

## REPORT.

### LETTER OF TRANSMITTAL.

SIR,—

Geological Survey Office, Wellington, 30th June, 1911.

I have the honour to forward you herewith the annual report of the Geological Survey Branch of the Mines Department for the twelve months ending 31st May, 1911.

I have, &c.,

P. G. MORGAN,

The Hon. R. McKenzie, Minister of Mines, Wellington.

Director, Geological Survey.

### INTRODUCTION.

THE present report, which is the fifth since the reorganization of the Survey, deals with the twelve months from 1st June, 1910, to 31st May, 1911. For over nine months of this time Dr. J. M. Bell was Director, and it is only since the 1st April, 1911, that the survey has been under my control.

### STAFF.

On the 10th March, 1911, Dr. J. M. Bell, who had been Director of the Geological Survey of New Zealand since the 21st January, 1905, severed his connection with the Survey. It is well known that under Dr. Bell's direction the Geological Survey was reorganized, with results that have been highly praised by scientific men in all parts of the world.

Mr. Colin Fraser, M.Sc., Mining Geologist, who had been connected with the Survey since the 28th March, 1905, also resigned his position, and left the service at the end of March. Mr. K. M. Graham, who had joined the Survey as Topographer on the 1st October, 1908, was transferred to the Defence Department at the close of the year under review. I wish here to record my appreciation of the zealous and capable service which both Mr. Fraser and Mr. Graham rendered to the Geological Survey.

The vacancies caused by the retirement of Dr. Bell and Mr. Fraser were filled by the appointment of myself as Director and of Dr. J. Henderson as Mining Geologist. An important forward step has been taken by appointing Mr. J. Allan Thomson, M.Sc., F.G.S., to the position of Palæontologist. The two last-named gentlemen took up their duties on the 1st June, 1911.

### SUMMARY OF OPERATIONS.

During the twelve months under review detailed field-work has been under way in the Tairua-Waihi, Aroha, New Plymouth, and Mokihinui Subdivisions.

The survey of the Waihi-Tairua Subdivision has been brought to a conclusion, and a detailed report upon the area has been written by Dr. Bell and Mr. Fraser. This report, which is now being revised by the authors prior to publication, will be accompanied by a number of geological and topographical maps, together with numerous mine-plans, &c.

Work in the Aroha Subdivision was confined almost entirely to topographical surveys by Mr. K. M. Graham in the Waitawheta and Waiorongomai Valleys.

During the past summer Mr. E. de C. Clarke, formerly a member of the staff, completed the survey of the New Plymouth Subdivision under a special agreement, and has since supplied a detailed report on the area. Owing to the large amount of other work on hand, it may be some time before Mr. Clarke's report can be published, and a brief summary dealing mainly with the economic features of the New Plymouth Subdivision is therefore published with this report.

Since the middle of January of this year detailed field-work in the Buller-Mokihinui Subdivision has been conducted by myself, with the assistance of Mr. H. S. Whitehorn, Assistant Topographer, in the topographical work.

During the year flying visits were made by Dr. Bell to Ngaruawahia, Whangarei, and other places, and by myself to the Brighton district, south of Westport.

### PUBLICATIONS.

Within the past year, besides the fourth annual report, three bulletins, Nos. 9, 10, and 11, have been issued. Bulletin No. 9, entitled "The Geology of the Whatatutu Subdivision, Raukumara Division, Poverty Bay," was written by Mr. J. H. Adams. The area with which it deals contains oil-springs and other indications of petroleum. Bulletin No. 10, "The Geology of the Thames Subdivision, Hauraki, Auckland," is the work of Mr. Colin Fraser. This publication, which describes a district that contains the oldest quartz-mining field in the Dominion, is of great economic and scientific interest. Mr. E. J. H. Webb is the author of Bulletin No. 11, "The Geology of the Mount Radiant Subdivision, Westport Division," which gives a full account, *inter alia*, of a cupriferous district situated a few miles to the south-east of Karamea.