

between the latter point and Paradise yard at 120 m. Through connections to various points along the works have been made by the use of temporary tram-lines and jig-lines. This has greatly cheapened the cost of transport as compared with the horse and bullock drays used in the past. From Waiotira to Tokatoka Tunnel, temporary track was laid to connect with a jig-line over the top of the Omana Tunnel. On the north side of this tunnel the temporary track is continued to 109 m. 41 ch., and from thence the permanent line has been laid to 110 m. 30 ch.

At the Wairoa River, Pukehuia, a construction depot and yard has been established, and a wharf built to receive goods and material from the river steamers and barges. From this wharf a temporary line (including 61 chains of permanent track) connects with a jig-line over the Omana Tunnel, from the south side of which temporary track is laid to Omana station-yard. Owing to the cuttings north of Omana Tunnel slipping badly, it was found necessary to apply preventive measures instead of waiting for the rails to come through from Waiotira. A good volcanic outcrop was located above the junction of the Mangakahia and Wairoa Rivers, and from this locality large stone was barged down, and stone drains have been successfully employed in wet cuttings, enabling them to be kept open for traffic. Owing to portion of the country being unstable it has been found necessary to make a number of slight deviations to avoid bad places. A number of culverts, ranging from 12 in. to 6 ft., have been placed, and several water-tunnels driven. Six miles of line have been fenced on both sides, the permanent bridges, consisting of three 30 ft. spans at Waiotira and two 30 ft. spans at 110 m. 23 ch., have been erected, and temporary bridges at 113 m. 65 ch. and 114 m. 70 ch. are in place.

Plans have been prepared for the large cylinder bridge at the Wairoa River, and ironwork has been ordered. Borings have been taken, and a start will be made very shortly with the cylinder-sinking on the main-span piers and the pile-driving of the piers for approach spans.

Supplies of rails and fastenings are to hand, and sleepers are arriving, so that as soon as the Tokatoka Tunnel is pierced, platelaying and ballasting can be pushed forward in earnest. Temporary tracks have been ballasted lightly, as without some hard material maintenance of a running top is impossible.

The piercing of the Tokatoka and Omana Tunnels has been the most important and urgent work of the period. Great difficulty was experienced in both these tunnels, owing to the very treacherous nature of the country. In both cases the heaviest class of lining, including invert, had to be adopted, and only the greatest care and perseverance enabled such good progress to be attained. These tunnels are now almost completed; and, as there only remain approximately 4 chains in the Tokatoka and 5½ chains in the Omana to be completed, it is anticipated that they will both be finished in September. (See photo.)

The formation of the Pikiwahine and the Omana station-yards has been completed. In the Pukehuia yard formation is well in hand, and a start has been made at Paradise.

The winter season so far has been the wettest on record, and but for the complete system of temporary track and jig lines it would have been impossible to deal with the transport necessary to keep the large amount of work in hand over such an extended section.

The departmental ownership of the large sawmill at Donnelly's Crossing has contributed in no small measure to the effective working of the section, by providing prompt and ample supplies of timber for the various requirements of the works, particularly provision of temporary buildings, and workmen's accommodation, as well as for the timber-supplies for station-buildings on the other sections. This latter work necessitated a large demand for first-grade timber at comparatively short notice. During the year ended 31st March last 1,927,350 superficial feet of timber has been cut.

North of the Wairoa River a new road is in process of construction between Kirikopuni and Parakao, in the Mangakahia Valley, a distance of 13 miles. This road will serve as a valuable feeder to bring the traffic of the fertile Mangakahia Valley to the railway.

Okaihau to Hokianga.

The question of further extension to Hokianga has been investigated from an economical and developmental point of view, and further investigations are being made in the matter of the best route beyond Rangiahua, a survey party being engaged on trial-line work beyond that point.

WHANGAREI BRANCH RAILWAY.

Oakleigh Section (5 m. 27 ch. to 7 m. 60 ch.; length, 2 miles 33 chains).—In addition to the usual maintenance, the only work carried out on this section has been the stone walling of several cuttings, stone drainage of fillings at 7 m. 0 ch. and 7 m. 5 ch., and the close sleepering and decking of the Oakleigh Bridge at 7 m. 34 ch.

Tauraroa Section (7 m. 60 ch. to 14 m. 67 ch.; length, 7 miles 7 chains).—Although traffic is being carried over this section, considerable maintenance has been necessary, as several fillings between 8 m. and 10 m. have given a good deal of trouble. The completion of the Oakleigh station-yard in accordance with the final plan has been put in hand and the platelaying completed. At Mangapai Station the bridge has had decking and handrail placed. The platform and loading-bank are complete, and the station building and cottage for tablet-porter are practically complete. At Tauraroa the platform is complete and the station-building and extra platelayer's cottage well in hand.

Tauraroa Quarry.—The plant at this quarry has been considerably increased to give a monthly output of 5,000 cubic yards. The output for the last twelve months was 45,630 cubic yards, of which 12,000 cubic yards were supplied to local bodies, whose demand is ever increasing. All the requirements of the various railway sections for ballasting and road-metal have been filled from this quarry.