

DEFENCE WORKS.

NGARUAWAHIA MOBILIZATION BASE.

Good progress has been made with the construction of the railway-siding into the camp. Plate-laying and ballasting have been completed at the railway end, and 27 chains of the camp end of the siding have been laid and partly ballasted, and the balance will be completed shortly. The single-men's quarters, which consist of twelve rooms, kitchen, mess-room, and ante-room have been erected, but require plastering, papering, and painting. Married-men's quarters No. 5 and 6, which are concrete-block houses, are in course of construction. Two temporary cookhouses, together with the necessary benches, &c., were erected for the Territorial camp held in January last. The excavation of sites for four concrete magazine buildings is completed, and good progress has been made with the excavation for seven other magazines. The erection of No. 1 and No. 2 magazines has also been completed, with the exception of the installation of electric light. The foundation for No. 3 magazine has been laid, and the concrete walls and roof of No. 5 are built and the foundation for No. 3 is complete.

Approximately 100 acres of gorse and scrub have been cleared, and 30 acres of the land deeply ploughed. Materials are on hand for fencing the magazines area, and most of the fence-line has been cleared. A portion of the old Ngaruawahia-Taupiri Road has been sanded, and cleared of gorse and blackberry.

A water-supply is to be obtained from the Waikato River. A concrete settling-tank has been constructed alongside the river, 10 ft. below low-water mark, and a six inch cast-iron main leads from it to a concrete reservoir of 80,000 gallons capacity in the camp. Water percolates from the river into the settling-tank, and will be pumped from the tank to the reservoir by a motor-driven pump. The excavation around the settling-tank, and for the motor and pump, is almost finished, and the pump and motor are on the works. A satisfactory test has been made of percolation of water from the river to the settling-tank.

DEVONPORT FUEL-OIL DEPOT.

In June, 1924, sites were chosen near Calliope Dock, Auckland, for two large steel tanks with a combined capacity of 2,250,000 gallons for storage of fuel oil for naval purposes. Foundation work was commenced almost immediately, and No. 1 tank was erected and tested in January of this year. The reinforced impounding-wall, with a diameter of 131 ft. and height of 11 ft. above ground-level, also the foundation for tank No. 2, were completed by the end of February; the construction of the second tank will be commenced as soon as the necessary materials are delivered. A galvanized-iron building, 95 ft. long and 50 ft. wide, was also erected and fitted up for holding Admiralty stores.

IRRIGATION.

No new works were commenced during the year, and the Department's operations have been confined to surveys and investigation of new schemes, and the vigorous prosecution of those under construction. The Ida Valley and Galloway schemes have been completed, and most of the others are nearing completion. All settlers requiring water were supplied last season. The area of land being irrigated under Government schemes is 19,897 acres, occupied by 239 settlers, as compared with 14,677 acres and 200 settlers last year. The development to date has involved the construction of approximately 380 miles of race.

PROGRESS OF INDIVIDUAL WORKS.

Ida Valley Scheme.—Three miles of the German Hill Race, between Moa Creek and Poolburn Weir, have been enlarged, and the Syndicate Race extended $\frac{1}{2}$ mile, and 3 miles 32 chains of distributary races constructed. A large amount of work, consisting mainly of concrete-lining and stone-wall rebuilding, has been done on the Upper Bonanza Race, from the Manorburn to Moa Creek, to reduce leakage. The replacement of the Bonanza flume with a twin siphon is in hand, and will be completed before next season. A concrete measuring-weir has been installed at the head of the Lower Bonanza Race, and one is being constructed at the end of the Upper Bonanza Race. The flumes at Moa, Maori, and Dovedale Creeks have been tarred, including all woodwork, and numerous sheep-crossings, &c., installed. During the past season water was supplied to forty-six irrigators on 7,929 acres.

Galloway Scheme.—Work has been confined to the completion of the distribution races. Two miles of old mining race were reconditioned, and a measuring-weir installed, and these are now in use; 47 chains of distributary race were constructed, and 120 ft. of 15 in. siphon and 100 ft. of fluming installed. Traffic and stock bridges have been placed over races where required, as well as face culverts under roads. Of the 2,250 acres commanded, 1,949 were irrigated last season by twenty-four settlers.

Manuherikia Scheme.—6 miles 51 chains of distributary race, with all necessary crossings and culverts, were completed during the year. A concrete floor has been laid throughout the intake tunnel, portions of the sides concreted, and the intake gates overhauled and improved. The concrete race in the gorge has been overhauled and leaks patched, and 593 ft. of metal flume installed. The installation of the new 36 in. pipe-line at Chatto Creek siphon is in hand, and will ensure a full supply