

even bearing for the sheet piling. Two-inch plank was used for sheeting, which was placed in the deeper parts of the river by divers.

Throughout most of the length of the dam, the bed of the river was very rough, being strewn with large boulders. This condition made considerable work on placing the sheeting, as much of the boulder accumulation had to be removed.



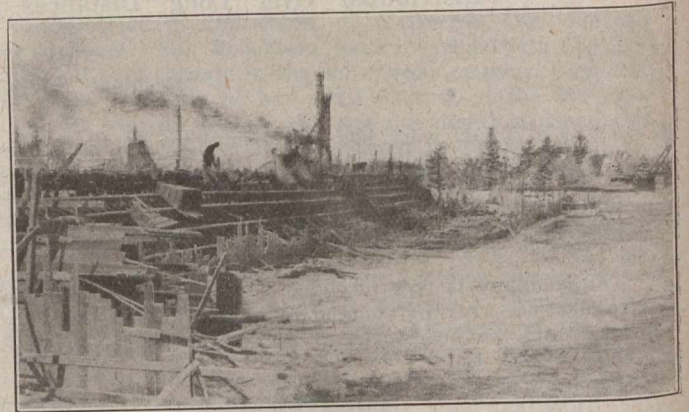
PLACING COFFERDAM CRIBS IN JANUARY

On the section of cofferdam built to unwater the site of the stop-log section and part of the spillway, instead of completely enclosing this area, the cribbing was continued downstream for some distance, to a point where the normal water elevation was lower than the bed of the river at the site of the foundations. This did away with the necessity of pumping out a large area, inasmuch as the section shut off from the river drained completely with the exception of a slight seepage through the cofferdam, which was conveyed away from the foundation excavation in ditches.

As soon as the concrete work was completed inside this cofferdam, sections of it were removed permitting the water to pass through the stop-log openings. The cofferdam work was then continued, paralleling the dam all the way across the river, and on its completion diverted the flow through the completed portion of the dam. The delay caused by

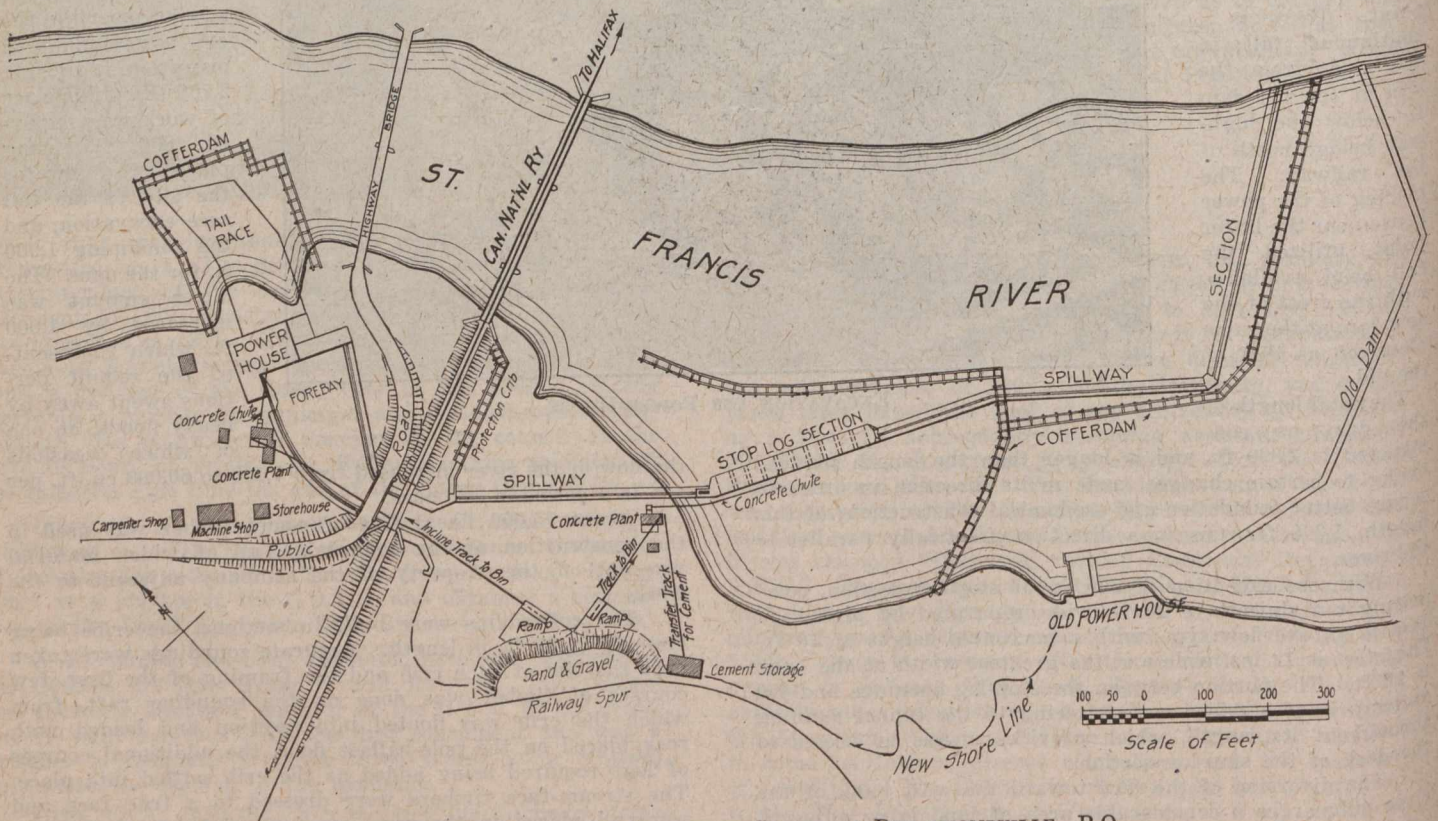
floods had advanced the work on this part of the unwatering into the winter season, and in consequence large quantities of ice had to be removed before the cofferdam cribs could be placed. A considerable length of this work had to be built in and parallel to a very swift rapid, and it was found that owing to the rough bottom and the presence of fissures in the rock, there was considerable leakage. To unwater the foundation effectively a double row of sheeting, 24 inches apart, was placed along the line of the upstream and downstream face of the masonry footing. Two-inch plank was used for this and was held in place between 3 by 4-inch wales, the whole being thoroughly braced inside and out. The space between rows of sheeting was thoroughly puddled.

The foundation excavation for the dam varied in depth, the maximum being 9 ft. through a heavy deposit of gravel and boulders overlying a stratum of very compact silt next to the rock. The work was performed in sections of



CONSTRUCTING THE DAM

from 30 to 50 ft., the material being loaded into skips handled by a steam-operated derrick. Owing to the nature of the material excavated, there was a certain amount of seepage into the excavation. This was pumped out by an electrically-operated centrifugal pump.



PLAN OF WORK AND LAYOUT OF PLANT AT DRUMMONDVILLE, P.Q.