

*Glen Afton No. 1 Colliery* (Glen Afton Collieries, Ltd., Owners).—Mining operations during the year were confined to the extraction of the pillars in K4, K3, and K2 sections. In K3 section the pillars were removed to a predetermined line which afforded pillar strength for the protection of the main return airway. The section was sealed off and the pillars in K2 section were then attacked in maintenance of the daily output. In K4 section the pillars are being successfully removed, and no serious difficulties have been encountered by the management in controlling the roof-weight exerted by a roof-cover of 450 ft. of jointy fireclay and limestone. The movement of the superincumbent weight causes the coal to fracture in the faces, and few shots are required. Under these conditions the use of coal-cutting machines in pillar places is impracticable. The ventilation, assisted by an auxiliary fan installed in the return airway, and by a connection to the neighbouring MacDonald Colliery, was maintained in sufficient volume for good working conditions. Many panels, comprising pillars remaining from the first working, have been sealed off, and the old workings are inaccessible to the miners and workmen.

*Glen Afton No. 2 Colliery* (MacDonald State Coal-mine Reserve under Lease to the Glen Afton Collieries, Ltd.).—An output of 156,825 tons was obtained, principally from the bords of the first working. Two sections were made available for pillar-extraction with the aid of coal-cutting machines for taking three successive lifts from the pillars which are one chain square. The seam is a strong one and few props are required in support of the roof in the bords, but the roof stone is of soft structure, especially near the outcrops, and many renewals of props are required before the pillars are finally extracted. In F section of the main west section, the headings have reached the boundary where a fault was met. In the main north section sufficient secondary sections have been formed in approved panels for the production of many years of output from the remaining pillars. An ambulance-room, to be used exclusively for first-aid treatment, is being erected near the entrance to the mine. The existing bathhouse is being enlarged to accommodate the increasing number of men employed at the mine. This colliery has achieved the distinction of producing the largest output in the Waikato District from one system of entry and haulage.

*Graham Colliery*.—The pillars are still being extracted under safe conditions. Increasing roof-weight is causing the stumps to crush and break the roof supports. Only narrow lifts, 5 ft. to 6 ft. wide, are taken from the pillars, and a high percentage of the pillar coal is being won. The seam to the west has thinned to 2 ft. 6 in., and the prospecting drive there has been stopped.

*Waikato Extended Colliery* (Roose Shipping Co., Owners).—The Roose Shipping Co., Ltd., is continuing to work the Old Waikato Mine area leased from the Taupiri Coal Mines, Ltd. The seam is 18 ft. thick, and the output is used for bunkering the company's river steamers. Operations are confined to the splitting and extraction of pillars under a hard roof on the north side of the main drive.

*Huntly Brick Works*.—A quarry is being worked for the production of fireclay for brick and tile manufacture on the works. The face is maintained in good order, and the overburden is well stripped back from the top of the face.

*Taupiri East Colliery* (Auckland University Council Endowment Lease).—Mining operations extend to the splitting of pillars in the Old Kimihia Mine dip which is being dewatered 60 ft. ahead of the last split being made in the large roadside pillars left by the former workings. The places to the west have entered upon a faulted area, with water dripping from the roof.

*Campbell Colliery* (Crown Lease, Whatawhata).—This colliery is situated midway between Hamilton and Raglan. Operations are confined to the extraction of a few pillars in the south section of the dip and to the opening of a section in solid coal lying ahead, at a lower level, of No. 1 Mine workings. The output is carted to Raglan and the surrounding farming district.

*Renown Colliery* (Renown Collieries, Ltd., Owners).—An output of 113,591 tons was won from three separate districts, and chiefly from bords extending within panels to the north and south of the main haulage road. In No. 3 north section a slant dip, equipped with endless-rope haulage, has been advanced in provision of two panel sections. In No. 3 south section the pillars have been removed to within working limits of the main return airway. During the extraction, which was assisted by machines, the floor yielded to a crushing weight on the pillars. Numerous chocks were erected in support of the roof coal, which was thick, and hand-mining of the faces followed the withdrawal of the machines. The main headings have been advanced seven chains during the year, and, although the seam is thinning to the west, there still remains a thickness of 11 ft., which is an ideal height for the full recovery of the seam. In No. 4 south section the seam has been followed 34 chains through small faults and undulating floors to a faulting which has thrown the top seam down 40 ft. and to within 2 ft. of the bottom seam. It would appear that both seams may join in a few chains. A fall in the return airway, where the drives rise 1 in 1 to the top seam, caused the management to provide a new return which was effected by a parallel heading driven to a more moderate grade. Safety-lamps are used in all development headings as a precaution against danger from emissions of inflammable gas occurring from the breaking of fresh coal. The main endless-rope haulage road from the mine to Rotowaro, a distance of two miles and three-quarters, and the mine subsidiary haulage roads have been maintained in good condition, and are properly equipped as regards safety appliances. Only two sections have been pillared, and the marketable coal remaining in the pillars contained in the panels of first working provide a reserve equal to 2,000,000 tons.

*Wilton Colliery* (Wilton Collieries, Ltd., Owners).—The whole of the output for the year was obtained from the bords advancing in No. 2 section which comprises Katovich's and Kent's areas. The large Keith-Blackman ventilating-fan has been removed to the southern outlet, the most inbye point of the workings. Four separate ventilating districts have been provided by the construction of two air-crossings, and a high standard of ventilation is now assured for many years. In Katovich's area the seam has thinned from 8 ft. to 6 ft., but the coal is clean and easily mined. Disused steel tram-rails have been set in replacement of broken timber roof-supports on the main haulage road with satisfactory results as regards strength and durability. The main headings in No. 2 section have reached a faulted area with the seam pinching out against a limestone intrusion. Exploratory measures, by boring and the exposure of seam outcrops, are being carried out to the south-west in the direction of the supposed displacement of the seam. A daily output of 450 tons has been maintained by 161 workmen.

*Glendale Colliery, Opaheke*.—A new drive at a higher level was extended into the hillside with the view of intersecting the seam at a point where future workings would be to the rise, thus dispensing with pumping operations. The work was abandoned and mining operations ceased during the month of June.

*Rangitoto Coal-mine* (Native Lease, Tabia).—This mine is situated nine miles east of Te Kuiti. The working seam is 6 ft. thick. A small output is being won and marketed at Te Kuiti.

*Relief Coal-mine* (Auckland University Council Endowment Lease).—A few pillars still remain for extraction, and the work is being carried out by experienced unemployed miners. The coal is transported from the mine by means of an aerial ropeway to the county road.

#### *Taranaki District.*

*Old Stockman Colliery, Mokau*.—This mine is situated on the west bank of the Mokau River at a distance of twenty-five miles up the river from Mokau Heads. The seam is 4 ft. thick, and small quantities, mined by Jones and party, satisfy a demand in Mokau and Waitara, to where the coal is shipped by small steamers.

*Paparatu Coal-mine* (Crown Lease: Taranaki Coal Mining Co., Ltd., Owners; subleased to A. Pratt and Party).—The mine is situated eleven miles from Tahora and eight miles from Heao, to where the output is conveyed by motor-lorries. The working seam is 3 ft. 3 in. thick, and has a soft parting of 9 in. of friable fireclay on top, which renders easy holing in preparation of the face for shots. The coal is of good quality, and is marketed in Stratford. The miners reside in comfortable cottages in this remote district.