

(e.) REPORT OF THE DIRECTOR OF THE GEOLOGICAL SURVEY DEPARTMENT.

JAMES MACKINTOSH BELL, Director, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,—

Wellington, 31st December, 1906.

In accordance with your instructions, I have the honour herewith to submit to you a statement of the work of the Geological Survey Department for the year ending the 31st December, 1906. The present report is a brief summary of the routine and field-work of the Survey. The annual report of the Geological Survey Department for the year 1906, now being prepared, which is this session to be presented to Parliament as a separate parliamentary paper, will contain a more detailed account of the work accomplished, together with the reports of the various officers.

FIELD AND ROUTINE WORK FOR THE YEAR.

With the exception of the period from the 13th April to the 8th September, I was occupied throughout the year practically continuously in field-work.

As stated in last year's report, at the close of the year 1905 I was engaged with Mr. Colin Fraser, Mining Geologist, in the geological survey of the Coromandel Subdivision, Hauraki. Early in January, feeling that the work was well under way, I proceeded to Auckland, leaving Mr. Fraser in charge. While in Auckland I paid a brief visit to the Drury Coal-mine, and attended to other departmental matters. On the 22nd January I left Auckland, and proceeded south *via* the Wanganui River. At Wellington and Christchurch it was necessary to spend a few days in attending to departmental business, but by the beginning of February I was able to join Professor Park in Central Otago, where he was engaged in the geological survey of the Alexandra Subdivision. After spending a few days with Professor Park, in order to familiarise myself with the interesting work which he had in hand, I set out for the Hermitage, Mount Cook. The route followed was by the road from Cromwell to Queenstown, from there across the Clutha River to Tarras Station, on to Omarama and Lake Pukaki, and thence to the Hermitage. Some ten days were spent in the Mount Cook district, and a very good general idea was obtained of this centre of glaciation in New Zealand. As a stranger to the country, I was greatly impressed with the magnificence of the ice-features, and their really wonderful proportions.

On the 26th February I left the Hermitage in company with Dr. Marshall, of Otago University, and Guide Clarke, *en route* for the west coast. Having crossed the lofty mountain *col* known as Fitzgerald Pass, we descended the valley of the Copland. This river was followed to its junction with the Karangarua, down which we continued to the main south road of Westland.

Early in March, after traversing Arthur's Pass, I joined Mr. Colin Fraser at the head of the Wilberforce River. Mr. Fraser, who had left his work in the Hauraki Division in order to assist me in Westland, so that a bulletin on the Hokitika Subdivision could be published during the coming session, was at the time engaged in a geological survey of the area included within the Westland reefs mining district. This district lies within the area drained by the head-waters of the Wilberforce River, a tributary of the Rakaia, flowing eastward through Canterbury, and by the head-waters of the Arahura River flowing westward through Westland, and, together with the adjoining mountainous country, occupied the united attention of Mr. Fraser and myself for the rest of the season.

During the winter months I was engaged at headquarters in the preparation of Bulletin No. 1 on the Hokitika Subdivision of the North Westland Division, in writing the annual report, and in attending to numerous other matters arising out of the departmental work throughout the colony.

Work in Southern Part of the Hot Lakes District.—On the 8th September I left Wellington in order to make a brief reconnaissance in the central volcanic area of the North Island. This season's investigations were confined to the southern part of the Taupo volcanic zone—namely,