

1927.  
NEW ZEALAND.

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DEPARTMENT OF LANDS AND SURVEY.

# RANGITAIKI LAND DRAINAGE.

REPORT FOR THE YEAR ENDED 31st MARCH, 1927, TOGETHER WITH STATEMENT  
OF ACCOUNTS.]

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

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SIR,—

Department of Lands and Survey, Wellington, 30th June, 1927.

I have the honour to submit herewith the report upon drainage operations in the Rangitaiki Plains for the year ended 31st March, 1927, pursuant to the provisions of the Rangitaiki Land Drainage Act, 1910.

The accompanying statement of accounts and balance-sheet shows the financial transactions for the year, and the position of the account as at the 31st March last. A plan of the drainage district is attached.

I have, &c.,

J. B. THOMPSON,

The Hon. A. D. McLeod, Minister of Lands.

Under-Secretary for Lands.

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## REPORT OF CHIEF DRAINAGE ENGINEER.

SIR,—

In accordance with the provisions of the Rangitaiki Land Drainage Act, 1910, I have the honour to submit my report for the financial year ending 31st March, 1927.

Apart from the general maintenance of completed works and the completion of the Tarawera stop-banking, the only remaining major works to be undertaken during the period were the diversion of the Kopeopeo lower down the Whakatane River, and the widening of the Awaiti and Omeheu Canals. It was not possible to commence work on the Kopeopeo diversion owing to the difficulty in finalizing arrangements with the Native owners affected, but a start was made on the Awaiti and Omeheu Canal improvement late in the period, and this work is now proceeding expeditiously.

The area experienced a very favourable winter, but unfortunately this was followed by heavy rains in the spring, during which both the Whakatane and Rangitaiki Rivers overflowed their banks, flooding a considerable area in the intervening basin. Despite this setback at the beginning of the dairying season, the area has more than held its own in increased production. This year's returns show that the Rangitaiki Dairy Co. manufactured 1,300 tons of butter, an increase of 315 tons over last year's production. The Tarawera Cheese-factory manufactured 300 tons of cheese, compared with 260 tons for the previous year.

*Rainfall.*—The total rainfall for the year was 58.12 in., rain falling on eighty-four days. The wettest month was October, with a fall of 10.88 in., and the driest January, with a fall of 0.52 in. The average fall for the past nine years was 53.02 in.

*Eastern District.*—The only dredge-work put in hand in this area during the period was the erection of a low-level stop-bank along the east bank of the Te Rahu Canal, north from the main Rotorua Road, three small flood-gates being placed along this bank. The concrete barrel flood-gate across the south end of the White-pine Bush Road was completed early in the period. Apart from these works, expenditure in this area was almost entirely confined to maintenance and repair of existing works.

*Western District.*—The main work in hand in this district was the Tarawera River control. The Priestman dredge working north of the railway completed this section early in the period, and was laid up for the remainder of the year. Good progress was made with the erection and protection of the bank south of the railway, and this should be completed towards the end of the coming period. Late in the year a Monighan dredge was transferred from the Eastern district and commenced work on the Awaiti and Omeheu widening. The usual maintenance of hand drains and river-protection works was put in hand as required.

*Dredges.*—Four dredges, comprising two Priestman, one Monighan, and one Bay City dipper-dredge have been employed part time during the period. A total of 227,006 cubic yards of spoil was removed, covering a distance of 714 chains. The cost per cubic yard of the material excavated was 6·05d.

The following table shows the total amounts excavated, with the cost per cubic yard, for the past eight years:—

	Cubic Yards.	Cost per Cubic Yard.		Cubic Yards.	Cost per Cubic Yard.
1919-20	.. 176,672	6·62d.	1923-24	.. 788,059	5·59d.
1920-21	.. 215,768	8·82d.	1924-25	.. 626,762	5·56d.
1921-22	.. 473,994	6·68d.	1925-26	.. 431,277	5·88d.
1922-23	.. 540,802	8·13d.	1926-27	.. 227,006	6·05d.

No. 8, Priestman Dredge: This plant commenced work in the Tarawera River at the beginning of the period, raising the final bank on the eastern side, and has completed as far north as the north boundary of Section 6s, Matuku Settlement. The bank is being protected and growth encouraged, and should prove a complete protection for the areas of country adjoining the river. The distance covered during the year was 236 chains, and a total of 132,800 cubic yards of material was excavated.

No. 9, Priestman Dredge: This plant completed work in the lower reaches of the Tarawera River early in the period, a considerable improvement in the channel resulting. Plant was then laid up at the mouth of the Awaiti Stream for the remainder of the period. The distance dredged during the period worked was 125 chains, a total of 21,090 cubic yards of material being removed.

No. 17, Monighan Dredge, was laid up for a good portion of the period, but in November was transferred by pontoon from the Whakatane River to the Tarawera River, and thence up the Awaiti Canal, to commence the work of widening this and the Omeheu outfall. Splendid work was done during the period worked, a distance of 193 chains being covered and a total of 53,170 cubic yards of spoil excavated.

No. 18, Monighan: This plant was laid up throughout the period.

No. 21, Bay City Dredge, completed improvement work in the Omeheu drain north of the railway early in the period, and after overhaul was laid up in readiness for future maintenance work. During the time worked a distance of 160 chains was covered and 19,950 cubic yards of spoil removed.

*Roadwork.*—The only roadwork carried out during the year was the formation of 50 chains of road in Section 30A from the spoil removed by dredge from the adjoining drain.

*Bridges, Flood-gates, &c.*—One bridge gang has been employed for a portion of the period. This gang completed the barrel flood-gate across the White-pine Bush Road, placed three small flood-gates in the Te Rahu stop-bank, and erected ten sill bridges. In addition various repairs to existing works were carried out as required.

*Stop-banks.*—The only new stop-banking carried out in the period was that done by the dredges and already enumerated. Repairs and protection of existing banks have been carried out where necessary.

*Drains in operation.*—The total length of drains in operation remains the same as last year, and is as follows: Dredge-cuts, 65 miles 14 chains; main-outlet drains, 105 miles 17 chains; road-drains, 30 miles 46 chains.

*Roads Opened.*—The total length of roads opened is still 113½ miles, of which 85 miles have been constructed by the Department.

*Buildings.*—These consist of Engineer's cottage and twelve cottages and huts for workmen, office buildings, machine-shop, smithy, store-sheds, &c. All men occupying quarters are required to pay rent for same.

*Workshops.*—The workshop and smithy have been kept employed during the period on repair work for dredges and general machinery, and the ironwork for general construction work.

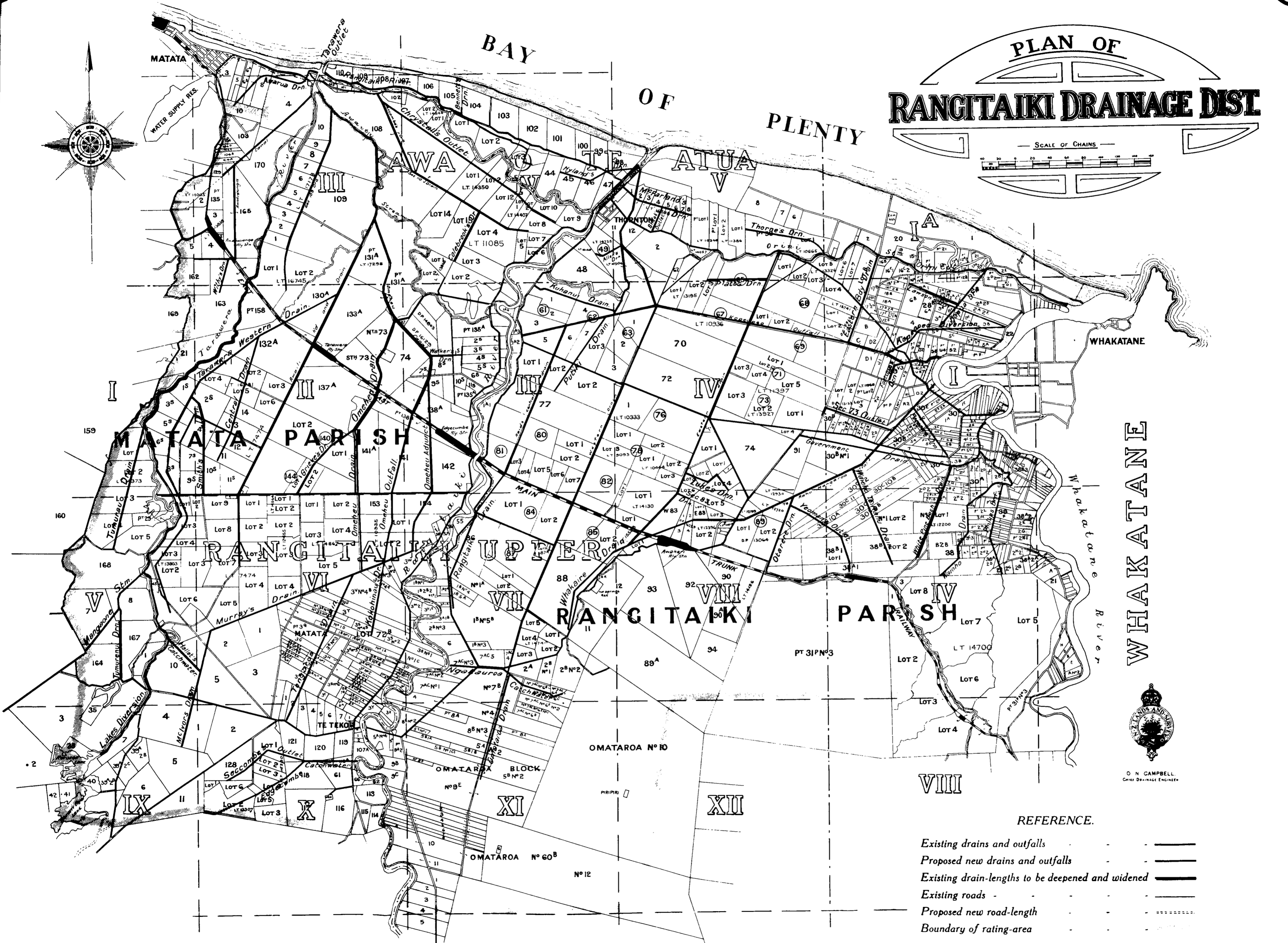
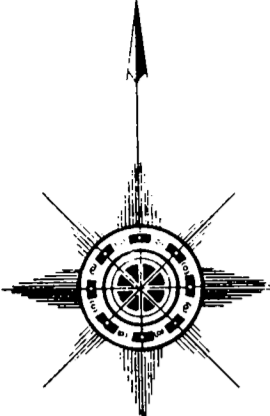
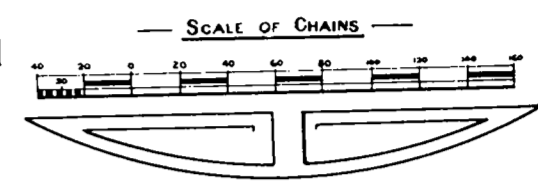
*Rolling-stock.*—The Thornycroft lorry, now in its sixth year of running, has done all the cartage of supplies for dredges and the bulk of general cartage throughout the works.

*Plant and Machinery.*—This consists of two Priestman grab dredges, two Monighan walking drag-line excavators, one Bay City walking dipper, three coal-punts, two oil-launches, and six small boats and punts, one having been dismantled during the year. In addition the pontoon of the Priestman dismantled last year has been retained on the works and is utilized for moving walking plants.





# PLAN OF RANGITAIKI DRAINAGE DIST



WHAKATANE



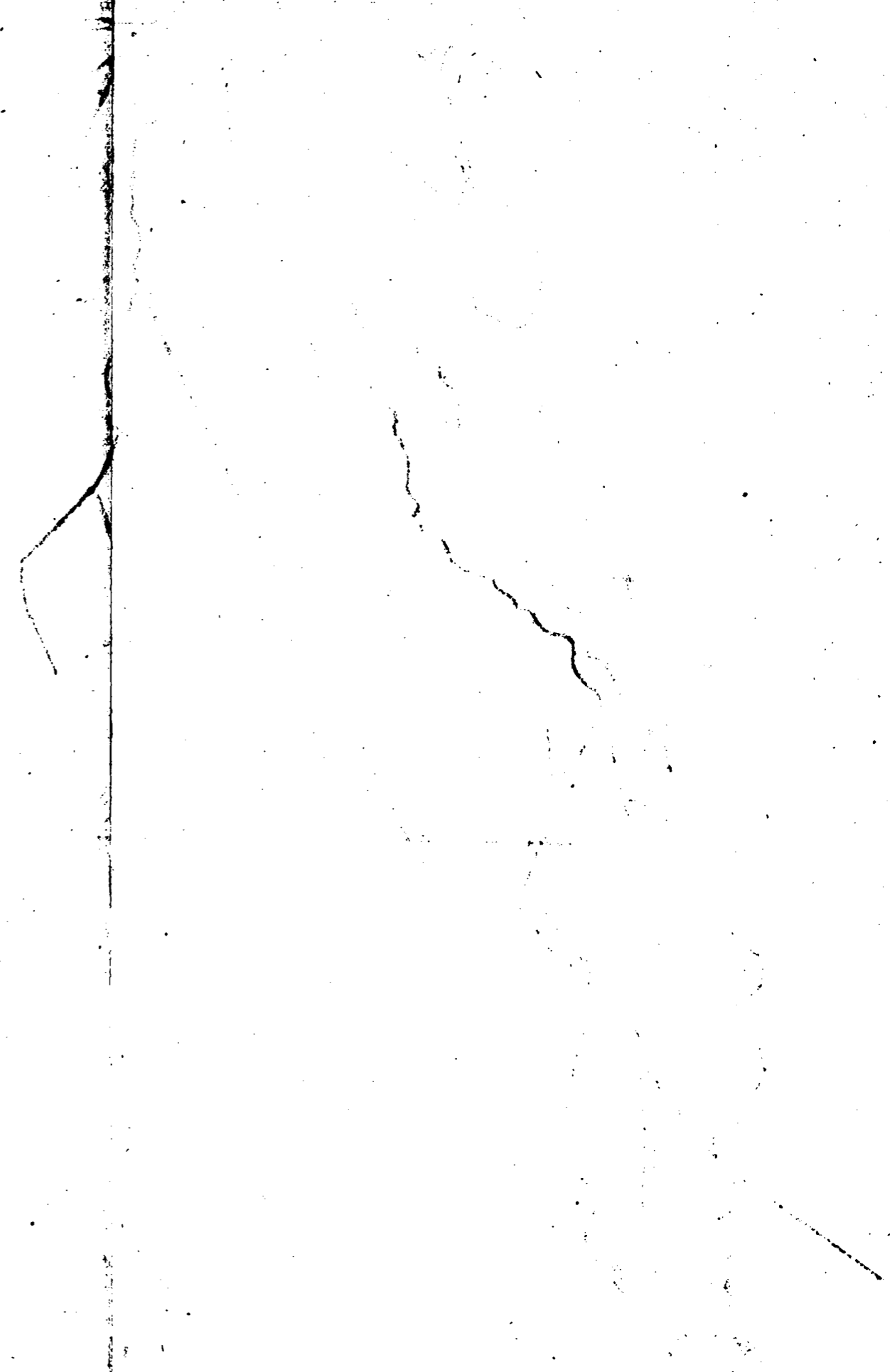
O. N. CAMPBELL  
CHIEF DRAINAGE ENGINEER

### REFERENCE.

- Existing drains and outfalls - - - - -
- Proposed new drains and outfalls - - - - -
- Existing drain-lengths to be deepened and widened - - - - -
- Existing roads - - - - -
- Proposed new road-length - - - - -
- Boundary of rating-area - - - - -

For bdy. see RangitaiKI Land Drainage Act 1910.

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