

the existence of a coal-bearing area some 35 acres in extent containing 600,000 tons of coal. The seam averages 12 ft. in thickness and the coal is of good grade. A short stone drive to open up this area has since been completed.

*Cook's Lease.*—As opportunity provided, trenching and survey work was carried out in Cook's lease, attention being directed to possible opencast areas. At the end of the access road an area has been located where an average thickness of 18 ft. of coal occurs underlying a maximum cover of 60 ft. of overburden, and detailed work will be carried out in this locality during the present year.

#### DRILLING ACTIVITIES

Extensive operations were carried out by the Drilling Section of the Department during the year ended 31st December, 1949, with a considerable increase of footage drilled over that of previous years.

For the year ended 31st December, 1948, the total number of feet drilled, including 1,520 ft. of blast-hole drilling for opencast purposes, was 23,418, whereas for the year now under review a total of 49,198 ft. was drilled extending over most of the coalfields in New Zealand.

During the year there were no serious accidents and very few non-serious accidents. A competent staff has been maintained, and plant has been kept in good mechanical order.

One drill was dismantled, reconditioned, and converted from steam to petrol drive, it now being a machine with modern equipment which will be most useful for depths up to 1,000 ft.

#### *Southern District*

During the year most of the drilling was done in the Ohai district, where large quantities of coal have been proved both for underground working and opencast. Some work was also done at Wangaloa and Ashers Siding, in both cases for opencast purposes.

*Wangaloa.*—Three bores with a total depth of 103 ft. were drilled, completing a programme, started in the previous year, to prove whether sufficient coal for opencast purposes existed on an area offered to the Department by the Wangaloa Coal Co.

*Ashers Siding.*—At the beginning of the year drilling operations on this area ceased because of unfavourable results. Eight holes with a total depth of 313 ft. were drilled by hand and fourteen holes with a total depth of 820 ft. were drilled with an alluvial drill.

*Ohai.*—Two rotary drills—one alluvial drill and one hand drill—have been in operation all the year and one other alluvial drill most of the year in this district, and 142 bores with a total depth of 16,459 ft. have been drilled for prospecting purposes, while two bores with a total of 67 ft. were drilled to test screening-plant foundations. Also two bores, Nos. 196 and 197, totalling 428 ft. were drilled on the line of the proposed Morley drives to determine the grading of the drives.

The 142 bores mentioned above were drilled to prove (1) blocks of coal suitable for opencasting, (2) continuity of deeper coal suitable for underground work.

The drilling in the Ohai district is well advanced and large quantities of coal have been proved.

#### *West Coast District*

*Stockton.*—During the year 4,390 ft. of drilling was done with one of the prospecting drills at the Stockton Opencast for shot-holes in connection with coal-winning and seventy-eight bores with a total depth of 9,209 ft. were drilled on the grid pattern ahead of the opencast to determine coal and overburden quantities and coal-floor grades with the two drills.