

# The Canadian Engineer

*A weekly paper for Canadian civil engineers and contractors*

## La Loutre Dam Across St. Maurice River Completed

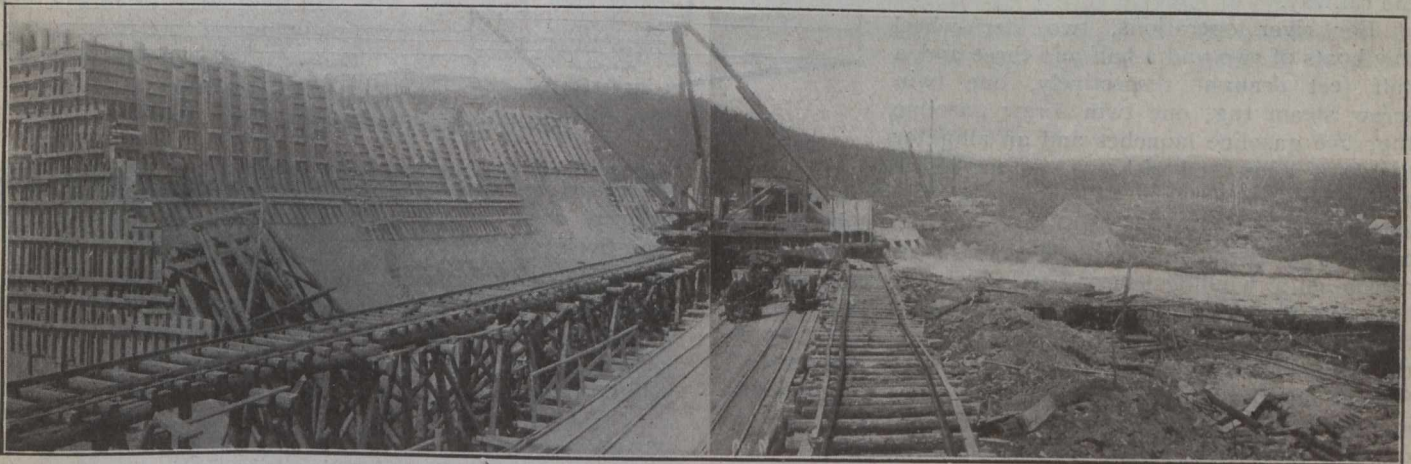
Site Up River 50 Miles From Nearest Railway Caused Transportation Difficulties.—Construction Finished Before Contract Time With Twenty Six Billion Cubic Feet of Water Stored During Construction

By CHAS. LUSCOMBE, A. M. Can. Soc. C. E.  
Resident Engineer for the Contractors

**T**HE cyclopean masonry dam across the St. Maurice River in the County of Champlain, P.Q., has been completed, including the gate-hoisting machinery and gate houses on top of the dam with the electric heating system, and is now in operation. Cofferdams have been removed and there has been about twenty-six billion cubic feet of water impounded during construction.

This dam is for the regulation of the flow of the river and for that purpose, creates a reservoir larger, it is said, than any other in the world, having a capacity of about

region with its short summer seasons and severe winters, at a distance of fifty miles up the river from the nearest railway (the Canadian Government Transcontinental), the first thirty miles up the river navigable but with shoals and rapids, and the remainder unnavigable by reason of the many rapids in a total difference of elevation of one hundred and thirty-five feet in the fifty miles, entailed obstacles in the way of transportation which called forth considerable ingenuity and skill in addition to the construction of a fleet of power boats and scows on the lower



Concrete Forms and East Channel Temporary Sluiceways, Looking East

one hundred and sixty billion cubic feet between average low-water level, and the elevation of the spillway of the dam. The lack of a uniform flow of water the year round has long been a source of inconvenience to the many great power developments and industries between Three Rivers and La Tuque, and of regret at the waste of so much water in the spring time which, if retained, would be so valuable in the low-water season. Not only the existing, but other possible and contemplated developments will be more valuable by means of the water control and regulation made possible by the construction of the dam with its gates, tunnels and spillway.

The site was decided upon by the Quebec Streams Commission after the usual and necessary information had been obtained with regard to the varying flow of the river and precipitation for a period of several years, and the decision was undoubtedly a good one, the site being upstream from any possible future power sites, and at the foot of a chain of lakes and widenings of the river where the greatest and best results could be obtained in storage. The construction work, however, in this "out of the way"

thirty miles, and twenty miles of standard gauge railway by the upper twenty miles.

At Weymontachingue Hudson Bay Post on the river near the Transcontinental Railway the contractors made their base, constructed a terminal with tracks, wharves and boatways, some storage room and camps for the operation of the terminal, and temporary accommodation for employees passing to and from the dam. A ten-ton guy derrick was erected to handle material and construction plant from the cars directly to the boats, a thirty-five-ton dinkey handling the cars. The base was named Sanmaur.

At the foot of Chaudiere Rapids, about thirty miles from the base, a transfer connection was made with similar conveniences to transfer from the river to the railway then to be constructed from there to the dam site.

The construction of a standard gauge railway through the mountainous forest for the necessary rapid transit of heavy materials and plant involved some fairly heavy grading and a large number of trestles over deep ravines and tributaries to the St. Maurice. The maximum grades