



NEW ZEALAND
GOVERNMENT GAZETTE,
(PROVINCE OF NELSON.)

Published by Authority.

All Notifications which appear in this Gazette, with any Official Signature thereunto annexed, are to be considered as Official Communications made to those Persons to whom they may relate, and are to be obeyed accordingly.

ALFRED GREENFIELD, Provincial Secretary.

VOL. XV.

NELSON, FRIDAY, DECEMBER 13, 1867.

No. 51.

Superintendent's Office,
Nelson, 12th December, 1867.

THE SUPERINTENDENT directs the publication of the following documents for general information.

ALFRED GREENFIELD,
Provincial Secretary.

Provincial Engineer's Office,
Nelson, December 10th, 1867.

SIR,—I have the honor to forward, enclosed, for the information of his Honor the Superintendent, Mr. A. D. DOBSON'S REPORT, with sketches, plans, and sections, on the KARAMEA, BATON, and WANGAPEKA DISTRICTS.

The Report appears to be very full and clear, and will, I doubt not, enable the Superintendent to decide at once on the measures to be taken for opening up the Karamea District.

I have the honor to be, Sir,
Your Obedient Servant,

JOHN BLACKETT,
Provincial Engineer.

The Provincial Secretary,
Nelson.

To the PROVINCIAL ENGINEER, Nelson.

SIR—I have the honour to inform you that, in accordance with your instructions, I have examined the various proposed routes to the Karamea, and beg to forward my report on the exploration.

It will be observed that I have given all the distances to the Karamea Bend, that being the point which, to the early explorers of the country, it seemed desirable to reach, as being a central and well-marked point.

The altitudes given in the following report have been observed with an aneroid barometer, carefully corrected for temperature, &c.

The lengths given are the *surface measurements*, which I have chained throughout; the gradients, therefore, will be much steeper than would be found by dividing the distances by the altitudes. The *true gradients* would, of course, be found by dividing the *horizontal distances* by the heights, but as these can only be ascertained approximately, I have thought it better to give the distances as measured.

Where actual slopes are given, they are measured with a clinometer.

Together with this report I also forward a table of distances and altitudes, a map of the district examined, and sections of the proposed lines.

I shall now proceed to describe the various routes in the order in which I examined them.

DUTTON'S TRACK.

Commencing at the junction of the Graham with the Motueka River, the track follows the banks of the Graham for 2 miles, when it reaches the foot of the Loadstone Mountain. It then goes up an undulating spur, which in many places is extremely precipitous, the slope of the spur being in many places 1 in 2, and 1 in 3. The track continues to ascend, with slight dips here and there, to 6 miles 60 chains from the commencement, at which point an elevation of 4,396 feet is attained; then it sidles round the mountain, on a level, for 40 chains; then down a steep spur into a branch of Flora's Creek, at 8 miles 10 chains, along the banks of which it runs, crossing Flora's Creek (one of the heads of the Takaka), at 8 miles 32 chains (height above sea level 3,092 feet); then up a spur from Mount Arthur, it crosses the summit of the spur at 9 miles 30 chains (height 4,110 feet); then down into Horseshoe Creek, which it reaches at 9 miles 70 chains (height 3,255 feet); then up a flat alongside the creek, to 10 miles 40 chains; then up a steep hillside, to 11 miles 20 chains, the saddle between Mount Arthur and Gordon's Pyramid (height 4,400 feet); then along the western slopes of Mount Arthur, above the bush, to 12 miles 32 chains; then down a steep, rocky spur, to 12 miles 65 chains; then through rough, broken, limestone rocks and holes, to 13 miles 37 chains, to the Ponds (height 3,192 feet). The Ponds lie in a patch of open ground, about 150 acres in extent, covered with snow grass, and apparently very swampy.

The track then goes up a rising table-land to the commencement of Salisbury Open, at 14 miles 41 chains. Salisbury Open is situated on a high, undulating tableland, which extends from Mount Arthur, on the east, to Mount Peel, on the west. Its being devoid of bush is most probably attributable to its altitude, the greater part of it being over 4,000 feet above the sea. The surface is covered with snow-grass and stunted shrubs.

The track then runs across a part of Salisbury Open, to 15 miles; then down an easy descent, to 15 miles 36 chains, when the bush is entered again; then down a very precipitous and rocky spur to the Peel (the north branch of the Leslie), at 16 miles 70 chains. This spur is in many places very precipitous, and, in 1 mile 44 chains, 2,754 feet are descended. The track then goes along the banks of the Peel, which it crosses three times, to the Leslie, 19 miles; then down the north bank of the Leslie, to the Karamea Bend, 24 miles.

The north bank of the Leslie is a very bad one to make a road on, as many rocky points run out into the river, forming steep cliffs, which would entail a considerable amount of blasting.

SUMMARY.—It would be almost impossible to make a horse track by this line, not only from the precipitous rises and falls, but also from the great elevation maintained from the 6th to the 15th mile. The track might be blocked with snow almost at any time of the year except the summer months.

The line of this track has been badly selected; the ascent should have commenced at the foot of the Sugar Loaf, on the south bank of the Graham, and carried on a regular gradient, up the slopes of the Sugar Loaf, and the spur which connects it with the main range to the saddle, at the head of Flora's Creek (height, 3,192 feet), then down the same creek, sidling round the various streams which descend from Gordon's Pyramid, then up the stream which flows from the Ponds, which are situated on the lowest point of the watershed between Mount Peel and Mount Arthur (height, 3,912 feet); then

down the Leslie to the Karamea Bend. The most difficult part of this line would be from the Ponds to the junction of the Peel and Leslie, as both these streams lie at the bottom of deep ravines: but I have no doubt that a very fair line would be obtained by careful search, although a good deal of rock side-cutting would be necessary.

From the junction of the Peel and Leslie to the Bend the track would follow down the south bank of the Leslie on flat river terraces.

The distance from the Motueka river to the Karamea Bend would be about 25 miles by this line, and might probably cost about £50 per mile, taken all through, which is equal to £1,250. The highest point is at the Ponds (3,912 feet); the snow would probably stop horse traffic here occasionally during the winter months, but would not lie very long.

JONES'S TRACK.

Describing this track as I travelled it, it commences at the Karamea Bend, and follows the south bank of the Leslie on river flats for 2 miles 65 chains, then up a steep gorge between limestone cliffs, the track winding about amongst large rocks, to 3 miles 60 chains (height, 2,196 feet, having risen 1,243 feet in a mile), then up an easy ascent, to 4 miles 50 chains, then up to 5 miles, where the spur dies out, then up the wide hill-side, which is very steep and precipitous, to 5 miles 20 chains, where the bush is left behind (height, 4,534 feet), then up the steep bare mountain side to the summit, at 5 miles 30 chains (height, 4,881 feet). From the top of the limestone gorge, just described, to the summit, distance 1 mile 40 chains 2,685 feet are ascended.

The track then goes straight down the east side of the mountain, and reaches a flat covered with spear grass and high scrub at 6 miles 10 chains (height, 3,691 feet), having fallen 1,190 feet in 60 chains, the upper 20 chains of this being exceedingly precipitous.

At 7 miles, the bush is entered; from this point to 12 miles 40 chains the track follows down the banks of the Baton River, occasionally crossing; the hills run down abruptly into the stream, making the ground very steep and sidling for travelling. From 12 miles 40 chains, to 15 miles, is flat hard ground, mostly open. At the fifteenth mile, Taylor's Accommodation house is reached.

SUMMARY.—This line offers no facilities for a horse track, its only recommendation is its extreme shortness; to make a horse road, several miles of zigzag side-cutting in rock would be required on both sides of the mountain, especially on the western side; and from the great elevation attained (4,881 feet) the track would frequently be blocked with snow during the winter months. But this is by far the best line for a foot track; £150 spent in altering the present track, and making a few rock side-cuttings, would make a very fair foot track for a mountainous country.

SNOW'S TRACK BY HOUGH'S SADDLE.

This track, cut by Messrs. Snow and Mackay, commences at the junction of the Skeet with the Baton (close by Taylor's), and follows the valley of the Skeet, occasionally crossing the stream, the track running on flat river terraces to 4 miles 60 chains; here side-cutting commences. At 6 miles 19 chains, the track begins to rise rapidly, but with good gradients, to 7 miles 32 chains (height, 2,665 feet), to the foot of a spur which leads to the saddle, then up a steep spur for 8 chains, rising 216 feet in that distance, then along an undulating spur to 7 miles 73 chains (height, 3,096 feet), then up a steep spur to the saddle, at 8 miles 45 chains (height, 4,290 feet) having risen 1,194 feet in 52 chains.

The track crosses the bare mountain ridge at the southern base of a rugged peak, which rises about 300 feet above it; on the southward, the main ridge rises gradually, and attains an altitude of 4,826 feet at Knuckle Peak, 70 chains from the track, and falls rapidly to a wooded saddle about 1 mile 40 chains from where the track crosses the mountain. This latter saddle, although 300 feet lower than the one over which the track is taken, is very difficult to approach on both sides, and was therefore on that account not selected by Mr. Snow.

On leaving the summit the track descends the hill-side, falling 190 feet in 15 chains, where it reaches the top of a narrow spur, which stands out like a buttress into the Crow valley, the ridge of this spur, which is undulating, narrow, and rocky, is then followed to 9 miles 8 chains (height, 3,948 feet), the spur then descends very rapidly to 9 miles 50 chains (height, 2,889 feet), falling 1,059 feet in 42 chains; the descent continues, the track reaching the flat of the Crow Valley at 10 miles (height, 2,270 feet), falling 619 feet in 30 chains. This descent into the Crow is one of the worst features in this line, the measured distance down the spur, from the top to the bottom, is 72 chains, but this is the surface measurement chained along the track, which zig-zags in many places on account of the steepness, and the descent is 1,678 feet, the mean rise of this spur, ascertained by a number of observations with a clinometer, is 1 foot in 2 feet 4 inches.

The track then follows down the valley of the Crow, occasionally crossing the river to secure the best ground; narrow flats occur in many places for the first 2 miles (or 12 from the commencement); between this and 22 miles 40 chains, a distance of 10 miles 40 chains, the valley is very narrow and rocky, the river in several places running in a deep gutter cut in the rocks only a few feet wide; cliffs border the river in many places, rising from 150 feet to 200 feet above the water level; the track either winds round these cliffs on the debris at their base, or zig-zags over them, the travelling in these places being extremely laborious.

Bare escarpments are visible in places, where acres of soil covered with timber have slid off the smooth rocky precipitous mountain sides into the river.

After reaching 22 miles 40 chains, the track runs through flat bush, for the greater part of the way, to 26 miles 23 chains, where it joins Rochfort's track at the junction of the Crow and Karamea, 5 miles 54 chains from the Bend, making the total length 32 miles, all but 3 chains. The last-mentioned 5 miles 54 chains is mostly on flat bush land, but there are several rocky points, making a road round which would be expensive.

SUMMARY.—From its great length and height, this line of road would not only be expensive to make but also to keep in repair. The only means of accomplishing the descent into the Crow, would be by long zig-zag side-cuttings down the mountain side; the ascent on the east side would have also to be zig-zags, these cuttings would be principally in rock, and would add about 3 miles on to the present length, making a total of 35 miles. Also, from its height, the mountain ridge on both sides of the saddle would frequently be covered with snow, so as to stop horse-traffic during the winter. The country through which this line would go, being very similar to that northward of Mount Arthur, through which I propose the track by Flora's Creek saddle to run (previously described) I estimate it at the same sum per mile taken throughout—35 miles, at £50 per mile, £1,750.

ROCHFORD'S TRACK.

Describing this track as I travelled it, it commences at the Karamea Bend, and runs on the east bank of the river, crossing the Crow at 5 miles 54 chains. As before mentioned, this part of the road would require a good deal of work, on account of several rocky points.

From the Crow to the 18th mile, the track runs for the most part over flat bush country and river terraces; from this point to the 20th mile, a good deal of side-cutting in rock would be required. The track then goes along narrow stony flats on the bank of the river to 22 miles the foot of the saddle (height, 3,099 feet), then up a steep side-cutting to 22 miles 20 chains, the top of the saddle (height, 3,489 feet) having risen 390 feet in 20 chains; then down the east side to 23 miles 60 chains, the eastern foot of the saddle (height, 2,432 feet), having fallen 1,057 feet in 1 mile 40 chains; then down the valley of the Wangapeka over flat bush land and river terraces, to 28 miles; from this point to the end of the present horse-road, distance 2 miles, would be chiefly rock side-cutting. Total length of present track, 30 miles.

SUMMARY.—This line is the only one suitable for making a dray-road; good gradients can be obtained, as the mountains at the heads of the Karamea and Wangapeka are much lower; neither are they so rocky as those more to the northward.

In laying out a road by this line, I should not propose to cross the saddle chosen for the present track, but one considerably to the northward of it, cutting off a large bend; this saddle would be about 3,600 feet high. This proposed line would shorten the present road by 6 miles, which would leave the number of miles to be made at 24 miles, 12 miles of which being through flat bush country, would not be very costly.

Estimate for horse-road, with gradients suitable for dray-road:—

Twelve miles flat ground, £30 per mile	360
Twelve miles rough ground, £50 per mile	600
Total	£960

GENERAL REMARKS ON THE MOUNT ARTHUR RANGE, AND COMPARISON OF TRACKS.

The range of mountains, of which Mount Arthur is the highest peak, commences at Separation Point, and runs in a south-westerly direction for a distance of 52 miles to the head of the Wangapeka. Here the range becomes much lower and broken; it then rises again, forming a mass of mountains lying between the River Buller and the heads of the Wangapeka.

The Wangapeka and other streams falling into the Motueka River, drain the eastern, and the Karamea and Takaka drain the western slopes of the Mount Arthur range.

There is no break or deep gap in this range from one end to the other. The Takaka road crosses it at an elevation of about 3,000 feet. There is a slight depression, forming a saddle, at the head of Flora's Creek; height, 3,192 feet. Neither Jones's nor Hough's lines cross the mountains by what can be called passes, in the usual sense of the word. They both really cross the mountain-ridge, only 500 feet or 600 feet below their adjoining principal peaks. Lines may be taken over the mountain in several places at a considerably lower level than Hough's, but they offer no advantages which are not possessed in a superior degree by the Wangapeka route.

From the foregoing data, it will be seen that the Wangapeka and the Flora's Creek lines are the two shortest, lowest, best, and cheapest. They also each have the advantage of opening up new ground all the way.

The Wangapeka line would throw open the whole valley of the Upper Karamea and the head of the Mokihinui, and the road can easily be laid out on such gradients that it may, when required, be widened into a dray-road. This is also the *only* line by which a dray-road can be made, except at an enormous expense.

The Flora's Creek line could only be made into a horse-track, and would be a long drag for loaded horses; but it throws open all the heads of the Takaka, and Salisbury Open, a district long reported to be auriferous, but almost inaccessible at present. By looking at the accompanying map, it will be seen that, by crossing the range anywhere much to the southward of Jones's line, the Crow will be reached, and not the Karamea. Therefore a road by Hough's line, or any other line, into the head of the Crow, will be high, long, and difficult, the length being caused by the great bend the Crow makes to the southward. The mountains also bordering the Crow are very high and rugged, precluding the possibility of any available short cut to the Karamea Bend.

As a present means of supplying the existing wants of the Karamea, and pending the establishment of any more permanent means of communication with the Karamea, I should recommend that the present foot-track by Jones's line be materially improved and altered, from the Karamea Bend to the flat at the east side of the saddle, and that from this flat a good packing-track be made to Taylor's, at the Baton River; improving also the road below this, to and down the Motueka River. From Taylor's to the flat the distance is 8 miles, of which 2 miles are at present available for horse-traffic. That leaves 6 miles to be made, which I estimate at £40 per mile—£240. To make a good foot-track over the range, putting up stout snow-poles at short distances over the bare part, would cost about £50; making a total of £290.

This would supply the present wants of the diggers, who are mostly working on the Leslie and near the Karamea Bend. A man could then go easily from the Bend over the range for stores, and back in a day. Under any circumstances this line will always be preferred by diggers and other travellers on foot, by reason of the quick means of communication it furnishes between the Baton and Karamea Rivers. During the past winter men have continually used this line, even when covered with snow.

In conclusion, I may state that it gives me great pleasure in testifying to the correctness of the reports and sketches which have been given to the Government of the Mount Arthur range and surrounding districts, by Messrs. Skeet, Rochfort, O'Connor, and Groom.

The above exploration occupied nearly six weeks, during which time we experienced the most unfavourable weather.

I have the honour to remain,
Your most obedient servant,

A. DUDLEY DOBSON,
Assistant Provincial Engineer.

Engineer's Office, Nelson,
December 2, 1867.

TABLE OF ALTITUDES.

DUTTON'S TRACK.		Feet above Sea.
Mouth of Graham		200
Foot of Loadstone Spur		456
Loadstone Mount (highest point track rises on the Loadstone)		4,396
Flora's Creek		3,092
Mount Arthur Spur		4,110
Horse-shoe Creek		3,255
Saddle at Gordon's Pyramid		4,400
Mount Arthur (highest point of track)		4,639
The Ponds		3,912
Salisbury Open		4,484
Peel River		1,430
Karamea Bend		800
Flora's Creek Saddle		3,192

JONES' TRACK.

Foot of Limestone Gorge		953
Top		2,196
Edge of Bush, west side of ridge		4,534
Jones's Saddle		4,881
Snow Grass Flat		3,691
Edge of Bush, east side of ridge		3,291
Taylor's (Baton River)		700

HOUGH'S TRACK.

Foot of spur, 7 miles 32 chains		2,665
Saddle		4,290
Top of spur, 9 miles 8 chains		3,948
Western foot of mountain, 10 miles		2,270
Mouth of Crow		1,123
Knuckle Peak, south of Saddle		4,826

ROCHFORD'S TRACK.

West foot of saddle, 22 miles from Karamea Bend		3,099
Saddle		3,489
East foot of saddle		2,432
Wangapeka forks		1,860
Rolling River		1,044
Wangapeka Plain		800

TABLE OF DISTANCES.

Name of Track.	Number of Miles of present Walking Track.	Number of Miles to be formed if made a Horse Road.	Greatest Elevation.	Number of Miles from Motueka to Karamea Bend.	Number of Miles from Nelson to Karamea Bend.
Dutton's	24	...	4,639	41	
Flora's Creek Line	...	25	3,912	42	
Jones'	15	...	4,881	47	57
Hough's	32	35	4,290	67	77
Rochfort's	30	24	3,489	...	88