

ANNEXURE A.

SUMMARY OF REPORTS BY INSPECTORS OF MINES.

NORTHERN INSPECTION DISTRICT (WILLIAM BARCLAY, Inspector of Mines).

OUTPUT OF COAL.

The whole of the Northern District produced 766,312 tons of coal during the year 1930. The North Auckland district produced 140,911 tons, an increase of 24,802 tons; the Waikato district 610,160 tons, a decrease of 41,611 tons; and the Taranaki district 15,241 tons, an increase of 13,263 tons. In the Waikato field two new large collieries, McDonald, Waikokowai, leased by the Glen Afton Collieries, Ltd., and Wilton, owned by the Wilton Collieries, Ltd., were opened out and equipped with modern plant to market outputs at the end of the year. Both new fields contain large unbroken areas of brown coal connected to the railway. In order to meet the demands of the house-coal and steam-coal trade, all the Waikato companies have installed up-to-date screening-plants. These plants are very complete, and it is the general practice to make five separate grades of coal at those mines competing for the domestic-coal trade. During the year the miners in several of the long-established Waikato mines suffered much idle time due to reduced outputs, a natural consequence arising from the opening of additional mines in diminishing markets. The Waipa Colliery at Glen Massey ceased operations on the 8th November owing to high cost of production and the reduction in selling-prices resulting from increased competition. In the Northern field the Hikurangi Shaft Colliery was again flooded for five months of the year, causing a dissipation of the company's reserves and loss of work to the miners. The increased output in this district was produced by ten parties of miners working thin coal-seams left by former workings over the field. The erection of the low-temperature carbonization plant at Rotowaro is almost completed, and experimental trials of the carbonization of the waste coal-slack are shortly to be undertaken in order to prove the commercial value of the products from the adopted process.

SUMMARY OF OPERATIONS AT EACH COLLIERY FOR THE YEAR ENDING 1930.

Hikurangi Coal Co., Ltd. (Shaft Colliery).—A serious flooding of the mine-workings occurred on the 29th July, due mainly to the inefficiency of the installed pumps and boilers. Since the previous flooding and restoration of the mine-workings early in January of the present year, a daily average output of 300 tons was obtained from the west heading section from places advancing to a proved fault in the coal-seam. On the morning of the flooding one of the steam-boilers was under repair, and the reduced steam-pressure, from 130 lb. to 95 lb., affected the efficiency of the pumps to the extent that the mine-water rose rapidly from the sump-level. The boiler was repaired at 7.30 p.m., and when the normal steam-pressure was restored an additional 9 in. pump, installed as a standby unit, was started up to run in conjunction with the 6 in. and 7 in. pumps permanently installed at the top of McKenzie's dip. From evidence given by the Deputy and the pumpman, it appeared that the emergency 9 in. pump failed to function, due possibly to a defect in the suction. During the early morning the water rose steadily against the pumps, which were eventually submerged, together with the motors and the whole of the mine workings. On the 16th September the water had risen 150 ft. up the shaft; at that height it flowed into the neighbouring colliery (Wilson's) through channels in the roof-cover over the 3 chain barrier between the respective workings. Wilson's Collieries Co. installed two 7 in. pumps in the Hikurangi No. 2 shaft, and held the water at a safety level until the 8th November, when the Hikurangi Co. resumed pumping with a pump obtained through the Mines Department from Muir's Reef Gold-mining Co. This sinking-pump has a rated capacity of 75,000 gallons per hour at a head of 500 ft., and with one 7 in. pump in support it dewatered the mine-workings in nine weeks from the date it was installed in No. 2 shaft. The Hikurangi shafts, No. 1 and No. 2, were sunk on the edge of an extensive swamp area which is in course of drainage. The roof cover over the coal-seam is composed of jointed limestone that contains large feeders of water, which flow into the mine-workings when the faults are pierced by the advanced headings, resulting in increasing quantities of water to be pumped up the shafts. The successive floodings of the mine-workings have seriously affected the company by loss of output and expenses incurred in dewatering the workings. In this connection the Chief Inspector of Mines has submitted proposals for remedial measures to be taken in prevention of a recurrence of similar floodings. The safeguards consist of a deepening of No. 1 shaft and the construction of a lodgment to hold at least eight hours' water.

Wilson's Collieries, Ltd.—A normal output was maintained during the year from places in No. 6 section and the main dip advanced workings. In No. 6 section the pillars are being extracted from a seam 5 ft. in thickness. The physical conditions of the mine have not been conducive to easy mining, and abnormally high temperatures of the mine-air have existed in the low seam rise places, causing discomfort to the workmen and loss of output to the company. In the dip section the seam is of a tough nature and has no regular partings. The limestone roof cover exceeds 400 ft., and large coal-pillars are formed in the first working in prevention of crushing. The roofs in the working-places do not stand very well, and every place is timbered with sets and laths systematically set right up to the working-faces. A 9 in. borehole 430 ft. from the surface to the pump-station in the main dip, drilled for the passage of 8 in. water-pipes, was completed during the year, and almost all of the mine-water is now being discharged through the vertical column of pipes. Formerly the water was pumped in two stages a distance of 55 chains inclined to the surface, and many difficulties have been experienced in maintaining the former pump column, which was affected badly by incrustation. An uncommon feature in the dip workings is the presence of numerous soda-water springs in the shape of small geysers accompanied by large volumes of carbon-dioxide gas. The roadways are naturally wet throughout the mine-workings, and no accumulations of dry coal-dust could be seen in any of the working sections. From the 30th August to the 8th November the company expended the sum of £1,964 in pumping the Hikurangi Shaft water, and also erected 60 chains of electric-power transmission-line from the colliery to Hikurangi Shafts to assist in dewatering the shaft mine-workings.

Silverdale Colliery (Foot's Crown Lease).—Operations were carried on continuously during the year. The seam is 3 ft. in thickness, and the daily output per man does not average 2 tons. A considerable area is standing on pillars, which are to be extracted when the headings reach the boundary.

Northern Co-operative Colliery (Cunningham and Party's Crown Lease).—On this lease several drives have been driven in an attempt to open out the bottom seam for working-places. The bottom seam is 4 ft. thick, and has been followed as far as the installed siphon was effective in draining the workings. On Coal Lease 70, owned by A. E. Cunningham, 356 tons of coal were extracted by Parsons and party under arrangements with the lessee. During a visit to the scene of operations I observed that the roadway through broken ground was sinking, and spreading weight on the timber. I advised the miners to cease work and draw their rails from the disturbed ground.

Glen Nell Colliery (Crown Lease, Sublease from McIntyre and Party).—Operations on this lease were conducted by Foot and party in a coal-seam 3 ft. thick. Proper attention is paid to the timbering of a soft watered roof. A coal hopper to hold 30 tons of coal has been erected in order to facilitate the loading of motor-lorries.