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JULIENNE RAILWAY
RECONNAISSANCE
~~PRELIMINARY~~ SURVEY

1953

23 G (146)

CONFIDENTIAL

236(146)

July 22, 1963

To: W. H. R.

From: D. K.

Subject: Julienne Railway - Reconnaissance Survey

As you will see from the enclosed report, I have covered the route and given my findings. All flags are in place and we are ready any time for photography. We are also ready for the tellurometer crew.

About all we can do in regard to surveying for the railroad and the rest of the project is survey those few points which cannot be reached readily by the tellurometer crew.

We will complete our investigations tomorrow by checking into the water diversion situation and laying out a few more flags in the Mile 25 area.

DMK/bb

JULIENNE RAILWAY

PRELIMINARY SURVEY

A traverse along the general route of the Julienne railway was made during the period July 18 - 22, 1963 by a 3 and 4 man party. White crosses were constructed at close intervals for survey control, a blazed line was established between points and note taken of the general ground conditions as given in this report. The map shows the route taken and the location of the points.

Most of the route was accessible from Julienne or Shabogamo lakes so that lake transport permitted the job to proceed quite rapidly. The general conditions along the route are as follows.

Points A to F - Thick bush, generally flat to gradually rising along route taken. Land slopes gently towards the lake, poor drainage. Subsoil most likely impervious silt. Swamp at F drains to Julienne Lake. There will be no cuts along this section, all fill. There might be a little sandy material between A and B.

F to I - The blazed line goes up and over the hill centered around H. This hill is about 50 feet high and is apparently all sandy material. The railway will have to go around the north and eastern flanks of the hill passing close to the swamp north of the hill. The bush is all open and very well drained. The entire area to the northeast as far as Shabogamo and Julienne Lakes is sand, a typical kame and kettle glacial outwash sand deposit. This area provides an inexhaustible supply of sandy materials.

I to K - Here the route crosses a low area receiving the drainage from the hills to the west. Heavy bush, wet ground. Point K is located on a slight hill which has a gneissic rock core. Railway should go either to the west or east of the hill in lower ground.

K to N - This section traverses the eastern slope of the high hill forming the middle of the Julienne - Shabogamo peninsula. All drainage from the hill is concentrated in many small

streams occupying valleys cutting across the railway route. These valleys may be up to 20 - 40 feet deep and have gentle slopes on their sides. The higher areas are well drained and are probably composed of glacial till.

The blazed line is inland several hundred feet from Shabogamo and follows a more flat route than occurs towards the lake. There apparently is a rock ridge along here so that the land just west of it is flat and swampy locally, at points L and M for example.

Regardless of whether the railway goes west or east of the blazed line, considerable fill will be required to cross the valleys. Point N is located on a glacial till ridge. Where the line crosses this ridge it is perhaps 50 feet higher than the deep valley immediately to the south.

N - O - Here the blazed line crosses the deep valley and encounters the north edge of the extensive sandy area further south. Point O is only about a hundred feet from the lake and perhaps 10 feet above it with wet low lands to the west.

O - P - Here the line climbs up the eastern slope of a high kame, which at point P (on the top) must be over 70 feet above Shabogamo Lake. The railway will probably be located between P and the lake.

P - R - Along this section the line crosses rolling sand piles cut by four distinct low valleys carrying drainage from the west. The line is, however, near the eastern toe of the sand piles so that relative elevations are not great except at point R which is perhaps 30 feet above the little creek to the north.

R - T - The line from point R to T crosses the northern outwash area related to the esker. It is typical kame and kettle country consisting of rolling hills or ridges of sand gravelly sand some 20 - 40 feet higher than the low spots, there is no surface drainage, all water soaks through the sand rather than flows across. The blazed line R - S - T more or less follows a ridge with lower lying areas both to the east and west.

The main esker itself is encountered at point T which is perhaps 30 feet higher than the ridge to the north.

T - U - South of T there is more kame and kettle country for about a thousand feet, then the land slopes off (still sandy) to a rock ridge at U.

While the entire kame and kettle country from P to near U is very rough topographically, there will be no problem putting a grade through there because all the material that must be cut or filled will be sand.

U - V - The line follows a dry rocky cored ridge perhaps 30 - 40 feet above the lake. There is a bad swamp immediately to the west caused by the impounding of the drainage by the ridge. The line will likely go along the western flank of this ridge.

V - W - A second and lower rock ridge occurs about half way from V to W. The ground is wet up to this ridge, then becomes dry until nearly to the lake at W.

W - X - Eight soundings were taken across the lake at approximately 100 foot intervals. The depths, in order from west to east, are: 4 ft., 6 ft., 10 ft., 8 ft., 8 ft., 7 ft. and 4 ft.

X - Y - Point X is on a rocky point about 8 feet above the lake. From X to Y the land is relatively flat and poorly drained, but several low mounds occur which appear to be sandy. Quite thick bush.

Y - Z - Ten lake soundings were taken across the lake at 100 - 150 foot intervals, depth to bottom, from west to east, are: 4 ft., 8 ft., 8 ft., 12 ft., 12 ft., 12 ft., 10 ft., 10 ft., 8 ft., 4 ft.

Z - DE - From Z to the railroad at DE, the ground is covered by regular tree cover, there are alternating low, wet places and slightly higher and drier places. There would be a slight up hill grade involved. The ground is probably mostly silty.

DE - Point DE (De Mille) is located about 100 feet north of the main line of the Wabush Lake Railway on a curve about 400 feet east of De Mille river. There are two passing tracks on the south side of the main line. The beginning of the tangent to the east would appear to be a quite logical place for Mile zero of the Julienne railway.

Conclusion

The writer has walked the entire route, and from his observations it would appear that construction of the railway will be routine. The route is topographically irregular from Mile $2\frac{1}{2}$ to $6\frac{1}{2}$, but the immediate availability of sandy fill will easily remedy this problem. There are no severe grade problems or sharp curves.

D. Knowles

July 22, 1963

DMK/bb

JULIENNE LAKE

LAKE WABUHS

LEILA WYNNE L.

SHABOGAMO LAKE

SOUTHWEST ARM

SOUTHEAST ARM

JULIAN ROAD

LAC MICHEL

DE MILLE LAKE

RLY.

WABUSH

N

LEGEND

- Julian Railway Routes
- Blaized Line and Corners (S T U)
- Flags Placed
- Extensive Sand Deposit
- Mileage Indication (3)

JULIAN IRON CORP.

JULAN RAILWAY RECONNAISSANCE SURVEY

SCALE 1:50 000	DATE 7/26/63	No.
DWG. LEO D	APP.	FILE N.J.