

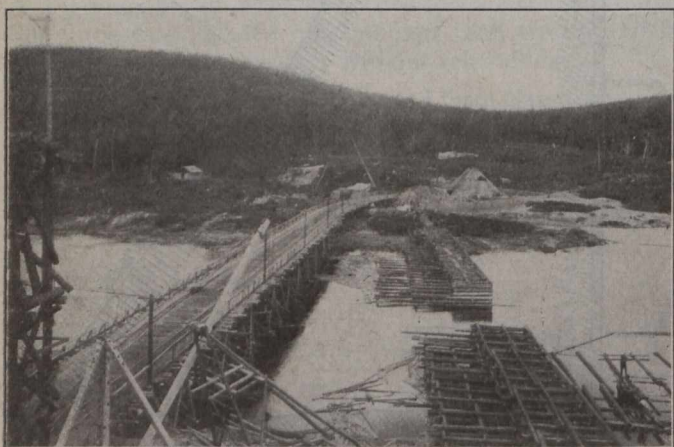
Excavation work was carried on during the winter under very severe weather conditions involving the removal of several thousand yards of ice of great thickness.

Concreting started in the west channel on the 18th of April of this year, having stopped on the 1st of December, 1915, at which time 7,400 cubic yards had been placed in the east channel.



Upper West Cofferdam Under Construction, Looking East

The mixer plant was on the west shore of the west channel with its back toward the dam and on the downstream side. Three mixers of one yard (of concrete) capacity were used. Two of these discharged toward the concrete trestle which was double-tracked. The other discharged toward the dam into a concrete hoist, and the concrete from the latter was distributed by chutes from the tower into the west part of the dam. Concrete from the other two mixers was distributed in bottom-dump buckets by two travelling derricks erected on flat cars travelling on two higher trestles, one trestle on each side of the concrete trestle, and by side-dump concrete cars into chutes from the concrete trestle.

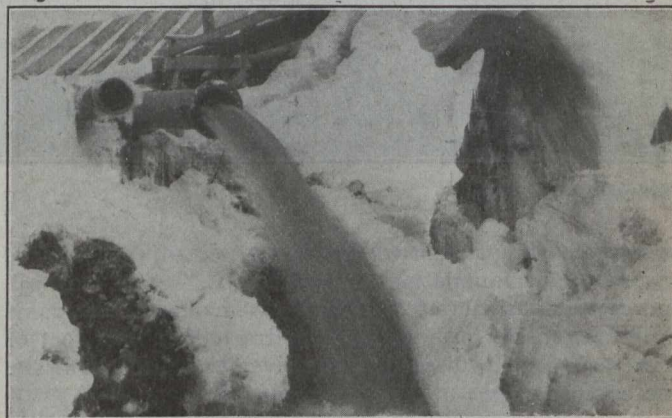


Lower West Cofferdam Under Construction, Looking East

At the top of the mixer plant, stone and sand bins were on a level with the railway yard tracks; sand and cement were delivered into the plant directly from trains. Crushed stone was brought from the crusher plant by two six-yard standard gauge side-dump cars on a double track, a distance of 650 feet down a three per cent. grade. The cars were attached to a cable passed around a loose sheave at the crusher plant. The loaded car descending pulled the

empty car up grade. There was a cement shed at the mixer plant and a storage shed in the yard, 150 feet x 50 feet x 12 feet, with two tracks.

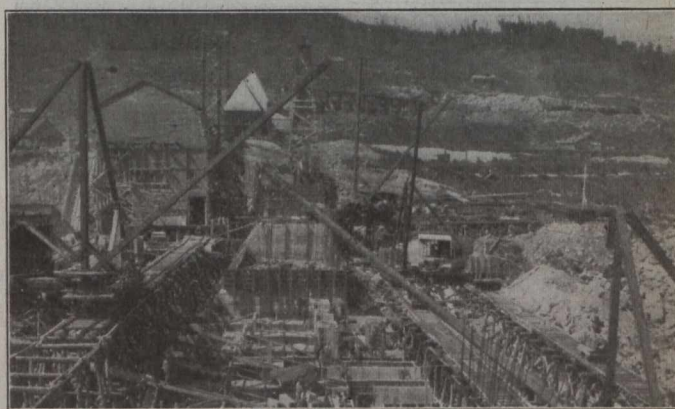
The crusher plant consisted of a 54-inch x 36-inch Buchanan jaw crusher discharging into a No. 7½ Tel-smith gyratory crusher. From the latter there was a 16 feet x 4 feet Tel-smith girder type screen from which, when used,



Downstream Side of Lower Cofferdam. Small Discharge from 10-inch Pump Handling Total Leakage of Coffers

the stone was carried by an 80-foot link-belt bucket elevator to the storage bins. The screen rejections passing first through two smaller gyratory crushers, No. 3 and No. 4 Austin. The storage bins were above the tracks leading to the mixer plant and discharged through bottom hopper gates. The screen was not used long, as run-of-crusher, carefully mixed by drawing from various parts of the bins, was permitted.

From the quarry, six-yard side-dump cars conveyed the rock up an inclined trestle and were hauled by a hoist driven from a flywheel of the jaw crusher. The jaw crusher was driven by a 150-h.p. electric motor. The No. 7½, with back gear driving the screen, was driven by a 75-h.p. motor; the No. 4 crusher by a 35-h.p. and No. 3



Gate Section (Looking West); Mixing Plant and Crusher in Background

by a 25-h.p. The elevator was driven by a 35-h.p. motor.

An air compressor of 1,100 cubic feet capacity at 100 lbs. pressure, and driven by a 200-h.p. electric motor furnished power for drills, blacksmiths' oil forges and other pneumatic machines, and the cableway engine.

A cableway of 550 feet span was used to great advantage in the construction of the upstream west cofferdam crib construction above water, and afterwards erected