



TELEGRAPH CREEK, STIKINE RIVER.

its rise in a regular glade-like pass at an elevation of 3,100 above the river level (at crossing), & distant 27 miles therefrom; thence down the easy pine-clad slope of Arthur Creek to the South Tahltan & on over flats & light rolling ground to Koketsi divide, 19 miles from the pass or 46 from the crossings. The grades on this section, particularly on the Stikine slope, will be severe, reaching in places to 4% to ensure moderate construction cost.

The 2nd route follows the right slope of the Stikine with a gradual rise over better ground than to be had on the Telegraph Creek route, to the eastern or tongue-like end of the range terminating at the confluence of the Tahltans and Stikine rivers, & where the mountains gradually fall away to high rolling timbered hills. The ascent to this point, some 1,200 ft., would be reached in 30 miles, over moderately inexpensive country with gradients which need not exceed 2%.

From this point the route continues along the right slope of the Tahltans, in places in steep & rocky ground, with only such light undulations in the grade line as local circumstances may economically demand, to near the Forks of the Sh. Tahltan where the stream should be crossed & the line continued on easy clay & gravel slopes & benches to the Koketsi divide, or to the same point as described for the 1st or Telegraph Creek route, a total distance of 59 miles from the Stikine crossing & 12 miles longer than by Telegraph Creek.

I would here point out that route no. 2 although longer has several advantages over the other to which due consideration should be given, viz.: the gradients are lighter, so that with the same engine power in about equal time heavier tonnage could be transported to Koketsi. The work of construction would be less per mile. It would approach 12 miles nearer the Dease Lake Disk & Tooya river basin than that via Telegraph Creek, therefore more favorably situated for future extension eastward to Dease Lake, or to meet a line from that district, or the sea coast, via the Naas or Skeena River valleys.

It is also possible that a route from here to Teslin Lake via the Tooya River is to be found, & as it may be inquired why that country was not fully examined, I would state that the time or means at my disposal was not sufficient to enable me to cover personally, or by assistants available, more country than was examined.

thence descending (200 ft.) slightly for 8 miles through a broken, lumpy & irregular looking valley, bounded on the north by the escarpment & slope of Level Mountain, to the head of the Doo-de-dontooya river at Me-a-de-le Lake, a total distance of 14 miles.

The route from the Koketsi divide is through an open valley as far as seen by me (2 miles), but I am informed by an assistant who examined it that towards the head it is a series of canyons & broken, irregular masses of rock intermixed with the gravel on slopes; however, by commencing to rise with a heavy gradient some distance back on the last section it is probable that a line may be obtained above the "canyon" portion of the walls, which are not usually very high in this section. The summit once reached, the descent (as viewed by me from an elevation of 4,000 ft. at Egnalls Mountains) would be made through a section of country apparently composed of broken & disconnected hills as above described.

No. 2, or the alternative route, would be 15 miles from Koketsi to the head of the east branch of Egnalls Creek, with a rise of 1,400 ft., thence in 7 miles a descent of, say 150 ft. to Me-a-de-le Lake, in all 22 miles from Koketsi, or 8 miles longer than no. 1 by the North Fork.

It is evident that with a distance of 15 miles in which to make the rise of 1,400 ft. a much easier grade can be had than by way of the North Fork, but I cannot advise such a course unless the whole of route no. 2 be adopted, when it would be an

At Koketsi (1,700 ft. above the Stikine crossing) there apparently occurs another choice of route for a short distance, & to which I again refer as nos. 1 & 2. No. 1 extends from Koketsi up the valley of the north fork of the Tahltan River to its head, distant, say 6 miles, in Level Mountain (a vast basaltic & gravel covered plateau extending north to the Nahlin River 70 miles) & at an altitude of about 1,600 ft. above

object to incur the expenditure for additional mileage for the sake of obtaining easier gradients; again, within the limits of this part of the route are several alternative plans.

1st. To keep on easy ground, to the right of the Tahltan to Koketsi divide, thence along the southern margin of the lakes of same name, & crossing the stream at Profile rock, & there commencing an ascent of 9 miles along the side hill to the summit of Egnalls Creek, with a 3% grade, easy curvature & comparatively light work, thence from this point descending to Me-a-de-le Lake over the ground before referred to. 2nd. A line should be tried through a high depression north of Profile rock by commencing the ascent east of the North Fork crossing. 3rd. A minute examination should be made up Quartz Creek ravine, as it appears open to the north.

Only by an instrumental survey, with measured distances, can the proper route in this vicinity be determined, & the base of operations should be established by running up the North Fork & over the summit to Me-a-de-le Lake & returning by Egnalls Creek & the Koketsi to place of beginning.

From Me-a-de-le Lake, for the next 118 miles a line is common to both routes, & extends northward in a very direct course for 57 miles to the Nahlin river over flats, glades & gentle slopes in the valley near the base of the western shed of Level Mountain with a small percentage of curvature, easy gradients & light work. For a considerable proportion of the distance the country is timbered with a small growth of spruce, pine, scrub willow & alder, the spruce, however, predominating. The surface of the ground through the whole valley is covered with a deep growth of moss, & in places brush & coarse tufted grass. The soil consists of light clay, sand & gravel, with drift boulders & occasional masses of basalt & limestone.

The 7 or 8 streams passing over are small & unimportant, a short pile trestle being sufficient for each, the names of the largest being the Doo-de-dontooya, Massazooya-Kaka, Tooya & Ka-hak.

The Nahlin River where crossed on the trail is at least 150 x 6, with 1% fall at flood, & runs in a valley, & is about 1,200 feet wide, 50 ft. deep, with 1 1-2 to 1 slope, but where the line is projected, at a point some 4 miles above the trail crossing, it runs in a much contracted V-shaped trough about 100 deep & 350 wide.



FIRST CANYON ON STIKINE RIVER ABOVE TELEGRAPH CREEK.