

in Maungakaretu, West Waitapu, Mikimiki, Waitotara, and West Mauriceville Districts. The low cost of these forest surveys is very noticeable and creditable to the field officers, every allowance being made for the larger areas of the sections and other adventitious circumstances attending the work of the past season. In addition to this, the staff explored, graded, and located the roads, selected reserves, and mapped an area of over 112,000 acres for selection under "The Land Act, 1887." By this means tracts of country in various localities in this provincial district were prepared for application under safeguards to conserve and protect the public interests and requirements, the chief points of operation being in the Maungakaretu, West Waitapu, Otamakapua (Curl's Clearing), Waitotara-Omahine, Tiraumea-Makuri, Mangaone-Tiraumea, Kopuaranga-Wangaehu, West Mauriceville, and South-eastern Wairarapa Districts.

Besides the foregoing, this office had to do with the survey of 31,000 acres of rural and suburban surveys, which were executed by contract and authorised surveyors, bringing up the total area to 185,454 acres.

The town-section surveys comprised 149 acres by the staff, and 2,218 acres by the contract surveyors, the latter including the special-settlement townships of Parkville, Newman, Scarborough, and Ballance.

Of the Native Land Court surveys, totalling to 60,475 acres, the bulk of the area is made up by the Horowhenua Block.

The only Native land-purchase survey was that of the Mangatainoka subdivisions, a fraction of which—viz., 2,760 acres, is returned for the year.

Notwithstanding the close attention devoted to the settlement surveys, the staff found time to survey 63½ miles of roads and railways, to attend to a multitude of miscellaneous duties, including engineering surveys, preparation of plans and specifications for, and the supervision of, road-works.

It is suggested that the operations next spring should comprise trigonometrical and topographical surveys in the Upper Rangitikei and Mangawhero Districts; settlement surveys in the Upper Whanganui, Waitotara, Otamakapua, Pohangina-Oroua, Mangatainoka, and Puketoi Districts; Native Land Court surveys in Waimarino Block; and, if time permits, to legalisation surveys of roads through Native and freehold lands throughout this provincial district.

The ten staff surveyors' mean error of traverse is under 2 links in the mile. The results for the last four years are as follows:—

|         |     | Number of<br>Chains. | Number of<br>Stations. | Mileage. | Mean Error<br>per Mile. |
|---------|-----|----------------------|------------------------|----------|-------------------------|
| 1887-88 | ... | 95                   | 4,911                  | 266      | 2.0                     |
| 1886-87 | ... | 50                   | 1,804                  | 109      | 1.7                     |
| 1885-86 | ... | 101                  | 2,275                  | 149      | 1.6                     |
| 1884-85 | ... | 80                   | 1,990                  | 116      | 1.9                     |

From this I conclude that the maximum error in the rough bush-country, such as the Wellington staff's operations cover, should be fixed at 4 links in the mile.

The office-work of the year exceeded in amount that for any similar period. The correspondence of the combined offices here comprised the receipt and despatch of 8,232 recorded and unrecorded returns, reports, and letters, exclusive of a vast amount of references and routine business; the book-keeping, &c., connected with the expenditure of £12,859 on staff surveys; and £9,050 on road-works; besides the classification, pricing, and computing, &c. of 150,000 acres of land thrown open for sale. It is but right that I should record my sense of the active and cordial co-operation of the field and office staff in this district, and of the able and zealous manner in which they have attended to their duties.

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#### MARLBOROUGH.

*Minor Triangulation.*—The stations of the subsidiary triangulation in connection with the section surveys have been observed, as in minor triangulation, and permanently marked, and as they are all available for future work I have classed it under the above heading in the general return.

*Topographical and Trigonometrical.*—The country operated upon extends from Jackson's Head to Forsyth Island, and connects the intervening gap between Mr. Goulter's Pelorus Sound and Mr. Wilson's Queen Charlotte Sound triangulations. The windy weather prevailing during the first two weeks, the rough and exposed nature of the coast, and the delays incidental to boating from place to place much retarded the progress of the survey.

The closures are as follow:—

Gore District:—

|                                                            |         |         |                   |
|------------------------------------------------------------|---------|---------|-------------------|
| A-Z, Wilson's determination, Queen Charlotte Sound         | ...     | 25581.6 |                   |
| A-Z, Goulter's determination, from base Takorika Ref.-D    | 25573.2 |         | } 25576.1 (mean.) |
| A-Z, Goulter's determination, from base Onahau-Ref. Onahau | 25579.0 |         |                   |
| Difference 5.5 = 1.7 per mile.                             |         |         |                   |

The triangulation is based on sides Takorika Ref.-D and Onahau-Ref. Onahau (Wilson), and carried from these sides to close on A-Z by a series of small triangles for 40 and 36 miles respectively, generally along the course of the waters of Pelorus Sound, and the coast-line from Forsyth Island to Jackson's Head; the closing may therefore be considered satisfactory, taking into account the smallness of the triangles and the distance from the bases.

*Section Surveys.*—Of the 6,547 acres returned, 1,940 acres, in 12 sections, were surveyed on applications, as requisitions came in from the Land Office. They are mostly in bush-country, and ground-marked front and back. The remaining 4,607 acres (revision), in 61 sections, are the resurvey and location of the balance of the old dispersive surveys alluded to in former reports. They are scattered about in twenty-six different localities, each requiring a special trig. connection,