

INSPECTIONS OF SURVEYS.

Systematic field inspection has been carried on, though not quite as general as could have been wished, owing to the Inspectors having been so much engaged on other pressing work—city standard and settlement surveys, &c.; but in the field checks that have been applied, nearly a hundred in number, enough has been done to show that, with a few exceptions where there is room for improvement, the work of both staff and licensed surveyors in private practice is reliable, and that a very excellent standard has been maintained, which view is supported by the reports of the Chief Surveyors bearing on the character of the surveys made in their several districts, the error in closures, as a rule, being under 2 links to a mile, much of it less than 1 link.

FUTURE OPERATIONS, 1907–8.

The new year commenced with a field staff of 73 surveyors, and a very large amount of work in progress, which will with certainty be supplemented very materially from time to time; and with the prospect of new purchases under the Land for Settlements Act, and heavy calls upon the Department for surveys of Native land in connection with Native Land Boards, &c., there is a likelihood of the necessity for an increase in the number of surveyors so as to cope with it.

Apart from some 1,500 square miles of minor triangulation in hand, and that which will be found necessary to control the surveys to be made, there is in the hands of the surveyors at the present time 533,472 acres for settlement work, 524,612 acres of it being sectional and 8,860 acres “provisional settlement.” Of the former, there are no less than 310 unsurveyed selections, representing 145,496 acres, which are now receiving special attention, so that the applicants may be put in possession. This particular work is being rapidly pushed forward, and a considerable portion of it will shortly be completed.

The staff has also in hand Native Land Court surveys to the extent of 102,694 acres and 362 miles of road survey, besides a considerable amount of miscellaneous work, one of the principal items being the standard and alignment survey of the City of Auckland. There will doubtless be the usual amount of Native Land Court and mining surveys required, which will, as is customary, be placed in the hands of licensed surveyors at schedule rates.

The proposed operations for the coming year as they affect the several land districts are very fully set out in detail in the reports of the respective Chief Surveyors, which appear in the Appendix.

THE MAGNETIC OBSERVATORY.

During the year the Magnetic Observatory has been kept in successful operation, and the usual magnetic, seismological, and meteorological records obtained. The observatory buildings were repainted and necessary repairs executed. Especial interest attaches to seismograms recording the effects in Christchurch of the disastrous San Francisco and Valparaiso earthquakes, and these records are proving of immense value to the science of seismology. Some of the principal seismograms and magnetograms are reproduced in the report. The work of reducing observations has been carried on, and a table of hourly values of magnetic forces for 1902 will be published in June, to be followed by others.

Considerable interest is taken abroad in our observatory-work and the field-work in connection with it, which was so very ably initiated and carried out by Dr. Farr in the first instance, and subsequently satisfactorily continued by his successor, Mr. H. F. Skey, B.Sc., partly, no doubt, owing to the value attachable to it on account of our outlying position. Mr. Heimbrod, who has been appointed by the Carnegie Institution Department of International Research in Terrestrial Magnetism to make magnetic observations in the islands in the equatorial and North Pacific, visited the Christchurch Observatory in July last to compare his magnetic instruments with ours, and the magnetic survey vessel “Galilee” will also call next year for the same purpose on her way to her work in the extreme South Pacific.

Scientific authorities are looking to New Zealand to take her part in the international work of making a complete magnetic survey of the globe now in progress by extending our observations throughout the various outlying islands of the colony. Strong representations have been made for New Zealand to join in this, which is not alone of theoretical importance, but has a practical bearing on navigation, and it is very gratifying to find that the Government is favourably disposed to the carrying out of the project.

BOARD OF EXAMINERS FOR SURVEYORS.

During the preceding twelve months the Board held fourteen meetings, one of which was an inquiry into the case of a licensed surveyor who had executed very faulty work, the result being that his license was suspended for three months.