

*Pukemiro Collieries* (Pukemiro Collieries, Ltd., Owners).—Mechanical appliances, transport within the mine, ventilation, inspections, and working of the coal have been maintained in accordance with the regulations. The plan adopted for the arrangement of panels and roads to develop the first workings has contributed largely to the economic and safe production of coal from the remaining pillars. In the North Mine sections the pillars are being removed from three separate districts, and along the lines of retreat several incipient fires in the goaf have been isolated by means of brick stoppings erected before the fires became troublesome. Three rows of new props are generally set in support of the roof and maintained within 60 ft. of the faces before the pillars are attacked, and the gradual roof-movement tends to tighten the props and hold the roof while the second weight, due to the removal of the pillar, is causing the roof-stone to fill up the excavated spaces. This method of timbering the roadways in close proximity to the pillars under extraction should be adopted throughout the Waikato Coalfield. In the South Mine section the pillars are being extracted from the boundary of the southern fault. The seam is 12 ft. in thickness, and contains clean coal from the floor to 6 ft.; the upper 6 ft. of coal is interspersed with stone balls which render it unmarketable. Several pillars have also been extracted from the East Mine section which had reached the boundary of the workable coal. Dust-sampling, analysis, and treatment of excess coal-dust have been conducted in accordance with the requirements of the Act and regulations in respect to the limit of 50 per cent. of combustible matter.

*Glen Afton Collieries* (Glen Afton Collieries, Ltd., Owners).—There are five working sections in the mine, and the first workings are still being advanced in workable coal of an average thickness of 12 ft. Operations in A section are confined to the extraction of the pillars under fair working conditions considering the unconformity of the roof cover. In E section an extensive area of coal has been opened out on the panel system, and as each section is worked to its predetermined boundary it is replaced by another one turned away from the headings which are driven many chains in advance of the bord sections. K, L, and J sections, formed from headings turned off the main haulage-road at the farthest inbye section, have been extended to provide places for seventy miners working under good conditions in respect to ventilation and security of roof. Well-thought-out plans are in operation to secure a required output from each section, and to balance the weight of the skips on the main haulage-rope. The total output from the open sections is 800 tons per day. Requisite attention has been paid to the condition of the main roads in respect to the amount of stone-dust applied in treatment of the fine coal-dust. Subsidiary rope haulages are in operation to the faces of the headings. The main return airway from E section to fan exit has been widened to afford a cross-sectional area of 60 ft. throughout a constricted part. New screens and railway sidings are in course of erection and formation to deal with an output of 1,000 tons of coal per day. A considerable amount of exploratory work by boring from the surface to prove the continuity of the seam ahead of the main headings has been carried out during the past two years. The result of such work has, I believe, been quite satisfactory, and an extensive field of coal has been proved under a roof cover of 500 ft. The main headings on the east side have been extended to within a distance of 12 chains of McDonald State Coal-mine Reserve. The mine worked full time during the past year.

*Graham's Colliery* (Party of Miner Owners).—Operations during the year were confined to the extraction of pillars on the east side, where bords of small dimensions were driven in the first working. The seam to the west has thinned down to 4 ft. of coal. The roof is friable, necessitating the use of bars and close timbering. An output of 70 tons per day has been maintained and loaded into railway-wagons at the extension of the Glen Afton Railway.

*Pukemiro Junction Colliery* (Crown Lease).—Two separate mine-sections have been worked during the year. In both sections the pillars have been removed to the main roads under safe conditions as regards timbering and widths of splits taken from the pillars. An output of 60 tons per day has been loaded into railway-wagons at Pukemiro Junction Railway-station. Bathhouse and first-aid appliances are provided for the benefit of the workmen.

*Waipa Collieries*.—There are three working-sections in the mine. No. 1 and No. 2 sections have been extended to the fault, from where the pillars are being extracted under a slight crushing movement. The pillars in No. 3 section have been removed to within 2 chains of the main haulage-road. Exploration to the dip by the main heading has proved the seam to be thin (5 ft.) through the downthrow fault. No boring has been done to test the ground in advance of the main headings. The workings to date have exposed considerable faulting of the seam on the west side of the main haulage-road. It is the usual practice to open out large working-sections varying from 8 to 12 acres, which are frequently subjected to crush, creep, and heating before the pillars can be extracted back to suitable positions for stoppings, and in some sections the roadways have been continuously under repair during the lengthy period required for the extraction of the remaining pillars. The management is considering the advisability of forming smaller sections in the new ground to the dip, and to follow on with pillar-extraction immediately the first workings are completed in the panels.

*Waikato Extended Colliery* (Roose Shipping Co., Ltd., Owners).—Operations have been confined to the extracting of the barrier of coal lying between the old Waikato Mine workings and the Waikato Extended Colliery. Places of small dimensions have been driven to provide safe roadways for the extraction of the pillars later on. Several of the fire stoppings in the company's mine sagged from the top and could not be repaired, as the fire had evidently attacked the inner walls of the stoppings. A new line of stoppings put in at sites 2 chains outbye enclosed the fire area. The roof falls in lumpy condition to the surface, leaving avenues for the breathing of air to the fire in the goaf. The output is distributed along the Waikato River for the use of river-bank settlers.

*Huntly Brickworks*.—The output of fireclay from the opencast face has been fully maintained during the past year. The face and endless-rope-haulage road are in good order, and the local company continues to market building bricks, firebricks, and tiles, &c.

*Taupiri East Colliery* (Auckland University Council Endowment Lease; John Holland, Owner).—This is a small coal-mine being opened up to supply local requirements. A considerable amount of prospecting has been done to prove the existence of a seam to the rise of the old Kimihia Mine drive. The seam is 20 ft. in thickness in places. The output is carted to Huntly, a distance of three miles.

*Campbell Colliery* (Whatawhata Crown Lease).—The mine is worked by the Campbell Whatawhata Coal Co., Ltd. The main roadway has been extended 20 chains to the west of the field in coal of good quality, which finds a ready market in Hamilton and surrounding districts. A dip is being driven from the mine-entrance, and electric power is being obtained to operate a pump and winch. A considerable amount of boring has been carried out on the property which has proved the continuity of the seam over a fairly large area.

*Renown Colliery* (Renown Collieries, Ltd., Owners).—In addition to producing an output of 72,535 tons for the first year of working, the company carried out a considerable amount of development work, and has also shown enterprise in the introduction of coal-cutting machines in almost the whole of the winning-places. The development of the top seam was first carried out, as it was easily reached by headings turned off the main haulage-road. This upper seam covers a considerable area, but the workings were suspended during the month of May, as it had been proved that the quality of the coal was not good enough to compete in the market with other Waikato coals. In this connection the company had no alternative but to commence intensive machine-mining operations in the bottom seam of superior coal, in order to develop sections for the maintenance of an output of at least 250 tons per day. The bottom seam was intersected by a dip 10 chains in length driven 14 ft. wide through the fireclay occurring between the seams. Three headings, to the north, east, and west respectively, were carried forward in three shifts by machine mining for a production of a daily output equal to almost double the tonnage obtained from hand mining in the top seam. Two machines were subsequently employed in the section for an output of 400 tons per day, got principally from headings driven 12 ft. wide by 7 ft. in height. Under ordinary working-conditions each machine is capable of cutting eight places per eight-hour shift for a production of 15 tons per cut from headings and 20 tons from bords.