

APPENDICES.

APPENDIX No. 1.

EXTRACTS FROM THE REPORTS OF THE CHIEF SURVEYORS IN CHARGE OF SETTLEMENT OPERATIONS.

AUCKLAND.

Triangulation.—The amount completed in the field and mapped during the past year was 864 square miles, or, in other words, 553,195 acres, at a cost of £1,661 2s. 2d., averaging $\frac{1}{4}$ d. an acre. Of this area 450,000 acres cover the country on the West Coast between Kawhia and the Awakino Block. The triangulation of this area was found to be absolutely necessary so as to govern the extensive surveys of Native Land Court blocks in that part of the King-country. The sides of the triangles average about 6 miles, but in a few cases, where the country is particularly difficult, owing to flat-topped hills covered with forest, we have had to be content with 10-mile sides. In other parts a minor series of from 3 to 4 miles have been obtained.

This country was found to be very rugged and difficult of access; but the District Surveyor, Mr. L. Cussen, assisted at times by Mr. A. Simpson, has accomplished the work rapidly and effectively. Mr. Cussen is deserving of special commendation, as his work this season has been particularly arduous, for conjointly with the work of triangulation he has carried on in an exhaustive manner an examination of the contract surveys in the district, amounting to 700,000 acres.

This triangulation forms another close on to the Taranaki series, which must be considered exceptionally good, considering that the bases of the two series are 170 miles apart in a direct line. The mean difference in the length of the common sides is four-tenths of a link to a mile, and the greatest difference is seven-tenths. The mean difference in bearing, after allowing for convergence, is 7", and the greatest 12".

The remaining trig. work was undertaken for the purpose of connecting sectional surveys at Hohoura, Hukerenui, Otau, and Waingaroa.

The triangulation in progress comprises 353,000 acres, extending from near Morrinsville to the Frith of the Thames, which is being executed under contract by Mr. P. E. Cheal, authorised surveyor.

Mr. W. Cussen, authorised surveyor, also has in hand 99,000 acres at Waihaha, west of Taupo.

Rural Sections.—The work completed in this district during the past year has been very large, for it has been exceeded only three times since the establishment of the department, the last time being in 1883. The total for 1889–90 was 103,672 acres, costing £9,375 10s. 10d., or 1s. 9d. per acre. The maximum area in any one section was 2,000 acres, and the average size of each section was 122 acres. So great has been the demand for land that the staff was quite incapable of making all the surveys required, and outside assistance had to be obtained, and 20,915 acres of "unsurveyed" selections, averaging 510 acres each, were consequently placed in the hands of authorised surveyors, as were also thirty-four applications, comprising 3,444 acres of isolated sections scattered over the district, and distant from the localities where staff surveyors were engaged.

The balance of the 103,672 acres—viz., 79,313 acres—has, with the exception of six prospectors' mineral leases, been executed by the staff. This land has been divided into 766 sections, averaging 122 acres each, and costing 1s. 9d. an acre, which is a very reasonable price. These surveys were scattered about localities where the original surveys are of a very ancient order, and where great care and tact is needed to satisfactorily solve numerous perplexing problems relating thereto. These problems have arisen in some cases from the complete obliteration of old survey-marks, and in other cases because there is no record to refer to excepting the diagrams on the back of old Crown grants, as neither field-books nor maps of the original surveys are now obtainable. It must be gratifying to the surveyors interested to find that so little exception has been taken to their determinations, as only one or two cases out of the multitude have been referred to me by the parties interested.

Town Surveys.—Under this head some 147 sections have been surveyed, at a cost of £107 17s. 4d., the greater portion being the redefining of the Town of Pahi, a very tedious and expensive survey, caused by the almost complete absence of old survey-marks or other reliable data upon which to base the work.

Native Land Court Surveys.—The large extent of country covered by applications from Natives to bring land before the Land Court for the investigation of title has brought about an unprecedented amount of survey. In the King-country alone there were no less than 1,411,000 acres the survey of which has either been executed during the year or is in progress and is nearing completion.

The country covered by these blocks extends from Taumarunui, on the Wanganui, northward for 64 miles to Alexandra, with a breadth of 50 miles, from the West Coast below Kawhia to the Waikato River at Patetere.