

satisfactorily accomplished; and the area thus added to major triangulation between main dividing range and trig. stations at the gorges of the Wanganui and Waitaha Rivers fully compensated for the loss in area between Weheka and Karangarua Rivers.

MINOR TRIANGULATION.

Area completed, 80,134 acres, at a cost of 2.22d. per acre; consisting of detached pieces, with distances derived by breaking down from major trig. stations.

TOPOGRAPHICAL AND TRIGONOMETRICAL SURVEYS.

Area completed, 93,418 acres, at a cost of 3.05d. per acre, consisting principally of circuit-traverse surveys, &c., within areas over which major triangulation only extended.

RURAL AND SUBURBAN SECTION SURVEYS.

Completed, 19,990 acres, at a cost of 1s. 3½d. per acre. The great difference in the cost of these surveys by different surveyors is due to the system of selection before survey which obtains in West-land. In one case a surveyor has to survey a number of sections contiguous to one another and of comparatively large size: the cost per acre will naturally be small as compared with that of another surveyor whose rural and suburban section surveys are scattered and of less size. It happens that, for the reason stated, in this year's report the greatest cost per acre is returned by the same surveyor whose rural and suburban section survey work ranged lowest in last year's report.

ROADS AND WATER-RACES.

Forty-one and a quarter miles, at £19 9s. 11d. per mile; 40 miles of these (all heavily-timbered country) comprised survey and levelling, preparation of plans, longitudinal and cross sections, preparation of specifications ready for calling for tenders.

PROPOSED OPERATIONS DURING THE YEAR ENDING 30TH JUNE, 1881.

Under this heading special mention need only be made of triangulation, which I purpose extending from Weheka River to base-line in Paringa River Valley. Total area to be covered, 200,000 acres. Closings also with Canterbury triangulation in Rakaia Valley should be effected and distances verified by measuring and connecting with a base-line there.

Arrears of rural and suburban section surveys (57,496 acres, inclusive of endowments) to be brought up to date if possible; and circuit traverses, mining and road surveys, to be attended to as occasion requires.

GERHARD MUELLER,
Chief Surveyor.

OTAGO.

The areas of the different classes of survey done during the past year, their average cost per acre or allotment, and total cost, also cost of this office and the branch offices, are as follows:—

	Area.	Cost.	
Minor triangulation, with topo-		£ s. d.	£ s. d.
graphy	293,218 acres	0 0 1½ per acre	1,905 14 6
Rural section survey	115,276 „	0 1 0¾ „	6,128 2 1
Town allotments (881)	618½ „	0 15 10 per allotmt.	698 19 10
Gold-mining surveys	1,604 „	0 9 7 per acre	770 10 3
Water-races, roads, &c.	130½ miles	2 18 0 per mile	375 3 2
Other works	...	...	931 18 5
Less amount paid during last year	...	...	£10,810 8 3
			485 4 4
Total cost of field work for the year	...	...	£10,325 3 11
Cost of Dunedin and branch offices	...	...	4,597 10 10
Total cost of district for the year	...	...	£14,922 14 9

While, however, this sum of £14,922 14s. 9d. appears as the cost for the year ending 30th June, 1880, of the Survey Department in Otago, it really includes the sum of £2,234 15s. 1d., being the expense that this office has been put to in doing work for other departments or public bodies. For the School Commissioners, a survey of 20,000 acres at Wakaia; for the Clutha River Trust, a survey of 15,300 acres in Kuriwao District; for the Balclutha Athenæum, a survey of 600 acres; for the Milton Corporation, a survey of 2,000 acres; for suburban Municipalities, surveys of 5,244 acres; for the Oamaru Harbour Board Trust, a topographical survey of Run 160; together with a good deal of work for the Land-Tax Office, for County Councils and for other offices, have been done. I would draw attention to this fact in connection with the statement recently made public that the Survey Department is a very expensive one. And, while referring to this matter of expense, perhaps I may be allowed to state that there are officers on the staff well qualified, and who have passed both junior and senior Civil Service examinations, whose salaries are not equal to the wages paid to ordinary artisans. Moreover, the life of a field surveyor in this part of the colony, living in a tent all the year, is a hard and very exposed one, cut off as he usually is from the advantages and comforts of city life, and one which results sooner or later in ailments due to exposure. Taking these things into account, there can be no doubt that, so far as this office is concerned, there are none here overpaid, while some are underpaid. Therefore, for these reasons I do not see very well how the cost per acre of survey could be reduced.

MINOR TRIANGULATION AND TOPOGRAPHY.

Of the 293,218 acres under this heading, 23,043 acres were done by Assistant Surveyor Murray, in the Wakaia and Wart Hill Districts 115,875 acres by Contract Surveyor J. Aitken Connell, in the