

these watersheds and to pipe and flume it to a reservoir whence it could be carried to the various mills.

Bass Lake is practically without an outlet, slight seepage into Mud Lake being the only possible discharge, no surface stream existing. A pumping station was built on the north shore of Bass Lake, discharging into South Pickerel Lake. The capacity of this station is 3,500 gals. per min. One De Laval centrifugal pump, direct connected to a Westinghouse 75 h.p. motor, comprises the pumping unit. The head is approximately 55', including friction. The discharge is through 1,260' of 16" wire-wound wood stave pipe.

In order to lift the water from the Pickerel watershed to the Cobalt Lake watershed, a pumping plant identical to that at Bass Lake was placed on a scow at the north end of North Pickerel Lake. This plant also discharges against a head of approximately 55' including friction, the discharge being through 1,270' of 16" wood stave pipe, laid partly on trestle and partly on the ground.

This pipe line carries the water to the height of land between Pickerel and Brief Lakes, and from there it flows north through a closed flume, of two sq. ft. area, for 1,560' to Brief Lake, which is in the Cobalt Lake watershed. This closed flume was constructed of tongued and

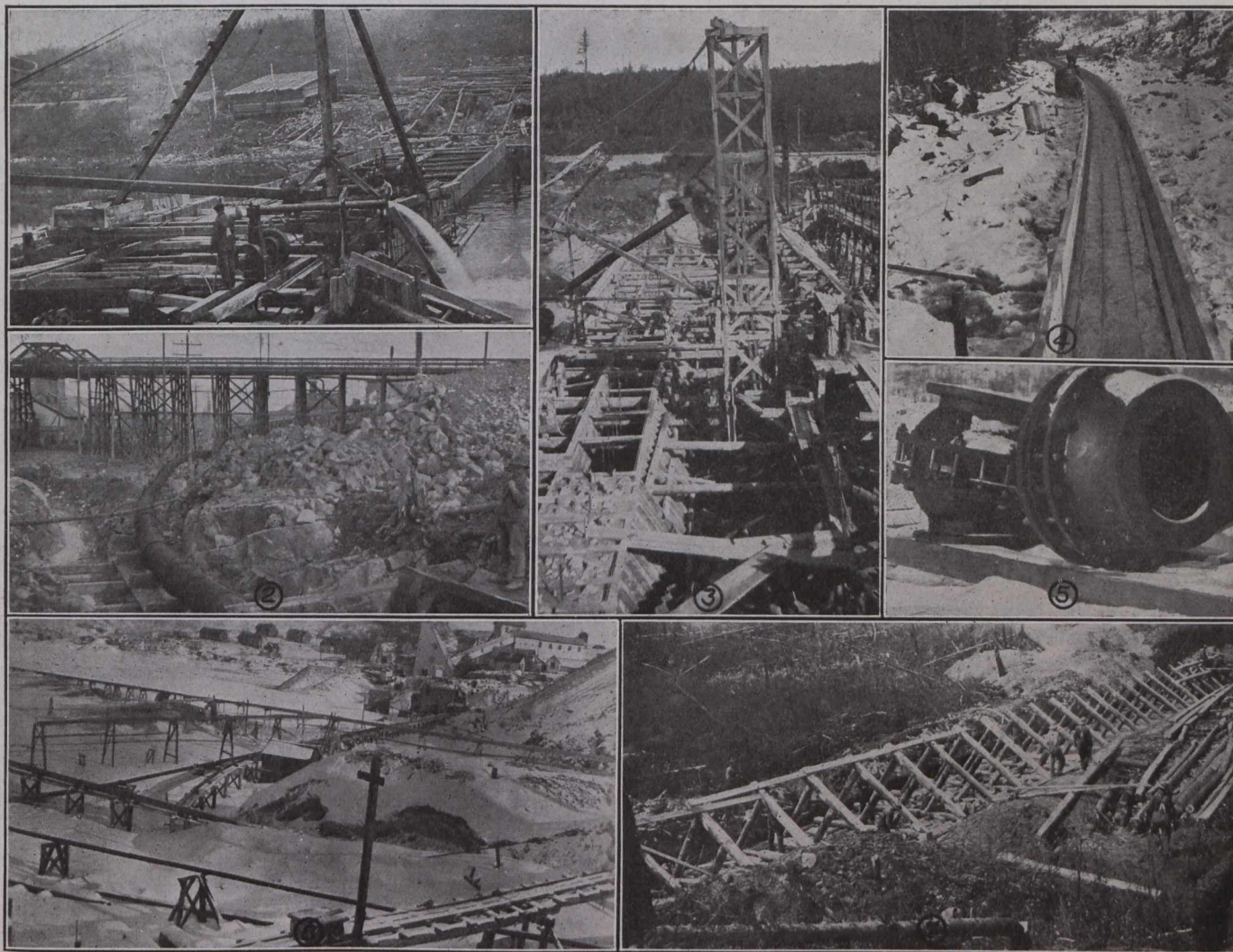


Fig. 3.—(1) Pumping out Cofferdam at Short Lake. (2) Wood Stave Pipe, carrying discharge from Cobalt Lake Drainage Pumps. (3) Short Lake Dam under construction. (4) Flume from height of land to Brief Lake. (5) Flexible Couplings. (6) Pipe Lines from Short Lake to concentrating mills. (7) Timber Dam at South Pickerel Lake.

It was found advisable to raise the level of North and South Pickerel Lakes, which are connected by a surface stream, in order to conserve water during periods of excessive precipitation, so that it would be available for use during dry periods. In order to raise the height of these lakes five feet, a dam was built across the discharge creek which leads to Montreal River, and two smaller dams, or cut-offs, were built to prevent any overflow into the same creek. A cut-off wall also had to be built to keep the high water from flowing into Bass Lake, as the area of the Pickerel Lakes was increased about 25%.

grooved material, and laid to .4 grade, velocity 4.3 ft. per sec.

From Brief Lake the water flows by gravity through an open cut, 1,600' long, to Short Lake, which is about 22' below the level of Brief Lake.

Short Lake is used as a storage reservoir and distributing point for the various mills. A dam was constructed across the narrow neck of the lake, near its discharge end. A pumping station was constructed on the dam with the following motor-driven centrifugal pumps: