

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.