

Map-drawing for Photolithography.—Increased work in other directions has drawn a number of the staff from this work. This is unfortunate (although unavoidable in the circumstances), as the standard maps, published on a scale of 1 in. to a mile, are well in arrears both as regards actual drawing and revision.

Adjustment of Triangulation and Standard Traverses.—This work has so increased that the present staff of two mathematicians will have to be strengthened to keep pace with the field-work. This staff also carries out the harmonic analysis of the tidal survey, as well as other computations.

Tidal Survey.—The work of measuring the times and heights of high and low waters at the seven standard ports for the year 1938 was carried out on the tide-predicting machine at the Tidal Institute, Liverpool University, from the harmonic constants computed by the computing staff at Head Office. The seven ports for which tables are published are Auckland, New Plymouth, Wellington, Lyttelton, Dunedin, Bluff, and Westport.

Photoprinting.—Besides the usual appliances for sunprinting installed in the various offices two machines—a Photostat in Auckland and a Lucigraph in Christchurch—are also operating. The Photostat, a new machine replacing one which had been in constant use for sixteen years, is in almost continuous operation for copying plans for data and Proclamation purposes, Fields Inspectors' reports, small farm cottage and building plans, miscellaneous drawings, and documents. During the year 10,833 prints, of which 1,508 were for other Departments, were run off. The Lucigraph is being operated approximately one day per week, 1,623 prints having been run off during the year. An increasing use of this machine may be anticipated as its value becomes better appreciated.

Map Publications.—The full details of these are contained in the report of the Chief Draughtsman, Head Office, appended hereto.

Town Schemes.—An analysis of the areas subdivided for building purposes (other than those in boroughs and town districts) is also contained in the Chief Draughtsman's report.

Warrants for Title, &c.—The following summarizes the number of Warrants and Proclamations issued for the year ending 31st March :—

Number of Warrants for issue of certificates of title	..	..	162
Number of Proclamations of road-lines under the Native Land Act, 1931	..	..	11

PROPOSED OPERATIONS, 1937-38.

Surveys.—Table 3 shows the amount of the principal classes of survey-work in sight at the end of the year. The amount shown is in itself sufficient to keep the present staff fully occupied, and it is anticipated that further work will be forthcoming during the year. Other unclassified work in hand is set out below.

Precise Levelling.—Approximately 150 miles of levelling to the standard laid down by the International Association of Geodesy for levelling of high precision is being undertaken in Canterbury. This, besides its scientific value in a country subject to seismic disturbances, will have a high practical value in co-ordinating the various systems of levels now carried out for drainage, river-protection, irrigation, &c., in that locality.

Geodetic Triangulation.—This will be continued to cover the North Auckland peninsula by the present party, consisting of Mr. T. W. Preston (in charge) and Mr. J. P. Arthurs (observer).

Aerial Surveys.—The ground control of 1,000 square miles in hand in Hawke's Bay will be completed during the year by Mr. J. A. Henderson. The plotting, contouring, and final mapping under the charge of Mr. R. J. Crawford, Senior Draughtsman, Head Office, should be well advanced. At present the work is being held up by the non-arrival of the second precise stereoscope.

Hydrographic Survey.—It is anticipated that the Admiralty survey ship, H.M.S. "Endeavour," will be commencing operations during the year. As the Department will probably be required to give accurate values for coastal triangulation stations it may be necessary to do further triangulation work for this purpose. The geodetic work already carried out has revealed large discrepancies in the old minor triangulation executed over sixty years ago, and it would appear that revision of this will have to be made.

STAFF.

I regret to have to record the death of Mr. J. A. Godfrey, who very ably carried out his duties as draughtsman in charge of plan safe, North Auckland. A number of officers have left the Department—Messrs. B. C. A. McCabe, H. R. Mottram, C. G. S. Ellis, and W. G. Nelson, joining the State Advances Corporation; Mr. K. A. Bell, the Scientific and Industrial Research Department; Messrs. R. C. Lough, P. J. Burke, and S. G. Rees, the Public Works Department. At the close of the year many changes in the higher positions were pending, among which was the retirement of Mr. A. J. Wicks, who had for the past eight years held the position of Chief Draughtsman in the Head Office, the duties of which he performed with distinction.

APPRECIATION.

The Chief Surveyors express their appreciation of the loyal co-operation of their staffs in carrying out the services of the Department. To this I would wish to add my like appreciation.

H. E. WALSHE, Surveyor-General.