

Mountain, Showing Layout

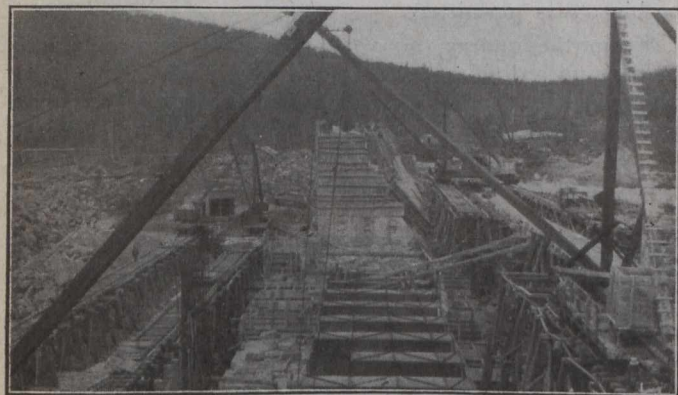
were proceeding in the winter and spring of 1915-16, the various plant foundation works, camps, stores, sawmill and concrete trestle erection and east channel cofferdams were carried on. About three and a half million feet of logs were cut and hauled to the river above the dam site and boomed there.

By August, 1916, the power house and transmission lines were completed, giving power and light to the dam site, also the first railway train arrived there. The east channel cofferdams were pumped out and excavation for the dam started, and concreting quickly followed.

The west channel cofferdams were next started. The log cribwork was built for both upstream and downstream cofferdams, leaving a gateway about eighty feet long in the centre of each. The river rock bottom was chiefly overlaid with gravel and sand which varied in depth from two to five feet, but this was

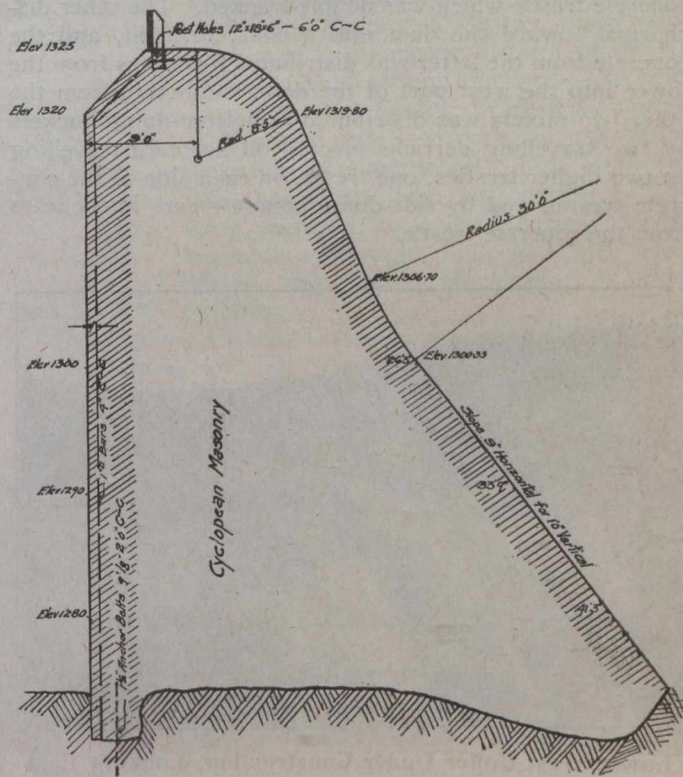
five temporary sluiceways of dimensions twelve feet wide by twenty feet high each were left open and the cofferdams there removed, permitting some relief from too great a head of water pressure against the upper west coffer until the cribs were sufficiently filled with rock to resist it. The coffer cribs were thirty feet wide, filled, and then widened on the back with rock and gravel. The front was toe filled on "dryer felt" spread on the bottom with one edge fastened to the cribwork.

The length of the upstream coffer was six hundred feet, the alignment straight and the final head of water against it over forty feet. The leakage was so small that, when once pumped out, it was handled by one of the ten-inch centrifugal pumps working at about one-half the capacity of the pumps. The pumps were on the down-



Dam, Looking East

not removed. At some points huge boulders only were found on the bed rock. At these, as at other points, care was taken to have the cribwork scribed to fit the river bottom when commencing the crib, careful soundings having been taken every two feet in the direction of the stringer courses, and under each course. The logs were on an average of nine inches diameter, well notched and drift pinned and about seven and a half feet apart in each direction. The "keys" were next built near shore and floated to position where they were sunk by the weight of logs increasing their height above water while anchored a few inches upstream from the final position, then were cut loose and jammed tight to the splayed abutments by the current. The first sheeting was of two-inch lumber driven down into the gravel and spiked to the cribwork by divers. The second sheeting was of one-inch lumber, but before the key sections were sheeted the east channel concrete was in place to elevation thirteen hundred, and



Type of Spillway Section

stream coffer, two on each of two stages. A small secondary coffer near the upstream coffer formed a small reservoir for the leakage from the large coffer, and the water was conducted from the reservoir by an eight-inch pipe through the dam site proper to the pumps at the downstream cofferdam.