

MINOR TRIANGULATION.

With the exception of a small amount in connection with rural standard surveys in the Hawke's Bay District, no work was carried out under this heading.

TOPOGRAPHICAL SURVEYS.

For settlement purposes an area of approximately 20,000 acres, principally in the Auckland and Hawke's Bay Districts, was surveyed.

SETTLEMENT SURVEYS.

The Crown lands and land-for-settlement surveys are set out in Table 1 under their appropriate headings for each land district.

NATIVE-LAND SURVEYS.

This work, the greater proportion of which was carried out by private surveyors, shows a slight increase on last year's return, the greater proportion of the work being in the Hawke's Bay District.

GEODETIC TRIANGULATION.

No work of this nature has been carried out during the year.

HAWKE'S BAY RE-ESTABLISHMENT OF SURVEYS.

Good progress has been made during the year with the controlling standard survey of the principal roads, of which 650 miles was completed and mapped, at an average cost of £18 16s. per mile.

The field-work of the Borough of Napier standard survey, including alignment surveys and re-parcelling surveys under the regulations issued under the Earthquake Act, 1931, is approaching completion, and the mapping is also well forward.

Nearly five hundred reproduced plans were examined and approved during the year, and a large number of data tracings in connection with surveys prior to 1931 were received and recorded.

The computations of the revised secondary triangulation have been completed and referred to the transverse mercator projection based on the meridian through the initial station A, Hawke's Bay, and portion of the network of rural standard traverses adjusted to harmony.

STANDARD SURVEYS.

With the exception of a small amount of work in Christchurch and the maintenance of existing standards, the only work carried out under this heading was the standard-survey work in connection with the re-establishment surveys in the Hawke's Bay District.

PRECISE LEVELLING.

At the request and with the co-operation of the City Council, a length of some twenty-five miles of precise levelling was carried out in the Wellington City.

The probable accidental error ($\eta\tau$) computed on the International formula is 0.0016 ft. per mile, and the probable systematic error ($\sigma\tau$) 0.00128 ft. per mile, showing that the work has been carried out to a high degree of accuracy. The datum for the heights is mean sea-level at Wellington based on seven years reading of the automatic tide-gauge.

FIELD INSPECTIONS.

Except where absolutely necessary for title purposes, no field inspections were carried out during the year.

TIDAL SURVEY.

The tide tables for the year 1934 for the seven New Zealand standard ports (Auckland, New Plymouth, Wellington, Lyttelton, Dunedin, Bluff, and Westport) for which predictions are published were received from the Hydrographer to the Admiralty. The work of measuring the times and heights of high and low water was performed by the Tidal Institute, University of Liverpool.

PROPOSED OPERATIONS, 1933-34.

Hawke's Bay Re-establishment of Surveys.—This work will be continued in the field by the rural standard traverse of the principal roads, and in the office by the collection and compilation of all obtainable existing data.

Triangulation.—It is not proposed to carry out any geodetic or minor triangulation during the coming year.

Standard Surveys.—With the exception of maintenance work, and in the hill suburbs of Christchurch the protection of original reference marks now being lost through street construction, no standard work is proposed to be done this year.

Town Section Surveys.—An area of 68 acres is at present on hand.

Rural Settlement.—Areas of about 50,000 acres, principally in the Auckland and Hawke's Bay Districts, require surveying during the coming year.

Native Land Court Surveys.—As a result of the amending legislation with regard to security for the costs of survey, the work on hand is only 4,085 acres, many prospective surveys being in abeyance.

Office Work.—The routine examination and recording of plans, photo-lithographic drawings, *Gazette* notices, &c., will be continued, as also the publication of maps as present editions become exhausted. The adjustment of the rural standard traverses to harmonize with the revised triangulation will be continued.