

MANGAHAO HYDRO-ELECTRIC SCHEME.

No. 1 tunnel has been driven during the period a distance of 2,651 ft., of which 729 ft. has been completely lined and a further 270 ft. partly lined. The total amount driven to date in this tunnel is 3,361 ft. No. 2 tunnel has advanced 1,770 ft., of which 1,038 ft. has been completely lined and a further 400 ft. partly lined. In addition to this, 625 ft. of adit has been driven. The total amount of tunnelling to date under this heading is 3,496 ft. Considerable delay was caused in progress of these tunnels by a strike of the co-operative parties over the first "wages-cut."

In the foundations of the Mangahao Dam No. 1 6,000 yards have been excavated, and the by-pass tunnel heading has been driven 422 ft., the gate-shaft 78 ft., and the incline drive 52 ft. The start of this work was delayed for some considerable time owing to foundations not being so favourable as had been expected. The same conditions were found at the Tokomaru dam, and the quantity of excavation here during the period was 7,500 cubic yards. Crushing plant and bins for concrete-work at both dams are nearly completed.

The pipe-line excavation is approaching completion. Ninety concrete pedestals have been erected, and contracts have been let for the supply and erection of pipes. A tram-line and 100 h.p. electric hauler for conveying the material up to the pipe-line has been completed and in operation for some months.

Satisfactory progress has been made with the excavation of the surge-chamber, 8,000 cubic yards having been excavated.

A start has been made with the erection of the power-house, the concreting of the tail-race being completed, the building itself in hand, and good progress generally being made. The crusher, screen, bins, and concrete-mixer have been erected for use at the power-house.

The work on the transmission-line is in hand, a large number of main-line and telephone poles having been delivered at the various railway-stations along the line, and erection contracts prepared for advertising.

Six permanent cottages for the accommodation of the regular staff have been completed to date, and ninety-eight buildings, including single huts, married men's quarters, cookhouses, recreation-halls, canteens, billiard-rooms, &c., have been erected for the accommodation of workmen.

The sawmill has been in operation throughout the period, and all timber required on the works has been sawn locally.

LAKE COLERIDGE POWER SCHEME.

The permanent work in connection with the diversion of the Harper River into the lake has been proceeded with, a large dam and a netted groyne having been constructed. This portion of the work is now practically completed, and a considerable improvement has taken place in the lake-level.

The erection of the third pipe-line was completed and the fifth unit put into operation, and a contract was let for the erection of the fourth pipe-line, which was also completed during the period.

The erection of the main transmission-line poles from Coleridge to Timaru was completed.

Five miles of additional 11,000-volt reticulation was erected in the North Canterbury district, and $7\frac{1}{2}$ miles of 33,000-volt line.

WAIHOU AND OHINEMURI RIVERS IMPROVEMENT.

This work has been carried on during the year. The following are the principal operations:—

Rotokohu Drainage.—This work is nearing completion, the principal unfinished work being the construction of the main outfall drain and flood-gates into the Ohinemuri River.

Ngahina Bridge Extension.—This work is well in hand.

Upper Waihou Stop-banks.—Considerable progress has been made with the stop-banks on this sector, chiefly by the Waihou suction dredge and recently by a drag-line scraper.

Lower Waihou Stop-banks.—A drag-line has been working on this sector constructing stop-banks between Waimarie Bend and Netherton.

Ohinemuri River Stop-banks.—The survey of these stop-banks is nearing completion. Construction has been started as a relief work.

Komata Creek.—A drag-line scraper has been working continuously throughout the year, and good work has been done straightening the channel and constructing stop-banks.

Culverts.—A four-barrel concrete culvert has been completed at drain H outlet, near Netherton, and several smaller culverts built.

TRAMWAYS.

Auckland.—Proposals for alterations to tram-tracks in Manukau Road and for the Main South Road extension were examined and approved. A number of new cars were tested, and works inspected generally.

Napier.—The Hastings Street tramway extension was inspected and passed. Plans of alterations to car-bodies to suit them for this section were examined and dealt with.

Wanganui.—Cars and trailers have been examined, and tests made where required.

New Plymouth.—One-man cars have been adopted for portions of this system, and have been examined and tested before being put into commission.