two lots. The alligator went at a fair speed for men. The men on the previous shift came up after the others had gone down. The cage used to take five minutes coming direct from the face to the top. He was never told by Lewis to go slowly, as he was going to make a thorough examination of the tunnel. Timber took a minute and a half or two minutes longer to send down. The men went down with the timber, which was placed in the alligator. Sometimes he went to work with the men working in the tunnel. He heard Dan Gronow remark about bent timbers down the street one Saturday, five or seven weeks before the accident. Gronow said there were two or three caps that were bending and splintering. He said no more than that. None of the other men said anything to him about it.

To Mr. Tillett: The conversation took place at the post-office. Gronow said there would be some timber to replace when the tunnel was finished, as two or three caps were bending and splintering. He did not speak of them as indicating danger.

To the Coroner: He never saw Lewis going down, but knew he must be there.

Thomas Lionel Bates, Inspector of Collieries, was called.

To Mr. Tillett: He inspected East Greta Colliery at various times, and made his last inspection on the 5th September before the accident. He was in the tunnel then, and went to the face. It was below where the first fall occurred. He inspected the timbering, which did not show the slightest indication of undue pressure. He had previous experience of the colliery, and was quite satisfied with what he saw of the timbering.

To the Coroner: He walked down the tunnel, and from where he stood examined the roof 50 or 60 yards below the level. He could see between the slabs, and as far as he could see it was conglomerate. Conglomerate was the predominating feature of the seam.

To Mr. Atkinson: He had been inspecting the colliery for nine years. He was at the colliery three times between the 5th September and the date of the disaster investigating accidents. During his inspections he had seen slight falls in various parts of the mine. What came down was an argillaceous or clay shale, and the conglomerate was above. It was 5 or 6 or 8 inches thick. He invariably saw the conglomerate above the shale. He had one complaint, an anonymous one, in the early part of 1897. It was from a wheeler, complaining that a bord he was working in was dangerous on account of the roof. He investigated it without delay—made an investigation. He found the floor swelling and troublesome to wheel along, but the roof was safe. It was on the left-hand side of the lower level of No. 1. That was between No. 1 and No. 2 tunnels on the lower level. The roof was coal. The bord was in 50 or 60 yards. There was no fall from where the bord was turned away to the face. He had been down the tunnel since the accident. He had no two opinions about the accident. It was caused through the conglomerate thinning out. As it could not expand above on account of the conglomerate it would burst away at the point of least resistance, which would be at the cavity caused by the excavation of the tunnel. Side or bottom pressure had little to do with the fall.

To the Coroner: Where the falls occurred he invariably found the conglomerate overhead and nothing else. The stuff that fell was 6 or 8 inches thick above the coal. He saw two kinds of conglomerate, the silicious conglomerate and the calcareous. The silicious was undoubtedly the harder of the two. The roof of the tunnel was composed of both. The silicious was at the overcast. The calcareous was below the big fall. There might have been some in the fall. He saw the roof between the slabs, and knew it to be conglomerate. He noticed no shale of any description. He examined the timber, and so long as it was sound and safe the men were safe. It was not an uncommon thing to see a fall in a mine. He had seen hundreds. When pillars were out he could quite understand the roof would come down. He heard that large falls had taken place where pillars had been taken out, not otherwise. He had not inspected the action of the falls on the sides. He had seen nothing of any importance showing weight on the timbers—nothing he deemed worth calling attention to. He saw several places on the levels where there had been small falls. That was not extraordinary. There was no element of danger in it. About 6 or 8 inches might have come down. He would pay attention to cavities caused by falls between the timbers on the levels. If other persons had seen falls up to 2 or 3 feet he had no recollection of them. He had been in the lower level and saw the roof there. There was a kind of mudstone above the coal similar to Exhibit J. The roof was not broken to a dangerous or alarming extent. He saw it when he was down with the jury. The conglomerate was above the mudstone, but he did not see any between the latter and the coal. He saw conglomerate there. He was in the overcast, and saw silicious conglomerate there, but nothing else.

To the Coroner: He saw no falls there more than in an ordinary mine. The timber was sufficient for the roof.

To Mr. Curley: He examined the report books at the colliery when he made his inspection, and at the time they were to his satisfaction. From the evidence he heard he was not satisfied. He was not satisfied with the person who made the inspections. The manager or the under-manager should have been down the tunnel oftener. If the under-manager was not down the tunnel for a fortnight, he did not comply with Special Rule 7. A mine of such a character as East Greta should be under strict supervision.

To Mr. Millard: He knew David Lewis since the disaster. He believed him to be a most competent man from what he had seen of him. He was a thoroughly practical man. He looked upon Lewis in the light of a contractor, who was therefore ineligible to make an inspection. He was quite satisfied Lewis was competent to make the inspection.

To Mr. Bowden: On the whole the colliery was a carefully and skilled managed one.

To the Jury: If there was conglomerate between the tunnel and the mudstone, at the seat of the fall, it was beyond human conception to have expected so large an amount of the mudstone there. It would be possible, but not expedient, to work the tunnel with double skips and props down the centre. He did not like the props in the middle of the tunnel. Almost invariably he visited every working place in the mine when he inspected it. It was not carelessness on the part of the men who timbered the tunnel that caused the accident.

To Mr. Curley: The last time he was in the tunnel he was not at the face. He was only once in the extension, and went close enough to see all he wanted to see.

To Mr. Millard: It would be reasonably practicable to put bores into the roof to test it. Something of the kind was done at Stockton to prove the roof. It was a question of expense. After what has occurred, he would like to see it done. If he thought it desirable he could have had it done.

To the Jury: When he visited the tunnel the face was below the big fall.

To Mr. Curley: He saw the fall on the day of the accident. Two of the caps at the edge of the fall showed signs of bending, and they were strengthened. He had a look at the strata. It was conglomerate, shale, and sandstone. The conglomerate was calcareous, and was thickest on the left-hand side at the top of the fall. The timber below the fall was more or less broken. At the bottom end of the fall two or three caps were standing. Below them was another fall. He took no record of the bent or broken caps.

To Mr. Millard: He saw water coming from the roof on the Monday, but not on the day of the accident. It came from the top. He saw it after the second fall in the big fall.

Edward Davis, colliery carpenter, was called.

To Mr. Millard: He had often been down the extension of No. 1 tunnel. Sometimes he was down once, and sometimes twice a day. For two or three days he might not be in it. The last time he was below the bottom level was a week ago. The timber was in a good state. He noticed none of the cap pieces bent. He knew about where the fall took place. If any timbers were bent they were bent very slightly. There were no broken ones. Had there been any bent or broken down a foot he would have seen them. He was fixing up the road and looking after the signals. He fixed a roller 60 or 70 feet from the bottom, and was there an hour or an hour and a half. He occasionally walked down.

To Mr. Tillet: His work was on the floor and sides.

To Mr. Curley: When he was fixing the roller 50 or 60 feet from the face he saw no five or six broken caps there. He saw none bent. He could see some little distance down the tunnel. He did not see four bent caps there. He had nothing to do with looking after the road.

Edward Howarth, labourer, at East Greta Colliery, was called.

To Mr. Millard: He knew the extension of No. 1 tunnel. He was down with Mr. Thomas and Mr. Heyes on the Tuesday or Wednesday before the accident. They got off at the level, and Mr. Thomas took the grade of the floor. Mr. Thomas called out to Griffiths at the face to give him a sight. He took the level. Witness described how he assisted Mr. Thomas. He saw two bent caps nine or ten sets above the face. He saw no others. He saw every set as he went down. Mr. Thomas was at the bottom level. Mr. Heyes went back up the tunnel, and he and Mr. Thomas went down to the face in the alligator. Griffiths, Parsons, and March were there also. Mr. Thomas asked how they were getting on, and Griffiths asked Mr. Thomas how much further they had to go. Mr. Thomas replied that he would let him know as near as he could. He said it was about 45 feet, and that would mean about nine more sets of timber. Griffiths said he wished it was his last shift, as he was sick of the water, which was not agreeing with him. Griffiths also said that it would be finished by the New Year. They (Mr. Thomas, Mr. Heyes, and witness) went up in the alligator to the level. Mr. Thomas did not stop going down in the alligator.

To Mr. Tillet: He was watching Mr. Thomas coming down in the alligator. His work was all along the floor. He could just notice the two bent caps he saw.

To Mr. Curley: He was told what he was going to do before he went down the tunnel. Mr. Heyes told him he was to go down and draw the chain. That was his only trip down to the face. He had often been down to the bottom level. He went one day nine or ten sets below the bottom level. He had been 100 yards along bottom level towards No. 2 tunnel. He saw no breaks in the roof there. He saw no bent timbers there.

Alfred A. Atkinson, Chief Inspector of Mines, was called.

To Mr. Curley: He had about twenty-four years' experience in coal mines, and during that time had to deal with various roofs in collieries. Conglomerate was a very unusual thing in coal-mines in the Old Country. He had given attention to the study of geology. Knowing that Geikie was a great geologist, he would take it that he would not be likely to write anything that was not correct. From his knowledge of managers he believed they tried to get a knowledge of the strata overlying the roof. They would go to some considerable trouble to get acquainted with the roof. The manager ought to have a fair knowledge of the roof after the falls described by Cartwright. If caps or other timbers were bent or broken that should make a manager look for the cause. He was in the colliery in October, 1897. The extension was not then commenced. The mine was idle. He went down No. 1 tunnel as far as the level and along the level to the face on the south side. He was down the tunnel since the fall twelve or fifteen times. He had gone through mostly all the principal working places. He saw the character of the roof at the big fall in No. 1 tunnel. He noticed the roof over the dam. Above the conglomerate was some shale. There were 2 feet of conglomerate. The shale was there. The hole was half the width of the tunnel, and the shale showed in the hole. Seeing that shale there he would think it possible for it to be found in other parts of the mine. In the overcast he saw one place on the left-hand side which showed a softer stone than the conglomerate. It was mudstone, mixed with sandstone. It was a small patch in the conglomerate itself. The conglomerate over the dam was a mixed one, silicious and calcareous. He saw the fall on the day of the fall. The conglomerate there was mostly calcareous, and was about 18 inches thick on the left-hand side, tapering down to 4 or 5 inches on the right-hand side. Shale or mudstone was above the conglomerate, and was several feet thick, and above that was hard

sandstone. The silicious was the stronger conglomerate, and would not suffer so much as the calcareous. It would carry more weight than calcareous. If Mr. Thomas visited the tunnel often he would know the nature of the two conglomerates. He noticed no water on the day of the accident, but he saw some dripping out of the top of the fall on the Monday afterwards. It was dripping. The sides appeared good, except where the caps had torn a little of the coal away at the top. He noticed no bending in the sills. The caps near the fall appeared right but it was decided to strengthen them in view of possible danger. He could not say the men would have a knowledge of the mudstone over the conglomerate. The timber setters would have a knowledge of it if the conglomerate had run out and mudstone had taken its place. If the conglomerate did run out Mr. Thomas should have known it. If conglomerate run out and mudstone took its place he considered the timbering should have been strengthened. The timber, as mining timber, was very good. He had seen larger timber put in mines. He had seen sets put closer. He had seen tunnels bricked. In his opinion Lewis was not eligible under General Rule 4 to make the inspection. The Special Rules were considered to be of equal force with the Act itself. Cartwright did not comply with Special Rule 3 when he remained away from the tunnel for a fortnight.

Mr. Millard and Mr. Bowden objected to Mr. Curley's questions about the rules, and asked for notes to be made of the objections.

Continuing his evidence, in reply to Mr. Curley, the witness said some of the roads wanted more timber on the bottom level of No. 2 tunnel. Conglomerate roofs did not run so regularly as the ordinary sandstone or shale roofs.

To the Jury: One could not say how far the mudstone would spread itself out.

Oliver Kay Young, auctioneer, was called.

To the Jury: The witness, Parsons, spoke about the accident to him in his office some few days after the accident, and asked if he wanted any men. Parsons said he was in the rescue work at No. 1 tunnel, and he was not going to work there any more, as Cartwright, the under-manager, had said he could not work at the mine unless it was in No. 1 tunnel. Parsons said no one forced him to go into No. 1 tunnel. Parsons said, "I've got the company under my foot, and I'm going to squeeze them."

To Mr. Curley: He was a director of East Greta Colliery Company. He did not know Parsons by name when the conversation took place. He had an animus against Parsons because he believed Parsons told untruths in the witness-box.

The Coroner declined Mr. Curley's request to be allowed to address the jury, as the other gentlemen present did not wish to do so.

The Coroner complimented Sub-Inspector Fowler upon the able manner in which he had collected the evidence and enabled the inquiry to run so smoothly. The thanks of the jury and the Coroner were due to the Sub-Inspector and to Senior-Constable Brown, also to Mr. Roberts, who had taken the evidence and saved the Coroner so much trouble.

The Coroner then reviewed the evidence in a brief address, and left the matter in the hands of the jury.

[*Newcastle Herald*, 30 January, 1899.]

THE EAST GRETA DISASTER.

THE conclusion of the Coroner's inquest into the circumstances of the death of Albert Moncrieff, one of the victims of the disaster at East Greta, is a lame and impotent one. Ample evidence was adduced in the case, and every care was taken by cross-examination and otherwise to throw light on the causes and circumstances of the deplorable fatality. The majority of people who had read the evidence had probably arrived at the conclusion that the deaths were accidentally caused, but that the catastrophe emphasised the necessity for taking the most stringent precautions in underground workings where the nature of the strata placed unusual strain on the timbering. It is understood that ten of the jury were desirous of bringing in an unconditional verdict of accidental death, but that two jurymen were determined on bringing in a stronger verdict. As matters stand, no verdict has been obtained. Nevertheless, it would be unjust to declare that the holding of the inquest has been absolutely resultless. One thing it emphasises, and that is the necessity for multiplying precautions in order to secure the lives of underground workers. What further is to be done in the matter remains to be seen. It is probable that the possibility of a Departmental inquiry being held may have contributed in some degree to the failure of the Coroner's jury to arrive at a verdict.

THE EAST GRETA DISASTER INQUIRY.

THE JURY DISAGREE.

THE jury, which had been in retirement for fifteen hours, returned into Court on Saturday morning at about 8 o'clock. The Foreman, Mr. F. W. Thursby, then announced to the Coroner, Mr. Martin, that the jury had disagreed, and that there was not the slightest hope of a verdict being returned.

The Coroner expressed his regret at the statement made by the Foreman, because it appeared as though there were something lacking. The evidence had been voluminous, and Sub-Inspector Fowler had done exceptionally well in bringing such an amount of evidence bearing on the case before them. All that was possible was done by the police to assist them in arriving at a verdict. Their confinement during the night was unavoidable under the circumstances, and he hoped they would not think he had acted harshly in the matter, as it was his duty, if possible, to obtain a verdict. He again expressed his regret that no decision was arrived at.

The Foreman said that on behalf of the jury, he desired to thank the police for the way in which the evidence had been collected, and for the way in which it had been put to the jury. It was also the desire of his colleagues that he should thank the Coroner for his kindness and courtesy to the jury, and to compliment him upon the conspicuous ability displayed by him throughout the inquiry.

The Coroner thanked the jury, and said it was a pleasure to a man to know that his efforts to do his duty were appreciated.

Sub-Inspector Fowler, on behalf of the police, thanked the jury for the references made to the work done by him and his officers.

The

The jury was placed in charge of Senior-constable Brown during Friday night, and that officer was assisted by Constable Kent. The evidence was freely discussed, and at times during the night it was evident that very heated arguments were in progress. The matter was viewed in every possible light, and ten jurors decided in favour of an unconditional verdict of accidental death, while the other two considered that some attention should be paid to what they considered as a non-compliance with the Special Rules of the colliery by some of the officials. It was this point which proved to be the stumbling block to a verdict being returned. The contradictory evidence concerning the existence or non-existence of broken cap-pieces under the seat of the fall had much to do with placing the jury on the horns of a dilemma. We have been informed by several of the jurymen that although the discussion throughout was of a very heated nature there was no display of ill-feeling. The evidence will now be forwarded to headquarters in Sydney, and it will rest with the Department to decide what action shall be taken in the matter.

No. 17.

Telegram from Mr. Sub-Inspector Fowler to The Chief Inspector of Coal-mines.
Re Greta Colliery accident. Jury discharged—did not agree. 28 January, 1899.
 F. FOWLER.

Noted.—A.A.A., 28/1/99. Seen.—D. McL., 28/1/99. The Hon. Joseph Cook, Minister for Mines, Lithgow,—Greta Colliery accident. Jury discharged. They did not agree. Wire so to the Honorable Joseph Cook, M.P., 28/1/99.

No. 18.

The Chief Inspector of Coal-mines to The Under Secretary for Mines and Agriculture.

Subject :—East Greta Inquest.

Coal-fields Office, Department of Mines and Agriculture,
 Sydney, 28 January, 1899.

Sir,

I have the honor to inform you that the jury in the above inquest after having been locked up since 5 p.m. yesterday were discharged this morning without any verdict being recorded. The inquest occupied a period of thirteen days, during which a large number of witnesses were examined, and it is probable that but for the constitution of the jury a satisfactory verdict would have been given.

I venture to think, for the reasons set out hereunder, that it is not expedient that an inquiry should be held under section 23.

1. Every latitude was allowed in the calling of witnesses, and their cross-examination. The Crown as well as all other parties interested were represented, though they were not allowed to address the Court.

The course adopted by the Coroner in this case, though not acceptable to the miners' representative, is the one usually followed at such proceedings in England, and appears to me to be much preferable to allowing a number (some four or five) of long addresses, which very often only serve to confuse the minds of the jurymen.

2. So far as I am aware, all witnesses of any value who were procurable gave evidence, and it is not likely that any further light will be thrown upon the "causes and circumstances" of the accident by any further inquiry.

3. The expense of the inquest to the Government has been great, and that of an investigation under section 23 would be greater still.

4. In my opinion the best course to adopt at the present stage, having regard to the proper administration of the Act, is to prosecute the manager and under-manager—the manager for a breach of General Rule 4, for employing contractors in making the inspections, &c., under that rule; and the under-manager for breaches of Special Rules Nos. 3 and 7. [copy of rules herewith—*Appendix 1.*]

In this connection I would invite your attention to the opinion expressed by Mr. Wade at page 12 of his report on the Dudley Colliery explosion in the paragraph regarding "Prosecution." [*Appendix 2.*]

As the offences were committed in the month of November last, and the time (three months) allowed for commencing proceedings will shortly expire, no time should be lost if it is intended to proceed under the Act against the manager and under-manager.

I have, &c.,

A. A. ATKINSON,

Chief Inspector of Coal-mines.

Approved. To proceed against manager and under-manager as suggested.—J.C., 28. Minister might see Mr. Atkinson on Tuesday morning.—D.C.McL., 28/1/99. Mr. Atkinson to note and return.—D. McL., 30/1/99. Will the Crown Solicitor kindly arrange for the necessary steps to be taken in this matter?—D. C. McLACHLAN, B.C., 31/1/99.

APPENDIX No. 1.

[To Report by Chief Inspector of Collieries, dated 28th January, 1899.]

SPECIAL RULES for the conduct and guidance of the persons acting in the management of the East Greta Colliery, in the district of Maitland, and all persons employed in or about the said colliery, framed in conformity with the provisions of the Coal-mines Regulation Act, 1896, 60 Victoria No. 12.

Manager.

1. The manager (or the under-manager when acting for him) shall have the daily supervision of the above colliery, and shall have full command over all other officers and workmen employed in or about the colliery, who are to receive their orders from him, and shall apply to him for instructions as often as may be necessary.

2. He shall comply with the requirements of the Coal-mines Regulation Act, 1896, and shall, to the best of his power, enforce the observation of the said Act, and enforce observation of the General and Special Rules.

Under

Under-manager.

3. The under-manager shall have the daily supervision and responsible charge of the mine under the direction of the manager, and shall give all necessary instructions to the men and boys in the mine respecting their work, and shall, to the best of his power, see that they comply with the rules and regulations of the colliery, as well as the orders of the manager, and shall visit every working-place in the mine daily, or as often as may be practicable, and see that the air courses and stoppings are kept in a good state of repair, and that an adequate quantity of fresh air is constantly supplied to the men.

4. He shall give immediate attention to any complaints, and shall inspect personally such portions of the mine as are reported to be unsafe or in any way to need his attention.

5. He shall see that a sufficient supply of timber is sent down the mine and into the different districts.

6. He shall see that each miner keeps his working-place sufficiently timbered, and shall suspend at once any miner refusing or neglecting to do so.

7. He shall examine every day the different main and district air currents, and shall see that the furnaces are kept in good repair and carefully attended to.

8. He shall, under the direction of the manager, cause safety-lamps to be used, and naked lights to be excluded where required by the Act.

9. He shall see that the deputies, miners, shifters, and all others under his charge in the mine, strictly and rigidly observe the rules applicable to them, and shall suspend immediately anyone infringing, or attempting to infringe, any rule, order him out of the mine, and report the same to the manager.

Deputy.

10. Each deputy shall be informed by the manager or under-manager as to what portion of the workings is to be under his charge, and all persons working in that portion of the mine will be under his direction, and he shall, in the absence of the manager or under-manager, direct the workmen how and where they shall work, and shall see that the rules applicable to them, as well as the orders of the manager or under-manager, are strictly attended to.

11. The deputy or other competent person appointed for that purpose shall be in the mine within four hours before the workmen commence, to enable him to examine the working-places, &c., carefully, and shall ascertain the condition thereof so far as the presence of gas, ventilation, roof and sides, and general safety are concerned, and shall record the result of such examination without delay in a book to be kept at the mine for the purpose.

12. He shall place cross timbers or rails thus, X, or a signal-board, as a signal of danger, at the entrance of every working-place which he may find unsafe, and on his return to the station shall state on his board all places so found unsafe.

13. In any place where there is a dangerous appearance of fire-damp, locked safety-lamps shall be used, and no workman shall be permitted to remain where fire-damp has accumulated in such a quantity as to show a permanent blue cap over the flame.

14. Before safety-lamps are taken into the workings the deputy, or some other competent person duly appointed for the purpose, shall examine the entire lamp, and if all is right, shall lock it for the miner.

15. Should there be any discharge of gas, or any condition of roof from which the deputy apprehends any danger, he shall instantly report the circumstances to the under-manager.

16. He shall report as soon as possible to the manager or under-manager all accidents, dangers, or defects which may occur in his district of the mine, and he shall also so report any accident, danger, or defect to or in any machinery or structure in the mine which may come to his knowledge.

Wheelers.

17. The wheelers shall report to the under-manager or deputies if any part of the road or roof has been deranged or is insecure or dangerous.

18. Any wheeler injuring a door or brattice-cloth door, and not immediately reporting the fact, shall be suspended. He shall also report to the under-manager or deputy every morning the quantity and different lengths of timber required for his miners.

19. He shall take in without delay any timber the miners may require, and shall at all times carry out the orders of the manager, under-manager, or deputy, in order to facilitate and promote the work of the mine.

20. Any person neglecting these rules will be liable to instant dismissal or prosecution according to law.

Onsetter.

21. The onsetter shall, subject to the directions of the manager or under-manager, have the sole control of the pit bottom and the command of the signal up the pit, and on no account shall he allow any person to interfere with the signals. He shall at all times, when sending up skips of coal, see that none of the coal projects beyond the side of the skip, and shall pay the greatest attention to the signals when men are going to ride, in order that accidents may be avoided. The signals shall be as given in Rule 87.

22. No timber, materials, stones, coal, or other things shall, under any circumstances, be lowered or lifted in a pit while men are being lowered or lifted in it, except such as may be necessary in repairing a pit while the repairs are going on.

23. The onsetter shall not, on any account, allow more than six persons in a single cage, or ten in a double cage at the same time.

24. Any person refusing to leave the cage when ordered to do so shall be immediately suspended.

Miners.

25. Any miner, after passing through a door, must instantly close it, and shall not injure a door or leave it open, break down a stopping or brattice, interfere with or obstruct or damage an air-crossing, or an air-pipe, or remove or go beyond a mark or "danger-signal," without orders from the manager, under-manager, or deputy.

26. Every miner shall securely sprag or uphold the coal whilst holing, and shall securely prop up the roof of his working-place so that accidents may be avoided; and should he not be provided with a sufficient quantity of timber he shall cease working and report the same to the manager, under-manager, or deputy.

27. The seam of coal must be wrought strictly in accordance with the orders of the manager or under-manager.

28. Every miner shall in all matters relating to the working of the mine or the safety of the men, obey strictly the orders of the manager, under-manager, or deputy; and no person shall go into any part of the mine other than where he is employed, except by the order of the manager, under-manager, or deputy.

Door-keepers.

29. A door-keeper must only open a door for the passage of persons, skips, or animals, and must instantly close the same when they have passed through. He must never allow a door to remain open, or to be propped or fastened back, unless authorised to do so by the manager, under-manager, or deputy.

30. A door-keeper must not leave any door or doors under his charge until the work of his shift is finished, or until another person appointed by the manager, under-manager, or deputy takes his place.

31. Any door-keeper becoming aware of any defect in, or damage to, any door, shall report the same as soon as practicable to the manager, under-manager, or deputy.

Persons in charge of Ventilating Appliances.

32. The persons in charge of any ventilating furnace or other ventilating appliance shall not leave the same without the permission of the manager, under-manager, or engine-wright.

33. Furnace-men must pay careful attention to the furnace under their charge; and shall maintain the fire in such a state as constantly to ensure efficient ventilation.

34. The fan and fan-engine shall be carefully attended to by the person or persons in charge thereof, who shall keep the same running at the speed ordered by the manager, so that effect may be given to the provisions of the Act as to ventilation.

35. All persons in charge of ventilating furnaces, fans, fan-engines, or other ventilating appliance, shall immediately report any damage, defect, or derangement therein to the manager, under-manager, or engine-wright.

Lamp-keepers.

Lamp-keepers.

36. No person, except a person authorised by the manager or under-manager, shall either take himself or give out for use in any mine any safety-lamp.

37. Lamp-keepers must see that every safety-lamp is thoroughly cleaned, properly put together, in safe working order, and securely locked when given out for use in the mine. If any lamp be not returned at the proper time they shall at once report the fact to the manager or under-manager.

38. All persons entrusted with the duty of cleaning any gauze, or other part of any safety-lamp, or with the duty of putting any safety-lamp or parts thereof together, shall at once report any defect therein to the lamp-keeper, or if there is more than one lamp-keeper, then to the head lamp-keeper.

39. Whenever any defective or damaged lamp is received from any person by any lamp-keeper he shall report the fact to the manager or under-manager, and shall cause such lamp to be kept in the state in which he received it until seen by one of them.

40. Every lamp-keeper shall see that all oil, spirit, and other inflammable articles under his charge are carefully and properly stored and used, and that no greasy waste or other refuse is allowed to accumulate in or near the lamp cabin.

Engine-wright.

41. The engine-wright, or other competent person appointed for the purpose, shall cause the ventilating fan or other mechanical ventilating apparatus, together with the engines, machinery, and boilers for driving the same, to be properly attended to.

42. The engine-wright, or other competent person or persons appointed for the purpose, shall have charge of all engines, machinery, and boilers used for raising or lowering persons or minerals, or for pumping water, and of all ropes, chains, appliances, or apparatus connected therewith; and of all guides, ropes, chains, conductors, or other appliances in the shafts, and of all other engines, machinery, and boilers in or about the mine. In case he shall discover any weakness, defect, or want of repair therein, he shall, as soon as practicable, cause the same to be repaired and made good, and shall at once report to the manager the fact of such defect, weakness, or want of repair, and also the steps taken to remedy the same.

43. The engine-wright, or other competent person or persons appointed for the purpose, shall make the examinations and report required by General Rule 5.

44. The engine-wright, or other competent person appointed for the purpose, shall cause every rope used for raising or lowering persons or minerals to be securely attached to the drum, so that when either cage is at the pit bottom, there shall be not less than two rounds of rope upon the drum.

45. The engine-wright, or other competent person, whenever a winding rope requires capping, coupling, or splicing, shall superintend the same, and shall see that no spliced rope is used for raising or lowering persons in a shaft.

46. The engine-wright, or other competent person or persons appointed for the purpose, shall see that the fences are fixed and maintained at the top of every shaft, and that the guides, signals, covers, flanges, or horns, appliances, brakes, indicators, fences, valves, ganges, and things required by General Rules 18, 20, 26, 27, 28, 29, 30, 31, 32, and 33, or any of them, are fixed and maintained as therein required; and that the provisions of General Rule 25 are carried out above ground.

47. The engine-wright shall cause bells or other signals to be fixed in every drawing engine-house, connected with the drawing pit bottom, and with every entrance for the time being in work between the surface and bottom of the shaft; and shall cause the board required by Special Rules 23 and 64 stating the number of persons authorised to descend or ascend the shaft at one time, to be fixed and maintained on the pit bank.

48. The engine-wright shall cause each working boiler to be cleaned and examined as often as the manager shall so order.

49. The engine-wright shall cause the code of shaft signals used in moving the cages to be fixed and maintained at the top and bottom of each winding shaft, and at every shaft to which the provisions of Special Rule 57 apply, he shall see that the point named in that rule is distinctly marked on the indicator.

Engine-drivers.

50. Every engineman shall attend at such time as the manager may appoint, and as required by General Rule 25.

51. An engineman shall not allow any person to interfere with the engine or machinery under his charge, or to remain in the engine-house unless authorised by those in authority above him. A winding engineman while winding must remain at the handle and must pay particular attention to the indicator and signals, and if he perceives anything wrong must instantly stop his engine and not start it again until the defect is put right or until he receives an order to go on.

52. Every winding engineman before commencing work in his shift, and before any person descends the shaft, shall carefully examine the engine, machinery, drums, ropes, brakes, indicators, and signal apparatus in the engine-house or under his charge, in order to ascertain whether they are safe and in good working order, and shall run the cages at least once up and down the shaft. Where shifts are worked continuously, it shall be sufficient if this rule is carried out at the commencement of the morning shift.

53. Every engineman, unless some other competent person is specially appointed for the purpose, shall keep the engines, machinery, and things connected therewith under his charge, properly cleaned and oiled, and shall see that they are in good and safe working condition. He shall see that the provisions of General Rules 27, 30, 31, and 32 are carried out and observed during his working shift, so far as they relate to engines or machinery under his charge.

54. Every engineman must diligently and carefully attend to the working of the engine and machinery under his charge. He must examine such engine and machinery before commencing work, and if he becomes aware of any weakness or defect, or apprehends any danger, he must, as soon as practicable, inform the manager, under-manager, deputy, or engine-wright. He shall not alter a safety-valve without leave from the manager, under-manager, or engine-wright.

55. Every engineman, in addition to the duty in this respect imposed on the engine-wright, shall see that any ropes attached to the drum of the engine under his charge are securely attached, and so that when either cage is at the bottom of the pit there shall not be less than two rounds of rope upon the drum.

56. Every winding engineman, whenever the engine under his charge ceases working, shall see that the cages are left so as not to impede the ventilation.

57. When men are being raised in shafts where the winding apparatus is not provided with some automatic contrivance to prevent overwinding, the cage shall not be wound up at a speed exceeding 3 miles an hour when and after it has reached a point 10 feet from the top of the shaft, as required by General Rule 27, and such point shall be marked on the indicator.

58. The signals given in Rule 87 shall be carefully observed by the engine-man.

Banksman and Assistants.

59. That the banksman shall, subject to the directions of the manager, under-manager, and engine-wright, have the control of the pit top, and the command of the signals down the pit and to the engineman.

60. That the banksman shall be responsible for the state of the pit top, and shall see that the frames and the surface near the pit mouth are kept free from coals, stones, or dirt.

61. That at least one banksman and one onsetter, or other person appointed by the manager, under-manager, or deputy for that purpose, shall be at their respective posts at the proper time every morning, to give the proper signals, and to see the men and boys carefully into and out of the cages at the top and bottom of the shaft.

62. The banksman must be at the drawing shaft at such times as the manager or under-manager may appoint. He shall not allow a person to descend or ascend until the cages have been once run up and down the shaft, but where continuous shifts are worked it shall be sufficient if this is done at the commencement of the morning shift.

63. That the banksman shall not permit strangers or persons not employed in the mine to descend the pit or remain upon the bank, unless authorised by the manager; and shall caution strangers descending to keep carefully within the cage until they are fairly landed. He shall not allow an intoxicated person to descend the pit.

64. That the banksman or onsetter shall not allow more than six persons in a single cage, or ten persons in a double cage; nor shall any person be allowed to ride with or against coals, slack, dirt, &c. Neither shall any person, unless specially

specially allowed by the manager, under-manager, or deputy, be permitted to carry any tools, implements, props, rails, or such like in his hands whilst so riding; but the same shall be securely placed in the cage, skip, or basket, so that no danger may exist of their falling out during their ascent or descent, or of their coming in contact with anything in the pit; and no person shall be allowed to get upon or off the cage at the pit top unless it be standing upon the catches or keeps, or at a mouthing, without the signal first being given and responded to.

65. The banksman must frequently observe the pit top pulleys, ropes, chains, cages, and landing apparatus during working hours, and whenever he becomes aware of any weakness or defect therein, or in anything belonging to the shaft, or any engine, machinery, or winding tackle, he must immediately inform the engineman, and the manager, under-manager, or engine-wright, so that it may be repaired.

66. The banksman must report to the manager or under-manager any disobedience on the part of the miners or others.

67. The signals given in Rule 87 shall be carefully observed by the banksman.

Miners and all other persons employed.

68. No person acting in a place of trust shall depute anyone to do his work without the sanction of the manager.

69. No swearing or fighting is allowed in or about the mine, and no intoxicating liquors shall be permitted in the mine without the consent of the manager.

70. Any person employed in the mine shall inform the person in charge of the workings of the existence of any choke or fire-damp, of any insecurity of the roof, shaft, or any other part of the workings, or of any air-door being damaged or left open, immediately on its being observed by him.

71. No person shall be permitted to carry a naked light attached to the cap or hat on his head whilst handling explosives, or in charging holes for blasting.

72. A safety-lamp must be frequently examined, and if a lamp shows a blue cap, the person using it must carefully draw down the wick with the prickler, cease working, leave the place, and report the same to the manager, under-manager, or deputy.

73. No person shall place a safety-lamp on its bottom unless it is necessary to do so for the safe performance of any particular work, or unless authorised by the manager, and in all cases the lamp shall be hung or placed at least 2 feet from the swing of the pick, hammer, or other tool.

74. No person shall leave a lighted candle or other light in any part of the mine when leaving his work.

75. No person shall try the wastes or workings for fire-damp with a naked light, and no person shall smoke or take a naked light, tobacco, pipe, cigar, cigarette, lucifer matches, or candle, where safety-lamps are ordered to be used.

76. No naked lights shall be allowed or taken beyond any danger signal where gas exists.

77. No person shall wilfully kindle a feeder of gas, or negligently have the gauze of his safety-lamp full of fire, or unlock the lamp, or unscrew the gauze, or blow out the flame, or light tobacco or other substance at the gauze, or damage or improperly use the lamp, or leave it in the works, when he has ceased using it.

78. Any person discovering any stoppage or derangement to ventilation, injury to an air-crossing, door, regulator, sheet stopping, brattice, or air-pipe, or observing any injury to or obstruction of an air-course, shall immediately give notice to the manager, under-manager, or deputy, and to any person or persons whose safety may be endangered thereby.

79. Any person passing through a door or sheet must instantly close the same, unless it is a door or sheet ordered to be kept open. No person shall, without authority, remove any caution board, notice, or danger signal, or pass any danger signal, caution board or fence.

80. In case of a shot missing fire the workman shall place a danger signal at the entrance to his working-place, and shall immediately report the same to the manager, under-manager, or deputy.

81. Every miner or other workman in charge of any working-place, before commencing work, and at intervals during his shift, shall examine his working-place, and in case any danger is observed shall at once report to the manager, under-manager, or deputy.

82. No person shall leave coal, slack, or other material so as to impede the ventilation; nor leave a skip or other obstruction in the air-current.

83. Every horsekeeper shall see that no animal under his care is allowed to go to work while in an unfit state, and shall report to the manager, under-manager, or deputy, any injury received by any animal.

84. No person shall wilfully injure any animal whilst in his charge, or permit it to receive injuries by his wilful act or negligence, and shall report immediately to the horsekeeper or a deputy any injury received by such animal while in his charge.

85. No person shall take a horse on to or travel along any incline or plane, either in the mine or on the surface, which is self-acting or worked by machinery, while it is in motion, without special instructions from an officer of the mine.

86. Every person in charge of any animal shall immediately report to the manager, under-manager, or deputy, in case he finds such animal cannot pass along any road without rubbing against the roof or timbering; and no person shall, unless otherwise authorised, give his horse into the charge of any other person than the horsekeeper at the stables.

Shaft Signals.

87. The following signals (with such additions as under special circumstances may be ordered by the manager) shall be carefully observed by the engineman, banksman, onsetter, and other persons employed at this Colliery:—

One knock—to go on.

One knock—to stop when the engine is in motion.

Two knocks—lower down.

Three knocks—When any person is going to ascend or descend.

One knock—in reply before any person is allowed to get into the cage.

Four knocks—to lower slowly.

Five knocks—to ascend slowly.

88. Every person, when on the pit bank, or while about to descend the shaft, shall obey the orders and directions of the banksman; and every person, while in or about the pit, or while about to ascend the shaft, shall obey the orders and directions of the onsetter.

89. No person shall improperly use any signal, signal wire, or signal apparatus.

90. No person shall get into the cage after the authorised number is in, or if forbidden to do so by the banksman or onsetter.

91. Every person who shall couple or fasten any skip to any other skip, or to any rope or chain shall see that such coupling or fastening is made secure.

92. Before any person moves a skip in a bord he must see that a safety-block is at or near the entrance of the bord, and in good order and set across the rail.

93. All persons employed in the mine shall be under the control of the manager, under-manager, and deputies, and shall at all times obey their lawful commands.

94. Any person committing a breach of any of the foregoing Special Rules is liable to be instantly dismissed.

END.

Name of the Mine—East Greta Colliery. Where situated—Near West Maitland. Name of the Owner—East Greta Coal Mining Company, Ltd. Name of the Manager—Azariah Thomas. Name of the Under-Manager—Henry Cartwright. Name and address of the Inspector of Mines of the District—J. Dixon, Newcastle.

CERTIFICATE OF SPECIAL RULES, EAST GRETA COLLIERY.

AZARIAH THOMAS, Manager.

I HEREBY certify that the above copy of Special Rules has been shown to my satisfaction to be a true copy of the Special Rules which at this date are established under the Coal Mines Regulation Act, 1896, for the above-named mine.

30th day of April, 1897.

(Signed) JOHN DIXON, Inspector of Collieries.

APPENDIX 2.

[To report by Chief Inspector of Coal-mines, dated 28th January, 1899.

1898.

(Second Session.)

Legislative Assembly, New South Wales.

DUDLEY COLLIERY EXPLOSION (REPORT OF THE COURT OF INVESTIGATION ON).

Printed under No. 4 Report from Printing Committee, 29 September, 1898.

REPORT OF THE COURT OF INVESTIGATION.

Sir,

On the morning of the 21st March, at 9 a.m., an explosion took place at Dudley Colliery, in consequence of which fifteen men lost their lives. A Coroner's inquest was held subsequently on two of the bodies which had then been recovered. The taking of evidence extended over fourteen days, and fifty-one witnesses were examined. The verdict of the jury was to the effect that the two men, Thomas Dorrity and John Benson, met their death in the Dudley Colliery on the 21st March, 1898, from carbon mon-oxide poisoning, and that there was not sufficient evidence before them to determine the cause of the explosion. They added:—

“We consider the natural ventilation insufficient and unreliable, and that the artificial ventilation of the Dudley Mine is quite sufficient to ventilate the said mine, providing air-courses are in thorough order and bratticing is carried up to each working face.

“We consider that sufficient examination was exercised for the safety of the workmen, according to Rule 4 of Part 2 of the Coal Mines Regulation Bill (referring to the deputy's inspections); but we consider a greater margin should be allowed for a more thorough inspection of the whole mine at all times, and with station farther back from the working faces.

“We consider the question as regards naked lights a matter between management and inspection.

“We are of opinion, according to evidence, that all precautions necessary for the safety and comfort of the workmen were attended to by the Management, with the exception of Rule 1 of Clause 47, Part 2, of the Coal Mines Regulation Bill, referring to ventilation being constantly produced, of which we consider ourselves unable to interpret.

“We consider that the Dudley disaster was quite unexpected, as not sufficient reports of danger were made to the Management prior to the explosion.”

Owing to a fire that manifested itself during the search for dead bodies, it was deemed necessary by those who undertook the management of exploring operations after the explosion to temporarily seal the pit down. This was done on 24th March, and it was unsealed on 17th June.

I received an appointment in June, under the hand of the late Secretary for Mines, Mr. Sydney Smith, to hold an investigation into the causes of the explosion, under the provisions of Section 23 of the Coal Mines Regulation Act of 1896. As the indications seen immediately after the unsealing of the pit pointed to a great confusion underground, and five bodies were not yet recovered, it was decided to postpone the opening of the inquiry until the hitherto unexplored districts had been opened up.

In the meantime, after the last body had been recovered, I spent the greater part of one day in the pit in company with Mr. Atkinson, Chief Inspector of Coal-mines; Mr. John Dixon, an Inspector of Collieries; Mr. Humphreys, Manager of the Dudley Colliery; and Mr. Turnbull, Manager of the A. A. Company's Colliery, who was then superintending the opening up of the mine; and I visited the chief points of interest in connection with the explosion.

The Court of Investigation was opened on Monday, 15th August; and sittings for the taking of evidence were held on thirteen days, when forty-five witnesses were examined orally. I used as exhibits the depositions of various persons who had been called at the Coroner's Inquiry, but whose evidence was not of sufficient importance to warrant the expense of bringing them to the Court by summons. [Appendix C.]

The following persons appeared before me representing various interests:—

Mr. W. H. Baker, Solicitor, appearing in the interests of Mr. Hugh Humphreys.

The Hon. Alexander Brown, M.L.C., appearing for the proprietors of the Dudley Colliery.

Mr. James Curley, Secretary of the Colliery Employees' Federation, appearing on behalf of that Federation, and also for some of the relatives of the deceased.

Mr. A. A. Atkinson, Chief Inspector of Coal-mines, appearing to watch proceedings in the interests of the Mines Department.

They were afforded the opportunity of cross-examining witnesses, and, at the conclusion of the evidence, of addressing me on any matter they might think pertinent to the inquiry.

No evidence was obtainable as to the circumstances leading up to the explosion, inasmuch as no person survived who was in the mine at the time of the disaster; but a number of witnesses gave evidence as to the general condition and management of the colliery; of its examination (immediately after the explosion, and also after the unsealing in June) as to the presence of fire-damp; the finding of the bodies of the men who were killed; and there is no reason to suppose that any evidence which is material to the inquiry has been withheld.

Upon the facts so disclosed, I have the honor to submit my Report, under the following heads:—

- (1.) Description of the Mine.
- (2.) The Management and Working of the Mine.
- (3.) The State of the Mine just before the Explosion.
- (4.) The Explosion and its Results.
- (5.) Cause of the Explosion.
- (6.) Conclusion.

(1.) Description of the Mine.

The Dudley pit is situated some few miles south of Newcastle, in the locality known as Redhead. Sinking operations commenced somewhat more than nine years ago. There are now two shafts—the down-cast, 624 feet below the surface, and the up-cast or fan shaft, 553 feet deep. The coal is bituminous in character, and, as is general in the Newcastle district, it is the Borehole seam that is being worked. The height of the seam is 6 feet 3 inches, and it is worked to an extent of 5 feet 9 inches, 6 inches being left in the roof. Above the coal is a band, 2 feet 6 inches in thickness, consisting of rotten shale and ironstone. In places where the shale has not fallen the roof is supported by props; but falls have occurred from time to time in spite of these precautions. The mine as a whole is dry and dusty, more particularly so in Nigger's heading and the headings to the right of the second right main headings. The district to the left of the last-mentioned headings is wet. The main roads are watered, but it was admitted to be done more for the sake of convenience in travelling, and it is obvious that to water the roadway and to omit the sides where the fine dust collects, would be useless as a check upon the spread of an explosion. There is a rise, generally speaking, in the pit from the down-cast towards the up-cast shaft. The area that has been worked up to the present is *acres*. The plan appended hereto, and marked “A,” will show the main features of the mine; the crosses with figures denoting the places where the dead bodies were found; the pencil arrows showing the directions of force or flame as deposited to by different witnesses; the small ink arrows giving the direction of the air-current. The lines coloured blue are the intake airways, those in red the return.

(2.) The Management and Working of the Mine.

The system of working is what is known as the “pillar and bord”; the wider oblong spaces on the plan indicate the pillars, and the narrow the bords. The mine, when working, has always given off fire-damp, more or less, especially in the winning places; and when the connection was being made between the two shafts, it was found advisable by the Management to introduce safety-lamps for that particular work. In recent years, however, naked lights have been used throughout the mine, except during the deputy's inspections, when safety-lamps are used. The working places have always been bratticed up to the face, even prior to the existing Coal Mines Regulations Act, and when it was not compulsory; but,

Ventilation.	but, nevertheless, numerous instances were recorded by witnesses of the presence of fire-damp in an inflammable state manifesting itself by igniting at the naked lights of the men. The pit was ventilated by a fan situated at the mouth of the up-cast shaft, which usually runs when the mine is at work, at a speed of from forty to forty-five revolutions to the minute. There are five distinct ventilating districts, and the main intake current is distributed throughout the workings by means of splits. It has been the custom, when there were no men in the pit at the week end, to stop the fan on Saturday and Sunday, and, should all the men be going to work on Monday morning, to start it again on Sunday night. After the men had come out of the pit at 4 p.m., the fan would be idle daily until 9 p.m., when it would again be started—some hour and a half before the shiftmen went down.
Stoppage of fan	
Inspection.	The method of inspection under Rule 4 was as follows:—
Stations.	It appears that since 1896, in addition to the miners who were working on contract, shiftmen were employed on day-wages in getting coal at night-time. Rule 4 provides, for the purpose of inspection, that a station or stations shall be appointed at the entrance to the mine, or to different parts of the mine, and no workman shall pass beyond any such station until the part of the mine beyond that station has been examined in the prescribed manner.
Reporting presence of gas	Section 46 of the Coal Mines Regulation Act provides for the division of a mine into parts, but there is no evidence that the Dudley pit has been divided in accordance with that section. As a matter of fact, at Dudley a station has been established at the bottom of the down-cast shaft, and beyond this point the miners on contract may not pass in the daytime till they receive the deputy's permission. The shiftmen and water-bailers, on the other hand, were in the habit of passing this station before any inspection of the mine had been made, and travelling with an intake current of air would wait at a flat or station in their respective districts for the deputy's report. At night the deputy would go down the pit half an hour before the men, and examine the working places in each district where the men were to work, travelling with the air-current. If he found gas, his duty was to remove it before the men went in to that working-place; if all was safe, the practice was to mark the date in each bord or working-place. After this inspection he would meet his men at the station for that particular district, make a verbal report to them as to the condition of the district, and set them to work, and subsequently make the prescribed entry in the deputy's book. Thus the men would very often be at work at their places before the deputy had made his report in his book in accordance with the Act. Later on, in the early hours of the morning, he would make a second inspection, as provided for in Rule 4, and would meet the miners going down at 7.30 a.m. at the station near the bottom of the down-cast shaft. The old workings were not examined unless the ventilation going through them subsequently passed through a district where men were at work. The deputy's duty was further to replace immediately all brattice that was disarranged, and convey to the manager all information which he had with regard to the presence of gas and other sources of danger. There was a corresponding obligation imposed on all persons employed in the mine by the Special Rules of the colliery to report to the person in charge of the works the existence of fire-damp. In practice, it would appear from the evidence that the deputies recorded in their book the place and circumstances of their finding gas in the course of their inspections, but the books do not show any entry of an ignition of gas having taken place during the ordinary working hours. Many of the miners admitted that they made no report of the presence of gas which they experienced from time to time; some, indeed, stated that they did report such ignitions to the deputies, but the latter when so informed seem to have neglected to make these matters known to the manager. I shall have occasion to refer to these matters in detail later on.

(3.) *State of the Mine just before the Explosion.*

19th March.	The places had been balloted for by the miners on 17th March, and Monday, 21st, was to be the first day of working under the new arrangement. Operations had been suspended in Nigger's heading since the previous October. On the 18th March some men had been at work laying rails in that part, in pursuance of the intention to resume work there immediately. In the second left district, Bob's heading had recently been worked by night, and Star's heading by day. Work had also been carried on in the second right district. On various occasions since the beginning of the year fire-damp in a more or less inflammable state was proved to have been given off both in the face of the second right main headings and in the bords contiguous thereto; but in the previous ten days it had been detected in Bob's heading, in a bord opposite to the spot where the body of Hindmarch was subsequently found, and also in the last unholed bord, marked "AO" on the plan.
21st March.	The men came out of the pit on Saturday morning, the 19th. Up to that hour nothing unusual was noticed, nor was there any indication of the subsequent explosion. The fan, according to the usual practice, remained idle from then until Monday morning; it was to start at 6 a.m. that day. There was, however, some uncertainty as to what hour it did commence to work, and I have come to the conclusion that the time was undoubtedly later than usual. However, by 6.30 its speed was somewhere about 42 revolutions to the minute, thereby providing for a current of air to the extent of 100,000 cubic feet entering the mine every minute. And it was stated by several witnesses that this volume of air was sufficient to dilute and render harmless all noxious gases with which it came directly in contact; that although there might possibly be some accumulation of gas that morning in consequence of the fan having been idle for forty-seven hours previously, yet that current of air was ample, assuming that the brattice and ventilating apparatus generally were in proper order, to clear the mine of all noxious gases in less than one hour.
Duties of workmen.	Young was the examining deputy for the day. His work would take him down the pit about 7 o'clock. Towards 7.30 the other men descended. Amongst them were Hetherington, the deputy, and Hindmarch, the underground manager. The two deputies carried safety-lamps when last seen at the pit-mouth that morning; the other men, including Hindmarch, had naked lights. Benson, the pumpman, had been engaged at the pump. Hetherington had charge of a gang of men in Nigger's heading. Young would be in charge of the three water-bailers, Rudge, Jones, and Cook, whose work was in the left of the second right-hand headings. In the second right return airway there was a fall of roof some four stentous inly of the up-cast shaft. Haddon and Mowbray would be employed there filling skips, which McDougal wheeled round to Price and Dunn, who, in their turn, disposed of the contents in the stow-bord behind the up-cast shaft. Hetherington would probably examine the district called Nigger's heading for his men. Young would first examine the district where the water-bailers were about to work, and according to practice place the date, in chalk, upon the working-faces. Having disposed of them he would probably proceed with the examination for the other men. After completing this preliminary inspection, Young had some work to do near where his body was ultimately found. There would be then, some hours later, a second inspection provided for by the Act. Hindmarch's duties took him nowhere in particular on that morning. In all fifteen men were in the pit at 9 o'clock, and as far as is known there was to be no shot fired that day, nor has any evidence been obtained since to suggest that a shot was fired before the explosion took place. Two youths, Croker and Parsons, were down below for a short time that day, returning to the surface just before 9 o'clock. About 8.45 Green was seen by Croker at the cross-cut end, and Dorritty in charge of a horse at the pit-bottom. None of these fifteen men were seen alive again.

(4.) *The Explosion and its Results.*

Effect of explosion.	At ten minutes past 9 there was a loud report, and quantities of dust and dirt were forced up both of the shafts. These indications were noticed to proceed from the up-cast shaft some few seconds earlier than from the down-cast. At the up-cast the result was that the covering of the shaft was blown away and a door of the fan chamber was broken, and the timber baulks, on which rest the pulley legs, were plastered with mud on the underside. At the down-cast the cage, weighing 22 cwt., which was at the pit-mouth at the time, was thrown upwards some 23 feet, the chain of the cage was broken, some sheets of iron were blown off the roof, and dust and small coal were emitted in large quantities. The cage at the shaft-bottom was wrecked, and the guide-ropes were broken. The exploring parties descended the pit in the course of that same day. At the shaft-bottom there was evidence of very great force travelling outly; the ventilation was everywhere disarranged. Up to the 24th ten dead bodies had been recovered, but owing to the presence of what was deemed to be a fire it was decided to seal the pit down.
Up-cast shaft.	
Down-cast shaft.	

Up to that point the evidence indicated that the force had proceeded chiefly from the left-hand side of the mine, and it was thought by some that Nigger's heading was the initial point of the explosion. Since the unsealing of the pit in June, most parts of the colliery have been carefully and minutely explored, and further investigation has led the majority of the witnesses who offered an opinion on the matter to locate the starting-point somewhere on the right-hand side of the mine. Indeed, not only is there a difference of opinion as to the inference to be drawn from the facts disclosed, but in more than one instance there is a conflict as to the evidences of force. Moreover, thousands of tons of fallen roof were found after the pit had been reopened, and it was proved that many of these falls had taken place after the shafts were unsealed. The displacement of air so occasioned would have the same effect upon stoppings as the explosion itself. Care is therefore required in endeavouring to trace the course of the explosion to avoid attributing to the original force damage which has been caused subsequently.

After

After due consideration, the following are the conclusions I have arrived at as to the indications of force :—

Proceeding first along the main narrow bords intake airway from the down-cast shaft, we find a set of full skips near the overman's cabin, which had evidently been blown along the road some distance by a force travelling outover. At the first over-cast the wall on the left-hand side was standing, that on the right bore evidence of having been acted upon by two forces, one travelling outby, the other proceeding from the back heading of the first right-hand heading. Of the stentons between the first over-cast and the cross-cut, three were standing, the stopping of the second going inby being blown into the return, that is from right to left. Opposite that stenton a set of loaded skips were standing; some of these had been blown against the right rib, indicating a force from left to right. Opposite the third stenton, which was standing, was another set of skips. Some of the skips in the middle of this train were forced against the right rib. Three skips at the rear, that is on the inby side and just opposite to the first cut-through, were spread out and partly turned round in the direction of the down-cast shaft. At the cross-cut the door marked "D" on the plan had been blown inover. Here again was a set of skips standing; those actually opposite to the cross-cut opening being moved against the right rib as if a force had come outby from the cross-cut. The first skip of this set was tipped on end and blown outby. Either the sixth or seventh stenton was standing, but with that exception all stoppings between the narrow bords from the cross-cut, and as far as the faces of the main narrow bords, were blown into the return. Standing opposite to the second cut-through was another set of skips, the rear skips being turned round from right to left, in a similar manner to those at the first cut-through. The second over-cast shows a force from left to right, the bricks being blown outby, and the timber from left to right. At the entrance to the second left headings there is a drift of dust driven from the heading into the main narrow bord. Yet again, Mr. Humphreys says that some of the timber has not yet been recovered, and the only part hitherto unexplored where it can possibly be found is the return airway of the second left-hand heading. The door of the first stenton inby of the second over-cast was blown towards the left, and its remains were found in the return of the second left-hand headings. The third over-cast affords no clear evidence. We find the bricks are blown into the return towards the left, and some of the timber was found in the intake of the second right-hand headings to the right. Still travelling inby of the third over-cast, the stoppings to the right of the narrow bords are blown to the right; the first stopping has been blown to the right with some force, inasmuch as some bricks were found 44 yards away in that direction. The stentons further inby are fallen, but as no part of the stoppings has been found in the intake it is fair to assume that the force which must have displaced them was from left to right. Travelling along the main narrow bords return inby from second over-cast, the first two stoppings on the left are blown from right to left; the third was fallen.

There are indications of flame in the stentons, both inby and outby of Star's heading.

Going along Star's heading there is a general indication of force and flame in the bords on either side of the heading, having travelled from the main narrow bords. In some bords the brattice has been blown up against the left rib, and has been subjected to great heat. The flame has travelled down the bords on the left towards the second left-hand headings. From the end of Star's heading to where Hindmarch's body was unearthed there is no evidence of flame, as the roof has fallen. In the bord to the right of Hindmarch the brattice-cloth is torn. Some props in the bord to the left show signs of flame having travelled towards the second left headings. From this point, generally speaking, there is evidence of flame, as seen by scorched props and coke-dust travelling towards the second left. In the going bord at the fourth pillar, down from Star's heading, a full skip has been driven some distance off the flat in the same direction. In the second left-hand return, the first stopping inby was standing, the second has fallen, and the third was blown into the intake.

In a bord directly opposite to the third stenton, and contiguous to the intake, some bricks were found which had been blown 20 yards from that stenton. Between the second and first left headings, coke-dust and other signs of flame are to be met with. The stoppings between the first left-hand headings have been blown from right to left with great force, the bricks of the first, second, and third being embedded to a depth of 3 or 4 inches in the opposite pillar.

Returning again to the junction of the second left headings with the main narrow bords, travelling outby, in each of the three cut-throughs there is evidence of flame, and in the first cut-through inby of the first over-cast the tram of a skip was found close to the main narrow bords, some 20 yards inby the skip itself was found. There are indications that it had been loaded, and coal was lying about in the vicinity. Just inside this heading were also found the bottom of some empty casks, the other portions lying on the inby side of this skip.

Taking the second right main headings, going inby, the stoppings between the two headings are all blown from right to left, with four exceptions—that is, the third, fourth, seventh, and ninth, which are standing. The fourteenth stenton shows very strong force from right to left, the bricks of the stopping being embedded in the opposite pillar. The stoppings on the left-hand side of the intake do not present an uniform appearance. As far inby as the fan-shaft they are blown from left to right, inby of the fan-shaft many are standing; those which have been displaced are blown from right to left. On the flat at the first going bord on the left side of these headings a skip has been blown inover. Of the stoppings in the first going bord to the left, the first on the left is standing, that on the right is blown to the right. The stoppings on either side of the next two headings are blown right and left respectively. Further on inby of the second going bord a skip has been blown out-over. In the going bord the stoppings of the first and second headings have all been blown to the left. In the third heading the left stopping is blown left, and the canvas stopping on the right is standing. From the main narrow bords the force has been towards the first going bord, and from the face of the second right headings the force is also towards that bord. In the whole of this district there is no evidence of flame, and the force is only slight.

Returning to the third over-cast, and traversing the second right-hand return, the first, second, and fourth stoppings on the right inby are blown into the return, and a door on the second pillar behind the up-cast shaft has been blown towards the return. The first stopping on the right inby of the up-cast and such others as can be traced have been blown into the return.

Taking next the bords off the second right-hand return, at the inner bord inby where Young's body was found, a skip has been forced inover. From this spot to the face of the heading there is no sign of force or flame, and there have been no falls. Travelling along the face, there are no indications between where Young's body was found and bord 21, as the roof has fallen. In the neighbourhood of the latter bord a skip has been tipped in the direction of the main narrow bords, and props in that vicinity indicate that flame has travelled outby. Between this point and the stow-bord the directions of force and flame are very conflicting—sometimes inby, at other times outby, and occasionally travelling opposite directions in two parallel bords. Going from the stow-bord towards the main narrow bords, the same conflicting evidences of flame are encountered.

The body of Cooke when discovered was lying a pillar's distance from his water-tub. Haddon, Rudge, and Jones were found nearly 70 yards away from their respective working-places, and Mowbray some 35 yards. The rest all died close to their work. The immediate cause of death of every man whose body was examined *post-mortem* was attributed to carbon monoxide. In some instances the bodies were burnt or injured by falls of roof, which injuries might in themselves have brought about the death of the individual in the course of a few days had not the effects of after-damp immediately supervened. A detailed account of the circumstances surrounding the death of each man will be found in Appendix "D."

(5.) Cause of the Explosion.

All the witnesses were in substantial agreement that the explosion has been caused by the ignition of fire-damp at a naked light; that the quantity of gas was probably not large; but that the explosion has been intensified and extended by the action of coal-dust. The initial explosion must have stirred up some fine dust, which in its turn has been inflamed and exploded, thus leading to a series of almost simultaneous explosions. As to the seat of the explosion, there is much difference of opinion. Messrs. Atkinson and Humble make Hindmarch's light the starting-point; Mr. Croudace agrees with them—that the mine fired on the left-hand side, but does not actually say where. The Brothers Dixon, and Messrs. Humphreys, Henwood, Ross, Brown, and Mason say it originated on the right-hand side, the witnesses varying in making Young or Haddon or Price the initial point of the disaster, or leaving the matter entirely at large. Messrs. Turnbull and Thomas declined to commit themselves to either side. So long as it is established that this was a fire-damp explosion, the fixing of the exact point of ignition becomes a matter of secondary importance; and although there are difficulties in the way of adopting either theory, the balance of probability to my mind is in favour of the explosion originating at Hindmarch's light. From Hindmarch the general direction of the explosion was across the second and first left-hand headings, through the pump-drift, and up the down-cast shaft. Portion of this force was diverted when meeting the second left headings, and after driving the stenton stoppings into the intake, it has travelled along the intake and blown the second over-cast into the main narrow bords. Here the force has again subdivided after striking against the fast wall of the main narrow bords, part of it travelling inby has blown the door in the first stenton into the return, as described, thus allowing a portion

portion of the explosion to travel along the return. As the force travelled along the main intake, it found a partial escape into the third cut-through. Continuing in by, it has distributed itself left and right through the stoppings on either side, thus reaching respectively Star's heading and the headings to the right of the main narrow bords. As it approached the face the force was gradually dying out, and in its last effort travelled against the air from the face of the main narrow bords to where the two air-currents met in that bord (No. 54). Returning now to the main narrow bords at the second over-cast. At this point the remainder of the force of the explosion took a direction out by, finding a partial escape at the second and first cut-throughs. In these headings to the right of the main narrow bords, the explosion has travelled in different directions, finding an outlet partly at the first right headings, partly at the up-cast shaft, and also through the stoppings off the return of the second right-hand headings, eventually crossing these last-mentioned headings somewhere near the spot where Rudge and Jones were found; then travelling with slight force against the air and along the working-faces as far as bord 54, and out by as far as the second going bord.

The fact of dust issuing from the up-cast shaft earlier than from the down-cast does not assist us, for that is equally consistent with either theory. Again, the evidences of force and flame in the second right district are so contradictory as to afford little help in themselves.

The following seem to me strong objections to accepting the view that the mine fired on the right-hand side:—

- (i) The evidence of force having moved the second over-cast from left to right, and having carried a skip and casks along the first cut-through, is inconsistent with the idea that the explosion entered the main narrow bords from the right-hand side, and no explanation that has been offered has removed that difficulty from my mind.
- (ii) If the explosion had originated on the right, one would expect a greater exhibition of force than the evidence affords, in the stoppings between the second right main headings; and some evidence of flame or force at the faces of the same headings.
- (iii) The fact that all the men on the left-hand side were found close to their work, whilst on the right-hand at least five had travelled some distance from their places before they succumbed, suggest that those in the right heard the sound of the explosion, and, being alarmed, had dropped their lamps, and had had sufficient time to travel in three instances as much as 70 yards before they were overcome. Such an occurrence would not be probable if the explosion originated some 200 yards away, when the sound and force would reach them almost simultaneously.

On the other hand, the left-side theory presents a difficulty. If Hindmarch's light initiated the explosion, one would expect the flame to branch out in all directions when first seeking an outlet. It may be that Hindmarch, before being overcome by after-damp, travelled some short distance towards the second left headings, and that the explosion, after splitting at the second over-cast, has returned almost to the starting-point. It was suggested that, although Hindmarch entered to the pit with a naked light, he would be carrying a safety-lamp at the time of his death. To settle this question, I adjourned the Court for a week to give the management an opportunity to make full search in the vicinity of his body and Young's, but up to the last day the Court sat no trace of any lamp or light in either spot had been found.

There was, undoubtedly, some accumulation of gas upon which the ventilating current was unable to properly act on that morning. This may have been brought about by a fall of the roof liberating a quantity of gas, or the fall may have disarranged the brattice, and thus caused an accumulation of gas shortly before the explosion, or the brattice may have been disarranged on the previous Saturday in some bord where gas was exuding, and the accumulation of those forty-seven hours may have been uninfluenced by the air-current on Monday morning up to the moment that the naked light came into contact with it. There is no evidence upon the matter, and I can only say, judging from the history of the mine, that the last alternative seems the most probable.

Conclusions.

I find that—

- (i) The explosion was caused by the ignition of fire-damp at a naked light.
- (ii) The explosion was intensified by the agency of coal-dust.
- (iii) Evidence did not show what was the approximate quantity of fire-damp, or what the circumstances were under which it assumed an explosive character.
- (iv) Ventilation was not "constantly" produced in accordance with the terms section 47, Rule I, of the Act.
- (v) Inspections were not conducted in accordance with General Rule 4.
- (vi) There was in the mine a quantity of fire-damp, which rendered the use of naked lights dangerous.
- (vii) Locked safety-lamps should have been used at the time of the explosion.

It is manifest, according to the decision of the English Courts in the case of Knowles v. Dickinson (2 E. and E., 705), that it is the duty of the management to keep the fan constantly at work each day in the week, and whether the men are actually in the mine or not, so long as it is being worked as a going concern. The circumstances of that case are very similar to the present one, and the decision seems to me to be directly in point. A prosecution for a breach of the Act in this respect is at the present date barred by statute. However, the following remarks are noteworthy in this connection:—

- (i) The evidence proved that the stoppage of the fan from Saturday till Monday was not the cause of the gas being in explosive state; on the contrary, that the volume of air was sufficient to dilute all noxious gases (assuming the brattice was in proper order so as to enable the current to reach all places where gas did exist).
- (ii) The practice of stopping the fan at the week-end has been common for years to Dudley and other pits without any protest on the part of the colliery inspectors; in fact, the wording of the report of Mr. Inspector Humble, of 31st October, 1896 [Appendix E], reads as if he was then under the impression that the fan need not be worked unless men were actually in the mine.
- (iii) A notice has been issued by the Chief Inspector of Coal-mines since the conclusion of the Coroner's inquest to Mr. Humphreys, drawing his attention to the duty of keeping the fan at work during any temporary suspension of work; and the manager, since that notification, has complied strictly with the terms of Rule 1.

As to the method of inspection (Division V, page 24): A station with a deputy bord in accordance with Rule 4 and Special Rule 11, has been established at the bottom of the down-cast shaft. Beyond that no person may pass until the part of the mine beyond that station has been stated by the deputy to be safe (see Rule 4).

The practice with regard to inspection before the miners enter in the morning as above mentioned (see page 3), is strictly in accordance with the rule; but the system in connection with the night-shift is undoubtedly not only irregular, but a breach of the rules. The deputy precedes the night-shift men down the pit by some half-hour; they in their turn pass the station at the entrance to the mine and wait at different places or stations as they have been termed, till they see the deputy. My view of the provision as to stations is as follows:—

Where a mine is worked as a whole with one system of ventilation, then one station only is allowable—that is, at the entrance to the mine. If, however, a mine is divided into parts, under the provisions of section 46 of the Coal Mines Regulation Act, so as to make each part a separate mine within the meaning of the Act, then a station may be established at the entrance to each different part. I find confirmation of this view in a passage of the judgment of Mr. Justice A. L. Smith, in *Wales v. Thomas* (16 Q.B.D. 340, page 343).

Therefore, to appoint stations in the various districts of Dudley, as deposed to in evidence, is a violation of the Act in two respects, for—

- (1) Only one station is permissible as the colliery is at present worked.
- (2) That station must be at the entrance to the mine.

With the removal of these various so-called stations from the various flats, the examining deputy will then make a complete inspection of the working-places, &c., and will meet the shiftmen at the entrance to the mine, and sign his report in the same manner as he now does when the miners on contract go to work.

As to Division VII (page 9)—the use of safety-lamps: The evidence shows that from its earliest history the mine has always been giving off fire-damp, and to deal with it effectually it has been necessary to brattice the working-places. The history of the mine during the eleven months prior to the explosion shows that gas had been reported by deputies on sixteen different occasions in various parts of the mine. Miners had experienced ignitions of gas in the faces of the second right headings generally, in the first left, and, during the week previous to the explosion, in Bob's heading and in the bord next to where Hindmarch's body was found. After the explosion a quantity of fire-damp was discovered in the faces of the second right main heading. This might be due to the circumstances attending the explosion, yet since 21st March, we find that, though the faces of the coal have been undisturbed, gas was being still exuded as late as 20th August from the faces of the second right-hand main headings, and up to the end of the same month in the bords abovementioned in Bob's heading.

The

Right-hand side theory. Difficulties.

Cause of gas accumulating

Ventilation

Inspection.

Station at entrance to the mine, or to different part of the mine.

Safety-lamps.

The deputies' books some years back, and after the fan was introduced, show that in different parts of the mine gas was found daily for periods extending over a fortnight [Appendix F]. From the evidence it is clear that it was necessary to have both the fan at work and the brattice erected in order to prevent accumulations of gas. On different occasions when the fan has been working and the brattice disarranged gas has been discovered, and *vice versa*. Some twenty witnesses gave evidence of ignitions of fire-damp which they had experienced. These ignitions may be divided into the following classes:—

- (1.) Those caused by the bratticing being damaged, or not being sufficiently close to the face.
- (2.) Those caused by the firing of a shot.
- (3.) Those caused by workmen going to the face with a naked light too soon after firing a shot.
- (4.) Those caused by a workman's light when drilling a hole.
- (5.) Cases of which no explanation is forthcoming.

Causes of gas lighting up.

Referring to these individually, the first may be dealt with by properly enforcing the provisions of Rule I as to ventilation. The means for detecting the presence of fire-damp require the constant attention of those in authority. In many instances the insufficiency of the brattice to carry off the gas should have been found out by the deputies, or, if discovered, should have been remedied. The necessity of strict attention to this part of their duty should be impressed upon the officials.

As to (2): Possibilities of that kind may be avoided by strictly adhering to the conditions of General Rule 12.

(3): May be obviated by more care on the part of the workmen, who, in more than one instance, admitted that they knew they were taking a risk in returning to the face with a naked light before the smoke had cleared away.

There remain, however, a number of instances where an ignition of gas has taken place which could not be accounted for by any temporary defect in an otherwise perfect system of bratticing. These ignitions occurred sometimes in the early morning when the miner first entered his working-place; on other occasions after a temporary absence during the shift. In these cases there was no shot-firing, and the brattice was well up to the face. In most cases the flame was of small extent, with the exception perhaps of Harrison's, the flame in his bord ran back along the broken roof a distance of 12 yards. Nobody hitherto had actually been burnt. Several witnesses treated these flares-up, as they were styled, with great contempt (the manager saying that 99 cases out of 100 there was no necessity to make a special report as the quantity was infinitesimal). The underground manager did not consider a flame 4 or 5 yards long dangerous to workmen. As illustrating the danger attending the lighting of a small quantity of fire-damp, I will refer to the report for 1892 of Mr. Stokes, one of Her Majesty's Inspectors of Mines for the Midland Counties. Referring to fire-damp, he says: "With regard to what quantity might be considered dangerous, a clear proof of what might be the result of igniting a very small quantity of gas is given in the lists of non-fatal explosions, in which is recorded the ignition of a very small quantity of fire-damp at a gate-end lip by a naked light held by a workman. The quantity was so small that the man who ignited the gas was in no way injured, but the flame from the ignited gas passed along a break in the roof and exploded other gas in the goaf and burnt two men working 56 feet away from the point of first ignition. This accident clearly shows that a quantity of gas so small in itself as when ignited not to injure the person igniting it, is yet sufficient to prove dangerous to the mine and persons working some distance from it, due to its flame being extended by gas lying unknown in breaks in the roof."

A number of cases unexplained.

Danger of fire-damp.

The above extract shows that a small quantity of inflammable gas may be a danger to workmen if there are surrounding circumstances of an aggravating nature.

Another element to be considered is the question of coal-dust. The manager says that the whole of the left side of the second right is damp, also Bob's heading and the lower portions of the second left and first left; but the remainder of the mine is both dry and dusty.

Coal-dust.

The Royal Commission on Explosions from Coal-dust in Mines, in their Report published in 1894, are of opinion that the danger of explosions in a mine in which gas exists, even in very small quantities, is greatly increased by the presence of coal-dust; that air and dust with a very small quantity of fire-damp, such as practical people perhaps could not find with the ordinary safety-lamp, would cause violent explosions. Thus what might be a local explosion of a simple character is transformed through the medium of coal-dust into a widespread disaster.

Increased danger from fire-damp.

Moreover, it appears that, from time to time, falls of roof may take place in the Dudley pit, which may either liberate some fire-damp or derange the brattice and cut off from the influence of the ventilating current those parts of the pit contiguous to the damaged brattices. The falls have not hitherto been frequent, yet, as Mr. Humphreys says in his evidence, "the falling of the roof on the brattice is a possibility that has to be reckoned with in the mine. The roof, as it is generally in the mine, is liable to fall at any time, in spite of precautions."

Falls of roof.

Up to the time of the explosion no measures had been taken by dumping the coal-dust to check the spread of a possible explosion.

The existence of these three sets of circumstances, namely,—

- (1.) The ignitions of gas in spite of proper and perfect ventilation;
- (2.) The liability of the roof to fall and derange the ventilation;
- (3.) The presence of coal-dust ready to transmit and intensify a fire-damp explosion,

suggests the question: Was the use of naked lights likely to be dangerous to workmen in the mine about the time of the explosion, and should safety-lamps have been used? My answer is, undoubtedly yes.

The Honorable A. Brown, on the question of safety-lamps, referred me to the Report of the Royal Commission on Accidents in Mines of 1886, where it appears, on page 117, they refrained from prohibiting the use of naked lights in mines giving off fire-damp. But it will be noticed that whilst the Commission do not advise safety-lamps merely because a mine gives off fire-damp, they assume that their adoption is essential when fire-damp is associated with coal-dust; and certainly the trend of expert opinion and legislation during the last ten years in England is to enforce the use of safety-lamps in every mine where fire-damp is found.

Royal Commission, 1886: opinion as to safety-lamps.

Mr. H. D. Greene, Q.C., in his Report in 1890 on the Llanerch Colliery Explosion, advocates legislative prohibition against allowing or using naked lights in a mine, where inflammable gas has been reported within a period of twelve months.

Opinion of Mr. H. D. Greene, Q.C. Mr. Robson.

Mr. Robson, Her Majesty's Inspector of Mines for the South Wales District, in his Annual Report of 1890, states that in his opinion all mines known to produce fire-damp should be worked with safety-lamps of the best description, and all other lights excluded.

Mr. Martin, another Imperial Inspector, holds equally strong views.

Mr. Martin. Coal Mines Regulation Act, 1896.

Our own local Act, The Coal Mines Regulation Act, 1896, makes it compulsory under Rule 4 to conduct all inspections of the working-places with a locked safety-lamp unless the mine has been absolutely free from inflammable gas for a period of twelve months.

The explosives in Coal Mines Order, 1898, supersedes the rule in England which corresponds to Rule 12 of the Coal Mines Regulation Act of this Colony, and indicates that in any mine in which inflammable gas has been found within three months in such a quantity as to be indicative of danger, or which is not naturally wet throughout, no explosive, other than those specially authorised by that order, shall be used. Statistics further show that whereas in Great Britain 1,561 persons lost their lives through explosions caused by a naked light between 1873 and 1893, during 1897 there were only fifteen deaths from the same cause, when 720,000 were engaged and the output of coal was 200,000,000 tons.

Explosives in Coal Mine. Order, 1898.

The Inspectors of Coal-mines, who up to the time of the explosion had not heard of these ignitions of gas detailed in evidence before me, stated that those facts demanded the use of safety-lamps throughout the Dudley Colliery. Mr. Turnbull says: "If you find gas and it lights up you ought to have safety-lamps." Mr. Croudace says: "If gas has given off and the ventilation working and the brattice well up, one should increase the ventilation or use safety-lamps." Mr. Henwood says: "If Harrison's evidence is true, the gas is a danger to workmen."

Opinions of witnesses called.

Mr. Humphreys swore that, with the exception of Harrison's experience, he had no knowledge of gas igniting at naked lamps when the ventilating appliances were in proper order. And in justice to himself, it should be mentioned that many of the men who gave evidence of these flares-up admitted that they failed to report them to the proper authority, and, further, when the matters were reported to a deputy, they were not recorded in any way. Thus the probabilities confirm the manager's testimony. However, I think that the incident Harrison spoke of, and the other circumstance peculiar to this colliery, should have put him upon inquiry and prompted him to use safety-lamps in compliance with Rule 8. Such a matter as a prosecution for breach of this rule is now out of the question, as it is Statute-barred after three months (see section 62).

Manager ignorant of the ignitions of gas.

Nor do I think I am justified in making any recommendation as to a prosecution for manslaughter, for the jury at the Coroner's Inquest had before them all the facts of the case, and decided that no responsibility was to be attached to the manager

Prosecution.

manager

manager for the consequences of the disaster. In the first place I cannot say that such a finding was unreasonable, and secondly, I do not think it lies within the scope of this inquiry to suggest criminal proceedings for any offence other than what may be dealt with under the Coal Mines Regulation Act itself.

Future working
of the mine.

For the future, the use of safety-lamps is entirely a matter for the discretion of the management; responsibility in this respect is removed by section 20 from the shoulders of the inspectors and transferred to the mine officials. And I have no doubt that they will show the same regard for the interests of all associated with the mine as has been exhibited in the past.

Coal-dust.

Side by side with the precautions taken to prevent the ignition of inflammable gas, strict measures should be adopted to prevent the possibility of a small local explosive becoming extensive through the agency of coal-dust, and some method either of removing the dust or of damping it, or both, is essential where the dust exists in any quantity.

Importance of
reporting
presence of fire
damp.

However, the true interests of the mine cannot be effectually safe-guarded 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.

I have, &c.,

G. C. WADE,

Sole Commissioner,

19th September, 1898.

The Honorable Joseph Cook,
Secretary for Mines and Agriculture.

No. 19.

The Crown Solicitor to The Under Secretary for Mines and Agriculture.

Sir,

Crown Solicitor's Office, Sydney, 30 January, 1899.

I have the honor to return herewith the papers, numbered as in the margin (98/2,208), forwarded with your letter of the 28th ultimo requesting that one of my officers should represent your Department at the inquest upon the bodies of the men who were killed in the recent accident at East Greta Colliery.

One of my officers attended at West Maitland as requested, when, after a protracted hearing, the jury were unable to agree upon a verdict, and were discharged by the Coroner on the 28th instant.

I have, &c.,

GEO. COLQUHOUN,

Crown Solicitor.

No. 20.

Mr. Inspector Bates to The Chief Inspector of Coal-mines.

Coal-fields Office, Department of Mines, Newcastle,

31 January, 1899.

Sir,

I herewith enclose, for your information, the official notice of the fatal accident at East Greta Colliery on 18th November last.

I am preparing my annual report, and hope to post it to you to-morrow.

I have, &c.,

THOS. L. BATES,

Inspector of Collieries.

Noted.—A.A.A., 1/2/99. Records.

Telegram from Mr. A. Thomas to Mr. Inspector Bates.

18 November, 1898.

THREE men entombed in No. 1 tunnel through a fall.

A. THOMAS.

Noted.—T.L.B., 18/11/98. The Chief Inspector of Coal-mines.

Telegram from Mr. A. Thomas to Mr. Inspector Bates.

24 December, 1898.

ONE body found last night. Inquest likely this afternoon.

A. THOMAS.

Noted.—T.L.B., 24/12/98. The Chief Inspector of Coal-mines.

Dear Sir,

East Greta Colliery, near West Maitland, 18 November, 1898.

A serious accident occurred at No. 1 tunnel of this mine this morning, at about 7 a.m. A fall of roof took place in the main tunnel, about 127 feet below the second or bottom level. The timber and rubbish from roof after falling ran down towards face of tunnel and entombed three men, names David Gronow, Bertie Moneriff, and Stephen Hy. Barnes.

Yours, &c.,

A. THOMAS.

T. L. Bates, Esq., Inspector of Collieries, Hamilton.

Seen.—T. L. BATES, 18/11/98. The Chief Inspector of Coal-mines.

Dear

Dear Sir,

East Greta Colliery, near West Maitland, Christmas, 1898.

Another body was found last night at 10:40 p.m., that of Gronow. It was on the right-hand side, about 3 feet from the side, between the sills, with his head inclined a little towards the middle of the tunnel.

The police doctor examined the two bodies this morning and found that no bones were broken in either.

It is thought that we are approaching another body.

Yours, &c.,

A. THOMAS.

T. L. Bates, Esq., Hamilton.

No. 21.

The Crown Solicitor to The Under Secretary for Mines and Agriculture.

Re Bates v. Thomas.

Sir,

Crown Solicitor's Office, Sydney, 4 February, 1899.

I have the honor to forward herewith an information to be laid by Inspector Bates in the above matter, and to request that you will inform me of the return day of the summons, when the prosecuting officer will attend to conduct the prosecution. The witnesses required are Thomas L. Bates, David Lewis, Joseph Thompson, Edward Weller. The Under Secretary for Justice to produce depositions taken at inquest, and Sub-Inspector Fowler.

I have, &c.,

GEO. COLQUHOUN,
Crown Solicitor.

The information may perhaps be forwarded to Mr. Inspector Bates with instructions to lay the same, notifying me of the day of return of the summons, and summon the witnesses named herein.—A. A. ATKINSON, Chief Inspector of Coal-mines, 6/2/99. The Under Secretary.

Approved.—D.C.McL., 6/2/99. Mr. Inspector Bates.—A.A.A., B.C., 6/2/99. Report herewith.—T. L. BATES, 17/2/99. The Chief Inspector of Coal-mines.

No. 22.

The Crown Solicitor to The Under Secretary for Mines and Agriculture.

Re Bates v. Cartwright.

Sir,

Crown Solicitor's Office, Sydney, 4 February, 1899.

I have the honor to forward an information herein to be laid by Inspector Bates, and to request that you will inform me of the return day of the summons. The witnesses required are Thomas L. Bates, Azariah Thomas, to produce Special Rules signed by the Inspector of the District, and appointment of Cartwright as under-manager. The constable, to whom Cartwright made a statement of the evidence he could give at the inquest, to produce the statement. The Under Secretary for Justice to produce depositions taken at inquest, and Sub-Inspector Fowler.

I have, &c.,

GEO. COLQUHOUN,
Crown Solicitor.

Mr. Inspector Bates may be instructed to lay the two informations herein, notifying me of the return day of the summons; and summon the necessary witnesses indicated by the Crown Solicitor.—A. A. ATKINSON, Chief Inspector of Coal-mines, 6/2/99. The Under Secretary.

Approved.—D.C.McL., 6/2/99. Mr. Inspector Bates.—A.A.A., B.C. 6/2/99.

NOTE.—There are two informations to be laid against Mr. Cartwright, one in regard to Special Rule 3, and the other in regard to Special Rule 7.

Report herewith.—T. L. BATES, 17/2/99. The Chief Inspector of Coal-mines.

No. 23.

Mr. Inspector Bates to Mr. H. D. Wood, Mines Department.

Sir,

Coal-fields Office, Newcastle, 7 February, 1899.

I have been to West Maitland this morning laying information against Mr. A. Thomas and H. Cartwright, of East Greta Colliery, for breaches of the Coal Mines Regulation Act, 1896, and Colliery Special Rules.

The case is set down for hearing on Thursday, 16th February.

I enclose herewith two summonses, requiring the Under Secretary for Justice to produce the depositions taken at inquest held at West Maitland, before Mr. Coroner Martin, on 24th December, 1898, on the body of Albert Moncrieff.

Will you kindly take such steps as will ensure the documents reaching the proper quarter.

I have informed Mr. Atkinson when the case will be heard.

I have, &c.,

THOS. L. BATES,
Inspector of Collieries.

Inform Crown Solicitor that the cases are set down for hearing on the 16th instant.—H.B.S., for U.S., 8/2/99. Crown Solicitor informed, 9/2/99. Return the attached notice of service of summons to Mr. Inspector Bates.—Chief Inspector of Coal-mines, 11/2/99.

No. 24.

Mr. Inspector Bates to The Chief Inspector of Coal-mines.

East Greta Colliery Prosecutions.

Sir,

Coal-fields Office, Newcastle, 9 February, 1899.

Would it not be desirable for the Department to produce the letter from Mr. A. Thomas, dated 1st October, 1896, nominating himself as manager, and Henry Cartwright as under-manager of East Greta Colliery.

I have a copy of the Special Rules signed by Mr. Inspector Dixon, which can be produced as evidence.

I have, &c.,

THOS. L. BATES,
Inspector of Collieries.

No. 25.

Mr. A. Thomas to Mr. Inspector Bates.

Dear Sir,

East Greta Colliery, near West Maitland, 1 October, 1896.

I herewith appoint myself as manager of the East Greta Colliery, and Mr. Henry Cartwright, as under-manager of the same colliery. We also (both) have made applications for certificates to the Minister of Mines, as we are entitled to, under the 1896 Act.

I remain, &c.,

A. THOMAS,
Agent.

Will Mr. Winchester please note this letter in a book, and then forward this document to the Under Secretary, Department of Mines and Agriculture.—J. DIXON, 5/10/96. Noted.—H.W., 5/10/96. Records, 6/10/96.

I presume that Mr. Thomas means this to be the nomination of Mr. Cartwright. It may be pointed out to him that a person is required by section 3 (II) to be the holder of a certificate of competency or service before he can be nominated as an under-manager, qualified to exercise the supervision of the mine. If Mr. Thomas has appointed himself under clause *b* of subsection III, section 2, he should send notice to the Inspector of the district of the reason for the appointment. The issue of certificates of service to those entitled to them will be expedited. Mr. A. Thomas may, perhaps, be so informed.—H.R., 7/10/96. Under Secretary. Submitted.—H.B.S., 7/10/96.

No. 26.

Chief Inspector of Coal-mines to The Under Secretary for Mines and Agriculture.

[Very Urgent.]

Coal-field's Office, Department of Mines,

Sir,

Newcastle, 14 February, 1899.

I understand from Mr. Inspector Bates that in the prosecution case against Mr. Thomas, manager of East Greta Colliery, that the defendant has secured the services of Mr. Edmunds, barrister, of Sydney. Under these circumstances, I think it would be desirable for the Department to be similarly fortified, and shall be glad if you will take the necessary steps to that effect.

Mr. Tillet, of the Crown Solicitor's Office, has the case in hand, and purposes coming up to Newcastle to-morrow night. If I might be permitted to suggest, Mr. George Wallace, barrister, who conducted the case against Mount Kembla Colliery, on the weighing question, would be a good man, as he has had experience in mining matters.

I have, &c.,

A. A. ATKINSON,
Chief Inspector of Coal-mines.

For approval, to ask the Crown Solicitor to see that the Crown is represented by counsel.—H.B.S., 15/2/99. Approved.—J.C., 15.

The Crown Solicitor has arranged with counsel to leave for Maitland to-night with Mr. Tillett. A letter should now be written to the Crown Solicitor asking him to do what he verbally promised me to do this morning.—R. M. GIBSON, 15/2/99.

Yes. Write to the Crown Solicitor.—H.B.S., for U.S., 15/2/99. Mr. Atkinson informed by wire.—R.M.G., 15/2. The Crown Solicitor asked, 16/2/99.

No. 27.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary for Mines and Agriculture.

15 February, 1899.

POSTED important letter to you last night *re* East Greta prosecution. Please ask Mr. Wood to ascertain from Justice Department if depositions taken at inquest have been forwarded, as they are required to-morrow.

A. A. ATKINSON.

Mr. Gibson. Ask Mr. Wood, by telephone, if depositions have been forwarded.—H.B.S., 15/2/99. The Chief Clerk, Justice Department, informed me by telephone this morning that the depositions had been forwarded some days ago to the C.P.S., Maitland, for production to-morrow.—R. M. GIBSON, 15/2/99. Inform Mr. Atkinson by wire.—H.B.S., 15/2/99. Chief Inspector Coal-mines informed by wire, 15/2/99. Noted.—A.A.A., 17/2/99.

No. 28.

No. 28.

Telegram from The Chief Inspector of Coal-mines to The Under Secretary
for Mines and Agriculture.

16 February, 1899.
BREACH of General Rule 4 against manager of East Greta is dismissed. Breach of Special Rule 7 against under-manager withdrawn. Same is fined 10s. and 6d. 8d. costs for breach of Special Rule 3.

A. A. ATKINSON,
Chief Inspector of Coal-mines.
For Minister's information.—D.C.McL., 16/2/99. A farce.—J.C., 16. Mr. Atkinson.—
D.C.McL., 16/2/99.

No. 29.

Mr. Inspector Bates to The Chief Inspector of Coal-mines.

Bates v. Cartwright.

Sir,

Newcastle, 17 February, 1899.

I have the honor to report that the above case was heard at the West Maitland Police Court yesterday, 16th inst., before G. F. Scott, Esq., P.M., and H. Crothers, Esq., J.P.

The Department was represented by Mr. J. C. Gannon, barrister, Mr. J. V. Tillett, of the Crown Solicitor's Office, the Chief Inspector of Coal-mines, and myself.

Mr. Cartwright, under-manager of East Greta Colliery, was charged with a breach of Special Rule 3 and Special Rule 7 of East Greta Colliery. The two cases were tried together. He was defended by Mr. W. Edmunds, barrister, of Sydney, and Mr. G. W. Millard, solicitor, of Newcastle.

He at first pleaded "Not guilty" to both charges, and the cases were proceeded with, subsequently he pleaded "Guilty" to Rule 3, and the other charge against Rule 7 was withdrawn. The Bench imposed a fine of 10s. and 6s. 8d. costs.

I have, &c.,

THOS. L. BATES,
Inspector of Collieries.

No. 30.

Mr. Inspector Bates to The Chief Inspector of Coal-mines.

Bates v. Thomas.

Sir,

Newcastle, 17 February, 1899.

I have the honor to report that the above case was heard at the West Maitland Police Court yesterday, 16th inst., before G. F. Scott, Esq., P.M., and H. Crothers, Esq., J.P.

The Department was represented by Mr. J. C. Gannon, barrister, Mr. J. V. Tillett, of the Crown Solicitor's Office, the Chief Inspector of Coal-mines, and myself.

Mr. Thomas was charged with a breach of section 47, General Rule 4 (1), of the Coal Mines Regulation Act, 1896. He was defended by Mr. W. Edmunds, barrister, of Sydney, and Mr. G. W. Millard, solicitor, of Newcastle.

He pleaded "Not guilty," and after evidence had been taken, the Bench dismissed the case on the ground that Lewis and the others were not contractors for getting coal.

I have, &c.,

THOS. L. BATES,
Inspector of Collieries.

No. 31.

The Crown Solicitor to The Under Secretary for Mines and Agriculture.

Re Prosecution of the Manager and Under-manager of East Greta Colliery.

Sir,

Crown Solicitor's Office, Sydney, 17 February, 1899.

I have the honor to acknowledge the receipt of your letter of the 16th inst., this morning, asking me to arrange that your Department be represented by counsel in the above cases, and to inform that these cases were heard yesterday at West Maitland, when the under-manager was fined 10s. and 6s. 8d. costs for breach of Rule 3. The information for breach of Rule 7 was withdrawn. The case against the manager was dismissed. I am of opinion that the magistrate was right, and that no good would be done by appealing. Papers returned herewith.

I have, &c.,

GEO. COLQUHOUN,
Crown Solicitor.

No. 32.

Extract from the *Newcastle Herald*, 17 February, 1899.

IMPORTANT COAL-MINING CASES.

EAST GRETA COLLIERY.

MR. G. F. SCOTT, P.M., and Mr. H. Crothers, J.P., occupied the Bench at the West Maitland Police Court yesterday, when three cases of unusual interest to the mining community were dealt with, the complainant in each being Mr. T. L. Bates, Government Inspector of Collieries.

Azariah Thomas was charged that on the 17th November, 1898, he, as the manager of a certain mine to which the Coal Mines Regulation Act of 1896 applies, called the East Greta Colliery, did contravene and fail to comply with General Rule 4, section 47, of the Act, in that in the course of the shift working from 3 p.m. to 11 p.m. on the 17th November, 1898, an inspection of all parts of the said mine in which workmen were to work or pass during that shift was not made by a competent person or competent persons

persons appointed by the owner, agent, or manager of the said mine, who was not a contractor or contractors for getting minerals in the said mine. Mr. J. C. Gannon, instructed by Mr. J. V. Tillett, of the Crown Solicitor's Office, appeared for the prosecution, and Mr. Walter Edmunds, instructed by Mr. Millard, for the defence. Mr. A. A. Atkinson was also present.

Thomas Lionel Bates, Inspector of Collieries, deposed that he had occupied the position of Inspector for twelve years. He believed the information to be true.

To Mr. Edmunds: Defendant held an Imperial as well as a colonial certificate. He knew David Lewis slightly, and from what he saw of him he considered him to be a competent miner, and one well qualified to make inspections under General Rule 4.

Frederick Fowler, Police Sub-inspector, identified the signature of Azariah Thomas to the depositions given by him as manager of East Greta Colliery at the East Greta Disaster Coronial Inquiry.

Mr. Dawson then tendered the depositions, and certain parts of Mr. Thomas' depositions were read by Mr. Black, C.P.S.

David Lewis deposed that he was a miner and knew East Greta Colliery, where he was working in charge of men. He was sinking a tunnel, and was engaged by Mr. Thomas, who arranged with Thomas, Griffiths, Gronow, and himself to sink a tunnel at £3 19s. per yard. If their was any trouble their wages would be made up. He had control of the men. He and his three mates received the wages and paid their assistants. In the course of their sinking they worked coal or anything else they met with. They were paid £3 19s. per yard no matter whether it was coal or dirt they met with and took out. He inspected the tunnel where they were working. Thompson also inspected it on the 17th November. Gronow and Griffiths also made inspections of the tunnel. Messrs. Thomas, Heyes, and Cartwright also inspected. Between 3 p.m. and 11 p.m. on the 17th November he made the inspection of the tunnel.

To Mr. Edmunds: His inspection covered the whole of the tunnel, which was intended as a main artery for the mine. They were paid for the amount of place opened up, but not for the amount of stuff received on top. They were all engaged as miners by Mr. Thomas. It was immaterial to them what the nature of the stuff they met with was. He had seventeen years' experience in coal-mining—ten in Wales and seven in the Colony. It was particularly his duty to attend to and do all the timbering.

This was the case for the prosecution.

Mr. Edmunds held that no case had been made out. The whole gist of the charge was that the person appointed to make the inspections was not eligible under the section. It was admitted by the prosecution that he was competent and that he had made inspections. They had failed to prove he was a contractor for getting minerals. The men were not contractors, but miners, and could have been taken away from the work at any time.

The P.M.: They were decidedly not contractors for getting coal.

Mr. Edmunds: Then that settles the case at once.

Mr. Gannon said the men were contractors, to do certain excavations, and incidentally to get coal or any material met with. Coal had been taken out, and consequently they were contractors for getting out coal. The Act aimed at protecting the men. He held the information was good, and that Lewis was ineligible.

The Bench expressed a desire to hear Mr. Thomas.

Azariah Thomas, manager, East Greta Colliery, deposed that Lewis, Griffiths, Thompson, and Gronow had to drive the tunnel. Whether they met with coal or dirt they were to be paid by the lineal yard. They were to receive a certain wage, not less, no matter what they took out. They had no interest in what came out, but would still be paid even if not an ounce of coal was recovered. It was in his power to stop the work, and take any one or all of the men out of the tunnel and put them in other parts of the mine.

To Mr. Gannon: He could have taken Lewis out of the tunnel and put him somewhere else in the mine. They started on coal, and followed the seam as near as possible. The grade was changed in order to land on the right spot. They worked on a varying seam of coal. The four men were appointed as inspectors. They were competent men.

To Mr. Edmunds: Their object was to make the best passage for the working of the mine. The men had no interest whatever in what was recovered.

To the Bench: The coal was not weighed when it was taken out, but an endeavour was made to make some of it marketable. If the stuff taken out was valueless, the men would have been paid all the same.

At 12 o'clock the magistrates retired to consider the case.

On returning, a few minutes later, the P.M. said: "We dismiss the case, as we do not consider Lewis and the others were contractors for getting coal."

Henry Cartwright was charged that he did unlawfully, in East Greta Colliery, contravene and fail to comply with Rule 17 of the Special Rules, in that he did not examine the air current of No. 1 tunnel, he being a person bound as under-manager to observe the Special Rules established for a mine called the East Greta Colliery, in pursuance of the Coal Mines Regulation Act of 1896.

The same defendant was also charged that he did unlawfully, in East Greta Colliery, contravene and fail to comply with Rule 3 of the Special Rules of the colliery, in that he did not visit every working-place in the mine. Defendant pleaded not guilty to each charge.

Mr. Edmunds suggested that the two cases should be tried together. Mr. Gannon consented, and the Bench agreed.

Thomas Lionel Bates, Inspector of Collieries, produced the Special Rules of East Greta Colliery, which were tendered in evidence. He knew the mine from the time it started. He would call the air current in the tunnel a district air current.

To Mr. Edmunds: Witness explained, by the aid of a rough plan produced, the system of ventilation in the colliery.

To Mr. Gannon: To inspect the air current a man would have to go down the whole tunnel.

To Mr. Edmunds: A man standing at the level could tell the quantity of air going down and coming up the tunnel.

At this stage Mr. Gannon tendered the depositions of defendant at the East Greta Disaster Inquiry. The depositions were read by Mr. Norman Black, C.P.S.

Mr. Gannon said he had other evidence to call, but in face of the sworn depositions of defendant he would not do so, and closed his case.

Henry Cartwright, under-manager of East Greta Colliery, deposed that he was at the level every day. On the 17th November he was down in the mouth of the tunnel, and was called down by Griffiths, who was complaining of some men letting the water down on them. He was down 20 or 30 feet. He did

did inspect the air current. When he said, in the depositions, that he had not been to the tunnel, he meant he had not been to the face of the tunnel. He did not go to the face daily, because Mr. Thomas and Mr. Heyes were inspecting there. On the 17th he could not go there, owing to a mishap in another part of the mine.

At this stage the Court was adjourned until 2.15 p.m.

On resuming at 2.15 p.m., Mr. Edmunds consulted with defendant, and subsequently announced that Cartwright wished to withdraw his plea of not guilty to the charge of neglecting to comply with Special Rule 3, if the other charge was withdrawn.

Mr. Gannon agreed to the suggestion.

Mr. Edmunds asked for a lenient fine, as the breach of the Act was a technical one, and no harm had been done. Besides, the men working there were quite as competent to inspect as defendant was.

The Bench imposed a fine of 10s., with 6s. 8d. costs.

Put with Mr. Atkinson's report on these cases.—D.C.McL., 20/2/99.

No. 33.

The Chief Inspector of Coal-mines to The Under Secretary for Mines and Agriculture.

Sir,

Department of Mines and Agriculture, Sydney, 17 February, 1899.

I have the honor to state that, together with Mr. Gannon, barrister-at-law, Mr. J. V. Tillett, of the Crown Solicitor's Office, and Mr. Bates, Inspector of Collieries, I attended the West Maitland Court yesterday, with reference to the prosecution of the manager and under-manager of East Greta Colliery. The latter were represented by Mr. W. Edmunds, barrister-at-law, instructed by Mr. G. W. Millard, solicitor, of Newcastle. The magistrates present were Mr. G. F. Scott, Police Magistrate, and Mr. Crothers, J.P. The case against the manager, under General Rule 4, for employing, as the "competent persons" under that rule, men who were driving the tunnel at so much per yard (and deemed by the Crown Solicitor to be "contractors for getting minerals") was dismissed, for the following reasons:—

1st. The men doing this work were not, in any way, paid for the quantity of coal they got.

2nd. Although the tunnel was driven mostly in coal, it was partly stone, as some of the bottom was removed in order to get the required size.

The magistrates soon came to this conclusion, and expressed the opinion that the men were not "contractors for getting minerals" in an early stage of the case.

In view of their opinion being in opposition to that given by the Crown Solicitor, and the important principle which is involved, I beg to suggest that the Crown Solicitor may be asked to move the magistrates to state a case for the Supreme Court.

The under-manager was summoned for breaches of Special Rules 3 (not visiting No. 1 tunnel daily, or as often as practicable) and 7 (not examining the air currents of No. 1 tunnel daily), and for the former was fined 10s. and 6s. 8d. costs. It was thought by the counsel for the Crown that the case under Special Rule 7 (which was heard first) was likely to be lost, and the charge was therefore withdrawn.

I may state for the information of the Minister, that in June, 1898, the manager of South Greta Colliery was prosecuted for breaches of General Rules 1, 4, 5, and 32, the magistrate on that occasion being Mr. G. F. Scott, when the manager was fined 1s. and 4s. 10d. costs for each offence. This fine was, in my opinion, altogether inadequate for the offence committed; and it is, therefore, satisfactory to note that the fine in the present instance was made more severe. I understand that Mr. Scott has frequently fined workmen 1s. for offences under the Coal Mines Act.

Though the proceedings of yesterday may not be considered altogether satisfactory, I am still of opinion, and for the reasons stated in my letter of the 28th ult., that it is unnecessary to hold a formal investigation of the accident under section 23 of the Coal Mines Regulation Act.

I have, &c.,

A. A. ATKINSON,

Chief Inspector of Coal-mines.

Submitted. The causes and circumstances surrounding this accident have been fully ascertained by the prolonged inquiry which has already been held, and I do not see that anything further can be elicited by another inquiry.—D. C. McLACHLAN, 17/2/99. The suggestion that the Crown Solicitor should move the magistrates to state a case for the Supreme Court should, I think, be acted upon.—D.C.McL., 17/2/99. Approved. To get the case to the Supreme Court, if possible.—J.C., 18/2/99. 99/3,051 M. The Crown Solicitor, who will perhaps be so good as to cause the necessary steps to be taken to give effect to the Minister's wish herein.—H. B. SULLIVAN (for U.S.), B.C., 20/2/99.

No. 34.

The Chief Inspector of Coal-mines to The Minister for Mines and Agriculture.

REPORT to The Honorable Joseph Cook, Secretary for Mines, on the causes and circumstances of the Accident which occurred at the East Greta Colliery, on 18th November, 1898.

Sir,

Coal-fields Office, Department of Mines and Agriculture, Sydney, 17 February, 1899.

In pursuance of section 22 of the Coal Mines Regulation Act of 1896, I have the honor to make the following Special Report with respect to the accident, by fall of roof, which took place at the East Greta Colliery on 18th November, 1898:—

The following Appendices are attached to this Report:—

Appendix I.—Evidence of Witnesses.

" II.—Special Rules of the Colliery.

" III.—Plan showing the workings of the Colliery.

" IV.—Section of No. 1 tunnel, showing position of fall, progress of rescue work, and method of timbering.

Position of Colliery.—East Greta Colliery is situated about 3 miles from West Maitland, and works two seams of coal in the Greta or Lower Coal Measures. The strata is lying at an angle of from 45 degrees to 47½ degrees, and dips towards the east. This is due to an upheaval between Maitland and Greta, the top of the anticline being found about Lochinvar, and the East Greta workings are lying on the eastern slope of this anticline.

Winning and Working of the Coal.—The top seam of coal is only worked to a small extent by means of two tunnels driven from the surface. The lower seam, which is about 11 feet thick, has been worked for about ten years, and the coal is won by means of two main tunnels (Nos. 1 and 2), which commence at the outcrop of the seam at the surface, and follow the full dip of the Measures. These tunnels are used for the haulage of the coal from the levels to the surface and the descent and ascent of workmen, and as intakes for air. At certain intervals, levels are driven at right angles to the main tunnels, and from these the coal is worked to the rise, on the bord and pillar system. The pillars have been made from 5 to 7 yards in thickness, and the bords usually 8 yards wide, but turned away narrow, are driven on the strike of the seam. When the bords are first driven, it is usual to leave between 3 and 4 feet of the seam next to the roof, which in many cases is afterwards taken down. The extraction of coal in the broken or pillar working has only been carried on to a limited extent, as indicated by hatching across the pillars on the plan.

Haulage.—The haulage of the coal from the bords to the levels is effected by means of self-acting "jigs," and on the levels by ponies to the tunnel, where the tubs are put on to the cage, which runs on rails 4 ft. 8½ in. apart, and thence hauled to the surface by means of a steam engine placed there.

Roof of Seam.—The roof of the seam in which the accident occurred is usually a hard conglomerate, sometimes calcareous and sometimes siliceous in its nature. This roof forms a sort of landmark or beacon by which the seam in many places has been found along the outcrop, and by which means it has been traced for a distance of 16 or 17 miles.

Management, &c.—The manager of the mine is Mr. A. Thomas, who holds an Imperial certificate, and gained his mining training in South Wales. He has also had experience of working steep measures in the United States of America. The under-manager is Mr. Henry Cartwright, who holds an under-manager's certificate. He has been at the mine since it was opened, at first as manager, until succeeded by Mr. Thomas about seven years ago, since which time he has acted as under-manager.

Inspections under General Rules 4 and 5.—No. 1 tunnel, in which the accident occurred, was inspected by the following four men, viz., David Lewis, Joseph Thompson, John Griffiths, and Daniel Gronow (killed by fall), in terms of General Rule 4. David Lewis made the daily report in writing. The engineer, Mr. R. St. Vincent Heyes, also made a weekly examination and report of the tunnel, in terms of General Rule 5.

Work in No. 1 tunnel.—At the time of the accident, No. 1 tunnel was being extended further into the dip, in order to win out more coal, and all other operations were temporarily suspended in this part of the colliery. The distance from the surface to the lowest levels is 546 feet, and when the accident happened the main tunnel had been driven to a point 387 feet below this, or 933 feet from the surface. From the lowest levels a place parallel to the main tunnel had also been driven 129 feet, but no communication between these places had been made. The work in connection with driving and timbering the main tunnel was carried out by nine men, including the four men who made the inspections, working in three continuous shifts of three men each, and the parallel or back place was driven by six men in three shifts of two each.

Accident.—The fall occurred about 7 a.m., on November 18th, and resulted in the death of the following three men, who were engaged at the time in extending No. 1 tunnel below the lowest levels:—

Daniel Gronow, aged 29, married, leaving a widow and four children.

Albert Moncrieffe, aged 25, married, leaving a widow and one child.

Stephen Richard Barnes, aged 23, unmarried.

The out end of the fall which occurred was 127 feet from the lowest levels, and extended for a distance of 60 feet. The top of the fall was about 15 feet above the top of the coal and probably about 300 tons of stone fell, which, in consequence of the high inclination of the seam, rolled down into the face, doubtless causing the almost instantaneous death of the three men, all of whom were afterwards found within 30 feet of the face. In consequence of the dangerous and difficult character of the work to be done in recovering the bodies of the deceased men, and the large quantity of timber which it was necessary to put in to secure the fall and strengthen the other timbers, in order to ensure safety to the rescue parties, it was not until December 23rd, or five weeks after the fall occurred, that the first body was recovered. The second was recovered on the 24th December, and the third on December 26th. Having regard to the uneasy state of the roof after the first fall, and further falls which subsequently occurred, I think that every reasonable endeavour was made to recover the bodies of the three men with as little delay as possible.

Signals.—When the extension of the tunnel was proceeding, electric signals were kept within a few yards of the face.

Manholes or Places of Refuge.—Manholes or places of refuge were made at intervals of 20 yards, in accordance with General Rule 14, and it was stated in evidence at the inquest that one was to be prepared close to the face during the night before the accident.

Inspections.—I reached the colliery about 4 p.m. on the day of the accident, and made an inspection of the seat of the fall. Subsequently I made several inspections as the work progressed at the fall, besides examining the workings of No. 2 tunnel, and some of the old workings of No. 1 tunnel.

As the result of these inspections, I deemed it advisable to address a letter to Mr. Thomas, the manager, of which the following is a copy:—

Sir,

10 December, 1898.

With reference to recent underground inspections of the East Greta Colliery, and conversations with you on several matters in connection therewith, I respectfully desire to call your serious attention to the following points:—

1st. Having regard to the altered character of the roof of the seam proved by the fall of the 18th ultimo in No. 1 tunnel, and by a fall in the lowest north level of No. 2 tunnel, it is desirable to increase considerably the quantity of timber on all these lower levels to keep them secure.

2nd. It is desirable to prove the thickness of the conglomerate above the seam in the lowest level of No. 2 tunnel going towards No. 1 tunnel.

3rd. It is not advisable, having regard to altered nature of the roof, to allow the levels when going with the top coal left on to remain without being timbered near the face.

4th.

4th. Under the conditions of increased depth and altered roof it is desirable to increase the size of the pillars considerably.

5th. The diameter of the props used by the miners in the bords would afford more security if increased in size, and this is necessary, having regard to the extra depth at which the workings are carried on, and also the altered character of the roof.

Trusting these matters will receive your serious consideration, and I shall be glad at any time to further discuss them with you.

I have, &c.,
A. A. ATKINSON,

Chief Inspector of Coal-mines.

A. Thomas, Esq., East Greta Colliery.

Roof in No. 1 tunnel.—As stated before, the seam of coal is about 11 feet thick, and usually overlaid by a hard conglomerate. From the lowest levels towards the face of the tunnel, a band of shale, a few inches in thickness, had made its appearance between the top of the coal and the conglomerate. Where the fall occurred the conglomerate had thinned down in places to 4 or 5 inches in thickness, and was very variable in thickness, although it did not altogether run out.

Above the conglomerate at the fall was a considerable thickness (5 or 6 feet at least) of rotten argillaceous shale or mudstone. This stone was not laminated, and presented many slippery facings and joints, as revealed in the fall. When immersed in water, it decrepitates very rapidly.

Between the surface and the lowest levels, there is about 180 feet of tunnel, driven about seven years ago, which is not timbered at all, the conglomerate being hard at that point.

From the lowest levels to the face the sets of timber were put in 5 feet apart from centre to centre.

These consisted of—

- A—One sill or floor piece of ironbark, 16 feet long, 8 inches diameter at the small end, let into each side.
- B—One cap piece of ironbark next to the roof, 15 feet long, 8 inches diameter at small end, let into each side 8 or 10 inches.
- C—Two legs or props of ironbark, 10½ feet long, 8 inches diameter at the small end. These were mortised into sill and cap about 4 inches deep.
- D—Slabs of hardwood 6 feet long, 6 to 8 inches wide, and 2 to 3 inches thick.
- E—Pieces of tea-tree for packing behind the slabs, in order to make all secure.
- F—Sole pieces of ironbark between the sills, near to the sides, and parallel with the tunnel.

The props were 12 feet apart at the top, and 13 feet at the bottom, measured between inside and inside. They were fixed at right angles to the dip of the strata, which is the correct method to resist the greatest pressure.

The ironbark timber was cut fresh before being used, and, when examined after the fall, by sawing it in two appeared to be quite sound, though containing a good deal of sap.

In his book of "Notes on the Commercial Timbers of New South Wales," Mr. J. H. Maiden, F.L.S., states, with reference to ironbark, "Ironbark is the king of New South Wales hardwoods; in fact, it is not excelled in any part of the continent for combined strength and durability."

Assuming that the pressure on the sets of timber in the tunnel at East Greta was equally distributed, the pressure which each set would bear before breaking works out to figures varying between 16·76 and 23 tons according to different authorities.

If the character of the roof in the extension of No. 1 tunnel had been the same as that exposed at the "overcast," or where the lowest levels are driven from the tunnel, I think that the sets of timbers would have been ample, and the fall would not have occurred.

In order to get sufficient height for sets of timbers some of the stone below the seam was removed. Occasionally, also, a little cutting had to be done in the stone above the coal, although much the greater portion was taken out of the floor, as it was much softer than the roof stone.

Inquest.—The inquest, at which a large number of witnesses were examined, was opened by Mr. G. C. Martin, Coroner for the Newcastle district, on December 24th, and resumed on January 4th, occupying altogether thirteen days, on one of which the jury made an underground examination of the tunnel.

The Crown was represented by Mr. J. V. Tillett, of the Crown Solicitor's Office; the owners, by Mr. F. S. Bowden, solicitor, Maitland; the manager, by Mr. G. W. Millard, solicitor, Newcastle; the miners and the relatives of the deceased, by Mr. James Curley, General Secretary to the Colliery Employees Federation; and Mr. T. L. Bates, Inspector, and myself watched the proceedings on behalf of the Department.

The jury retired to consider their verdict at 5 p.m. on January 27th, and, as they failed to agree, were discharged at 8 a.m. on January 28th.

The following were the most important points disclosed at the inquest:—

1. The four men, Davis Lewis, Joseph Thompson, John Griffiths, and Daniel Gronow, undertook to drive the tunnel for £3 19s. per yard, and, in my opinion, were therefore ineligible to be employed to make inspections under General Rule 4.
2. The under-manager, Henry Cartwright, admitted that he had not examined No. 1 tunnel for a fortnight before the accident, which was a breach of Special Rule 3.
3. He also admitted having committed a breach of Special Rule 7.
4. The evidence of several witnesses was to the effect that the roof above the coal, as disclosed by falls in different parts of the mine, was not invariably composed of conglomerate far above the coal.
5. The consensus of opinion was that the fall was caused by roof pressure, due to the thinning out of the conglomerate, the place of which was taken by mudstone; this being acted on by water in the roof, which was not seen until after the fall. Some of the witnesses, however, were of the opinion that the fall was due principally to bottom and side pressure.
6. Some of the witnesses considered that the fall had taken place suddenly, and without warning, by bending the caps, while others thought that the pressure had gradually bent the caps before the fall occurred.

7. It was stated by the witnesses Parsons and March, that a conversation had taken place between Mr. Thomas, manager, and John Griffiths, in the face of No. 1 tunnel, on Tuesday, 15th November, about replacing some bent caps during the next week end, and that these caps were situated where the fall afterwards took place. This was denied *in toto* by Messrs. Thomas, Griffiths, Heyes and Howarth.

8. On the morning of the accident Thomas Cantwell spoke to some of the deceased from the lower level about 6:30 a.m. (half an hour before the fall took place) at which time the deceased evidently did not think there was cause for alarm.

- 1, 2 and 3. With reference to the first three points, it has been decided to prosecute the manager and under-manager.
4. As to the fourth, I am of opinion that, having regard to the somewhat altered character of the roof in different parts of the mine, the manager would have exercised wise judgment if he had examined the roof in the extension of No. 1 tunnel by putting boreholes at intervals up through the conglomerate. The result would probably have been to induce him to put the timber sets closer together; but the omission to bore these holes, however, does not, in my opinion, amount to culpable negligence.
5. The cause of the accident, in my opinion, was due to roof pressure, consequent upon the conglomerate having been replaced by mudstone, which, by virtue of its jointy nature, and the presence of water, rested on the timbers, and caused the caps to break.
6. Although the fall might have occurred without much warning of timber breaking at the last, I am of opinion, some days before it actually took place, evidence of pressure would have been afforded by the bending of the caps.
7. I am unable to say, from the evidence, whether the conversation referred to took place.
8. This does not require any comment.

A good deal was said in evidence at the inquest about the unchangeable character of the conglomerates in the Greta Measures; in fact, one witness said that the intrusion of the mudstone might be considered as a "freak of nature." On this point I give a quotation from Professor Archibald Geikie, an acknowledged authority on geology, with reference to conglomerates: "Coarse conglomerates which represent ancient shingles and gravels, thicken and thin out rapidly, and do not usually cover a large area; they pass laterally and vertically into grits and sandstones which have a much wider distribution and these again shade off into clays and shales that range also over large areas."

This opinion, coming from such an authority, should have the effect of causing the managers, who have conglomerate roofs, for the future to place less reliance on their consistent character.

I have, &c.,

A. A. ATKINSON,

Chief Inspector of Coal-mines.

The Hon. Joseph Cook, M.P.,
Secretary for Mines and Agriculture.

Submitted for Minister's information.—D.C.McL., 17/2/99. Seen.—J.C., 22/2/99.

APPENDIX II.

SPECIAL RULES for the conduct and guidance of the persons acting in the management of the East Greta Colliery, in the district of Maitland, and all persons employed in or about the said colliery, framed in conformity with the provisions of the Coal Mines Regulation Act, 1896, 60 Victoria, No. 12.

Manager.

1. The manager (or the under-manager when acting for him) shall have the daily supervision of the above colliery, and shall have full command over all other officers and workmen employed in or about the colliery, who are to receive their orders from him, and shall apply to him for instructions as often as may be necessary.

2. He shall comply with the requirements of the Coal Mines Regulation Act, 1896, and shall, to the best of his power, enforce the observation of the said Act, and enforce observation of the General and Special Rules.

Under-manager.

3. The under-manager shall have the daily supervision and responsible charge of the mine under the direction of the manager, and shall give all necessary instructions to the men and boys in the mine respecting their work; and shall, to the best of his power, see that they comply with the rules and regulations of the colliery, as well as the orders of the manager, and shall visit every working-place in the mine daily, or as often as may be practicable, and see that the air courses and stoppings are kept in a good state of repair, and that an adequate quantity of fresh air is constantly supplied to the men.

4. He shall give immediate attention to any complaints, and shall inspect, personally, such portions of the mine as are reported to be unsafe or in any way to need his attention.

5. He shall see that a sufficient supply of timber is sent down the mine and into the different districts.

6. He shall see that each miner keeps his working place sufficiently timbered, and shall suspend at once any miner refusing or neglecting to do so.

7. He shall examine every day the different main and district air currents, and shall see that the furnaces are kept in good repair and carefully attended to.

8. He shall, under the direction of the manager, cause safety-lamps to be used, and naked lights to be excluded where required by the Act.

9. He shall see that the deputies, miners, shifters, and all others under his charge in the mine, strictly and rigidly observe the rules applicable to them, and shall suspend immediately anyone infringing or attempting to infringe any rule, order him out of the mine, and report the same to the manager.

Deputy.

10. Each deputy shall be informed by the manager or under-manager as to what portion of the workings is to be under his charge, and all persons working in that portion of the mine will be under his direction, and he shall, in the absence of the manager or under-manager, direct the workmen how and where they shall work, and shall see that the rules applicable to them, as well as the orders of the manager or under-manager, are strictly attended to.

11. The deputy or other competent person appointed for that purpose shall be in the mine within four hours before the workmen commence, to enable him to examine the working-places, &c., carefully, and shall ascertain the condition thereof so far as the presence of gas, ventilation, roof and sides, and general safety are concerned, and shall record the result of such examination without delay in a book to be kept at the mine for the purpose.

12. He shall place cross timbers, or rails, thus X, or a signal board, as a signal of danger at the entrance of every working-place which he may find unsafe, and on his return to the station shall state on his board all places so found unsafe.

13. In any place where there is a dangerous appearance of fire-damp, locked safety-lamps shall be used; and no workman shall be permitted to remain where fire-damp has accumulated in such a quantity as to show a permanent blue cap over the flame.

14. Before safety-lamps are taken into the workings the deputy, or some other competent persons duly appointed for the purpose, shall examine the entire lamp, and if all is right, shall lock it for the miner.

15. Should there be any discharge of gas, or any condition of roof from which the deputy apprehends any danger, he shall instantly report the circumstances to the under-manager.

16. He shall report as soon as possible to the manager or under-manager all accidents, dangers, or defects which may occur in his district of the mine, and he shall also so report any accident, danger, or defect to, or in any machinery or structure in, the mine which may come to his knowledge.

Wheelers.

17. The wheelers shall report to the under-manager or deputies if any part of the road or roof has been deranged or is insecure or dangerous.

18. Any wheeler injuring a door or brattice-cloth door, and not immediately reporting the fact, shall be suspended. He shall also report to the under-manager or deputy every morning the quantity and different lengths of timber required for his miners.

19. He shall take in without delay any timber the miners may require, and shall at all times carry out the orders of the manager, under-manager, or deputy, in order to facilitate and promote the work of the mine.

20. Any person neglecting these rules will be liable to instant dismissal or prosecution according to law.

Onsetter.

21. The onsetter shall, subject to the directions of the manager or under-manager, have the sole control of the pit bottom, and the command of the signal up the pit, and on no account shall he allow any person to interfere with the signals. He shall at all times when sending up skips of coal see that none of the coal projects beyond the side of the skip, and shall pay the greatest attention to the signals when men are going to ride, in order that accidents may be avoided. The signals shall be as given in Rule 87.

22. No timber, materials, stones, coal, or other things shall, under any circumstances, be lowered or lifted in a pit while men are being lowered or lifted in it, except such as may be necessary in repairing a pit while the repairs are going on.

23. The onsetter shall not, on any account, allow more than six persons in a single cage, or ten in a double cage at the same time.

24. Any person refusing to leave the cage when ordered to do so shall be immediately suspended.

Miners.

25. Any miner after passing through a door must instantly close it; and shall not injure a door or leave it open, break down a stopping or brattice, interfere with or obstruct or damage an air-crossing, or an air-pipe, or remove or go beyond a mark or "danger-signal," without orders from the manager, under-manager, or deputy.

26. Every miner shall securely sprag or uphold the coal whilst holing, and shall securely prop up the roof of his working-place so that accidents may be avoided; and should he not be provided with a sufficient quantity of timber he shall cease working and report the same to the manager, under-manager, or deputy.

27. The seam of coal must be wrought strictly in accordance with the orders of the manager or under-manager.

28. Every miner shall, in all matters relating to the working of the mine or the safety of the men, obey strictly the orders of the manager, under-manager, or deputy; and no person shall go into any part of the mine other than where he is employed, except by the order of the manager, under-manager, or deputy.

Door-keepers.

29. A door-keeper must only open a door for the passage of persons, skips, or animals, and must instantly close the same when they have passed through. He must never allow a door to remain open, or to be propped or fastened back, unless authorised to do so by the manager, under-manager, or deputy.

30. A doorkeeper must not leave any door or doors under his charge until the work of his shift is finished, or until another person appointed by the manager, under-manager, or deputy takes his place.

31. Any doorkeeper becoming aware of any defect in, or damage to, any door, shall report the same as soon as practicable to the manager, under-manager, or deputy.

Persons in charge of Ventilating Appliances.

32. The persons in charge of any ventilating furnace, or other ventilating appliance, shall not leave the same without the permission of the manager, under-manager, or engine-wright.

33. Furnacemen must pay careful attention to the furnace under their charge; and shall maintain the fire in such a state as constantly to ensure efficient ventilation.

34. The fan and fan-engine shall be carefully attended to by the person or persons in charge thereof, who shall keep the same running at the speed ordered by the manager, so that effect may be given to the provisions of the Act as to ventilation.

35. All persons in charge of ventilating furnaces, fans, fan-engines, or other ventilating appliance, shall immediately report any damage, defect, or derangement therein to the manager, under-manager, or engine-wright.

Lamp-keepers.

36. No person except a person authorised by the manager or under-manager shall either take himself or give out for use in the mine any safety-lamp.

37. Lamp-keepers must see that every safety-lamp is thoroughly cleaned, properly put together, in safe working order, and securely locked when given out for use in the mine. If any lamp be not returned at the proper time they shall at once report the fact to the manager or under-manager.

38. All persons entrusted with the duty of cleaning any ganze, or other part of any safety-lamp, or with the duty of putting any safety-lamp or parts thereof together, shall at once report any defect therein to the lamp-keeper, or if there is more than one lamp-keeper, then to the head lamp-keeper.

39. Whenever any defective or damaged lamp is received from any person by any lamp-keeper he shall report the fact to the manager or under-manager, and shall cause such lamp to be kept in the state in which he received it until seen by one of them.

40. Every lamp-keeper shall see that all oil, spirits, and other inflammable articles under his charge are carefully and properly stored and used, and that no greasy waste or other refuse is allowed to accumulate in or near the lamp cabin.

Engine-wright.

41. The engine-wright, or other competent person appointed for the purpose, shall cause the ventilating fan or other mechanical ventilating apparatus, together with the engines, machinery, and boilers for driving the same, to be properly attended to.

42. The engine-wright, or other competent person or persons appointed for the purpose, shall have charge of all engines, machinery, and boilers used for raising or lowering persons or minerals, or for pumping water, and of all ropes, chains, appliances, or apparatus connected therewith; and of all guides, ropes, chains, conductors, or other appliances in the shafts, and of all other engines, machinery and boilers in or about the mine. In case he shall discover any weakness, defect, or want of repair therein, he shall, as soon as practicable, cause the same to be repaired and made good, and shall at once report to the manager the fact of such defect, weakness, or want of repair, and also the steps taken to remedy the same.

43. The engine-wright, or other competent person or persons appointed for the purpose, shall make the examinations and report required by General Rule 5.

44. The engine-wright, or other competent person appointed for the purpose, shall cause every rope used for raising or lowering persons or minerals to be securely attached to the drum, so that when either cage is at the pit bottom, there shall be not less than two rounds of rope upon the drum.

45. The engine-wright, or other competent person, whenever a winding rope requires capping, coupling, or splicing, shall superintend the same, and shall see that no spliced rope is used for raising or lowering persons in a shaft.

46. The engine-wright, or other competent person or persons appointed for the purpose, shall see that the fences are fixed and maintained at the top of every shaft, and that the guides, signals, covers, flanges, or horns, appliances, brakes, indicators, fences, valves, gauges, and things required by General Rules 18, 20, 26, 27, 28, 29, 30, 31, 32, and 33, or any of them, are fixed and maintained as therein required; and that the provisions of General Rule 25 are carried out above ground.

47. The engine-wright shall cause bells or other signals to be fixed in every drawing engine-house connected with the drawing pit bottom, and with every entrance for the time being in work between the surface and bottom of the shaft; and shall cause the board required by Special Rules 23 and 64, stating the number of persons authorised to descend or ascend the shaft at one time to be fixed and maintained on the pit bank.

48. The engine-wright shall cause each working boiler to be cleaned and examined as often as the manager shall so order.
49. The engine-wright shall cause the code of shaft signals used in moving the cages to be fixed and maintained at the top and bottom of each winding shaft, and at every shaft to which the provisions of Special Rule 57 apply, he shall see that the point named in that rule is distinctly marked on the indicator.

Engine-drivers.

50. Every engineman shall attend at such time as the manager may appoint, and as required by General Rule 25.
51. An engine-man shall not allow any person to interfere with the engine or machinery under his charge, or to remain in the engine-house unless authorised by those in authority above him. A winding engineman while winding must remain at the handle and must pay particular attention to the indicator and signals, and if he perceives anything wrong must instantly stop his engine and not start it again until the defect is put right or until he receives an order to go on.
52. Every winding engineman before commencing work in his shift, and before any person descends the shaft, shall carefully examine the engine, machinery, drums, ropes, brakes, indicators, and signal apparatus in the engine-house or under his charge, in order to ascertain whether they are safe and in good working order, and shall run the cages at least once up and down the shaft. Where shifts are worked continuously, it shall be sufficient if this rule is carried out at the commencement of the morning shift.
53. Every engineman, unless some other competent person is specially appointed for the purpose, shall keep the engines, machinery, and things connected therewith under his charge, properly cleaned and oiled, and shall see that they are in good and safe working condition. He shall see that the provisions of General Rules 27, 30, 31 and 32 are carried out and observed during his working shift, so far as they relate to engines or machinery under his charge.
54. Every engineman must diligently and carefully attend to the working of the engine and machinery under his charge. He must examine such engine and machinery before commencing work, and if he becomes aware of any weakness or defect, or apprehends any danger, he must, as soon as practicable, inform the manager, under-manager, deputy, or engine-wright. He shall not alter a safety-valve without leave from the manager, under-manager, or engine-wright.
55. Every engineman, in addition to the duty in this respect imposed on the engine-wright, shall see that any ropes attached to the drum of the engine under his charge are securely attached, and so that when either cage is at the bottom of the pit there shall not be less than two rounds of rope upon the drum.
56. Every winding engineman, whenever the engine under his charge ceases working, shall see that the cages are left so as not to impede the ventilation.
57. When men are being raised in shafts where the winding apparatus is not provided with some automatic contrivance to prevent overwinding, the cage shall not be wound up at a speed exceeding 3 miles an hour when and after it has reached a point 10 feet from the top of the shaft, as required by General Rule 27, and such point shall be marked on the indicator.
58. The signals given in Rule 87 shall be carefully observed by the engineman.

Banksman and assistants.

59. That the banksman shall, subject to the directions of the manager, under-manager, and engine-wright, have the control of the pit top, and the command of the signals down the pit and to the engineman.
60. That the banksman shall be responsible for the state of the pit top, and shall see that the frames and the surface near the pit mouth are kept free from coals, stones, or dirt.
61. That at least one banksman and one onsetter, or other person appointed by the manager, under-manager, or deputy for that purpose, shall be at their respective posts at the proper time every morning, to give the proper signals, and to see the men and boys carefully into and out of the cages at the top and bottom of the shaft.
62. The banksman must be at the drawing shaft at such times as the manager or under-manager may appoint. He shall not allow a person to descend or ascend until the cages have been once run up and down the shaft, but where continuous shifts are worked it shall be sufficient if this is done at the commencement of the morning shift.
63. That the banksman shall not permit strangers or persons not employed in the mine to descend the pit or remain upon the bank, unless authorised by the manager; and shall caution strangers descending to keep carefully within the cage until they are fairly landed. He shall not allow an intoxicated person to descend the pit.
64. That the banksman or onsetter shall not allow more than six persons in a single cage, or ten persons in a double cage; nor shall any person be allowed to ride with or against coals, slack, dirt, &c. Neither shall any person, unless specially allowed by the manager, under-manager, or deputy, be permitted to carry any tools, implements, props, rails, or such like in his hands whilst so riding; but the same shall be securely placed in the cage, skip, or basket, so that no danger may exist of their falling out during their ascent or descent, or of their coming in contact with anything in the pit; and no person shall be allowed to get upon or off the cage at the pit top unless it be standing upon the catches or keeps, or at a mouthing, without the signal first being given and responded to.
65. The banksman must frequently observe the pit top pulleys, ropes, chains, cages, and landing apparatus during working hours, and whenever he becomes aware of any weakness or defect therein, or in anything belonging to the shaft, or any engine, machinery, or winding tackle, he must immediately inform the engineman, and the manager, under-manager, or engine-wright, so that it may be repaired.
66. The banksman must report to the manager or under-manager any disobedience on the part of the miners or others.
67. The signals given in Rule 87 shall be carefully observed by the banksman.

Miners and all other persons employed.

68. No person acting in a place of trust shall depute anyone to do his work without the sanction of the manager.
69. No swearing or fighting is allowed in or about the mine, and no intoxicating liquors shall be permitted in the mine without the consent of the manager.
70. Any person employed in the mine shall inform the person in charge of the workings of the existence of any choke or fire-damp, of any insecurity of the roof, shaft, or any other part of the workings, or of any air-door being damaged or left open, immediately on its being observed by him.
71. No person shall be permitted to carry a naked light attached to the cap or hat on his head whilst handling explosives, or in charging holes for blasting.
72. A safety-lamp must be frequently examined, and if a lamp shows a blue cap, the person using it must carefully draw down the wick with the pricker, cease working, leave the place, and report the same to the manager, under-manager, or deputy.
73. No person shall place a safety-lamp on its bottom unless it is necessary to do so for the safe performance of any particular work, or unless authorised by the manager, and in all cases the lamp shall be hung or placed at least 2 feet from the swing of the pick, hammer, or other tool.
74. No person shall leave a lighted candle or other light in any part of the mine when leaving his work.
75. No person shall try the wastes or workings for fire-damp with a naked light, and no person shall smoke or take a naked light, tobacco pipe, cigar, cigarette, lucifer matches, or candle, where safety-lamps are ordered to be used.
76. No naked lights shall be allowed or taken beyond any danger signal where gas exists.
77. No person shall wilfully kindle a feeder of gas, or negligently have the gauze of his safety-lamp full of fire, or unlock the lamp, or unscrew the gauze, or blow out the flame, or light tobacco or other substance at the gauze, or damage or improperly use the lamp, or leave it in the works, when he has ceased using it.
78. Any person discovering any stoppage or derangement to ventilation, injury to an air-crossing, door, regulator, sheet stopping, brattice, or air-pipe, or observing any injury to or obstruction of an air-course, shall immediately give notice to the manager, under-manager, or deputy, and to any person or persons whose safety may be endangered thereby.
79. Any person passing through a door or sheet must instantly close the same, unless it is a door or sheet ordered to be kept open. No person shall, without authority, remove any caution-board, notice, or danger signal, or pass any danger signal, caution-board, or fence.
80. In case of a shot missing fire the workman shall place a danger signal at the entrance to his working-place, and shall immediately report the same to the manager, under-manager, or deputy.
81. Every miner or other workman in charge of any working-place, before commencing work, and at intervals during his shift, shall examine his working-place, and in case any danger is observed shall at once report to the manager, under-manager, or deputy.

82. No person shall leave coal, slack, or other material so as to impede the ventilation; nor leave a skip or other obstruction in the air-current.

83. Every horsekeeper shall see that no animal under his care is allowed to go to work while in an unfit state, and shall report to the manager, under-manager, or deputy, any injury received by any animal.

84. No person shall wilfully injure any animal whilst in his charge, or permit it to receive injuries by his wilful act or negligence, and shall report immediately to the horsekeeper or a deputy any injury received by such animal while in his charge.

85. No person shall take a horse on to or travel along any incline or plane, either in the mine or on the surface, which is self-acting or worked by machinery, while it is in motion, without special instructions from an officer of the mine.

86. Every person in charge of any animal shall immediately report to the manager, under-manager, or deputy, in case he finds such animal cannot pass along any road without rubbing against the roof or timbering; and no person shall, unless otherwise authorised, give his horse into the charge of any other person than the horsekeeper at the stables.

Shaft Signals.

87. The following signals (with such additions as under special circumstances may be ordered by the manager) shall be carefully observed by the engineman, banksman, onsetter, and other persons employed at this colliery:—

One knock—To go on.

One knock—To stop when the engine is in motion.

Two knocks—Lower down.

Three knocks—When any person is going to ascend or descend.

One knock—In reply before any person is allowed to get into the cage.

Four knocks—To lower slowly.

Five knocks—To ascend slowly.

88. Every person when on the pit bank, or while about to descend the shaft, shall obey the orders and directions of the banksman; and every person, while in or about the pit, or while about to ascend the shaft, shall obey the orders and directions of the onsetter.

89. No person shall improperly use any signal, signal wire, or signal apparatus.

90. No person shall get into the cage after the authorised number is in, or if forbidden to do so by the banksman or onsetter.

91. Every person who shall couple or fasten any skip to any other skip, or to any rope or chain, shall see that such coupling or fastening is made secure.

92. Before any person moves a skip in a bord he must see that a safety-block is at or near the entrance of the bord, and in good order and set across the rail.

93. All persons employed in the mine shall be under the control of the manager, under-manager, and deputies, and shall at all times obey their lawful commands.

94. Any person committing a breach of any of the foregoing Special Rules is liable to be instantly dismissed.

End.

Name of the Mine—East Greta Colliery. Where situated—Near West Maitland. Name of the Owner—East Greta Coal-mining Company (Limited). Name of the manager—Azariah Thomas. Name of the under-manager—Henry Cartwright. Name and address of the Inspector of Mines of the District—J. Dixon, Newcastle.

CERTIFICATE OF SPECIAL RULES, EAST GRETA COLLIERY.

AZARIAH THOMAS, Manager.

I HEREBY certify that the above copy of Special Rules has been shown to my satisfaction to be a true copy of the Special Rules which, at this date, are established under the Coal Mines Regulation Act, 1896, for the above-named mine.

30th day of April, 1897.

(Signed) JOHN DIXON,
Inspector of Collieries.

No. 35.

Extract from letter by Mr. W. N. Atkinson.

EXTRACT from a letter from Mr. W. N. Atkinson, Inspector of Mines in North Staffordshire, *re* interpretation of certain words in General Rule 4 of Coal Mines Act of 1896.

Barlaston, Stoke-on-Trent, 14 January, 1899.

"As to whether a person contracting to drive by the yard is a 'contractor for getting mineral,' opinions would probably differ, but I am inclined to think that the legal decision would be that he is not.

"The English Inspectors have proposed that when the Coal Mines Regulation Act is amended, General Rule 4 shall be altered in that respect, as follows:—

"Gen. Rule 4 (1). After the word 'contractors,' in line 2, delete the words 'for getting minerals' and substitute 'for any work in the mine, or in the employ of any such contractor.'"

For the information of the Minister.—A.A.A., 2/3/99. Under Secretary for Mines and Agriculture. Submitted.—H.B.S. (for U.S.), 3/3/99. Seen.—J.C., 3/3/99.

No. 36.

Extract.

Legislative Assembly, 22 February, 1899.

"THE Minister for Mines, in answer to Mr. Edden, said it was too late now to take any further legal action in regard to the Greta disaster inquiry."

Mr. Atkinson.—D.C.McL., 23/2/99. Noted.—A.A.A., 24/2/99. Put with East Greta papers. May be put away.—A.A.A., 17/7/99.

No. 37.

The Under Secretary for Mines and Agriculture to Mr. H. Wood.

East Greta Accident—Special case for Supreme Court.

WHAT has been done in this matter?

D.C.McL., 15/3/99.

The Crown Solicitor wrote to Mr. Bates on 21st ultimo, asking him to get a case stated, but has not heard from him since. He is now asking him if a case has been stated.—H.W., 15/3/99. In a week, 15/3/99. Do we require these papers any longer?—H.B.S., 16/3/99. Mr. Wood. No. Papers 9/4,978 returned to Justice, 16/3/99. Mr.

Mr. Bates saw Mr. Scott, P.M., on Friday, the 17th instant, who stated that the case was being prepared, and would be forwarded to him (Mr. Bates) soon, who will at once return the papers to the Crown Solicitor.—A.A.A., 20/3/99.

For the information of the Under Secretary, 21/3/99. Submitted.—H.B.S., 22/3/99. In two weeks, 23/3/99. Mr. Wood, 7/4/99.

No. 38.

Copy of Case stated by Magistrate.

[Copy.]

In the Supreme Court of New South Wales.

IN the matter of an appeal from the determination of the undersigned, two of Her Majesty's Justices of the Peace in and for the Colony of New South Wales, in a proceeding before us at West Maitland, in the said Colony, between *Thomas Lionel Bates*, complainant, and *Azariah Thomas*, defendant.

The information alleged that on the 17th day of November, 1898, Azariah Thomas, of East Greta, was the manager of a certain mine to which the Coal Mines Regulation Act of 1896 applies, called the East Greta Colliery, and the said Azariah Thomas, unlawfully in the said mine, did contravene and fail to comply with General Rule No. 4, in section 47 of the said Act, in that in the course of the shift working from 3 o'clock to 11 o'clock in the afternoon of the said 17th day of November, 1898, an inspection of all parts of the said mine in which workmen were to work or pass during that shift, was not made by a competent person, or competent persons appointed by the owner, agent, or manager of the said mine, who was not a contractor or contractors for getting minerals in the said mine.

The defendant pleaded not guilty, and after hearing the parties and the evidence adduced by them, we did on the 16th day of February, 1899, dismiss the said information.

The complainant, alleging that he was aggrieved by the said determination as being erroneous in point of law, did within eight days thereafter apply in writing to us to state and sign a case setting forth the facts and the grounds of such determination for the opinion thereon of this honorable Court, and did, at the time of making such application, and before the stating of this case before a Justice of the Peace, enter into recognizance to Her Majesty in the sum of £20, with a condition to prosecute this appeal with effect and without delay, and to submit to the judgment of this honorable Court, and pay such costs as may be awarded by the same, and, thereupon, in pursuance of the Act in such case made and provided, we state and sign the following case:—

This deponent, *Thomas Lionel Bates*, on his oath, saith as follows:—I am an Inspector of Collieries, and reside at Hamilton; I have acted so for twelve years; my information as read is true.

To *Mr. Edmonds*: I have no personal knowledge of the causes of complaint on the 17th November, 1898; I know defendant, whom I believe to be a thoroughly competent colliery manager; I know David Lewis slightly; I had him under observation during the rescue work at the mine, and from what I saw believe him to be competent as to mining and timbering and the work generally going on, also a competent miner, and competent to make inspections under General Rule 4; it is admitted that defendant was the manager of the East Greta Colliery on the 17th November, 1898.

THOS. L. BATES.

Taken and sworn at West Maitland, the 16th }
day of February, 1899, before us,— }
GEO. F. SCOTT, P.M.
HY. CROTHERS, J.P.

This deponent, *Frederick Fowler*, on his oath, saith as follows:—I am a Sub-inspector of Police, and reside at West Maitland; I was present at the inquest held on the body of Alfred Moncrieffe; I recollect the oath being administered to Mr. Thomas, the depositions being read over to Mr. Thomas, and his signing same; the signature attached to the depositions shown me is defendant's.

F. FOWLER.

No questions.
Taken and sworn at West Maitland, the 16th }
day of February, 1899, before us,— }
GEO. F. SCOTT, P.M.
HY. CROTHERS, J.P.

This deponent, *David Lewis*, on his oath, saith as follows:—I am a miner, and reside at East Greta; I know the East Greta Colliery, and I know defendant; I was working at the colliery when the accident took place; I was engaged by defendant; the arrangement between us was that Thompson, Griffiths, Gronow, and I were to get £3 19s. per yard; we never looked upon it as a contract; payment was made to me, and the others with me, at £3 19s. per yard if the ground proved right; if we met anything unforeseen we were to get extra; I had control of the men working with me on behalf of defendant; I paid the assistants, but I received the money and shared with my partners; on the 17th November I was working down at the bottom; I had been on this work three or four months; during the course of this time we generally followed the seam; we worked coal and anything else that came in our way; we got a good deal of coal and other stuff; the coal we got was sent up on top; I do not know what became of this coal; we were paid £3 19s. per yard, irrespective of whether we got coal or anything else; I am an experienced miner; I cannot say how much coal I took out, but what I took out I was paid so much per yard for the length I drove the tunnel; on the 17th November, 1898, I inspected the parts of the mine where we were working; Thompson, who is one of my partners, also made an inspection; Gronow, who was in charge of the shift, inspected the working place as well; there were other workmen working in the same vicinity of where I was working on that day; Thompson, Griffiths, Gronow, and I were appointed by the manager to make inspections; I do not know whether anyone else made an inspection on the 17th November; I have a clear recollection of making an inspection for the shift working from 3 to 11; I only inspected the tunnel, which I did completely; I made the inspection for that shift. (Admitted, there is no part of the mine in question except the tunnel.)

To

To Mr. Edmunds : I made a careful inspection of all parts where the workmen were to work or pass in that shift; the tunnel was to be 10 feet 6 inches on the clear; this tunnel was to be the main artery for the further development of the mine; the work of the mine had been carried on through the upper part of the tunnel prior to my sinking the tunnel; I had to inspect the tunnel from top to bottom; my work was to open up this main passage, and I was paid for the exact amount of space opened up during the course of the work; I and the three others had all been miners in the colliery; all the men carrying on the work were engaged by defendant as miners in the colliery; in carrying on the work it was perfectly immaterial to us what stuff was got out, the softer the better for us; I have had seventeen years' experience as a coal-miner—seven years in this country and ten years in Wales, and my experience has been particularly directed to timbering all sorts of places; it was a particular part of my duty to look after the timber; my shift did all the timbering, and this occupied nearly the whole time of my shift; after the others had driven I would come along and do the timbering; defendant required me to look after the timbering; this was part of the understanding before we started.

To Mr. Gannon : The men with me worked at the coal face; I might have worked at the face a couple of times; the face we worked on was partly coal and partly country; Thompson, Griffiths, Gronow, and I were partners, and were appointed by the manager to make inspections.

To Mr. Edmunds : I would call them mates, and would also call the assistants mates.

Taken and sworn, at West Maitland, the 16th }
day of February, 1899, before us,— }

DAVID LEWIS.

GEO. F. SCOTT, P.M.
H. CROTHERS, J.P.

This deponent, *Azariah Thomas*, on his oath, saith as follows:—I am the manager of the East Greta Colliery, and reside at Mount Dee; I have a certificate under the Imperial Act and also under the Colonial Act, and I have had a large experience; it became necessary to drive the tunnel further into the field of coal at as uniform a grade as possible; I arranged for the driving of the tunnel at so much per lineal yard completed; it was possible that the seam would leave the tunnel and the stuff obtained be valueless, then the men were to be paid just the same; they were to be paid not less than usual wages, and more if the ground proved hard; the men had no interest in what they took out of the tunnel; they were paid so much per yard completed, and not for any coal obtained; I have heard portions of my depositions, taken before the Coroner's Court, read; they are correct; I thought I was responsible for the wages of the other men; I examined the work as it went on, and it was within my power to stop the work at any time, take the men away, and put them on to other work, or take any one man away and put him in any other part of the mine.

To Mr. Gannon : I could stop Lewis working in the tunnel and put him to any other work I liked; Lewis is a deputy and a colliery employee in the mine, though he was working under an arrangement—a contract, Mr. Gannon calls it; I laid out the work; the men did not altogether follow the seam; I slightly altered the course of the tunnel to follow the coal; in getting this coal out I was opening the mine up; the change in the course of the tunnel was to reach a certain point, and to have an even grade; the men were working on an uneven seam of coal; sometimes they left some coal on top; the men drove 355 feet, at £3 19s. per yard, and I paid about £460 for the work; Lewis got the money; Lewis and the others were appointed by me as competent persons to make inspections; the efficiency of the tunnel was to be a good passage for the development of the mine, not to get all the coal I could; I insisted on Lewis doing the timbering, on account of his qualifications.

To the Bench : The men were not paid anything at all for the coal got; the mine got the benefit of it all.

AZARIAH THOMAS.

Taken and sworn, at West Maitland, this 16th }
day of February, 1899, before us,— }

GEO. F. SCOTT, P.M.
H. CROTHERS, J.P.

It was not proved, upon the hearing, that the competent person or competent persons to make inspections, as required by the Coal-mines Regulation Act, was or were a contractor or contractors for getting minerals in the said mine.

We determine that the matter hereinbefore stated did not support the said information.

The question for the opinion of the said Court is whether our said determination was erroneous in point of law.

Dated at West Maitland, this 23rd day of March, A.D. 1899.

G. F. SCOTT, P.M.
H. CROTHERS, J.P.

No. 39.

The Crown Solicitor to The Under Secretary for Mines and Agriculture.

Re Bates v. Thomas.—Special case.

Sir,

Crown Solicitor's Office, Sydney, 7 June, 1899.

I have the honor to return herewith the papers sent me herein, and to state that the matter was decided by the Full Court on the 1st instant, when the appeal was dismissed with costs, the Court holding that the magistrates were right in determining that the Act does not apply to persons contracting to make a tunnel, though they may remove coal in so doing.

I have, &c.,
GEO. COLQUHOUN,
Crown Solicitor.

No. 40.

The Secretary to The Attorney-General to The Under Secretary for Mines and Agriculture.

Bates v. Thomas.

Sir,

Attorney-General's Department, Sydney, 15 July, 1899.

I have the honor to request that you will be good enough to cause the sum of £47 Os. 8d., amount of defendant's taxed costs herein, to be placed to the credit of my public account to enable me to pay same.

I have, &c.,

HUGH POLLOCK,

Secretary.

For approval.—D.McL., 20/7/99. Approved.—J.C., 20. Accountant. Voucher herewith.—E.C.P., 21/7/99. The Examiner. Vou. 99/1900-1156. Secretary, Attorney-General. £47 Os. 8d., passed, 21/7/99.—G.P.L., Examiner, Department of Mines and Agriculture.

APPENDIX X.

REPORTS BY MR. INSPECTOR BATES ON EAST GRETA COLLIERY FROM OCTOBER, 1897, TO NOVEMBER, 1898.

Accident at East Greta Colliery.

Newcastle, 25 November, 1898.

Sir, I beg to report an accident by a fall of coal, which occurred to two miners named William Henderson and George Rowley, at East Greta Colliery, on 7th November.

I visited the colliery on 8th November, and ascertained the following particulars:—

The accident occurred in the second jig on the second north level, in No. 2 tunnel. This jig had been driven 4 feet wide and 4 feet high in the coal, upwards from the second level to the first north level. It was then necessary to increase the size to allow the cage to be run in it, the finished size to be 8 feet wide and 7 ft. 6 in. high inside timbers. The angle of dip is 40 degrees.

The men commenced work at the top (No. 1 level), and the coal taken down was sent through the original opening into skips on the No. 2 level.

About 14 yards of the work had been completed, timber set every 5 to 6 feet, sill, side props, and caps with slabs at the sides.

Two sets of timber had been put in on the day of the accident, the last set being close to the face.

About 3:30 p.m. on the 7th instant, whilst the men standing at the mouth of the opening were engaged in shovelling coal down, some coal fell away at a slip at the sides and roof on to the men, who could not get away quick enough owing to the steepness of the measures. Henderson had two ribs fractured and Rowley a fractured thigh and serious internal injuries, which it is doubtful whether he will survive. Both men were experienced miners, and in my opinion this is a pure accident, and no blame attributable to anyone.

I have, &c.,

THOS. L. BATES,

Inspector of Collieries.

A. A. Atkinson, Esq., Chief Inspector of Coal-mines.

Noted. Will Mr. Bates please say if injuries to either of these men was caused by falling on a pick, as I have heard.—A.A.A., 26/11/98.

I inquired at the Maitland Hospital yesterday, and was informed that the injuries to Rowley, in addition to a fractured thigh, are two wounds in the back caused by some sharp instrument, probably a pick; but neither Rowley nor Henderson can give me any information on the matter.—T.L.B., 2/12/98. The Chief Inspector of Coal-mines.

Noted.—A.A.A., 3/12/98. Under Secretary, Mines and Agriculture. For the information of the Minister.—H.B.S. (for U.S.), 6/12/98. Approved.—J.C., 6/12/98.

Dear Sir,

East Greta Colliery, near West Maitland, 7 November, 1898.

Two miners—William Henderson and George Rowley—were injured by a fall of coal this afternoon.

Yours, &c.,

A. THOMAS.

T. L. Bates, Esq., Inspector of Collieries, Hamilton.

Report herewith.—T.L.B., 25/11/98. The Chief Inspector of Coal-mines. Noted.—A.A.A., 26/11/98.

Dear Mr. Winchester,

Hamilton, 7 November, 1898.

I have just received a wire of an accident to two men at East Greta Colliery by fall of coal, and that the place is waiting inspection, so must go there in the morning. Will endeavour to be at office on Thursday.

Yours, &c.,

THOS. L. BATES,

Inspector of Collieries.

Mr. Atkinson.—H.W., 8/11/98. Noted.—A.A.A., 14/11/98. Records. Please furnish a copy of the report made on this accident. Urgent.—D.McL., 23/11/98. Inspector's report not yet received at Records.

REPORT on accident to A. Whiteley at East Greta Colliery.

Accident at East Greta Colliery, West Maitland.

Sir,

Newcastle, 12 October, 1898.

I beg to report an accident by the slipping of a rope on the surface, which occurred to an assistant banksman named Albert Whiteley at East Greta Colliery on 27th September.

I visited the colliery on 3rd October, and ascertained the following particulars:—

Albert Whiteley and his brother Sydney are banksmen at the mouth of the No. 2 tunnel. Near the tunnel is a small coal-hopper, and a skip carries the small coal from underneath the screen up a slanting tramway into this hopper. The rope from the skip passes through a snatch block on the hopper, and passes over the pit-bank to a small engine worked by a boy named Martin Jensen, 17 years of age.

The distance the skip travels is 25 feet, and there is a mark on the rope to denote where to stop.

Between 8 and 9 o'clock in the evening of 27th September, the boy Jensen, by mistake, pulled the skip up too far, and the connecting chain got fast in the snatch-block. This was liberated by the two Whiteleys and another man, but, probably owing to the darkness, neither Albert Whiteley or any of the other men noticed that the side-iron of the snatch-block was slightly bent. They resumed work, and after the skip had been pulled up four or five times, the rope came out of the block, and becoming taut, broke some side-rails and struck Albert Whiteley (who was passing underneath on his way to get some skips to put on the cage) on the back, knocking him down on the rails. His right leg was fractured below the knee. He was removed to Maitland Hospital, where it was necessary to amputate the injured limb.

I have, &c.,

THOS. L. BATES,

Inspector of Collieries.

A. A. Atkinson, Esq., Chief Inspector of Coal-mines, Sydney.

Noted. Will Mr. Bates kindly say if any one is to blame, or if he can suggest any means of preventing a recurrence of this.—A.A.A., 13/10/98.

I do not see my way to blame any one person for this accident. The accident is due primarily to the boy Jensen, who, by mistake, pulled the skip up too high and jammed the coupling of the rope in the snatch-block. This was liberated by several men, amongst whom was the injured man Albert Whitely, and no one appears to have noticed any injury to the block. Since the accident a more substantial mark has been made on the rope, and a similar accident should, therefore, be avoided.—T.L.B., 15/10/98. The Chief Inspector of Coal-mines.

Noted.—A.A.A., 20/10/98. Records. For the information of the Minister.—H.B.S. (for U.S.), 21/10/98.

Dear Sir,

East Greta Colliery, near West Maitland, 28 September, 1898.
A young man named Albert Whitely had his leg broken last night on the surface at the above colliery; he was assistant bankman.

Mr. Jno. Dixon, Senior Inspector of Collieries, Merewether, near Newcastle.

Yours, &c.,
A. THOMAS.

Report herewith.—T. L. BATES, 12/10/98. The Chief Inspector of Coal-mines.

REPORT ON EAST GRETA COLLIERY.
East Greta Colliery Inspection, West Maitland.

Sir,

Newcastle, 20 September, 1898.

I have the honor to report having inspected the above colliery on 5th and 16th September. All the workings, bords, of No. 1 tunnel are at present idle until the tunnel has been driven a further distance to the dip.

No. 2 Tunnel, Lower Seam, South Side.—There are 22 men and 2 boys employed underground in each shift, and supplied with 7,500 cubic feet of air per minute, giving each an average of 312 cubic feet. This is by natural ventilation. The air current descends the No. 2 tunnel, and returns up what is known as the steam jig.

North Side.—There are 25 men and 2 boys employed underground; total, 27 in each shift, and supplied with 15,000 cubic feet of air per minute, giving each an average of 555 cubic feet. The air-current descends the No. 2 tunnel, and returns to a furnace at the extreme north of the workings.

There are three shifts worked at this mine, each having the number of men and boys as stated above.

The wheeling and travelling roads were in good condition, and there was a plentiful supply of timber on hand.

I have, &c.,
THOS. L. BATES,
Inspector of Collieries.

A. A. Atkinson, Esq., Chief Inspector of Coal-mines, Sydney.

Noted.—A.A.A., 24/9/98. Records. For the information of the Minister.—H.B.S. (for U.S.), 26/9/98. J.C., 27.

REPORT ON EAST GRETA COLLIERY.
East Greta Colliery Inspection, West Maitland.

Sir,

Newcastle, 11 June, 1898.

I have the honor to report having inspected the above colliery on 17th May and 10th June. No. 1 Tunnel, Lower Seam, South Side.—I inspected this portion of the mine on 17th May, and found 14 men, 4 boys, and 1 horse employed; total, 19,—and supplied with 10,070 cubic feet of air per minute, giving each an average of 530 cubic feet.

These workings are at present suspended until the main tunnel has been driven a further distance to the dip, when operations will be resumed.

North Side Workings.—The coal from the north side workings is drawn out of two tunnels. The No. 2 tunnel is filled up with cages, in which the men, &c., ride; the other tunnel, known as the steam jig, is used for hauling coal only. The mine is ventilated by means of a furnace on the surface, and a brick chimney connected with an opening to the surface north of the steam jig.

The current of air in circulation was 17,390 cubic feet per minute. The mine works three shifts, and in each of the shifts there are 57 men, 7 boys, and 1 horse; total, 65, which will give each an average of 267 cubic feet.

The wheeling and travelling roads were in good condition, and a plentiful supply of timber on hand.

I have, &c.,
THOS. L. BATES,
Inspector of Collieries.

A. A. Atkinson, Esq., Chief Inspector of Coal-mines, Sydney.

Noted.—A.A.A., 13/6/98. Records. For the information of the Minister.—H.B.S. (for U.S.), 14/6/98. Seen.—S. SMITH.

REPORT ON EAST GRETA COLLIERY.
East Greta Colliery Inspection, West Maitland.

Sir,

Newcastle, 11 February, 1898.

I have the honor to report having inspected the above colliery on 31st January and 8th February. No. 1 Tunnel, Lower Seam.—Only the coal from the south workings of the mine is drawn up this tunnel. There are in this portion of the mine 24 men, 4 boys, and 1 horse employed; total, 29,—and supplied with 9,900 cubic feet of air per minute, giving each an average of 341 cubic feet.

No. 2 Tunnel, Lower Seam.—All the coal to the north of the No. 1 tunnel is drawn up this one. There are usually 41 men and 2 boys employed, but on the day of my inspection no miners were at work, and no coal being drawn. Four men working in one of the jigs fixing up a drum for the purpose of lowering the full skips of coal from the bords down to the main level, from which they are drawn in the cage to the surface.

The ventilation in this portion of the mine was satisfactory.

Two shifts are worked with the above number of men, &c., in each shift.

The wheeling and travelling roads were in good condition, and there was a plentiful supply of timber on hand.

I have, &c.,
THOS. L. BATES,
Inspector of Collieries.

A. A. Atkinson, Esq., Chief Inspector of Coal-mines, Sydney.

Noted.—A.A.A., 14/2/98. Records. For the information of the Minister.—H.B.S. (for U.S.), 14/2/98. Seen.—S. SMITH.

REPORT ON EAST GRETA COLLIERY.
East Greta Colliery Inspection, West Maitland.

Sir,

Newcastle, 18 October, 1897.

I have the honor to report having inspected the above colliery on 7th and 15th October. No. 1 Tunnel, Lower Seam.—The only coal drawn up this tunnel is from the south side workings, where 23 men, 4 boys, and 1 horse are employed; total, 28,—and supplied with 9,800 cubic feet of air per minute, giving each an average of 350 cubic feet.

No. 2 Tunnel, Lower Seam.—All the coal from the north side workings is now hauled up this tunnel. There were only 4 men and 2 boys employed at the time of my inspection, no coal being drawn, but usually there are 31 men and 1 driver employed. There was a satisfactory amount of air circulating through the working-places.

Two shifts are worked, with the above number of men, &c., in each shift.

The wheeling and travelling roads were in good condition, and there was a plentiful supply of timber on the flats.

I have, &c.,
THOS. L. BATES,
Inspector of Collieries.

A. A. Atkinson, Esq., Chief Inspector of Coal-mines, Sydney.

Seen.—A.A.A., 27/10/97. Under Secretary, Mines and Agriculture. For the information of the Minister.—H.B.S. (for U.S.), 1/11/97. Seen.—S. SMITH.

APPENDIX Y.

ORIGINAL DEPOSITIONS TAKEN AT INQUEST ON BODY OF A. MONCRIEFFE.

MINUTE.

Subject :—Inquest at East Greta and Court-house, West Maitland, upon the body of Albert Moncrieffe (letter from Coroner, Newcastle, 1/2/99).

SUBMITTED for the Minister's information.

Department of Justice, Sydney, 9 February, 1899.

A subpoena has been received for the production of these depositions at the hearing of a case, *Bates v. Thomas*, at the Court of Petty Sessions, West Maitland, on the 16th instant.

They might be forwarded to the Clerk of Petty Sessions, West Maitland, for production to the Court.

G.M.

Approved.—C.A.L., 10/2/99. Depositions and subpoena to C.P.S., West Maitland, 11/2/99. Forwarded to the Under Secretary for Mines and Agriculture, in accordance with request specially made to-day—G.W. (for U.S.), B.C., 17/10/99.

Sir,

Newcastle, 1 February, 1899.

I have the honor to inform you that I forwarded yesterday by post (registered) two packets of depositions of witnesses, taken during the inquest held before me touching the death of *Albert Moncrieffe*, in the East Greta Colliery.

The inquest was opened at East Greta on the 24th of December, 1898, and was continued for twelve days at the Court-house in West Maitland, and concluded on the 27th of January, 1899. I much regret that though the evidence covered every subject in connection with the disaster itself, and the state of the colliery, and that the context was nearly the same throughout, yet the jurors, after over fourteen hours continuous debate, could not agree upon a verdict, and without the least likelihood of doing so, as the foreman said, if they were locked up for a month. I therefore then discharged the jury.

I enclose application for an advance, and obligation receipt for the sum of £69, to pay the jurors' allowances.

The Exhibits and other papers connected with the inquest will be forwarded as soon as I receive part of them from West Maitland. There is a model of the tunnel, showing manner of timbering; it is very bulky, and would, perhaps, be better left at Court-house, in West Maitland, with the different samples of stone from the colliery.* Kindly advise me respecting these.

Can I do anything more in the case, as the result was so bald?

I have, &c.,

GEO. C. MARTIN,
Coroner, District of Newcastle.

The Under Secretary, Department of Justice.

*Submitted for approval of this suggestion—G.M., 9/2/99.

Sir,

Court-house, West Maitland, 18 February, 1899.

I have forwarded, under separate cover (registered), the depositions taken at the inquest held on the body of one Albert Moncrieffe, which were duly produced at this Court of Petty Sessions, in accordance with your instructions.

I have, &c.,

NORMAN BLACK,
Clerk of Petty Sessions.

The Under Secretary of Justice, Sydney.

Depositions to Under Secretary for Mines, 6/3/99.

[Coroner, Newcastle.]

Telegram from Geo. C. Martin, Coroner, Newcastle, to The Under Secretary for Justice, Sydney.

Newcastle, 3 January, 1899.

MR. ATKINSON, Chief Inspector of Collieries, was asking if a type-writing deposition clerk would attend at West Maitland on Wednesday next to take evidence. Kindly inform me early.

GEO. C. MARTIN,

Coroner.

Inform not intended send clerk, unless it appears that otherwise the proceedings will be lengthy. As to this Mr. Martin might report to-morrow.—G.M., 3/1/99. Wire sent, 3/1/99. File with inquest proceedings when received.—G.W., 10/1/99. Remind Mr. Martin that he has not furnished the report asked for in my telegram of 3rd instant, and ask how much longer he thinks the inquest will last.—16/1/99. Wire. Wired Coroner, Newcastle, 16/1/99.

[Coroner, Newcastle, that he has adjourned inquest on Albert Moncrieffe till 4th prox.]

Sir,

Newcastle, 27 December, 1898.

I have the honor to acknowledge the receipt of your wire, and to inform you that I opened the inquest touching the death of Albert Moncrieffe last Saturday afternoon at East Greta; and, after taking evidence for identification, adjourned till Wednesday, the 4th of January, 1899. I considered the holidays would be over then, and also that it would give time for the mine to be opened and cleared up to where the fall commenced. About 25 feet of building up and supporting must be done to get there; 5 feet is done, as I have heard, each day.

The adjournment will be at the Court-house at West Maitland, to commence at 10.30 a.m. I expect the inquest will last some days.

I have, &c.,

GEO. C. MARTIN,
Coroner, District of Newcastle.

The Under Secretary, Department of Justice.

Seen.—J.L.W. (for U.S.), 29/12/98.

[Coroner, Newcastle.]

Telegram from Geo. C. Martin, Coroner, Newcastle, to The Under Secretary of Justice, Sydney.

Newcastle, 28 December, 1898.

AM leaving this afternoon for East Greta, to open inquest; wish your wire had reached me earlier.

GEO. C. MARTIN,
Coroner.

MINUTE.

Subject :—Inquest at East Greta and Court-house, West Maitland, upon the body of Albert Moncrieffe,

Department of Justice, Sydney, 3 March, 1899.

THE proceedings in this case are forwarded for the information of the Department of Mines.

G.M.

Submitted for the information of the Minister.—A.A.A., B.C., 13/3/99. H.B.S. (for U.S.), 14/3/99. J.C., 15. The papers are now returned. The Under Secretary of Justice.—H. B. SULLIVAN (for U.S.), B.C., 16/3/99.

Sir,

Newcastle, 4 February, 1899.

I have the honor to forward herewith by post (registered) papers in connection with the East Greta Inquest, viz. :—

Exhibit marked "A."

Do Tracing of Tunnel.

Do Special Rules of Colliery.

Affidavit of Jurors.

Death information, "Albert Moncrieffe."

Index to witnesses in Depositions.

Voucher in duplicate for the conveyance of jurors twice.

Voucher in duplicate for tea-meal for jurors on the evening of the 27th.

I have, &c.,

GEO. C. MARTIN,
Coroner, District of Newcastle.

The Under Secretary, Department of Justice.

[Exhibit

[*Exhibit at Inquest by Mr. Thomas. Geo. C. Martin, Coroner, 4th January, 1899.*]

SPECIAL RULES.—For the conduct and guidance of the persons acting in the management of the East Greta Colliery, in the district of Maitland, and all persons employed in or about the said colliery, framed in conformity with the provisions of the Coal-mines Regulation Act, 1896, 60 Victoria No. 12.

Manager.

1. The manager (or the under-manager when acting for him) shall have the daily supervision of the above colliery, and shall have full command over all other officers and workmen employed in or about the colliery, who are to receive their orders from him, and shall apply to him for instructions as often as may be necessary.

2. He shall comply with the requirements of the Coal-mines Regulation Act, 1896, and shall, to the best of his power, enforce the observation of the said Act, and enforce observation of the General and Special Rules.

Under-manager.

3. The under-manager shall have the daily supervision and responsible charge of the mine under the direction of the manager, and shall give all necessary instructions to the men and boys in the mine respecting their work; and shall, to the best of his power, see that they comply with the rules and regulations of the colliery, as well as the orders of the manager, and shall visit every working-place in the mine daily, or as often as may be practicable, and see that the air-courses and stoppings are kept in a good state of repair, and that an adequate quantity of fresh air is constantly supplied to the men.

4. He shall give immediate attention to any complaints, and shall inspect personally such portions of the mine as are reported to be unsafe or in any way to need his attention.

5. He shall see that a sufficient supply of timber is sent down the mine and into the different districts.

6. He shall see that each miner keeps his working-place sufficiently timbered, and shall suspend at once any miner refusing or neglecting to do so.

7. He shall examine every day the different main and district air-currents, and shall see that the furnaces are kept in good repair and carefully attended to.

8. He shall, under the direction of the manager, cause safety-lamps to be used, and naked lights to be excluded where required by the Act.

9. He shall see that the deputies, miners, shifters, and all others under his charge in the mine, strictly and rigidly observe the rules applicable to them, and shall suspend immediately anyone infringing or attempting to infringe any rule, order him out of the mine, and report the same to the manager.

Deputy.

10. Each deputy shall be informed by the manager or under-manager as to what portion of the workings is to be under his charge, and all persons working in that portion of the mine will be under his direction, and he shall, in the absence of the manager or under-manager, direct the workmen how and where they shall work, and shall see that the rules applicable to them, as well as the orders of the manager or under-manager, are strictly attended to.

11. The deputy or other competent person appointed for that purpose shall be in the mine within four hours before the workmen commence, to enable him to examine the working-places, &c., carefully, and shall ascertain the condition thereof so far as the presence of gas, ventilation, roof and sides, and general safety are concerned, and shall record the result of such examination without delay in a book to be kept at the mine for the purpose.

12. He shall place cross timbers, or rails, thus X, or a signal-board, as a signal of danger at the entrance of every working-place which he may find unsafe, and on his return to the station shall state on his board all places so found unsafe.

13. In any place where there is a dangerous appearance of fire-damp locked safety-lamps shall be used; and no workman shall be permitted to remain where fire-damp has accumulated in such a quantity as to show a permanent blue cap over the flame.

14. Before safety-lamps are taken into the workings, the deputy, or some other competent person duly appointed for the purpose, shall examine the entire lamp, and, if all is right, shall lock it for the miner.

15. Should there be any discharge of gas, or any condition of roof from which the deputy apprehends any danger, he shall instantly report the circumstances to the under-manager.

16. He shall report as soon as possible to the manager or under-manager all accidents, dangers, or defects which may occur in his district of the mine, and he shall also so report any accident, danger, or defect to or in any machinery or structure in the mine which may come to his knowledge.

Wheelers.

17. The wheelers shall report to the under-manager or deputies if any part of the road or roof has been deranged, or is insecure or dangerous.

18. Any wheeler injuring a door or brattice cloth door, and not immediately reporting the fact, shall be suspended. He shall also report to the under-manager or deputy every morning the quantity and different lengths of timber required for his miners.

19. He shall take in without delay any timber the miners may require, and shall at all times carry out the orders of the manager, under-manager, or deputy, in order to facilitate and promote the work of the mine.

20. Any person neglecting these rules will be liable to instant dismissal or prosecution according to law.

On-setter.

21. The on-setter shall, subject to the directions of the manager or under-manager, have the sole control of the pit bottom, and the command of the signal up the pit, and on no account shall he allow any person to interfere with the signals. He shall at all times when sending up skips of coal see that none of the coal projects beyond the side of the skip, and shall pay the greatest attention to the signals when men are going to ride, in order that accidents may be avoided. The signals shall be as given in rule 87.

22. No timber, materials, stones, coal, or other things shall, under any circumstances, be lowered or lifted in a pit while men are being lowered or lifted in it, except such as may be necessary in repairing a pit while the repairs are going on.

23. The on-setter shall not, on any account, allow more than six persons in a single cage, or ten in a double cage at the same time.

24. Any person refusing to leave the cage when ordered to do so shall be immediately suspended.

Miners.

25. Any miner after passing through a door must instantly close it; and shall not injure a door or leave it open, break down a stopping or brattice, interfere with or obstruct or damage an air-crossing, or an air-pipe, or remove or go beyond a mark or "danger-signal," without orders from the manager, under-manager, or deputy.

26. Every miner shall securely sprag or uphold the coal whilst holding, and shall securely prop up the roof of his working-place, so that accidents may be avoided; and should he not be provided with a sufficient quantity of timber he shall cease working and report the same to the manager, under-manager, or deputy.

27. The seam of coal must be wrought strictly in accordance with the orders of the manager or under-manager.

28. Every miner shall, in all matters relating to the working of the mine or the safety of the men, obey strictly the orders of the manager, under-manager, or deputy; and no person shall go into any part of the mine other than where he is employed, except by the order of the manager, under-manager, or deputy.

Door-keepers.

29. A door-keeper must only open a door for the passage of persons, skips, or animals, and must instantly close the same when they have passed through. He must never allow a door to remain open, or to be propped or fastened back, unless authorised to do so by the manager, under-manager, or deputy.

30. A door-keeper must not leave any door or doors under his charge until the work of his shift is finished, or until another person appointed by the manager, under-manager, or deputy takes his place.

31. Any door-keeper becoming aware of any defect in, or damage to, any door, shall report the same as soon as practicable to the manager, under-manager, or deputy.

Persons

Persons in charge of Ventilating Appliances.

32. The persons in charge of any ventilating furnace or other ventilating appliance shall not leave the same without the permission of the manager, under-manager, or engine-wright.

33. Furnace-men must pay careful attention to the furnace under their charge; and shall maintain the fire in such a state as constantly to ensure efficient ventilation.

34. The fan and fan-engine shall be carefully attended to by the person or persons in charge thereof, who shall keep the same running at the speed ordered by the manager, so that effect may be given to the provisions of the Act as to ventilation.

35. All persons in charge of ventilating furnaces, fans, fan-engines, or other ventilating appliance, shall immediately report any damage, defect, or derangement therein to the manager, under-manager, or engine-wright.

Lamp-keepers.

36. No person, except a person authorised by the manager or under-manager, shall either take himself or give out for use in the mine any safety-lamp.

37. Lamp-keepers must see that every safety-lamp is thoroughly cleaned, properly put together, in safe working order, and securely locked when given out for use in the mine. If any lamp be not returned at the proper time they shall at once report the fact to the manager or under-manager.

38. All persons entrusted with the duty of cleaning any gauze, or other part of any safety-lamp, or with the duty of putting any safety-lamp or parts thereof together, shall at once report any defect therein to the lamp-keeper, or if there is more than one lamp-keeper, then to the head lamp-keeper.

39. Whenever any defective or damaged lamp is received from any person by any lamp-keeper he shall report the fact to the manager or under-manager, and shall cause such lamp to be kept in the state in which he received it until seen by one of them.

40. Every lamp-keeper shall see that all oil, spirit, and other inflammable articles under his charge are carefully and properly stored and used, and that no greasy waste or other refuse is allowed to accumulate in or near the lamp cabin.

Engine-wright.

41. The engine-wright, or other competent person appointed for the purpose, shall cause the ventilating-fan or other mechanical ventilating apparatus, together with the engines, machinery, and boilers for driving the same, to be properly attended to.

42. The engine-wright, or other competent person or persons appointed for the purpose, shall have charge of all engines, machinery, and boilers used for raising or lowering persons or minerals, or for pumping water, and of all ropes, chains, appliances, or apparatus connected therewith; and of all guides, ropes, chains, conductors, or other appliances in the shafts, and of all other engines, machinery, and boilers in or about the mine. In case he shall discover any weakness, defect, or want of repair therein, he shall, as soon as practicable, cause the same to be repaired and made good, and shall at once report to the manager the fact of such defect, weakness, or want of repair, and also the steps taken to remedy the same.

43. The engine-wright, or other competent person or persons appointed for the purpose, shall make the examinations and report required by General Rule 5.

44. The engine-wright, or other competent person appointed for the purpose, shall cause every rope used for raising or lowering persons or minerals to be securely attached to the drum, so that when either cage is at the pit bottom there shall be not less than two rounds of rope upon the drum.

45. The engine-wright, or other competent person, whenever a winding rope requires capping, coupling, or splicing, shall superintend the same, and shall see that no spliced rope is used for raising or lowering persons in a shaft.

46. The engine-wright, or other competent person or persons appointed for the purpose, shall see that the fences are fixed and maintained at the top of every shaft, and that the guides, signals, covers, flanges, or horns, appliances, brakes, indicators, fences, valves, gauges, and things required by General Rules 18, 20, 26, 27, 28, 29, 30, 31, 32, and 33, or any of them, are fixed and maintained as therein required; and that the provisions of General Rule 25 are carried out above ground.

47. The engine-wright shall cause bells or other signals to be fixed in every drawing engine-house connected with the drawing pit bottom, and with every entrance for the time being in work between the surface and bottom of the shaft; and shall cause the board required by Special Rules 23 and 64, stating the number of persons authorised to descend or ascend the shaft at one time, to be fixed and maintained on the pit bank.

48. The engine-wright shall cause each working boiler to be cleaned and examined as often as the manager shall so order.

49. The engine-wright shall cause the code of shaft signals used in moving the cages to be fixed and maintained at the top and bottom of each winding shaft, and at every shaft to which the provisions of Special Rule 57 apply; he shall see that the point named in that rule is distinctly marked on the indicator.

Engine-drivers.

50. Every engine-man shall attend at such time as the manager may appoint, and as required by General Rule 25.

51. An engine-man shall not allow any person to interfere with the engine or machinery under his charge, or to remain in the engine-house unless authorised by those in authority above him. A winding engine-man while winding must remain at the handle and must pay particular attention to the indicator and signals, and if he perceives anything wrong must instantly stop his engine and not start it again until the defect is put right or until he receives an order to go on.

52. Every winding engine-man, before commencing work in his shift, and before any person descends the shaft, shall carefully examine the engine, machinery, drums, ropes, brakes, indicators, and signal apparatus in the engine-house or under his charge, in order to ascertain whether they are safe and in good working order, and shall run the cages at least once up and down the shaft. Where shifts are worked continuously, it shall be sufficient if this rule is carried out at the commencement of the morning shift.

53. Every engine-man, unless some other competent person is specially appointed for the purpose, shall keep the engines, machinery, and things connected therewith under his charge, properly cleaned and oiled, and shall see that they are in good and safe working condition. He shall see that the provisions of General Rules 27, 30, 31, and 32 are carried out and observed during his working shift, so far as they relate to engines or machinery under his charge.

54. Every engine-man must diligently and carefully attend to the working of the engine and machinery under his charge. He must examine such engine and machinery before commencing work, and if he becomes aware of any weakness or defect, or apprehends any danger, he must, as soon as practicable, inform the manager, under-manager, deputy, or engine-wright. He shall not alter a safety-valve without leave from the manager, under-manager, or engine-wright.

55. Every engine-man, in addition to the duty in this respect imposed on the engine-wright, shall see that any ropes attached to the drum of the engine under his charge are securely attached, and so that when either cage is at the bottom of the pit there shall not be less than two rounds of rope upon the drum.

56. Every winding engine-man, whenever the engine under his charge ceases working, shall see that the cages are left so as not to impede the ventilation.

57. When men are being raised in shafts where the winding apparatus is not provided with some automatic contrivance to prevent overwinding, the cage shall not be wound up at a speed exceeding 3 miles an hour when and after it has reached a point 10 feet from the top of the shaft, as required by General Rule 27, and such point shall be marked on the indicator.

58. The signals given in Rule 87 shall be carefully observed by the engine-man.

Banksman and Assistants.

59. That the banksman shall, subject to the directions of the manager, under-manager, and engine-wright, have the control of the pit top, and the command of the signals down the pit and to the engine-man.

60. That the banksman shall be responsible for the state of the pit top, and shall see that the frames and the surface near the pit mouth are kept free from coals, stones, or dirt.

61. That at least one banksman and one on-setter, or other person appointed by the manager, under-manager, or deputy for that purpose, shall be at their respective posts at the proper time every morning, to give the proper signals, and to see the men and boys carefully into and out of the cages at the top and bottom of the shaft.

62. The banksman must be at the drawing shaft at such times as the manager or under-manager may appoint. He shall not allow a person to descend or ascend until the cages have been once run up and down the shaft, but where continuous shifts are worked it shall be sufficient if this is done at the commencement of the morning shift.

63. That the banksman shall not permit strangers or persons not employed in the mine to descend the pit or remain upon the bank, unless authorised by the manager; and shall caution strangers descending to keep carefully within the cage until they are fairly landed. He shall not allow an intoxicated person to descend the pit.

64. That the banksman or on-setter shall not allow more than six persons in a single cage, or ten persons in a double cage; nor shall any person be allowed to ride with or against coals, slack, dirt, &c. Neither shall any person, unless specially allowed by the manager, under-manager, or deputy, be permitted to carry any tools, implements, props, rails, or such like in his hands whilst so riding; but the same shall be securely placed in the cage, skip, or basket, so that no danger may exist of their falling out during their ascent or descent, or of their coming in contact with anything in the pit; and no person shall be allowed to get upon or off the cage at the pit top unless it be standing upon the catches or keeps, or at a mouthing, without the signal first being given and responded to.

65. The banksman must frequently observe the pit top pulleys, ropes, chains, cages, and landing apparatus during working hours, and whenever he becomes aware of any weakness or defect therein, or in anything belonging to the shaft, or any engine, machinery, or winding tackle, he must immediately inform the engine-man, and the manager, under-manager, or engine-wright, so that it may be repaired.

66. The banksman must report to the manager or under-manager any disobedience on the part of the miners or others.

67. The signals given in Rule 87 shall be carefully observed by the banksman.

Miners and all other Persons Employed.

68. No person acting in a place of trust shall depute anyone to do his work without the sanction of the manager. 69. No swearing or fighting is allowed in or about the mine, and no intoxicating liquors shall be permitted in the mine without the consent of the manager.

70. Any person employed in the mine shall inform the person in charge of the workings of the existence of any choke or fire-damp, of any insecurity of the roof, shaft, or any other part of the workings, or of any air-door being damaged or left open, immediately on its being observed by him.

71. No person shall be permitted to carry a naked light attached to the cap or hat on his head whilst handling explosives, or in charging holes for blasting.

72. A safety-lamp must be frequently examined, and if a lamp shows a blue cap, the person using it must carefully draw down the wick with the pricker, cease working, leave the place, and report the same to the manager, under-manager, or deputy.

73. No person shall place a safety-lamp on its bottom unless it is necessary to do so for the safe performance of any particular work, or unless authorised by the manager, and in all cases the lamp shall be hung or placed at least 2 feet from the swing of the pick, hammer, or other tool.

74. No person shall leave a lighted candle or other light in any part of the mine when leaving his work.

75. No person shall try the wastes or workings for fire-damp with a naked light, and no person shall smoke or take a naked light, tobacco, pipe, cigar, cigarette, lucifer matches, or candle, where safety-lamps are ordered to be used.

76. No naked lights shall be allowed or taken beyond any danger signal where gas exists.

77. No person shall wilfully kindle a feeder of gas, or negligently have the gauze of his safety-lamp full of fire, or unlock the lamp, or unscrew the gauze, or blow out the flame, or light tobacco or other substance at the gauze, or damage or improperly use the lamp, or leave it in the works, when he has ceased using it.

78. Any person discovering any stoppage or derangement to ventilation, injury to an air-crossing, door, regulator, sheet stopping, brattice, or air-pipe, or observing any injury to or obstruction of an air-course, shall immediately give notice to the manager, under-manager, or deputy, and to any person or persons whose safety may be endangered thereby.

79. Any person passing through a door or sheet must instantly close the same, unless it is a door or sheet ordered to be kept open. No person shall, without authority, remove any caution-board, notice, or danger signal, or pass any danger signal, caution board, or fence.

80. In case of a shot missing fire the workman shall place a danger signal at the entrance to his working-place, and shall immediately report the same to the manager, under-manager, or deputy.

81. Every miner or other workman in charge of any working-place, before commencing work, and at intervals during his shift, shall examine his working-place, and in case any danger is observed shall at once report to the manager, under-manager, or deputy.

82. No person shall leave coal, slack, or other material so as to impede the ventilation; nor leave a skip or other obstruction in the air-current.

83. Every horse-keeper shall see that no animal under his care is allowed to go to work while in an unfit state, and shall report to the manager, under-manager, or deputy any injury received by any animal.

84. No person shall wilfully injure any animal whilst in his charge, or permit it to receive injuries by his wilful act or negligence, and shall report immediately to the horse-keeper or a deputy any injury received by such animal while in his charge.

85. No person shall take a horse on to or travel along any incline or plane, either in the mine or on the surface, which is self-acting or worked by machinery, while it is in motion, without special instructions from an officer of the mine.

86. Every person in charge of any animal shall immediately report to the manager, under-manager, or deputy in case he finds such animal cannot pass along any road without rubbing against the roof or timbering; and no person shall, unless otherwise authorised, give his horse into the charge of any other person than the horse-keeper at the stables.

Shaft Signals.

87. The following signals (with such additions as under special circumstances may be ordered by the manager) shall be carefully observed by the engineman, banksman, on-setter, and other persons employed at this colliery:—

One knock—to go on.

One knock—to stop when the engine is in motion.

Two knocks—lower down.

Three knocks—when any person is going to ascend or descend.

One knock—in reply before any person is allowed to get into the cage.

Four knocks—to lower slowly.

Five knocks—to ascend slowly.

88. Every person, when on the pit bank, or while about to descend the shaft, shall obey the orders and directions of the banksman; and every person, while in or about the pit, or while about to ascend the shaft, shall obey the orders and directions of the on-setter.

89. No person shall improperly use any signal, signal-wire, or signal apparatus.

90. No person shall get into the cage after the authorised number is in, or if forbidden to do so by the banksman or on-setter.

91. Every person who shall couple or fasten any skip to any other skip, or to any rope or chain shall see that such coupling or fastening is made secure.

92. Before any person moves a skip in a bord he must see that a safety-block is at or near the entrance of the bord, and in good order and set across the rail.

93. All persons employed in the mine shall be under the control of the manager, under-manager, and deputies, and shall at all times obey their lawful commands.

94. Any person committing a breach of any of the foregoing Special Rules is liable to be instantly dismissed.

END.

Name of the mine—East Greta Colliery. Where situated—Near West Maitland. Name of the owner—East Greta Coal-mining Company, Ltd. Name of the manager—Azariah Thomas. Name of the under-manager—Henry Cartwright. Name and address of the Inspector of Mines of the district—J. Dixon, Newcastle.

CERTIFICATE

CERTIFICATE OF SPECIAL RULES.—EAST GRETA COLLIERY.

AZARIAH THOMAS, Manager.

I HEREBY certify that the above copy of Special Rules has been shown to my satisfaction to be a true copy of the Special Rules which at this date are established under the Coal-mines Regulation Act, 1896, for the above-named mine. JOHN DIXON, Inspector of Collieries.

Exhibit A.—Put in by Mr. Thomas.

NEW SOUTH WALES.

Sir, Coal-fields Office, Department of Mines and Agriculture, Sydney, 10 December, 1898.

With reference to recent underground inspections of the East Greta Colliery, and conversations with you on several matters in connection therewith, I respectfully desire to call your serious attention to the following points:—

1st. Having regard to the altered character to the roof of the seam, as proved by the fall of the 18th ultimo, in No. 1 tunnel, and by a fall in the lowest north level of No. 2 tunnel, it is desirable to increase considerably the quantity of timber on all lower levels to keep them secure.

2nd. It is desirable to prove the thickness of the conglomerate above the seam in the lowest level of No. 2 tunnel going towards No. 1 tunnel.

3rd. It is not advisable, having regard to altered nature of the roof, to allow the levels, when going with the top coal, left on to remain without being timbered near the face.

4th. Under the conditions of increased depth and altered roof it is desirable to increase the sizes of the pillars considerably.

5th. The diameter of the props used by the miners in the bords would afford more security if increased in size; and this is necessary having regard to the extra depth at which the workings are carried on, and also to the altered character of the roof.

Trusting these matters will receive your serious consideration, and I shall be glad at any time to further discuss them with you.

A. Thomas, Esq., East Greta Colliery, West Maitland.

I have, &c.,

A. A. ATKINSON,

Chief Inspector of Coal-mines.

Copy of original.—3-1-99.—GEO. C. MARTIN, Coroner.

New South Wales, } County of Northumberland.
to wit.

INFORMATION and depositions of witnesses, taken on oath, before me, George Cannon Martin, one of the coroners of our Sovereign Lady the Queen, for the Colony of New South Wales, this twenty-fourth day of December, one thousand eight hundred and ninety-eight, at the surgery, at East Greta, district of Maitland, in the said Colony, on view of the body of Albert Moncrieffe, then and there lying dead.

Arthur Morrison, having been sworn, states:—I am a wheeler, and am employed at East Greta Colliery, and I live in West Maitland; I have seen a body this day in the surgery at East Greta, in the presence of the coroner and jury; I cannot recognise the body from its appearance on account of the body being too decomposed; but I see a clasp knife now produced, and I know that it belonged to Albert Moncrieffe; I am sure that the knife was his; the point of it was blunted through he and others opening tins with it; I was told that this knife was found on the body we have now viewed; I am the brother-in-law of Albert Moncrieffe; I am almost sure that Moncrieffe was in the East Greta pit at the time of the late disaster; he was 25 years of age, and was born in Sydney, and he was married; his wife is alive; she lives in West Maitland; he leaves one child—a girl; he does not leave any property or invested money.

By Jury:—I was personally acquainted with the three men who were entombed in the pit. Dick Barnes was, I believe, the tallest of the three men, and Moncrieffe was, I think, the short one of the three.

ARTHUR MORRISON.

Sworn and made at East Greta this 24th day }
of December, 1898, before me—

GEO. C. MARTIN, Coroner.

This Deponent, William Thomas Doran, on his oath saith as follows:—I am a constable in the Police Force, and reside at and am stationed at West Maitland; at 6:30 a.m. this day I received the body just now viewed by the jury, and also a tin, containing clothing, from Constable Townsend, at this surgery; shortly afterwards, I took the clothes out of the tin to wash them, and I then found in the trousers pocket the knife that is produced; this knife was identified in my presence by the last witness, Morrison, as the knife of Moncrieffe, and also by William Tiedeman as the property of Moncrieffe; the clothes were not identified; the body that I received was too decomposed to be recognised by the features; I have shown the clothes taken off the deceased to the relatives of the other two men entombed, and they positively say that they were not worn by either Gronow or Barnes.

By Jury:—The tin of clothes handed to me was said to have been removed from the body I received at the same time.

Sworn and made at East Greta this 24th day }
of December, 1898, before me—

W. T. DORAN.

GEO. C. MARTIN, Coroner.

Inquest adjourned for the purpose of obtaining further evidence until 10:30 a.m. on Wednesday, the 4th day of January, 1899, at the Court-house at West Maitland, the jury being bound over and warned of time and place.

Dated at East Greta, this 24th December, 1898.

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at half-past 10 o'clock on the 4th of January, 1899, at the Court-house at West Maitland, in the District of Maitland and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe; the jurors having answered to their recognizance the examination of witnesses was proceeded with.

Dated at West Maitland, this 4th January, 1899.

GEO. C. MARTIN, Coroner.

This Deponent, Ada Emily Moncrieffe, on her oath saith as follows:—I am the widow of Albert Moncrieffe, and reside at West Maitland; I was shown a singlet and a pair of trousers, those now produced, and I identify them as belonging to my late husband, Albert Moncrieffe; he leaves one girl, named Evelyn May, aged 7 months; the singlet and trousers were shown to me by Sub-inspector Fowler.

Sworn and made at West Maitland this 4th day }
of January, 1899, before me—

ADA EMILY MONCRIEFFE.

GEO. C. MARTIN, Coroner.

This Deponent, Azariah Thomas, on his oath saith as follows:—I am the manager of the East Greta Mine, and reside at Mount Dee; I instructed certain work to be done in a part of the East Greta pit; it was let to David Lewis, Joseph Thompson, John Griffiths, and Daniel Gronow, on an understanding that they should make good wages at driving or sinking a tunnel—what we term extending No. 1 tunnel; I had to have it done to my satisfaction, and anything wrong that I objected to would have to be made good by those working; there were three shifts, of eight hours each, continuous working; and the five extra men were engaged by me for the mine and transferred to the work of the No. 1 tunnel as necessity occurred; I did not tell the men of what the strata was composed; I imagined that the men working knew of what it was composed; I always considered everything there was perfectly safe, and that all their work would be done in perfect safety; I did not go to see the tunnel every day; I cannot say how often, but I was satisfied with the work when I did go; I was deceived in the thickness of the conglomerate where the men had to tunnel; we had never found that the conglomerate was less than 50 to 60 feet, and I considered that 50 or 60 feet would be the average thickness of the conglomerate where the men had to go through in the tunnel; the men employed never referred to the place as being unsafe.

By

By Mr. Tillett: The driving of the tunnel was commenced—that is, the men commenced to clear the old sump out on the 22nd of June, last year; the men had nearly got as far as we intended to go at present, when the fall took place; the fall occurred 127 feet from the lower level, and about 260 feet from the face; the tunnel had been driven some distance beyond where the fall occurred; I was through the tunnel many times; I had not noticed any pressure on the timbers where the fall occurred; but I had noticed pressure in other parts of the tunnel; I noticed pressure on the timber about 40 yards from the face; the caps were bending; that did not indicate to me a change in the roof; the caps were not considered dangerous, so precaution was taken, but the timber was not strengthened; the same timbering has not been carried out from the surface to the face in the No. 1 tunnel, because we considered that stronger timbering should be put the greater depth we got; I was in the tunnel last on the Tuesday, the 15th of November, before the accident occurred on the 18th; this was one of the occasions on which I noticed pressure; no complaints had been made as to the roof by anybody, nor did I hear of any complaints; the men were not to earn less than miners, but if the work was to my satisfaction, they would be paid more; the men were to be paid by the yard; and also for anything extra that they did; there was no time fixed for the work; the men were to have assistance if required to be paid for out of the lump sum; I did not name the men who were to assist them; I had no written agreement whatever; In the Coal Mines Regulation Act, I know Rule 4; the four men, David Lewis, Thompson, Griffiths, and Gronow, were appointed as competent persons to inspect the work, or make the inspections in compliance with Rule 4; the work was measured up before these men were paid, and they were paid according to the measurement, and they were supposed to settle with the others, though I considered I was responsible to the men, these four men employed.

By Mr. Tillett: The model produced shows how the timbering was done in the tunnel, and I also produce a tracing of that portion of the No. 1 tunnel where the fall occurred; the props, sills, and caps were from 8 to 10 inches diameter, and with an 8-inch minimum; the sets were placed 5 feet centres apart, and slabbed over, and by the sides and underneath the sills, same as the model; the slabs were 6 feet long, and 2½ to 3 inches thick, and from 6 to 9 inches wide; the height of the tunnel from the top of the sill to the bottom of the cap was 10 ft. 6 in.; the mean width of the tunnel was 12 ft. 6 in., 12 feet to the cap, and 13 feet to the sill; we have taken out some of the timber that fell, and some of the caps are broken in pieces; I cannot say if they were bent before getting broken.

By Mr. Atkinson: The timber used for the sets was of ironbark—that is, the sills, cap-pieces, and props, and the slabs were of ordinary hardwood; the sills and caps were let into the side; the sills and caps were let in from 8 to 10 inches; the sills were 16 feet, and the caps 15 feet over all, that is their total length; they were set into the coal, and we avoided the roof; the sills were let into the bottom of the floor of the seam; the floor was moderately soft, and becoming softer as it got exposed.

By Coroner: The timber was new timber; the first lot of timber used was cut in June; the timber was not seasoned; the prop was mortised into both cap and sill about 4 inches deep; the timber from the lower level upward was much the same as that I have described, only it was set farther apart; I have had occasion to renew timber here, some years ago, but not recently; they were renewed on account of the sills breaking; the props seldom fractured, all pressure came from below; we supposed it was the floor expanding or swelling by the water and air that caused the sills to break; we have entirely used ironbark for all purposes until some little time ago; I cannot compare it with other timber on account of only using it; I have used ordinary hardwood for props in the bords recently; I had not had any fall previous to this one in the mine to indicate that the conglomerate had disappeared; the conglomerate has been proved at least at 7 feet at the lower levels, but how much more it may have been we could not tell; the station was on the surface under General Rule 4; the men commenced work on a Monday at 7 o'clock; David Lewis examined before the men went to work; Lewis came on the Monday morning to examine, and took the night shift; the night-shift went in at 11 o'clock, and Lewis stayed all that shift; I cannot say where he would meet the shift coming in; Lewis made a report in writing every day; none of the other four men made any report; the engineer made a report of the tunnel every week, under General Rule 5 of the Coal Mines Regulation Act; this inspection was made as to the condition of the timber and other things; no defects were mentioned in any of the reports; there are refuge holes in the No. 1 tunnel; I do not know how many there are, but I think that the plan shows six about 20 yards apart; we suppose that a refuge hole was made the night of the disaster within 10 feet of the face; general instructions were given to make these holes to be put in every 20 yards, and to be made immediately after securing the bottom corner of the intended man-hole; none of the deceased were found near man-holes; they were picked up in the tunnel; some of the fallen stuff had blocked up completely all the man-holes below the point we found the debris had filled the tunnel; the tail end of the debris was 150 feet from the completed face of the tunnel; the workmen did not make any inspection of the whole mine under General Rule 39; I cannot say how much the caps were bent, but I should say the worst may have been bent from 2 to 3 inches; I considered that they would require strengthening with others ultimately; I did not strengthen any at the lower levels, as they did not require it.

By Mr. Curley: I have a copy of the Special Rules of the East Greta Mine; before work took place in the tunnel I had an interview with David Lewis, and told him that I would like he and his party to take the work, as they had completed similar work satisfactorily; we conversed about terms; it was agreed that they should have a certain price, which I considered would be sufficient for them to make good wages, provided the ground proved the same as it did at the commencement; but should it alter and become worse, I should give them more, and to see that they would get as much wages as the miners; the price agreed upon was £3 19s. a yard, and nine men were to be employed, three in each shift; I engaged all workmen at the colliery; I engaged all the nine men, but before going at the tunnel they were working in the East Greta Colliery; Moncrieffe and Barnes were two of the five assistants; these men asked me to transfer them to the work in the tunnel, and I did so; I considered them sufficiently practical men as assistants; they had worked in the colliery for some time; Moncrieffe was on-setter in No. 2 tunnel when he asked me; Barnes was engaged at, I think, filling coal for a miner before he went to the tunnel; I did not regard my arrangement as a contract; I would not call it a daily-wage payment; I call it an arrangement satisfactory to both parties; there was nothing in writing; the payment was made as arranged, and was satisfactory; I found the caps bent on a prior visit to that of the 15th of November, but I cannot say when; I did not make any note of the date of the caps being broken; I cannot say if I went into the tunnel once a week or once a month; the report books are kept at the colliery office; I either examine the report books daily or have the reports read to me; there was no mention of the caps being bent in the report book; I did not consider it of sufficient importance when I found that it was missing from the report book; there have been no extensive falls in the East Greta Pit until the present one, in no part of the colliery.

Sworn and made at West Maitland, this 4th day
of January, 1899, before me,—

GEO. C. MARTIN, Coroner.

A. THOMAS.

Inquest adjourned, for the purpose of obtaining lunch, until 2:30 p.m. on Wednesday, the 4th day of January, 1899, at the Courthouse, West Maitland, the jurors having been bound over, and warned of time and place of adjournment.

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at 2:30 p.m. on the 4th of January, 1899, at the Courthouse, at West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognition, the examination of witnesses was proceeded with.

GEO. C. MARTIN, Coroner.

This deponent, *Asariah Thomas*, recalled on his former oath, saith as follows (*By Mr. Curley*):—I believe David Lewis inspected the tunnel prior to these men going in to work—that is to say, the three men, Gronow, Moncrieffe, and Barnes; all these men worked at the coal that night except one that should be working at a manhole; even that would be working in the coal; Thompson and one of the assistants generally worked with Lewis on his shift; in the ordinary mode of working, when Lewis and his mates were not timbering, they would be at work at the coal-face; Lewis was not the only man in the ordinary way who inspected the tunnel; Griffiths and Gronow inspected it; Griffiths would be working in the face at coal or at anything else required; I consider that all this was in compliance with Rule 4 in the sense that is meant; I appointed them to inspect in the way I have mentioned; I have no record of the appointment; I had some knowledge of the stratification overhead at the East Greta Colliery; it can be seen on the surface, and some years ago we had a place driven from the lower to the upper seam off No. 1 level in this same tunnel; this gave me an idea of the thickness of the conglomerate; it was from 50 to 60 feet thick; this was 212 feet below the surface; I have never seen the conglomerate of less thickness than 50 to 60 feet anywhere; it was hard and strong; I have no knowledge of the Maitland Colliery or its strata; we have never had any slow or quick movements in the roof at the East Greta Colliery; we have had an upheaval of the floor; we have had some floor-upheaval in the No. 2 tunnel; we have not done much timbering in this

tunnel since the fall; no extra work than usual; the inspectors have been at the colliery, and have drawn my attention to timber and pillars in the deeper workings since the fall, and have advised the use of more timber, having regard to the altered state of the roof, as revealed by this fall; it has been remarked that I should have larger pillars in the lower section; I have had communication from the Inspector in respect to the workings; I now produce the letter from the Chief Inspector of the 10th of December, 1898; this letter is made an Exhibit "A."

Sworn and made at West Maitland, this 4th day }
of January, 1899, before me,—

A. THOMAS.

GEO. C. MARTIN, Coroner.

This deponent, *Robert George Alcorn*, on his oath, saith as follows:—I am a legally qualified medical practitioner, and reside at West Maitland; I examined the body of Albert Moncrieffe on the 25th December last year; I found no bones broken; the body was in an advanced state of decomposition; I came to the conclusion from examination and the information that I received, that death was caused primarily from shock and suffocation; I am almost certain that death was almost instantaneous.

Sworn and made at West Maitland, this 4th day }
of January, 1899, before me,—

ROBERT GEO. ALCORN, L.R.C.S.I.

GEO. C. MARTIN, Coroner.

This deponent, *Azariah Thomas*, recalled on his former oath, saith as follows (*by Mr. Curley*):—The Government Inspector who usually inspects my colliery at East Greta is Mr. Bates; Mr. Bates during his inspections has drawn my attention to fencing the machinery according to the Act, and fencing openings to the tunnel, to the ventilation in different parts, and methods of signalling, and to the security of roofs in different parts of mine; this was some time ago; this was on No. 1 level; Mr. Bates did not suggest that more timber should be put in, and he pointed out some timber that was broken from the pressure from the floor; this was, I think, about two months back or more; I think that it was on the second level of No. 2 tunnel that Mr. Bates pointed out some timber showing evidence of some pressure; this would be, I should say, some two or three months ago; I cannot recollect any other place; he did not suggest that more timber should be put in to strengthen these localities; he did not forward me any written communication about the matter; I have never had any written communication from Mr. Bates as regards any defects in the condition of the colliery; I have had no objection to the workmen using the function mentioned in Rule 39 as regards examination, but I have not asked them to do it; the face in this No. 1 tunnel would be 397 feet from any opening; branching off this tunnel a parallel drive had been started recently, and was being worked at the time of the disaster by another gang of men; I had no anxiety as to the safety of the men, though I knew they were so far away from any opening; the fact of the tunnel being near its present destination did not in any way influence me in ordering additional timber being put into the level; the fact of Mr. Bates pointing out to me the broken timber in other parts, did not influence me in attempting to get more timber into that tunnel, not before we considered it was required; I cannot say how much coal came out of that tunnel.

By Mr. Millard: I could at any time I wished stop the sinking of the drive, showing that there was no agreement; these same men—that is, the four men—had sunk No. 2 tunnel; the men were satisfied with their payment for that work, and I was satisfied with their work, as I have previously said, and the payment I made for No. 2 assisted both sides in arriving at the right figure for No. 1 tunnel; the four men were experienced, and particularly qualified for the work; no regular miner, unless experienced in it, could be trusted to do the work in No. 1 tunnel; I do not know of any other men anywhere better or as well qualified to do this class of work as Lewis and his three mates; I produce a general plan of the workings of the East Greta Colliery, and point out the particular part of the seam referred to in evidence; the seam at East Greta Colliery is inclined at an angle of 45 to 47 degrees at No. 1 tunnel; No. 2 tunnel is driven a length of 1,132 feet, and coal has been worked on both sides of No. 2 tunnel; both seams crop out at the surface, and, owing to the inclination of the seams, crop out close together, and the whole of the strata between the two seams is composed of conglomerate; we found the conglomerate all the way of the 1,132 feet that we drove the No. 2 tunnel; we never had any indications prior to the fall that this conglomerate had at all thinned out; from indications in other places we have always associated this conglomerate as a roof for the seams; in prospecting for the crop of the seam this conglomerate is the indicator as to where the seam lies, and it extends many miles from the East Greta Colliery, and it is a very hard conglomerate, and very expensive to remove by blasting; it is an excellent roof for a coal-mine; it has cohesion and strength on account of its being so thick; we did not find any thinning out of the conglomerate roof in the No. 2 tunnel, but we saw the conglomerate in the roof all the way we went; at the seat of the big fall the top end of the conglomerate showed only a few feet to paring down a few inches; I may say to a mere shell, and above the conglomerate was a thickness of shale or mudstone; the nature of mudstone is a soft, weak substance; I believe, from what I have seen since the fall, that the roof came away suddenly, it being only mudstone with a thin shale of conglomerate next to the timber; this is my firm opinion; the caps that were bent that I spoke of are in the tunnel, and in position still, only more bent, and not very near the seat of the fall; there was no timber bent near where the seat of the fall was; the width of the seam was 10 feet 9 inches in the last place; I measured it in No. 1 tunnel, and the height of the tunnel from roof to floor would be about or over 13 feet; the bottom was taken out on account of the known hardness of the roof; the timber being what I would call green, was in its favour; I do not know of any better timber than I used that could be got for that purpose; it is recognised as being the best timber for the purpose for durability and strength, and I know that the way that the tunnel was being timbered it was done in the best way that it could be done; I go down the mine almost daily, and have been at the beginning at the extension of No. 1 several times in the week, and the tunnel is straight, and one could hold a conversation from one end of the tunnel to the other; in my opinion the cause of the disaster was from the change in the roof not being apparent, and yet it had changed, from a thick conglomerate into the soft mudstone.

Sworn and made at West Maitland, this 4th day }
of January, 1899, before me,—

A. THOMAS.

GEO. C. MARTIN, Coroner.

Inquest adjourned, for the purpose of obtaining further evidence, until 10-30 o'clock, on Thursday, the 5th day of January, 1899, at the Court-house, West Maitland, the jurors being bound over and warned of time and place of adjournment.

Dated at West Maitland, this 4th of January, 1899.

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at 10-30 o'clock, on the 5th day of January, 1899, at the Court-house at West Maitland, in the District of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizance, the examination of witnesses was proceeded with.

Dated at West Maitland, this 5th day of January, 1899.

GEO. C. MARTIN, Coroner.

This deponent, *Azariah Thomas*, recalled on his former oath, saith as follows (*By Mr. Millard*):—I do not know of any reasonable precaution that I could have taken, to prevent this accident, that was not taken; the timber that Mr. Bates called my attention to as being bent, was on the other side of the tunnel, and over 28 chains from where the fall occurred; I now point this part out to the Jury, as it is shown on the plan now in Court; virgin coal being in No. 1 tunnel at the sides, and not being worked, and not having been worked, proved of great strength to the sinking; it is impossible that the pressure, as noticed by Mr. Bates, had anything to do with the fall; there is a part of No. 1 tunnel where the roof was without timbering for over seven years; it is between the surface and the top level of No. 1 tunnel, and it is now good and strong; I had no one in the colliery who could have made a better inspector than Lewis; Lewis is skilled in that class of timber, and in the timbering; I know this, as he worked for me in the Old Country in a mine, with about the worst roof of anyone I know, and with very deep workings; I found on examining, after the fall, that the caps and props had all fallen; the sills only remained; I should say that probably 100 tons of rock and mudstone came away altogether. I made every exertion to get to where the men had been at work, using all precautions in the way of securing and

and timbering to keep those attempting the rescue from being injured, and no expense was spared in connection with this work; the work was continuous for the twenty-four hours, and advice and assistance were tendered by managers of other collieries; the amount of timber to be put in is at my discretion; I hold a manager's certificate under the present Colonial Act, and also one under the Imperial Act; I also served my time as a mining engineer, and have had experience in working coal at an angle.

By Mr. Bowden: I have been with this company over seven years, and know all matters connected with the colliery. The Government Inspectors could see the timber that was put in, and, had they not been satisfied with it, would have mentioned it to me; the timber was in the best condition for its purpose; the timber taken out after the fall, except being broken, is in as good condition as being sound as when put in; I believe that the Government Inspector was down the tunnel while it was being constructed; whenever the Government Inspector pointed out anything to me I was careful to attend to what he would draw my attention to; when the tunnel was being sunk I had it heavily timbered, so as to make it as strong as possible, as this tunnel was intended as the main artery of the mine.

By Mr. Thursby, Foreman of Jury: After the tunnel, that I mentioned as being on a parallel, had got finished, it would be of great advantage to the men in going in and out, and also to their safety; the place was well ventilated; the Coal Mines Act does not compel me to have a parallel tunnel cut; the parallel tunnel is down about 40 yards; this tunnel is not as large as the main tunnel.

By Mr. Curley: I have seen, when top coal was worked, that the top coal came down with the conglomerate, sometimes 1 foot, 18 inches, and perhaps 2 feet, but I never saw any mudstone come down with the top coal, but this was of seldom occurrence.

By Mr. Millard: When top coal was taken down, the props were first removed; this was only done when abandoning a certain portion.

Sworn and made in West Maitland, this 5th day }
of January, 1899, before me, —

A. THOMAS.

GEO. C. MARTIN, Coroner.

This deponent, *John Jones*, on his oath, saith as follows:—I am a wheeler at the East Greta Colliery, and reside at East Greta; I knew all the three deceased; and I know that this inquest is being held on the body of "Albert Moncrieffe."

By Mr. Tillet: I was in the mine working at the time of the disaster in the jig just off No. 1 tunnel, on the lower level; Mr. Cantwell and his son Thomas were at work with me; I saw the light of "Albert Moncrieffe" in the distance in the bottom of No. 1 tunnel, at about 25 minutes to 7 a.m.; I sung out to Moncrieffe, and he replied "Hullo"; I went down the jig where I was working, and filled a skip of coal, and I heard something that sounded like rolls of thunder; I ran towards the tunnel, as it frightened me a little; I heard the fall when I got to the end of the level; I sung out to the man at the top that the tunnel had fallen in, and to sent the alligator down; I called out "Moncrieffe" first, and then "Gronow," and then "Barnes"; I called out loud, and got no answer; I stopped at the end of the level, and the Cantwells went up the tunnel; I engaged in the search party, and found "Moncrieffe," and Gronow; I found Moncrieffe's body lying face towards the slabs at the side of the tunnel, and Gronow's body was on its side; I have been at work at East Greta Colliery for about two years; I have not been further down the No. 1 tunnel before the fall than I was at the time I called to the men; I know that the roof where I have worked is composed of coal and conglomerate; I have seen the roof work just a little in places; I have seen timber bent where I have worked; I should say that the roof was a safe one, otherwise I should not have worked there; I have never heard any of the men at work say that the roof was unsafe; but I have heard the roof creep occasionally, now and again.

By Mr. Atkinson: I commenced my work on the occasion of the fall at 11 p.m. on the Thursday night, the deceased went down at the same time as I did; I did not have any conversation about his work; I have seen where the tops have been taken down, that the conglomerate came through, and also brought some other soft stone that was behind the conglomerate with it; this occurred in the seam jig in one of the bords off No. 2 tunnel; this would be a long way from where the present fall occurred; I do not remember any similar falls to this last large one; I worked in the model jig, just off No. 1 tunnel; it was only at bottom coal I worked there; I did not see any falls of roof there; the place I was at work in on the day of the fall was about 40 yards from the No. 1 tunnel; I did not examine the roof thoroughly where I was at work; it seemed a hard roof of coal; I was at work down about 30 yards from the level; I cannot say how much coal was left next the roof in this part; I do not know how thick the seam is, but I should say about 8 or 9 feet; I was driving this jig parallel to No. 1 tunnel about 6 feet; the props were about 6 feet long; I never heard any of the deceased express themselves as being unsafe where they worked; I have got a copy of the Special Rules of the East Greta Colliery, but as I cannot read I have not read them.

By Mr. Curley: The timber I saw broken was a cap-piece; it was broken from the centre; I saw several caps broken; I do not know how many; I was working nearly the whole time with those who were at work after the fall in No. 1 tunnel; I did not see Barnes's body recovered; I cannot say how far the other bodies were recovered from the mouth of the tunnel; I have heard the cracks or shakes in the levels and bords in No. 2 tunnel; I cannot say it was the timber that cracked, or what, or it might have come from the coal; I mean by shakes, a shaking noise; I did not expect that the mine was likely to tumble in; I have noticed the coal on the pillar sides a bit loose in some places; this was in the bords; this would be about three months ago; I never took notice if the timbers were broken; I have noticed caps bent but not broken in tunnels and bords, and in different parts of the mine; I believe I have been with the other men when they went into work; I cannot remember that they made any remarks about the work or the timber in the tunnel.

his
JOHN x JONES.
mark.

Sworn and made at West Maitland, this 5th day }
of January, 1899, before me, —

GEO. C. MARTIN, Coroner.

Witness to mark, —

F. FOWLER, S.-Insp.

Inquest adjourned, for the purpose of obtaining lunch, until 2-30 o'clock on Thursday, the 5th day of January, 1899, at the Court-house, West Maitland, the jurors being bound over, and warned of time and place of adjournment.

Dated at West Maitland, this 5th day of January, 1898, —

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at 2-30 o'clock p.m., on the 5th January, 1899, at the Court-house, at West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizance, the examination of witnesses was proceeded with.

Dated at West Maitland, this 5th day of January, 1899, —

GEO. C. MARTIN, Coroner.

This deponent, *John Jones*, recalled on his former oath, saith as follows (*by Mr. Millard*):—I know conglomerate when I see it; I know that in the last fall there was some stuff that was not conglomerate, it was ironstone, as well as soft stuff; I call the soft stuff conglomerate; I have seen this stuff that I call soft in other parts of the mine; I have seen it lying along the roads and the levels on the side; it might have come from the roof; it was the same as the most of the roof above the coal, it was of a whitish colour; I know the difference between conglomerate and clay; I have never noticed the soft stuff that I saw there in other parts of the mine; I do not know what it is called; I never saw this same stuff come away from the roof where I have seen roof come away with top coal; everything seemed all right, when I heard Moncrieffe say, "Hullo"; I never made any report to anyone about the cracks and shakes that I heard; I have about two years' experience in the East Greta Mine; I did not think that these cracks or shakes indicated any danger; they might have been caused by weight coming on the timber.

Sworn and made at West Maitland, this 5th day }
of January, 1899, before me, —

GEO. C. MARTIN, Coroner.

Witness to mark, —

F. FOWLER, S.-Insp.

his
JOHN x JONES.
mark.

This

This deponent, *David Lewis*, on his oath, saith as follows:—I am a miner, and reside at East Greta; I know that this inquest is being held on the body of Albert Moncrieffe.

By Mr. Tillet: I have been working in the East Greta Mine about four years, and at the date of the accident I was engaged sinking No. 1 tunnel from the lower level; I was on the previous shift to the deceased men; I had with me Thompson and Weller; it was understood between us and the manager that we were to sink this tunnel; no distance was mentioned; the manager could at any time stop us; we were paid by the yard, and if we could not make fair wages we were to be compensated, or if the manager wanted us to do anything else, we were to do it; we had to do the timbering as well as the driving; Mr. Thomas employed nine of us—three on each shift; four of us took the job, and the other five assisted; the party of four paid the other five, and they were paid a daily wage; these five men were not included in the arrangement of getting the daily wage; I was appointed a deputy by Mr. Thomas; I made my last inspection at 10:30, and after 11 p.m. on the Thursday night I made a report of that inspection, and entered it in the report-book at the office at after 12 o'clock that night; the three deceased men were then at work; the result of my inspection was that I considered it was all safe; I inspected the roof right through the tunnel, and saw no indications of danger except a few sets bent in the caps, about 40 or 42 yards from the face, but these did not make me think there was danger; I had seen these caps slightly bent on previous inspections; I did not think it anything unusual to see these caps bent; the sills might have rose a little and caused the caps to bend; I did not report that the caps were bent; none of the other men drew my attention to these bent caps; I never saw a movement in the roof of that tunnel; I have not seen any falls in any other part of the mine or any movement of the roof in any part of the mine.

By Mr. Atkinson: I was appointed a deputy about the latter end of June or the beginning of July, at about the time the continuation of No. 1 tunnel was commenced; I had a copy of the Special Rules, and have read that part referring to the deputy's duties; I have had no occasion since acting as deputy to report any danger or defect; there was nothing that I saw of a dangerous nature; my district was No. 1 tunnel, as far as the dam; it did not include the back place or the parallel jig; I went to work on the Monday previous to the accident, at 4:30 a.m.; I stopped until the men came in, and remained with them, and before they came in I thoroughly examined the No. 1 tunnel; I made a report in the book at the office; none of the men working ever asked to be allowed to see the report-book, had they done so I would have allowed them; there is no space left between the slabs and the roof; I have not had occasion to renew any of the sills either in this tunnel or anywhere else, the caps were bent back about 3 inches; I never noticed much, but the sills were bent a little at the same part where the caps were bent; the pressure that bent the caps and sills came from the floor, perhaps a little from the sides; I would not expect to get much side pressure in a single drive; I have not seen any evidence of coal peeling off the side of this tunnel; I had no conversation with the manager about these bent caps and sills; I did not consider the matter of sufficient importance; I looked upon this tunnel more in the light of a sinking shaft than a level drive; if I had seen similar bendings in a shaft I should have thought it of sufficient importance to report to the manager, but not in this case; the reason was that I did not think there was the least danger or that the timbers would give way; I cannot tell the distance the body of Moncrieffe was found from the face; I was prevented by illness from knowing this; I cannot say if the other men can tell this; I have never had occasion to ask to have stronger or more timber put in; it requires about three men to fix one of the sets; it would not be inconvenient to put in stronger timber; I was at the tunnel about seven, eight, or ten minutes after the fall; I went down the tunnel and got down to the beginning of the fall; I called out the names of the three men, but got no reply.

By Mr. Curley: I returned to make another inspection on the same Monday night; I went in at 11 p.m. and I remained for eight hours; I made the inspection before the working-men went in; sometimes I went in at 3 p.m. to start work some weeks; another shift had been in before I started at 3 o'clock; I inspected for this shift in the morning at 4:30; the men went in with me at 3 p.m. to go to their work; my next inspection would be before the 11 p.m. shift; I would be along with the men for one or two hours afterwards, so that I would be there until 1 or 2 a.m. on the Tuesday; this inspection would be sufficient on my part for the working shift coming in at 7 a.m., the leader of the incoming shift would also inspect for his shift; these men did not report that I know of; the first entry I made in the report-books was at the latter end of June or the beginning of July; Mr. Thomas appointed me to be deputy in the tunnel, and report in the book, and if I saw anything wrong after carefully examining the places, to withdraw the men, and report to him to that effect; Mr. Thomas meant that I was to make my reports in the book at the office of the colliery; I cannot see the report I mention in the report-book; my first report there is on the 1st of September last year; the shift that I went down with, and worked a shift continuously; I worked at the coal face occasionally when there was nothing else for us to do; we were generally engaged timbering; I have never noticed falls in any other part of the mine; Gronow never spoke to me of the sets that were bent; I never draw the attention of the men particularly to the bent caps, but in passing I have just mentioned them to Thompson and Weller; I cannot say if this would be a week or a month before the accident; I never thought of placing other sets between those where the caps were bent; I understood that there were to be 5 feet centres; that was my instruction from Mr. Thomas, the manager; I could have put in other sets even less than 5 feet apart, without consulting the manager; he gave me instructions to put up what I thought was required; had I thought there was the least danger I would have attended to it at once; I do not consider it singular on seeing the caps bent that I did not exercise the extra power that Mr. Thomas had given me; as deputy I gave official orders to the other men during the absence of the manager; we have taken out from 9 up to 12 yards during the fortnight.

DAVID LEWIS.

Sworn and made at West Maitland, this 5th day }
of January, 1899, before me,— }

GEO. C. MARTIN, Coroner.

Inquest adjourned, for the purpose of obtaining further evidence, until 10:30 o'clock a.m., on the 10th day of January, 1899, at the Court-house at West Maitland, the jurors being bound over, and warned of time and place of adjournment.

Dated at West Maitland, this 5th day of January, 1899.

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at 10:30 o'clock a.m. on Tuesday, the 10th day of January, 1899, at the Court-house, at West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizances the examination of witnesses was proceeded with.

Dated at West Maitland, this 10th day of January, 1899.

GEO. C. MARTIN, Coroner.

This deponent, *David Lewis*, recalled on his former oath, saith as follows (*by Mr. Millard*):—The roof of the East Greta Mine was of conglomerate; I never before this fall saw any sign of that conglomerate running out, and it continued all the way down the No. 1 tunnel; I know the stuff that came through was a sort of mudstone—soft stuff; before that fall I had never seen any of this description of stuff in the roof, and I saw no indication to lead us to expect that any mudstone was there; conglomerate is a good roof; it was a hard conglomerate; we got the extra depth that we wanted by cutting out the bottom, as it was softer than the roof; we cut into the roof in some places from 1 to 4 inches; we found the roof very hard; I have had some experience in making drives of this description, and thirteen years' experience in timbering; in my opinion the system we carried out in the No. 1 tunnel was the best; we were not stinted in the timber in any way; the wages that we received were also satisfactory; the caps that were bent were about 40 yards from the face; it was not near the seat of the fall; the force that bent the caps was not the same force that caused the fall, as far as I can think; the fall could not have been prevented by replacing the bent caps with good ones; the bent caps gave no indication of the real danger or what was the real danger; the caps under the fall must have been broken by the fall; I made an inspection every twenty-four hours that I reported; but I made two to four inspections during a twenty-four hours; I made that inspection towards the end of my own shift; I never saw any sandstone in the roof of the seam; I have worked since the fall in No. 1 tunnel; I have worked long hours, but how many I cannot say; sometimes I went without sleep to attend there; finally my health gave way just before we found Barnes' body, and since then I have been very ill.

By Mr. Bowden: I cannot say the first time I saw the bent caps that were 40 yards from the face; I put the timbers in that were subsequently found bent two or three months back, before the accident; we would drive from 9 to 12 yards in a fortnight; those timbers were the only bent ones.

By

By Foreman of Jury: As far as I am aware of, I am only required to make one inspection in the twenty-four hours; I had no particular reason for making extra inspections; the first report that I made in September last would be to the effect that I found everything safe; the whole of the No. 1 tunnel was under my inspection and charge; the floor at the East Greta Colliery has always been a trouble; I do not know if the Government Inspector was down; I am sure I saw him once at the top of the tunnel; the most of my time I was down on the 11 p.m. shift, I was doing timbering.

By Mr. Bowden: It was my duty to keep a constant supervision over the work; the bent timbers are there still, but the bent parts are now broken; these were broken by the weight of roof, as far as I know; no other timbers have replaced these.

By the Jury: It would take me half an hour or three-quarters of an hour to inspect the tunnel.

By Mr. Curley: Thompson and Weller worked with me on my shift; the skip took me down to the level, it went slow; I never timed it from starting to stopping.

By Mr. Millard: I am still of the opinion that the bending of the caps before the fall was due to the floor; I have had other experience of caps being bent by the floor on account of its being soft and swelling.

By Mr. Tillet: I consider that the caps got bent by the floor, but I consider that their breaking came from the weight of the roof afterwards.

Sworn and made at West Maitland, this 10th day }
of January, 1899, before me,—

DAVID LEWIS.

GEO. C. MARTIN, Coroner.

This deponent, *Thomas Cantwell*, on his oath, saith as follows:—I am a wheeler, and reside at East Greta; I knew Albert Moncrieffe, and that this inquest in sitting on his body.

By Mr. Tillet: On the morning of the 18th of November I was working on the level, and my father and Jones were at work in the jig; we went to work at 11 p.m. on the 17th November; we and the three deceased all went down together; I saw down the tunnel where the deceased were at work; I called down for the alligator and got a reply that I was to have it directly, this was at 6:30 a.m.; I got the alligator and filled it and sent it on top, then it came back to the deceased, and they filled it; it had not reached the top when I heard the fall; I stepped back a few yards as I thought that the alligator may have broken away; then I went into the level and met my father; the three of us, my father, Jones, and I came out, and Jones and my father shouted down to the men under the fall; afterwards we rapped for the alligator, then I called on top for the alligator; my father and I then started down the tunnel, and Jones went to report; I have worked in East Greta Colliery five years altogether; I have known slight falls of roof in the colliery in the old levels; I noticed the stuff that fell; we call it conglomerate; I have not been down the tunnel since the accident; I don't know what stuff fell from the roof at the fall; I have seen the roof work in the steam-jig bords, that is the coal roof; I never reported these roofs working; I never heard any complaints from the miners of the roofs working or of the timbers.

By Mr. Atkinson: I worked in the back or parallel jig before the accident; all the coal was not being worked; some portion of the seam was left next the roof to my knowledge; I had no opportunity of seeing what the roof was, except in one spot at the top of the jig, it was a pebbly conglomerate there; the coal in the back drive stood well next the roof; prior to the accident I had never been in the No. 1 tunnel below the levels.

By Mr. Curley: The roof was down; what I called the pebbly conglomerate was in a level; it looked like a sort of white sandy stone with little pebbles in it; it had fallen when I noticed it; it was mostly broken up; the width of the level where I saw it would be about 9 or 10 feet. It had fallen out between the bars, between the cap pieces, I should have said; I should say that the bars there would be 6 or 7 feet apart; the fall came down during the daytime, during the time I was on my shift; the most I have seen fall would be about a couple of skipsful; a skip would carry about half a ton; I have seen this on more than one occasion; it did not stop work only while it was being cleared away; it would leave a space of a foot or 18 inches in the roof; I did not notice any re-timbering after the stuff was cleared away; no one came in to see about it; I cannot say who the deputy was for that part; it was two or three years ago; anyone coming along could see the stuff until it was cleared away. We used not to go and inform when any falls like these took place; Mr. Thomas was the manager at that time; when I saw the coal roof work it was six or seven months back in the bords in the steam-jig; I have seen much timber broken; the props were some bent and some broken in the bords; it was in more than one of the bords; it was in three of the bords; the width of the bords was about 8 or 9 yards; I have seen coal shell off the rib side, sometimes five or six skips would shell off; I have not seen any top coal fall between the props in the bords; I did not see any board hanging outside of the tunnel, no deputy's board; I have seen roof down in different places in the slippery level, and the old bottom level, it fell in the slippery level from between the timbers, and also in the old bottom level; I handled some of this stone, it was damp in some places; I did not see any real soft, it was friable or crumbly; I cannot say if any one of these falls was larger than the other; the last one I noticed was about two years ago; I never heard any of the three deceased make any remark about the tunnel; I saw Gronow, Barnes, and others at the mouth of the tunnel when we went to work; I worked in the No. 1 tunnel for about three weeks before the accident; I have not seen Lewis in the morning at the entrance to the tunnel when I went to work; I have seen Lewis at the entrance to the tunnel of an afternoon; when we were coming down Lewis was about going up; I do not remember seeing Lewis at the entrance to the tunnel at any time during the three weeks that I worked in the tunnel; I went down the tunnel on the alligator; it would take us a minute or two; the distance would be about 600 feet, I think; I have not walked in or out for this past four years; one could not examine the tunnel very carefully at the speed that the alligator travelled; I think at the rate the alligator went one would have time to notice if the caps were bent; I have noticed that the caps were bent where I have seen the falls of roof on the levels.

Sworn and made at West Maitland, this 10th day }
of January, 1899, before me,—

T. CANTWELL.

GEO. C. MARTIN, Coroner.

Inquest adjourned for the purpose of obtaining lunch, until 2:30 o'clock on Tuesday, the 10th day of January, 1899, at the Court-house, West Maitland, the jurors being bound over and warned of time and place of adjournment.

Dtd at West Maitland, this 10th of January, 1899.

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at 2:30 o'clock in the afternoon of the 10th day of January, 1899, at the Court-house in West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizance, the examination of witnesses was proceeded with.

Dated at West Maitland, this 10th of January, 1899.

GEO. C. MARTIN, Coroner.

This deponent, *Thomas Cantwell*, recalled, on his former oath, saith as follows:—I have looked down the tunnel, and have conversed with the man down the tunnel; I have seen cap pieces bent down the tunnel, at about 100 feet from the level; I have seen four or five cap pieces bent; I noticed them about a fortnight before the accident; they were about 9 inches lower than the other sets, it appeared to me; I never heard the men talk about this.

By Mr. Millard: I have never worked in any colliery but East Greta; I could see at a certain time of the day very nearly to the bottom of the tunnel—say, at a quarter to 3 p.m.; in the morning one could not see down above 50 to 70 feet; I had been on the night shift for three shifts; it was at my fourth shift when the accident happened; I was about 5 yards away when the fall came away.

By the Jury: The caps that I saw bent, on looking down the tunnel, were also splintered; I think the alligator might make sufficient noise to prevent any timber cracking; I have never seen any inspectors down in the new jig, nor have I seen the inspector go down to No. 1 tunnel.

By Mr. Millard: I had no idea that a fall was going to take place; I know that if I saw anything dangerous in my workings I would report it; I do not remember ever making any report.

By the Jury: If the deputy said the working place I was in was safe, I would work in it without examination myself; I have had a copy of the special rules, but I do not know Rule 70; I hear it says that all miners and those employed should report to the person in charge any insecurity in the roof, &c.

Sworn and made at West Maitland, this 10th day }
of January, 1899, before me,—

T. CANTWELL.

GEO. C. MARTIN, Coroner.

This deponent, *Edward George Curtis*, on his oath, saith as follows :—I am a banksman at East Greta Colliery, and reside at West Maitland ; I know that this inquest is being held on the body of Albert Moncrieffe.

By Mr. Tillet : I was at work at East Greta mine at the time of the accident ; I was in the shift that went in to work at the tunnel at 11 p.m. on the night of the 17th ; I saw the deceased at 11 p.m. on the 17th, when I let them down ; I had not spoken to them or communicated to them after that time ; I had not received signals direct from them, but had got several skips of coal from them ; I think I received the last skip at 10 minutes to 7 ; I heard somebody sing out the tunnel had fallen in ; I can't say the time ; I had no time with me ; I ran to the mouth of the tunnel and looked down, and I heard someone sing out, "Send the alligator down, the tunnel has fallen in" ; I sent the alligator down ; I had been employed at East Greta Colliery about four months ; I have never been underground ; I have never heard any complaints or any remarks about the roof of the colliery ; I took no part below in the search for the bodies.

By Mr. Atkinson : The engine-driver gets the signal to pull up the alligator.

By Mr. Curley : The signal was in the engine-house ; I could hear the signals given at times ; I cannot say what signal was given before the last skip of coal was taken up ; I was at my post at about 20 minutes to 11 p.m. ; I saw Bert Moncrieffe, Dan Gronow, and Richard Barnes go down the tunnel that night ; three others, named two Cantwells and John Jones, went part of the way ; I did not see anyone else that night either go in or out ; I don't remember seeing anyone else that I knew there that night ; there is a board just inside the door with signals on it ; that is, simply signals for working the tunnel ; I have frequently seen this board, but have not seen any other notice on it except signals ; as soon as I heard of the fall I sent the alligator down at once ; John Jones came out first, and said the tunnel had fallen in ; I told somebody to go and call Mr. Heyes, the engineer ; Mr. Heyes came after about 10 or 15 minutes ; I have not been down the tunnel at all, either before or since the accident.

By Jury : I have seen the Inspector go down ; I cannot say how often.

Sworn and made at West Maitland, this 10th day
of January, 1899, before me,—

E. G. CURTIS.

GEO. C. MARTIN, Coroner.

This deponent, *John Downie*, on his oath, saith as follows :—I am a timberer in the East Greta Colliery, and reside at East Greta ; I knew the deceased man, Albert Moncrieffe.

By Mr. Tillet : I was working in the mine at the time of the accident ; I was working in a jig alongside of the tunnel ; I took part in the search for the bodies ; I came across Barnes's body ; it was lying on the left-hand side of the tunnel, standing, or rather in a stooping position, on the last set of timber ; there was no man-hole nearer than 20 yards ; we did not clear the debris right up to the face ; we got the body and then left off ; I have been at work at East Greta between three and four years ; I have never been past what was originally called the bottom level ; I never noticed the state of the roof ; I never had time to look down the tunnel ; I have known of slight falls along the levels ; these were falls of roof ; the stuff consisted of conglomerate that fell ; it was not the same stuff as fell at the big fall ; there was a sort of mixture of stuff at the big fall ; there was in that some conglomerate, ironstone, and mudstone ; the falls at the levels at the one known as the "slippery jig" level ; I cannot say when it occurred ; I have noticed caps bent in the mine ; the weight causes them to bend ; sometimes the floor causes them to bend, and sometimes the roof causes them to bend ; when they bend from the floor, the sill springs up too ; the caps in No. 1 tunnel are broken below the fall from the pressure of roof ; I had not heard from any of the men the state of the roof in the tunnel.

By Mr. Atkinson : My jig was going in the same direction as the No. 1 tunnel ; I put the timber in the jig ; the timber was put under coal ; I never saw the roof above the coal ; Michael Burns worked in my shift, the two of us alone ; the sets were apart 6 feet ; the size of the timber was 6 inches diameter ; the timber had a cap-piece ; the timbers did not bend while I was in it ; neither Cantwell or anyone made any remark about bent timber in the No. 1 tunnel that I heard ; when Barnes's body was recovered I could see the coal face ; the face was about 6 feet from his body, I should think ; it appeared to me as if Barnes must have gone where he was found for refuge ; I did not see either of the other bodies found.

By Mr. Curley : I was instructed to timber by one of the deputies, Mr. Hosking, or by the underground manager, Mr. Cartwright ; I was never instructed to do any special timbering in No. 1 tunnel ; I had instructions on my last shift to go to No. 4 bord, in what is known as Armstrong's jig, to timber, this is No. 2 tunnel ; I had to timber the top rib, because it had all broken away ; this timber was set under the coal roof ; a good amount of timber has been broken there lately, props mostly, this was due to pressure, mostly from the floor and in some places from the roof ; I have done a good bit of timbering in No. 1 tunnel since the accident ; pretty well most of the caps from the fall to the face were broken in No. 1 tunnel ; this timber was ironbark ; I am sure I did not measure the distance that the sets were apart ; the first set we put up would about almost touch the broken set on both sides, and the next set would be between the new set and the old one ; I have never known of any extensive fall in the East Greta Colliery ; I have known rails bent from pressure from the floor ; I have done some timbering in slight falls on the level, the fall would be up in the roof, sometimes 18 inches and sometimes 3 feet ; I would call what fell from the roof conglomerate ; I have timbered in other levels for slight falls ; I have timbered in the bottom levels in the Scotch heading side ; on no other levels or other places for falls from the roof ; I have never seen any falls in the bords when tops were being taken down ; the Scotch heading is on the right-hand side of No. 1 tunnel, and the top level is on the left side of No. 1 tunnel ; I know other deputies—one Mr. Jowett and the other Mr. Eggleston ; I do not know of any other deputies in that colliery.

By Mr. Millard : I have never worked in any colliery but East Greta ; none of the falls I have mentioned were any way close in the lode by fall ; I had nothing to do with the continuation of No. 1 tunnel, and have never been past the bottom level.

Sworn and made at West Maitland, this 10th day
of January, 1899, before me,—

JOHN DOWNIE.

GEO. C. MARTIN, Coroner.

Inquest adjourned, for the purpose of obtaining further evidence, until 10:30 a.m., on Wednesday, the 11th of January, 1899, at the Court-house, in West Maitland, the jurors being bound over and warned of time and place of adjournment.

Dated at West Maitland, this 10th day of January, 1899.

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, until 10:30 o'clock a.m., on the 11th of January, 1899, at the Court-house in West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizance, the examination of witnesses was proceeded with.

Dated at West Maitland, this 11th of January, 1899.

GEO. C. MARTIN, Coroner.

This deponent, *Edward Weller*, on his oath, saith as follows :—I am a miner, and reside at East Maitland ; I knew the deceased man, Albert Moncrieffe.

By Mr. Tillet : I was working in No. 1 tunnel on the day of the accident ; I was in Lewis' shift ; I went in at 3 p.m. on the 17th November, and came out at 11 p.m. ; I was there timbering in No. 1 tunnel ; I was fixing the set ; this set was 5 feet from the face ; I had been at work in No. 1 tunnel between four and five months ; no falls took place while I was at work there ; I had a good opportunity of noticing ; I never saw the roof work ; I never heard any movement in the roof, but I heard the roof working at various times when we were quiet, taking lunch ; I never took any notice of it ; I did not consider it dangerous ; I have seen caps bent about 100 feet from the face ; they had cracked a little ; I did not take notice of it ; I cannot say if it was from the roof or the floor ; the roof was of conglomerate mixed with slaty stuff, the heavy stone is conglomerate, and the other the slaty stuff ; the slaty stuff is soft to work ; there was no difference in the timbering ; they were put the same distance apart for both sorts of stuff ; I have been in the tunnel since the fall ; the fall consisted of the two descriptions of stone now before me.

By Mr. Atkinson : I did not have any conversation with my mates about the bent caps ; I do not remember mentioning it to my mates ; I mean that the caps were split ; there were splinters on the bottom side of the caps ; I saw it only in the bottom side ; I cannot say how much of the cap was splintered through ; the fall took place where the caps were

were bent; I cannot say how far the big fall was from the face; the caps were bent 100 feet from the face; I did not take notice after I went down after the fall to see if the bent caps that I had previously noticed had been where the fall afterwards occurred; I saw three or four bent caps; I cannot say how much the caps were bent, but I should say about 3 inches; the splinters were not of any great length; I have seen this slaty stone in the mine previously; there are parts of this slaty stone all the way down; I cannot say how far or what distance the tunnel was worked; I worked from the bottom of the sump; I never heard my mates make any remarks about the change in the roof; the bending of the bars did not strike me as dangerous; I heard instructions given by Mr. Lewis to make a manhole; they were given to Daniel Gronow, Barnes, and Moncrieffe; these instructions were given before they went to work on their last shift; we had started the manhole in our shift; I have had a copy of the special rules; I know that it is a part of my duty to report a defect in the roof or any special danger that I may see.

By Mr. Curley: I now show on a penholder how the timbers were cracked; I noticed these caps six or seven weeks before the accident; Lewis worked on the same shift as I did; I have never seen a board with any reports on it at the tunnel mouth; I never saw reported on any board that the caps had been bent as I have described; I cannot say how I came to notice that the fall had occurred where I had seen the caps bent; Lewis told me on last Thursday that the fall was 100 feet from the face; Lewis said that the bent caps were 100 feet from the face; this conversation occurred outside this Court; I asked Lewis what distance the bent caps were from the face; I did not notice any other bent caps; Lewis did not mention it in the mine at any time; Mr. Thompson was working with us; he did not mention it; I was on the night-shift, and never saw the manager (Mr. Thomas) down; I did not see the under-manager down either; Lewis went down with us when we went to work, and he stayed the whole of our shift; Lewis worked with us on the coal; Lewis never warned us at any time to go out; he never said the place was unsafe; Thompson never did so, nor did either Cartwright or Mr. Thomas, the manager; Mr. Lewis paid me my wages; he paid me 6s. 6d.; I have worked in East Greta Colliery just the time the No. 1 tunnel was being driven.

By Mr. Millard: I remember a water-cask in the tunnel; the bent caps were above that; you could see them from the cask; I have been to the cask, and could always see the bent timber from it; I know from what Lewis told me that the fall was 100 feet from the face; and he also said that the bent caps were 100 feet from the face, and that is how I know where the bent caps were; if the fall was over 200 feet from the face the bent caps could not be in the position that I said they were; I should say that the bent caps were about 20 or 30 feet above the cask; I have seen the soft stuff all the time we were driving the tunnel; I cannot say where I first saw it; I think that in the first 10 feet of the tunnel the roof was of conglomerate; I always went by myself up the tunnel to get any small timber, but for any heavy timber Lewis would come with me.

By Foreman of Jury: I have had experience as a miner; I did not look for any danger, though the stuff did change; I worked at the Co-operative Colliery for three years as a wheeler; Lewis never said anything to me about the roof or about any danger; I knew Lewis was appointed a deputy to look after the tunnel; I depended on Lewis to withdraw me if there was any danger; I never saw the Inspector down the tunnel, but I was on the night shift for a month before the fall; I had previously worked on a day shift; I knew the Inspector; I never saw a false set of timber put in; I never saw a set put in and then removed; I do not consider myself a practical miner; I knew that the props and caps were morticed right through.

By Mr. Millard: The roof in the Co-operative mine is of bluestone and conglomerate; falls there are pretty frequent; I would not have gone in if I had thought that there was danger.

By Mr. Curley: The water-cask was there to catch water coming down the tunnel; I had to go to this cask to empty it; I cannot say its distance from the face; I think that the cask was about 80 feet from the face.

EDWARD WELLER.

Sworn and made at West Maitland, this 11th day }
of January, 1899, before me,— }
GEO. C. MARTIN, Coroner.

This deponent, *Joseph Thompson*, on his oath, saith as follows:—I am a miner, and reside at East Greta; I knew the deceased, *Albert Moncrieffe*.

By Mr. Tillet: I was working in No. 1 tunnel, and was in the same shift as Lewis and Weller, and went in to work on our last shift on Wednesday afternoon, from 3 p.m. until 11 p.m.; we were working on the face that night; I was one of the four that took the job of sinking, and was appointed deputy for the shift I was on; as deputy, it was a part of my duty to inspect the roof; the roof was of conglomerate, as far as I knew, all the way down; the stuff I now hold is not conglomerate; I call it muck; it was under the conglomerate, and where I have seen it come down it would be from 1 inch to 4 inches; we never took anything down that would stop up; I worked in the tunnel from the commencement; I saw three or four bent caps in the tunnel; they were not splintered; my opinion was that the bending was caused from side and bottom pressure; we knew that the bottom was always springing; I would likely find side pressure in a single drive; the bent caps were from 70 to 75 yards from the top level; I have been in the tunnel since the fall; the fall occurred above where the bent caps were; I did not regard these bent as showing any danger; I do not make any report of my inspection, either written or otherwise; we were considered to have 60 feet of conglomerate, and I consider that we had that thickness of conglomerate, where the stuff I call muck came from; I saw Gronow's body in the surgery, and I identified it.

By Mr. Atkinson: I have been appointed deputy since the work commenced; I understood from Mr. Thomas, the manager, that I was to look after things in my shift; I commenced from the bottom sump; I have read the special rules of the colliery; I believe I have read general rule No. 4 of the Mines Act; my inspection was made every time I went up and down the tunnel; that would be very likely three or four times some shifts, if extra timber was required to be brought in; the inspection was made from the alligator going up and down; the alligator would not go quick, slow enough to have time for inspection; it did not go particularly slow, but in taking heavy timber in, the alligator would go very slow; I never saw a drop of water in the roof; the timbers were set with the lay of the seam; the timbers were set at right angles to the dip of the seam; I had a square, a straight-edge, and a spirit-level; we would use the square at about every fourth set; Lewis and the others have talked about bent caps in the tunnel; we were surprised at the new timber bending so quick, and consequently we expressed our opinions about it; my opinion was that the caps were bent from side pressure; there was no talk about strengthening or of renewing bent timbers; as deputy I did not think that it was of importance to mention it to the manager, as I did not consider there was danger; had I thought so I would have reported to Lewis, and through him to the manager; I did not think that, seeing the soft stuff called muck, that it denoted a change in the roof; there was no space left between the props and the coal; there were no props bent that I saw; I should not have expected to see the props moved by the side pressure; the reason that I give for the caps being bent was that the caps were wedged tightly from the rib on each side, both ends being wedged tight; the ti-tree might give behind the props.

By Mr. Curley: The ti-tree was put there with the bark on it; the ti-tree was not dressed, it was in its natural state of round timber; the ti-tree was used for packing; sometimes it would not be required behind the timber; the ground was what I would call live ground; there was no great weight on the coal; I would see the coal burst out occasionally; I do not think there was sufficient side pressure to interfere with the side timber; I do not believe that there was any pressure from the roof, notwithstanding the fall; I have worked at East Greta Colliery about, I think, two and a half years; I worked in No. 2 tunnel, sinking; I also worked in the slippery-jig, in the bottom jig, and various parts of the mine; I have never seen any part of the roof giving, nor have I seen any falls from the roof, nor have I heard of any falls, or of anyone being hurt by any falls; the sets in No. 2 tunnel were put in 5 feet centres; that tunnel was driven exactly the same as the No. 1; we were paid by the yard in No. 2 tunnel, the same as in No. 1; the party consisted of Lewis, Griffiths, Gronow, and myself; I never saw any caps bent in that tunnel; we took up the bottom the same as in No. 1, and did the packing the same way.

Sworn and made at West Maitland, this 11th day of }
January, 1899, before me,— }
JOS. THOMPSON.

GEO. C. MARTIN, Coroner.

Inquest adjourned for the purpose of obtaining lunch, until 2:30 o'clock on Wednesday, the 11th day of January, 1899, at the Court-house in West Maitland, the jurors being bound over, and warned of time and place of adjournment.
Dated at West Maitland, this 11th day of January, 1899.

GEO. C. MARTIN, Coroner.

Inquest

Inquest resumed, in pursuance of adjournment, at 2-30 o'clock on the 11th day of January, 1899, at the Court-house in West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizance, the examination of witnesses was proceeded with.

Dated at West Maitland, this 11th day }
of January, 1899,— }

GEO. C. MARTIN, Coroner.

This deponent, *Joseph Thompson*, recalled, on his former oath, saith as follows (*By Mr. Curley*): Tenders were called for work in No. 1 tunnel, I believe; I think that a notice was posted up in the office; we tendered for the work; the price that we tendered was not accepted; we tendered, as far as I can remember, at £4 7s. 6d. per yard; after we had a conversation with the manager, Griffiths and I together had a conversation with the manager, and he objected to our price; the manager asked us if we would do it at a certain price, and we came to an understanding, and if we could not make wages at it he said he would see that we made wages; we agreed afterwards for £3 19s. a yard; for that we had to drive the tunnel, as far as I can remember, the same as in No. 2; we had to take the coal out and put the timber in, after lifting the floor; it was explained how we were to put the timber in, the sills were to be 16 feet over all, the caps 15 feet, and the props 10 feet 6 inches, and the class of timber to be of ironbark, same as No. 2, and ordinary hardwood for the slabs; the sills were to be varied from 9 to 10 inches, and of round timber cut off the bush; the cap pieces were to be about the same as the sills, about 9 inches through, put in as they come from the bush, except for fitting in; the props would be of the same thickness, about; I never saw any timber that was defective; sometimes a good bit of the timber would remain on the surface; when I saw the caps the idea never came to me that the roof was weighty; I never thought about putting in a set between the bent caps; as far as I understand the tunnel would have to go about another nine sets, about 45 feet; I cannot say who told me, but I think it must have been Griffiths; this was about two or three days before the accident; we had no conversations about pushing on the work to get it completed; we pushed on every day as much as we could; I never said to the under-manager, the manager, and Lewis, that it was necessary to put in fresh timber where the caps were bent; I considered myself a deputy to make inspections, but not to make a report; the understanding was with Mr. Thomas, and that was, that he would look to me as responsible for anything that occurred on my shift; but Mr. Thomas did not say that I had to report; I did not consider, under general rule 4, that I should report; I believe that my mate, Lewis, who worked with me, made reports; we started at the tunnel four or five months back; I think it was in June last; I generally kept the record of the distance we had driven; I can produce the book I entered that in; I know Edward Weller; he worked along with us; he had, I should think, every opportunity of seeing those cap-pieces; we used the ordinary miner's light; as a rule, we all went down together, Lewis, Weller, and myself; I have never seen any other cap-pieces bent besides those in No. 1 tunnel; there were two casks on the roadside; the water came down the tunnel; it did not come out of the roof; I think that it came out of the coal; there was one cask between the third and fourth man-hole from the level going down the tunnel, and the other cask was further down; I cannot say how much further, but the casks would be about 20 or 30 yards apart; the man-holes were 20 yards apart; the first one was 20 yards from the level.

By Mr. Millard: The stuff I called muck would be between the coal and the conglomerate; there are bands in the seam sometimes; it is not always the same; I do not think that this band would affect in any way the roof; I never saw any of the muck mixed with the conglomerate, or above it; I noticed the roof carefully as I went down; had there been this muck in the conglomerate I must have noticed it; all the timber supplied was good; I never saw better; I do not know of any better class of timber for this work; it is recognised as the best; I knew that this tunnel was meant to be a permanent work; the bent caps that I saw were nearer the face than the fall; I do not know the distance of the big fall from the face; the fall extended 55 or 60 feet; I should think that the bent caps would be about 15 or 20 yards from the lower end of the big fall; had fresh timber been put in where the bent caps were, it would not have prevented the accident; the bent caps had nothing to do with the accident, I think; I have had experience of other collieries; the East Greta roof being conglomerate, I should consider it a good roof; it is not an uncommon thing to see falls from the roof in other collieries; I should say that a skip and a half or two skips coming down would be a common thing; I don't think that this would indicate any special danger; in abandoned workings it would not be at all strange for the roof to come down, it would be unusual if the roof stayed there, under those circumstances.

By the Jury: The bent caps are still there as far as I know; they were there when I was there last; all that I know of the thickness of the conglomerate is from what I have been told; the slabs were not bent.

By Mr. Millard: Had there been pressure from the roof I should have expected to see the slabs bent; I have seen conglomerate in the overcast; this conglomerate shows about 7 or 8 feet thick.

By Jury: I have seen since the fall a cap piece taken out that was not broken; I heard that the Inspector was down the mine; this was said to me by Gronow about three or four weeks before the accident; I did not see the Government Inspector myself.

By Mr. Curley: The slate above may have been of an average of 8 inches; I have heard the manager and the engineer, and others say that the conglomerate was of the thickness that I have mentioned.

By Mr. Tillet: The piece of conglomerate produced is from the overcast, and is marked as an exhibit B, in blue.

By Mr. Curley: Where the fall took place I call it soft conglomerate and muck; the rock that I see on the table I term a soft conglomerate, the blue or slatish stone I call muck, and the whiter stone I call a fine conglomerate; the blue or slatish stone examined by the jury is somewhat like what we have been taking up in the floor of the tunnel, sometimes softer than this stone, and sometimes harder.

JOS. THOMPSON.

Sworn and made at West Maitland, this 11th day }
of January, 1899, before me,— }

GEO. C. MARTIN, Coroner.

This deponent, *John Downie*, recalled, on his former oath, saith as follows:—I see the stone on the table; I brought it from the East Greta Colliery; I cannot say where one piece came from in the colliery, but the other piece came from the big fall in the colliery; this piece is marked as an Exhibit "C"; I got this stone, marked "D," out of a skip of muck; this muck had not been exposed to the weather, and the Exhibit "C" I got out of a heap of stone that came out from the big fall.

By Mr. Curley: I think that the stone I produce is a fair sample of the stuff; I cannot tell what part of the fall it came from.

Sworn and made at West Maitland, this 11th day }
of January, 1899, before me,— }

JOHN DOWNIE.

GEO. C. MARTIN, Coroner.

Inquest adjourned, for the purpose of obtaining further evidence, until 10-30 o'clock on Thursday, the 12th day of January, 1899, at the Court-house at West Maitland, the jurors being bound over and warned of time and place of adjournment.

Dated at West Maitland, this 11th }
of January, 1899,— }

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at 10-30 o'clock on the 12th day of January, 1899, at the Court-house at West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizance, the examination of witnesses was proceeded with.

Dated at West Maitland, this 12th }
of January, 1899,— }

GEO. C. MARTIN, Coroner.

This deponent, *James Cantwell*, on his oath, saith as follows:—I am a miner, and reside at East Greta; I knew the deceased man, Albert Moncrieffe.

By

By Mr. Tillet: I was working at East Greta Colliery at the time of the accident; I went in at 11 p.m. on the 17th November; the three deceased men went in with me; I was working in the new jig, running parallel to the new tunnel; my son Thomas and John Jones were there with me; I did not see any of the deceased, or have any communication with them after going down; I remember the time of the fall, at 5 minutes to 7 on Friday morning; we heard a noise as a rumbling like thunder; I stood and listened for four or five minutes; then I ran over to the No. 1 tunnel; I thought the old workings on the opposite side had fallen in; I looked up the tunnel and could see nothing; then I walked round and looked down the tunnel and saw the fall; I and Jones called out to the deceased men and got no reply; we then went up the tunnel; I have been at work at East Greta Colliery for seven years; I have never been down the new tunnel; I have not seen any defects in the tunnel, as I have not been down; you could see a good distance down on a clear day; I never heard any complaint of the tunnel; I had a conversation with Moncrieffe (2) two nights previous to the accident; I was alone with Moncrieffe; he said that some of the bars were bent and broken; he did not say any more; he said that they were 100 feet from the level down towards the face; Moncrieffe said that he wished he was out of the place, as he was frightened; I did not mention this conversation to any one that I am aware of; Moncrieffe did not say anything else about it.

By Mr. Atkinson: I know the roof of the East Greta Mine; it was composed, parts of it of conglomerate and parts of soft stone; these stones represent the roof; we had softer stone in the colliery than any of that stone in the roof represented here on the table; I saw patches of it; there was no conglomerate at all where I saw the soft stone I have mentioned; the place where I saw it was on the bottom level—now called the middle level—about from the tunnel 40 yards, and 500 yards further in; it was only in patches during this distance; I know where the dam is fixed on that level; I did not notice the soft stone on the tunnel side of where this dam is fixed; I saw the soft stone just fair over the dam; I saw this while the coal was coming in and out; the thickness of the patches of soft stone would be of about 3 feet up between the timbers; I was working with a deputy named Higginson; we had no conversation about it; he would repair any little fall that would come; the sets were about 5 feet apart; the weight of the pillar broke a good many of the sets; I think the pressure came from the coal pillars; the coal occasionally fell off the pillar sides, in about the quantity of a skip or a couple of skips at a time; the bar or cap pieces got broken; I know that the bar was 9 feet long and 9 and 10 inches in diameter; it was of ironbark; the sets were only slabs in bad places; the slabs did not often break; I put packing sometimes between the prop and the rib side; this timber was generally of ti-tree or short slabs—anything we could get; I have seen this soft stone in other parts of the mine; I have seen it in No. 2 hord, above the present level in taking down top coal; it would be about 500 yards from No. 1 tunnel, travelling south; I have not seen this soft stone in any other place except that level, not nearer the tunnel; the top coal was taken down to within 5 or 6 inches of the roof; falls sometimes would displace this coal; it used to drop off; I considered the roof more dangerous where the soft stone is; I did not report the change, because a deputy was with me; I presumed that the deputy would report if anything was dangerous.

By Mr. Curley: It was three years ago since I was doing the timbering; I have seen the manager where I was working; I mean Mr. Thomas; Mr. Thomas would have a knowledge of the change of roof same as I would; the No. 1 tunnel is an extension of the workings of the No. 1 tunnel, that have been working for years; I know of a parallel tunnel that is being made about 30 yards from the No. 1 tunnel; it goes at the same dip as the tunnel; no places have been driven between these two tunnels; the jig is down about 130 feet; it has not been worked since the fall, but was at work at that time; I did timbering in the Scotch heading; this was at the right of the tunnel, about 200 yards from it; I was working in a level and bords; I never saw any conglomerate fall there, but I have seen coal fall there only; I presume that pressure from the old workings caused the coal to fall; after the coal is taken out a little creep takes place, and then there is a fall of roof; there was a very big fall of roof in No. 3 bord over three years ago; I visited this bord with a deputy, and tried to secure it by extra timbering; I saw what came from the roof; it was soft stone; I have done timbering on the left-hand side of the tunnel; I call that the north district; I did not see any stone fall on that level; the timber I put in was to secure the roof; there was timber in previously; this timber was about 5 feet apart; I had occasionally to put extra timber in between the sets; there was about 5 or 6 inches of coal left in the roof there; some of the caps were bent and some broken; they were broken here and there in patches, and new ones were put in; I cannot say how often I have seen the manager in where I was working before the accident; I have seen him in three times one week; I know the under-manager; I have seen him come in twice when I was on the day-shift; I was on the night-shift there for a fortnight; I heard Jowett's voice one night he called out down to me; Jowett was the only official I heard there during the fortnight; I was at that time driving the jig; had they come down the jig I must have seen them; I am quite sure that Jowett was the only official about there during that fortnight.

By Mr. Millard: I was going to the pick-shop from the Cricket Ground when Moncrieffe and I conversed about the tunnel; it was at about 6 o'clock in the evening; I would not go into a place I knew to be dangerous; I worked at it to put it in a safe state; it was dangerous while we were working at repairing it; afterwards I remarked to Higginson that it was dangerous; Higginson said that we need be careful of it and not go underneath it; the patches of soft stone, I cannot say how many I saw during the 500 yards, as far as I could judge; in some places the patches occurred in every second set, and then you might go for five or six sets and not see any more; I believe that there would be 100 patches in the 500 yards; there was only conglomerate in patches also in that level, small parts, that is flakes, came away; it still seemed, when this came away, that there was conglomerate above it; I cannot say how much soft stuff there was above the other that came away; I cannot say if there was conglomerate above the soft stuff on the level; the stuff was very soft; I cannot account for its not keeping on falling except that in places the timber may have kept it up; it came away about 3 feet in the level, higher in the middle; after it fell timber was put up against the roof; the pillars had not been taken out in the Scotch heading to my knowledge; if they are out now they must have been taken out before the fall; I am positive the pillars had not been taken out in the Scotch heading at the time of the fall; it is not usual to take pillars out in the East Greta Colliery; the roof of the East Greta Colliery was patchy; I believe that there was more conglomerate in it than soft stone; I know the overcast in the bottom level, there is no soft stuff in that, it is composed of hard conglomerate; the extension starts 30 or 40 feet below the level of the overcast.

By Mr. Bowden: I have never worked in other collieries; we could always get all timber that we ever required.

By the Foreman of the Jury: I consider that the parts of the East Greta Colliery that are not safe is that where is a soft roof; I consider that the manager and those in charge have always done their best to safeguard the men at work in the mine; I never heard from anyone but Moncrieffe anything that would reflect on the safety of the No. 1 tunnel; I cannot remember anyone being discharged for saying that the mine was unsafe.

By the Jury: I still work at the East Greta Colliery; if Mr. Thomas, the manager, says that the pillars have been removed in the Scotch heading it is an untruth; it is not possible that the manager could take anyone down to take out these pillars without my knowledge; I have seen a Government inspector in the colliery; when I looked up the tunnel I did not think that the fall was where it had occurred; I thought it was a fall in the old workings; I knew that caps were broken in the old No. 1 tunnel, and were replaced with new ones; the fall where Shuffler was at work at the pillars came from the roof; it would be away about 400 yards, to the best of my belief, from the No. 1 tunnel, where the last fall occurred; I cannot say how long he was taking them out, or if he still continued to take them after the fall; I saw this fall afterwards; I should think about 80 tons may have fallen of roof; the pillars were not continued taken out there after the fall; top coal was taken out the same side as the fall, but farther on; Higginson and I went to the Scotch heading to see if we could do anything to repair or prevent further fall, and we found that it was so high we could not do anything with it; the front shift had come out, and there was no one at work there when Higginson and I went in; I did not call these extensive falls; caps do not always break from roof pressure; it may be from other causes; if the props were intact, the sills were intact, and the caps only bent, this would indicate roof pressure; I am experienced in timbering, and if I saw the props were tightly wedged, and the sills had not moved, and yet the caps were bent, I should say there would not be side pressure; if there was sufficient side pressure to bend the caps, it should also show in the props; with bottom and side pressure I should say that the sills would bend or break in the middle, and then I should say that the sides would go next; the packing of ti-tree would for a time keep back the side pressure.

By Mr. Tillet: I would expect to get side pressure in a tunnel of that description.

By Mr. Millard: The caps, I know, were wedged into the side tight, and if the side was packed the pressure would come on the logs; the ti-tree packing, if put in with the bark on, could give a little; ti-tree put in with spongy bark on it would give sooner than the wedges; the ti-tree giving would ease the pressure on the props; I should expect in roof pressure to see it affect the slabs; they would give or bend a bit; the slabs are not as strong as the caps.

Sworn and made at West Maitland, this 12th day }
of January, 1899, before me, — }

JAMES CANTWELL.

GEO. C. MARTIN, Coroner.

Inquest

Inquest adjourned, for the purpose of obtaining lunch, until 2:30 o'clock p.m., on Thursday, the 12th day of January, 1899, at the Court-house in West Maitland, the jurors being bound over, and warned of time and place of adjournment.

Dated at West Maitland, this 12th of January, 1899.

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at 2:30 o'clock p.m. on Thursday, the 12th day of January, 1899, at West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizance, the examination of witnesses was proceeded with.

Dated at West Maitland, this 12th of January, 1899.

GEO. C. MARTIN, Coroner.

This deponent, *James Cantwell*, recalled, on his former oath, saith as follows (*by Mr. Curley*):—I had repaired timber in No. 1 tunnel; this would be midway between the top level and the middle level; the caps were broken that I replaced; I saw about half a dozen caps that I helped to remove; I had to pass in and out of the tunnel before I went to repair them; I could see that they were broken before I went to repair them; they could not have been broken more than a week before I went to repair them; I did not notice the roof, as I could not see it for the slabs overhead; it was the cap-pieces that were broken; they were from 9 to 10 inches; this was a little over three years ago.

By Mr. Millard: I have noticed sills bent up in that tunnel.

By Mr. Bowden: I was with Deputy Higginson when I went to repair the timber; where I noticed the caps bent or broken the slabs were not bent or broken; in bords I have seen slabs broken; I was a fencer, or at any kind of bush-work, before I went to the East Greta Colliery; I was employed on the surface at East Greta Colliery before I went below, for about six months, as near as I can think; I have of late had charge of a shift down below; my duties were then to replace timber in No. 2 tunnel, or to put timber in to strengthen it.

By Jury: Mr. Thomas and I are friendly; we have never had any quarrel; the caps that Mr. Higginson and I saw were above the No. 1 tunnel; I had a contract for driving the jig, running parallel with No. 1 tunnel; I had one partner in that contract, Aquila Roster; tenders were called for it; there were no specifications; no distance, only an ordinary jig; I had men working for me; Downie was one of my men; I paid him his wages; after the fall took place, I rang for the alligator; it was not sent down; it is the rule for it to be sent down if rung for; but I did not ring for it on any previous occasion; Jones rang for it after I had done so; I knew a shift was coming down, so I sung out for them not to come down; I have looked down where the continuation of No. 1 was going on; I never noticed any bent caps, as I was never there at a time you could see far down; at about 3 p.m. you can see well down the tunnel; I never happened to look down the tunnel at that time, though I have been there in going about my work; I could have seen had I looked at that time.

By Foreman of Jury: I have never seen a fall from the side; the falls generally took place where the timber had not been strained; if I heard a fall at some distance in a mine where there were strained timbers, I should infer that it occurred where the strained timbers were.

By Mr. Millard: I put full sets in where the sills were broken.

By Mr. Curley: I did this work for about 300 feet in No. 2 tunnel.

Sworn and made at West Maitland, this 12th day }
of January, 1899, before me,—

JAMES CANTWELL.

GEO. C. MARTIN, Coroner.

This deponent, *Henry Cartwright*, on his oath, saith as follows:—I am under-manager at East Greta Colliery, and reside at East Greta; I knew the deceased man.

By Mr. Tillet: I have been under-manager and manager since the inception of the colliery—first as manager, and then, after Mr. Thomas came, under-manager; I know the extension of the new No. 1 tunnel; I was one of the first to enter the tunnel after the fall; there were three of us together, Heges, the engineer, David Lewis, and myself; the time was, I think, at ten minutes past 7; we found the tunnel had fallen in; we went right to the edge of the fall and called to the deceased; I shouted out loud and knocked on the rails, but got no reply; I was in the tunnel before the fall, but I cannot say exactly when or if I had been in during the week the fall took place in; I think I was in the tunnel for the last time about a fortnight before the fall took place; I examined the roof all the way down then; I did not see any indications of danger in the roof; I saw a couple of caps bent, not broken; they were so bent that one could only just discern it; I did not regard this as an indication of danger; I do not remember seeing stone of the sort now before me at the East Greta Colliery; the roof of the mine was of conglomerate; I have seen slight fall of roof before this fall, after the pillars have been taken out; I have seen slight falls in the levels, but of no thickness; the stuff that came down was sometimes coal and sometimes roof, nothing like this stuff; I went down in the bottom level every day; this has been my practice every day, but I cannot remember seeing this description of stone.

By Mr. Atkinson: I was at the top of No. 2 tunnel when I was called at the time of the fall; I had not been down the mine that morning; the pit starts to get coal as soon as the men are down at 7 a.m.; my usual time for going down is 8 to 8:30 a.m.; I had not been near the top of No. 1 tunnel on that morning; I am under-manager for the whole of the mine; it would take me one day to examine the whole of the East Greta mine; I refer to examining No. 1 as well as No. 2; I have read the rules as to the duties of the under-manager; I now read No. 3 rule of the special rules; I can only explain not complying with the Rule 3 that Mr. Thomas and Mr. Heges looked after No. 1 tunnel whilst sinking; Mr. Thomas told me that he had put David Lewis in charge as deputy of No. 1 tunnel; I saw Mr. Thomas about No. 1 tunnel; I did not look upon the extension of No. 1 tunnel as a particularly important place; I cannot say when Lewis was given in charge as deputy of No. 1 tunnel; I do not keep any record; Lewis was put in charge as deputy at No. 1 tunnel when it was started from the bottom of the sump; this would be, if I think rightly, about last July; Jowett, the night-deputy, made the report at the time the tunnel started, and I believe that he reported about it until Lewis took charge as deputy, about a couple of months from the start; I do not know why Lewis came to take charge as deputy; I do not think that Jowett looked after the tunnel after Lewis took charge as deputy.

By Mr. Atkinson: Pillars were taken out in the East Greta pit; some of them on the north and some on the south side of No. 1, between the top level and what is now known as the middle level; there were falls of conglomerate when these pillars were taken out; I do not remember seeing any other stone than conglomerate; the fall would be up about 5 or 6 yards; it consisted all of conglomerate; I do not know how far the No. 1 tunnel was to go; I knew that the level was coming from No. 2 tunnel to meet the No. 1 tunnel when it reached a certain point; I have examined the roof in the level; it is of conglomerate; I remember a drive being made from the bottom seam to the top seam; I cannot say the distance; I have been in the place while driving it; conglomerate went through it; it was all conglomerate, if I remember rightly; on second thoughts, I think there was some other stone just before we got to the top seam, but I cannot remember what it was; there are distinct facings in the coal at East Greta; the facings run east and west; I would expect coal to come off the side of the jig easier than a level; there has not been much evidence of a side pressure in East Greta; we generally set timber in the jigs; we always do; we generally wedge the cap-ends tight; I have a good deal of experience in timbering; in a mine with a side pressure I would not think it good practice to wedge the ends of the caps tight; I have seen the big fall in No. 1 tunnel; I think, in my opinion, that a leakage of water made its way to that blue mudstone, and made it swell, and broke the cap-pieces; this was pressure from the roof; I think that side pressure had some influence on the fall; I have noticed the sides of the coal; they are in good condition; I should not take this as a sign of much side pressure; I think the fall was influenced by pressure from the floor; we are troubled a lot with the floor, it is so soft; the bottom heaves up and forces the sill up and then the props, and lifts the ends of the cap-pieces with the middle, being wedged tight, and this is some help towards breaking the cap-pieces; as a general thing the slabs on top are tighter than the sides; by pressure from the floor I should expect the sill to break first; I did not notice the sills bent where I saw the caps bent; I did not notice any water dripping from the roof prior to the fall; since exploration I have noticed a considerable number of caps broken; I never saw any slabs broken; it is a surprise to me to see the caps broken and no slabs broken;

broken; I saw Moncrieffe and Barnes recovered; I cannot say how far from the face they were, but I think that both were about 20 or 25 feet from the face; I should say that Moncrieffe was about 20 feet from the face, and Barnes about from 5 to 10 feet from the face.

HENRY CARTWRIGHT.

Sworn and made at West Maitland, this 12th day }
of January, 1899, before me,—
GEO. C. MARTIN, Coroner.

Inquest adjourned for the purpose of obtaining further evidence, until 10:30 o'clock on the 13th day of January, 1899, at the Court-house, in West Maitland, the jurors being bound over and warned of time and place of adjournment.
Dated at West Maitland, this 12th day of January, 1899. GEO. C. MARTIN, Coroner.

Inquest resumed in pursuance of adjournment at 10:30 o'clock on Friday, the 13th day of January, 1899, at the Court-house, in West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizance, the examination of witnesses was proceeded with.
Dated at West Maitland, this 13th day of January, 1899. GEO. C. MARTIN, Coroner.

This deponent, *Henry Cartwright*, recalled on his former oath, saith as follows (*by Mr. Curley*):—I have a good knowledge of the East Greta Colliery; I think I have; I have noticed falls in the colliery at different times; I have seen them both north and south, that is prior to the fall in this No. 1 tunnel; I have not seen any large falls only where pillars and tops were being taken out; the falls were large then; I do not remember anyone being shut in by a fall; I have known of smaller falls in the colliery mostly in the levels, both north and south of this No. 1 tunnel; these falls took place where timber was in; the falls came between the timbers; from seeing these falls I have a fairly good knowledge of the roof; I do not remember any of this blue shale coming down; I have seen stone like the piece marked C come down; it came down about 6 inches below the top of the coal, and sometimes next the roof; I call this stone conglomerate that I now hold; I have seen stone like this fine conglomerate come down from falls; the stone marked B is what the roof is composed of; the width of the levels where I saw the falls between the timbers would be 9 feet; I call the conglomerate stone marked B very hard stone; the piece marked C I call a soft shale intermixed with a grain of conglomerate, or rather streaked with conglomerate; I do not remember seeing any of this stone in the falls between the timbers, but I have seen both the hard and fine conglomerate; I have seen both these conglomerates at the same fall between the timbers; I should call the fine conglomerate a strong one; I should say that a little damp, water, and the air caused it to come down; I have seen cap-pieces broken where these falls were; I should say it was due to the bottom; we have not had sills in these levels; I have seen props broken—that is, split up; when I have seen the falls between the timbers, I should say there was no weight on the roof; I call the conglomerate I have referred to very heavy stuff; the weight would lay heavy on the caps from the damp, the water, and the air; the falls were of 6 or 7 inches; I would call it more from fretting; I have seen it larger—from 18 inches to 2 feet; I do not remember seeing anything beyond 2 feet; my instructions on seeing the cap-pieces broken were to put fresh ones alongside, and take the others out; I saw in the No. 1 tunnel two cap-pieces bent; these were 5 feet apart, one next the other; I did not give any instructions about them; the roof where the larger falls were was of conglomerate, similar to that on the table I have referred to; I never saw any other stone that I can remember but conglomerate; I saw the face of the fall all the way; I climbed up; the thickness was 5 or 6 yards at right angles to the seam; this was on the north side of No. 1 tunnel; this would be on the left-hand side going down; I cannot say what the locality was, but it was betwixt the No. 1 level and what we called the middle level; I know of a fall on the same side, betwixt the surface and No. 1 level; I forget the number of the jig; the roof there I saw was a few yards in thickness, and it was a conglomerate, but I think a little browner and rougher than the stone I now see, something similar to the stone marked D on the table; the piece marked D is a rougher conglomerate than the other, and of a softer nature; the piece marked D is more friable than the other two pieces; it would fret more; I did not see any other stone at that fall than I have spoken of; I do not remember any other falls that I have examined; I have known of falls in what we call the Scotch heading, and in No. 2 level; in the Scotch heading the fall was a large one; I saw it; I could see up; I think my light would only show me up as far as 4 or 5 yards, but what I did see, if I remember right, was conglomerate; the stone mostly resembled that stone marked D inside the paper on the table; in the fall I saw between the No. 1 and No. 2 level, on the south side of the tunnel, if I remember rightly, the stone that came away was conglomerate, but I will not say positively that it was conglomerate; this occurred about three or four years ago, I think; I cannot speak positively, as it is so long since it occurred; I do not remember seeing anything but conglomerate fall; after it has fallen I have not seen any other stone but conglomerate; the main intake for air for No. 1 tunnel is the No. 1 tunnel; we had no difficulty in getting the air to the men there; it was got there from No. 2 level by natural ventilation; the distance from No. 2 level to the face of the tunnel I cannot tell you; I know No. 7 of the special rules; I did not comply with that rule; I examined the report-books at the colliery office every morning; knowing that the cap-pieces were bent, and not seeing any report of it in the report-book, I was no ways alarmed, and did not think of doing anything towards putting the cap-pieces right; I do not think that I took too much for granted in this matter; as I did not go to the tunnel, if there were defects, I could not possibly see them; I have read Special Rule 3 very carefully, but it did not make me anxious to be in that tunnel oftener than I have been; I cannot say when my previous visit to the tunnel was before the fortnight I have mentioned; I regarded the roof of the East Greta Colliery as an exceptional roof; I have had experience in other collieries as overman and under-manager; notwithstanding that the roof was exceptionally good, the tunnel was boxed with timber in a similar way to the model before the Court; but this has not been sufficient to cope with the roof in the No. 1 tunnel.

By Mr. Millard: We have had caps broken above the extension in No. 1 tunnel, and other caps have been bent; these bent and broken caps have been taken down, and when these caps were taken down, the roof stood; the slabs were not bent or broken where the caps were bent and broken; I have seen sills bent and broken there likewise; I have seen many of these broken; we have had trouble with the bottom in No. 1 tunnel; the bottom heaved up; the road was lifted; the height of the tunnel was reduced by the bottom lifting; I should not say that the bent and broken caps that I removed were put in that way by the roof; it was done by the floor and sides; the swelling of the floor was the same all the way up the No. 1 tunnel; I replaced all the sills in the No. 1 tunnel; I did not replace all the caps; I had to replace sills in No. 2 tunnel for about 100 feet; I remember a cage breaking away in No. 1 tunnel before the extension was commenced; it carried away several sets; I should think about seven or eight sets it carried away; the roof did not come down when the sets were carried away; the sides and floor moved where the sets were carried away; this would be evidence that the timber held the sides and floor in position, not the roof; the sets are 8 feet apart where this took place, so that about 50 feet of sets were carried away; we boxed up the No. 1 tunnel with timber, as shown in the model, to hold the roof, sides, and floor; had the sides and floor been as good as the roof it would not have been necessary to timber; there is a part of the No. 1 tunnel without timber; this part is between the surface and No. 1 level; where the fall I spoke of in the Scotch heading was the pillars had been all taken out, except the two bottom bords in the Scotch heading, jig, that is in No. 1 bord on each side of the jig; the falls took place after drawing the pillars and tops.

By Mr. Bowden: There was an ample supply of timber always kept in the mine; we always got what was necessary; the timber was considered to be good; the work ordered by the company was required to be done safely; expense was not studied to the detriment of safety; I did everything that was necessary to the safety of the men and the mine.

By Foreman of Jury: When I went down the tunnel after the accident I found the sides still standing; I believe that there was some side pressure, but that did not make it certain that the sides would come in; I think that the slabs being under the sills, the pressure from the floor was greater; I did not think the slabs under the sills would be a benefit some time ago, and, from the experience of it, I do not think so now; I think that had additional timber been put into the No. 1 tunnel it might have prevented the fall.

By Mr. Millard: The bottom of the old No. 1 tunnel was not slabbed.

By Jury: In this particular place, on account of the troublesome floor, the slabs were put in at the bottom; the model is a correct specimen of the No. 1 tunnel as regards the timbering, with the exception that in the model there is a string piece on the end of the caps; I have seen a Government inspector in this tunnel; Mr. Thomas and Mr. Heyes measured the work in the extension of the No. 1 tunnel; I do not know how often it was measured; when working-places have been examined by the deputy I have not seen the name and date put in the bord or face; I do not remember acquainting

acquainting Mr. Thomas of falls having taken place in the mine; I do not consider it is my duty to acquaint the manager with any falls that I have seen; I was getting pillars out when the falls took place in the northern side of the No. 1 tunnel; we had the jig drove from the top level to the lower level.

HENRY CARTWRIGHT.

Sworn and made at West Maitland, this 13th day }
of January, 1899, before me,— }
GEO. C. MARTIN, Coroner.

Inquest adjourned, for the purpose of obtaining further evidence, until 10:30 o'clock a.m. on Tuesday, the 17th day of January, 1899, at the Court-house, in West Maitland, the jurors being bound over and warned of time and place of adjournment.

GEO. C. MARTIN, Coroner.

Dated at West Maitland, this 13th of January, 1899.

Inquest resumed, in pursuance of adjournment, at 10:30 o'clock on the 17th day of January, 1899, at the Court-house in West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizance, the examination of witnesses was proceeded with.

GEO. C. MARTIN, Coroner.

Dated at West Maitland, this 17th of January, 1899.

This deponent, *Henry Cartwright*, recalled, on his former oath, saith as follows:—We never put a jig the same distance apart from another jig; we considered the distance between the jig we started and the No. 1 tunnel; we consider the thickness between the No. 1 tunnel and the jig, but I do not remember the thickness of the pillar; I consider it my duty to know the thickness of the pillar, on account of it being the main tunnel of the mine; we did not work the tops and pillars from the first jig; I cannot remember the distance we worked the pillars from that jig; the time was six or seven years back; we drove another jig further in than this jig, and it was between these jigs that we took the tops and pillars out; we did not continue to work the tops and pillars further in the workings; we worked them on the opposite side, also in a similar manner to those worked on the north side; we did not continue to work them further south; we worked all the pillars out in the Scotch heading, except those I have previously mentioned; I know some of the men who worked those pillars; they were named Joe Hallam, John, and David, and William Haddow; neither of these men are working in the colliery now; I know of a place being driven at right angles between the two seams; it was in the Scotch heading, the south side of No. 1 tunnel; a fault occurred that made us put in this drive, and the distance driven I cannot remember; I know it was measured; I did it myself; a Mr. Hughes, I think, can give you particulars of the distance; I cannot say how long this Mr. Hughes was working at it, for, if I remember rightly, it changed hands; Mr. Hughes was in that drive at the time it was being driven; if I remember rightly, it was Jim Allen who finished the drive; I cannot remember who started, or who finished it; by sounding them the sides seem different to what they did when driven through; they, however, look the same; if the side pressure was so great as to break a 6-inch bar, it does not necessarily say that it would bring about a fall from the side; that pressure would not necessarily show the coal on the side to be broken.

By the Foreman of Jury: There are no splintered caps where the fall occurred, as far as I remember; the clearing of the pillars in the Scotch heading took place about four years ago, I think.

By Mr. Millard: We tried to cut the roof in the old No. 1 tunnel to get the additional height, but did not succeed in getting the height, because to do so we must have commenced to blast, and Mr. Thomas would not allow this; the roof being hard conglomerate would have required blasting; no pillars were taken out to the north of the extension of the No. 1 tunnel; it was all virgin coal from the No. 1 tunnel north to the workings of the No. 2 tunnel; there were no pillars taken out south of the extension of No. 1, and no jigs, and no workings, except the starting of Cantwell's jig.

By the Coroner: The floor of the No. 2 tunnel kept good all the time we were sinking and timbering, and the sets were put in 5 feet apart all the way; in the extension of No. 1 tunnel, from the start the floor was found to be soft and troublesome, but we did not consider it worse than in the No. 2 tunnel, and thought 5-foot centres were sufficiently close to well support the roof.

By Mr. Millard: The floor of the No. 2 tunnel is good now, and the floor of No. 1 is good now, and they have been kept good by timbering; age and time affect the floor; they make it lift, but in about ten years or so the floor would have settled; I should say that in a couple of years the floor would begin to settle; the old No. 1 tunnel was finished to the No. 2 level about seven years ago, and the No. 2 tunnel has been finished about two years, if I remember rightly.

By Mr. Curley: This stone I call hard conglomerate that I have now in my hand; but this I now hold, marked B, is harder; and this stone I now hold I call fine conglomerate, and is as hard as this that I looked at first; one is, in my opinion, as hard as the other; the piece of stone I see marked D is also a conglomerate, and is as good stone as the others, the fine and hard conglomerate; I would not be surprised to know that the first piece of stone you put in my hand came out of the No. 1 tunnel; I know the overcast; it is on No. 2 level; I know a door there, not far away; I have examined the roof there; this door is about 30 yards from No. 1 tunnel, on the north side; I have noticed the roof close to this door; it is composed of conglomerate; the first foot might be soft from fretting, but at the back of that it would be hard conglomerate; I call this stone I now hold a very fine conglomerate; it is soft now, from exposure; I would not swear that it came out of the East Greta mine; I would not be at all surprised to hear that this stone came from near the door mentioned; this other stone is a fine blue conglomerate; possibly it came from the East Greta mine; you can see some of this stone mixed in the conglomerate; this stone may have come from the floor; I cannot say; I know the position of the dam, it is about 40 yards from the south side of No. 1 tunnel; my attention was never called to any soft stone in the tunnel by anyone; when I went into the tunnel after the fall the stone that had fallen had mostly gone down the tunnel; there might have been a shovelful of dirt between the sills where the fall occurred, but no stone; we reckoned there were about six or seven sets knocked out; I saw a good part of the timber that was recovered from the tunnel; I noticed cap-pieces broken; I cannot say how many; I also noticed props broken; they were both broken and splintered; we have relaid the rail-line from where the fall occurred; the rails were broke away; they had separated, and partly gone down the tunnel; to make the connection complete we had to put every pair of rails down afresh; some of the sills went down with the rails, as the rails are laid on the sills; we fasten them together with fishplates, bolts, and dogs; I cannot say how many sills went down; I saw some of the material that was filled out of the tunnel; it was pretty lumpy; it had to be broke up to lift it into the alligator; the largest piece would be about 4 feet one way, 6 feet one way, and 2 feet one way; looking down the tunnel this piece would be (say) 2 feet thick; there was not much fine stone, it was filled away; I think that there were many tons of small dirt; the stone said to be mudstone I should call a soft blue shale; the stuff carried down the tunnel, I should call this soft blue shale; I cannot say what was the composition of the large stone I mentioned; we had to break some of it to get Barnes's body out; I should say that the stone that composed the fall generally was this conglomerate (marked D), only browner, a soft blue shale, and some other sort of grey shale, and some ironstone.

By Mr. Millard: The action of water on the conglomerate makes it fret and crumble, and air has something of the same effect.

By Foreman of Jury: I cannot say if soaking this conglomerate in water for twelve months would make it soft, but I should say that in five years' soaking it would go soft; the fine conglomerate would go soft first.

By Mr. Curley: The overcast was built since the extension was started; I cannot say when; I should say that it was a month at least before the fall; in driving the overcast the men had to blast the whole way; I think that some of the drill-holes can still be seen; I do not think that it has fretted much.

By Mr. Markham, Jurymen: The No. 2 level is not in good repair between the No. 1 and No. 2 tunnels; there are ways of getting out of the tunnel if the mouth was blocked.

HENRY CARTWRIGHT.

Sworn and made at West Maitland, this 17th }
day of January, 1899, before me,— }
GEO. C. MARTIN, Coroner.

Inquest

Inquest adjourned, for the purpose of obtaining lunch, until 2:30 o'clock p.m. on Tuesday, the 17th day of January 1899, at the Court-house, at West Maitland, the Jurors being bound over to appear at that time and place of adjournment. Dated at West Maitland, this 17th of January, 1899. GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at 2:30 o'clock on the 17th of January, 1899, at the Court-house at West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The Jurors having answered to their recognizances, the examination of witnesses was proceeded with. Dated at West Maitland, this 17th of January, 1899. GEO. C. MARTIN, Coroner.

This deponent, *Ernest March*, on his oath, saith as follows:—I am a hay-presser at present, and reside at West Maitland; I knew the deceased man, Alfred Moncrieffe.

By Mr. Tillet: I was at work in the East Greta Colliery; I had been at work there for about ten weeks at the time of the accident; I had been working at East Greta, on the surface, for about two years previously; I had been away, and came back and worked for ten weeks; I was working in the shift that came out at 3 p.m. on the 17th of November; I was working with Jack Griffiths and Ed. Parsons; I was working in the extension of the No. 1 tunnel getting coal; I noticed the roof; I noticed some of the caps bent and cracked; I saw the roof work in one place; this was at about a quarter of the way down from where the tunnel was commenced; the caps I saw were also about a quarter of the way down; I spoke to Griffiths; I asked him if it was not dangerous; he said he did not think it was; I did not speak to anyone else; I spoke to Moncrieffe, and Moncrieffe said that if something was not done to it they would not see him there much longer; he said this a few shifts before the tunnel fell in; Dick Barnes and Cronow were both present, and Ted Parsons and Jack Griffiths also; it was said at the bottom of the tunnel at the face; no one present said anything more about it; the roof was composed of conglomerate and slaty rock; the conglomerate was the same as the sample marked "F," and a piece spoken of by witnesses as fine conglomerate, and also something like the bluish stone marked "C"; I call this the slaty rock; a little rock came down in the tunnel at a time; both conglomerate and slate came down; I worked three shifts in the tunnel since the fall; I know where the fall took place; I believe the fall came away at about the part where I saw the bent timbers.

By Mr. Atkinson: I know the stone just over the coal; the stone was mixed; it was conglomerate, and dark slatish stone; I could not measure the thickness of the conglomerate; I cannot say how much of the stone was broken on top of the coal, but there was about 18 inches of conglomerate; about 150 feet of the tunnel was driven while I was working there; Jack Griffiths was the chargeman in our shift; he used to notice the roof, but he made no remarks about it; it was from the top of the tunnel to the face that he noticed; Griffiths examined going down and coming up; I worked also with Dave Lewis and Joe Thompson; I never saw water dripping from the roof where I saw the bent caps.

By Mr. Curley: The bent caps I saw were down from where the tunnel was commenced—the new part; it was 100 feet from the bottom level where I saw the caps bent and cracked; I saw them plainly and distinctly; I never counted them, but I believe there was four or five; I saw Mr. Thomas, the manager, there once on the Tuesday morning before the accident; he was at the face at the bottom; I only spoke once to Griffiths about the broken caps and the roof; I was at the face at the time working when I heard the roof work; I could hear the timber crack occasionally, and it was at that time I drew Griffiths' attention to it; I cannot say if anyone examined the tunnel before we went to work; I never saw anyone at the top of the tunnel who told us that everything was right; I saw slaty stone with the conglomerate; one time the slaty stone would be first; at another the conglomerate would be first; we had sometimes to chip the roof to get the sets fixed; that was how I came to see the stone; I went into the fall on the Saturday morning after the fall to work; I saw where the fall had taken place; I saw the rails on the left-hand side were bent out; I did not see them disconnected; they had not separated; I did not see that any part of them had gone down the tunnel; I never saw the under-manager down there while I was at work before the fall; we all went down the mine together when I worked with Lewis; I do not know if Lewis went down the tunnel to inspect before I went in to work; when Lewis went down with us he appeared to be making an inspection of the tunnel; I cannot say if Lewis made any other inspection during the shift; at times Lewis was working in the face, and at times he was timbering; when I say Lewis was working at the face he was getting coal with a pick; the sills appeared to be in the same position where the fall had occurred as they were before the fall.

By Mr. Millard: I noticed the bent caps going down and coming up; I was sitting in the skips; it was about five or six weeks before the fall that I noticed them; I spoke to Griffiths about it a few shifts before the fall took place; that would be about five or six weeks after I had noticed them; the caps were bent about a foot; when I first noticed them they were only bent a few inches; it took five or six weeks to make them show a foot; one could hardly see how they progressed, but they did; I had to go up and empty the cask by baling out into the alligator; you could see the bent caps from the cask in the daytime; they were about, I think, 140 or 150 feet from the cask—up from the cask; the casks would be about 120 feet from the face, I think; I cannot fix the distance by anything, but I believe I am about right in my impression; I saw some caps bent lower down; I could not say how many, but perhaps about three or four; these caps were about halfway between the first lot of bent caps and the face; this second lot were bent 3 or 4 inches; I did not speak to anyone about them; I noticed these caps about two or three weeks before the accident; they seemed to get bent more slowly than the first ones; these caps were a bit above the cask; you could see them from the cask; when I say I heard the roof move I mean I heard the timber cracking; it was loud at times; you could hear it at times above the noise of those working; what I heard was, I believe, the top, not the sides; my reason was the weight coming on the timber, but I did not see the weight come on the timber; I do not know that the sides pressing in could cause the top timber to bend; I do not know that the bottom timber pressing up could affect the top timber; when I was at the face I was about 250 feet to 300 feet from where the fall was, so that I cannot say but what I heard of timber cracking may have come from other places; I did not notice any shifting in the slabs, but they were sinking down with the caps; on each of the bent caps the slabs had sunk down with the caps; I did not notice if the slabs had sagged down between the caps; there was a distinct crack in the caps; in speaking with Griffiths, Moncrieffe being present, I spoke first; I asked Griffiths if he thought that there was any danger of the timber coming in; I thought myself that it was dangerous; I said to Griffiths the bent and cracked timber was dangerous; Griffiths said he did not think it was dangerous; it was on another occasion that Moncrieffe spoke; it was after that other; it was Moncrieffe who began the conversation; I know the band on top of the coal; it is composed of conglomerate; I do not see any stone here like the stone I have seen in the band except the piece marked "C"; there is a patch on it like the band I mention; the band would be only 2 or 3 inches thick; the band was as black as the coal; I could tell it from coal, because it was harder; there was nothing between these two; I would not be surprised to hear that there is a grey band between the coal and the conglomerate showing there now; it was the first time I had been down below that ten weeks I worked.

By Mr. Bowden: I believe other men saw both the lots of bent cap-pieces; they did not speak to me about the two places that I remember; when I went down Lewis met me at the mouth of the tunnel; at times he met me there, and at times I was there first; at times we got out some of the floor with the coal; I believe that 2 feet of the floor had to be taken out, and we took out this 2 feet in our shift; I have discussed this case outside, but I know I have not said anything about the timber; I have spoken to those men who worked in the tunnel with me.

By the Foreman of the Jury: I have never spoken to any of the jurymen; when I spoke to Griffiths, and called his attention to the caps being bent, the slabs were sagged down on the caps; at the same time we were down at the face, and I am sure that Griffiths knew what I meant as regards these being dangerous; during the whole five weeks I felt that there was danger, but I trusted in those whom I thought had better knowledge; I am not now working at East Greta Pit; I would not mind going back to work at East Greta; I was only on the day shift about a week and a half; I did not see the Government Inspector down the mine; I never mentioned the cracking to Mr. Thomas, the manager, but I mentioned it to Mr. Lewis, and he said he did not think the timber was dangerous.

By Mr. Markham, Jurymen: I noticed the sills all down the tunnel, but I did not see any bent; I did not take particular notice of the props or logs; I cannot say if they were bent; I do not think they were.

Sworn and made at West Maitland, this 17th }
day of January, 1899, before me,—

GEO. C. MARTIN, Coroner.

ERNEST MARCH.

This

This deponent, *Ernest March*, recalled, on his former oath, saith as follows:—*By Mr. Millard*: I mentioned about the bent caps to Lewis at different times; it was while we were on the shift together; I did not mention it as soon as I saw it bend; it was a week or two after I saw it; I mentioned it while we were going up and down the tunnel, and also while we were at work at the face.

ERNEST MARCH.

Sworn and made at West Maitland, this 17th)
day of January, 1899, before me,— }
GEO. C. MARTIN, Coroner,

Inquest adjourned, for the purpose of obtaining further evidence, until 10:30 o'clock, on Wednesday, the 18th day of January, 1899, at the Court-house, at West Maitland, the jurors being bound over and warned of time and place of adjournment.

Dated at West Maitland, this 17th January, 1899.

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at 10:30 o'clock, on the 18th day of January, 1899, at the Court-house at West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizances, the examination of witnesses was proceeded with.

Dated at West Maitland, this 18th of January, 1899.

GEO. C. MARTIN, Coroner.

This deponent, *Ernest March*, recalled, on his former oath, saith as follows:—I mentioned it to Lewis two or three times; Joe Thompson and Weller were on the shift with me; they went down in the alligator with me, and they would hear me then mention it to Lewis; I could not say where or what part of the journey it was when I mentioned it, but I mentioned it when the caps were in sight; the caps were plainly bent and cracked; those with me could see these caps as well as I could; these men spoke of the caps at times when on the alligator going up and down; I heard the others speak of them first; I cannot say who spoke first; they spoke about them a week or two after I saw them bent; I did not hear them say they were dangerous; Lewis spoke about them several times before I did; I did not hear Lewis speak of the lower lot of bent caps.

By one of the Jury: I heard Mr. Thomas tell Mr. Griffiths that he had been speaking to Lewis about doing something to the timbers; this was on the Tuesday morning before the fall; Mr. Thomas viewed the bent timber on the Tuesday morning when he was down.

By Mr. Curley: Moncrieffe said he thought it was dangerous, and if something was not done to it he would not stay; I understood this from what he said; I believe that Mr. Thomas went down to inspect these timbers; I saw him stop there some time, and that led me to think he was inspecting the timbers; I did not go up the tunnel to see him, but I saw his light; I think at that time he would be about 250 feet from the face; Mr. Thomas said to Griffiths, I was speaking to Lewis about the cracked timbers, and Griffiths made some remark, but I cannot say what.

By Mr. Millard: Mr. Hayes, Ted Howard, Ted Parsons, and Griffiths were all together at the face when this was said; I believe at that time Mr. Thomas was measuring and examining the tunnel; Griffiths was holding the light.

By Mr. Tillet: We used to converse of matters when in the alligator; those were casual conversations about certain matters in the mine; no one seemed to attach much importance to the timber except Moncrieffe; the men seemed indifferent to it.

By Mr. Curley: It appeared to me that the men in the tunnel considered that the timber should be looked to.

By the Foreman of Jury: Of the men there, Ted Parsons and Ted Weller were two of them who said that they thought those bent timbers were dangerous; I never saw a false set used in that tunnel; I saw slabs put in the roof to hold it up before the permanent timber was put in; these timbers were used in the present face at the bottom where we were working; as far as I know those were only used in places where the roof was bad; the slabs were let into the face to hold up the roof, and the sets were put in underneath them if there was room; if not the slabs were taken out.

ERNEST MARCH.

Sworn and made at West Maitland, this 18th)
day of January, 1899, before me,— }
GEO. C. MARTIN, Coroner.

This deponent, *Edward Parsons*, on his oath, saith as follows:—I am a labourer, and reside at Morpeth; I knew Albert Moncrieffe.

By Mr. Tillet: I was in the shift with Griffiths and March the day before the fall; I left the bottom about 3 p.m.; I have worked at the East Greta Colliery since last February, all underground; I had been down mines, but had not had any experience in mining; I think I was at work in the extension of the No. 1 tunnel for about four months; I noticed in that tunnel broken timber; they were cap-pieces; they were about 100 feet down from the lower level; I first noticed one of these broken cap-pieces about six weeks before the big fall; my two mates were with me sitting at tucker, when I heard something crack, which I took to be a cap-piece; those two mates were Pike and Griffiths; we conversed about it; I asked Griffiths what it was; I said I thought it was a sill, and Griffiths said it could not be, as when those sills go there will be something wrong; the caps went on working and breaking; it was about on the 11 o'clock shift that I noticed the caps going more than at other times; I could not say the reason for noticing it so particularly at these times, but it may have been the dampness of the air in the early morning; I have heard Dan Gronow and Albert Moncrieffe speak of the roof as working; when we would get to the face, if there was any bad roof it would be noticed, and one would say, "Look out for the bit of roof," mentioning a certain part wherever there might be a piece likely to drop out; I refer to the face all the way through; one morning when we were down at the bottom, Dan Gronow said that the biggest part of their shift then had been in the man-holes on account of the timber above them working; I heard Moncrieffe speak about it; he said that unless something was done to the timber, that he would not come in to work any more; I have often talked to Griffiths about the timbers; March was with us sometimes, and sometimes Lewis; when a set of timbers wanted to go in, he would be with us also; the roof was composed of a very soft soapstone and some conglomerate, and the stone; the large piece called the bluey-slatish stone is most like what I call the soapstone; the conglomerate that was there resembled the stones marked "D" and "F"; before a set was put in, slabs were put sometimes from the last cap to the coal in the face to prevent bits of roof from coming down; when the sets were put in, these slabs were sometimes lowered down to the caps, and at other times they were left up.

By Mr. Atkinson: I noticed five or six broken caps on the last shift that I worked before the accident; I suppose these caps were down a foot from their proper level; as a cap lowered down, the slab lowered with it; the slabs were not broken, nor were the sills bent or broken; I do not think that the props were broken; I have been down the tunnel since the fall frequently; I worked in seven or eight shifts after the fall; the fall occurred where these caps were broken; I know, because when I went down half an hour after the fall, I saw that the broken caps that I had formerly noticed had been carried away; I do not recollect mentioning this to anyone, as the most of the time I was down that time I was alone; I was working on the level at the rafter wire; I came out at 6:30 in the afternoon; I cannot remember mentioning it that night; I remember a conversation about renewing the bent caps; I heard it on the Tuesday before the fall; it was at the face where we were at work; Ernest March, Jack Griffiths, Mr. Thomas, the manager, and a labourer whose name I do not know, were present with me there at this conversation; I do not remember who commenced the conversation, but Mr. Thomas said to Griffiths that he was going to leave that timber up there, signifying the bent caps, till the week end, so that it would not interfere with the contractors' work much; I never had to retire to a manhole when I was at work; we changed shifts at 20 feet from the face; we, that is Griffiths, March, and I, came down together generally; the charge man in our shift was supposed to be Griffiths; he made an inspection of the tunnel mostly as he was going down, by standing up on the alligator; powder was used in getting coal; the shots never disturbed the roof, to my knowledge, unless it was a shot in the top coal, and sometimes it would shake the roof and a bit of the roof would come away with the coal; the bit of roof that came away would be sometimes conglomerate and sometimes that soft stone I have spoken of; I have seen into the roof 6 inches above the coal.

By

By Mr. Curley: I have not fired many shots in working at that coal; Griffiths used to do that part of it; he might fire two shots in a shift; I bored some of the holes for the shots, and March bored some, and Griffiths bored some; these holes would be a foot off the roof; I never saw any exceptionally soft roof that I can say; the roof was fairly regular as far as I saw; with shots or without shots some part of the roof would fall; I have seen bent caps besides those I saw broken; there was more than one bent or cracked in the tunnel; these were below the broken caps, towards the face; on the Tuesday before the fall, at the time Mr. Thomas was speaking about the broken timbers, he said he hoped, by the next time he came down, the cage would be running; Griffiths replied to the statement made by Mr. Thomas, and said he hoped so too, and wished the tunnel was done then; sometimes I have heard the caps crack once or twice, and sometimes a dozen times; Griffiths would be present at these times; Lewis was with us on shifts occasionally, when we had timber to put in; I cannot swear if Lewis was present when the cracks were heard, but I expect he was there; after the fall I was down the tunnel as far as the last leg left standing; I noticed the rails; they were bent in all shapes; the first length was not disconnected; I noticed the sills; they were the same as they were before the fall pretty well all through the tunnel as far as I went.

By Mr. Millard: Since the fall I have been right underneath where the fall was; I know the band that runs between the coal and the roof; it is sometimes a black stone, or a sort of a black stone—a sort of dull black, not shiny like the coal; there was, at times, a small piece of grey band between the coal and the roof; it was something like the piece of stone here marked "H," and also like the piece of stone called "fine conglomerate"; the grey band would hardly be seen sometimes, at others it would go to an inch and a half, and sometimes it was in the coal; I have been told that stone like that was called "a fine conglomerate"; the roof was not hard nor soft—it was a patchy roof; the bottom was mixed too; the bottom had sometimes to be dynamited to remove it.

By Mr. Bowden: The bent timbers were lower down than the broken ones; there was more than one bent timber; the bent timbers were three sets below the broken ones; there were about four sets of bent timbers; these were standing after the big fall; I estimated that five or six or seven broken timbers were carried away by the big fall; the timbers that were bent were so for about 2 or 3 inches; I have never noticed any bent timbers below the other bent timbers that I have mentioned; a man must look carefully to notice timber that was only bent.

EDWARD PARSONS.

Sworn and made at West Maitland this 18th }
day of January, 1899, before me,— }

GEO. C. MARTIN, Coroner.

Inquest adjourned for the purpose of obtaining lunch until 2:30 o'clock on Wednesday, the 18th day of January, 1899, at the Court-house at West Maitland, the jurors being bound over, and warned of time and place of adjournment.

Dated at West Maitland, this 18th of January, 1899.

GEO. C. MARTIN, Coroner.

Inquest resumed in pursuance of adjournment at 2:30 o'clock on the 18th of January, 1899, at the Court-house at West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizances, the examination of witnesses was proceeded with.

Dated at West Maitland, this 18th of January, 1899.

GEO. C. MARTIN, Coroner.

This deponent, *Edward Parsons*, recalled on his former oath, saith as follows:—(*By Mr. Bowden*): I was generally at the face when I heard the caps cracking; I cannot swear that it was the broken caps that were working—it might have been other timber; I could form a good idea from where the cracking came by the noise it made; I was sometimes away about 120 feet from the cracking noise; this would mean that I was about by the cask at the time the timber was cracking above the cask; you could tell whether it was above you or to the right or the left of you; there are no other workings down there; the width of the tunnel, as I understand, was 14 feet, so that the crackings either right or left must have been within a very few feet of me; the first crack seemed about 20 feet from where I was sitting; I was on a sill; I reported the cracking to Mr. Griffiths; I could form a pretty good idea of where the cracking I heard at the face came from by where the sound came from; I could not tell how far it came down the tunnel; I said it was the caps, because that timber was the only timber that did work.

By Foreman of Jury: I only mentioned the cracking of the first caps to Griffiths; I did not go and examine, because Griffiths said it was nonsense; I thought it was a sill; I am sure that Griffiths saw the broken caps, and also the slate bearing and following the caps down, and I said several mornings to Griffiths that they were looking bad; the legs of the sets had come away with the cap pieces, but the side coal or the ribs stood.

By the Jury: I noticed the sills in the extension of No. 1 tunnel; I never noticed any bent; had there been we could not have travelled in the alligator, I think.

EDWARD PARSONS.

Sworn and made at West Maitland, this 18th day }
of January, 1899, before me,— }

GEO. C. MARTIN, Coroner.

This deponent, *Rudolph St. Vincent Heyes*, on his oath, saith as follows:—I am an engineer, and reside at South Maitland; I knew the deceased, Albert Moncrieffe.

By Mr. Tillet: I am the engineer at East Greta Colliery, and I remember the fall that took place there on the 18th of November, last year; I was in No. 1 tunnel about ten minutes after the fall; I went down to the edge of the fall; I was in that tunnel on the Tuesday previous to the fall; I was on that day measuring the distance from the second level down to the face; Mr. Thomas was with me, and also Edward Howarth; I saw John Griffiths, Ernest March, and Edward Parsons there; I saw the timber as I was going down on the Tuesday; the timber was all sound; there was one or two bent caps at about 130 feet from the face; I saw no other bent timber but these caps; I did not hear any conversation between Mr. Thomas, the manager, and Griffiths about the timber; Mr. Atkinson has not since the fall said anything to me about how the timbering should be done, but he has asked me if we have put any defective timber in; I answered, "No"; Mr. Atkinson has not written to me on the subject; I believe the stone on the table, called by me mudstone, came out of the roof of the No. 1 tunnel—it is now marked "J"—of the East Greta Colliery, at the time of the big fall; I gave this stone to Senior-constable Brown; I gave him also another piece of stone; it came out from the fall.

R. ST. V. HEYES.

Sworn and made at West Maitland, this 18th }
day of January, 1899, before me,— }

GEO. C. MARTIN, Coroner.

This deponent, *Robert Brown*, on his oath, saith as follows:—I am a senior-constable in the Police Force, and reside at and am stationed at West Maitland; I received some stone from Mr. Heyes; I got the piece of stone marked "J," and also this piece marked "K," and I picked up at the mouth of the tunnel two other pieces of stone marked "I," which Mr. Heyes said had been exposed to the weather; I found it outside, lying at the mouth of the tunnel.

R. BROWN.

Sworn and made at West Maitland, this 18th }
day of January, 1899, before me,— }

GEO. C. MARTIN, Coroner.

This deponent, *Rudolph St. Vincent Heyes*, recalled on his former oath, saith as follows:—(*By Mr. Atkinson*):—The distance that the tunnel measured was 565 links from the second level down to the last sill, making it, in fact, 370 feet; my duties took me down the tunnel once a week; my duties were to report on the general state of the tunnel, including the condition of the timber and the timbering; a few sills were slightly bent besides the one or two caps I have mentioned; these sills were 120 feet from the face; the sills were bent within a few feet of where the caps were bent; I have been down the tunnel frequently since the fall; I kept an account of the progress of the work, as shown on the plan; I have seen the timber brought out since the fall; two or three sills were knocked out, I presume, by the fall; I mean that they were knocked out of their position altogether; all the rails had gone down; the roof, including the caps, coming away, carried

carried the sills and rails with them ; I located the bent caps from the dam being there and the water-casks also being there ; I did not count how many broken caps came out among the timber ; I consider ironbark a good timber for the purpose that we used it ; I have never tested the breaking qualities of a bar of ironbark ; our method of signalling in the tunnel is by electricity ; the signals are carried to within three or four sets of the face ; the engineman was in attendance at the handles when the accident happened ; there is about 4 ft. 6 in. between the back end of the cage, its highest point, to the under side of the caps, and at the sides 18 inches at each side.

By Mr. Curley : I examined the machinery and the ropes in connection with the working of the tunnel ; I examined the boilers also ; I made the examination once every day ; the boilers have safety-valves and steam-gauges ; I made my report once a week ; I never said anything in my report about bent caps ; the date of my last report was on the Wednesday, the 17th of November last year ; this was the daily report ; the report books were kept in the outer office ; I considered it was my duty to report any defective timbers and show the defects in the report ; I made my examination during the day ; I made my last examination before the accident on the morning before the accident ; I am quite sure that I only saw two bent caps ; they were bent about 3 inches ; I did not see any broken caps ; I did not see any splintered caps ; I have not made any examinations in the No. 1 tunnel the same as before the accident, but I made examinations during the work of finding the bodies ; I did not consider it part of my duty to count the bent or broken caps after the fall, but I saw a good few after the fall ; I did not make any report of those I found ; we could only get 127 feet down from the level ; I did not see any bent or broken caps in this 127 feet ; I am certain of this ; for this 127 feet down the timber is all sound ; the top end of the fall was 127 feet from the level ; during the progress of retimbering the tunnel I saw a number of broken and bent caps ; I account for this quantity by the fall hitting them and knocking them out of position ; some of the legs are knocked out of position and yet the caps are up ; I did not make any report of this in the report book ; all of the timber was fresh from the bush ; I have a fair knowledge of timber ; I noticed sap in the timber ; I never saw round timber without sap—that is, green timber ; I cannot say how much sap there is circling in that timber ; I have examined it ; I never suggested that stronger timber should be used for this tunnel ; I was at the face on the Tuesday that the manager was there, but I did not hear any conversation about timbering the tunnel at the week end ; no conversation could have been carried on without my hearing it ; Lewis never mentioned to me at any time about any bent caps in the tunnel, neither did the manager or Griffiths mention anything of it ; it is possible that other men might see more than I would ; Mr. Thomas gave the order for the timber to the bushmen ; I looked on it as part of my duty to see whether the timber supplied was defective or otherwise ; I have discarded timber, but not for any defects, but only for being too small—under the standard size ; I believe it was for props ; I had the dimensions from Mr. Thomas—8 inches diameter at the small end for the legs, caps, and sills.

By Mr. Millard : I was at the face on the Tuesday, walking up and down the tunnel ; I waited there some time at 132 feet from the level I was measuring at the time ; there were no broken caps near me while I was sitting that day ; had five or six caps been broken and slabs sagging down on them, I would not have sat there ; I would have seen any bent or broken caps, because I kept a good eye on the state of the tunnel.

R. ST. VINCENT HAYES.

Sworn and made at West Maitland, this 18th day }
of January, 1899, before me,— }
GEO. C. MARTIN, Coroner.

Inquest adjourned for the purpose of obtaining further evidence until 10-30 o'clock on Monday, the 23rd day of January, 1899, at the Court-house, West Maitland, the jurors being bound over and warned of time and place of adjournment.

Dated at West Maitland, this 18th day of January, 1899.

GEO. C. MARTIN, Coroner.

Inquest resumed, in pursuance of adjournment, at 10-30 o'clock a.m. on the 23rd day of January, 1899, at the Court-house, at West Maitland, in the district of Maitland, and in the Colony of New South Wales, to further inquire touching the death of Albert Moncrieffe. The jurors having answered to their recognizance, the examination of witnesses was proceeded with.

Dated at West Maitland, this 23rd day of January, 1899.

GEO. C. MARTIN, Coroner.

This deponent, *Rudolph St. Vincent Heyes*, recalled on his former oath, states (*in answer to Mr. Millard*) : I saw one or two sills bent in the tunnel ; they were not bent to any great extent, but slightly ; the bending of the sills in that way would not prevent the skips from running ; after the fall the road was disconnected from the tunnel ; fourteen or fifteen pairs of rails were knocked down the tunnel ; that would be from the top end of the fall ; a person from the top end of the fall could see that these rails were gone ; the rails were bent and twisted in all shapes ; some of them are at the pit mouth now ; on the Tuesday before the fall the manager made a stay at the second level ; we stayed there for some considerable time before we went down ; he fixed his instruments there ; after he had taken the angle I went down to measure it, and he stayed at the level—the bottom level ; I walked down to the bottom, then back to within 2 chains of where the manager was staying ; the manager did not leave the bottom level while I was measuring down the tunnel ; I waited at the 132 feet point ; the manager did not stop at that point either on his way up or down ; I was with him the whole time ; he did not stop under where the big fall took place to examine the timber ; he did not stop at all ; the men were stopped working from the time we got down to the level ; Griffiths was holding a light for the manager ; the bent caps I saw before the accident did not indicate any danger ; it is not an unusual thing to see timber bent to the extent that I saw those bent ; I attribute the bending of this timber to the bottom pressure and the end pressure—the pressure on the end of the caps ; I have seen caps bent in a similar way from side pressure, but not in this mine ; it was in the old Greta mine ; they were bent in that way for years ; I know that one was taken out eventually ; the roof did not come down on that being done ; one could not notice that the sides had come in ; there was no fall from the sides ; I have a general knowledge of the roof in the East Greta mine, and of the tunnels in particular ; the roof is conglomerate ; it is a good roof, and had always proved itself so ; the method of timbering and timber employed, in my opinion, could not be bettered ; I cannot think of any precaution that could have been taken to prevent the accident ; the bent caps I saw were 70 feet from the lower edge of the big fall ; there were several slight changes in the grade of the tunnel there ; there was a change in the grade about 130 feet from the face ; that would give the timber the appearance of coming down more so than where the grade was different ; the tunnel begins to dip more at that point.

By Jury : The sills would have to be bent to the extent of 8 or 10 inches to affect the running of the cage ; I attribute the accident to the soft mudstone giving way through the action of the water ; that has proved the roof to have been not solid—not so good as I expected to find it ; the sills that were bent were 120 feet from the face ; the caps were bent at about 130 feet from the face ; the bent sills had nothing to do with the bent caps ; there were not four or five caps bent where I saw the two ; it would have been impossible for four or five to have been bent without my seeing them ; I replaced the legs that were knocked out. (*Witness marks on plan where the legs were knocked out.*) I could see a cap bent 120 feet below the fall after the fall had taken place ; if fresh timber had not been put in where the caps were bent another fall might eventually have taken place ; I used to revise the report book every night ; I never saw it reported that the shift on one night had passed most of their time in the manhole through the dangerous condition of the tunnel ; the man in charge of the shift would be neglecting his duty if he did not report such a circumstance.

By Coroner : Daniel Grono had been working in the colliery for two years and more as a miner ; he had charge of the shift in which Barnes and Moucrieffe worked.

By Mr. Curley : I never suggested the strengthening of timber by placing cross-pieces from the sides to the caps ; the skips would not have got through if that had been carried out ; the skips do not go into the cage ; they go on top of the cage ; there would be a space of about 8 inches between the skips and the bottom end of the caps when the cage was thus loaded ; the sides of the cage run within 18 inches of the props ; the skips run the full length of the cage ; there would be no space to put supports from the legs to the caps under those circumstances ; I receive my instructions as to the working of the mine from the manager ; the manager has never suggested to me the bricking of the tunnel at any part of it ; I have never suggested such a thing to him, not even where this fall took place ; the rails are 5 yards long ; fifteen new ones were put in ; the pieces of timber I have spoken of as going down the mine did not include the slabs ; they would have to be added to those ; there were about 1,000 slabs and four sills.

By

By Juryman: There would be about 8 inches between the skip and the caps when the caps were plumb; the cage could not work with the cap bent 12 inches; the cage Mr. Curley referred to was not working at the time we repaired the tunnel.

By Mr. Curley: A sinking skip was working when the repairs were being effected before the fall.

By Mr. Millard: If the caps had been bent down 12 inches the tunnel would not have been of any use for the purpose for which it was intended.

By Juryman: When the hood was on the cage there would be about 18 inches space between the top of it and the cap; the hood does not go over the last skip.

R. ST. VINCENT HEYES.

Taken and sworn at West Maitland, this 23rd day
of January, 1899, before me,—

GEO. C. MARTIN, Coroner.

This deponent, *John Griffiths*, on his oath, states:—I am a miner, and have been employed in the East Greta Colliery; I knew the deceased, Moncrieffe; I was in charge of the shift that came out at 3 p.m. on the 17th November last; I had with me Ernest March and Edward Parsons; I was one of the party sinking the tunnel; I commenced about the end of June or beginning of July last; I know where the big fall has taken place in the tunnel; I did not see any bent caps where the fall took place; I saw some about 40 or 50 yards from the face; I cannot say to what extent they were bent; there were three or four of them; I have heard timber cracking in the tunnel many times; it is a usual thing when new timber is put in to hear it cracking; I believe some persons have spoken to me about the timber cracking; there were one or two of the men working with me who did so; the roof was composed of conglomerate; there was a band of soft blue-stone, running from 2 or 3 inches to about 6 inches; it sometimes extended right across the face; the piece of stone produced, marked "C," is what I call soft blue-stone; I saw Mr. Thomas in the tunnel on the Tuesday before the accident; he spoke to me; he did not speak to me about the timber; he spoke to me about the grade of the tunnel; I am positive he said nothing to me about the timber, to my recollection.

By Mr. Atkinson: I have worked in East Greta a little over five years altogether; I have worked as a miner during that time; I have not got coal off the bottom levels in No. 1 tunnel; I have not worked along the bottom level at any time; I have seen no falls in the mine where I have been working; while I worked in No. 1 tunnel, during the extension, I have seen the stone fall above the coal about 6 or 8 inches occasionally; that was the soft blue-stone I have referred to; the timber I have referred to as cracking was the timber last put in; it might be six or seven sets back; I have never heard cracking except in the timber near the face—never away from the face further than six or seven sets; I attributed that cracking to the timber setting into the joints; the timber is put right into the joints before the set is left; there would be some settling after that had been done, in my opinion; the pressure would cause that settling or grinding; that pressure would come entirely from the bottom and sides, in my opinion; I cannot give any opinion as to the cause of the accident; I cannot form any idea as to the cause of it; I had charge of the shift; my duties were to see that everything was right—to inspect the tunnel going down; I used to inspect it every day, both going down and coming out; none of the workmen ever expressed any danger to me owing to the timbering in the tunnel.

By the Coroner: It never struck me, while at work, that there was a weak place in the tunnel.

By Mr. Curley: I have had nearly thirty years' experience as a miner; I have not seen many falls in mines; when a roof is timbered and a fall takes place I suppose it is a sign of a bad roof; the bending of the timbers at the roof is not always a sign of a bad roof; it is sometimes; at other times it is an indication of side pressure; if there was side pressure in the tunnel I would expect to see the effect of it upon the timber; I would not expect to see the props bent; if there was extraordinary pressure I would expect to see the props bent; if there were bottom pressure, I would not expect to see the effect of it on the sills always—unless there was extraordinary pressure; where the caps were bent I did not notice any signs of bottom pressure; I saw no signs of side pressure; I could see no more indication of it than that the caps were bending; I cannot say when I first noticed a cap bending in the tunnel; hearing the cracking of the timber did not induce me to make an examination; I have not said that the men were speaking to me about these bent caps; I cannot say when I noticed any of the bent caps; I cannot say even approximately; it was over a week before the accident; I cannot say how far they were bent; they were not splintered or cracked; nothing in particular drew my attention to these bent caps; I just noticed them in the course of my ordinary examination of the tunnel; I had no conversation with Lewis about them at any time; I was off work about a fortnight or so before the accident; Thompson was working in my place; my two mates worked with him; no other man was put into the tunnel to fill my position; we had a spare man there at the time—Ernest March; I do not think it possible for there to have been other bent timbers in the mine without my seeing them than those I have spoken of; I saw those bent timbers before Heyes was in the tunnel; if I could not see any timbers bent that were bent they must have been bent to a very slight extent; I do not know whether any timber was replaced in the tunnel before the accident; on the Tuesday before the accident I asked the manager how much further the tunnel was to go, and he said he could not tell me until he had gone to the office; he said, "I believe you'll be finished by Christmas"; I replied, "I wish it was finished now, Mr. Thomas"; Mr. Heyes said, "Why, Griffiths?" I replied, "Because the water does not agree with me"; that was about all the conversation that took place; I do not recollect Mr. Thomas saying that he had been speaking to Lewis about the timber, and that they were going to do it at the week end; I heard him say nothing like that; I had no talk with anybody about the timbering; I am acquainted with all the deputies of the colliery; I never at any time to my recollection spoke to Lewis about the timbering; I never spoke to Mr. Thomas, the manager, about it, nor to Mr. Heyes, nor to the under-manager, nor any of the deputies; I was down the tunnel on the same day as the fall took place, not since; I went right down to where the fall had taken place; I stayed there about five or ten minutes at a time; Lewis Thompson and, I believe, Mr. Thomas were with me at the time; I noticed that nine or ten sets of timber had gone, and that the roof had fallen; I noticed nothing else; I noticed the road and the sills where the fall had taken place; the road was bent into all shapes, and two or three sills had been knocked out; the rails had become disconnected; I cannot say for what length; I could see very little; I have fair sight; I cannot say how far those rails had separated; I had sometimes to put up a slab in the face before I got my sets up; that was because sometimes there were 6 inches of coal there, and if we had good height we used to keep that up; if we were short of height we used to take the coal down and try to keep the soft stone up with slabs; we had to do that pretty often; I never had to chip any of the conglomerate to get my sets in, but the timber men did; they were Lewis and Thompson; I saw the stuff that came down when they did chip; there was sometimes difficulty in getting it down; it was always hard when the conglomerate had to be chipped down; I never saw any particularly soft patches of conglomerate; I have seen some softer than others; I would not say from that that the conglomerate varied in certain places; the bottom was, as a rule, soft; we have put a shot into it occasionally when we struck a hard patch; it was not soft where we had to do that; it was soft on the top sometimes, with hard layers underneath; I did not assist to clear any of this stuff out after the fall; some of the men spoke to me about the timbers cracking; they would listen, and ask me what was that, and if there was any danger in it; I always told them no, that it was always the same when new timber was put in; I often heard this cracking of the timber; the men did not often speak to me about it—not more than once or twice; I do not remember ever having heard the men speak about these bent caps; they never, as we went up and down, drew my attention to them, and said, "There's a bent cap there"; at no time did they do so; Gronow never spoke to me about them; I never heard the men mention a statement that had been made by Moncrieffe about these caps; I have never spoken to anybody about these bent caps.

By Mr. Millard: I know the East Greta Colliery generally; I have seen the roof in No. 2 from top to bottom, and considered it a good roof; the roof generally I considered a good roof; I drove the tunnel in No. 2; it was a very good roof there; the floor was not equally good; it was a soft floor; the roof in No. 1 appeared very much the same as No. 2; I worked all the way down carrying out the extension, and there was nothing about the spot where the fall afterwards took place to indicate in the slightest degree that it was a weak spot; the roof there appeared to be conglomerate, and the same all the way down, as far as I could see; wherever the roof was cut into it appeared to be conglomerate; the "pot-holes" referred to were small, and showed no break in the conglomerate, which appeared to be above them; the pot-holes were the same stuff as the bands, or something similar to them; the band was pretty nearly always between the coal and the conglomerate; sometimes it went out like a wedge; there were no caps bent where the fall took place; if there had been caps there bent down 12 inches, and the slabs sagging out with them, I must have noticed them; nothing was ever said by any of the men going up and down in the skips with me about the caps being bent there; March never spoke to me about broken timbers or bent timbers; Parsons never did; I remember the Tuesday before the accident, when the

manager came down; he came straight down from the bottom level; I cannot remember whether he stopped going up; I did not notice him do so; I cannot say whether he stopped underneath where the fall afterwards took place, and examined the timber; I did not see him do so; I have not had much experience of timbering; the other men did the timbering; before the accident there was nothing in the tunnel to indicate to me any danger; had there been I should not have gone down; it is not an unusual thing to see caps bent in the way I saw them; they were not bent to any out-of-the-way degree; I know the Greta Colliery, and have seen timbers bent there, and caps bent by side pressure; those caps have stood for a length of time, and some of them are standing there yet; I have often heard timber crack, and have attached no importance to it; I do not think the timber being green would make it crack more than seasoned timber.

By Mr. Bowden: The sills were not put on the ground, but a piece of wood was put under each end, from one leg to the other; it was hollow underneath, the bottom being cut from underneath it; we used to put in four or five sets of timber before we slabbbed the bottom; very often there would be 6 inches between the sill and the bottom; the soil was very often scooped out under the sill to allow for the bottom pressure; it used to swell up to the sills, and we would have to take a pick or a drill to break a hole under the sills again; that was on account of the swelling that took place after the sill had been put in; I have seen the sill sometimes spring back about an inch after we had taken the stuff out to put in the slabs; the slabs put in from the end timber to the face were only put in to keep the loose stuff from falling; that loose stuff would sometimes be the soft blue-stone and sometimes coal.

By Jury: Edward Parsons and Ernest March were my mates; there were nine men working on that extension altogether; since the tunnel was begun there have at times been ten men working there; Pike was the tenth man working there; I do not know how long it is since he left; he may have worked there for two or three weeks; I do not think Pike is still at the colliery; I do not know where he is; he left through sickness; the soft blue-stone and the pot-holes indicated no danger to me; I would not call the roof of the tunnel a patchy one; it was pretty regular; I know the meaning of the term "a live mine" as described by one witness; it means that there is a good deal of life in the coal—that it is cracking while being worked; that does not indicate danger, but is just what we like to see; Mr. Thomas did not mention Lewis' name to me on the Tuesday before the fall when he came down the tunnel; I heard March and Parsons give their evidence the other day, and heard them say that Mr. Thomas said he would see Griffiths and speak to Lewis about the bent timbers; Mr. Thomas did not say that; I am quite positive about that; he never mentioned such a thing; Mr. Thomas did not speak to me about the bent timbers and say he would have something done to them at the end of the week; March did not draw my attention to a bent cap with the slab sagging down upon it; the cause of the fall was something unseen; when we put the timber in we considered it quite strong enough to support the roof; I cannot say how far the fall went down the tunnel; I could not tell how far the rails had gone; I have seen the Government Inspector down the mine; I cannot say how often; I saw him more than once between June last and the time of fall.

Taken and sworn at West Maitland, the 23rd }
day of January, 1889, before me,—

JOHN GRIFFITHS.

GEO. C. MARTIN, Coroner.

Inquest adjourned at 1 p.m. till 2:30 p.m. this day for lunch.

Court-house, West Maitland, }
23rd January, 1899,—

GEO. C. MARTIN, Coroner.

Inquest resumed at 2:30 p.m. this day.

Court-house, West Maitland, }
23rd January, 1899,—

GEO. C. MARTIN, Coroner.

This deponent, *John Griffiths*, recalled on his former oath, states (*in answer to Mr. Curley*):—I think Grono was off work for a day or two before the accident; that was while I was at home; I cannot say how long ago that was; I believe a man named Kelly worked for him during that time; I do not know whether Kelly is working at the colliery now; I have never seen any fall to speak of in the colliery while I have been there; I have seen little bits of falls; they were along the level; that was not roof, but coal, as a rule; there might have been a little bit of roof occasionally, but nothing to speak of; it did not extend far into the roof; I have never been in a bord where they have taken the tops out; I have never had to go to a place where a fall has taken place; I have never had to clear out of the mine in consequence of falls.

By Jury: I was not a contractor in the No. 1 tunnel; I was paid so much per yard; I did not consider that contract work; I consider it was not contract work, because we took it to sink by the yard; there was no contract about it at all; it was an understanding between Mr. Thomas and ourselves; I was not appointed a deputy; I was appointed to take charge of the shift; I was appointed by Mr. Thomas; I do not think Mr. Thomas could have spoken about repairing the timber on that Tuesday without my hearing it; Lewis never spoke to me about that timber; Mr. Thomas could have stopped at the scene of the fall without my seeing him on his way up; I did not start to work at the face after he had left us; we could not do so till we got the skip; I watched him going up the tunnel; if he had stopped at the locality of the fall I might not have seen him; we used a couple of dynamite shots in getting up the bottom; I have not been speaking particularly to anyone about the accident since it happened; I have only spoken of it in a general way to those who have mentioned it to me; I cannot mention some of those to whom I have spoken about it; we only had nine men working in the mine except for a little while, when Ernest March worked as a spare man; he worked in the tunnel; Kelly worked in the tunnel; others besides those men mentioned have worked in the tunnel, but I cannot say who they were; I considered myself responsible to the men for wages; that would not be the means of my knowing who they were; if my mates had reported the tunnel as dangerous I had the power to withdraw them from the face to remedy that danger; Grono had the same power in that respect.

By Mr. Bowden: I have worked in other mines—all sorts of mines; I have heard cracking in them similar to that I heard in East Greta; any mine that has sets of timber will crack in that way; that cracking does not indicate to me that there is any danger or likelihood of a fall; one cannot locate the timbers from which this cracking emanates; I could not see Mr. Thomas when he was going up the tunnel; I could see his light, but not the part of the tunnel in which he was; that was because the grade of the tunnel altered to a very great extent; my mates at the bottom of the tunnel could not have seen him either; we could see the reflection of his light, but not the light itself, unless he held it up a good bit; when we were at the face I held the light for him; I held it in my hand, but I had a 5-foot stick on the sill with the light on top of it; I lifted the light as he required it to be done; I had to hold the light up on the stick before he could see.

By Coroner: It was the ordinary cracking of the timber that I took no notice of; anything out of the way I would inspect and look for the cause of.

By Jury: The tunnel was steeper in some parts than in others; the tunnel had not the same grade all through, as shown in the plan produced.

By Mr. Bowden: The cracking noise coming from the timber is not the same noise as that produced by the breaking of a 9-inch bar; it is nothing like it; the noise of the timber breaking is much louder than that of the timber cracking; I heard only the one noise—the cracking of the timber; I have never heard a 9-inch bar break in a mine; I have never heard any timber break.

By Mr. Curley: Timber is put up in a mine to prevent it from coming in.

Taken and sworn at West Maitland, the 23rd }
day of January, 1899, before me,—

JOHN GRIFFITHS.

GEO. C. MARTIN, Coroner.

This deponent, *David Lewis*, recalled on his former oath, states, in answer to Mr. Millard:—Where the fall took place there were no bent caps before the fall; it is not true that at that point there were caps bent down 12 inches, with the slabs sagging down on them; that was not the case in any part of the tunnel; March never spoke to me about bent timber when we were going up or down in the skip, nor did Parsons; I never heard any of the men in the skip say that the timber was bent or broken at the point where the fall took place; March spoke to me after the fall as to the position of the fall; he asked me at the pit top how far it was from the level down to the fall; I said, "I cannot tell you exactly; what do you want to know for?" he replied, "I should like to know, because very likely there will be an inquiry after this"; I asked, "Do you not know?" and he replied, "No"; I said, "Well, if you do not know you can tell them that you do not know"; he said, "I should like to know," and I answered, "Well, I cannot tell you"; March had been down between the time of the accident and this conversation; he was not down after that.

By

By Mr. Bowden: I have never heard timbers breaking in a mine; I was in Court when the witness Cantwell told the jury that Moncrieffe had slept in one night; I know that Moncrieffe did sleep at home one night; that was on the Wednesday night; on the Tuesday night, when I came up on top, Moncrieffe's brother-in-law was on top, and I asked him to call Moncrieffe; Gronow had told me that he was a man short; he said, "All right" to me; Moncrieffe went to work, calling at my house on his way; on Wednesday night he never turned up at all, and I spoke to the men about it; Thompson said, "You had better leave him sleep to night, it will be a lesson for him"; on Thursday night he turned up, and I said to him, "Hello, did you find yourself?" he replied, "Yes, I made sure of it to-night"; I said, "What did you do?" he replied, "I came to the pit top at 7 o'clock, and had a sleep in the little skip on top"; that is the skip that is now at the tunnel; he had slept there from 7 till a quarter to 11, so as not to miss the shift.

By Mr. Tillet: I used to talk to the men going down in the skip; sometimes we spoke about the mine; I did not pay particular attention to those conversations, and they would soon pass out of my memory.

By Mr. Millard: If anybody had said that the timbers were bent so as to be dangerous, I would not forget that.

By Mr. Curley: If anyone had said to me, "That timber has been cracking down there to-night," I would ask in a minute, "Where?" whether I put it in my report book would depend upon the sort of answer I would get; I have never heard the timbers "cracking" down there; but I have heard them "creaking"; to illustrate my idea of the difference between the two terms—if you sit on an old chair it will "creak," but if the leg breaks it will "crack"; I recollect being in the tunnel with the jury on the 13th instant, and being asked to get a sample of the stone from the roof; the exhibit marked "F" is what I got; I procured it from the roof of the tunnel down below the fall; it was a good bit below the fall; the stone had been in the water, but was not when I got it; I do not know how far the water came up in the tunnel after the fall; I look at the piece of stone marked "H"; I recollect being through the drift in the overcast near the door; I got a piece of stone there very much like that produced; if that piece came in the parcel that I sent to the Court that would be the piece of stone; Mr. Thomas was there; I did not hear him say there was a soft patch there; I call that stone a sort of conglomerate; the piece of stone now shown me came from the the floor [marked "M"]; I had sometimes to shoot the bottom; I had to fire three or four shots; I have never tested the roof by putting a hole up into it nor in any other manner; Thompson and I set all the timber that was put up in the tunnel; any defect in it I would hold myself and Thompson responsible for; Mr. Heyes and Mr. Thomas, the manager, inspected the timber besides Thompson and myself; sometimes they found fault with the manner in which the timber was set; Heyes used sometimes say they were not in line and point out how they ought to be; we had to rectify that; that was all Mr. Heyes drew attention to; Mr. Thomas once complained to me that the timber was not set at right angles to the seam; he said it was out, and I said it was not; he maintained it was; I asked him how much, and he said a couple of inches; eventually we had to get the square head to prove who was right; neither of us was right; it was an inch out; the timber had to be put right; at no other time was any complaint made to me by Mr. Thomas about the timbering; the under-manager did not trouble us very much there; I never measured the thickness of the sap in the timber; I do not think it possible for bent caps to have been in that tunnel without my seeing them; on the 13th instant, when down with the jury, I saw a number of bent and broken caps below the fall; I was working on the clearing out of the fall from shortly after it took place till the recovery of the bodies; on the 13th instant the jury could not get to the face for water; they were 60 or 80 feet from the face; I have been below that point myself since then, and have seen broken and bent caps along there; I noticed them after the fall as soon as we got the dirt clear from them, as we worked our way along; before the fall I only saw four bent caps; after the fall I have seen any number of broken caps; I cannot account for that alteration in the timber; I should say the roof had broken those caps, or some of them; the others may have been broken by the sides; I do not know the names of the men who were working with me in clearing the tunnel after the fall; there were three of the Genges, Jack Downey, Jimmy Hinney, Jack Lisman, Fred Cook, Ernest Nickson, a man named Jilson, and others whose names I cannot remember; I was on the scene soon after the fall; the rails were all right down to the fall; down about two-thirds of the fall I could not see any road; the rails had gone; in the other part of the fall the rails were hanging on to the top end of the fall; the dogs had sprung out; there was one of the sills gone near the seat of the fall; that was the only one there, but we found others gone as we went down; I think we found four altogether gone; the first one was about two-thirds down on the fall; the others were lower down as we went down; all the rails had gone from the fall to the face; they were all swept from their places to the face.

By Mr. Millard: The rails had not all gone in a heap to the very bottom; some of them were thrown up against the roof and fastened there.

DAVID LEWIS.

Taken and sworn at West Maitland, the 23rd day }
of January, 1899, before me, — }
GEO. C. MARTIN, CORONER.

This deponent, *Azariah Thomas*, on his oath states (*in answer to Mr. Millard*):—On the Tuesday before the accident I was down the tunnel surveying; I had a conversation with Griffiths; I did not mention to him to speak to Lewis to have the timber repaired at the end of the week; I did not say a word about that; not one word was said about the necessity of timber being repaired; not one word was said about timber being broken or bent; I did not stop either on the way up or on the way down to look at any broken or bent timber; there could not have been timber bent and broken as described by March and Parsons without my seeing it; I saw no timber bent, except that near the water-cask.

By Mr. Bowden: I have never heard any creaking of the timber in the tunnel; I have heard timbers crack in a mine and have stood by them; I know the noise produced by the settlement of timber; that noise could not be mistaken for the breaking of timber; if the timber is large it would make a noise like the report of a cannon on breaking; the timber in East Greta mine was what I would call large timber; if the timber had been broken in the manner suggested by previous witnesses, the noise produced would have been a very loud one.

A. THOMAS.

Taken and sworn at West Maitland, the 23rd day }
of January, 1899, before me, — }
GEO. C. MARTIN, CORONER.

Inquest adjourned till 10-30 a.m. to-morrow, the 24th of January, 1899, the jurors being bound over.
Court-house, West Maitland, }
23rd January, 1899, — }
GEO. C. MARTIN, CORONER.

Inquest resumed at 10-30 a.m. this day, at the Court-house, West Maitland, on the 24th January, 1899, the jurors answering to their recognizance.
GEO. C. MARTIN, CORONER.

This deponent, *Edward Parsons*, recalled on his former oath, states (*in answer to Jury*):—Since the accident I have had a conversation with some one about the bent caps in the extension; I have conversed with Mr. O. K. Young; he has not offered me a cheque for £20 to keep my tongue silent about the bent caps; I have never said that he did so; when I left the mine on the Thursday the props were not bent and the caps were not broken at the shoulders; it was possible for the caps to have been bent 12 inches without being broken at the shoulders; I think it possible for them to have bent 2 feet without being broken at the shoulders; I think I said Griffiths and I were in the "alligator" together when I called his attention to the caps and the slabs sagging down on them; that was on the day before the fall, between 6-30 and 7 a.m.; one would naturally think that the roof would fall in as soon as the slabs sagged down in the manner I have described; I called his attention to five or six caps that were broken as we passed down; I am quite positive that those caps and slabs were at the place where the fall occurred.

By Coroner: They were right under where the fall took place; I could not see the roof there; I could see between the timbers; you could put your hand up between the timber on each side of the tunnel; the roof looked like a sort of composition; it looked more like the mixed stone than the conglomerate.

By Jury: There were spaces between the slabs through which you could see; whenever I got close to the cap-pieces I used to examine them at the corners close to the props; I will not swear they were broken, or that they were sound close to the props; the slabs could sag a foot without the caps being broken.

By Mr. Millard: I first noticed I could see the roof between the slabs when they first began to drop; that was about three weeks before the fall; the stone I could see through the roof was like that marked "J"; I made no remark to anybody about the stone showing through there; I heard nobody else make such a remark; the stone I could see in the
roof

roof through the slabs was broken up; it was pressing right on to the slabs; the spaces between the slabs were about 1 inch wide; pieces of this stone used to drop through and come down the tunnel; I could not say whether it dropped through the slabs or from the rib; the rib was of coal; at the corner of the caps there might be coal or the stone; I never saw any stuff falling from the roof as I went past in the alligator; the stuff could not roll down the tunnel; it would fall down the tunnel; sometimes it would hit the sills and go jumping down the tunnel; there used to be pieces coming down the tunnel like that all the time I was working in the colliery; one night a piece fell from about 50 feet from the surface, and the engineer had to stop the engine; we saw the patch where it dropped out, and saw where it fell on the bottom; the other men working there could see this stuff dropping out as I could; the slabs were not sprung in any way, but bent down.

By Jury: The other men would not speak about the stuff falling, because they were frightened of losing their job.

By Mr. Millard: I considered it dangerous when a large piece of this stuff came tumbling down.

By Mr. Bowden: None of the men told me that they were frightened of losing their jobs.

By Jury: Five or six of the caps in succession were bent down—about 30 feet altogether; the slabs were split slabs; they averaged 3 inches in thickness; some were about 1½ inch thick; the larger slabs never slipped over the smaller ones when the caps bent; the slabs have a lap of pretty well a foot over the edge of the caps; the larger slabs might slip over the smaller ones, but the weight on top would tend to prevent them doing so; it might be possible for them to have slipped over in that way.

By Foreman: I say that I did call Griffiths' attention to the broken and bent caps.

By Mr. Curley: There are no broken or bent caps in the model of the tunnel produced; that is not a correct representation of the tunnel as it was before the fall; if I saw bent and broken caps in the tunnel before the fall, the fact that I saw bent and broken caps there after the fall might or might not confirm the statement I have made that there were bent and broken caps in the tunnel before the fall; I cannot properly understand that question; Griffiths can hear pretty well; he knows well when a workman is not using his pick; Griffiths was not more than 12 feet away from me on the day I heard the conversation between them; Mr. Thomas was about 5 feet away from Griffiths; Thomas said to Griffiths, "Well, Griffiths, we are going to let that timber there," pointing up the tunnel, "go till the week end, so as not to interfere with the working of the tunnel"; I am still positive he said that to Griffiths; I took particular notice of it; I do not know what made me do so, but I did; notwithstanding the fact that both Thomas and Griffiths have denied that anything of the sort was said between them, I still say it was.

By Foreman: I went down the tunnel after the accident; the broken caps were not there then, but the bent ones were.

By Mr. Millard: The same bent caps were there after the fall as I had seen before the fall; they would be about the third or fourth set below the fall; I am certain those were the caps I had seen bent before the fall; before the fall the bent caps were two or three sets below the broken ones; the broken caps were 100 feet at least below the bottom level; I cannot say they were not 150 feet below it; they may have been; I think they were about 130 feet below the bottom level; I cannot say the first of the broken caps was 130 feet from the bottom level; I cannot say within 30 feet where the first broken cap was; the first broken cap was within 100 feet of the bottom level; it may have been a little more, it was not less; I cannot say where the first broken cap was within 30 feet; I still say those broken caps were under the big fall.

By Jury: I thought there was a bit of danger in working down the pit; whenever I heard the timber work I thought of the danger; I did not think the mine was so dangerous as it was; I trusted the men above; I asked them about it, and they said it was all right; I told them the timbering was looking bad, and that something ought to be done to them; I did not think they would come down as quickly as they did; if I had thought so I would not have stayed there; I was not afraid of losing my billet, because I had made my living before I went to East Greta, and could do so after leaving; from what I saw before the fall I located the broken caps after the fall; there were either five or six sets of timber that I saw bent down in the manner I have described; I think seven sets were carried away by the fall; there may have been more.

By Coroner: I never spoke to Mr. O. K. Young about the accident at all that I know of.

By Mr. Bowden: I went to see Mr. Young about a job; he did not give me a job.

By Mr. Curley: Nothing at all took place between Mr. Young and myself; I simply asked him for a billet on hearing that he wanted a couple of men.

EDWARD PARSONS.

Taken and sworn at West Maitland, the 24th day)
of January, 1899, before me,—

Geo. C. MARTIN, Coroner.

This deponent, *Jonathan Dixon*, on his oath, states (*to Mr. Millard*):—I am the manager of the Greta Colliery, and reside at Greta; I know the East Greta Colliery; I have had about twenty-nine years' experience of coal-mining in all its branches; I have had experience in the A. A. Co.'s mine, the Stockton Colliery, the Wickham and Bullock Island Colliery, the Newcastle Colliery, and at Austimur on the southern coast, the Maitland Colliery; I have, in addition, visited several other collieries; I was not in the East Greta Colliery prior to the date of the accident; I know the seam there, and have had practical knowledge of it at the South Greta Colliery and at the Maitland Colliery; the roof overlying the seam is conglomerate; the hardness of the conglomerate is characteristic of that seam; at Captain Russell's old mine, at the junction of the Wollombi and Great Northern roads, it has a thickness of 39 feet; according to Professor David's geological report of 1888, it has a thickness of 49 feet at the Homeville Colliery; I have proved the conglomerate myself at the Maitland Colliery; I proved it there to a thickness of 52 feet; that is about 2 miles from East Greta Colliery, in a direct line; that conglomerate is an exceptionally hard roof; it is, consequently, a reliable roof; I have also proved it at the South Greta Colliery and in the Old Greta Colliery; at the Greta Colliery there is a thickness of 23 feet immediately overlying the top seam; that thickness has been obtained in the sinking of the shaft at Greta; the exhibit marked "F" is a sample of that conglomerate; Exhibit "B" is also a sample, and particularly resembles the conglomerate in the Maitland Colliery; Exhibit "K" is also an extremely fine sample of the conglomerate; Exhibit "H" is a sample of sandstone; Exhibit "F" has been subjected to the action of water and the atmosphere.

By Coroner: Exhibit "J" is a sample of mudstone; I have seen stone similar to that in my visits to East Greta since the fall.

By Mr. Millard: That stone is not characteristic of the seam; I have been into the tunnel at East Greta since the accident; I took particular notice of the timbering; I have not been to the face; I consider the method of timbering in the colliery good; it is scientific timbering; the timber used—ironbark—is considered one of our best timbers; spotted gum is considered more resilient than ironbark, but I doubt its greater strength; I was at the scene of the fall about 2 p.m. on the day of the accident, and saw the cavity; as well as I could with safety I took notice of the strata of the cavity; afterwards I had a better opportunity of doing so; on the left-hand rib—speaking of the cavity—there were from 18 inches to 2 feet of the conglomerate on the head of the coal; that seemed to thin out to 4 or 5 inches on the opposite side; the conditions were reversed when we got down to where the bridge had been left; above the conglomerate there was the mudstone, and above that again a stone somewhat similar to the sandstone produced; the mudstone went to a height of 8 or 10 feet; I have been into the overcast two or three times; from what I saw there, and what I have seen of the cavity, I would not have expected to have found such a thickness of the mudstone; from my knowledge of the seam and its strata I could not have imagined such a thickness of mudstone on the hard conglomerate; the timber in the tunnel was sufficiently strong to have met all requirements that might reasonably have been expected; from what I saw there, and my knowledge of the seam, I would not have anticipated such an accident.

By Coroner: In the light of this accident I think an intrusion of this mudstone upon the conglomerate may be expected anywhere in connection with this seam.

By Mr. Millard: It is not an unusual thing to find timbers bending in a mine; there is not a mine in the world using timber where bent timber will not be found; the deflection of a cap or several caps is not a positive indication of danger; the movement of the strata will bring that about until the strata have settled down; if the caps were bent and the slabs not pulled down with them, I would say the pressure was a lateral one.

By Coroner: Seasoned timber has the greater power of resistance, and is better for all mining purposes than new timber.

By Mr. Millard: The fact of the timber being new would not weaken the tunnel, because timber of a greater strength than is required is generally put in; under the conditions I have named, and allowing for the fact that the timber in East Greta was new timber, I consider it was sufficient for all purposes of the colliery; notwithstanding the fall, I still adhere to my opinion that the system of timbering carried out there was the best under the conditions existing; approximately

approximately I should say that from 250 to 300 tons of staff came away in that fall—that is, including the slabs and legs, &c. ; I scarcely think that caps bent down a foot and the slabs sagging down on them would have supported such a weight for six weeks ; a broken cap will support a certain amount of weight ; if a cap is broken right through, the leverage gained from the joint will support a certain weight ; if five or six caps were broken like that they would not support such a weight as I have mentioned.

By Mr. Tillet : I cannot accept the statement that the caps were deflected 12 inches the day before the fall ; I daresay an ironbark cap with a length of 12 feet would deflect 8 or 10 inches before it broke where the pressure was on the centre of it ; the ends of it would still have some strength ; I saw the broken caps at the pit mouth ; I should imagine they had been broken from the under side ; I have not met the mudstone in the other collieries in the conglomerate as it has been found in East Greta ; if I had known of the falls of mudstone in the tunnel I would have to find out first whether the fall was a merely local one or a general one in the tunnel before I would strengthen the timbering ; if I had found the mudstone right across the face in sinking and at other places finding the conglomerate, I would think a change was showing itself and take precautions to deal with it ; sometimes you get three or four bent caps running sometimes at intervals ; the fact of these caps being bent in that way would not indicate too much pressure on the roof ; in a drive like that at East Greta, with the coal on each side, I would expect a lateral pressure ; the fact of it having a soft bottom would tend to make part of the coal slide, and thus exert a lateral pressure ; after the fall I thought the pillars were standing very nicely ; it was quite possible for there to have been a lateral pressure there ; I have formed an opinion as to the cause of the accident ; the mudstone, which is an indurated clay, has become infiltrated with water, and has thus lost its adhesive properties and thrown all its weight on the caps, which have suddenly gone—that is, one or two of the bent caps have gone and thrown the others out ; a small piece of the Exhibit "J" placed in water and left for a few minutes would have to be picked out in small pieces, thus showing the action of the water on the stone ; the weight of the mudstone would come suddenly on the caps at the last moment after complete impregnation ; the bent caps would be an indication of the pressure of the stone on them if you knew the mudstone was there ; the fact of the clearing being made between the caps and the roof would allow the mudstone, after full impregnation, to come down suddenly on the caps and snap them off ; if ti-trees were placed on top of the slabs and the mudstone were sliding a deflection of the caps would be brought about before the actual fall.

By Mr. Millard : The layer of conglomerate between the slabs and the mudstone would not hold any weight if it was thin ; had the thickness been right across about 18 inches it would have held up a good weight, but my examination showed it to be thinning between the two sides of the tunnel ; if none of the caps were bent before the fall it does not alter my opinion as to the cause of the accident ; there must have been a space between the timbering and the roof.

Taken and sworn at West Maitland, the 24th }
day of January, 1899, before me,—

JONATHAN DIXON.

GEO. C. MARTIN, Coroner.

Inquest adjourned till 2-30 p.m. this day for lunch.

Court-house, West Maitland, }
24th January, 1899,—

GEO. C. MARTIN, Coroner.

Inquest resumed at 2-30 p.m. this day.

Court-house, West Maitland, }
24th January, 1899,—

GEO. C. MARTIN, Coroner.

This deponent, *Jonathan Dixon*, recalled, states (*in answer to Mr. Atkinson*) :—Water would disintegrate the mudstone very rapidly ; water finding its way to the mudstone would commence to disintegrate it at once, and the water would percolate through the interstices it made in the stone ; if I noticed changes of a marked character in a roof I was dealing with I would increase the quantity of timber, not alter the method of timbering ; from what I have seen of the roof since the fall, I do not consider the manager would see sufficient to warn him of the change in the roof, and the impending danger resulting therefrom ; the conglomerate would hide from him any deficiency in the roof above it ; to my mind the mudstone would not be visible till after the fall had taken place ; on looking through the breaks in the slabs on the day Monerjeffe's body was found, I could see the conglomerate in its usual position above the coal ; if I had known the mudstone was immediately over the coal I would have considered it necessary to put in additional timber ; the fall was influenced to a very slight extent by side or bottom pressure, in my opinion ; if the caps were not put tightly in a very slight side movement would cause a bending of the caps ; knowing there was a side movement, I would not recommend that the caps be tightly wedged at the ends ; had there been much side pressure I should expect to see it first shown on the legs ; I was not at the Maitland Colliery when the sinking was being done ; that shaft is bricked, but not through the conglomerate ; I have never noticed any patches of mudstone in the conglomerate.

By Coroner : I took particular care to examine the tunnel since the fall ; I saw nothing but the conglomerate, thick or thin, except where the fall had taken place, and there there were traces of the presence of the conglomerate ; the conglomerate overlaid the coal everywhere.

By Mr. Curley : The water would eventually work through the mudstone and trickle down ; probably the piece of stone produced marked "J" has not been subjected to the action of water ; it does not follow that all the mudstone was wet, but sufficient had been acted upon by the water to bring down the whole body ; on the Monday after the second fall, I saw the water running and dripping down from the roof ; the action of the water will affect some kinds of conglomerate ; it will affect calcareous conglomerate, but not the hard siliceous conglomerate ; the conglomerate marked "D" is not of the same class as that marked "B" ; the latter is the harder, and water will not affect it, while it will the former ; if the water trickled through the roof, it would be noticeable by the manager ; I was manager of the Maitland Colliery for about four years, actively and inactively ; it worked continuously during that time, except for one short break ; the workings extended about 300 yards to the south, and about 150 yards to the north as well as to the west ; we worked the bord and pillar system with 8 yards bords ; we used a fair amount of timber ; we had a soft floor, but not so soft as I have seen in the tunnel of the East Greta ; we took the bottom up when we drove the stone drift ; we only took up a few inches of the bottom ; that would be portion of the roof of the lower seam ; I have seen a roof in a mine vary in different parts of the roof ; that is not a common occurrence in a marked degree ; you generally get a characteristic roof over the whole of your seam ; I have spoken of the timbering in the Stockton Colliery being bent and broken in many places ; I know that a fall took place there many years ago ; that was the cause of the timber being put in ; there was a good roof at Stockton, but I decline to say what was the cause of that fall, as that matter has been investigated by a Commission ; the probabilities with regard to such a tunnel as East Greta are that the timber put in would be too strong for the requirements ; the timber put in at 500 feet depth would be far in excess of the requirements, so that at 1,000 feet I would not increase the size of the timber ; there was nothing to my knowledge before the fall to show or indicate that the timber was not strong enough to bear the roof at any depth ; I have examined the tunnel carefully since the fall, and found the conglomerate overlying the seam everywhere ; I am satisfied now that there is not uniformity in the roof of the East Greta Colliery ; if the cap were broken in the middle, and the end fastened into the coal at the side, the end would support a certain amount of weight by reason of the leverage gained from the leg ; if I had seen four bent caps in succession in the tunnel, I would certainly have looked for the fifth ; I would have found out whether the wedging at the side caused the bending, or the side pressure or the top weight ; I would have looked for the cause of the bending or breaking ; I would find out the cause first before putting in extra timber ; I would be guided by the conditions of the case as to whether I put in extra timber ; broken caps will sometimes support a heavy weight upon it.

By Mr. Bowden : If mudstone were saturated with water, there might not be sufficient water to trickle through the stone and into the tunnel ; the moment a heavy weight fell upon a thin band of conglomerate it would snap at once, and not bend ; I would not expect to find the conglomerate in the tunnel bending down to a depth of 8 or 9 inches before breaking ; if the mudstone were immediately in contact with the conglomerate the conglomerate would break away first in the case of such a fall ; when the conglomerate broke in that way the other strata would be all ready to come away ; if the caps had cracked they would be weaker than before ; the pressure upon them should increase as they bent more and more ; if the water had not gone into the mudstone, I do not think we should have heard of the fall in East Greta ; if the water were performing its action unseen it is possible that it might be disintegrating the material on the top, and bending the caps.

By Foreman : I have proved 52 feet of hard conglomerate over the second seam of the Maitland Colliery ; that was 512 feet below the surface ; that is the corresponding seam to the seam at East Greta at No. 1, which comes out to the surface ;

surface; the conglomerate near the surface would be subjected to the action of weather, and be softer than conglomerate lower down, but it would be affected for a depth of a few feet only from the surface; after that it is all the same all the way down, as long as it is the same kind of conglomerate; it is just as likely to be as hard at East Greta as at the Maitland Colliery; the piece of stone produced marked "K" is on the line of demarcation between conglomerate and poststone; I do not think that water trickling over it would disintegrate it; water falling from some height would disintegrate it; the stone marked "D" would disintegrate before that marked "K" if placed in water; the fact that the tunnel extension was being carried on for five months, and the fall happening suddenly, may be accounted for by the fact that the water was silently doing its work, and without being visible; the fact that the bodies were found where they were is an indication to me that the fall must have taken place suddenly; otherwise, if the cracking of the timbers had been going on for some time, the men would have had time to have reached the level.

By Jury: I cannot say whether the water had come through the seam after the fall had taken place or not; I think it had been there for some time affecting the mudstone; there would not, in my opinion, be a cavity in between the two seams that held that water; I think the water was held in the strata; in all probability I would have a look at any bent timber in the tunnel as soon as I knew of it, and try and find out the cause of it bending; if it were due to roof pressure, I would not necessarily strengthen it; it would all depend upon the circumstances; after first putting in timber the movement of the strata might bend the timber and then settle down, and no more bending be visible; the bending or breaking of timber is not necessarily a cause for repair; I would be entirely guided by conditions; I have seen timber break with only 2 or 3 feet of stuff on top of it, and then, after the removal of that stuff, a thoroughly safe roof found where it was not formerly known to exist; a large body of running water acting upon the mudstone would bring the mudstone down through the slabs, but where there is only a small body of water acting on the stone, it would take a very long time to do its work and percolate through the stone; I saw a length of roof in the tunnel with the roof untimbered; if all the roof had been like that it would not have required timbering.

By Mr. Millard: If I saw a band of dark shale above the coal, and between it and the conglomerate, I would not look upon that as a change in the roof; even although this dark shale ran into the roof in small potholes I would not deem that a change as long as the conglomerate lay above it.

Taken and sworn at West Maitland, the 24th day }
of January, 1899, before me, — }
GEO. C. MARTIN, Coroner.

This deponent, *Hugh Humphreys*, on his oath states (*in answer to Mr. Millard*):—I am the manager of the Dudley Colliery, and reside at Dudley; I have had twenty-three years' experience of coal-mining in the Wallsend and Dudley Collieries; I have visited East Greta Colliery several times since the accident; I have made observations as I have gone down the tunnel as to the manner in which the tunnel has been driven, and the method of timbering adopted there; the methods of driving and timbering I consider good; I have had no experience of the East Greta seam; from what I have seen of the roof since the accident I consider the timbering in the tunnel was sufficient for its purpose—that is, taking into consideration the conglomerate roof I have seen there since; a slight bending of the caps does not always indicate danger; it is quite a usual thing in mines to find timber bending; it is quite possible for side pressure to bend timber; if I saw caps bending, but the slabs not being affected in any degree, I would attribute it to side or bottom pressure; I have been down the tunnel six or seven times since the accident; I took notice of the strata where the fall had taken place; I saw a layer of conglomerate about 18 inches thick on top of the coal with the soft mudstone immediately above the conglomerate; I noticed conglomerate on the sides of the tunnel, just on top of the coal, in other parts of the tunnel; I have made no inspection through the slabs of the roof; I attribute the accident to the faulty ground—the mudstone—which has been acted upon by water, breaking some of the timber, and carrying away the rest of it; if there was no indication, such as the creaking of the timber a quarter of an hour before the fall, I would call that a sudden fall; we estimated that from 250 to 300 tons of stuff came away in the fall—that is, including the stuff that came away in the second fall; if that weight had been pressing on the roof for some time, it would give some indication of that pressure; if it came away suddenly, there would be no such indications.

By Mr. Tillett: I should expect a fall of that sort to give some indication of its coming; it is not impossible that it came away without any warning; that warning might be the bending of caps, or a crushing and creaking of the timber; I do not think that could have been going on for three weeks before the fall; if I saw extensive patches of the mudstone in the conglomerate roof, I would take extra precautions in my timbering; if I saw any great extent of it, I would deal with it, instead of the conglomerate; I would not put in stronger timber, but put it closer together; with such a roof as they have had to deal with at East Greta, I consider the timbering there sufficient.

By Coroner: I have had no experience with conglomerate roofs; I do not know that mudstone comes into conglomerate in extensive patches; the cause of the East Greta accident was the conglomerate thinning out, and the mudstone taking its place.

By Mr. Atkinson: I consider side or bottom pressure had very little to do with this fall; I have seen the sides of the tunnel where the fall took place; the sides there were in good condition; if there had been much side pressure, and the slabs had been well wedged in, I should expect to see it on the legs first; I have not had an opportunity of examining the roof on the lower level; the roof where I have examined, it was very hard conglomerate; I did not see the roof in the neighbourhood of the dam; if in a tunnel like No. 1 I saw four or five consecutive caps bent to the extent of 6 inches, I would ascertain the cause before dealing with them; if the roof were lying down on the caps, I would consider it roof pressure, and that they required renewing; timber in a tunnel, at an angle of 45 degrees, would require more attention than timber on a level drive; timber in a tunnel of this sort would require more attention than timber on a level drive.

Taken and sworn at West Maitland, the 24th day }
of January, 1899, before me, — }
GEO. C. MARTIN, Coroner.

This deponent, *Jonathan Dixon*, recalled on his former oath, states:—I wish to say that every credit is due to the workmen employed in restoring the tunnel for the manner in which they carried out their work; I wish to make special mention of Deputy David Lewis for his intrepidity, calmness, and sound judgment in supervising the work.

Taken and sworn at West Maitland, the 24th day }
of January, 1899, before me, — }
GEO. C. MARTIN, Coroner.

Inquest adjourned till 10-30 a.m. to-morrow, the 25th of January, 1899, the jurors being bound over.
Court-house, West Maitland, 24th }
January, 1899, — }
GEO. C. MARTIN, Coroner.

Inquest resumed at 10-30 a.m. this day, the jurors answering to their recognizances.
Court-house, East Maitland, }
25th January, 1899, — }
GEO. C. MARTIN, Coroner.

This deponent, *Hugh Humphreys*, recalled on his former oath, states (*in answer to Mr. Curley*):—On the left-hand rib the conglomerate showed from 18 inches to 2 feet at the seat of the fall; on the right-hand rib it only showed 4 or 5 inches; lower down the conditions were reversed; the thin layer seemed to run for about 30 feet down the fall; after that it began to thicken on the right-hand side, and thin out on the other side; on the left-hand side of the bottom of the fall the thickness of the conglomerate was 4 or 5 inches; the thin layer on the left-hand side extended about 15 to 20 feet from the bottom end of the fall; I am satisfied that the stone put into the glass yesterday by Sub-inspector Fowler has been affected by the action of the water; I have noticed veins lying vertically and horizontally in the strata of mines; they lie in layers; there are sometimes natural facings in the strata; if water had been trickling through at East Greta, and came through the slabs, it must have been seen; it must have affected the conglomerate, or the fall would not have taken place; if the caps were broken, and the slabs lying on them, and the roof lying on those slabs; I should say the water had affected the roof; otherwise the roof would have remained, and the slabs would have come away by themselves; under those conditions I should have expected to have seen some indication of the water; if no water was coming through under the

the conditions of roof described, I could not say that water was there; I called the stone marked "J" soft shalstone; that marked "K" is hard poststone; that marked "F" I would call conglomerate; if I had to use timber at 500 feet in that tunnel, and timber at 200 feet lower down, and I saw the timber in the lower level bending, I would set it closer together, as has been done in this case.

By Foreman: I have got out at the No. 2 level on the right-hand side; I have been through the overcast several times; I did not notice a soft spot over the overcast; I examined the nature of the roof of the overcast; all I saw there was extremely hard; if there is any soft material there I did not see it; leaving out of consideration the part where the fall took place, I consider the roof of the tunnel a very good one; had the conglomerate, as it appears at the overcast, continued right through the tunnel, there would have been no fall; I saw nothing like the stone marked "H" in the overcast; that is a sandstone; it may be portion of the conglomerate; probably above that the roof would be hard again; there would not be much of that stone in the roof; down the tunnel, below the fall, the roof I saw through the top slab was conglomerate.

By Jurymen: I have had no experience of the East Greta roof, but I know what a conglomerate roof is; I saw the roof near the surface at the overcast, and where I saw it above the slabs on the side; practically the only places where I could examine it properly were above the tunnel, and at the overcast; there may have been soft patches that I could not see at all; my opinion of the roof is formed from what I saw of it at the place where it is not timbered and at the overcast; if the roof was as solid as it is at the overcast and out by the level, I do not consider it would have required timbering all the way down; if that sort of roof continued it would not require timbering at all, leaving out the soft bottom.

By Mr. Millard: I did not see a band between the coal and conglomerate; if there is one it would not be a source of danger.

By Mr. Bowden: A person travelling up and down in the alligator could not see the nature of the roof while he was doing so; he would have to stop and examine it.

By Mr. Tillet: Anyone that stopped under the timber and made an examination through the timber he could see the nature of it.

By Coroner: A deputy or man in charge travelling in the alligator could not see the nature of the roof unless he went very slowly.

By Mr. Bowden: A person in the alligator could make a proper inspection of the timber from it if travelling slowly.

By Jurymen: There must be some portion of the roof exposed at the face before they can get it in.

By Mr. Bowden: From what I saw of Lewis I consider him a thoroughly practical man; I had every opportunity of watching him while I have been at the mine. H. HUMPHREYS.

Taken and sworn at West Maitland, the 25th }
day of January, 1899, before me,— }

GEO. C. MARTIN, Coroner.

This deponent, *Duncan McGeachie*, on his oath, states (*in answer to Mr. Millard*):—I am manager of the Waratah Colliery; I have had about twenty-seven years' experience of coal-mining in all its branches, both in Scotland and in this Colony; I am also an engineer and surveyor; I had not visited the East Greta before the accident; I have a fair knowledge of the whole of the Greta Measures; the roof found over the East Greta seam is a hard conglomerate roof; that is known as the general roof of the seam; that conglomerate extends to a depth of 40 feet; when I visited the tunnel after the fall I took notice of the method of driving and timbering; I consider the timbering had been done on the most approved method for a tunnel of that description; the manner of carrying out the work appeared to be good; the timber employed was all good that I saw; I have heard the conditions existing with regard to the roof before the accident, and consider the roof was well timbered; I took notice of the strata at the seat of the fall; I found that the conglomerate there had run out to almost a thin casing or shell—from about 18 inches to a few inches on the other side; above that there was a soft mudstone, and above that a hard sandstone; that is not a usual thing to find in a conglomerate roof; from my knowledge of geology and the strata of this district I would never have expected to find such conditions; I was not down the tunnel lower than the fall; I had an opportunity of observing David Lewis at work; I consider he was a competent person to superintend such work; I consider him a very competent man, and a man deserving great credit for the work he has done there; from what I have seen the accident has been caused by this mudstone coming into the roof; it may have been assisted by water; I think the fall took place quite suddenly, with very little warning, if any; I do not think the timbers at the fall would last five minutes if the weight had come on them; they would not last five weeks with the weight of the roof on them in that way.

By Coroner: I was very much surprised when I saw the cause of the accident; it upset all my preconceived ideas of the strata of the seam; I had never seen such a thing before in that stratum.

By Mr. Tillet: It is most unusual to find this mudstone in such a roof; I had never seen it before; if I had seen it it would indicate to me a change in the nature of the roof; sometimes stuff of that sort would fall through a little hole and would not mean any change in the roof; I would not be surprised to find small potholes of it in the conglomerate; if I found a patch of it extending right across the face it would indicate to me a change in the roof; under such circumstances I would consider a change in the timbering necessary to strengthen it; I do not think it possible that this roof gradually settled on the timbers; the conglomerate underneath is so hard that it would not yield; it would break suddenly when the weight came on it; the weight might have been on the conglomerate without being seen, but the moment the weight became too much for the conglomerate to bear, it would snap away suddenly.

By Coroner: If I saw the change in the roof spoken of I would either put in heavier timber or put the same timber closer; it would depend upon the circumstances of the particular case.

By Mr. Atkinson: I have had experience in steep measures in Scotland; the dip was from 43 to 47 degrees; those mines were worked by shafts; the roof was what was called a treacherous one; the main working places went to the rise, and the main leading places to the dip; the main leading places required timbering; they were from 10 to 12 feet wide; the main dips were not driven on pillars as at East Greta; they were worked on the long-wall system; my experience of the Greta seam consists of two years under-management of the Greta Colliery; we worked the conglomerate in the shaft there; the shaft was not bricked where the conglomerate was; I think roof pressure had all to do with this fall; I saw no water dripping from the roof on any of my visits; I had an opportunity of examining the roof in the lower level at East Greta; it seemed to be a very sound conglomerate there; I saw no indication of any other stone there, at the overcast; I was in no other part of the mine to examine the roof; I have had experience of ironbark caps in other collieries with which I have been connected; if I saw four or five of those caps together, bent to the extent of 5 or 6 inches, I would think there was something wrong; I would try to find out what was the matter; if I satisfied myself that it was due to pressure from the roof I would consider those caps required renewing or strengthening; I do not think that the bending of a cap for 3 or 4 inches would be anything out of the way; when it comes to be bent 6 or 8 inches it is practically useless; if there were side pressure I would expect it to show first on the props.

By Coroner: I noticed the floor just above the fall; it seemed to be of a nature that would be easily affected by water; taking that into consideration, I consider the timbering there was good; the sills were good and well put in.

By Mr. Curley: If a cap were bent 3 or 4 inches I would not consider worth putting in another; if bent 6 or 8 inches it would be past the point of resistance; if I noticed four sets in a line bent 3 or 4 inches I would take notice of it; I would try and ascertain the cause of the bending; if it were roof-pressure I would provide against it; according to the circumstances of the case, I would either put in heavier timber or put the same timber closer; I did not make a minute examination of the conglomerate at the fall; on the right-hand side it thins out to 5 or 6 inches; I cannot say how far that thinning out extended; it extended for several yards; I examined the left-hand side of the fall also; the conglomerate was thicker on that side; I was never out of the main tunnel except into the overcast.

By Mr. Bowden: I saw no water or appearance of water at the fall when I examined it; from my knowledge of the seam, I would not expect the layer of conglomerate to thin out to 6 to 8 inches as in this case; I think the timber used was good timber—could not have been better timber for the purpose for which it was used; if the caps had been bent to the extent of 12 inches they could not have stood up for any length of time; they would not have stood their own weight; I have seen timber bent by side pressure; if I had had any trouble with side pressure in one part of the tunnel, the bending of three or four sets of timber in another part would not have alarmed me; in the case of pressure from the roof, I would have expected to have seen the slabs bulge down between the caps; if they were not bulged down, and I had had side pressure previously, I might take it that the side pressure was affecting the caps; if the slabs were not tight down on the caps

caps at the ends I would not consider it was roof pressure, I would expect to see side pressure exerted on the props, even with packing of ti-tree; caps wedged hard in would be affected by side pressure before the legs; where the fall occurred it was impossible to see that such a change in the roof had taken place; I saw patches of the soft stone at the sides of the tunnel, but that was no guarantee that it extended right across the tunnel; it was impossible to see such patches extending across the tunnel where the fall took place; they could not be seen for the conglomerate.

By Mr. Tillet: I do not say that such patches did not exist, and had been seen; what I say is, that it was impossible for them to have been seen at the seat of the fall.

By Coroner: I was at the mine on the Monday, Wednesday, and Friday following the fall, and saw no water on any of those days.

By Foreman: I first visited the mine on the Monday after the accident; I went there to consult with Mr. Thomas; I was asked to go there; I was asked to inspect the seat of the fall in order to give my ideas as to the best way of getting over the difficulty and getting the place retimbered; I could see for myself what was the cause of the fall—a change in the roof; I could see that in the fall; I saw no change whatever in the roof at the overcast; I went no further than the overcast; I tried to ascertain the nature of the roof; I looked at the roof in the overcast at the edge of the tunnel; I did not go there to find out what was the nature of the roof; I knew the nature of the roof pretty well before I went there; I examined the roof over the overcast and saw it was good conglomerate; I was not on the dam side of the tunnel; if I had thought such questions were to be put to me I would have made a closer examination of the roof; I only went there for the purpose of advising as to the best way of repairing the fall.

By Juryman: I never saw a change in the Greta seam like that before; I have known faults to come in the coal in that seam; that has not surprised me; I consider that I have a fair knowledge of the Greta measures right through; I never saw the East Greta mine before the Monday after the fall; I consider I have a practical knowledge of the East Greta roof in consequence of my general knowledge of the nature of the Greta measures; I have never seen such changes in the measures as revealed by this accident; I did not go round the overcast; I only went to the one side of it; I saw the roof at the beginning of No. 1 tunnel; some of the roof there had no timbering; from what I could see of the whole of the roof from the outside it did not appear to require timbering anywhere; I prefer seasoned timbering; the timber that has been put in the East Greta tunnel is good enough for anything—either seasoned or unseasoned; I think I saw one or two sets of timber below the fall broken; that fact was proof that the timber was not strong enough to withstand the pressure that came on it after the fall; the fall would certainly influence the bending of the caps immediately below the fall; simply because of the greater weight thrown on them by the fall; I do not think the fall would affect the caps 200 feet below the fall.

By Mr. Millard: As to replacing bent timber I would be guided by my past experience as the manager of the mine; if I had previously found timbers bent higher up the tunnel, and on examination, taking them down and the roof were found intact, I would incline to the belief that the cause was not roof pressure; if I had had trouble with the bottom I would incline to the same belief; I went to the colliery because I was asked to do so by the manager, to assist with my advice in carrying out the operations for finding the bodies, and repairing the tunnel.

By Mr. Curley: One could tell whether the pressure came from the roof or the side or bottom when the bent cap was taken away; I have seen broken or bent caps in a mine that showed pressure from the roof, and not from the sides.

By Coroner: I was asked to visit the Dudley and Stockton mines after the disasters there, but did not give evidence afterwards.

By Mr. Millard: There is no greater danger in the bord and pillar system than in the long-wall system; the long-wall system would not have prevented this accident.

By Mr. Bowden: Patches of this mudstone underlying the conglomerate would not indicate a general change in the roof; all roofs are patchy to a more or less extent; these patches are not usually thick, but what are termed pot-holes.

By Juryman: I would describe the stones produced as exhibits by the same terms as the other witnesses.

D. McGEACHIE.

Taken and sworn at West Maitland, the 25th day }
of January, 1899, before me,—

GEO. C. MARTIN, Coroner.

Inquest adjourned till 2:30 p.m. this day for lunch.

Court-house, West Maitland, }
25th January, 1899. }

GEO. C. MARTIN, Coroner.

Inquest resumed at 2:30 p.m. this day.

Court-house, West Maitland, }
25th January, 1899. }

GEO. C. MARTIN, Coroner.

This deponent, *Richard Thomas*, on his oath, states (in answer to *Mr. Millard*):—I am manager of Messrs. Brown's collieries; I have had about twenty-eight years' experience of mine managing; I have a general knowledge of the strata of the coal seams throughout the Maitland and Greta district; I know the East Greta seam, and have had experience of it; I have made a study of geology; I went over the whole of the Greta field with Professor David; the roof in the East Greta seam is hard conglomerate—calcareous; that is generally found over the Greta seam; I have traced it for about 16 miles from the Homeville mine; that is the best roof for coal mining purposes; it has been proved from 50 to 80 feet thick throughout that distance; I have visited the East Greta colliery, both before the accident and after; I visited it when it was opened up, and was there on the day of the disaster, and on several occasions since; I took particular notice of the methods of driving and tunnelling; the timbering was squarely framed, very strongly put together, and well adapted to resist pressure from roof, floor, or sides; it is a modification of the Welsh style of timbering, specially adapted to resist floor pressure; the tunnel has been driven and timbered on thoroughly scientific principles; the class of timber employed is the best that can be used for that purpose; under the conditions obtaining before the accident, I consider the timbering was all that could be desired for the purpose for which it was intended; I visited the scene of the fall and took notes of the strata disclosed by the fall; immediately over the slabs was a thin layer of conglomerate, 18 inches thick on the left-hand side, and a foot thick on the right-hand side; above that about 5 feet of mudstone; then a pebbly sandstone from 10 to 12 inches thick; above that about 4 feet of mudstone, and above that a dark-brownish sandstone; on a subsequent visit I went to the lower end of the fall, and the conglomerate on the left-hand side prevailed right through, and on the right-hand side thinned out to almost nothing; I went no further than that; I have had no particular experience of the roof in the tunnel beyond that; I saw the overcast in the second level driven right through the solid conglomerate; that showed no sign of giving out; I did not go into the level at all; from my knowledge of geology, and of this seam in particular, this erosion of the mudstone is not what I would expect; it is what I would call a freak of nature; conglomerate is always carried along by a swift strong current, while mudstone is carried along by a slow stream or current; it is not unusual for the conglomerate to carry away the mudstone, but it is very unusual for the mudstone to carry away the hard conglomerate; the conglomerate would be in the first instance laid down horizontally; a band of shale between the coal and conglomerate would not affect the roof unless it formed the roof; as long as the main roof of conglomerate was overhead its stability would not be affected; a stream of water has first run over the coal depositing silt, then another current has brought down the conglomerate and carrying away the silt, leaving patches of it; we never expect the soft silt to carry away the hard conglomerate; originally the stream of water would leave the conglomerate of a uniform thickness, especially when it is found persistent over such a large area as in this instance; the accident has been caused, in my opinion, by the erosion of the mudstone into the conglomerate; such a thing would be quite unexpected, and a danger that could not reasonably be provided against; it is not an unusual thing to find timbers bending to a small degree in mines; it is a usual thing to find them so, for the reason that they are not put in tightly in the first instance, and do not get their full proportion of the weight; a cap slightly bent is quite as good as new; a bending of 2 or 3 inches is only a slight bending; if the caps were only slightly bent and the slabs had not come down with them, I would not expect the cause of the bending in the caps to be roof pressure; in dealing with these bent caps I would be guided by my general experience in the mine; if I had found at one point in the tunnel that the caps were bent, and, on examination, found that the roof was intact, a bending of the caps lower down would lead me to believe that it was not caused by any defect in the roof, but due to the same cause as the bending in the caps higher up; I think, in regard to the fall, that the conglomerate would probably break away suddenly

suddenly ; it is a roof that will not bend ; when once the conglomerate had broken away the timber would not stand the strain long ; there would be double the weight thrown on the set next to the first that carried away, and treble the weight on the next ; I think the breaking of the conglomerate and the actual fall would be almost instantaneous ; if the caps were broken and the conglomerate broken through, the timber would not support the weight of the roof for any length of time ; there would be so much extra weight thrown on each set of the timber as soon as the conglomerate had given away ; I do not think it possible for the caps to be bent or broken and the slabs sagging down on them with the mudstone visible through them for some weeks before the fall ; I consider the caps in the tunnel would support a weight of 20 tons each ; after the cap had been cracked and broken through it would hardly support itself ; if the cap were bent down to an extent of 8 inches, and were cracked, it would have reached the limit of its strength ; it would not then support 20 tons ; any amount of cracking would reduce its strength ; I cannot give any estimate of the strength of the slabs used in the tunnel ; in mining, the strength of the slabs is not taken into consideration ; the cap is supposed to bear the whole weight.

By Mr. Tillet : This mudstone has practically no cohesion ; if the tunnel had not been timbered, the thin layer of conglomerate would not have supported the mudstone for any time ; the face had been driven some distance past the fall ; it had been driven for about three months ; the fall did not take place sooner because the timber was there to support the conglomerate ; it was not necessary for the conglomerate to break before the weight came on the set of timber ; the timber was carried right into the conglomerate ; if the mudstone had to depend upon itself it would have come away ; if the caps were tight under the conglomerate, any movement of the conglomerate would come right on to the caps at once ; I could not see any evidence of the assertion that water played a part in this fall ; there was no evidence of the action of water either upon the conglomerate or the mudstone ; the timbering was sufficient for the conditions existing as far as could be seen before the fall ; the existence of the mudstone upon the coal meant nothing ; small furrows of the mudstone may not have been scoured away by the conglomerate, but there was not sufficient of it to affect the stability of the roof ; my opinion of the formation of the roof is that there was this dark band on the coal, then irregular patches of mudstone, which were subsequently partially scoured away by the conglomerate in its deposition ; only practice would tell me whether these patches of mudstone are extensive or not.

By Mr. Atkinson : I would not expect much side pressure in a tunnel of this kind ; I do not think that side or bottom pressure had much to do with the fall ; I consider that conglomerate is a rock which geologically varies very little in its character, especially such a consistent conglomerate as this is ; in calculating the strength of the cap-piece I assumed that the weight was equally distributed throughout the length of the cap-piece ; if four or five caps together were bent to the extent of about 6 inches, I would be guided by my previous experience of the tunnel in dealing with them ; I would first make my examination to see whether the roof was intact ; if it was intact I would not consider the pressure came from the roof ; if the pressure came from the sides I would expect to see the sides fall ; the sides under this fall were to all appearances just as they were driven.

By Mr. Curley : I was in the East Greta in its earlier stages ; that would be ten years ago or more ; I was in the No. 1 tunnel at that time ; I saw a hard patch of conglomerate there, entering that tunnel, which is not timbered ; there are about 75 or 80 feet of that untimbered roof ; I saw timber following on that, and also patches without timber, then timber continuously ; I should say that the continuous timber would be put in owing to the greater depth, and it is a precaution that a prudent and cautious manager should take against accidents in connection with the roof or sides ; the continuous timbering at the greater depth would be necessary because the cover was so much greater ; where there was no timbering there was not the same thickness of cover ; the tunnel was down about 100 or 150 feet when I was there about ten years ago ; some bords were going at that time ; I have not been in the colliery since up to the time of the accident ; during that interval I would not think there had been any serious falls of the roof with such a roof as they had ; if there had been falls of the roof in that time I would want to know the conditions of them before I would class my knowledge of the mine with that of the manager ; I would not compare my limited knowledge of the mine with that of the manager ; I would not say that to a great extent my experience of the mine is a closed book ; my scientific knowledge enables me to form an opinion as to the tunnel, and the characteristics of the formation of it ; in making my geological examination of the district I took my points at Homeville Maitland Colliery, East Greta, Heddon Greta, Sandford Greta, Silkstone, Richmond Vale, and Scholey's bore ; that would be about 16 miles long, and about 4 miles wide ; if I had had the conglomerate breaking, and the mudstone showing above it, I would say that the conglomerate did not prevail throughout the roof, but a patch of mudstone under the conglomerate would not affect the roof at all ; if the mudstone were above the conglomerate I would say there was a want of uniformity in the roof ; the exhibit marked "J" is mudstone, and practically has no cohesion ; a roof composed of that would require close timbering ; if I knew the conditions prevailing at the fall before the fall I should put the timber not more than 3 feet apart ; if I knew of the presence of mudstone in unknown quantities with the thin conglomerate I would treat it as mudstone, and timber accordingly ; I made my first measurements on the first or second day of the fall, and the others on the last visit ; I made them at the first set of timber that was standing, and close to it ; I measured from observation, and not with any instrument ; other measurements were made at the bottom end of the fall ; at the bottom of the fall there were three caps good and the fourth broken ; this side of the fall, the nearest to the edge of the fall, was good, and the second one bent about 4 inches ; at the side there I could see no sign of weight upon the timber at all ; I noticed no break of the roof there ; I did not get beyond the overcast ; I went there to look after the rescue of the men, and effect it, if possible, and to attend to the safety of the explorers ; Inspectors Dixon and Bates were with me when I made the measurements, and Mr. Thomas, the manager, Mr. Ross, and Lewis, the deputy ; I think a colliery worked with such a deep incline requires more care and attention than one working on the even grade.

By Mr. Tillet : I would call the conglomerate in this roof a coarse conglomerate ; I know "Geikie's Geology" ; it is a standard work ; I do not agree with the description quoted by you to me as to the nature of our conglomerates in the Greta district ; Geikie could not have had experience of our marine beds when he wrote that ; the quotation applies to our Newcastle freshwater beds.

By Mr. Millard : My examination of the field contradicts that quotation from Geikie.

By Foreman : The first fall did not extend beyond the rib, but the second fall ran over the rib about 3 feet ; the second fall happened at the same point as the first ; the extension of the fall over the rib only applied to the left-hand side ; my first object in going to the fall was to try and rescue the men ; when that was found impracticable, I devoted my energies to getting their bodies out, and looking after the safety of the explorers ; those were the main objects of my visit ; of course, I took a scientific interest in trying to ascertain the cause of the fall ; it was not necessary for me to go all over the mine to find that out ; I would no doubt have been interesting for me to have examined the roof over the No. 2 level, but I had no time to go all over the mine ; my visits could only be made when I could spare the time from my own mine ; I would not, from the fact of the presence of a soft patch in the roof near the overcast, expect to find the soft roof the same all through.

By Juryman : The coal was deposited there by a slow current, carrying driftwood, which, on becoming consolidated, became coal ; that would likely be covered with the silt or mudstone, which would afterwards be carried away in furrows by the conglomerate ; if the coal had not been solid, the conglomerate would have scoured it away ; calcareous conglomerate will soften if exposed to the atmosphere or the action of water ; after the fall, the edge of the conglomerate there would be exposed to the air, and might soften rapidly ; I believe the tunnel in which the fall took place was the same as I went down ten years ago.

By Mr. Bowden : I have seen caps bent by pressure from the floor in the Old Country, but not in the Newcastle district ; if the timber were bent from the floor, the sides would be affected ; it is not possible for a body of stone with little cohesion in the roof to hang for any time if it depends upon its own support ; a roof with little cohesion could stand there till its limit was reached, and then it would come away ; there is a certain breaking point which, on being reached, brings the stuff away ; if I saw a patch of that shale-stone in the roof, I would not from that expect to find a large quantity of it there ; the presence of those patches is no indication of a change in the main roof.

Taken and sworn at West Maitland, the 25th day }
of January, 1899, before me, — }

GEO. C. MARTIN, Coroner.

RICHARD THOMAS.

Inquest adjourned till 10.30 a.m. on Friday next, the 27th instant, the jurors being bound over.

Court-house, West Maitland, 25th January, 1899.

GEO. C. MARTIN, Coroner.

Inquest resumed at 10:30 a.m. this day, the 27th of January, 1899, the jurors answering to their recognizance.
 Court-house, West Maitland, }
 27th January, 1899,— }
 GEO. C. MARTIN, Coroner.

This deponent, *Azariah Thomas*, recalled on his former oath, states (*in answer to Mr. Curley*):—The dip of the No. 1 tunnel was 47 degrees from the bottom level to the face; my instructions to the timber-setters were to set the timber at right angles to the pitch; the set of the timber was at right angles to the angle of the tunnel; I did not tell the setters to set the timber at so many degrees, but at right angles to the dip of the tunnel; I have formed an opinion as to the cause of the caps in the tunnel being bent and broken after the fall; the lower sets of timber were broken by the water soaking into the roof after the fall; the water affected the conglomerate; it is quite evident that the breaking of those caps happened after the fall, because those caps are resting on the stuff that came down in the fall; I would not say that the water had been over all the broken caps; the water and *debris* filled up the tunnel for about 130 feet from the face; the timber immediately below the fall we saw breaking during the time we were repairing the tunnel where the big fall had taken place; we both heard and saw that; I heard the timber cracking while we were putting in timber where the fall had taken place; I noticed the timbers on the out-by side of the fall towards the level; they were in very good condition; the sets next the edge of the fall were in good condition; they were not bent, as far as I could see.

By Coroner: The mudstone that came from the fall was in much the same state as the Exhibit "J"; the bottom end of the fall had mudstone in it which contained water; the mudstone that had not been immediately in contact with water was in a solid state; as we worked down the tunnel we could see the water working its way down to the face under the timber.

By Jurymen: It was impossible for me to have got timber out of the bush without sap in it; the 8 inches required in the timber included sap and all; the smaller end was to be that size; the other end would be larger; I have known ironbark to be in a mine for seven years and a half, and it is there still; the sap of ironbark is considered much better than that in other timbers; that is one reason why it is chosen for permanent work; it is possible to get square timber without sap—that is, if the timber is large enough to allow of the sap being cut out; growing timber cannot be got without sap; I have never had it reported to me, directly or indirectly, that the roof or any part of it was dangerous and a demand made for extra timber.

By Mr. Curley: That particular tunnel was commenced a little over seven years ago; there was another tunnel near it down as far as the top level; I do not know how far away from this tunnel that was; there was a distance of 135 yards between the two mouths on the surface; the other tunnel was down 120 yards horizontally when I took charge; there were two places opened out on it, if I remember rightly; it was very little timbered—only a stick in here and there; it never occurred to me to do anything in the No. 1 tunnel that I have not done; there was no restriction at all on me.

Taken and sworn at West Maitland, the 27th day }
 of January, 1899, before me,— }

A. THOMAS.

GEO. C. MARTIN, Coroner.

This deponent, *William Kerr*, on his oath, states:—I am an engine-driver employed at the East Greta Colliery, and residing in West Maitland.

To Mr. Curley: I was on the 3 o'clock shift at the tunnel at the time of the accident; I worked a year and nine months at the colliery; I was not on that shift all that time; the other shifts I went on at 11 p.m. and 7 a.m.; the 3 o'clock shift terminated at 11 p.m.; sometimes I would send the men down on the 3 o'clock shift, sometimes the other man; Lewis went down the tunnel at 3 o'clock during the week in which the accident occurred; I sent Lewis down and the men on that shift; the men did not always go right from the surface to the face; sometimes they went right to the face; sometimes I stopped them at the level; Lewis and the men usually went down together; I could not see them at all from the handles; it was the alligator that went down with the men; I knew by the signals that men were going down; we had a signal for men going down, and another for men coming out; the tunnel men used to go down in one lot sometimes, and sometimes they and the jig men would all go together; I cannot remember whether during the week before the accident I sent them down in one lot or two lots; the alligator went down at a fair speed with the first lot of men; it would go with the same speed with the second lot; the men on the previous shift came up after the other shift went down; it generally took five minutes to bring up the men from the bottom direct to the top—I mean from the present face of the tunnel; I was never told by Lewis or anybody else to go down slowly as he was going to make a careful examination of the tunnel; the method I have described of lowering and bringing out the men has been the practice since I have been at the mine; the timber took a minute and a half or two minutes longer; the men had to come up for the timber; they went down with the timber which was placed in the alligator; I sometimes went to work with the men working in the tunnel; I have heard some one remark about broken or bent timber in the tunnel; that was Dan Grono; it was during a conversation I had with him in the street here one Saturday afternoon, between five and seven weeks before the accident; he said there were two or three caps that were bending with a splinter in them; he said nothing more than that; none of the other men working in the tunnel ever said anything to me about broken or bent caps.

By Mr. Tillett: The subject was brought up by the tunnel being mentioned between us, and one asking the other how it was going on; he said there would be some timber replaced when the tunnel was finished, and then went on to mention about the caps being bent with the splinter; he did not speak of them as indicating danger at all.

By Coroner: I could tell that Lewis went down with the other men, because I only sent the alligator down once, although I could not see who were in the alligator.

WILLIAM KERR.

Taken and sworn at West Maitland, the 27th day }
 of January, 1899, before me,— }

GEO. C. MARTIN, Coroner.

This deponent, *Thomas Lionel Bates*, on his oath states (*in answer to Mr. Tillett*):—I am an inspector of collieries, residing at Hamilton; I have inspected the East Greta Colliery several times; I last inspected it before the accident, on the 5th September last; I was in the extension of No. 1 tunnel on that occasion, and down to the face; it was then driven about 50 or 60 yards; that was below where the first fall occurred; I inspected the timbering; it did not show the slightest indication of undue pressure; I had had prior experience of the tunnel, and from what I saw of the timbering on the 5th September last was quite satisfied with it.

By Coroner: I walked down the tunnel; I could not see much of the roof because it was slabbed over; I could see the timber as I went down; I examined the timbering in the extension carefully; I could see the roof just through the slabs, and, as far as I could see, it was the usual conglomerate; the predominating feature of that seam is that conglomerate.

By Mr. Atkinson: I have inspected that colliery ever since it commenced—about nine years ago; I was at the colliery three times between the 5th September and the day of the accident investigating accidents; I have seen light falls in the mine during my inspections; what came down was what I would call an argillaceous shale or clay shale; I only saw it from 5 to 8 inches thick; I invariably saw the conglomerate above that shale; in the early part of 1897 I had an anonymous complaint about the mine; it came from a wheeler, and set out that the place in which he was working was dangerous on account of the roof; I investigated the matter at once, and all I could find was that the floor was lifting and making the road dirty and difficult to wheel upon; the roof was perfectly good; that was on the left-hand side of the lower level of No. 1; the roof was of coal; the bord was in some little distance—some 50 or 60 yards or thereabouts; there was no fall of roof from where the bord was turned away to the face; I have been down the tunnel since the fall; I am satisfied that the accident was brought about by the conglomerate thinning out, and this mudstone creeping in large bodies; that has become saturated with water and brought about the fall; the saturation with water would cause the mudstone to expand; it could not expand upwards on account of the conglomerate above it, so it would break away where the least resistance was offered, which would be at the point where the fall took place; the side or bottom pressure had very little to do with the fall.

By Coroner: I cannot account for the water getting into the mudstone; it might have been brought about by the excavation of the tunnel, which would allow the mudstone to expand.

By Mr. Curley: I never saw anything but conglomerate in the slight falls that I have spoken of; I have seen two kinds of conglomerate in the colliery—the silicious and the calcareous; the silicious is the harder of the two; the roof of this tunnel is composed of both kinds—the silicious at the overcast; I cannot tell how far that goes down the tunnel; the calcareous

calcareous comes in below the fall ; there might be some of it in the big fall ; I could only see between the slabs to examine the roof, and wherever I looked I found the conglomerate ; I did not notice any shale ; I looked to see that the timbering was sound and safe ; as long as that was so the men were safe ; I have not investigated any falls in the mine ; I have just seen where some slight falls have taken place ; it is not an uncommon thing to see a fall in the mine ; I can quite believe that there have been big falls where the pillars have been taken out ; I have heard of such falls under those circumstances ; I have not noticed the action of these falls upon the pillars ; I have seen nothing in connection with these falls to indicate any action of the roof upon the timber before the falls ; I have seen several places where there have been slight falls on the levels ; there was nothing important about them, nothing to indicate any danger ; about 6 or 8 inches have come down ; if I, as an inspector of the East Greta Colliery, knew that the levels were timbered in a certain way, and falls had taken place between the timbers, I would take notice of such falls ; I have not, to my recollection, seen falls on the level extending for 2 or 3 feet in thickness ; I have been in the level where the dam is ; I have seen the roof there ; there is a kind of mudstone above the coal there ; it is something like the exhibit marked J ; the roof is not broken to a dangerous extent there ; it is broken where the mudstone has come away, but not to an alarming extent ; I cannot say to what extent it is broken ; I saw it when I was down with the jury ; I cannot say whether it was broken for inches or feet ; the conglomerate was above it ; I saw none between it and the coal ; I think the conglomerate there was calcareous ; I have been in the overcast ; I saw silicious conglomerate there ; I did not go up as far as the door when the jury were down ; I saw nothing but conglomerate in the overcast.

By Coroner : Even if the whole of the roof were calcareous conglomerate I consider the timbering was sufficient for the purpose.

By Mr. Curley : I have examined the report-books of the colliery when making my inspection ; they were to my satisfaction at the time—that is, prior to the accident ; from what I have heard in this inquest about the report-books, I am not satisfied ; I am dissatisfied with the person who made the inspections, and recorded by Lewis ; I consider that Cartwright or the manager should have been down the mine during the fortnight ; I have read Special Rule 7 of the East Greta rules ; I do not think that the under-manager complied with that rule when he was not down the tunnel for a fortnight ; I should say that a mine of the character of East Greta should be under very strict supervision.

By Mr. Millard : I had no knowledge of Lewis before the fall ; I have nothing to say against his competency as a practical miner ; I believe him to be a most competent man from what I have seen of him since the accident ; he appears to be a thoroughly practical man ; I look upon him in the light of a contractor, and say that he is ineligible to make the reports in the books ; I do not say he is incompetent ; that is a question of law, and I only offer my opinion as a layman ; I cannot mention anybody in the mine more qualified to make the inspections than Lewis.

By Mr. Bowden : On the whole, the colliery is a carefully and skilfully managed one ; I should call the current of air in the extension a district current.

By Foreman : The opening of the top seam some years ago would not affect this tunnel with regard to water.

By Jurymen : It was beyond human conception to expect the mudstone in such large quantities in that roof before the fall ; if the tunnel had been worked with a straight ventre and double skips, with a line of props down the middle, it would have been doubly strengthened ; that was not practicable though ; it would have increased the safety of the mine if the roof had been bored periodically ; it would be possible to work the tunnel with the props down the centre, but it would not be expedient ; if the skip got off the line at all it would bring down the props ; I visit pretty well every working-place in the mine on my inspections ; I know No. 1 in the No. 2 jig on the north side of the No. 1 ; I believe it was a bord going north that I had the complaint about ; I have seen the tops and pillars between the No. 1 and No. 2 jigs ; I have seen where falls have taken place there ; I have never seen any falls take place in the places while the men have been working ; I considered those falls extensive ones ; I saw no reason to stop the men working ; there was no danger ; I know that they stopped taking out pillars ; I know the roof in other mines in this district ; I have never seen the mudstone in the roof to any appreciable extent, but only in small patches ; I would attach importance to it if I saw it for 2 or 3 feet with the sandstone above it.

By Foreman : The manager did not evade any provision of the mining laws by not running the jig down in front of the tunnel.

By Jurymen : I never knew from whom the complaint came about the roof in the mine ; it was quite possible for the men to be working in that tunnel without knowing of the presence of the mudstone ; only the conglomerate was exposed to their view, and they could not tell the thickness of it.

By Mr. Curley : I did not go to the face the last time I was down ; the tunnel was timbered close to the face, so I could not have seen the roof by going down to the face ; I went close enough to see all that I wanted ; I went close enough to see the face.

THOS. L. BATES.

Taken and sworn at West Maitland, the 27th day }
of January, 1899, before me,— }
GEO. C. MARTIN, Coroner.

Inquest adjourned till 2:30 p.m. this day for lunch.

Court-house, West Maitland, }
27th January, 1899,— }
GEO. C. MARTIN, Coroner.

Inquest resumed at 2:30 p.m. this day.

Court-house, West Maitland, }
27th January, 1899,— }
GEO. C. MARTIN, Coroner.

This deponent, *Thomas Lionel Bates*, recalled, states (in answer to *Mr. Millard*) :—The periodic boring of the roof would have been a reasonable safeguard against such an accident as this fall ; it would not be practicable to put those bores in every 2 feet ; I would advise another bore at 50 feet from the overcast, if one were put in at that point ; I believe bores are put in the roof at Stockton to see what is in the roof ; if bores were put in about every 50 feet it would show that precautions had been taken to find out the nature of the roof ; the presence of the mudstone in bords would not have the same effect if it fell as in the main tunnel ; the putting in of the bores would be an additional precaution ; I would never have asked for these bores to have been put in before the accident ; I should advise such a thing now, after hearing the evidence in this case.

By Jurymen : I have never visited the tunnel since the 5th September last up to the time of the accident.

By Mr. Curley : I first saw the fall on the day of the accident ; two of the caps, I think, showed signs of bending on the out-by edge of the fall ; I just noticed the strata of the fall, but did not take any measurements of it ; there was a little bit of conglomerate—from a few inches to 18 inches—then the argillaceous shalestone, then the sandstone ; I think the conglomerate must have been the calcareous ; I did not take particular notice of it ; going down the tunnel the conglomerate was thicker on the out-by edge of the fall, on the left-hand side ; there was very little of it on the other side ; that thin shell ran for about 15 feet, I think ; I was desirous of pushing on the work of rescue and did not want to do anything to hinder it ; below the fall the timber was more or less broken ; below the fall there were two or three sets that were not broken ; then there was another fall below them ; I saw some water dripping from the roof at the fall ; that was on the Monday after the fall ; I saw no water on the day of the accident.

By Mr. Millard : I do not think there was any water there at all on the day of the accident ; it was after the second fall had taken place that I noticed it.

By Jurymen : One could make a certain examination of the roof while going up or down in the cage at the ordinary pace ; to make a proper examination it would be necessary to go more slowly ; I saw Lewis's signature to the reports in the report-books as having inspected the mine ; I did not object to his signing the books when I saw his name there.

By Mr. Tillett : I did not object to it because I did not know he was a contractor at the time.

By Jurymen : There must have been 13 feet between the top of the fall and upper seam.

THOS. L. BATES.

Taken and sworn at West Maitland, the 27th day }
of January, 1899, before me,— }
GEO. C. MARTIN, Coroner.

This

This deponent, *Edward Davis*, on his oath, states (in answer to *Mr. Millard*) :—I am a colliery carpenter, and reside at East Greta ; I have been often down the extension of No. 1 tunnel ; I have sometimes gone down once a day, sometimes two or three times a day, and sometimes not down at all for three or four days at a time ; I was down there about a week before the accident ; that was the last time I was right down to the place ; I noticed the timber in going up and down ; it was in a very good state, I consider ; I did not notice any of the cap-pieces bent or broken ; I know about where the fall took place ; there were no broken timbers there, and if any had been bent it must have been very slightly, or I would have noticed them ; if there had been five or six caps bent or broken, and sagging down a foot, I would have seen them ; there were none in that state ; my work was fixing up the rollers and oiling them, and looking after the signals ; I fixed a roller about 60 or 70 feet from the bottom, just before the accident ; I was there for at least an hour and a half.

By Mr. Tillet : I was not concerned much in the roof, my work being on the floor and sides.

By Mr. Curley : I did not see five or six caps broken where I fixed the roller 60 or 70 feet from the face ; I did not see one bent ; I just casually looked at the roof as I went by ; I could see some little distance down and up the tunnel ; I did not see four bent caps there ; I had nothing to do with looking after the road in the tunnel.

By Mr. Bowden : The rollers were fixed to the sills.

Taken and sworn at West Maitland, the 27th day }
of January, 1899, before me,—

EDWARD DAVIS.

GEO. C. MARTIN, Coroner.

This deponent, *Edward Howarth*, on his oath, states (in answer to *Mr. Millard*) :—I am a labourer at the East Greta Colliery, and know the extension of No. 1 tunnel ; I was down there either on the Tuesday or Wednesday before the accident ; I went down with the manager and Mr. Heyes ; we went as far as the bottom level, where we got off ; Mr. Thomas took the grade of the floor ; the three of us stayed there ; Mr. Thomas sang out to Griffiths to give him a sight ; Griffiths did so ; he was down at the face ; Mr. Thomas said, "Is that right?" after taking the level, and Griffiths answered, "Yes" ; Heyes threw the chain down the tunnel, and told me to take it down and mark every chain ; I did so ; I walked across the tunnel three times, then drew the chain down to the bottom ; I took notice of the timber as I went down ; I saw two bent caps ; they were about nine or ten sets before you come to the face ; I noticed no others bent ; there were none bent at 2 chains from the bottom level ; I saw every set as I went down ; I did not chain up the tunnel ; Mr. Thomas was at the bottom level all this time ; Mr. Heyes asked me how many, and I told him I did not know, as I had not been told to count them ; he said, "I'll have to climb back again now, as you did not count them" ; he then went back up the tunnel ; I do not think he went quite to the level ; Mr. Thomas and Mr. Heyes came right down the face afterwards on the alligator ; Griffiths, Parsons, and March were at the face ; Mr. Thomas did not get off the alligator ; Thomas asked the men how they were getting on ; there was nothing said about the timber, only Griffiths asked Thomas how far they were to go ; Thomas told Griffiths that he would let him know as near as he could ; he told Griffiths he had about 45 feet to drive in, and that would mean about nine more sets of timber ; Griffiths said he wished it was his last shift, as he was sick of the water which did not agree with him ; he said, "Well if that is all we have got to go we will have her done about the new year" ; Heyes told me to roll up the chain and get on the alligator ; I rolled up the chain and got on the alligator ; Messrs. Thomas and Heyes got on with me ; we did not stop between the face and the bottom level ; we stopped at the bottom level to get the instruments ; Mr. Thomas did not stop between the bottom level and the face coming down in the alligator.

By Mr. Tillet : I was watching him come down in the alligator ; I could see him quite plainly from the face ; I cannot say whether the chain was one or two chains long ; we chained along the rail ; Mr. Heyes was at the top end of the chain ; my work was all along the floor ; you could just notice these two caps bent, and that was all ; I could not go down very quickly with the chain as it used to get caught.

By Mr. Curley : I was told what I was going to do before I went down that tunnel on that occasion ; Mr. Heyes told me to go down and draw the chain while they measured it ; that was the first time I had ever done that work from the bottom level to the face ; that was my only trip as far as the face ; I had been down to the bottom level often ; one day I went down about nine or ten sets below the bottom level ; I dropped a pair of tongs from the bottom level, and went after them ; I do not go often into the mine ; I have been about 100 yards along the bottom level ; I have seen timber set there ; I saw no breaks in the roof there ; I cannot say how close the timber was set there ; I saw no bent timbers there.

E. HOWARTH.

Taken and sworn, at West Maitland, the 27th day }
of January, 1899, before me,—

GEO. C. MARTIN, Coroner.

This deponent, *Alfred Ashley Atkinson*, on his oath, states (in answer to *Mr. Curley*) : I am the Chief Colliery Inspector ; I have had about twenty-four years' experience of colliery workings ; during that time I have had to deal with various kinds of roofs in collieries ; I have not had to deal with conglomerate roofs ; that is a very unusual roof in the coal mines in the old country ; I have given some attention to the study of geology ; I heard the quotation from Professor Geikie the other day ; knowing him as a recognised geologist, I take it that he would not write anything that was incorrect ; my experience of mining managers teaches me that they usually endeavour to ascertain the nature of the strata overlying their coal seams ; I should think they would take considerable trouble to become acquainted with the roof of their various collieries ; I have heard reference made in this inquiry to falls in the East Greta mine such as that referred to by Cartwright ; from that I should say the manager should have a good knowledge of the roof of the mine ; if caps were broken or bent, or other timbers broken, I should say the manager should look for the cause ; I was once on the East Greta colliery in October, 1897 ; the extension of the tunnel had not been commenced then ; the mine was idle on that day, but I went down No. 1 tunnel as far as the lower level, and along the level to the face on the south side ; I was not making a general inspection of the working places ; it was my first visit to the colliery, and I did not think it necessary to go any further, as the mine was not at work ; I have been down the mine since the fall twelve or fifteen times ; I have gone through most of the working places, and part of the old places ; I have tried to ascertain the general character of the roof ; I have seen the character of the roof at the big fall in No. 1 tunnel ; I could not get along further to the south than the dam ; I noticed the character of the roof over the dam ; above the conglomerate there is some of that soft mudstone ; there were about 2 feet of conglomerate there in thickness ; I examined the mudstone above the conglomerate, and am satisfied it was there ; I could not say that it would run into No. 1 tunnel ; the whole was half the width of the level ; the mudstone ran the whole of that distance, as far as I recollect ; from finding it there I would think it possible to find it in other parts of the mine as well ; I did not get beyond the dam ; I went through on the other side in connection with the overcast ; I saw one place on the left-hand side which showed a little softer stone through the conglomerate ; that stone, I think, was mudstone, with sandstone mixed ; that was just on the left-hand side ; I should say that was just a small patch in the conglomerate itself ; I think the conglomerate over the dam was silicious mostly, although there appeared to be traces of the calcareous conglomerate as well ; since the fall I have made what observation of it I could without going up into the fall ; I went there first on the day of the fall ; the conglomerate there was mostly the calcareous ; on the left-hand side on the top of the fall it appeared to be about 18 inches thick, and tapered down to a few inches on the right side—4 or 5 inches ; I cannot say with any accuracy how far that thin layer extended ; above the conglomerate was the mudstone ; that was several feet thick ; when I first saw the hole there seemed to be the hard sandstone or fine conglomerate ; the silicious conglomerate is the stronger, and would not suffer so much from the weather or influence of water ; I should say the silicious conglomerate would support a bigger weight than the calcareous ; a colliery manager would have that knowledge if he had opportunities of seeing the action of the weather and water upon the two ; I would naturally expect Mr. Thomas to know the nature of the roof in No. 1 tunnel ; I did not notice any water on my first visit to the mine after the accident, but saw some later, I think, on the Monday following the accident ; it was dripping from the roof right out of the top of the fall ; there was not much water ; it was not running, but dropping fast ; the sides appeared good, except where the caps had gone, and torn a little of the coal away at the top ; I did not take particular notice of the floor on my first visits, but afterwards looked at them ; I noticed no bending in the sills above the fall ; I noticed the cap pieces on the out-by side of the fall ; they appeared to be all right, but it was decided to strengthen them in view of possible dangers ; no doubt the men chipping the roof would have a knowledge of the mudstone which was lying immediately above the coal, but I could not say that they would know of the mudstone lying over the conglomerate ; if the conglomerate ran out, and the mudstone came in, the timber-setters would have a knowledge of it ; if the conglomerate had run out, and the mudstone come in, and the timber-setters known of that, I think it probable that some of them might have mentioned it to Mr. Thomas ; if the officials knew that the conglomerate had run out, and been replaced by mudstone, I should say it was a matter requiring their attention, and they should have

have put in stronger timbers and closer together; timber may be strengthened by adding sets of the same size or putting in stronger sets at the same distance; I have noticed the timber particularly that was put in; it was very good timber; I know that a lot of it came green from the bush, and was put in with the sap in it; I have seen larger timber than that put in mines; I have seen it put closer; I have seen tunnels bricked; that was where a tunnel was being driven from the surface, and ground was soft and treacherous; on the other side of the fall there were two or three sets standing good then—one set badly bent; as the work progressed several of the sets below were seen to bend a good deal more. [Objected to by Mr. Millard and Mr. Bowden: I do not consider that Lewis was eligible under General Rule 4 to make the inspections of the mine; I know the Special Rules of the colliery; the Special Rules of a colliery are according to the Act to be considered of equal force as the Act itself; I heard Cartwright's evidence as to his not being in the tunnel for a fortnight; I do not think he complied with Special Rule 3, or Special Rule 7.] I have been in the colliery since the accident several times; I found the pillars in good condition; I did not see much crushing of pillars; some of the roads I thought required more timber; I cannot tell whether it has been put there; those roads were on the bottom levels in No. 2 tunnel; it is general admitted that conglomerate roofs do not run with such uniformity as deposed to by several witnesses in this inquiry; my opinion is that they do not; I do not think they run so regularly as the ordinary shale or sandstone roof.

By Foreman: I could not say that the mudstone visible in the fall extended beyond the limits of the fall; it was probable that it spread itself out beyond the fall in a lateral direction; the water running down the tunnel, I expect, came from the dam; I should think that it was extremely unlikely that water from the dam percolated through the roof to the fall.

By Juryman: If the conglomerate at Greta is good, that at East Greta would also probably be good if it were of the same composition; I was through some of the workings in No. 2 tunnel; I found some of the mudstone in one of the levels where there was a fall.

A. A. ATKINSON.

Taken and sworn at West Maitland, the 27th day }
of January, 1899, before me, }
GEO. C. MARTIN, Coroner.

This deponent, *Oliver Kay Young*, on his oath states (*in answer to Foreman*):—I am an auctioneer, residing in West Maitland; the witness Parsons had a conversation with me about a job; he spoke to me about the accident; he came to my office in High-street a few days after the accident, and asked me if I wanted any men; I told him no, and asked him where he was working; he said at East Greta, in the rescue work at No. 1 tunnel, but was not going to work there any more; that Cartwright, the under-manager, had said to him that if he did not work at No. 1 tunnel he could not go to work at the mine; he said, "I don't intend to work there"; I asked him if anybody had forced him to work there, or if he had gone of his own freewill; he said nobody had forced him to go there; I then asked him what right he had to come to me to dictate where he would work, and where he would not; he replied, "I've got the company under my foot, and I'm going to squeeze them"; he said nothing about my having made him any offer; nothing was said about any offer of money to him.

By Mr. Tillet: I have mentioned this conversation to others.

By Mr. Bowden: There were two people within hearing of this conversation.

By Mr. Cwley: I am one of the directors of the East Greta Mine; Mr. W. J. Gilham, of Newcastle, is chairman of the company; I have an interest in the mine; Parsons and I have never had any quarrel; I did not know who he was when he came to see me; I recognised him by the lump on his neck; I have a feeling against him, because he told an untruth in his evidence.

O. K. YOUNG.

Taken and sworn at West Maitland, the 27th day }
of January, 1899, before me, }
GEO. C. MARTIN, Coroner.

[Court-house, West Maitland, 8:30 o'clock a.m., 28th of January, 1899.]

WE, the undersigned jurors, impanelled and sworn on an inquest opened at the Surgery, at East Greta, on the 24th day of December, 1898, and continued at the Court-house, at West Maitland, on the 4th, 5th, 10th, 11th, 12th, 13th, 17th, 18th, 23rd, 24th, 25th days of January, 1899, and concluded on the 27th day of January, 1899, touching the death of Albert Moncrieffe, do hereby solemnly and sincerely declare that, after (14) fourteen hours' continuous debate, we cannot agree together on a verdict; and we, the said jurors, do hereby affirm that it is not possible that we could come to any agreement however long we might be locked up to further consider the verdict:—

Frederick William Thursby, Foreman.
Henry Atkinson.
Daniel Joseph Ryan.
James Joseph Maher.
William Henry Oxley.
John Markham.

Stephen Prendergast.
Robert James Fullford.
Thomas Edmunds.
Thomas Dunphy.
Charles Wellington Holmes.
Frederick Isaac Beckett.

Signed in the presence of,—
GEO. C. MARTIN, Coroner.

And witnessed by
F. FOWLER, Sub-Inspector.

Dated at West Maitland, this 28th day }
of January, 1899. }

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[Three plans.]

EXHIBIT E.

H. WOOD,
Secretary, Dept of Mines,
1906.

PLAN
showing Workings and Ventilation
in the
BOREHOLE SEAM
NEWCASTLE COAL MINING CO. A. PIT
Scale 8 Chains to one Inch

