

inbye from panel in which pillars are now being extracted. A slant dip broken away 4 chains from main dip face was stopped in stone after being driven for $3\frac{1}{2}$ chains. At present a new turbine pump has been installed in this vicinity and is handling all the mine water direct to surface. In No. 1 East Level reconditioning work was carried out as far as C Panel and pillar-extraction started on this panel. From the surface a new drive was put down to connect on to the No. 1 East "A" panel, where, in conjunction with pillar-extraction, it is proposed to experiment with the system of hydraulic stowage. If this system of stowage can be successfully applied it will go a long way towards reducing the loss of coal which, due to spontaneous combustion, inevitably occurs when portions of pillars have to be sealed off. During the year the whole of the mine has been piped and a high-pressure water system installed; this has proved to be invaluable in combating fires resulting from heating.

Tutu State Colliery.—In the No. 2 North-west Panel, pillar-extraction continued until August, when, due to flooding resulting from excessively heavy rainfalls, further operations became impossible. Thus work was stopped for the time being. An effort is being made to dewater this section so as to retrieve the lost pillars. In the area opened up by two dips to the north-west ahead of No. 2, work was continued until the 50 ft. fault was contacted, when four places were broken away and driven in a south-westerly direction, opening up the field ahead of the present position of main entry. This coal has proved to be of good quality and approximately 8 ft. in thickness; the prospects here appear to be good. Extensive repairs have been effected to the main return airway between the bottom of incline from the surface and the fan drift. An air-crossing over the main haulage road has considerably improved the ventilation of the mine and at the same time haulage of coal. A main and tail haulage system operated by 75 h.p. motor has been installed and is operating successfully. Prospecting work in the Haero Gorge escarpment has continued as weather and man-power conditions permitted. Five holes have been completed and the seam has been proved to exist without any indications of major faulting.

Moynihan's Lease, Mangakara, Ohura.—Fifty chains of access roading was completed, storage bins for 40 tons erected, 10 chains of fluming built, waterways to storage dam completed, and sufficient stripping done to permit of coal being won, which was commenced in the beginning of December, 358 tons up to the end of the year being won.

Aria Colliery.—The work at this small mine has been carried on during the year developing on the dip side of trucking road. Entry to this section was achieved by driving a dip approximately 3 chains from which two levels to right and one to left were broken away. The levels to right after driving approximately 2 chains contacted a fault in which they are at present standing. The height of seam is about 9 ft. and is of fair quality. Electric power was installed for operating winch and pump.

Stockman Colliery.—This small mine operated by two men produced an output of 748 tons; the coal is brought down twenty-five miles by launch on the Mokau River to Mokau Settlement, from where it is distributed.

Paparata Colliery (Libline and Williams).—After producing 297 tons, operations ceased at this small mine.

Fougere's Opencast, Ohura.—Work has been carried on intermittently during the year for an output of 820 tons.

Waitewhena State Opencast.—Operations continued in the Lee Creek Section with satisfactory results throughout the summer months, but during the winter, creep of overburden gave continual trouble, resulting in irregular outputs, and after persevering against odds the section above the 30 ft. fault was abandoned, and with additional machines, "clam-grab," and power shovel to handle the stripping the area in the Lee Creek bed, extension of the first face operated, was worked up into the solid country.

Later a roadway was formed under atrocious conditions to the No. 2 Area, where, during the summer, reserves of stripped coal to the extent of 35,000 tons had been provided and which it was intended to transport by aerial ropeway (flying-fox) from the terrace to a roadside bin 300 ft. below and approximately 1,000 ft. distant.

The installation of the aerial ropeway was dropped for the time being, and all men and machines put to form the roadway, portion of which had to be corduroyed with heavy logs prior to metalling. and in November, production from the No. 2 area commenced, with increasing outputs. This coal is carted to the screens and bin in the Lee Creek, and then transported to the railway as graded coal.

Added reserves of stripped coal are being provided on No. 2 Area, where a combination of earthwork machines and trucks are operating, from which area outputs up to 200 tons daily can be had.

The installation of a screening-plant and bins at the Waitewhena railway siding is now well advanced, and electric power should be available when this plant is completed.

The installation of upper and roadside bins in the Waitewhena Valley for No. 2 and No. 5 Areas, together with that of the aerial ropeway associated with this installation, will follow the completion of the screening-plant now being erected at the railway siding.

A 25-ton wagon weighbridge has been installed at the railway siding.

Earthwork plant at present employed for stripping are two large bulldozers and two 12-cubic-yard carryalls, a medium bulldozer, two power shovels, and a clam-grab, the latter machines being used in conjunction with trucks transporting the spoil to a dump.

Eight 4-ton trucks transport the coal from the mine to the railway siding, a distance of twelve miles.