SUMMARY OF OPERATIONS OF EACH COLLIERY FOR THE YEAR 1934.

North Auckland District.

Hikurangi Shaft Colliery (Hikurangi Coal Co., Ltd., Owners).—Mining operations in the Hikurangi Shaft Colliery ceased during the month of September, due to an increased flow of water from the workings opening out in the seam under the Hikurangi Swamp area, and to the inadequacy of the installed pumping-machinery to cope with the flow.

The colliery was established during the year 1921 by two circular shafts, sunk 350 ft. and 320 ft. respectively, to the coal seams bordering the Hikurangi Swamp area. The total output raised from the working amounted to 587,679 tons. Numerous floodings have occurred during the life of the colliery, and on three previous occasions—namely, during the years 1926, 1929, and 1930—the mine was abandoned, in each instance for several months, until arrangements could be made for the purchase and installation of additional pumping-machinery.

Since the inception of the colliery the inflow of water has increased from 10,000 gallons per hour to 160,000 gallons per hour, due to the workings being extended under the Hikurangi Swamp area, where the roof cover is a stratum of porous limestone.

The following pumps were in commission at the beginning of September:—

One 7 in. Sulzer	.. .. ..	Capacity 50,000 gallons per hour.
One 7 in. Sulzer	.. .. ..	Capacity 60,000 gallons per hour.
One 4 in. Boving	.. .. ..	Capacity 10,000 gallons per hour.
Total capacity	.. .. ..	120,000 gallons per hour.

and taking 580 amperes.

The plant consisted of four boilers and three generators of a combined capacity of 485 kv.a., or 721 amperes, leaving little margin of power for emergencies.

On the 4th September a new "Pulsometer" pump, of a rated capacity of 120,000 gallons per hour against a 400 ft. head of water, was installed and brought into commission, and, together with one of the existing units, the combination was discharging 160,000 gallons per hour up the shaft as recorded by a water-indicator at the surface spillway. At this time an outburst of water, heavily impregnated with carbonic-acid gas, known as "soda-water," occurred in the dip headings, and its incidence largely contributed to the failure of the pumping machinery.

Subsequently an attempt was made by a diver to salvage the pumps and motors submerged in the pump chamber. Owing to the extremely dirty water submarine lamps were of little use, and the diver had to feel a way down through 70 ft. of water in the shaft and along the shaft-level to the pump chamber. After two weeks of arduous work under difficult conditions the diver was successful in recovering the new "Pulsometer" pump, which was valued at £1,000 and was the main objective of his salvaging operations.

As so many dangers and difficulties had been encountered during the working of the field the company's directors were not prepared to continue mining operations under the Hikurangi Swamp area, and have since turned their attention to a field southward of the Hikurangi Township, where boring operations conducted during the years 1908 and 1910 located thin coal seams and indications of erosion. The field is to be further proved by bore holes drilled by the company's diamond drill, which is being reconditioned.

Prior to the flooding of the colliery, 150 men were employed on a co-operative basis in production of the output.

Waro Colliery (Wilsons' Collieries, Ltd.: Sublessees, McGlashan and Party).—In common with the neighbouring Shaft Colliery, the Waro Mine workings were flooded at the end of the year, due to the percolation of the Hikurangi Mine water through crevices in the floor and roof of the barrier pillar of coal left between the workings of the two collieries.

The pillars remaining in No. 4 and No. 5 dip sections were being extracted prior to the flooding, and, as the Waro company's plant was unable to deal with the additional water, the mine plant was withdrawn ahead of the rising water, and intermittent pumping was done by three pumps, which were gradually removed up the dip in relays as the water rose. A project to work an area of coal lying between the Hikurangi West workings and Perrett's dip workings was also abandoned due to the increase in the mine flow.

The first indications of water-increase were detected at a point 42 chains down the dip, and eighty miners were employed on three shifts for four months extracting the roadside pillars clear of the water, and additional precautions were taken for their safety. The average weekly output was 1,000 tons, and of that quantity 200 tons per week were required for generating power for drainage purposes.

The total putput won from the Waro Mine was 681,905 tons. The coal was chiefly used by the Wilson's Portland Cement Co., Ltd., for the manufacture of cement.

Hikurangi Coal Co., Ltd., No. 6 Section.—Subsequent to the cessation of mining in the Shaft Colliery, three old drives—namely, the Kahikatea, Dunn's and Phœnix—driven under the Waro Railway Reserve, and containing pillars supporting the private railway, were dewatered and the pillars attacked for the production of a weekly output of 300 tons of coal by fifty miners retained by the Waro Coal-mines, Ltd.

A prospecting shaft was also sunk in close proximity to the Hikurangi Company's railway siding for the purpose of proving the continuity of the seam under the top portion of Perrett's West area. Another prospecting shaft sunk on Section 39 S.W. located 4 ft. of coal at 40 ft., and preparations are being made to work the seam.

Crown Leases.

Silverdale Colliery (Crown Lease: Foot and Party).—The working-seam is only 3 ft. thick, and at least 2 ft. of stone has to be uplifted from the floor to provide height for the trucking-roads. The pillars are being extracted, and the workable coal is almost exhausted.

Glen Nell Colliery (Crown Lease: Sublease from McIntyre and Party to S. Foot).—A drive 4 chains in length has been advanced under a limestone formation, and a seam of coal 3 ft. 6 in. thick has been exposed for extraction. The roof is of strong structure.

Phoenix Colliery (Crown Lease: McKinlay and Party).—Operations on the east side of the lease have been abandoned, and the plant has been removed to the western side for purposes of working out the remaining pillars, and, by agreement with Mr. Foot, a small area of detached coal contained in the Glen Nell Colliery is being worked by the party.

The coal in the mine is almost exhausted. A total output of 17,554 tons has been extracted by the party.

McInnes's Coal-mine (Prospecting-area subleased to Mackie and Party).—A small coal-mine is being opened out under a prospecting license on part Section 2, Block XVI, Hukerenui Survey District. A drive from the surface tapped old workings left by the Northern Coal Co., Ltd. (in liquidation). The seam is 5 ft. thick, but contains several bands of intervening stone. Prospecting is also being conducted by the party.

McInnes's Coal-mine (Crown Lease: Tunstall and Party).—Mining operations are being carried out on part Section 2, Block XVI, Hukerenui Survey District. A seam of coal 5 ft. thick was followed 3 chains, water free, from the surface and then old workings were met. The pillars are now being brought back by good mining methods as regards safety. A new drive is being commenced from the surface to reach a proved area of new ground. The output is 12 tons per day.