

DOMINION LABORATORY.

In the Dominion Laboratory, for example, the chemical work required for the Health Department in the administration of Public Health Regulations and Food and Drugs Act is carried out; similarly the analytical work on behalf of the Customs Department, Police Department, Department of Industries and Commerce, the Mines Department, Highways Board, in regard to various regulations administered by these Departments. Governmental regulation in connection with many Departments is becoming, with changing times, increasingly technical, and calls for a laboratory service and staff of increasing reliability and efficiency. The Dominion Laboratory needs to keep constant touch with improved methods of analysis, &c., developed overseas, and this is effected mainly through periodicals and exchange of reports with corresponding organizations abroad, as well as by occasional visits overseas of members of its staff. For instance, in regard to coal and fuel generally, one of the staff has been sent to Britain to study new developments in regard to hydrogenation and other aspects of fuel-utilization.

GEOLOGICAL SURVEY.

The Geological Survey is primarily concerned with the mapping of geological formations in the country, and about one-third of New Zealand has so far been mapped. The geological maps and publications indicate the structure of the country and also define the probable mineral-bearing areas. This information is useful to miners, engineers, agriculturalists; and, in general, the aim is to survey the country's national resources. During the year, in addition to extending the area mapped in ordinary routine, the geological parties have carried out investigations into water-supply, soil-surveys, and also those detailed geological and geophysical surveys of special areas. The results in these new lines of activity have proved most useful, and are at present in course of publication. It must be remembered that in New Zealand it is probably correct to say that the surface soils, the investigations of which are in part a geological problem, are worth more than all the minerals buried beneath them. Again, coal is probably more important than all the metallic minerals. The progress in the stock-taking of our resources by the Geological Survey Branch is progressing as satisfactorily as the funds available permit. The work is necessarily slow, partly because of the necessity of the topographical mapping involved. It is hoped that this may be speeded up by co-operation with the air services through the supply of aeroplane maps. From my experience overseas, I have appreciated that our geological publications are a factor in advertising New Zealand abroad, and that they often form a base for the attraction of overseas capital in various ventures.

The Mineral Resources Department of the Imperial Institute is of considerable help to New Zealand in indicating market requirements for some of the rarer minerals.

METEOROLOGICAL SERVICES.

During the past year the weather-forecasting service has been improved by the preparation and supply to morning and evening papers and to the Radio Broadcasting Stations of special regional forecasts. In the preparation of these forecasts New Zealand is handicapped by the paucity of observations from the Tasman Sea, and to overcome, in part, this difficulty arrangements have been made for an increased number of telegraphed observations from Australia, and also by the development of new so-called "polar front" methods of forecasting. In the latter connection my Department is indebted to the assistance of Mr. Holmboe, of the Swedish Meteorological Service, who, owing to the misfortunes of the Elsworth Expedition, was enabled to spend six months at the Meteorological Office collaborating with its own officers.