

SESS. II.—1887.  
NEW ZEALAND.

## COLLIERIES ON THE WEST COAST OF THE SOUTH ISLAND

(SUPPLEMENTARY REPORT ON).

*Presented to both Houses of the General Assembly by Command of His Excellency.*

Mr. Inspector BINNS, F.G.S., to the UNDER-SECRETARY of MINES.

SIR,—

Dunedin, 30th September, 1887.

I have the honour, in accordance with the instructions from the Hon. the Minister of Mines contained in your telegram of the 1st June, 1887, to make the following supplementary report on the coal-mines situated on the west coast of this Island.

1. *Coalbrookdale Colliery, Westport*.—On the 16th and 17th June last this colliery was inspected; at that time special rules were posted up, but no abstract of the Act, and the requisite names and addresses were not appended to the rules. A boy aged sixteen was working a steam-winch at the top brake: as this appeared to me to be a “steam-engine . . . . . used in connection with the working” of the mine within the meaning of general rule 28, I asked Mr. Brown to substitute a man. Reports duly kept. The air in the mine was good, but so long as it depends on natural causes, and is subject to alteration not only in volume but in direction from extraneous atmospheric changes, it cannot be called perfectly satisfactory. At No. 3 shaft the ventilating current for twenty-five men and two horses registered 6,760 cubic feet per minute. The timbering was good and plentiful; spragging also better carried out than I have previously seen it. The seam is in places very thick, but varies considerably. On the 6th July I wrote to Mr. Brown requesting attention to several points, and on the 30th August received a letter from Mr. Waters, C.E., engineer in charge of the company’s works, stating that, in order to assist the ventilation, a man had been put on to work a small ventilating-fan, and a chimney had been erected over one of the air-shafts. As the works on this side of the south branch are not of a permanent character, it was not considered worth while to erect a larger fan, but in the future mechanical ventilation would be applied. A man of full age had been put in charge of the steam-winch; Evan Thomas lamps had been ordered; special rules printed; and a copy of the Act hung up at the office to serve as an abstract. Another point mentioned by Mr. Waters was that travelling on the chain-road and incline during working-hours had been prohibited. As will be seen on reference to the published reports for past years, this has long been a *vexata quæstio*. I can state from personal experience that the man in charge at the bottom of the lower incline is energetic in endeavouring to prevent walking on that part of the surface road. I hope, however, that his zeal in this direction does not extend only to my own case. The operations of this mine are being rapidly extended, and the output continues to be large and of excellent quality. At the time of my visit the endless-chain extended to within 10 chains of Burnett’s Face; from which point, across the right-hand branch of the Waimangaroa, a wooden bridge, 340ft. in length, was being constructed; while over the same river lower down a bridge, 248ft. in length, and built of wrought-iron girders on cast-iron columns, was in hand.

2. *Phoenix Coal-mine, Reefton*.—Although the Reefton coal-mines are very small they are in many cases exceedingly badly worked. In this case a keg of powder was in the mine, as well as a tin. No report was kept. The mine was of excessive width and insufficiently supported. An iron pricker and tamping-bar were below ground. Certainly a safety-lamp was on the premises, but it was a Davy. The man in charge, who appeared to be acting as manager, had no copy of the Act. On the 6th July I wrote to Mr. W. Williams, the owner, about the iron shot-firing tools, the excessive quantity of powder, the inordinate width of the drive, and about approved safety-lamps.

3. *Lankey’s Gully Coal-mine, Reefton*.—Three men were on the 13th June engaged here, one of whom was actually working under a piece of stone so loose that he objected to my tapping it, lest a slight touch should bring it down. So long as men wilfully and deliberately risk their lives in this way we cannot hope for immunity from accidents. There was no return from the workings, and consequently the air was not particularly good. The Act was totally disregarded. On the 7th July I wrote to Mr. A. Elliston, owner, requesting his compliance with certain points.

4. *Golden Fleece Coal-mine, Reefton*.—In June last one man was engaged taking a little coal from the old Venus level. The timbering was excellent, but the Act not attended to.

5. *Burke's Coal-mine, Boatman's*.—The coal in this mine is soft, and a band of clay has appeared on the west side, where the workings are. On the 14th June last there was no return airway. Mr. Coghlan, the owner, says that he has seen indications of explosive gas on the candle-flame. Since my first visit to the Reefton coal-mines I have been apprehensive of the appearance of fire-damp, and have frequently recommended the proprietors and managers to obtain safety-lamps. This is, however, the first intimation of its actual presence. Mr. Coghlan is not a practised coal-miner, and, as observing gas with a naked light is a somewhat risky operation and requires considerable delicacy of manipulation, it would not surprise me to learn that in this case a mistake had been made. At the same time I adhere to the opinion that gas will, sooner or later, be found in the district, and that if the mines are not examined with a safety-lamp, as is now required by law, an explosion will eventually take place. I wrote subsequently to the owner of this mine, requesting him to procure an approved safety-lamp, and to sink an air-shaft.

6. *Boatman's Coal-mine, Boatman's*.—The seam here dips at a considerable angle, and a good width is taken out. The timber, which is set vertically, is, of course, valueless as a means of support in case of weight coming on. The Act is disregarded, and I have written on sundry points to Mr. Coghlan, who owns this mine as well as the preceding one. It is proposed to put down a surface tramway, which will greatly reduce the price of delivering the coal.

7. *Murray Creek Coal-mine*.—Mr. Macilquhaum, who manages this mine, has laid out and carried on his working in a capable manner. This, of course, is a new mine, and not the one referred to in my last report. Powder was taken in in 4lb. tins. The coal is of excellent quality, and worked on a proper system of bord and pillar, with a ventilating shaft, which requires a furnace in order to render the air-current constant. This point had not been overlooked by the manager. In this shaft, which is 45ft. 6in. in depth, two seams are exposed, the upper, 7ft. 6in. in thickness, being separated from the lower, 17ft. 6in. in thickness, and at present worked, by 4ft. of clay. The report was not at the mine, being, it was stated, kept at Reefton. The manager has a Davy lamp, which is used in the morning examination.

It will be observed that, with one exception, the Reefton coal-mines are not carefully or efficiently worked; also that in most cases the law is a dead-letter. I have generally noticed that these two defects go together. For years I have pointed out the careless way in which the coal-mines in this district are worked, and can only add that, unless an example be made by a rigorous prosecution of some manager or owner, I see no means of appealing to the feelings of the colliery-working population of the locality, and preventing the accidents which will, in the absence of improvement, most assuredly occur.

8. *Brunner Coal-mine, Greymouth*.—At the time of my visit, at the beginning of last June, Mr. Bishop, manager of this mine, had twenty-five Cambrian lamps, which have since, I believe, been supplemented by an additional supply. These lamps were used in the No. 1 or lower district, where the presence of gas was occasionally reported. In my examination of this district, which was made, as were my visits to other mines in the Grey Valley, in company with Mr. Inspector Gow, we found a very small quantity of gas in the main level of the lower workings. Reports were duly kept, the plan continued up to the 26th March, and the formalities of the Act strictly observed. The ventilation was by no means perfect; and this defect arises from the fact that the workings have become too extensive for the power of the fan. A 9ft. 6in. Schiele fan had been ordered, and preparations made for its reception.

9. *Coalpit Heath Colliery*.—On the 10th June, 1887, the main return from the workings, without counting what is allowed to course through the old bords, was 24,107 cubic feet per minute. At that time Mr. R. Elliott had been about four months in charge of the mine, and forty-two men were engaged in twenty-two working-places. We found no gas, the occurrence of which was occasionally mentioned in the report-book. Lamps were used in the places where gas was found. There was no plan at the mine, Mr. Waters having taken it away; but on the 28th July Mr. Elliott wrote that Mr. Gordon had recently been round and had seen it at the mine. Spragging was remarkably well carried out; the places not too widely driven, and the weight on the pillars, mentioned in the report of the 1st April last, had settled down. The air was pretty good, but, unfortunately, warmed by the pump, which is situated in the main intake. The cage was not fitted with safety gear, and had no corner chains: the latter fact was pointed out by Mr. Elliott. Safety-hooks and spring tumblers were fitted up; reports kept by the underground overseer; and in the months of April and May the miners had exercised their privilege of examining the workings, and had found very little fault—in one instance with the sides of the shafts, which have never been very well secured. Owing to the fact that the old pit-bank cover was pulled down with the old head-gear, and the new cover not completed, the brace was partially uncovered. No copy of the Act was exhibited, but special rules were hung up. The ropes had been tested as required. On the 5th August I received a letter from Mr. Elliott, stating that the cage alterations should have immediate attention.

10. *Greymouth Wallsend Colliery, Greymouth*.—The working of this mine having been so thoroughly and ably investigated by Mr. Commissioner Keddell, R.M., and the whole of the evidence having been, as I am informed, published, there remains little for me to report. There could be no doubt, in my opinion, that the evidence disclosed a state of affairs which proved a considerable amount either of negligence or want of judgment in working the mine; and that the information elicited was more full and detailed than could have been obtained by any other process, not excepting even an action at law. Under the existing Act (General Rule 40), if gas be present in a working-place, it is illegal for men to enter. In a fiery mine like this I do not see how it is possible, in the leading places, where blowers exist, for a perfectly clear atmosphere to be found. Of course, I do not refer to standing gas, which should never be allowed; but where there are strong feeders it will almost always be possible for gas to be detected with the lamp. Still the evidence given of frequent ignitions of gas, which were only extinguished by being beaten out with pieces of cloth, points to conditions of working which would, if allowed to continue, have doubtless led to disastrous

sacrifice of life. Another point in which neglect was shown was the arrangement of the cages, there being neither safety-catches nor tumblers, though in April last I had been in communication on this subject with the company's engineer, who arranged verbally on the 6th November, 1886, to have them put on. One good result of the inquiry is that the danger of coal-dust in fiery mines is now brought home to us. For a long time it has engaged the attention of mining men, both in Great Britain and other parts of the world; and we now see that in comparatively shallow and damp mines we must endeavour to cope with what is no doubt, in the presence of firedamp, a greater danger and one more difficult to overcome than the explosive gas itself. When the Liveing's indicators, which have I believe been ordered, on my requisition, arrive, we shall be able to measure the exact proportion of gas in the air of a mine, and to act accordingly.

211. *Tyneside Colliery, Greymouth.*—On the 10th June six men were at work in this mine. The ventilation seemed good; but being unassisted by any artificial means could not be otherwise than inconstant. Mr. P. Cumming, the manager, informed me that Mr. Kilgour was having a fan constructed. No gas has so far as I am informed, been found in the mine, which was examined with a Davy lamp. I told Mr. Cumming that it would be necessary to procure an approved lamp. No copy of the Act was exhibited, but a report was kept.

#### *New Mine.*

12. *Archer's Coal-mine, Boatman's.*—On the 14th June, at Mr. Archer's request, I examined some prospecting workings on a very small scale on his ground, which adjoins that on which the Burke's Coal-mine is worked. Mr. Archer promised to send me notice of commencement, and as I have received none, presumably he has not begun work.

I have, &c.,

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Inspector of Mines.

The Under-Secretary of Mines, Wellington.

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