

Considerable advancement has been made with the mapping of the Kaitangata Coalfield, and—pending the publication of the final report—information on certain areas is being mimeographed.

Activity on the West Coast has been confined to Reefton, Garvey Creek, Fletcher Creek, and Punakaiki Coalfields. Interim reports on these fields, as well as reports on further investigations in the Murchison district, have been issued.

VOLCANOLOGY

Routine investigation of the flow and chemical composition of water from wells and natural springs throughout the thermal regions has proceeded throughout the year.

Re-observation of activity on White Island indicates that apart from minor changes in the crater area there is little difference in the activity since observations were made in 1947.

The background of information provided by earlier investigators on the structure and history of geologic events in the thermal region of the Taupo and Bay of Plenty area is gradually being augmented by additional regional mapping, supplemented by geophysics and the various investigations in connection with dam-sites and the development of the hot-water resources. The overall picture, however, is far from complete and has not advanced to the stage where it can with any degree of confidence be utilized to investigate the potential thermal power available for industry. A concerted effort with the Ministry of Works is under way to test the Wairakei area as a possible source of thermal power for generation of electricity.

The officers who observed the recent eruption of Ngauruhoe are preparing a symposium for publication.

HYDROLOGY

Water-supply problems for local and public bodies, as well as for Government Departments, and industrial and private supplies, have been reported on throughout New Zealand; the number of investigations of such problems is ever increasing and is an important phase of the Survey's activities. A groundwork of information is accumulating that will serve for the future development and conservation of our water resources. It has been shown that some alleged deleterious effects of irrigation in Canterbury are due to excessive rainfall, and not the result of irrigation.

A paper on the "Conservation and Protection of Underground Water in New Zealand" was written for the International Water Supply Association.

ECONOMIC AND ENGINEERING

Investigations carried out during the year included those on limestones for various purposes, and greywacke and basalt for aggregate in the Waikato, on sands for glassmaking and moulding in Canterbury and Otago, on serpentine for the fertilizer industry at Wairere, on clay for ceramics at North Auckland and Orepuke, on bentonite for general purposes at Waimarama and Masterton district, on greywacke for coastal and river protection at Kaikoura, on clay and decomposed greywacke for bricks at Tawa Flat, on tuffs for pozzolanas at Oamaru and Te Kuiti, on antimony at Alexandra and Bannockburn, on copper sulphide at Waitahuna, on diatomite at Middlemarch, and on ironsands at Cape Foulwind. In addition, inquiries regarding available raw materials were attended to.