

1913.

NEW ZEALAND.

REPORTS ON RAILWAY ROUTES FROM WELLINGTON TO WAIRARAPA

MADE BY SURVEYORS YEARS AGO.

Return to an Order of the House of Representatives dated the 9th July, 1913.

Ordered, "That there be laid before this House the reports made years ago by surveyors of the various suggested railway routes from Wellington to the Wairarapa."—(Dr. A. K. NEWMAN.)

WELLINGTON-NAPIER RAILWAY: REPORTS ON ALTERNATIVE ROUTES FOR RIMUTAKA DEVIATION.

(APPENDIX J, PUBLIC WORKS STATEMENT, 1899.)

WELLINGTON-NAPIER RAILWAY: REPORT ON ALTERNATIVE ROUTES FOR DEVIATION OF
LINE IN ORDER TO AVOID THE FELL INCLINE OVER THE RIMUTAKA, BY MR. P. S. HAY,
M.A., M.INST.C.E.

MR. P. S. HAY to the ENGINEER-IN-CHIEF.

SIR,—

Public Works Office, Wellington, 19th August, 1899.

I have the honour to make the following report on the various possible routes for the proposed deviation of the railway-line over the Rimutaka, to avoid the steep gradients and sharp curvature between the Upper Hutt and the Summit Station and the Fell Incline. This report is based on the results of Mr. J. H. Dobson's surveys and explorations, and on my own inspections of the country through which the proposed deviations via the Coach-road Saddle and the Tauherenikau would pass.

To avoid the Fell Incline a trial line was surveyed by Mr. Dobson, starting from a point about three-quarters of a mile beyond Kaitoke Station and ending at Featherston. This line follows the coach-road gullies; it has been levelled and cross-sections have been taken, so that the quantities and estimates may be taken as correct, except in so far as they might be altered by minor deviations of the finally located line. From about the two-mile peg on the above line a traverse has been run via the Tauherenikau River to Woodside Station, but only aneroid levels have as yet been taken along this route to determine the heights of the principal points.

To avoid the 1-in-35 grades and numerous 5-chain curves on the existing line from the Upper Hutt to Kaitoke, a trial traverse with aneroid levels has been run from the Upper Hutt Station along the slopes of the Hutt Valley and through a low saddle near Kaitoke into the Pakuratahi Valley, to join the Road Saddle and Tauherenikau routes near the Pakuratahi River; this is No. 1 line on the plan. A variation of this line, No. 2 on plan, has been run to get flatter grades and a crossing of Mungaroa Valley without a viaduct. These lines do not utilize any portion of the existing line. To ascertain if any portions of the existing line could be advantageously used, No. 3 trial line was run, and a variation of it, No. 4. The ruling gradient adopted in running all these lines was 1 in 60, and the sharpest curve allowed for was 10 chains radius. The gorge of the Hutt River was also examined to ascertain if it was possible to take the line via the Hutt River and Pakuratahi River to join the Tauherenikau or Road Saddle routes.

In addition to the above, Mr. Dobson examined a suggested route starting from the existing line at Ladle Bend and crossing the Rimutaka by Lucena's Pass. This he reports impracticable. He also examined a suggested route starting from the Mungaroa flats, and thence through the lowest country to Cross Creek and Pigeon Bush; this he reports impracticable, except with a five-miles tunnel. He also examined the proposed route via the Wainuiomata, Orongorongo, and Wairongomai, and confirmed Mr. Rochfort's condemnation of it. The length of line to be constructed by this route would not be less than thirty-four miles, of which over twenty miles would be on 1-in-40 gradient. It is evidently not a promising route, though it is urged in his favour that it would be better for settlement than any of the other routes, and would not cut off any of the country now served by the railway.

The trial line from Kaitoke to Featherston via the Road Saddle shows that a line can be got of the following general character: Grades—Kaitoke to the Summit Tunnel, 1 in 55; sharpest curve on this gradient, 10 chains radius; Summit level, 995 ft. above datum (present Summit 1,244 ft. above datum); length of Summit Tunnel, 143 chains; grade in tunnel, 1 in 60, falling