

TRIGONOMETRICAL AND TOPOGRAPHICAL SURVEYS.

The output of work under this heading, which, combined, amounts to 451,821 acres, shows a considerable diminution in area when compared with that of last year, and the price per acre is somewhat higher. A considerable portion of this work lay in the East Cape district, where the Native Land Court surveys required its extension. That part of the colony is now complete, so far as this kind of survey is concerned. Mr. Lowe has in hand a large area of country in the Umutoi and other districts lying to the west of the Ruahine Range, which is much wanted for topographical and section work. The country is generally rough and forest clad, and, owing to breaks in his work through having to attend to other duties, the maps of this large area will not be finished till next year. Some extensive trigonometrical and topographical surveys have been commenced in the southern part of Marlborough and Nelson in order to furnish information on which to scheme out the boundaries of runs, which fall in next year. The work is a very necessary and important one, for no proper plans of those parts exist. The country being subject to much snow in the winter, the four survey parties engaged have been withdrawn to lower lands for the present, but will probably complete the whole by the end of next summer. During the progress of the survey Mr. Morgan Carkeek placed a station on the highest peak of Tapuaenuku (Inland Kaikoura Mountains), which is the highest station in the colony, viz., 9,460ft. The work shown in the returns is generally scattered through many districts. A considerable area of Stewart Island is under survey now, but was not completed at the 31st March last. A trigonometrical survey of the Urewera country had been commenced just before the close of the year, and after many difficulties with the Maoris is just on the point of completion.

Some explorations, resulting in the addition of a good deal of topographical work to our maps, have been undertaken on the western side of the Southern Alps during the year, by Messrs. Douglas and Harper, and a report by the latter will be found in the appendix. Mr. Harper does not speak hopefully of finding an available pass over the Southern Alps in the vicinity of Mount Cook. It will be remembered that an exploration was made by Messrs. T. McKenzie, Pillans, and Earnshaw last year, from Lake Manipouri towards the head of Dusky Sound, during which they discovered a river—named Seaforth—which those gentlemen supposed to fall into the sound. It seems probable, from a report sent in by Mr. Henry, the caretaker at Resolution Island, that this will turn out to be the case, as he had found a considerable stream at the head of the sound, which he followed up for some distance, but, through want of appliances, was not able to connect his explorations with those of Mr. McKenzie of the previous year.

An account will be found amongst the appendices of an ascent of Ruapehu Mountain by Mr. Dunning, of the Survey Department, which took place very shortly after the outburst from the crater-lake on the 10th March last. His visit dispels the ideas current at the time of a volcanic outburst having occurred: the eruption appears to have been of a thermal character, though the action was much greater than has ever been known before; nor is there any tradition amongst the Maoris of anything of the kind. The cloud of steam arising from the crater-lake was seen over a considerable portion of the North Island.

The Chief Surveyor of Westland has explored the route from Westland to Canterbury *via* the Whitcombe Pass, with the idea of testing its practicability as a road for cattle-driving and for tourist traffic; but he does not speak hopefully of it as a road for vehicles. He describes the scenery as some of the finest he has ever seen, and it might therefore be advisable to spend sufficient money in making a track that will allow of easy foot traffic through.

SETTLEMENT SURVEYS.

The output of section surveys during the past year has been larger than usual, 3,178 sections, containing 716,615 acres, having been completely surveyed and mapped. A great deal of this is work which was nearly completed in the field last year, but the maps of which could not be finished in time for the returns. The large number of association blocks completed, especially in the Wellington District, go to swell this total. As nearly the whole of the lands surveyed for settlement purposes is in rough forest-clad country, the difficulties the surveyors experience in securing roads on practicable grades are very great; and, as small sections are the rule, the mileage of road is much increased, and with it the burden on the land of forming these roads. The permanent staff of the department is not strong enough to meet all the surveys now required, and therefore, in the last year, as in previous ones, a considerable number of gentlemen have been engaged in addition, some paid by yearly salaries, others at what are termed schedule rates, derived from the fees deposited with applications for unsurveyed lands.

For the coming year we have a large amount of work on hand in several of the districts, in order to prepare lands for selection. By the end of the year the surveys should be sufficiently advanced on the main road from Stratford towards Auckland to extend the chain of settlement which is already gradually progressing from the south end. With the completion of this road in the near future, there are hopes of seeing a considerable development of settlement all along its course. The late acquisitions of land in southern Auckland will in several cases be put under survey for settlement. Part of the Awarua Block, on the North Island Trunk Railway, will also be ready for further selections during the year; an area of over 60,000 acres in that locality is now in hand. In the neighbourhood of Waimarino also a considerable area will be ready for selection. In the South Island the survey of lands for settlement will continue, but it will generally be in smaller areas. In southern Marlborough it is hoped that the falling-in of the runs next year will release a certain amount of land for closer settlement, where it is much wanted.