The south wall contains the orifices leading through massed concrete to the penstocks, and controlled by handoperated double gates. It is expected that these gates will later be fitted with electrical controls for rapid closing in emergencies.

Penstocks

At present, only one penstock has been constructed. It is an 8 ft. steel pipe, field riveted, with double-riveted lap joints. This penstock was constructed in a channel about 16 ft. in width by 10 ft. in depth, which was blasted from solid rock, and leads from the northerly orifice of the forebay to the power house, a drop in elevation of approximately 190 ft. Massed concrete anchor piers, four in number, are located between the two structures, and together with the penstock, will eventually be backfilled, thus reducing to a minimum the leakage in joints due to expansion and contrac-





tion. Within the power house, the flow from the penstock is divided by installation of a wye-branch, controlled by hydraulically-operated butterfly valves. The branches are designed to feed the present hydraulic turbine, No. 1, and a future turbine, No. 2.

Power House

The power house is located on the shore of Lake Timiskaming, about one-quarter mile north of the Canadian Pacific Railway station, and was constructed partially in cofferdam which extended into the lake in water of a depth of 35 to 40 ft. The building is massively constructed in steel and reinforced concrete, with curtain walls of pressed brick, and is plentifully supplied with windows fitted with interlocked double sash. It is divided into two main parts, separated on all floors by fire-resisting doors. The southern, or main, part of the building houses the turbines, generators, switchboards, pumps, governors, excitor and crane, while the remainder houses the transformers, storage room, oil storage, lightning arrestors and disconnecting switches (each of which is housed in a separate concrete box).



WOOD-STAVE PIPE LINE, 8 FT. DIAMETER

The turbine is of standard vertical type, 1,800 h.p. capacity, equipped with Lombard governor.

The capacity of power house will eventually be increased to 18,000 h.p. The southern wall is a wood curtain to permit extension.

Barking House

A short distance above the Dominion government's Quebec dam, and behind the Canadian Pacific Railway's main



POURING WALLS OF CONCRETE FOREBAY

track from Timiskaming to Mattawa, is located the barking plant. The logs are lifted from the lake by endless conveyors, forming a jack ladder to an overhead conveyor platform crossing the railway. The logs are dumped into Ushaped troughs and are continually sprayed with water. In these troughs are revolving discs which rip the bark and pass the log from trough to trough to a loading platform on the spur line and thence to the piling ground. It is to be



DRILLING CHANNEL IN FOREBAY FLOOR