

The index county maps of the Dominion on the mile-to-an-inch scale have been kept up to date. Several have been replaced by new editions having been issued.

Maps were printed and issued of the Counties of Buller, Inangahua, Murchison, Collingwood, Cheviot, Mackenzie, Waipa, Levels, and parts of Selwyn, Ashburton, and the northern portion of Westland.

New editions of the following survey districts were printed and issued: Kauroo, Rakaia, Teviotdale, Waikari, Papakaio, Moeraki, Linkwater, Tennyson, Tongio, Waitapu, Grey, Paritutu, Lammerlaw, Hedgehope, Belmont, Rankleburn, Silverpeak, Hawkdun, Tuapeka East, Maruwenua, Hall, Hurst, Mairaki, Selwyn, and New River Hundred.

The number of tracings drawn during the year exceeded 700, and there were considerably over 500 lithographs, maps, and tracings mounted.

During the session of 1909 four new counties were created—viz., Tawera, Waimairi, Wairewa, and Waipara—thereby necessitating a new edition of the county maps on a scale of sixteen miles to an inch. These were printed and published in colour.

Among other duties performed by the draughting staff, there were 130 descriptions made, bands tested for both staff and private surveyors (11 5-chain bands and 12 1-chain), 30 Proclamations prepared and gazetted under the Local Bodies' Loans Act, 1908, 5 Proclamations prepared and gazetted under the New Zealand State-guaranteed Advances Act, 1909. Plans drawn on deeds, 33.

Land-tenure maps of the following counties on a scale of one mile to an inch were also coloured for the use of the Hamilton Survey Office: Thames, Ohinemuri, Waikato, Piako, Matamata, Tauranga, West Taupo, Waipa, Raglan, Kawhia, Awakino, and Waitomo.

Two complete sets of registration districts in the Dominion were prepared, in addition to 40 separate districts for the Registrar-General.

For the Local Bills Committee of the House of Representatives, 33 schedules of Bills and 47 plans were examined and certified to.

A map of Wellington City and suburbs on a scale of 5 chains to an inch has been put in hand, similar to the one of Dunedin and Suburbs published some time ago. The revision of Auckland Sheet No. 4 is also being undertaken, and will be ready during the year.

One most important work for the ensuing year will be the preparation of the census maps (probably two sets) for the enumerators after the Dominion has been divided into districts by the Registrar-General; and, as on each map the boundaries of counties, ridings, road districts (with subdivisions), boroughs, town districts, electoral districts, &c., have to be shown, the work entailed thereby will be considerable, and will probably require the services of extra draughtsmen.

During my temporary charge, since October, 1909, I have to thank all the officers for the assistance given me.

Mr. C. E. Adams, Chief Computer, reports as follows for the quarter January–March, 1910:—

An index map has been compiled of the triangulation between the Wairarapa and Taranaki Bases, as a preliminary to the adjustment of the triangulation, and as soon as the results of the Taranaki Base are available this important work will be actively put in hand.

In order to check a recent Board of Trade Notice to Mariners, the latitude and longitude of the Akaroa Lighthouse and of the leading-light on the Akaroa new wharf have been calculated in terms of Geodetic Station, Mount Pleasant, and of Mount Cook Initial Station, at Wellington. The adopted longitude for Mount Cook Initial Station is 11 h. 39 m. 6.52 s. (= 174° 46' 37.80") east of Greenwich*, while the observed latitude of Mount Pleasant is 43° 35' 23" south.† The resulting positions are,—Akaroa Lighthouse, lat. 43° 53' 26.1" S.; long. 172° 58' 43.5" E.; leading-light, Akaroa new wharf, lat. 43° 48' 34.4" S.; long. 172° 57' 32" E.

A large amount of preparatory investigations has been done on the harmonic analysis and prediction of the tides; and this opportunity is gladly taken to acknowledge the great kindness and valuable help received from Sir G. H. Darwin, F.R.S., Cambridge; J. Eccles, Esq., M.A., Superintendent, Survey of India, Trigonometrical Branch; Thomas Wright, Esq., Sussex; O. H. Tittmann, Esq., Superintendent, United States Coast and Geodetic Survey; Dr. Bell Dawson, Director, Tidal Survey, Ottawa; Dr. Glazebrook, Director, National Physical Laboratory, Teddington, England; Dr. C. Börgen, Kaiserliches Observatorium, Wilhelmshaven (whose death, I regret to say, has since been reported); P. H. Cowell, Esq., F.R.S., Royal Observatory, Greenwich; Dr. G. Wegemann, Kiel; all of whom have been most kind in supplying advice and information on this difficult subject.

* See report of the Department of Lands and Survey for 1901–2, p. 89.
Lands and Survey for 1883–84, p. v.

† See report of the Department of