

HEAD OFFICE DRAUGHTING STAFF.

The calls for work for other Departments during this year have been fully up to the usual volume, and in spite of a diminishing staff have been met, although with difficulty.

Probably the map-work of the Department for publication has never been at so low an ebb, both in quantity and quality, as at the present time. Reproduction of maps has had to be made without revision as a temporary expedient, and the slowness with which printing has proceeded has prevented many maps from being put in hand at all.

Originals for new four-mile maps for the South Island have been completed and await printing, and the City of Wellington map has been brought up to date.

Town plans have continued to come in, and the number has been maintained, and no doubt will now increase with the change from war conditions. A general reorganization and overhaul of the publications will be carried out as soon as the projected replacement of staff can be effected.

DRAUGHTSMEN'S EXAMINATION.

This examination was held on the 3rd September, 1918, when ten candidates sat, two of whom, Mr. Saunders and Mr. Elvy, obtained second-grade certificates, and Cadet Nightingale passed the elementary stage, while several others have but one subject to complete to obtain this grade. Draughtsmen generally hardly seem as yet to realize the importance of this examination to their future prospects, more especially the younger men, the older men usually being already otherwise qualified for passing the salary bar of £300 per annum.

SURVEYORS' BOARD.

Examinations were held in September, 1918, and March, 1919. At the former eleven candidates sat, two passing; and at the March examination four sat and two passed. The return of many pupils and cadets from military service will bring a considerable increase in the number of candidates for the next ensuing examinations, and certain concessions have been agreed upon by the Associated Boards for this class of candidates.

TIDAL SURVEY.

The work for the year comprised the predictions for the year 1920 at the ports of Auckland and Wellington, and the completion of an additional harmonic analysis to determine the tidal constants at Auckland. The computations were carried out, as in former years, by Messrs. Gillespie and Williams.

The mean sea-level at New Plymouth was determined from a year's record by an automatic tide-gauge, and was referred to permanent bench-marks.

An inspection of the tidal stations at Auckland, New Plymouth, Wellington, Lyttelton, Dunedin, Bluff, and Westport was made by the Chief Inspector, and levels were taken to connect each of the automatic tide-gauges to a permanent bench-mark.

The work connected with the preparation of the necessary data to enable a tide-table to be prepared for the year 1921 for the ports of Auckland, Wellington, Lyttelton, Dunedin, Bluff, and Westport was commenced, and will be continued during next year. Dr. C. E. Adams, who was previously in charge of this work, having been promoted to the position of Government Astronomer, the control of the tidal survey was entrusted to Mr. W. T. Neill, Chief Inspector of Surveys, whose report appears in an appendix hereto.

MAGNETIC OBSERVATORY.

The work of the Magnetic Observatory at Christchurch has been carried on by Mr. H. F. Skey, B.Sc. Continuous records of the magnetic elements for the year have been obtained from the self-recording instruments at the Observatory, and also at the substation at Amberley. The Milne seismograph No. 16 has been kept in operation. In addition to the routine work of the Observatory meteorological observations have been taken and supplied regularly to the Dominion Meteorologist and to the local newspapers.

In Appendix II is given the hourly values of the magnetic declination and horizontal force, the vector diagrams, and diagrams showing the magnetic curves for the year. In the report by the Chief Inspector of Surveys (Appendix I) will be found further details as to the work of the Observatory.

If it is desired that the work of this Observatory shall be brought up to a proper standard of usefulness it will be necessary to increase the staff, and in any case it is essential that an understudy to the Director (Mr. Skey) should be appointed.

GENERAL.

During the past year the staff, both field and office, suffered severely by reason of deaths, retirements, and enlistments. The roll of honour has had added to it the names of Surveyors H. F. Edgecumbe, H. E. Girdlestone, and P. C. Gannaway; Survey Cadets A. E. R. Bagnall and A. D. Bines; and Draughtsmen T. L. Folley and O. D. Pearce. There also passed away after a long and painful illness, borne with wonderful fortitude, Mr. F. A. Thompson, Chief Surveyor of Nelson; Mr. A. N. Harrop, Chief Draughtsman, Hokitika, died suddenly; Surveyor R. M. McIvor was a victim of the influenza epidemic; and Cadet W. E. Gourley met his death by accident. The retirements were Mr. H. A. Farquhar, who was for many years senior draughtsman in Head Office, and Mr. A. M. Roberts, one of our surveyors. The enlistments comprised two surveyors, one draughtsman, and two draughting cadets. One draughtsman was also dismissed. The Department has thus lost permanently thirteen officers, and temporarily five officers. On the other hand, I am pleased to be able to report that three surveyors, four field cadets, and four draughtsmen have