

Office Work.—At the commencement of this year we were quite overwhelmed by the amount of field-work that came in just before last report. It took some months before any material impression was made on it; but it is nearly all clear now, together with that completed this year. We are now applying ourselves to the arrear work of block sheets, bringing the maps of early surveys on to sheets, and general work that has of necessity been laid aside while the rapid influx of surveyors' field maps continued. There have been 81 surveyors' plans checked; 45 block sheets compiled; 25 plans drawn for Public Works Department and Crown Lands Commissioner; 492 tracings; 1,099 plans placed on Crown grants, 1,216 on certificates of title, 476 on Native leases, and 21 on perpetual leases; and 27 surveyors' maps (land transfer) checked and passed. During the ensuing year I will endeavour to have the whole of the district lithographed on a scale of one mile to an inch. This is work that has been purposely delayed, as, owing to the amount of new work and rapid changes in all parts, the district has been in a state of transition. Lithographs of the triangulation will be prepared, and I hope to be able, in my report next year, to state that in this respect we have nearly all the district brought up to date.

Proposed Future Operations.—Mr. Skeet will extend the triangulation northwards, meeting that of the Auckland District. It will be a work of a very arduous nature, as the country is rugged and covered with forest, moreover it will present many difficulties in the way of getting in supplies. In the settlement-work we have to complete what we have in hand at Mokau, Egmont, and Kaupokonui. Our attention will also be given to preparing lands for sale eastward of Inglewood at Ngatimarau, in the Waitara Valley, a few thousand acres eastward of the Mountain Road near Te Roti, and a further quantity may be inland of Whareroa or Whakamara. The back-pegging of the sold land in the forest between Inglewood and Waimate will engage two surveyors at least, as there are about 130,000 acres to deal with. At present we have three surveyors at the work, the settlers finding the labour.

I have, &c.,
THOS. HUMPHRIES, Chief Surveyor.

ASTRONOMICAL AND GEODESICAL LATITUDES.

Station.	Relative Position of Mount Egmont.	Number of Nights.	Number of Pairs of Stars.	Extreme Range of Nightly Means.	Mean Diff. of each Observation from General Mean.	Probable Error.	Astronomical Latitudes.	Latitude, in Terms of Wellington Astronomical.	Diff. Astro-nomical and Geo-desical.
<i>North Coast.</i>	<i>Bearing. Mls.</i>								
Pukearuhe ..	222° 36½	3	55	0.64	1.33	0.15	38 53 56.78	38 53 45.38	11.50
Marsland Hill, N. Plymouth	180° 16	11	54	1.54	1.17	0.13	39 3 57.85	39 3 47.82	10.03
<i>South Coast.</i>									
Hawera ..	330° 23½	4	60	1.48	1.23	0.13	39 35 41.61	39 35 21.67	19.94
Patea ..	326° 38	3	54	0.17	1.35	0.15	39 45 33.60	39 45 14.33	19.27

WELLINGTON.

Triangulation.—Several members of the staff were employed in extending the trigonometrical surveys over back country, in accordance with your general instructions. Mr. Llewellyn Smith performed this duty in the North-west Wairarapa district, from the summit of the Tararua Ranges to the Tiraumea River, and has thus prepared the way for settlement surveys in an excellent class of country. Mr. J. D. Climie succeeded in covering and mapping nearly a quarter of a million of acres, completing our knowledge of the country at the sources of the Wainuiomata, Hutt, Tauherenikau, and Waiohine Rivers. The other officers who materially aided to advance this important class of survey—the Messrs. John and Joseph R. Annabell—carried it over the district lying inland of the Waitotara coast settlements. The out-turn of work is up to the average area, and has been accomplished at a low cost, the country operated upon being generally of a broken and inaccessible character, rendered intricate and costly to work in by the dense forest growth. A comparison of the duplicate values of common sides of 49 closures made during the year gives a mean discrepancy in distance of 1.1 link per mile, the greatest difference being 2.9 links per mile, and the least 0.0 link per mile. The mean error in the summation of the angles of the triangulation executed during the year is 13", the greatest being 48", and the least 0". The comparison between the meridians of Mt. Cook and Opaki initial points obtained through the minor triangulation gives a mean convergence of 34' 53", the computed convergence is 34' 22", the greatest difference between the computed and observed convergence being 39" and the least 19".

Settlement Surveys.—The small area sectionized was due to there being insufficient funds devoted to road construction, it being considered inadvisable to carry on the sectional pegging in advance of the clearing and forming of the road-lines. Large areas in the Wanganui, Manawatu, Makuri, and Kaiwhata districts were explored, and roads laid off and graded. Twenty miles of lines were levelled over and plans and specifications for contract prepared in a complete inanner by Mr. A. Dundas. Messrs. Northcroft and Ashcroft are credited with the bulk of the area actually pegged off; the former's survey comprised the hills between the Kopuaranga and Wangaehu Rivers, north of Mr. Stuckey's estate; and that of Mr. Ashcroft included the Paratieke and Karewarewa Blocks, in the Mangawhero district. The whole area is covered with bush. As a rule the back pegs of sections were inserted. The low cost of Mr. Ashcroft's work is worthy of note. A full comparison of traverse circuit and trig. check closures have been scheduled, for your information, which will be found to indicate the requisite attention to precision, having regard to expedition and economy.

Native Land Court Surveys.—In explanation of the limited area defined, account must be taken of the operations of former years which enabled the Native Land Courts to determine the ownership of the tribal lands throughout and adjacent to the settled districts in this part of the North Island.