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MINES DEPARTMENT.
GEOLOGICAL SURVEY BRANCH.
ANNUAL REPORT.

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

Geological Survey Office, Wellington, 20th August, 1918.

SUMMARY OF FIELD-WORK.

DURING the twelve months that ended on the 31st May the Director visited the State coal-mines (Greymouth), Dobson Flat, the Westland Gold-prospecting Syndicate's claims at Kanieri Forks and Arahura Valley, the Kaimata oil-bore, the Chertsey oil-bore, the Springhills coal-bore (Southland), Nightcaps district, Waikaia district, Mount Torlesse collieries (Canterbury), Waikari limestone outcrops, Maharahara copper-mine, the serpentine outcrops on the Griffin Range (North Westland), Thames, and Waihi. Dr. J. Henderson, Mining Geologist, was engaged chiefly in south-west Auckland and north Taranaki, with the object of determining the coal possibilities of those parts of New Zealand. He visited the Ohura, Waitewhena, Tangarakau, Mokau, and Awakino districts, &c., examining coal and limestone deposits. In consequence of the Government having been offered an option over a large area of supposed coal-bearing country in the Mohakaitino and Mokau valleys, a detailed survey of what will be known as the Mokau Subdivision was begun in March and continued until the 22nd May, when Dr. Henderson returned to Wellington. In addition to the examinations already mentioned, Dr. Henderson in June and July, 1917, visited Hammer, Kotuku, Thames, Whangarei, Tokomaru, Waipiro Bay, Gisborne, Morere, Wairoa (Hawke's Bay), Napier, Te Aute (Otane), and Takapau. The principal objects in view were to obtain information concerning the mineral springs and the limestone resources of the localities visited. In October, 1917, Dr. Henderson visited Reefton in order to make a special examination of the Inglewood Gold-mine. Mr. M. Ongley, Assistant Geologist, was in the military forces during the greater part of the year. From the 12th January to the 21st May he was on leave from military duty, and assisted Dr. Henderson in the examination of the coal and limestone deposits of south-west Auckland and north Taranaki.

OFFICE-WORK.

The editing of various publications occupied much of the Director's time. Until the 23rd October he also acted as Under-Secretary of Mines.

During the year numerous requests for information concerning New Zealand minerals and ores have been received and answered. These requests have led to the preparation of statements dealing with raw materials for electro-chemical industries; magnesite and dolomite, graphite, mica, talc, chrome-iron ore, manganese-ore, tungsten-ore, clay, and fuller's earth, most of which will probably be published in the *New Zealand Journal of Science and Technology*. A considerable amount of correspondence relating to minerals, ores, New Zealand geology, and more especially palæontology, has been handled. The usual amount of attention has been given to the library, which has been used and found helpful by various persons in addition to the officers of the Geological Survey.

MOKAU SUBDIVISION.

The detailed survey of the Mokau Subdivision has been planned to include the whole of Tainui, Mokau, Aria, Awakino, Awakino North, and Awakino East survey districts, together with portions of Mimi, Waro, Ohura, and Totoro survey districts. The subdivision therefore includes the coal-bearing areas contained in the Mangapapa and Mokau-Mohakaitino blocks and the promising coalfield in the Waitewhena Valley, north of Ohura (see last year's report, pp. 8-9). The survey has been carried out under difficulties. Owing to the war, suitable field hands have not been easy to obtain. Much of the country surveyed is rough, bushed, and unroaded. Many of the streams that were traversed run in precipitous gorges containing deep pools impassable except by swimming.

LIMESTONE-DEPOSITS.

During the year covered by this report a number of special visits to limestone-deposits has been made by members of the staff, and considerable progress has been made in the writing of a detailed report on the limestone resources of New Zealand. It will have the scope indicated in last year's report, and is expected to be the longest bulletin hitherto prepared by the Geological Survey. Its publication will be merely the initial step in the development and proper utilization of the limestone-deposits of New Zealand, but it will clear the ground, so to speak, and enable agricultural associations, local bodies, farmers, and others interested in limestone to ascertain what deposits are known to exist in their own and neighbouring districts, what the probable quantity and quality are, what amount of exploration and especially of sampling for analytical purposes is required, &c. They will also be enabled to realize the problems that require to be solved, and generally to grasp the situation, both from a local and a national point of view.