

season one surveyor (Mr. Clayton) has left, and two young surveyors have been transferred from Southland. In a few months time two of the cadets here will have completed their three years of service, and will be available for more responsible work. With your sanction I have informed all the field cadets, that before passing they will be required to spend some time in the roads branch, in order to acquire a practical knowledge of the construction of roads and minor bridges.

S. PERCY SMITH,  
Chief Surveyor.

#### HAWKE'S BAY.

*Trigonometrical Surveys.*—One party under Mr. Hallett has been engaged for six months on the minor triangulation and topographical survey of the tract of country on the coast line between Cape Kidnappers and Black Head, and extending inland from 10 to 20 miles. So far very satisfactory progress has been made: the area finished and mapped is 99,170 acres. In connection with the triangulation, standard traverses have been laid down in the townships on the plains. Mr. Hallett has also carried on a major triangulation over his minor stations, the observations being taken with a good 7-inch instrument. The other small triangulations have been made in conjunction with road surveys. The total area triangulated is 162,210 acres; cost, £714 7s.

*Settlement or Section Surveys.*—The arrears having been worked off, the area completed is less than in former years. The survey into sections of the Tikokeno Native Reserve, on which Mr. Rich was engaged, proved a tiresome and difficult piece of work, giving at least twice the surveying that a similar subdivision in new country would occasion. To illustrate the bother of reconciling old pegs and fences, it will be sufficient to state one case, where, on the boundary of an 80-acre property, there is a difference of 132 links in  $63\frac{1}{2}$  chains, from the Crown granted distances, between the corners as fenced. The owner has made a declaration that he fenced by the pegs. The total area of rural lands sectionized is 19,441 acres; cost, £1,475 6s. 6d.

*Road Surveys.*—Here again Messrs. Laing, Rich, and Irvine complain that the old surveys cause additional labour, and materially increase the cost of their work, through the difficulty they experience in connecting the traverses with the boundaries of sections and native blocks. During the year 99 miles have been surveyed at a cost of £809 2s. 6d.

*Land Transfer Surveys.*—A standard traverse of the town of Napier has been entrusted to Mr. James Rochfort, satisfactory progress is being made. The Borough Council contributes one half of the cost of the survey. Bench marks have been laid down by Mr. Hallett, in the townships of Meanee, Taradale, Clive, Hastings and Havelock, other inland places will be provided for as the triangulations are extended. The area surveyed by licensed surveyors, and examined by the draughtsman, is 18,406 acres, in 460 allotments on 46 maps. A number of land transfer surveys have been checked on the ground.

*Proposed Operations and Work on Hand, 1892–93.*—Triangulation.—The trig and topographical surveys will be continued by Mr. Hallett, over the Kidnapper, Oero, Waimarama and Pourere districts, about 300,000 acres. Assistant surveyors Messrs. Laing and Irvine, will carry on triangulations in connection with the road surveys.

*Section Surveys.*—The area in progress in the field is 19,321 acres, leaving 8,037 acres on hand. Should the upset price of Crown land be reduced to the market value, there will probably be calls on the Department for the survey of an additional 30,000 acres.

*Native Land Court Surveys.*—The causes which were mentioned in last year's report, as operating against the survey of native lands, are still in existence. Under these circumstances the only course to adopt is to leave them alone, nothing the survey department can do is likely to move the opposing claimants into consenting to surveys. The Native Land Court is now engaged on the Waikire-Mohaka confiscated block, particulars concerning the surveys inside this block were reported to you in January last. The area to be surveyed is 237,000 acres in ten blocks. The estimated cost of the surveys is £2,600, survey of blocks one penny an acre, minor triangulation one half penny an acre, roads 180 miles at £7 a mile. If the triangulation block surveys and roads are made at the same time, the cost will be reduced by one-third.

*Roads.*—The mileage on hand for survey is 145 miles, which covers the pressing demands, but new cross or country roads are constantly being asked for by settlers. The moving of survey parties from one district to another to secure the roads before the rights lapse, entails extra expense, which, under existing conditions, cannot be helped. In connection with triangulation, Mr. Hallett will lay out roads in each district. Messrs. Laing and Irvine will be engaged in the Wairoa County on roads through native blocks.

HORACE BAKER, Chief Surveyor.

#### TARANAKI.

*Triangulation.*—Under this head 146,000 acres have been completed at a rate of 2d. per acre. 22,000 acres form the long desired link in the chain of triangulation round the coast, the accomplishment of which has, until this year, been strenuously and successfully resisted by the natives. The close of the two series is at the rate of .3 link per mile. The remaining 123,000 (combined with topography) lies in the interior, between Stratford and the Wanganui River, at Tangarakau. This country is densely wooded, and difficult of access, making the work exceptionally arduous, and the moderate rate (under the circumstances) is due to Mr. H. M. Skeets' untiring energy. There has been no opportunity of verifying this by closures on to other series, or bases, as it is but a portion of a series that will form a junction with the northern one near Waitara; but the closes of polygons evidence careful work, thus, .4, .9, .8 links per mile.

*Settlement Work.*—The return shows 35,572 acres of rural and suburban. This has been subdivided into sections, averaging 89 acres, at a cost of 1s. 7½d. per acre. But this hardly represents the actual state of the operations of this nature; for besides that amount there is a further area of 27,000 acres under survey, 22,000 of which is all but completed. Of the 35,522 acres finished, about one-