

*Rural and Suburban Sections.*—16,259 acres at 1s. per acre. As in the preceding year, these surveys include several large Endowment Reserves, which account for the low cost per acre. The return also comprises a number of revision surveys of small sections.

*Gold Mining Surveys.*—144 acres at 6s. 9½d. per acre. The cost of these has been nearly covered by the survey fees received through the Warden's Court.

*Road, Railway and Water Race Surveys.*—Thirty-five miles at £3 18s. 0d., comprising mostly the surveys of roads and tracks already constructed.

*Office Work.*—As it is impossible for Westland surveyors, owing to our wet climate, to do more in the field than simply furnish traverse tabulations and correct working plans, the preparation of the block, survey district, and triangulation maps, devolves upon the office staff. Moreover, the chief draughtsman is also clerk to the Land Board, and much of his time is taken up with that work, and with attending to the public. In spite of this, I am happy to say, the year's work has been fairly well overtaken, and the arrears in block and other maps, which existed last year, have been considerably reduced.

*Proposed Operations during 1886-87.*—Carry the Westland triangulation across Otago boundary, and connect with Martin's Bay Circuit triangulation, and overtake the arrears in settlement surveys, and attend to current mining surveys. There is besides this a considerable amount of work in prospect in connection with the Midland Railway Syndicate, *i.e.*, the surveys of the blocks of land proposed to be set apart in payment for the construction of this railway. On the other hand, also, there will be a brisk demand for survey of the lands comprised in the applications now held in abeyance pending the lifting of the Midland Railway Reservation.

GERHARD MUELLER, Chief Surveyor.

#### CANTERBURY.

*Minor Triangulation and Topography.*—Includes about 101,526 acres done by Mr. Brodrick between the trigonometrical survey in the back Waimakariri country—commenced by Mr. C. W. Adams—and the Puketeraki range, including the Waimakariri Gorge country, which the proposed Midland Railway will traverse. The probability that surveys would have to be undertaken in connection with this line necessitated the early completion of this work, which Mr. Brodrick, therefore, pushed on energetically; but the heavy falls of snow so early in the season made it impossible for him to finish his observations from some of the higher stations, though, practically, he has so nearly completed the work that the new topography and trigonometrical stations, in the vicinity of the railway line, are now available, and a new topographical plan, on a scale of one mile to an inch, is being prepared, which will embrace all the country within fifteen miles on each side of the projected line of railway. Mr. McClure has also completed the observations of 18,200 acres of minor triangulation, being an extension of Mr. C. W. Adams' work in the Coleridge Survey District. This was a necessary preliminary to the survey of the Educational Reserve in that district, now finished; the topographical portion of the work was executed during the survey of the reserve, and the cost, therefore, debited to that survey. Mr. White's trigonometrical survey in the Hewlings and Dalzell Survey Districts—which had not been checked when I reported last year—has been recalculated by Mr. Burns in the office, the base line from which the work is calculated is in the Gladstone District, and the closures are as under:—With Mr. Mitchell's work in the Hakateramea Valley an average error of .75 links per mile; with the Otago minor triangulation in the Kurow and Gala Survey Districts—calculating through a few triangles in the Gibson Survey District executed by Mr. Grant—an average error of 1.43 links per mile: Shewing that the surveyors named have executed the work with commendable accuracy.

*Sectional Surveys.*—During the year just ended I have made every effort to finish the remaining surveys under the Canterbury free selection system, and to this end considerable progress has been made, but many of these sections are in outlying districts and are quite detached from other work, and, in addition to these, there are the re-surveys rendered necessary by the refusal or failure of the purchasers to pay for the excess areas found in the sections after they were surveyed, in accordance with the applications, so that it will take another season to complete all this work. The surveys of the sections purchased on Banks' Peninsula are nearly all finished, about 32 only remain to be done; these I purpose that Mr. Welch shall complete during the winter season, as well as such of the old surveys as will have to be revised, so that during the summer months his services will be available for surveys in other parts of the district. The very detached nature of the sectional surveys executed by Mr. Welch during the past year has rendered his work somewhat costly when submitted to the test of an acreage rate. Mr. Hay who during last summer was also engaged on the Banks' Peninsula surveys, has completed all the sectional and revision surveys required at Little River, and with the exception of three or four sections I think that the titles to all the sections in that locality—a great many of which did not accord with the holdings—can now be rectified. Mr. Hay's services will, therefore, be available for surveys in other parts of the district. Mr. Mathias has been engaged on various surveys and subdivisions of reserves throughout the district, and Mr. McClure has completed the survey of a large Educational Endowment Reserve in the Lake Coleridge district, also the survey of the mining leases at the Wilberforce, and has laid out and permanently marked on the ground a portion of the boundary line between the Canterbury and Westland Districts at Browning's Pass.

*Inspection.*—Press of other work has prevented the Inspector of Surveys from making any field inspections during the year, and, in fact the work of one of the surveyors—which was minor triangulation—needed no inspection; further, all the officers have been on the staff for years, and their work has been tested on so many occasions that their trustworthiness and capability are well established. Still, however, it will be as well to continue the inspections at an early date, and I will give instructions accordingly. The inspector has checked the plans of eight applicants for licenses as authorized surveyors; two have passed and four are coming up for examination in practical mensuration. He has also had charge of the inspection of roads in course of construction from grants authorized to be expended through the Road Boards. His report on the work undertaken during the year, and a general report on the roads opened up, and the area