

Arthur's Pass Tunnel.—The electrical equipment of the railway from Otira Station to Arthur's Pass Station has been completed, and the line was opened for traffic on the 4th August, 1923, using electric haulage entirely over the section, since when traffic has been handled steadily and satisfactorily. The necessary staff has been trained for operating the electric locomotives and the electric generating-station. The tunnel has been lit electrically throughout, and outside structures completed and painted. Engine-sheds and a turntable have been provided at Arthur's Pass, and both station-yards lit electrically. A hydro-electric plant has been installed at Goat Creek as an auxiliary to the steam station. This plant utilizes the condensing-water before it reaches the main reservoir, and generates the power for operating the auxiliary plant and signals. It also lights the village and station-yards, thus obviating the keeping of any steam plant in commission after the last electric tram of the day has been run. Machinery and buildings used for construction purposes are being partly dismantled and removed. The section was handed over to the Railway Department on the 26th May, 1924.

WESTPORT-INANGAHUA RAILWAY.

Cascade Section.—A start has been made with the prosecution of this work between Te Kuha Station, at 5 m. 70 ch., and Cascade Creek, at 9 m. 1,200 cubic yards of slips have been removed, and the formation trimmed ready for platelaying to 7 m. 25 ch. The diversion of the Cascade Falls by means of a stone drive is in hand, and should be completed shortly. 360 tons of rails and fish-plates have been procured and stacked at Te Kuha, and contracts for the supply of 4,000 sleepers have been let. Surveys have been made for the proposed temporary siding at Cascade, and plans and estimates prepared. The erection of temporary buildings and accommodation for workmen is in hand.

LAWRENCE-ROXBURGH RAILWAY.

Miller's Flat Section (34 m. 70 ch. to 49 m. 45 ch.; length, 14 miles 55 chains).—The work on this line was carried on under relief conditions up till the 1st September last, at which date relief rates of pay were abolished and construction carried on under normal conditions. Formation has been completed to 46 m. 45 ch. Beyond this point work is being pushed ahead on the cuttings at 46 m. 47 ch., 46 m. 58 ch., and the siding at 47 m. 24 ch. From this point onward formation is very light, and the work is rapidly nearing completion. A work-train has been employed more or less continuously, widening cuttings and banks between Beaumont and the railhead, and satisfactory progress has been made in this direction. Craig Flat siding, at 42 m. 15 ch., has been completed and metalled. A considerable amount of road-deviation has been necessary where the existing road was interfered with by the railway, and during the past year six deviations have been completed. 350 chains of fencing has been erected, and fifteen culverts, ranging from 12 in. to 10 ft., have been completed. The bridge over the Beaumont River at 35 m. 25 ch. has been completed, and rails and sleepers laid. At the Corstorphone Stream Bridge, at 39 m. 9 ch., the superstructure has been completed, and a start is being made with the sleepers and laying of permanent track. The piers of the Tallaburn Bridge, at 40 m. 25 ch., have been erected, steelwork has been assembled, and riveting is on the point of completion. Rail traffic across this stream is being carried on by means of a temporary bridge. Jessie's Creek Bridge, at 42 m. 62 ch., was completed, and the concrete piers of the Minzionburn Bridge, at 46 m. 35 ch., have been erected, and the steelwork is being assembled. During the year the railhead has been carried forward from 39 m. 54 ch. to 46 m. 13 ch., a distance of 6 miles 39 chains. A siding has been laid at the Craig Flat at 42 m. 15 ch., and a 20-chain-line has been built in the ballast-pit at 43 m. 65 ch. The first lift of ballasting has been placed from 36 m. 6 ch. to 46 m. 12 ch., and a second lift from 34 m. 74 ch. to 44 m. 54 ch. The majority of this ballast has been obtained from the pit at 35 m. 40 ch. The loading was carried out by means of a steam-shovel, which has been in constant use up to the end of April. It was then removed to a new ballast-pit at 43 m. 65 ch. Land-plan surveys were carried out and completed during the period.

OREPUKI-WAIAU RAILWAY.

Orawia Section (48 m. 23 ch. to 56 m. 47 ch.; length, 8 miles 24 chains).—The formation and fencing on this section has now been completed. Rails were laid from 50 m. 18 ch. to 54 m. 75 ch., including the Pukemaori Siding. The bridge at 53 m. 27 ch. across the Ellis Stream, consisting of two 25 ft. steel-plate spans on concrete piers, has been completed. The bridge at 55 m. over the Orawia River, consisting of eighteen 20 ft. and three 30 ft. steel-plate spans on timber piers, is still in hand, all piers being completed and about half the steel girders placed. The first lift of ballast has been laid from 38 m. 23 ch. to 54 m. 75 ch., and $4\frac{1}{2}$ miles of second lift and $1\frac{1}{2}$ miles of third lift were also laid.

SURVEYS OF LINES UNDER CONSTRUCTION, NEW RAILWAYS, ETC.

NORTH AUCKLAND MAIN TRUNK RAILWAY.

Okaihau Northwards.—Surveys are in hand investigating the question of the best route beyond Rangiahua to connect with Hokianga waters, and a considerable amount of data has been secured.

ROTORUA-TAUPO RAILWAY.

The trial survey has been completed from 3 m. to 28 m. Plans have been plotted and quantities calculated. Various alternative routes have been examined in detail, a total of 40 miles of survey having been carried out.