

REPORT.

A SUMMARY of the work executed both in the field and office during the year ended 31st March, 1937, is contained in the tables attached hereto. It may be noted that increases under practically all headings are shown.

Brief reports of the more important aspects of the operations under classified headings are given below.

FIELD.

Geodetic Triangulation.—Very good progress was made with this work during the year, an area of 6,900 square miles being covered and the observations so far as may be judged by triangular closures are fully up to the standard required. The work linked up the remaining base-line in the North Island and now covers the whole of the Island, except the North Auckland peninsula north of Helensville. Nineteen stations were occupied during the four months and a half engaged on this work and the closing errors of 60 triangles give an average close of 0·8 sec., the maximum error being under 2 sec.

Triangulation.—Second-order triangulation was also carried out by the geodetic party over practically the same area as the geodetic work. One hundred and fifty-three stations were occupied in the ten months, the average closing error of the 509 triangles closed being 1·8 sec., with a maximum error (for second order) of 5 sec. Minor or third-order work was carried out in various districts, the principal being an area of nearly 100 square miles in Hawke's Bay to control standard traverses.

Topographical.—Over 100 square miles are returned under this heading, about 80 square miles being fully contoured work, the balance mostly sketch topography. During the year air photographs covering 1,000 square miles in Hawke's Bay were received from the Air Force, and ground control and plotting from these will be proceeded with during the year.

Standard Surveys.—With the virtual completion of the rural standard surveys in Hawke's Bay, the output of this class of work will decrease. Town standard surveys in Auckland City (principally maintenance of existing work), Christchurch, and Ashburton (of small extent) were completed during the year.

Rural Surveys.—During the year 27,526 acres of settlement surveys were executed, over one-half (15,491 acres) being situated in the Auckland and North Auckland District. The costs remain at the low figure of 2s. per acre.

Town and Suburban.—During the year 275 town sections and 151 suburban sections were laid off, all districts returning areas under this heading.

Native Land.—The Auckland districts return practically the whole of the work done under this heading.

Housing.—During the latter half of the year areas aggregating 676 acres were surveyed preliminary to housing development, and final surveys of a further 102 sections for that purpose were completed.

Roads.—The greater part of the 84 miles returned under this heading are consequent upon deviations of the main highways due to improvement of grades and curves.

Inspections.—With the exception of surveys submitted by one surveyor, the fields inspections carried out show that the surveys are being faithfully executed. In the exceptional case it appeared that work was being done by an assistant without adequate supervision. This case was referred to the Survey Board for inquiry, the outcome of which being the suspension of the registration of the surveyor responsible for a period of three months.

Accuracy.—The average close for a traversed circuit under usual conditions obtaining in rural surveys remains at 0·4 of a link per mile, or 1 in 20,000, and only under the most adverse conditions does this close approach 0·8 link per mile.

Other work.—Under this heading a total of £4,501 19s. 4d. is returned. Of this amount, £1,100 comprises work of a purely survey nature such as locating old boundary lines or pegs, but which cannot be classified under the set headings requiring areas to be stated; £1,512 comprises maintenance-work and small surveys in maintaining the basic control of standard traverses and triangulation; £986 investigational and inspection surveys for purposes of check, more especially where office check raises doubts as to the correctness of surveys, old or new; £421 surveys in connection with land-development generally, not otherwise returned; £129 surveys and other work dealing with Police Court cases; £20 surveys and reports on mining privileges; £58 timber appraisals; the balance, consisting of varied expenses of office routine, transfers, &c., which cannot be allocated to any particular survey or work.

OFFICE WORK.

Examination and Recording of Plans.—The increased volume of work in this has necessitated allocating further staff to prevent an accumulation of arrears as this work is of an urgent nature and must be kept fully up to date. The work in hand at the end of the year does not disclose any excessive arrears, and consequently no delays may be attributed to this Department.

Plan-drawing.—Owing to the field staff being engaged on smaller works than formerly and usually of a more urgent nature, it has been found more economical for their plans to be drawn by the office staff, thus releasing the field officer for further field-work after sufficient computation to prove his work. This, incidentally, has improved the surveyor's method of note-taking, resulting in much clearer notes than formerly.