

APPENDIX K.

NORTH ISLAND MAIN TRUNK RAILWAY.

The ASSISTANT ENGINEER-IN-CHIEF to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Public Works Office, 27th June, 1889.

I have the honour to inform you that the survey of the Taranaki-Auckland line has been completed, and I beg to submit the following report thereon. As this line comes into competition with the Central Route it is necessary to refer to both. I attach a map showing the two routes, with an alternative to the Taranaki route *via* Waitara. The lengths of railway to be constructed, and distances between important places on all the routes, are given on the map, and the Native lands recently purchased and under negotiation are shown in distinctive colours.

STATE OF SURVEYS.

As showing the extent of our information on the various lines, it is desirable to describe the state of the surveys:—

Central Route.—The distance between the Upper Mokau and Rangatira, the present termini of the North Island Main Trunk Railway, is 163½ miles. Of this length, 26½ miles at the north and 43 miles at the south are definitely located and surveyed. This leaves 94 miles of which there are only trial-surveys of more or less exactness. There is one trial-section right through, and several trial-lines over the rough ground between Murimutu and Waimarino, and again between Waimarino and the Upper Wanganui Valley. The information as regards these places is not, however, complete: further investigation of an extensive character must take place before an exact estimate can be made.

Taranaki Routes.—The Taranaki routes—from Eltham Junction to Ongarue Junction, 103¾ miles, with the alternative from Waitara to Tangarakau, 47 miles—have been carefully surveyed throughout. Although only preliminary surveys, they are more in detail than usual. The lines have been pegged out at short intervals, gradients have been run and cross-sections taken where necessary, and a traverse has been made of each line for its entire length. The information is therefore very complete, and the estimates based thereon may be accepted with considerable confidence.

GENERAL DESCRIPTION OF COUNTRY.

The character and capabilities of the country traversed by the various routes were fully investigated by a Parliamentary Committee in 1884. It is therefore unnecessary to go minutely into the subject here, but in order that the report may be complete in itself I shall give the leading facts.

Central Route.—Commencing at Rangatira, the railway soon enters into a very broken country, which continues well into the Hautapu valley, a distance of thirty-nine miles from Marton Junction. Then it gradually opens out into flatter and more rounded ranges, till at Turangarere the hills become downs. The country on both sides of the Rangitikei is generally too rough for cultivation, but in ascending the Hautapu—more particularly on the eastern side—it opens out into valleys and easy slopes where farms could be planted. The block bounded by the Hautapu and Rangitikei, and extending northwards fifteen or twenty miles, is probably the best settlement-country on the whole line between Rangatira and Upper Mokau. The country from Turangarere to the Wangaehu watershed is open and undulating, and the land generally good. Some of it rises to an altitude of 2,600ft., but I do not know that this will be a bar to settlement. The country is covered with tussock, and otherwise resembles in appearance some of the upland districts in the Middle Island.

From Rangatira to the head of the Hautapu all the country is limestone of various kinds—soft argillaceous limestone or papa at the lower end, and hard crystalline varieties in the Upper Hautapu.

From Rangatira to Paengaroa—a distance of thirty-two miles—the country is nearly all covered with forest. The timber is chiefly rimu and kahikatea, with a large sprinkling of totara and maire: there is a considerable quantity of totara in clumps in the Rangitikei valley, and very large isolated trees all up the Hautapu.

After leaving the Hautapu valley the railway enters the Murimutu Plain, which extends to Waione, a point about two miles beyond Kerioi, or eighty miles from Marton. This plain is open, and covered with scant tussocky grass; the soil being mostly pumice-sand.

The bush is again entered at Waione, and, with the exception of about six miles on the Waimarino Plain and at other places, it continues all the way to the upper Wanganui valley, a distance of sixty miles. Although presenting considerable difficulties to railway-construction, the configuration of this country is no barrier to settlement. There is a considerable quantity of flat land, and the slopes are generally easy. The bed-rock is papa, overlying which there are large deposits of volcanic matter of various kinds, from basalt to clay and sand. The surface is vegetable matter and soil of varying thickness up to 18in., which seems quite capable of growing ordinary crops. Generally the soil is deeper and the land much better on the western side of Ruapehu than on the east. The more recent ejecta from the mountain have apparently been carried eastward, as in the case of the Tarawera eruption. The country rises from an altitude of 2,000ft. near Ohakune, to 2,680ft. at Waimarino, then falls to 565ft. at Taumararui, in the upper Wanganui valley.

The bush between Murimutu and the upper Wanganui is of mixed varieties, rimu predominating. There is a fine belt of silver beech between Waione and Ohakune, and the rimu trees near the