

MINOR TRIANGULATION.

An area of 38,100 acres is shown under this heading. The bulk of the work is in Auckland District, and a small area in Taranaki, and was undertaken to control the settlement surveys.

TOPOGRAPHICAL, FOR SELECTION.

A small area of 3,576 acres is shown under this heading, at a cost of 0.42s. per acre. This work is done as a preliminary to settlement surveys, and a portion of the area is on the Great Barrier Island.

SETTLEMENT SURVEYS.

The settlement surveys comprise Crown lands, land for settlement, and land for discharged soldiers. The bulk appears in Table A under the head of "Rural," the acreage there shown being 438,925 acres, while the remainder includes village and suburban and town lands, totalling 787 acres.

NATIVE SURVEYS.

During the year an area of 6,193 acres was completed by the staff surveyors, while an area of 260,697 acres was surveyed by private surveyors. The area surveyed in each land district is given in Table B.

GOLD- AND COAL-MINING SURVEYS.

An area of 2,669 acres is shown under this head. The surveys were made by private surveyors, and the fees paid by the applicants.

MAJOR TRIANGULATION.

This survey is held in abeyance, both as regards the field-work and the office computations.

STANDARD SURVEYS.

Two experienced surveyors are at present engaged on these useful surveys—Messrs. C. A. Mountfort and H. M. Kensington, District Surveyors in Palmerston North and Gisborne respectively.

Mr. Mountfort has completed the field-work of twenty-eight miles of road traverse in the vicinity of Feilding, on Bunnythorpe–Palmerston Road, Feilding–Colyton–Ashhurst Road, and Bunnythorpe–Ashhurst Road. He has also revised part of the Marton standard survey, and is extending the survey of Palmerston North.

Mr. Kensington returns thirty-three miles of streets, the plans of which have been completed during the year under report, in the City of Auckland, and reports that the field-work of the standard survey of Gisborne is about half-finished.

An examination of the traverse closures shows that the high standard of precision aimed at in these surveys has been maintained.

TOPOGRAPHICAL SURVEY.

This survey is held in abeyance.

INSPECTIONS.

A certain amount of inspection work has been carried on by the Chief Draughtsmen and staff surveyors, but on account of the pressure of work in connection with settlement surveys not much of this necessary work has been done during the year.

It is essential that more inspections should be made, so that an adequate check can be kept on the work of the staff and surveyors in private practice.

TIDAL SURVEY.

The work for the year comprised the preparation of the data to enable a tide-table for the year 1922 to be prepared by means of the tide-predicting machine at the National Physical Laboratory, Teddington, England, of the ports of Auckland, Wellington, Lyttelton, Dunedin, Bluff, and Westport. All the computations pertaining to the work required to evaluate the harmonic constants have been completed by Mr. E. J. Williams, Tide-computer, with a certain amount of temporary assistance.

Tidal records and other meteorological data, together with the surface temperature of the sea, have been received regularly from New Plymouth.

Fresh analyses of the six standard ports for which predictions are required have been commenced, and will be continued during next year.

In the report of Mr. E. J. Williams, Tide-computer, appended hereto, are given details of the tidal work, and a table showing the sea-temperature at New Plymouth.

The computing division is at a great disadvantage on account of the depletion of the staff and the difficulty of securing a suitable computer. The appointment of an assistant computer is indispensable in order that the essential duplicate check is made on all important calculations.