

REPORT

BY

MR. HEALE

ON THE SUBJECT OF

SURVEYS UNDER THE NATIVE LANDS ACT.

(In continuation of Papers Presented 6th August, 1867.)

PRESENTED TO BOTH HOUSES OF THE GENERAL ASSEMBLY BY COMMAND OF
HIS EXCELLENCY.

WELLINGTON.

—
1867.

REPORT BY MR. HEALE ON THE SUBJECT OF SURVEYS UNDER THE NATIVE LANDS ACT.

Copy of a Letter from MR. HEALE to the Honourable J. C. RICHMOND.

SIR,—

Inspector of Surveys Department, Auckland, 2nd August, 1867.

At the earliest moment after my return from the North, I hasten in obedience to the desire expressed in the Honourable Mr. Stafford's letter of 15th May, to the Chief Judge of the Native Lands Court, to lay before you a Report on the whole subject of Surveys under the Native Lands Act, and on the requirements which I conceive to be indispensable for placing them on a safe and creditable footing.

It is impossible to make the existing condition of this question clear without giving somewhat the history of the past.

It must be borne in mind that from the foundation of the Colony down to the period of the passing of the Native Lands Act, the only territory acquired by the Government consisted of the scattered blocks which were from time to time purchased from the Natives, and that over the remainder the rights even of sovereignty were practically so slight, that the carrying any system of survey over it was quite out of the question.

The institution of the surveys on the basis of a triangulation in the ordinary way having been consequently impracticable, and the blocks acquired having been generally separated by large intervals of difficult country, none of the methods available for securing the placing them truly in relation to one another, or even to obtain correspondence of meridian, were attempted; and the system of survey fallen into, rather than deliberately adopted, was that lowest one of all: of boundary traverse by magnetic meridian, unchecked and unconnected by any geodetic or astronomical work whatever.

This mode of survey is notoriously and admittedly incapable of securing the delineation of even a few square miles of country with tolerable accuracy, and is quite inapplicable to the determination of the geography of an extensive territory. The inaccuracies necessarily resulting from it have been greatly increased by the mode in which it has been carried out: the supervision which has been exercised over the surveyors has always been slight, and sometimes has been absolutely wanting, and the plan which was adopted, of paying the surveyors by contract prices for the mechanical work only of cutting and traversing lines, has completely excluded all reference to geodetic principles, and has prevented intelligent surveyors from using the facilities which the local circumstances often afford, of economizing the expensive work of line cutting, by processes far more exact as well as more rapid and compendious, and by making it the interest and business of the surveyor to cut as many lines as possible in the least possible space and time, has increased the cost of surveying in the same degree that it has excluded accuracy.

The extent to which all geodetic principles have been lost sight of in the Province of Auckland is curiously proved by the large map of the middle and north part of the Province, prepared at the Waste Lands Office, and handsomely lithographed in England.

This map subtends upwards of three degrees of latitude and nearly three degrees of longitude; the coast line extends all round the area delineated, and the latitude and longitude of numerous positions along it had been accurately determined by the marine surveyors: yet the map is not projected, no notice is taken of latitudes and longitudes, and the meridians drawn on the two sheets of which it is composed, differ by upwards of nine degrees.

It is impossible on such a map to set out positions by latitude and longitude with accuracy, but the relative places of those points as laid down on the map, differ from the truth by distances amounting to several miles: thence it has come to pass, that estates which actually abut on each other, are placed on the map fully four miles apart.

The existence of gross discrepancies in the surveys has long been notorious, and the necessity of recurring, sooner or later, to a sound geodetic system, has been pretty universally recognized; but as long as the bulk of the lands alienated by the Natives consisted of detached blocks, amidst a wilderness which could not be surveyed, even by way of *reconnaissance*, no great practical evil was felt, beyond the enormous expense involved by periphery survey: and some excuse for the continuance of a system so vicious was derived from the difficulty which the Maori lands presented in the way of establishing a better one.

The operation of the Native Lands Act soon brought prominently into view the grossest of the defects of the old system, while it has to a great extent cut away the only excuse for its maintenance.

As far as I have yet had the opportunity of observing, the old jealousy of the Natives of any survey work being carried over their lands has been removed, as regards the erection of trigonometrical stations: which, in the North at least, they clearly understand are points only to assist and guide the surveys they may have made of their lands; and since the owner of a piece of land any where, may at any time have his land surveyed and require a Crown Grant for it, the condition has become that of a country open to free selection, for the safe exercise of which it will, I presume, be admitted that a triangulation is absolutely necessary.

For the first time, then, since the foundation of the Colony, the Government is now in a position to define the geography of this part of its territory with precision. The doing this has been recognized as one of its first duties by every civilized Government in the world: and a special necessity for it here arises from the Acts of the Legislature giving every Native the right to claim a grant from the Crown, which must for its own safety and credit ascertain the position and boundary of the land granted.

Were all the surveys now to begin afresh, with present necessities and present facilities, no one can doubt but that it would be the duty of the Government to institute them on a sound trigonometrical system; and it can hardly be maintained that this moral obligation is lessened by the fact that, partly owing to the force of circumstances, but certainly in part by the neglect of preceding Governments, the surveys hitherto executed are so erroneous that new ones cannot be made to abut upon them without the perpetuation and multiplication of the grossest errors.

In the first operation of the Native Lands Act, its full effect in converting a wilderness, studded with a few spots only over which civilization was free to extend, into a uniform territory available for colonization in all its parts, was not readily perceived. It was assumed that the plan which had been pursued for twenty-five years might still be persevered in.

Surveys were made by compass meridian, and without any external connection. When the plans had been cursorily examined, to see that they had no self-contradiction on the face of them, and that no trespass or overlap appeared to have been committed on lands already held in ownership by the Province or the Colonists, they were passed, and Crown Grants for the land issued.

In this way several hundreds of detached maps speedily accumulated; no record maps existed, on which they could be delineated; the position of very many of them was quite unknown; and a state of extreme confusion was evidently likely to ensue, unless prompt means were taken to reduce the surveying and recording to order and system.

Happily, a lull in the activity of the Court afforded time to adopt a temporary remedy before the arrears had become unmanageable.

The palliative adopted was to make recom compilations of all existing maps into districts; all passed surveys were entered on these, many of them, it is true, provisionally only, their position not being yet accurately defined; and the rule is now established, that no map is passed for certificate, until it has been properly delineated on the district map.

This plan, carefully followed up, is sufficient to prevent any immediate mischief. In mapping the land, it is at once seen what estate it abuts upon or approaches, and this enables the office to send defective maps back to the surveyor, with proper instructions, if he has failed to make the closures which are necessary.

Still it is but a makeshift, and can only serve temporarily. It continually happens that pieces of land abut on opposite sides on two or more old surveys, and that the interstice is either far too large or too small; and as we are wholly unaware of the real direction of the error, it is impossible to rectify it. Any attempt to place the district maps together would be hopeless, since all the discrepancies arising from the "building up" from detached points accumulates at the outskirts.

In the central portion of the Province of Auckland, near Lake Taupo, the country is chiefly formed of open and undulating plains, and is being taken up on leases in large blocks. To carry into such a country the system of periphery traverse, would be merely to subject the Native owners to a very heavy tax, from which no advantage whatever could be derived, either to the Government or to the individuals. Such surveys being wholly unconnected, and with uncertain meridians, would be useless, and the expense of effecting them would be several times greater than to carry a thoroughly good triangulation over the country.

I think, then, that it will be admitted, from all these considerations, that within the Province of Auckland an extreme necessity has arisen for a complete system of triangulation, at the same time that the reasons or excuses for its not having been hitherto attempted have to a great extent disappeared.

The same necessity and opportunity are also arising between the Provinces.

Those Provinces which at the time of their institution were quite isolated, have now become truly conterminal; extensive tracts of land have been bought or leased, overstepping the boundaries, and no detached or Provincial triangulation can now be satisfactory, except in so far as it is suited to form part of a general system.

I do not propose now to go into any technical description of the mode of triangulation which I conceive to be applicable to this country. I shall very shortly have to report to you on the commencement I have just made between the Bay of Islands and Hokianga; when I propose to enter into the subject in detail. It is sufficient for me to show that a triangulation is of the first necessity, that it is quite practicable over a great part of the Island, especially in those parts in which it is most immediately required; and to urge that such a work to be trustworthy, and therefore really economical, and to be creditable to the Colony, and likely to meet the ends which will hereafter be required from it, must be based on sound geodetic principles, and be carried out in minute accordance with plans previously laid down for its execution; and above all that it must be general, or at least be suited, ultimately, though probably after some lapse of time, to embrace the whole Island.

Should the views I have suggested be adopted, it will be desirable as early as possible to look into the state and progress of the triangulations which have been and are now being carried on in the other Provinces of the North Island, and to endeavour, if necessary, to induce the adoption of any modification which would increase their fitness to be ultimately closed into a general system.

For the present, however, I apprehend that it will be sufficient for me to consider the carrying on the work in the ensuing summer over the country north of Auckland, and south of it, as far as the condition of the Native question may permit. To push this work with due vigour, will require two complete parties, which should consist each of a Geodetic Surveyor, with two junior assistants, each capable of acting separately, and conducting the subordinate part of the work with his own party of Native labourers.

SURVEYS UNDER THE NATIVE LANDS ACT.

5 A.—No. 10B.

The cost of this for one year, including the office establishment, as shown in the accompanying schedule, will amount to £5000.

SCHEDULE.

<i>Office Staff:—</i>							
Inspector performing other duties	...	...	...	...	£500	0	0
Chief Draftsman	...	...	...	...	250	0	0
Assistant ditto	...	...	...	...	200	0	0
Stationery, instruments, &c.	...	...	...	...	100	0	0
						<hr/>	£1,050 0 0
<i>Trigonometrical Staff:—</i> Two parties, each consisting of							
One Surveyor at	...	£8	0	0	per week		
Two Assistant ditto	...	8	0	0	„		
Nine Natives	...	13	10	0	„		
Contingencies	...	5	10	0	„		
		<hr/>	£35	0	0	= for a year £3,500 0 0	
Instruments ordered	...	...	...	...	£200	0	0
Repairs made in the Colony	...	...	...	...	100	0	0
Contingencies	...	...	...	...	200	0	0
						<hr/>	£4,000 0 0
						<hr/>	£5,050 0 0

It would be presumptuous in me to enter at all into the question of how the burden of this considerable outlay should be borne, but I may be permitted to observe that whether this work is looked upon as an effort to set the Geography and Topography of the whole country on a sound basis, or whether it is considered specially as a means of forwarding the operation of the Native Lands Court, it is one of a truly National character. In the former point of view it will ultimately effect the value of every estate in the country, and lay the foundation for great future facilities in defining properties, planning public works, forming districts for political and municipal purposes, and for carrying out the far-seeing operations with a view to the future, which characterize the Government of a civilized people.

In the latter point of view it will materially assist in carrying out an operation by which the tenure of two-thirds of the country will be altered, a policy which, if as successful as it promises to be, may peaceably solve questions which have resisted the utmost exertions of the Colony, and which it would be pitiable to embarrass or endanger by any undue pressure on the Native Land Claimants.

The Native land owner is already placed at a very great disadvantage in getting his land surveyed: rarely possessing ready money, he is obliged to find some one to survey his land on credit, and so often pays double what it cost a European; and now that from causes which the Natives cannot appreciate, the value of land has sunk to the lowest point, there is a danger if the burthens upon them are materially increased, of a feeling of discouragement arising which may bring the system now so popular into a discredit from which it may never recover.

At the very short notice I have had for the preparation of the present Report, I am unable to suggest any plan on which the cost of inspection of surveys or of triangulation, or of that proportion of it which is in justice chargeable to the present land claimants, can be recovered by a system of fees, nor is it within my province to do so; but it is impossible to look at the subject without seeing how very unequal the costs of surveying Native lands are, and how very differently they will be effected by a triangulation, if carried out. To connect small blocks of forest land in the North, in Kaipara for instance, with a trigonometrical station, will often be difficult and costly, and it will be looked on by the surveyor, and therefore by the Natives, as merely so much additional labour thrown on them; but in the open plains of the interior, the completion of the trigonometrical surveys would render private survey unnecessary, except in the case of a boundary line or two.

Still all discretionary charges are obviously objectionable, and in the present unsettled condition of the value of land, I can see no mode of fixing a charge which might not be far too light in some cases and yet such as to be prohibitive in others; possibly just those it might be desirable to encourage, namely, lands intended to be held by individual Native owners, or to be leased at low rentals as runs.

I have, &c.,
THEOPH. HEALE.

The Honorable the Native Minister, Wellington.

