

The Constuction of the Algoma Eastern Railway.

By R. S. McCormick, M. Am. Soc.C.E., Chief Engineer

The original charter for this railway, of 85 1/2 miles, now being completed from Sudbury to Little Current on Manitoulin Island, Ont., was obtained by F. H. Clergue at about the same time as the Algoma Central and Hudson Bay Ry. project was launched, a land grant

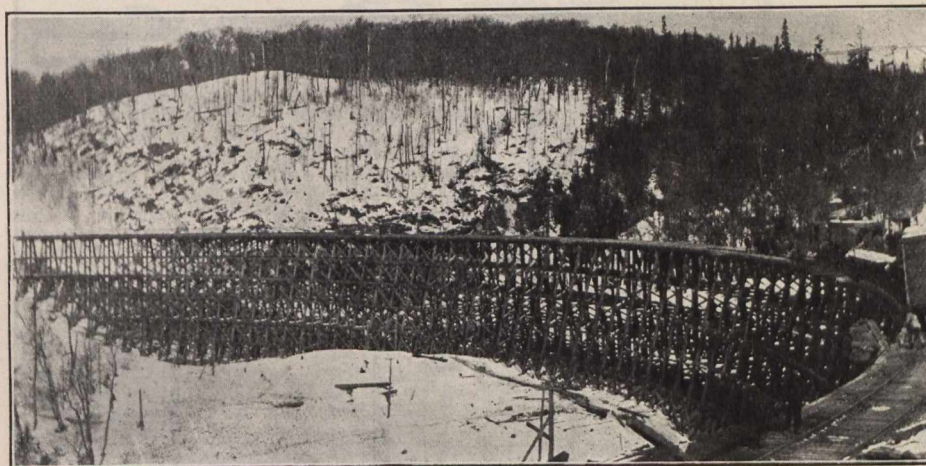
the 20 mile section from Little Current to the main shore at Whitefish, and in March, 1911, another contract was let to the Superior Construction Co. for the balance of the work from Whitefish to Crean Hill, 42 miles. The grading work on this 62 miles is practically complete and track laying was recently started at Espanola. The 62 miles of track will be laid and ballasted about Oct. 30 next.

The country traversed by this railway is almost wholly unsettled and south of

one 176 through rivetted truss at the second crossing of the Spanish river at Espanola (built in 1901) and two 100 ft. girder spans at two other points, together with a 36 ft. deck girder span on concrete at an overhead crossing of the Government trunk road near Espanola. These major structures are supplemented by a number of timber trestles and pile bridges. At Little Current, in order to cross the channel in front of the town, through which there is considerable vessel traffic, a bridge, some 600 ft. long, is required with a draw span. This will be erected this year.

The traffic expected for this railway consists of ore, pulp and paper, coal and the products of Manitoulin Island, which, previous to the construction of this line, was entirely dependent on water communication with the mainland. This island is 90 miles long, averaging 8 to 12 miles wide and is capable of great development. The population at present is about 20,000 and at least one-half the island is fine agricultural land, particularly adapted to hay and stock raising. The construction of the Algoma Eastern Ry., formerly known as the Manitoulin and North Shore Ry., has been most eagerly looked forward to for years by the Manitoulin Islanders.

The writer has been in charge of the completion of this line as Chief Engineer since the work started, with B. E. Barnhill as Division Engineer, and headquarters at Sudbury.



A.C. and H.B. Ry. Trestle at Mileage 104.9 from Sault Ste. Marie.

and subsidy accompanied the granting of the charter.

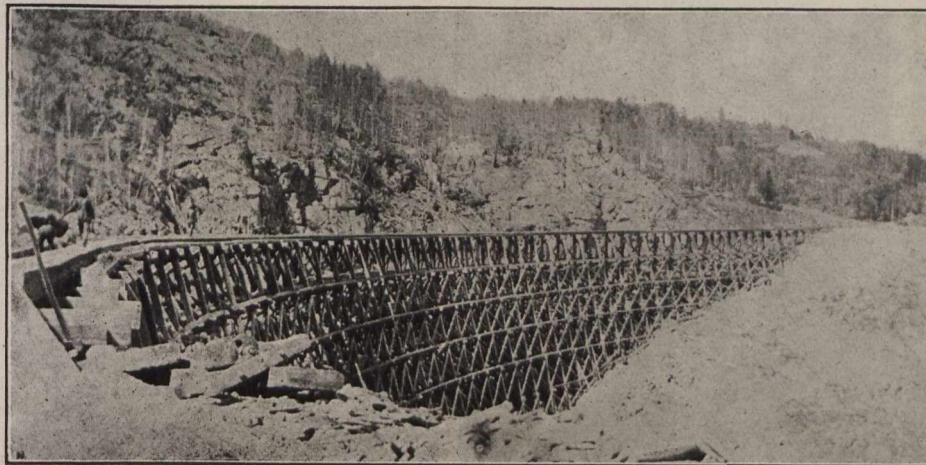
Actual construction of this line was delayed from year to year, after the first section of 13 miles, extending from Sudbury to Gertrude Mine, was constructed in 1900-1901. An extension of ten miles from Gertrude Mine to Crean Hill was built in 1909, carrying the end of steel 23 miles west of Sudbury, where connection was made with a spur track connecting with the C.P.R. at Victoria Mine station. This spur, three miles long, is owned by the Canadian Copper Co. and connects the Crean Hill mine with the C.P.R. This 23 miles of line passes through the richest nickel district in the world, the famous Sudbury district and practically the entire revenue derived from its operation is for handling the ore from the Creighton and Crean Hill mines to the Canadian Copper Co.'s roasting yards at Copper Cliff.

In 1909-1910 surveys were undertaken to locate a line extending this railway to Little Current, on Manitoulin Island. A party, in charge of Louis Whitman, locating engineer, was started at Little Current on a route over which the writer had run a line for the old Sault Company in 1900. This line traversed the islands, and along the shore of the north channel to the mainland at the mouth of the Whitefish river, where it cut through a range of high rock hills facing the lake, thence to a connection with the C.P.R. at Espanola, on the Spanish River. A short section of 1 1/2 miles of this original surveyed line was built in 1901, connecting the Spanish River Pulp and Paper Co.'s plant on the Spanish River with the C.P.R. Sault Ste. Marie branch. This little section or spur was built by the Sault Company and turned over to the C.P.R. to operate, under an agreement contemplating the ultimate completion of the whole project.

When the writer took charge of the work, a location was pushed through to connect with the Sudbury end at Crean Hill, 62 miles from Little Current. A maximum 1.25% compensated grade and a maximum 11° curve (with a 12° curve near Whitefish) was secured at a cost of about \$32,000 a mile complete, including track ballast and buildings. In July, 1910, a contract was let to the O'Boyle Bros. Construction Co., of Sault Ste. Marie, Ont., for the construction of

Espanola is very rugged. From the Whitefish river to Little Current the scenery is most picturesque, as the line follows close to the water and winds around the headlands and bays of the section of the north channel known as the Bay of Islands. The grading on this section, while practically all solid rock, was not excessive in cost, averaging about \$20,000 a mile, including bridging. From Espanola easterly to the junction with the old line at Crean Hill the line passes over a better country, but, from an agricultural point of view, of little value.

An under crossing of the C.P.R. Sault Ste. Marie branch is obtained near the village of Nairn Centre, where the Algoma Eastern Ry. passes under the C.P.R. embankment, the tracks of the



A.C. and H.B. Ry. Alice Lake Trestle, Magpie Branch.

latter company being carried over on a 27 ft. 7 ins. skewed deck plate girder span on concrete wing abutments.

The bridging on the entire line from Sudbury to Little Current is light for such a country. The steel structures consist of one 105 ft. and one 60 ft. deck plate girder spans on stone abutments and centre pier at the Vermillion river crossing, 17 miles west of Sudbury; one 180 ft. through rivetted truss span at the Spanish river crossing, mile 42;

Dominion Government Railway to Hudson Bay.

Tenders were received, May 16, for 40 sets of switches and frogs at present required for the line.

Specifications and plans are reported to have been completed for the second section of this line, and Ottawa press reports state that tenders for its construction are to be invited at an early date. The section will be 120 miles long, and will carry the line to the point at which the route is common, whether the terminal on the bay is at Port Nelson or Fort Churchill. With a view of determining this, it has been decided to send out a further exploratory expedition, by the Dominion Government s.s. Minto.

In addition to the work on the bay at the two ports, the expedition will report as to lighthouses and other aids to navigation necessary in Hudson Strait. (May, pg. 240.)

The 24-Hour Time System in which the hours of the day and night are numbered from 0 to 24, beginning at midnight, is to be adopted on the French Government railways, beginning with next summer's schedule.