

prospecting by means of cuts, pits, and hand-drilling. The Mines Department has now also a well-equipped organization seeking additional information as to coal resources by deep-core drilling, and the activities of this organization are expanding. As a result of all these operations the coal resources of New Zealand have been reviewed.

### COAL RESOURCES

Coal in New Zealand has for many years been mined in certain well-defined areas, beyond which no coal is known to exist in any significant quantities. The major coalfields, with the class of coal found in each, are :—

Bituminous Coal (Coking)—

Greymouth.

Westport (Buller Coalfield).

Sub-bituminous Coal (Non-coking)—

Waikato (including North Taranaki).

Southland (Ohai, &c.).

Reefton.

Lignite (Non-coking Low-grade)—

Southland (Mataura, &c.).

Minor coalfields from which coal is being mined, but which cannot be expected to provide an important contribution to our coal resources, are :—

Sub-bituminous Coal—

North Auckland (Hikurangi, Kamo).

Nelson (Puponga, Westhaven).

Otago (Kaitangata).

Lignite—

Canterbury (numerous small deposits).

Otago.

Charleston (Westport).

Close and systematic survey of the coal areas was interrupted by the war need to divert the limited staff of field geologists to investigate problems of immediate importance in the production of coal. However, a survey of the Greymouth Coalfield has now been completed by geologists of the Geological Survey staff, and figures published here regarding that coalfield have been obtained from their reports. Full details of the results of this survey will be published later as a bulletin of the New Zealand Geological Survey.

While it may be stated, in the light of present knowledge, that there is sufficient bituminous coal for requirements as at present for the next fifty years, it is not possible to give close estimates of coal resources in all the coal fields until the survey has been completed.

The table below gives an estimate of the coal resources of New Zealand.

“ Proved ” coal includes nothing beyond a proportion of coal actually in pillars in developed mines, plus a strip  $1\frac{1}{2}$  chains wide beyond the limits of workings, except where such limits are known to be controlled by faults, thinning of the seam, or the incoming of dirty or unmarketable coal. The proportion of coal in pillars is arrived at by a consideration of various factors affecting the individual mines and limiting the quantity which could be extracted in the ordinary way of mining. The expression “ proved ” is therefore synonymous with “ recoverable ” or “ measured ” coal in this sense.

“ Probably recoverable ” coal relates to extensions of existing and still developing mines, undeveloped seams where fair evidence of a workable seam is available from outcrops or boreholes, and a number of small areas adjacent to abandoned large collieries