

#### RAETIHI BRANCH RAILWAY.

The length of this branch is about 8½ miles. Little work has been done on formation and culverting during the period owing to shortage of labour, but not much remains to be done. Concrete piers for the bridge at 4 m. 75 ch. were built, and the superstructure is in course of erection. Permanent-way has been laid up to this bridge, including the sidings in Rochfort Station yard. Ballasting was commenced in November last, with material from the Railway Department's scoria-pit at Ohakune. Much time has been lost through lack of men, but the first lift is completed to 4 m. 20 ch.

#### OPUNAKE BRANCH RAILWAY.

*Kapuni Section (0 m. to 7 m.).*—Clearing is completed throughout, and good progress has been made with the earthwork. A steam-navvy was used to take out the cutting between 1 m. 1 ch. and 1 m. 33 ch., and has now been moved ahead. All concrete and pipe culverts are completed, eleven being constructed during the period. Concrete piers have been constructed for the bridge over the Mangatoki River (1 m. 48 ch.), and those for the Waingongoro (0 m. 25 ch.) and Kapuni (4 m. 69 ch.) bridges are being commenced. An overbridge has been constructed at Hastings Road (2 m. 15 ch.). Practically the whole length has been fenced, and four platelayers' cottages and an office have been erected at Kapuni.

*Auroa Section (7 m. to 12 m.).*—Clearing and fencing are completed to within about half a mile of the end of the section. A number of culverts have been constructed during the period.

*Manaia Branch (0 m. to 5 m. 50 ch.).*—A start was made during March with the clearing and fencing of this line, and a road-deviation at 0 m. 36 ch.

#### SOUTH ISLAND MAIN TRUNK RAILWAY.

##### *North End.*

*Mirza and Wharanui Sections (48 m. 9 ch. to 56 m. 5 ch.).*—At the date of last report contracts were in hand for the completion of the formation, platelaying, and ballasting, and for the erection of the station buildings at Mirza and Wharanui. These contracts were completed in 1915, a few works not included therein being carried out by the Department, and the line from Ward to Wharanui was handed over to the Railway Department on the 4th December, 1915.

*Kekerangu Section (56 m. 5 ch. to 60 m.).*—Formation is completed to 59 m. 29 ch. Rails have been laid to 59 m. 25 ch., and ballasting is well in hand. A new ballast-pit was opened at 57 m. 30 ch. Most of the formation during the period has been in sand, and all slopes of banks and cuttings and adjacent sand-drifts are planted with marram-grass, with excellent results. This planting is the only thing that would enable the line to be taken directly across the sand-drifts, the alternative being a devious and comparatively expensive line along the hillside farther inland, and its success is highly gratifying. Piles have been driven for the bridge over Woodside Creek (56 m. 50 ch.), and three gabion groynes built to protect the approaches. The superstructure has been delayed by difficulty in obtaining steel. Work has been commenced on the pile bridge over Waima Creek (59 m. 27 ch.).

#### WESTPORT-INANGAHUA RAILWAY.

*Cascade Section (5 m. 74 ch. to 10 m.).*—The three small contracts which were in progress at date of last report have since been completed, and no further work has been put in hand, the formation being now complete to 10 m. with the exception of the bridges.

#### MIDLAND RAILWAY.

##### *Nelson—Westland (North End).*

*Kawatiri Section (59 m. 17 ch. to 63 m. 10 ch.).*—Earthwork and culvert construction have been in progress during the period, with a small and decreasing force of men. The first mile is ready for platelaying, and the next two well advanced. Concrete piers for the bridge at 61 m. 36 ch. are in hand, and a cottage has been erected at Kawatiri Station yard.

##### *Arthur's Pass Tunnel.*

At the Otira end day labour is employed. The rock changed from greywacke to slate, and has continued in slate, which is easier to bore and not so wet. This change, together with improved drilling machinery, has enabled better progress to be made in the bottom heading, 26 chains 7 links being driven in the nine months, as compared with 23 chains 19 links in the previous twelve months. In the enlargement and lining very little dry time has been worked, and timber has had to be used. This work has also been hampered by difficulty in obtaining skilled labour, so that the progress made compares rather unfavourably with that for the previous period.

At the Bealey end the work has been continued on the co-operative system, but the progress has been poor, 11 chains 33 links of bottom heading and 13 chains 20 links of lining being done in the nine months, as compared with 16 chains 19 links and 19 chains 82 links respectively in the previous twelve months.

The total length of heading driven (both ends) is now 3 miles 78 chains 3 links, and the length of tunnel completed 3 miles 38 chains 82 links. The distance between the headings is 1 mile 27 chains 15 links, and between the completed portions 1 mile 66 chains 36 links, the length of the whole tunnel being 5 miles 25 chains 18 links.