

In connection with the fuller utilization of slack coal, samples from Rewanui Merrijigs (Reefton), and Rotowaro were submitted to the Laboratory for report during the year. Coals that had given trouble at gasworks were also examined, the difficulties in most cases being due to the highly swelling properties of otherwise excellent coal. Coals with low swelling properties and low sulphur content are relatively scarce in the Dominion.

The coal survey, set up on the joint recommendation of the Scientific and Industrial Research and Mines Departments, and staffed from the Geological Survey and Dominion Laboratory, has operated during the year in the Greymouth and Westport coal areas.

The Inspecting Engineer of Mines and the Superintendent of State Collieries ably represent the Department on the controlling Committee.

Detailed field investigations of quantities, also mapping of areas, are supplemented by Laboratory examination of carefully selected samples representative of various portions of each seam. In addition to proximate and ultimate analyses and determination of calorific values, the coals are examined for coking index, swelling properties, and sulphur forms, and a Gray King assay is made of each. The survey will thus result in data being made available as to the amount of coal in each seam and the purposes for which it is best suited, and will also help to determine whether conservation of special coals for the future requirements of the Dominion is desirable. The results obtained to date have been of very great value to the Iron and Steel Department in its investigational work.

PERSONS EMPLOYED IN OR ABOUT MINES AND STONE-QUARRIES.

The following table shows the number of persons employed in each inspection district during 1938 and 1937 :—

| Classification.                                | Inspection District.        |                                  |                                        | Totals. |        |                             |
|------------------------------------------------|-----------------------------|----------------------------------|----------------------------------------|---------|--------|-----------------------------|
|                                                | Northern<br>(North Island). | West Coast (of<br>South Island). | Southern<br>(rest of South<br>Island). | 1938.   | 1937.  | Increase<br>or<br>Decrease. |
| Gold, silver, and tungsten ore                 | 857                         | 1,488                            | 653                                    | 2,998   | 3,910  | Dec. 912                    |
| Coal .. .. .                                   | 1,541                       | 2,071                            | 951                                    | 4,563   | 4,417  | Inc. 146                    |
| Stone-quarries under the<br>Stone-quarries Act | 2,107                       | 81                               | 479                                    | 2,667   | 2,117  | Inc. 550                    |
| Oil .. .. .                                    | 34                          | ..                               | ..                                     | 34      | 4      | Inc. 30                     |
| Cinnabar .. ..                                 | 2                           | ..                               | ..                                     | 2       | 2      | ..                          |
| Iron ore .. ..                                 | 4                           | ..                               | ..                                     | 4       | 1      | Inc. 3                      |
| Manganese .. ..                                | 8                           | ..                               | ..                                     | 8       | ..     | Inc. 8                      |
| Totals .. ..                                   | 4,553                       | 3,640                            | 2,083                                  | 10,276  | 10,451 | Dec. 175                    |

The heavy drop shown in the number of persons employed in metalliferous mines is due principally to the diversion to other occupations of a large number of subsidized prospectors. It will be noted that the coal-mining industry found work for an additional 146 men during the year.

MINING AND QUARRY ACCIDENTS.

In metalliferous mines, at which 3,012 men were ordinarily employed, two persons were killed and eleven persons seriously injured.

At stone-quarries under the Stone-quarries Act, employing 2,667 men, there were three fatal accidents and four serious accidents.

In coal-mines, where 4,563 persons were ordinarily employed, eleven persons were killed and twenty-four persons seriously injured.