

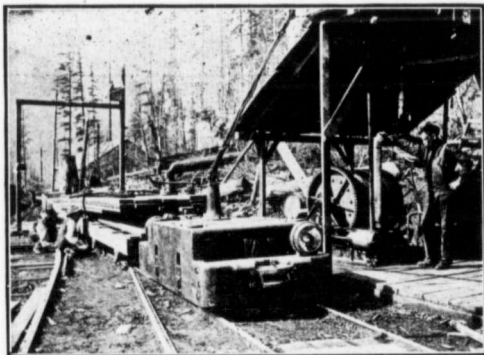
ceedingly low and the reliability of service to be obtained will make an ideal installation.

Both lakes will be controlled by dams at their outlets, and from the dam at Trout Lake steel pipe lines will convey the water under an effective head of 390



Sluicing out excavation for concrete dam.

feet to the power station, located just above high tide mark on the shore of the North Arm of Burrard Inlet, into which the water wheels will discharge. The dam at the outlet of Coquitlam Lake will raise the water 12 feet above low water level. It will be constructed of rock-filled timber crib, a type which has proven thoroughly successful in many mountain streams. The materials are provided by nature in ample quantity at the point where they will be used. The dam will be



Electric Locomotive and Hoisting Engine at top of incline.

planked, and constructed with an apron, extending far enough down stream to prevent any back-cutting action by the water flowing over.

The tunnel is nine feet wide by nine feet in height, with rounded corners, and is being driven from both ends by compressed air drills. At the portals, open cuts were carried into the solid rock, and at one end, where the depth of the open cut became inconvenient, a tunnel was driven for a short distance, temporarily

timbered, and the ground above the roof of the tunnel sloped down through chutes in the roof directly into the car. Before the machine drills and air compressors arrived, hand drills were used, and the average progress was two feet per day in each heading, but since the advent of the drilling machinery, this has been increased to ten feet per day. A system of electric haulage has been installed to facilitate the rapid and economical removal of the muck. The plant at each end includes a 100-h.p. boiler, 60 k.w. 500 volt generator and a 4-drill two-stage Leyner air compressor, 3 3-4 Rand air drills and General Electric Company's locomotive.

Ventilation is provided for by a 12-inch galvanized iron pipe through which the air is exhausted by means of an air jet under 100 lbs. pressure, acting as an ejector. This is only put in operation for a few minutes after each blast to remove the smoke, the exhaust from the air drills furnishing all the fresh air necessary at other times.



Excavation at power house site.

A concrete dam 350 feet long on the crest and 50 feet high is now in course of construction across the outlet from Trout Lake, and arrangements have been made for bringing out ten 54-inch pipe lines from the dam, but only three lines will be completed at the present time. Each steel pipe line will be 1,600 feet in length, 48 inches in diameter at the upper end, 44 inches in the middle section, and 42 inches at the power station. The contract for pipes has been awarded to the Vancouver Engineering Works. Close to the power station site on the shore of the North Arm, a wharf has been erected, at which steamers and barges from Vancouver may discharge their freight on to the cars of an incline tramway built from the wharf to the tunnel portal at Trout Lake. By this means all material for the camp at the tunnel portal and for the dam and pipe lines is delivered rapidly and with the least possible handling.

To deliver material to the tunnel camp at the Coquitlam portal is quite a different undertaking, since it can only be reached by wagon road from a station