

mountain Ruapehu there is a table-terrace land some fourteen miles long, from Raitihi to Manganui-a-te-Ao. This table-land is generally poor, but heavily timbered with rimu and kaikawakaroa, and some white pine, maire, and totara; but the country and timber below it are good to the Wanganui River. A part of this table-land would be traversed by the railway, and the crossings of two of the affluents of the Manganui-a-te-Ao, called the Manganui-a-te-Ao and Mangatote, are bad, being wide, deep depressions, one 100ft. and the latter 200ft. deep; but I ascertained, by going up these rivers a short distance, that they could be crossed without any extraordinary engineering work.

From Mangatote, 119 miles, to 121 miles, where the forest ends, the soil is good; and from there to about 124 miles are the Waimarino Plains. These are not better than the Murimotu: the growth is tussock-grass. The Natives have a number of horses and cattle, but they are generally poor. This is a central point from whence branch lines could be taken eastwards to Rotoaira, Tokaano, and Tapuaeharuru in Taupo, all of which are large hot-spring areas, the nearest (Rotoaira) being only fifteen miles, and Tokaano about thirty miles, distant from this railway route. It is also a good place for a branch line on the west side to the Wanganui River about Retaruka and Ohura, and from thence to Lower Mokau and the west coast. This is the highest part of the line, being about 2,600ft.

From 126 miles to the Matakerepuru Falls the line is through forest, and follows down the Piopiotea River (which is a branch of the Wanganui), on terrace land varying from 40ft. to 100ft. above the river. There are a few side gullies coming in, with very small watercourses, only requiring culverts; but the gullies die out and can be avoided by going back a little. I do not feel sure this is the best line, although it appeared to me to be so from the Hahungatahi, which I ascended for the purpose of choosing a direction. The country all falls towards Taumaranui, and it would be advisable to try another line skirting the rear of Kirikau Block before finally locating the line. (I may here again refer to the grades, which on the section in several places show as heavy, while on the ground they appear the reverse, and can only ascribe it to the difficulty of judging the distances. I am sure very satisfactory grades can be got all through.) The land and timber are both of good quality, and the land generally marl; the timber tawa, rimu, pines, maire, and totara—trees very fine for sawing purposes; in fact (excepting, of course, the open land) saw-mills might be profitably located nearly all through.

At 138 miles, on the Piopiotea River, occurs the Matakerepuru Fall, probably not previously seen by any European, and by very few Natives. It is an object of great interest: the whole river, some 90ft. wide, shoots over a precipice 60ft. deep, springing clear from its bed in an unbroken transparent arch, through which the ferns and growth beneath can be seen as through a window; on one side there is a sort of cave hollowed in the *papa* rock, which is coloured red and yellow with iron oxide; the banks of the river above and below are lined with trees, which overhang the river cliffs, and add to its beauty. Below the fall the river falls rapidly, and swirls and eddies in heavy rapids for about 10 chains; while above it for a long distance the water is still, deep, and lake-like. Below this fall for ten miles the country is almost a dead flat, covered with timber (except a natural clearing called Ohongo, which is grass and scrub)—totara, tawa, rimu, maire, matai, and kahikatea; most of the bush is good: in some parts pumice shows, but even there the timber and soil appear good.

From 148 miles to within four miles of Taumaranui the line would be sometimes graded and sometimes on terraces till it reached the level of the Wanganui River; no rock would be met with, and the side slopes are light.

From 155 to 159 miles the line would run along the flat of the Wanganui River, crossing the latter about a mile and a half above Taumaranui. This bridge would be about 300ft. long, but the bottom is small shingle, and pile-driving would be easy: the river is fordable on horseback. The land about Taumaranui is good, though some pumice shows in it, and it is good for ten miles above. There are many Native settlements in the neighbourhood. Below Taumaranui, on the east side of the Wanganui River, there is an extensive flat called Makokomiko, some fifteen miles long, extending to Kirikau, said by the Natives to be of good quality. There is other good land towards Tuhua: in this direction, if anywhere, gold will be found.

From Taumaranui (159 miles) nearly to its confluence with the Maramataha the country is open fern, good in the valleys, poor on the hillsides, and good again on the higher lands, which are generally bush. The line follows up the River Ongaruhe, crossing, about seven miles up, at 165 miles, with a bridge about 150ft. long; the banks are level and low, and the bottom shingle. There are seven Native cultivations and five occupied pas, and the Natives possess and use ploughs and horses.

From 179 miles to Waimika (184 miles) the country is poor, and the river passes through a short gorge. At the Waimika there is an extensive plain lying between the Ongaruhe and Waimika, but the land is exceedingly poor. I followed a considerable distance up each of these rivers with a view of finding a better route, but each has formidable gorges a few miles up, and leads off in an unfavourable direction.

At 184 miles there is an extensive Native pa, with large cultivations of good land up on the hills some 300ft. or 400ft. From the Waimika the line goes up a small creek called Ohinemoa: fern for about two miles up, and good land. At the head of this creek, which is bush, there is a watershed, which will have to be pierced with a tunnel some 20 chains long. There are two ways of overcoming the hill: one by grading up from 179 miles, mostly over open hill land and terraces, in which some of the cutting would be rather heavy, and soft sandstone rock would be met with occasionally; the other, to which I give the preference, would be to follow up the Ohinemoa at a lower level, and pierce the hill with a tunnel into a branch of the Mokau called Te Mangapihi. The work on this line would be much lighter, but two bridges over the Ongaruhe would be necessary, one of 70ft. and the other of 120ft.

From this point to Te Awamutu (some seventy miles) the country may be called all good, and, with the exception of about four miles, is all open.