

TABLE I.—PHYSICAL CHARACTERISTICS OF ALTERNATIVE LINES.

Name of Line.	Length of East Approach.	Maximum Grade, East Approach.	Length of West Approach.	Maximum Grade, West Approach.	Total Length of Line.	Percentage curved.	Total Curvature.	Rise and Fall.	Elevation of Grade at Summit.	Length of Summit Tunnel.	Grade in Summit Tunnel.
	M. ch.		M. ch.		M. ch.		Degrees.	Ft.	Ft.	Ft.	Ft.
A	0 37	1 in 40	8 6	1 in 37	8 43	20	372	1,199	2,392	31,837	1 in 37
B	1 68	1 in 50	7 76	1 in 32	9 64	20	754	1,431	2,508	20,828	1 in 32
C	2 57	1 in 30	7 68	1 in 25	10 45	28	950	1,932	2,754	13,662	1 in 28
C1	2 57	1 in 30	8 11	1 in 25	10 69	34	1,223	1,932	2,754	13,662	1 in 28
D	2 29	1 in 40	7 75	1 in 28	10 24	34	1,216	1,663	2,624	15,378	1 in 33
D1	2 29	1 in 40	8 19	1 in 28	10 48	38	1,442	1,663	2,624	15,378	1 in 33
D2	2 29	1 in 40	8 5	1 in 28	10 34	35	1,264	1,663	2,624	15,378	1 in 33
E	2 78	1 in 26	7 50	1 in 22	10 48	24	953	2,155	2,870	5,786	1 in 55
F	3 33	1 in 24	7 13	1 in 20	10 46	24	953	2,415	3,000	None	...

TABLE II.—ECONOMIC COMPARISON OF ALTERNATIVE LINES.

Name of Line.	Total Length of Line.	Maximum Grade.	Length of Summit Tunnel.	Train-miles, Otira to Bealey.			Cost of Working, Otira to Bealey.			Cost of Construction.	Interest on cost at 3½ per Cent.	Total Annual Charges.		
				500 Trains each Way per Annum.	700 Trains each Way per Annum.	1,000 Trains each Way per Annum.	500 Trains each Way per Annum.	700 Trains each Way per Annum.	1,000 Trains each Way per Annum.			500 Trains each Way per Annum.	700 Trains each Way per Annum.	1,000 Trains each Way per Annum.
	M. ch.		Ft.	£	£	£	£	£	£	£	£	£	£	£
A	8 43	1 in 37	31,837	8,540	11,956	17,080	4,560	5,450	6,785	566,000	19,810	24,370	25,260	26,595
B	9 64	1 in 32	20,328	9,800	13,720	19,600	5,008	6,028	7,550	480,000	16,800	21,808	22,828	24,350
C	10 45	1 in 25	13,662	10,560	14,784	21,120	5,260	6,475	8,298	480,000	16,800	22,060	23,275	25,098
C1	10 69	1 in 25	13,662	10,850	15,204	21,720	5,338	6,576	8,435	493,000	17,255	22,593	23,831	25,690
D	10 48	1 in 28	15,378	10,300	14,420	20,600	5,792	6,930	8,633	493,000	17,220	23,012	24,150	25,853
D1	10 48	1 in 28	15,378	10,600	14,840	21,200	5,864	7,020	8,753	498,000	17,430	23,294	24,450	26,183
D2	10 34	1 in 28	15,378	10,420	14,588	20,840	5,811	6,953	8,664	473,000	16,555	22,366	23,508	25,219
E	10 48	1 in 22	5,788	10,600	14,840	21,200	6,805	8,098	10,035	435,000	15,225	22,030	23,323	25,260
F	10 46	1 in 20	None	10,570	14,798	21,140	7,092	8,473	10,544	400,000	14,000	21,092	22,473	24,544

Working-cost does not include artificial ventilation of summit tunnels for lines C, C2, E, and F, it not being required.