

settlement-surveys in Waikawa district, which were urgently required; after which he completed the locating and grading of 19 miles of the Waikawa-Catlin's Road, according to instructions. The consequence is that the settlement surveys in these districts are ahead of the triangulation, which causes delay and inconvenience, as the surveyors have to carry on the true bearing under great difficulties. I have therefore arranged that Mr. Wilmot, of Queenstown, shall leave his district for a few months, and first of all carry in standard bearing from the geodesical station on Forest Range, in the Mokoreta district, to "Black Horn" in Waikawa district, and thence to the heart of the Tautuku district, which will afford the means of checking the bearings in the Taukupu Valley. As the triangulation of bush country is a slow process, I do not expect he will be able to do more than finish the triangulation of the Waikawa district, and perhaps throw a few triangles into Tautuku district before he returns to his own district.

As Mr. Langmuir, District Surveyor for Lawrence, has lately completed the settlement surveys in Tuapeka West and Rankleburn districts, and has only a few spotting surveys to overtake, I believe that he also will be able to spare a few months from his district; and I propose that he shall carry in standard bearing from geodesical Station 1 in Glenomaru district to A in Catlin's district, thence to Wisp Hill and Mount Tautuku (the latter in Rimu district). From this point he could in two sights join on to one of Mr. Wilmot's stations, thus completing the circuit and closing the work. If time permits he could measure a base-line in the vicinity of Tautuku or Taukupu Bays, and extend a few triangles northwards. As Mr. Langmuir has made a speciality of base-line measurements with the steel tape suspended above the ground, and has incurred considerable personal expense in perfecting apparatus for the rapid and accurate measurement of distances with the five- and ten-chain tapes, he is eminently fitted for this work, and I have no doubt will carry it out in a satisfactory manner.

On the topographical map of the Tautuku district, which is attached hereto, I have shown the scheme of triangulation which I propose to extend over the six districts previously mentioned. You will observe that the sides are longer than in ordinary minor triangulation, as they average five or six miles, but I have gone over the whole map carefully with Mr. Strauchon, who has an intimate knowledge of the country, and I think it is the best scheme that can be devised. If required, these triangles can be broken down into smaller ones, but now that the use of the five-chain tape has very greatly increased the accuracy of chained traverses, it has, to a large extent, done away with the necessity which formerly existed of having the reference points closer together.

As the land in the Tautuku Bush is being taken up as fast as it is surveyed, Messrs. Calder and McCurdie will not be able to keep pace with the demand; I therefore propose that Messrs. Edie, Falkiner, and Maitland should be employed in subdividing land for settlement in the Woodland and Tautuku districts until the supply is a little ahead of the demand.

I anticipate from this time forward that survey operations on the goldfields will gradually decline, which will enable the goldfields surveyors to devote more time to settlement-surveys. I was in great hopes that the extension of the standard survey over the City of Dunedin would have been undertaken last summer, as the want of referring-marks over a large portion of the city adds considerably to the cost of the Land Transfer surveys; but on applying to the City Corporation they declined to take any steps in the matter, so nothing was done.

C. W. ADAMS, Chief Surveyor.

SOUTHLAND.

Topographical Survey.—A rough survey, embracing about 82,000 acres of the central portion of Stewart Island, was made by Mr. John Hay for the purpose of ascertaining whether there was any country fit for pastoral pursuits and generally to acquire some knowledge of this hitherto unexplored locality. It was found to be densely wooded, very broken, and at present too inaccessible for ordinary purposes.

Topographical and Trigonometrical Survey.—The same officer completed 72,700 acres of the southern portion of Stewart Island, between Port Pegasus and Port Adventure. This survey, which was commenced for the purpose of controlling the large number of tin-mining claims applied for some two years ago, was carried out under considerable difficulties owing to the rough and densely-wooded nature of the country.

Rural and Suburban.—The work returned under this heading was chiefly for settlement purposes, but includes eighteen saw-mill areas, aggregating 1,892 acres, the cost of which (£186 2s. 6d.) was paid for by the applicants in terms of the regulations. Excluding these saw-mill areas, the area surveyed was 10,343 acres.

Native Land Court Surveys.—Mr. Blaikie surveyed 1,700 acres into eight subdivisions.

Gold-mining Surveys.—Eight applications, totalling 88 acres, were dealt with; three of these, being situated at Coal Island, Preservation Inlet, were somewhat expensive to survey, but the applicants in all cases pay the fees.

Road Surveys.—Mr. J. Strauchon surveyed 11½ miles of the Waikawa-Catlin's Road at the rate of £14 per mile, which, considering the nature of the country and the exceptionally wet season, was very creditable to him. Mr. Hay laid out 16½ miles of the Orepuki-Waiiau line at a cost of £16 per mile; this also in forest country, and somewhat difficult to get at. Mr. Blaikie, who was temporarily employed on the staff, surveyed 11 miles of road in Waikawa district to provide access to the surrounding Crown lands which are proposed to be opened for settlement shortly. The cost was £26 16s. 3d. per mile, which is very high, but the surveyor represents that the country is exceedingly difficult to road, and that he was much hindered by wet weather. Mr. Sharp executed 9¾ miles in the same locality, and for the same purpose, connecting his work with Mr. Blaikie's. This was done at a fixed rate of £15 per mile. Mr. Miller made an engineering survey of 5 miles of Mr. Hay's Orepuki-Waiiau Road for the purpose of getting out plans and specifications for inviting