

SURVEY INSPECTIONS.

Although a greater number of survey inspections have possibly been made this year than last, it is very necessary that closer attention should be given to this essential element in our system. Pressure of settlement work has prevented more being undertaken, but something like a hundred inspections have been made, more or less, over the North and South Islands. These have been taken in hand chiefly by Inspectors J. D. Climie and W. J. Wheeler, whilst the district and senior staff surveyors have also largely assisted as occasion required.

In the great majority of cases the work inspected was of a very high order indeed. In some nine or ten instances, however, the surveys were found to be defective and call for further drastic action. As against this it is satisfactory to note that in the case of the better class of surveyor, fortunately still predominant, although the limit of error is fixed at 4 links to the mile for rural surveys, the average error for the Dominion as reported only amounts to 0.75 link per mile.

GOLD-MINING SURVEY.

The number of claims surveyed during the year was forty-one, representing an area of 1,912 acres. Of this area 206 acres, in four claims, situated in the Otago District, was surveyed by staff surveyors, at an average cost of 4.04s. per acre; whilst the balance of 1,706 acres, comprising 1,592 acres in thirty-four claims, in the Otago District, 68 acres in one claim in the Southland District, and 46 acres in two claims in the Auckland District, was surveyed by licensed surveyors and paid for by applicants.

OPERATIONS FOR 1913-14.

Taking into account those surveys that are actually in progress, those contemplated to be taken in hand, as well as those in prospect, there is every indication that the work of the Department for the coming year will, as usual, be a very busy one.

At the beginning of the new year the number of staff surveyors is seventy-nine, of which fourteen are temporary. In addition to these there are ninety-two contract surveyors, which makes a total of 171 surveyors. The work allocated to these is divided up as follows:—

—				Triangulation.	Settlement.	Roads.	Town.	Native Land.
				Square Miles.	Acres.	Miles.	Acres.	Acres.
Staff ..	..	..	..	4,577.40	696,497	308	12	187,223
Contract	..	..	..	..	27,124	32	2	427,774
				4,577.40	723,621	340	14	614,997

Apart from the foregoing, the cutting-up of estates acquired by the Government from time to time for closer settlement under the Land for Settlements Act will have to be undertaken. There is also the work in connection with the standard survey of the cities and towns that is still being carried on by surveyors specially appointed for the purpose.

The inspections of surveys during the year will have to be carried out with even more vigour than previously.

THE MAGNETIC OBSERVATORY AND MAGNETIC SURVEY.

The activities of the Observatory have been continued during the year in the direction of obtaining the diurnal magnetic curves, the registration of earthquakes, and other observations, and also particularly in the direction of serving as a magnetic base for the late Captain Scott's South Polar Expedition and in co-operating in the magnetic work of Dr. Mawson's Antarctic Expedition.

The equipment of the Observatory has been added to in several ways, notably by the provision of a set of delicate Eschenhagen-Toepfer magnetographs which have been erected at a substation in the Kowai Domain at Amberley for use in co-operation with the expeditions. The Observatory has also received from the British Antarctic Expedition the gift of a valuable set of storage batteries for use in the substation. Weber's apparatus for the determination of the induction coefficients of magnets has also been provided.

Mr. Wright, the physicist of the British Expedition, has emphatically pointed out the importance of the future work of the Observatory in carrying on magnetic observation at the most southerly permanent magnetic station on the globe, because it is to its work that magneticians of past and future expeditions look to enable their observations to be of the fullest and of permanent scientific value. At the same time Mr. Wright has pointed out that the Observatory is at present understaffed. He acknowledges gratefully the great assistance the Observatory has afforded to the expedition.

The detailed report of the Officer in Charge, Mr. H. F. Skey, B.Sc., appears in Appendix VI.