

haulage-tunnel has been driven, through which the mine will be worked and the endless haulage-rope of the ground tram will be extended into the mine. This will give greater facilities in the delivery of the coal over the previous methods. The coal in No. 4 section is of a good quality, and the coal-seam is from 6 ft. to 8 ft. thick. I made eight visits of inspection to the mine during the year and found the mine safe, but the ventilation, though adequate in the main intake and return airways, was defective in workmen's bords, due to the want of brattice-cloth and stoppings in the worked-out places. On my recommendation that condition was amended, and the ventilation was eventually much better. The ground tram has been much improved by the completion of a tunnel and the installation of a haulage main and tail rope, replacing horse haulage. The mine machinery and buildings are in good order. The output of coal from the mine is 12,633 tons short of the output for the previous year, due to the closing of Nos. 1 and 3 Mines, and in some degree to the loss of working-time by miners who were victims of the influenza.

*Waikato Extended.*—During the year a tunnel was driven through rock from the 7 ft. coal-seam into the big coal-seam at a higher level, and there the workmen have been employed and have mined 2,254 tons of coal, an increase of 1,364 tons over last year's output. There are only a few men employed, and the company ship their coal in barges to settlers adjacent to the Waikato and Waipa Rivers. More vigorous methods might be employed in disposing of the coal, and it is doubtful if the present methods will pay working-expenses. I found the mine safely worked.

*Huntly Coal and Fireclay Mining Company.*—The opencast mine being worked out, after some prospecting a small coal-seam was located a few chains north of the opencast. An adit level has been driven about half a chain into the coal. The fireclay in the company's quarry is intersected by inferior clay bands, but as work proceeds it is believed the quality of the clay will improve. The coal mined and used at the works was 3,782 tons, being 607 tons increase over the previous year. I inspected the mine and quarry a number of times during the year and found them safely worked.

*Crown Lease, Aria.*—In June I visited the mine and found that the coal-seam was much broken, and it appeared that there was an upthrow fault ahead of the main drive. Later I was informed that this fault had been cut into, but I have not yet heard what is the amount of the displacement. It is my intention to visit the mine soon, when I will make a careful examination with the view of advising the owner for future development-work. The coal being of an inferior quality due to crush, there has not been a demand for it as a household fuel. During the year there was sold 217 tons of coal, mostly to the Aria Dairy and Butter Factory.

*Hikurangi Collieries.*—The company's mines are at Waro, the coal underlying the lime rocks there. As previously stated, there was some trouble in draining the mines, but that difficulty has been overcome and the pillar coal is being worked. No. 6 adit is at the southern end of the lime rocks, while No. 2 is just beyond the rocks at their northern end. Both mines are working the pillar coal, commencing at a fault-line about midway between the two tunnels and working back so as to leave the waste in the centre. Good progress is being made. Early in the year excessive quantities of timber were used in building chocks and pillars to protect the main haulage and airway roads. Since then the consumption of timber has been normal as in such cases. The work is being carried on with great care.

*The Phoenix Mine:* The workings have been driven up to the boundary of the Great North Road, where there is an upthrow fault close to the company's boundary. The seam is from 8 ft. to 12 ft. thick, and the coal is of a superior quality; there appears to be several years' supply in the area. I am informed that on the north-west side of the fault-line referred to a number of boreholes have been drilled into the coal, and that there is a prospect of extending the mining to that area. At present a new stone drive is being driven as an adit dip in a line with the screening plant to connect the Phoenix Mine workings, and it may be extended into the new area. This new tunnel will greatly facilitate the mine-coal haulage, being direct and worked by endless haulage-rope. I found the mines safe and the ventilation generally good.

The miners suffered to some degree by the epidemic, which resulted in much lost time at the mines; nevertheless the year's production of coal was 65,361 tons, being an increase of 33,480 tons over the previous year. The output for 1917 was much below the previous years' record.

*Northern Coal-mining Company, Hikurangi Sections.*—Tauronga section: The old Northern Mine is worked out, but there are six men working in a small mine on the Tauronga section, where the coal-seam is from 4 ft. to 7 ft. thick. The area is very small. The men are working on the co-operative or tribute system, mining and delivering the coal to the Northern Company at a fixed tonnage rate. During the year there was mined 1,380 tons from the Tauronga section and 10,701 tons from the company's Crown lease, being part of Section 2, Block 16, Hikurangi Survey District (Little and party, tributers). This latter area is now worked out and the mine closed. The total output from the Tauronga and Crown lease is therefore only 12,081 tons, as compared with 27,782 tons for the previous year, being a decrease of 15,701 tons. I have found the mines safely worked.

The Northern Company's Waro Rocks section: The company are preparing to reopen this mine, and are now calling for tenders for the sinking of an air and drainage shaft, which is to be sunk to the north-west of the mine-workings. However, it will be some time before the Waro Mine section is again working, as some new and improved machinery will have to be installed for haulage, drainage, and ventilation. The old mining plant is inadequate and obsolete.

*Northern Company's Kiripaka Mine.*—Crown lease, Section 17, Block VII, Whangarei Survey District, Te Kiripaka section: The mine has been worked continuously throughout the year. The north-east level has been continued along the line of fault or fold, and the coal mined up the folded