

1941.

## NEW ZEALAND.

## DEPARTMENT OF LANDS AND SURVEY.

## RANGITAIKI LAND DRAINAGE.

REPORT FOR THE YEAR ENDED 31ST MARCH, 1941, TOGETHER WITH STATEMENTS OF ACCOUNTS.

*Presented to both Houses of the General Assembly in pursuance of Section 10 of the Rangitaiki Land Drainage Act, 1910.*

SIR,—

Department of Lands and Survey, Wellington, 1st July, 1941.

I have the honour to submit herewith the report of the Chief Drainage Engineer on drainage operations on the Rangitaiki Plains for the year ending 31st March, 1941, pursuant to the provisions of the Rangitaiki Land Drainage Act, 1910.

I have, &amp;c.,

R. G. MACMORRAN,

Under-Secretary for Lands.

The Hon. Frank Langstone, Minister of Lands.

## REPORT OF THE CHIEF DRAINAGE ENGINEER.

SIR,—

In accordance with the provisions of the Rangitaiki Land Drainage Act, 1910, I have the honour to submit the report of the works carried out on the Rangitaiki Plains during the year ending 31st March, 1941.

Aided by exceptional weather conditions, the farmers of the Rangitaiki district have had an exceptionally favourable season, and new records have been set for farm production in the district. The Rangitaiki Dairy Co., which handles most of the butterfat produced on the Plains, manufactured 5,064.5 tons of butter during the twelve months ending 31st March, 1941, an increase of 669 tons over the quantity produced during the previous twelve months.

The rainfall recorded at Thornton for the period 1st January to 31st December, 1940, was 39.96 in., rain falling on ninety-six days. For the period 1st April, 1940, to 31st March, 1941, 43.91 in. was recorded for ninety-two days of rain. The wettest month was January, 1941, with 7.26 in., and the driest month February, 1941, with 0.58 in. There were no flood-producing storms.

The Department's activities during the past year can be generally described as intensive maintenance operations.

During the last three years over 17 miles of drainage canals have been reconditioned with mechanical excavators. This work, which is to be continued, has considerably improved the drainage conditions over a large part of the district.

## DREDGES.

The excavating-plant was reduced from five to four drag-line excavators by the transfer of a small machine to the Hauraki Plains in October. The total output of these machines for the year was 206,900 cubic yards.

*No. 17 Monigan Drag-line Excavator* has completed the deepening of the Kopeopeo Canal for a distance of 6½ miles between the junction of Reids Central Canal and the Rangitaiki River. The work was commenced in 1938, and 49 chains above the Whakatane River outlet was deepened during April and May, 1940. The machine was then moved to the Waioho Stream canal, and, working up-stream from the junction of the Waioho Drain, has removed the silt from the channel and placed the spoil on the right stop-bank for a distance of 94 chains. The output for the year was approximately 53,800 cubic yards.

*No. 28 Light Bay City Excavator*, using drag-line boom and bucket, completed the by-pass channel to divert the Orini Stream through the recently constructed triple 5-ft.-diameter flood-gates. The machine then moved to the Omeheu Settlement and constructed 20 chains of new drain leading to a recently installed flood-gate discharging into the Omeheu Canal, and also spread the spoil bank along the lower end of Walkers Drain for a distance of 51 chains and widened and deepened 55 chains of the same drain. Fitted with shovel equipment, the plant loaded 3,400 cubic yards of sand filling into motor-trucks to construct a substantial filling across the old channel of the Orini Stream to divert the flow through the new flood-gate. This is an old machine, and as the result of wear of the caterpillar traction mechanism it is now unsuitable for drain-excavation, and for this reason it was transferred to the Hauraki Plains works in October for power-shovel work requiring little travelling. The material handled in the Rangitaiki District was 10,700 cubic yards.

*No. 30 Bay City Drag-line Excavator* has been employed since 1937 improving the stop-bank on the right bank of the Tarawera River. Ninety-three chains of stop-bank has been enlarged during the year ending 31st March, 1941, and four weeks later the machine will complete the bank to Factory Road. From this point the bank improvement has been continued up-stream by No. 31 excavator. The year's output for machine No. 30 was 47,000 cubic yards.