

SECTION IV.—GENERAL REMARKS.

MINING OPERATIONS.

North Auckland Coalfields.

Operations at the five productive collieries in the Whangarei district have been unimportant. The Northern Coal Company has suspended work at the recently laid down Waro Colliery, owing to the unprofitable nature of operations. At the same company's Northern Mine work has been almost entirely confined to pillar-extraction. The mine is rapidly approaching exhaustion. A new property of this company at Kiripaka is being connected by tramway, about two miles in length, to the old Ngunguru Mine.

The Hikurangi Coal Company has been engaged upon pillar-extraction from the old mine, and upon the opening of the new Waro section, where a small area of coal is being developed from a dip adit. About 20 acres of standing pillars in the old No. 2 mine have been drained, and the extraction of pillars has been commenced.

Waikato Coalfield.

At the *Ralph's Colliery* (Taupiri Coal-mines, Limited) a disastrous explosion occurred on the 12th September, already referred to. From that date the output practically ceased for the remainder of the year. There exist in this colliery about 200 acres of old standing pillars, which it is not proposed to extract owing to danger of inundation. The length of bords and headings thus kept open amounts to about thirty-six miles, and of cut-throughs also maintained about eight miles. To overcome the difficulty by hydraulic (sand) filling is impracticable. To fill the space from which about 3,000,000 tons of coal has been extracted from the Ralph's and (the same company's adjoining) Extended Mine, in addition to the space left by pillar coal (if extracted), would entail an expenditure far greater than the value of pillar coal. The area of workable coal at Ralph's Colliery is becoming somewhat restricted, being confined on the southward by the Taupiri Extended Mine barrier, on the northward by faulted country, and to the eastward development toward Taupiri West and in the Dooley's dip districts proves the coal-seam to be split. In the last-named district a serious creep has occurred, covering the main haulage road and adjacent workings.

Since the explosion, safety-lamps have been installed throughout this and the adjoining Taupiri Extended Mine, and no other than permitted explosives are now used. Large accumulations of dry coaldust have been removed from both mines, and water-pipes have been laid along haulage and travelling roads to allay the dust.

At Ralph's Colliery a new double-inlet Sirocco fan of 83,580 cubic feet per minute capacity has been installed at a new shaft to supersede the old Waddel fan (capacity of about 43,818 cubic feet per minute). At the Extended Mine a Sirocco fan of 85,200 cubic feet per minute capacity has been running for some years. The old workings at both mines, where gas-blowers have occurred at falls, are travelling, and consequently accessible for inspection and air-coursing, but many more brick stoppings are required to secure adequate distribution of the air at sufficient velocity to remove accumulations of gas.

Taupiri Extended Colliery. This colliery is separated from Ralph's Colliery by a barrier 44 yards in thickness. The same seam is worked in both mines under practically similar conditions, although there appears to have been greater attention paid to the safety of the Extended Mine. The area of coal available for development is greater at this mine than at Ralph's. A considerable area of the workings of these two mines is situated under the Waikato River, lakes, and swamps, and there is ever present the danger of subsidence and inundation. Fire-damp is reported daily at Ralph's Mine, and very frequently at the Extended Mine.

The output of the Extended Mine, the most productive colliery in the North Island, amounted to 155,808 tons during 1914.

The *Waipa Colliery*, which commenced operations in April, 1914, by the end of the year had produced about 50,000 tons, a very satisfactory output under the circumstances. This mine, the property of the Waipa Railway and Colliery Company, is situated at Glen Massey, on the Raglan Road, about seven miles by the company's branch railway from Ngaruawahia, on the Main Trunk line. The company holds mineral rights covering an area of about 6,895 acres, over a considerable portion of which the coal-measures outcrop.

The same seam as that mined at Huntly is here worked from two dip-adit sections. The seam, which is of excellent quality, is about 10 ft. thick, only slightly inclined, and is free from bands. Little or no surface-water, as at Huntly, here exists; pillar-extraction may therefore be carried out. The mining conditions are extremely favourable for the economic production of coal.

A fault has been encountered striking north and south across the faces of the mine-workings. At the time of my inspection it had not been penetrated, and its character had not been determined; but as the coal outcrops at approximately its correct level at two points on the other side, the displacement, if any, is not great. The plant and surface arrangements at this mine are well arranged.

The *Pukemiro Mine*, situated about four miles northward of the Waipa Colliery, is expected to reach the output-stage within a few weeks. At this mine the same seam as that worked at Huntly and Waipa has been developed by short adit levels, and an excellent modern screening and haulage plant has been installed. An electrically driven endless-rope surface tramway has been laid down, connecting the sections of the mine with Norton's horizontal Hecla screens, specially constructed for delicate handling of the output and prevention of the creation of small coal. A short branch railway has been constructed from Huntly, crossing the River Waikato by a new bridge at that town. As at Waipa Colliery, there is no hindrance here to pillar-extraction. The mine is capitally arranged, and should become a very satisfactory property.