

Town Section Survey.—Of the 44 acres under this head, 12 acres, in 21 sections, were surveyed by Mr. Otway in Wyndham District, and 30 acres, in 48 sections, by Mr. Drury in Waiau District, the remaining 2 acres having been executed by a private surveyor, paid for by applicant.

Gold-mining Survey.—44 acres: these were two special claims, surveyed by private surveyors and paid for by applicants.

Roads and Water-races.—Six miles were surveyed by the staff in connection with lands to be opened for settlement.

Other Work.—The expenditure under this head represented traverses of water-races, tramways, &c., in connection with settlement surveys, reports, Mr. Falkiner's unfinished landless Natives survey, &c.

Proposed Operations, 1911-12.—Mr. Otway has in hand 3,000 acres in Longwood and Jacob's River Hundreds, 700 acres of which are nearly completed. Mr. Macpherson will be fully employed on a block of 9,000 acres in the Aparima District. Mr. Falkiner, on completion of the survey of the landless Natives block in Hokonui District, will take in hand a block of 5,000 acres in Mokoreta District. Mr. Drury will continue cutting up lands in the Longwood District, and 4,400 acres of cut-out sawmill areas. Mr. Thompson, who has just joined the staff, will be engaged on surveys of 8,000 acres in Alton, Longwood, and Campbelltown Hundreds. A survey will also be required of about 5,400 acres recently acquired by the School Commissioners and now administered by the Lands Department. There are in addition many miscellaneous surveys to be completed as opportunity arises.

Office-work.—During the year 75 ordinary survey plans, representing 34,862 acres, were examined and passed, and also 9 railway land plans; 33 photo-lithographic tracings for sale plans were made; 178 working tracings for surveyors, and 373 miscellaneous tracings. Two new lithographic drawings of survey districts were made, one drawing was revised, and another drawing is well in hand; 24 local bodies' schedules in duplicate were prepared, and 280 lithographs, plans, &c., were mounted; 4 new application maps have been compiled to take the place of old and dilapidated ones, and others are in course of preparation. The 4-mile map of Southland and Wallace Counties was revised with a view to its republication, and the Head Office Southland County map was brought up to date. The revision of the Valuation Department's maps of ridings, and preparation of maps for census sub-enumerators, occupied a large amount of the officers' time. At the request of the Head Office, a drawing of the northern portion of Stewart Island was prepared for the use of the Department of Tourist and Health Resorts. This necessitated the inspection of the actual roads and tracks in use, and this information, together with the general topographical features of that portion of the Island, has resulted in the publication of a map which is of considerable importance and interest to tourists and the public generally. Additions were made to the small pictorial map of the Dominion to enable a second issue of the map to be made. The principal drawing-work during the year has been in the direction of the preparation of a new topographical map of the Dominion, to be issued on a ten-mile-to-the-inch scale. The drawing has been projected on an eight-mile scale, and it will be published in four sheets, which can be joined together to make the complete map. As each of the sheets will be about 5 ft. 6 in. by 4 ft. 6 in., some idea may be formed of the extent of the map. I trust the work will be finished and the map published about the end of the present year.

In the Land Transfer Branch, 102 plans, covering an area of 10,446 acres, were examined and passed. As another draughtsman has now been added to the staff, I trust that time will be found during the coming year to resume work on the Land Transfer record and other public maps, so as to endeavour to bring all the ordinary lithographs of the district up to that state of usefulness required for general purposes.

The general work of the office has considerably increased during the year, and I have to thank the staff for their cordial assistance.

H. M. SKEET,
Chief Surveyor.

APPENDIX II.

THE MAGNETIC OBSERVATORY AND THE MAGNETIC SURVEY.

THE routine and other observational work of the Observatory have been carried on successfully during the year, and, as in previous years, comprise magnetic, seismological, and meteorological observations.

The Adie magnetographs have been kept in continuous operation, and the work of developing and annotating the records obtained duly performed. Throughout the year the absolute observations necessary for standardizing the curves have been duly made. For the information of other observatories, the magnetograms of most of the principal magnetic storms are reproduced herewith. The reproductions, in four sheets, are on a scale of three-eighths of the originals, so that the values of ordinates for the comparison of fluctuations are—

Declination curve	+ 1 mm. =	— 3.0' of arc.
Horizontal-force curve	=	— 0.00013 c.g.s. unit.
Vertical-force curve	=	— 0.00010 c.g.s. unit.

The work of measurement and tabulation of the magnetograms has been substantially advanced during the year, and in future each annual report will include the tabulated hourly values of the magnetic elements for the year. The reduction of the 1910 curves is not sufficiently advanced for inclusion in this report.