

THE CROW'S NEST.

Progress on the C. P. R. Line to the Kootenay.

The line is now located from the eastern terminus at Lethbridge, Alberta, to the crossing of the Kootenay River at the upper end of Kootenay Lake, a distance of, say, 287 miles, & preliminary surveys have been made to Nelson, B.C.

For the first 80 miles the line passes over what is called a prairie country, but very heavy grading is encountered, as well as the heaviest bridge work on the line. This is owing to the necessity of crossing St. Mary's River, Belly River, Pincher Creek & South Fork Old Man River, & the many coulees met with in order to reach these crossings. Following is a list of the principal structures on the 1st 80 miles:

Mileage.	Total Length.	Maximum Height.	Truss Spans.
3½	405 feet	110 feet	
7	420 "	105 "	
7.1	390 "	98 "	
7.8	450 "	85 "	
8.0	660 "	65 "	
8.3	490 "	130 "	1x150 D.H.T.
8.5	400 "	95 "	1x100 D.H.T.
8.8	400 "	90 "	
9	500 "	75 "	
9.6	200 "	90 "	1x150 D.H.T.
10	300 "	55 "	1x100 D.H.T.
10.3	400 "	35 "	
10.6 St. Mary's River	2750 "	65 "	2x150 D.H.T.
11.2	660 "	120 "	1x150 D.H.T.
11.4	450 "	75 "	
11.7	560 "	135 "	1x100 D.H.T.
15	300 "	50 "	
16	630 "	130 "	1x100 D.H.T.
26.5 Belly River	495 "	30 "	
58.3 Pincher Creek	710 "	110 "	1x150 D.H.T.
69	240 "	60 "	
67.1	375 "	70 "	
70 S. Fk Old Man Riv.	935 "	135 "	2x150 D.H.T.
79.3 M. "	190 "	20 "	1x150 T.H.T.

From mileage 80 to 105.8, where the line reaches the summit of the Rocky Mountains, the work is heavy, with a considerable amount of rock excavation. From the summit westward for 16 miles the work is also heavy, & involves the use of 2 tunnels & some 6 bridges from 60 to 200 ft. each in length.

The next 37 miles, following down the valley of the Elk River to the crossing of that stream, consists of earth & rock work with very heavy clearing & 2 bridges of 100 ft. span each. Elk River is crossed by 3 spans of 150 ft. each, & from there to the crossing of the East Kootenay River at Wardner, about 23½ miles, the earth work is heavy, & there are 3 bridges of, say, 80 ft. span each. It is proposed to cross the Kootenay River near Wardner by 3 spans of 150 ft. each, 1 span of 130 ft., & a swing span with a clear opening of 60 ft. From Wardner to Cranbrook, 23½ miles, the line passes through a park-like country, with the exception of about 5 miles through what is known as Isidore Canyon, where there is a considerable amount of rock excavation. From Cranbrook to the head of Moyie Lake, 12.7 miles, the earth work is moderately heavy. The line follows the east shore of Moyie Lake for about 8 miles, & the work is heavy, being almost entirely rock, with 1 tunnel of 500 ft. in length.

After crossing the Moyie River, 1 mile below the lake, the line follows the west side of the valley 21 miles, then turning to the westward & following up the valley of a small stream for 3 miles it reaches the summit between the Moyie & Goat River waters, in doing which the work is heavy. From this summit to the head of Kootenay Lake, 35 miles, the work is heavy, with a considerable amount of rock excavation & trestle bridging.

The maximum grade used in either direction is 1 ft. per 100 or 52.8 ft. per mile, & the sharpest curvature 12 degrees 478 ft. radius, but curves as sharp as this have only been used in a few places & compensation for same allowed.

The grading was commenced July 14 last, & has been completed from Lethbridge to the summit, & the bridging well advanced, track

being laid on 63 miles. The grading westward from the summit is now being proceeded with rapidly, & the entire work is covered by contractors.

Station buildings & water tanks are being erected at average distances of about 18 miles. These vary in design according to the requirements of the locality. The track is being laid with 60 lbs. steel, though 72 lb. rails will be used on a large portion of the B.C. section.

A very large proportion of the line from the summit of the Rocky Mountains westward passes through a densely wooded country, on a portion of which fire has destroyed a large amount of what would now have been valuable timber, but there are still considerable tracts of land on or in the vicinity of the line where excellent fir, spruce, larch & cedar, can be procured. Valuable coal deposits are found close to the line in many places for 35 miles on either side of the summit, & rich veins of galena and silver are being opened up in the vicinity of Moyie Lake. The country passed through in Alberta is an excellent grazing one, & ranching on both large & small scales has been successfully carried on for a number of years. There are also considerable tracts where land suitable for mixed farming can be met with, especially in the vicinity of Pincher Creek & in the valleys of the Old Man & Belly Rivers & their tributaries, and these could be greatly increased by irrigation. West of the summit considerable tracts of land suitable for either grazing or farming are met with in the valleys of the Elk, Kootenay, Moyie & Goat Rivers; & between the Elk & Moyie Rivers the country passed through, consisting of bench lands with glades of timber & occasional sloughs, is especially suitable for stock raising.

The Manager of Construction for the C. P. R. Co. is M. J. Haney, of Toronto, whose headquarters are at Macleod. The Chief Engineer is Hugh D. Lumsden, C.E., of Toronto, by whom the foregoing particulars have been prepared. The following facts gleaned from other sources may be added:

The line has been ballasted as far as Pincher Creek, & is in splendid condition for traffic. West of the summit of the Rockies between 40 & 50 contractors, & between 3,000 and 4,000 men, are at work, & Mr. Haney expresses confidence that the line will be completed as far as the coal mines in May & to Kootenay Lake by October next. This will give the company a 60-mile stretch of deep water to Nelson, but the location of this last section of road is now being revised, & the work will be carried forward with as much energy as the eastern sections.

Two seams of coal are being opened, each about 6 feet thick, on the north & south sides of Coal Creek. By the time the railway reaches the mines, probably 8,000 or 10,000 tons of coal will have been mined & awaiting shipment. The capacity of the mines from then on will be from 500 to 1,000 tons a day.

A correspondent of the Calgary Herald who recently went over the route, contributes the following: From Goat River Landing, on Kootenay Lake, the present western terminus of the Crow's Nest branch, to Macleod, the eastern terminus, is one crowded panoramic scene of busy men, horses & machinery, engaged in pushing forward construction. At Macleod are situated the headquarters from where all operations are directed. At this point between 300 & 400 men are continually at work—in the offices, stores, yards, machine shops, saw mill, & constructing new buildings. At least one construction train a day leaves Macleod for the end of the steel. A siding is constructed here, where mountains of hay & foothills of oats, & great warehouses of provisions and clothing for the thousands of men & teams employed are stored until they are freighted to the different camps. By the assistance of powerful headlights, night shifts work on the bridges as well as day shifts,

and the timbers are sent from the mill numbered & ready to be put into position, so that 125 men with the assistance of chutes, hoists & other modern machinery can handle 150,000 ft. of bridge timber every 24 hours.

The system of freighting is worthy of mention. To get the supplies into the various camps is a large undertaking, as from 3,000 to 4,000 men & the enormous number of horses consume an immense quantity of provisions. For freighting purposes the distance has been divided into 2 divisions, with Wardner as the centre point. The western division is supplied from headquarters on Goat River, & the eastern division from the Macleod headquarters. Porter Bros. have the contract for freighting from the west, & Strel & Buchanan from the east. There are over 200 teams engaged in freighting & the demand is not supplied. This number will need to be doubled, as most of the supplies for the spring & summer must be freighted in before the road breaks up. To facilitate freighting operations the company has erected large warehouses at 40 mile distances from the end of the steel to Goat River Landing, which will be filled with supplies, & the different contractors can obtain what they want from these distributing points.

Several towns are springing up along the line, principal among which are the temporary western terminus where connection will be made with Nelson & West Kootenay by steam boat; Moyie City, which is situated on Moyie Lake, & near which is the St. Eugene mine, & several other valuable & promising mining properties; Cranbrook, the market for 25,000 acres of farming land & a C. P. R. divisional point; Wardner, the present centre of activities, & Coal Creek, which is situated in the centre of the coal mining district.

There is great variety of climate in the 287 miles distance. At the western terminus & for about 12 miles east there was no snow & very little frost, but a good deal of wet weather. From the snow line east until the summit was reached there was snow enough for sleighing & the weather was calm & cold, but not severe. When the summit was left behind the atmosphere was noticed to be disturbed with a gradually increasing wind until Crow's Nest Lake was reached, when the wind became almost a hurricane. The mercury dropped as suddenly as the wind rose. This windy weather continued until Macleod was reached.

The route of the Crow's Nest Branch is shown on the C. P. R. map opposite the last page of this issue.

A telegram from Wardner, B.C., announced the arrival there on Feb. 23 of the commissioners appointed by the Dominion Government to enquire into the alleged grievances of men employed on the Crow's Nest Pass branch construction. The general grievances appeared to be cost of transportation from eastern points, owing to alleged misrepresentation of employment agents, insufficient medical attendance, & the low rate of wages. Not a single complaint was made by any of the men in Egan & Co.'s camps, & many of the grievances from other parts of the line were, on investigation, found to be groundless.

The Westinghouse Air Brake.

One of the most important manufacturing industries which has gone into operation during the past year in the Dominion, is that of the Westinghouse Manufacturing Co., Limited, which has established itself permanently in Hamilton, Ont. This company has the sole & absolute control of all the privileges connected with the manufacturing & sale of the Westinghouse Air Brake in Canada.

The fact that strenuous efforts are being made by both the governments of Canada & the United States to compel railway companies to apply proper safety appliances &