

tion of survey, and the comparative results of the season's work appear unfavourable to the surveyor compared with other work on a large scale and under more advantageous conditions. To reduce therefore the expense of cutting side lines and back angle-pegs of sections on steep hill-sides fronting the sea and no available land at the back, the side lines have only been partly cut with direction-pegs; the back pegs in those cases may not be required for many years.

Crown Grant and Land Transfer Work.—Under this head 8 deposited survey plans, containing 91 subdivisions, have been examined and passed; plans placed on certificates of title, 79 (in duplicate); Crown grants, 4 (4 copies of each); certificates of title in lieu of Crown grants, 56 (in triplicate), representing 342 marginal plans. This completes the grants of alienated lands in the district to August, 1879. The above surveys were made by authorized surveyors duly licensed, and the same degree of accuracy in the field and neatness in draughting is insisted on as is the practice in work executed by the staff. The defective state and paucity of information in the few existing field-books compel the department to ask for resurvey, in many cases, of lands applied for to be brought under the Act: the Government being responsible for the correctness of the title, this cannot be dispensed with. When once, however, a correct survey has been made, the resurvey of subsequent subdivisions is, I am of opinion, not required, provided sufficient information is afforded by the resurvey to accurately compute the interior subdivisions in area, in angular, and in linear measurements.

Office-work.—Exhibition maps of the provincial district have been completed and placed in show-cases in the public Survey Office. These maps, three in number, drawn to a scale of 1 mile to 1 inch, show all surveyed, leased, and licensed lands, reserves, and lands open for selection throughout the district. The four remaining survey districts were prepared, and tracings made and forwarded to be lithographed, and 17 proof lithos. revised. There are now (including those received last year) 8,940 lithos. on sale at this office: these, with the exception of the District of Gore, complete this district. Proof lithos. of Mr. A. D. Wilson's Wairau, Pelorus, and Kaituna major and minor triangulation sheets (traced last year) have been revised and printed; copies of the major triangulations, and of Wakamarina and Heringa Districts, have been supplied to, and are on sale at, this office. Tracings of Mr. A. D. Wilson's Wairau and Queen Charlotte Sound and Mr. R. F. Goulter's Pelorus Sound triangulation maps are now being proceeded with, to be forwarded to head office for photo-lithography when completed. Major, minor, and topographical maps: Maps partly drawn by Mr. A. D. Wilson of major triangulations, and parts of the Districts of Arapawa, Cloudy Bay, Linkwater, and Gore, have been completed by the office, together with working plans of surveys done for Nelson office. Block plans: Nine of these have been constructed, and the various surveys plotted thereon to a scale of 10 chains to 1 inch. These being complete working plans in themselves will almost entirely do away with the necessity for using the original plots, which can thus be kept in a state of preservation. Surveyors' plans: Sixteen of these have been received during the past year, and have been duly examined and recorded. In addition to the above, the office staff has been employed in the preparation of maps and plans for census, property-tax, postal, and marine purposes, certificates of title, examining deposited plans and diagrams on applications for the Land Transfer Department, pastoral leases and licenses, deferred-payment and mineral licenses, tracings for field surveyors, and attending to the requirements of the Crown Lands Office and the general public.

Summary, and Proposed Operations.—Reviewing the work of the year, it will be seen that 335,680 acres of major, at $\frac{1}{4}$ d. per acre, and 301,000 acres of minor triangulation, principally over rough forest country, together with trigonometrical and topographical maps, at an average of 1.3d. per acre, and 3,890 acres of section-survey, at an average cost of 1s. 7 $\frac{1}{4}$ d. per acre, have been completed; these surveys, owing to the rough and wooded nature of country, involving much laborious bush-cutting. During the current year triangulation will be pushed forward by Mr. Wilson over the lower portion of the Wairau Plain, and the open country extending along the East Coast to the Ure River, and the lower part of the Awatere Valley. It will be necessary to extend this work southwards to the settled districts at the Kaikoura Peninsula. Trigonometrically-fixed points for Land Transfer and other purposes are much required in that district, and a suitable base of verification for the whole series of triangles from Wairau to this point could be selected and measured. Of the arrears of survey, amounting to 3,060 acres, part is now in progress, and the balance will be in hand shortly. When not hindered by more pressing work, I contemplate preparing the Crown-grant record maps of townships in the district, with copies of same for Land Transfer Office record. The compilation of the rural and pastoral lands must be delayed until triangulation is more advanced; the building-up of some 700 detached surveys to a scale of 20 chains to 1 inch, based in most cases on independent magnetic meridian, and no fixed points to control them, becomes almost impossible. The errors of position in one survey has its influence on succeeding ones, increasing with the number of plans to be dealt with, and, although tolerably accurate individually, become unmanageable when attempted to be compiled in large areas. The preparation of these maps must, for the present, be confined to those districts already triangulated, and sufficient ties made thereto, either in progress of section and Land Transfer surveys, or specially made for that purpose.

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