

## RAILWAY, HELENSVILLE NORTHWARDS.

*Kaipara Section.*—The contract for the formation of this portion of the line—4 miles 12 chains—was completed in June by one of the sureties, the original contractor having abandoned the work.

*Kaukapakapa Section.*—This contract includes the formation of the Helensville Station-yard, and a length of 3 miles 30 chains beyond the Kaipara section; also the platelaying on both sections. The work has just been satisfactorily finished.

*Station-buildings.*—The station-buildings at Kaukapakapa will be completed in a few days, and the line can then be opened for traffic to 43 miles 30 chains from Auckland.

*Surveys.*—The contract-survey has been made to 46 miles 36 chains, a little beyond the Makarau River. The works on this section are somewhat heavy, including a tunnel 638 yards long. A preliminary survey has been made to 67 miles 75 chains, about three miles from Welsford, and it is proposed to continue both the preliminary and detailed survey of the line, so as to get full and accurate information. The land-plans have been finished for the Kaukapakapa section and the ballast reserve at Kaukapakapa. A survey has been made and a design prepared for a wharf at Mount Rix at the junction of the Kaipara and Kaukapakapa Rivers. The construction of the wharf will save the navigation of the shallower waters of the Kaipara River, and admit of the whole traffic of the estuary being carried on at all states of the tide.

## KAIPARA-WAIKATO RAILWAY.

*Auckland-Penrose.*—The survey for a second line from Auckland to Penrose has been completed.

## WAIKATO-THAMES RAILWAY.

*Ohinemuri Section.*—The contract for the formation of this section was finished in August.

*Bridges.*—A contract has been got ready for the bridges and culverts on the Hikutaia and Ohinemuri sections,  $4\frac{1}{2}$  to 19 miles.

*Surveys.*—A survey has been made and land-plans prepared for a road to the Hikutaia Station, and a survey is in progress for a road to the Omahu ballast-quarry.

## THAMES VALLEY-ROTORUA RAILWAY.

*Ngatira Section.*—The contract for the formation, platelaying, and station-buildings on the Ngatira section of eight miles was finished in October.

*Surveys.*—The land-plans have been completed, also the survey of a branch road from Okoheriki Station, at 18 miles, to the Rotorua main road at a point about six miles from Ohinemutu.

## NORTH ISLAND MAIN TRUNK RAILWAY.

*Waiteti Section.*—Although very much hindered by slips, the works on this section have been completed well up to contract time. This brings the railway to the Upper Mokau, 34 miles 34 chains from Te Awamutu. The contract included the construction of an iron viaduct over the Waiteti Ravine. It has four spans of 106ft., and stands 118ft. above the creek-bed. The abutments and bases for piers are of concrete, and the piers and girders of malleable iron. All the ironwork was manufactured in the colony, and carried out in a very creditable manner.

*Poru-o-tarao Tunnel.*—Steady progress was made during the year with the tunnel, but the works are considerably behindhand. The headings met on the 10th November exactly true to line and level, and  $16\frac{1}{2}$  chains of the tunnel has been lined.

*Hunterville Section.*—This section was finished in May and opened for traffic on the 2nd June. It extends to 18 miles 40 chains from Marton Junction Station. Cattle and sheep-pens have since been erected at Hunterville, a flag-station at Rata, and sheep-loading pens at Porewa.

*Roads.*—The various roads connected with the North Island Trunk Railway have been kept open during the year. The bush-felling on the sections between Kerioi and Ohakune has been widened, and considerable improvements made on the Inland Patea Road. The weekly mail from Napier now runs as far as Moawhanga.

*Surveys.*—All the surveys of the North Island Trunk Railway will be dealt with in a special report giving the result of the survey of the Taranaki route. The land-plans of the Poru-o-tarao section are completed.

## WOODVILLE-PALMERSTON RAILWAY.

*Woodville-Gorge Section.*—This section was opened out in August to provide work for the unemployed of Napier and the Woodville district. Work has been carried on steadily, mostly by piece-work and petty contracts. A contract is now being prepared for the small tunnels, and will be advertised shortly.

*Manawatu Gorge Section.*—The works on this section, which are unusually heavy, have been proceeded with steadily during the year, and all the more difficult portions are finished. With the exception of trimming-up, the earthworks are complete. Of 45 chains of tunnelling, 30 chains are pierced. Of twenty-two bridges the masonry is practically finished on seventeen, and twenty-one out of twenty-five retaining-walls are in a similar condition. The bridge superstructures and other works are also well advanced. The steep mountain-slopes in the Gorge are standing as well as could be expected; but there has been considerable difficulty in getting firm foundations for bridges and retaining-walls. Clay-slate rock which on the surface looks hard and solid is frequently soft and friable when dug into. This has necessitated considerable additions to the concrete foundations.

*Pohangina Bridge.*—This bridge consists of eight iron-girder spans of 80ft. on cylindrical piers, with three 13ft. timber spans at each end. A contract was entered into for its construction in September, and good progress is being made with the work.