

ing the road from the main road to the township to be about £520, including the Wairiki Bridge and three small bridges. A suitable road to convey machinery from the Air-line Road to the Prospectors' site would cost about £75; and a road from the Wairiki Bridge to the Caledonian machine-site about £150. Total, £745.

*Schedule of Distances and Estimated Cost of Road.*—Air-line Road: Main road to township (9 miles), £520; Wairiki Bridge to Caledonian (1½ miles), £150; table-land to Prospectors (1½ miles), £75: total, £745. Waiotu Valley: Main road to Prospectors' site (7½ miles), £1,100; Tangiapakura Spur to township (3½ miles), £300: total, £1,400.

*Remarks.*—The Air-line Road is, in my opinion, the most suitable for opening up Puhipuhi, and will be the chief thoroughfare to the mines and gumfields. The Native owner of the land near the main road informed me he is willing to dedicate the road through his land. If the road is made through to the township and wherever the bush is liable to be burnt provision might be made to cause all timber and scrub cut down to be burnt off before the summer months, in order to prevent the spread of fire if it should catch accidentally.

I have, &c.,

GEO. WILSON, Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

Mr. G. WILSON, Inspector of Mines, to the UNDER-SECRETARY, Mines Department.

SIR,—

Kawakawa, 6th August, 1890.

I have the honour to forward the following report on road from Taumarere to Puhipuhi via Parson's farm, which I have inspected in compliance with your instructions by telegram of the 28th ultimo.

*Description of Route.*—From Taumarere to Tirohanga Gorge the road will be chiefly over flat and rolling table-land—a dray with a load of 15cwt. was recently taken along the present track from Taumarere to the Gorge—and I am of opinion that, for a moderate expenditure in clearing scrub and forming side-cuttings, all this part of the road could be made available for heavy traffic during dry weather. The length of this section is about seven miles.

*Tirohanga Gorge.*—This is a gully about from 250ft. to 300ft. in depth, with steep sides—the creek has a shingle bottom and very little fall at the present crossing—and, in order to form a road, side-cutting for the whole distance and a substantial bridge will be required. There are plenty of totara trees growing convenient to the site of the bridge. The length of this section is about a mile and a half.

*Tirohanga to Parson's Farm.*—The first portion of the road is up a range, chiefly open hilly country, and a considerable amount of side-cutting will be required to get round the hill. There is then a gradual descent over the same character of country to a flat, where the bush has been burnt. This part will require to be cleared for the road, but very little cutting or formation need be done for the present. From this flat down to Parson's the road will be through bush, which will have to be felled and side-cuttings made to give an easy grade. The length of this section is about three miles and a half.

*Parson's Farm to Puhipuhi Township.*—A bridge will be required to cross the Waiotu River; and the bush cleared and side-cuttings made to connect with Galbraith's Waiotu Valley Road (referred to in my report of the 20th July last) on the Tangiapakura Spur, near the dead kauri tree. The remainder of the distance to the township will be along Galbraith's Road, the whole of which will require the bush to be cleared and side-cuttings made. The length of this section is about three miles and a half.

*Gradients.*—The gradients in all cases of ascending and descending will be about 1 in 15. Mr. Triphook has laid off a grade of 1 in 16 at the Tirohanga Gorge.

*Side-cutting.*—The width of the cutting to be from 10ft. to 15ft. where required, but in many places 8ft. or 9ft. would do.

*Estimated Cost.*—Taumarere to Tirohanga (7 miles), £120; Tirohanga Gorge (1½ miles), £180; Tirohanga to Parson's (3 miles), £250; Parson's to Puhipuhi (3½ miles), £320; Tirohanga Bridge, £80; Waiotu Bridge, £250: total (15 miles) cost, £1,200.

*Remarks.*—The road from Taumarere to Puhipuhi Township will connect with the Air-line Road, and open a good thoroughfare through Puhipuhi Forest. Machinery if once landed at the township, could be conveyed from thence to either the Tangiapakura or Wairiki Creeks on branch roads to be made where required. A considerable portion of the road is over flat land; and it is my opinion that it is undesirable to break the surface where such can be avoided. The scrub and undergrowth might be cleared, but no formation at present attempted unless absolutely necessary. It would, however, be desirable to confine the greater portion of the side-cuttings to a width of 8ft. or 9ft., to enable a dray or wagon to get along, and not at present to undertake the formation of a wide and expensive road until traffic increases and a wider road is required. The bush should be felled a chain in width and, if possible, burnt before the ground gets thoroughly dry.

I have, &c.

GEO. WILSON, Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

MEMORANDUM by Mr. W. H. HALES, District Engineer, for the ENGINEER IN CHIEF *re* Line of Proposed Tramway from Puhipuhi Forest to Kamo.

In reply to your memorandum P.W. 89, 1617, No. 83/950, of the 22nd October, 1889, I have to report as follows:—

A careful examination of the routes shown on plan No. 16427 sent therewith, and also on the ground itself, has been made, and the most suitable line has been surveyed, and the plans of it and