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NEW ZEALAND.

MINES DEPARTMENT.
GEOLOGICAL SURVEY BRANCH

(FOURTEENTH ANNUAL REPORT (NEW SERIES) OF THE).

Laid on the Table of the House of Representatives by Leave.

SIR,—

Wellington, 3rd July, 1920.

STAFF.

During the past year the staff of the Geological Survey has been considerably increased. The new officers are: Mr. H. T. Ferrar, M.A., F.G.S., Geologist; Messrs. J. Marwick, M.A., and L. I. Grange, M.Sc., A.O.S.M., Assistant Geologists; Mr. E. O. Macpherson, A.O.S.M., Field Assistant.

Mr. (Major) H. S. Whitehorn, on his return from the front, rejoined the Survey as Assistant Topographer, but was shortly thereafter transferred to the Forestry Department.

SUMMARY OF FIELD OPERATIONS.

During the latter part of the year under review three field parties have been employed, one in the Middle Waikato district (Huntly Subdivision), under Dr. J. Henderson, Mining Geologist; one in the Whangarei district (Whangarei Subdivision), under Mr. H. T. Ferrar, Geologist; and one in the Collingwood district (Collingwood Subdivision), under Mr. M. Ongley, Assistant Geologist. The area geologically surveyed amounts to about 1,100 square miles. Since 1909, until this year, the Geological Survey has never had more than two parties in the field at any one time, so that in this respect the past year has been one of progress. Great difficulty, due mainly to the low scale of wages offered, was experienced in obtaining efficient field hands. This not only retarded progress, but threw an additional burden on the already overweighed shoulders of the field geologists.

In each of the three districts mentioned above, detailed geological survey has been undertaken, largely on account of the presence of coal deposits. Although the investigation of our coal resources is a matter of great importance, it may be as well to point out that the present scarcity of coal in New Zealand is due primarily to a shortage of labour, and not to a shortage of coal available for mining, as seems to be the common belief. On the other hand, unless fresh discoveries are made and new mines developed, there will be a real scarcity of available coal before many years have passed.

Brief visits for special purposes were made by the Director to the following districts: Bay of Islands, Puhipuhi, Avoca (Northern Wairoa), Golden Stairs Tunnel (North Auckland Main Trunk Railway), Moehau (Coromandel), New Plymouth, Woodville, and Red Rocks Point (Wellington). Similarly, Dr. J. Henderson visited Reefton (twice) and Cheviot. Mr. H. T. Ferrar visited Press's farm, some miles north-west of Kawakawa, and Kioreroa, near Whangarei, in order to report upon coal and oil possibilities, and Mr. M. Ongley made special inspections of the marble-quarries and a reputed phosphate-find near Takaka.

HUNTLY SUBDIVISION.

Work in the Huntly Subdivision, which contains an important coalfield, was resumed in December last by Dr. J. Henderson, assisted by Mr. L. I. Grange. At the end of May about 300 square miles had been surveyed in detail. At the beginning of June Dr. Henderson returned to Wellington in order to begin the preparation of a detailed report. Mr. Grange, however, remained in the field in order to complete the survey of the subdivision.

WHANGAREI SUBDIVISION.

The exact extent of the Whangarei Subdivision has not yet been settled. Provisionally it includes the survey districts of Hukerenui, Opuawhanga, Purua, Whangarei, Taiharuru, and Taranga. The subdivision as thus defined includes several separate areas where coal is being worked. It also contains deposits of mercury-ore, silver-ore, manganese, &c. The limestone deposits are of great importance, both for the manufacture of cement and for agricultural purposes. The survey of the Whangarei Subdivision is under the charge of Mr. H. T. Ferrar, who began work last November, and at the end of May was still in the field.

COLLINGWOOD SUBDIVISION AND ADJOINING AREA.

The Collingwood Subdivision consists of the survey districts of Onetaua, Pakawau, and Paturau, together with the northern part of Whakamarama Survey District and a small part of Kahurangi Survey District. It contains several coal-bearing areas, some of which have been worked, but not on a large scale. Mr. M. Ongley, Assistant Geologist, assisted by Mr. E. O. Macpherson, began work towards the end of September, 1919, and remained in the field till the middle of June, by which time the survey of the subdivision was completed. A detailed report on the area is now being prepared.

Attention may be drawn to the discovery by Messrs. Ongley and Macpherson of marble in great variety and inexhaustible quantity within a mile of the shore of Golden Bay, two to five miles north of Collingwood. There is reason to believe that quarries capable of yielding large-dimension stone can be easily established under favourable transport conditions.

During the years 1908-9 Whakamarama Survey District and adjoining areas to the south and south-east were topographically surveyed by members of the Geological Survey staff. A portion of this territory was also geologically surveyed by the late Mr. E. J. H. Webb and others.