

SURVEYS.

No special feature characterizes the survey operations of the year, the summary of which appears below, beyond the largely increased area surveyed under the Mining Acts, in consequence of the greater activity in mining which has been a feature of the last two years.

	Area.	Average Cost per Acre.			Total Cost.		
		£	s.	d.	£	s.	d.
Major triangulation	914,000 acres	0	0	0.29	1,105	17	7
Minor triangulation and topography	826,907 "	0	0	0.95	3,265	6	7
Topographical surveys for selection purposes	52,945 "	0	0	5.00	1,095	19	2
Rural and suburban section surveys (1,968 sections)...	414,084 "	0	1	5.28	29,615	3	9
Town section surveys (1,052 sections)	1,515 "	1	6	6.36*	1,395	12	11
Native Land Court surveys (186 divisions)	294,124 "	0	0	3.90	3,581	18	3
Mining surveys (2,706 sections)	206,829 "	0	5	5.64	56,579	6	11
Roads (569.77 miles), per mile ... ..	...	12	0	4.80	6,846	15	6
Miscellaneous surveys, inspection, &c. ... ..	...	...	...	...	8,755	6	11

Total cost of fieldwork for the year £112,241 7 7

The total cost shown above is rather more than £18,000 over the cost of similar work done last year. This is due to the very large increase in the mining surveys, the cost of which is defrayed by deposits lodged with the Receivers of Gold Revenue. Deducting this class of work from the total, we shall find that the cost of the other surveys is much less than for the previous year, as is also the amount of work turned out. The decrease is in the triangulation and section work principally. The average-sized section of rural land surveyed last year was 210 acres, and the cost per acre was 1s. 5.28d., which is very near the average for many years past.

TRIGONOMETRICAL AND TOPOGRAPHICAL SURVEYS.

A very much reduced area of country was triangulated last year as compared with the previous period, when the surveys in Tuhoe-land tended to make the output above the average. This year's work consisted principally in an extension of triangulation over parts of the Thames Peninsula to control mining and road surveys. Mr. Skeet covered about three-quarters of a million acres in the south-east part of the Taranaki District, effecting some very fair closures on to the Wellington and Hawera work. The country he was working in was all forest-clad and broken, so that the cost of $\frac{1}{4}$ d. an acre is reasonable. Mr. Lowe was engaged on the triangulation of the country at the headwaters of the Rangitikei and on the flanks of the Ruapehu Mountain, effecting a junction with the Hawke's Bay work, where a larger difference than usual is shown in the closures, which appears to be due to an initial difference in the standards used when the surveys were controlled by different departments. An extension of Mr. Lowe's work next summer to connect with that resting on the Maketu base will afford the necessary check on this. A large amount of work has been done in Marlborough in connection with the adjustment of the new run boundaries, but only part of it has as yet been finally plotted. The country in which Messrs. F. S. Smith, Buckridge, Carkeek, and Gillies have been working is very mountainous, and considerable difficulties have been experienced in transit. A large amount of topographical information, as the result of these Marlborough surveys, will be forthcoming next year. In the meantime the preliminary sketches served the purposes of the Commissioners who reclassified the runs. Including both major and minor work, an area of 1,740,907 acres was triangulated last year.

EXPLORATIONS.

The result of Mr. Thomas Mackenzie's explorations of 1895-96 made it desirable to clear up some points left in doubt as to the course of rivers flowing into Dusky Sound, at the south-west corner of the Middle Island. To accomplish this, and also to fill in the blanks existing in the maps of that part, Mr. District Surveyor Wilmot was sent out with a party last summer, and the result is that he fully sketched the topography of about 164,000 acres of country lying between Lake Manapouri (the proper name of which is Manawa-popore) on the north and Lake Hauroto (proper name, Hau-roko—the southern equivalent of Hau-rongo) and Dusky Sound on the south. The result of Mr. Wilmot's work shows that Mr. Mackenzie's Seaforth River is identical with the Mackenzie River, Loch Maree being the same as the north-eastern arm of Lake Ida. The chief results of Mr. Wilmot's explorations are: That a carriage-road from Manapouri to Dusky Sound is not practical, though fair foot-tracks could be made; that a good pass exists between Manapouri Lake and the head of Smith Sound, passing over a saddle only 2,100 ft. high, with fair grades obtainable all the way; and that a good practical pass exists for a road from the Hauroto Lake to the head of Dusky Sound.

District Surveyor Brodrick has also explored a route from Lake Ohau, in Canterbury, to the Paringa River, on the West Coast, with a view of ascertaining if a horse-route is practical, but his report is not of a very encouraging nature in that respect, though by a little improvement a foot-track could be made that would open up some interesting country.

Mr. Lowe supplies some interesting but brief notes on the present condition of Ruapehu and Tongariro Mountains, both of which have shown unusual volcanic activity during last year. It is unwise to predict anything connected with volcanic phenomena, but the increased activity of Ruapehu seems to point to considerable changes going on in that mountain, which may result in more violent outbursts.

Reports from these gentlemen will be found in the Appendices.

* Cost per section.