

OPENCAST MINING

Steady progress continues to be made in the development of opencast mining, and production of coal from this form of mining amounted to 676,728 tons for the year 1948, as against 644,692 tons in 1947, an increase of 32,096 tons. Almost 25 per cent. of the total production of coal is now derived from this form of mining.

Since 1943, when attention was first directed to mechanized methods of opencast mining, production has increased from 62,037 tons to 676,728 tons, a tenfold increase, without exhausting the possibilities of considerable further expansion of output.

Stockton continued to hold pride of place in the production list with an output of 127,427 tons of good-grade bituminous coal. There was a falling off from the record output of 154,803 tons achieved in 1947, but this will be only temporary, and is due to the 5-yard shovel being out of action for a period and the difficulty experienced in maintaining the fleet of coal-hauling motor-vehicles in working-order. This latter difficulty will be overcome with the arrival of the three 21-yard bottom dump vehicles on order for coal transport.

Again while awaiting the arrival of additional equipment for the deeper ground to be worked it was decided to transfer operations from the main opencast area to a section known as W Block, which, though the coal seam only ranged from 6 ft. to 10 ft. in thickness, was considered amenable to opencast mining. In practice it was found that the coal roof was soft and the overburden broke up into large blocks, necessitating much secondary blasting, and the area was generally not suitable for opencast mining but that the coal could be more economically recovered by underground methods. Accordingly, the area was abandoned and work resumed at the main area. The situation while the 5-yard shovel was out of commission was retrieved by commencing operations with bulldozers and the smaller 1½-yard shovel at two contiguous areas known as Coal Island and Stable Pillar area, where coal had previously been worked by underground methods.

From Coal Island 20,000 tons were recovered, although extraction of coal by underground methods had been completed some twenty-seven years ago. This amount actually represents more than 50 per cent. of the coal originally in the area and would otherwise have been irrecoverable.

Operations at the Stable Pillar area were particularly interesting in that after completion of underground mining twenty-seven years ago a fire had broken out which continued to burn until twelve years ago. In this area, although the seam was 30 ft. thick, underground workings had been confined to the uppermost 10 ft., and it was found that, while the fire had destroyed all the coal above the level of the floor of the workings, the solid coal below had remained undamaged. In addition, the heat from the fire had, in fact, disintegrated the overburden and facilitated its removal by bulldozers. From this area, 35,000 tons of good-grade coal were obtained. The experience thus gained focuses attention on the fire area at Millerton, where it is possible that similar conditions prevail, and coal otherwise lost may yet be recovered by opencast mining.

During the year an area adjoining the main opencast area has been close bored in a grid pattern with 200 ft. centres and proved to contain 1,000,000 tons of coal of an average thickness of 30 ft. with an average overburden to coal ratio not exceeding 2 to 1. An extensive area in which similar conditions are expected to prevail adjoins this area, and close boring is continuing which will eventually greatly increase the proved tonnage of coal. To work this area a new 5-yard stripping-shovel, two blast-hole drillers, and four 18-yard muck-wagons have already arrived on the ground and will be shortly in commission, and this area to be worked to advantage and the maximum output obtained now only awaits the arrival of the coal-haulers and the construction of the aerial ropeway.

Huntly Field.—Kinihia No. 1 area continued in steady production throughout the year. In addition, work was commenced on Kinihia No. 5 area, which was surrounded by a stopbank and pumped out prior to stripping operations with the 5-yard shovel,