

Owing to Government deeming it necessary to restrict expenditure the survey was prematurely abandoned. The district thus discarded is a wild mountainous area, practically unsettled, and very difficult of access. It forms, however, part of a belt of country which probably contains gold-bearing lodes, as well as other mineral deposits, and is well worth exploration. Authority for a resumption of geological survey in this district has been given, but the scarcity and high cost of suitable labour may prevent the work from being carried out for some years.

PALÆONTOLOGICAL WORK.

Mr. Henry Woods, M.A., F.R.S., of Cambridge, England, has done some further work on New Zealand Cretaceous fossils, and a brief report has been received from him on the subject.

Mr. Frederick Chapman, A.L.S., F.Z.S., of the Melbourne National Museum, has continued to work at intervals in his spare time on the collections of Foraminifera and Ostracoda sent to him some time ago. His report thereon ought shortly to be ready.

During the past year a considerable number of fossil identifications have been made by myself and other members of the staff, working, however, under great difficulties.

Mr. John Marwick, Assistant Geologist, who has lately joined the Survey, has been detailed to palæontological work, and is now studying the Tertiary Mollusca, which are considered to be of great importance in connection with the correlation of New Zealand coal-measures.

PUBLICATIONS.

The publications issued by the Survey during the past twelve months are as follow:—

Thirteenth Annual Report.

Palæontological Bulletin No. 7: "Descriptions and Revisions of the Cretaceous and Tertiary Fish-remains of New Zealand." By Mr. Frederick Chapman, A.L.S., F.G.S., Palæontologist to the National Museum, Melbourne.

Bulletin No. 22: "The Limestone and Phosphate Resources of New Zealand (considered principally in Relation to Agriculture): Part I, Limestone." By myself and other members of the Geological Survey Staff.

In addition the following articles and reports were published in the *New Zealand Journal of Science and Technology* during 1919 and the early part of this year:—

"Permo-Carboniferous (Maitai) Rocks of the Eastern Part of the South Island of New Zealand." (Vol. ii, No. 1.) By P. G. Morgan.

"Chrome-iron Ore, Mica, and Tungsten-ore in New Zealand." (Vol. ii, No. 1.) By P. G. Morgan and J. Henderson.

"Talc, Manganese-ore, Clay and Fullers' Earth, and Oil-shale in New Zealand." (Vol. ii, No. 2.) By P. G. Morgan.

"Graphite in New Zealand." (Vol. ii, No. 3.) By P. G. Morgan.

"The Organization and Functions of a State Geological Survey." (Vol. ii, Nos. 4 and 5.) By P. G. Morgan.

"The Splitting of the Mangatini-Matipo Coal-seam, Buller-Mokihinui Coalfield," and "The Application of a Change-of-Volume Factor to the Correlation of Coal-seams and Coal-bearing Strata." (Vol. ii, No. 6.) By P. G. Morgan.

"Mokau Subdivision," and "The Taranaki Coalfield." (Vol. ii, No. 6.) By J. Henderson.

"Coal Prospects at Waiwera, Auckland." (Vol. ii, No. 6.) By J. A. Bartrum, Lecturer in Geology, University College, Auckland.

"The Tertiary Beds of Central Otago." (Vol. iii, No. 1.) By P. G. Morgan.

"A Mineral new to New Zealand—Pilotite." (Vol. iii, No. 2.) By J. Henderson.

At the present time Bulletin No. 21, entitled "The Geology of the Gisborne and Whatatutu Subdivisions, Raukumara Division," by J. Henderson and M. Ongley, has reached the final-proof stage, and will shortly be issued. This bulletin gives a new interpretation of the geological structure of the Gisborne district, which those interested in the attempt to establish an oil industry would do well to study carefully.

The present cost of printing, preparation of illustrations, &c., is a matter of serious import to the Geological Survey. The prompt publication of the results obtained by scientific workers is essential to progress, but at present the cost is almost prohibitive. Unless adequate means of publication is assured, both the volume and the quality of scientific work inside and outside Government Departments are bound to fall off.

OFFICE-WORK, ETC.

Information on many matters, some not of a geological nature, has been supplied to the Mines Department, to other Government Departments, to scientific institutions, and to members of the public. As examples of the subjects of inquiry may be mentioned—Coal; petroleum possibilities; iron-ore; limestone for agricultural purposes, cement, and carbide manufacture; roadmaking materials; building-stones (marble, &c.); monumental stones; clay; fullers' earth; magnesia-bearing rocks; asbestos; faulting in coal and gold mines; and water-power.

As Chairman of the Board of Examiners under the Coal-mines and Mining Acts I have attended to a considerable amount of detail not connected with the Geological Survey. On two occasions I have acted as a member of the Loan Board constituted under the provisions of the Mining Act (Part X) and the Coal-mines Amendment Act, 1919.

The work done in the draughting office during the year includes: Two maps fully drawn and five maps partly drawn for photo-lithographic reduction; thirty-three sheets on the 20-chain scale drawn for use in the field; completion of four similar sheets partly drawn about 1908; 164 tracings and miscellaneous drawings.

LIBRARY.

During the year numerous publications were received in exchange for Geological Survey material. A catalogue of the library, which now contains over five thousand volumes, is in preparation. The housing of this valuable collection in a wooden building, and its consequent exposure to the risk of destruction by fire, is a matter that causes me some anxiety.

I have, &c.,

P. G. MORGAN,
Director, Geological Survey.

The Hon. Minister of Mines, Wellington.