

During the year work in the various South Island fields was continued, Kaitangata area being the scene of detailed geological work, while drill log correlation and examination of detailed prospecting was carried out in the Ohai and Reefton Fields. The Murchison district was thoroughly examined in a search for likely coal areas and all the known coal occurrences examined in detail.

Late in the year the Coal Survey drill was finally completed and work was commenced in the Mataura Valley, Southland, on proving the Mataura lignite deposits. This work is viewed as a long-term job, as the entire Mataura Valley is to be examined.

Coal-sampling has been placed on a systematic basis, the southern and western districts being under the control of a sampler and assistants at Invercargill and Greymouth respectively. A similar sampling group will be stationed at Huntly for the northern mines.

Among the reports issued by the Coal Survey during the year, the following are concerned with geological work ; Structure of proposed mining area at Ohai ; Mataura lignite deposits ; correlation of drill-holes, Kaitangata ; limestone for stone-dusting ; Island Block, Garvey Creek ; progress report, Garvey Creek ; and Heapy Coalfield.

Coal Survey (Laboratory)

The Coal Laboratory analysed 1,264 samples, compared with 523 in the previous year. Drill-hole samples account for 840 of this total, coal-dust inflammability investigations account for 143, and mine and outcrop samples for 167. The increase in number of mines' samples was the result of the introduction of a systematic sampling scheme under the control of the Coal Survey (Geological). The drill-hole samples were largely from Stockton and Ohai areas, and mine samples were confined largely to the South Island, where the sampling groups are operating.

Other investigations carried out by the Coal Survey Laboratory included the preparation and examination of special cokes ; analysis of mine airs ; an examination of limestones for their suitability for mine dusting ; laboratory tests on the washability of Stockton and Wangaloa coals ; inflammability of mine dusts taken from the various mines throughout New Zealand ; the elimination of sulphur from gas ; and generally the use of high- and medium-sulphur coals.

MINES DEPARTMENT SURVEY PARTIES

Survey parties were maintained by the Mines Department in each of the three fields, Garvey Creek, Stockton-Millerton, and Denniston, and particulars of the year's activities in each field follow .

Garvey Creek

Island Block.—Preliminary trenching, principally on the " A " seam, was completed on the full perimeter of this block, which contains an area of approximately 100 acres at a general elevation of 2,500 ft. north-east of the Garvey Creek vertical seam. The trenches were surveyed both topographically and from a geologic aspect and a series of contours at 10 ft. intervals were mapped. These contours will serve as a basis for structural topography and by means of cross-sections enable estimates to be prepared of those areas suitable for open-casting and also assist in the layout of underground mining. When labour becomes available it is proposed to commence drives in this block to obtain further information on the quality, thickness, and regularity of the seams. From present data it is estimated that the Island Block may contain 1,800,000 tons, with possibly 1,000,000 tons capable of extraction by opencast methods.