

No. 1 penstock at Tuai was repainted inside with coal-tar paint during the summer, and manholes were welded into No. 2 penstock in preparation for its painting. The repainting work took up to 26 men, was a three-shift job for seven days per week, and, with the preparation, spread over almost three full months.

The number of employees has remained fairly steady, owing to the fact that all labour available could be employed on getting materials for leak sealing. Including staff, approximately 100 men are employed, and of these an average of 8 were engaged on bridge-construction and other work on Lake Waikaremoana Highway. An average of 4 have been employed doing jobs at the Lake Waikaremoana Tourist Hostel.

*Cobb.*—During the year work was concentrated mainly on the completion of the permanent intake tunnel and the erection of a large batching plant and a secondary crushing and screening plant, in readiness for large-scale concreting-work. At the same time excavations for the spillway were taken as far as possible before the diversion of water into the new intake tunnel.

Work was maintained reasonably well up to schedule up to the end of last year, but since the commencement of concreting in January of this year progress has been slower than anticipated, mainly due to an acute shortage of skilled tradesmen.

Details of work carried out during the year on the various sections of the job are as follows :—

(1) *Spillway Excavations:* Excavations were continued up from the tailrace channel and past the upstream end of the stilling basin (at about the level of the tailrace channel), leaving the deep part of the stilling basin still to be completed.

Commencing also at the upstream end of the river diversion channel, excavations wide enough for two culverts were taken downstream as far as the axis of the dam at footage 1,000. This section is now ready for concreting.

In order to exclude the Cobb River from work going on in the right-hand half of the stilling basin, a concrete coffer-dam 10 ft. high and 250 ft. long was built, and the river was deepened along the river side of the coffer-dam from the tailrace channel up to the concrete check dam, where further work was carried out to prevent erosion.

At the check dam the river is dropped over an artificial fall 16 ft. into the excavated channel, past the coffer-dam.

The total amount of material excavated during the year was 59,500 cubic yards, of which some 20,000 cubic yards were in solid rock and boulders.

(2) *Permanent Intake:* Driving for the 1,573 ft. permanent intake tunnel was completed in March of last year. Work done during the year just ended consisted of building the permanent intake and log screen and lining the tunnel throughout its entire length.

The first 439 ft. between the intake and the gate shaft were lined with concrete, and the 1,100 ft. section between the gate shaft and the old tunnel were steel lined with concrete backing.

The steel lining was fabricated in Wellington in 20 ft. sections, which were taken into the tunnel by way of the gate shaft, after which they were welded together, sand-blasted, and finally given six coats of coal-tar paint. The whole of the tunnel was grouted in two stages, a total of 61 tons of cement being used. The new intake was put into commission on 18th December.

(3) *Aggregate Processing and Batching Plant:* The erection of a large secondary and screening plant was completed during the year, and so far some 1,000 cubic yards of coarse aggregates and crushed sand have been processed. A sand washing and classifying plant has also been built and is in operation.

The primary crushing plant at the quarry produced 15,000 cubic yards of stone during the year, which has been stock-piled at the screening plant.