The excavating equipment handled 595,565 cubic yards of material during the year at an average cost of 6·25d. per cubic yard. The following table gives the total quantities excavated by the dredges during the past ten years :—

Year.	Cubic Yards.	Cost per Cubic Yard.
1920–21	158,865	7·42d.
1921–22	246,022	7·29d.
1922–23	440,092	8·20d.
1923–24	508,654	7·27d.
1924–25	822,286	5·86d.
1925–26	856,653	6·32d.
1926–27	647,182	7·42d.
1927–28	652,413	7·32d.
1928–29	619,911	6·54d.
1929–30	595,565	6·25d.

No. 1 Priestman dredge worked during the month of May, 1929, on the Awaiti Canal, and early in June was transferred to Auckland on loan to the Public Works Department. For this purpose the dredge had to be taken through the Awaiti Canal bridge, necessitating the removal and replacement of the central span. The plant returned from Auckland in November, and after overhaul commenced work in the Piako River above Kaihere, where it has been practically continuously employed. While on the Hauraki Plains Works the dredge excavated 13,156 cubic yards. The unit cost was 14·17d., but this figure includes interest and depreciation for one year though the actual working-time was 96½ days.

No. 2 Priestman dredge, working in the Maukoro Canal, completed the primary cut to the Torehape Road by June, 1929. The dredge was then turned, and by January, 1930, had worked back to the upper dam, deepening the canal for a distance of two miles and three-quarters. The peat along this reach varies between 17 ft. and 24 ft. in depth, and, as there has so far been very little bank caving, further deepening of the canal is being attempted with a view to winning sufficient clay for ballasting temporary roads on each side of the canal. The drainage provided by the canal will bring about the consolidation and decay of the peat. When sufficient clay can be won from the canal for the formation of development roads and the land can be used for grazing, the process of bringing this large peat area into a state of production will be considerably hastened. The dredge output for the year was 69,367 cubic yards, and unit cost 6·06d.

No. 6 Priestman dredge was employed pulling willow-stumps on the eastern side of the Piako River below Ngatea in April, and deepening the channel in the same locality in May, 1929. During June, July, and part of August the plant was laid up for repairs to hull and machinery. When recommissioned the dredge commenced deepening the river-channel between Kaihere and Kerepeehi, but was idle for a period of about four weeks in January and February, when the crew was temporarily transferred to No. 11 dredge in the Awaiti Canal. The total excavation for the year was 10,144 cubic yards, and the cost per cubic yard 25·80d. This exceptionally high unit cost is accounted for by the fact that hard material was encountered on the river-bottom, and it includes all charges while dredge was idle and engaged on removal of willow trees and stumps.

No. 11 Kingston dredge was engaged during the period April to August, 1929, deepening the Awaiti Canal and widening and deepening the Intercepting Canal. In August the crew was transferred to No. 6 dredge, and this plant has been idle, with the exception of four weeks' work in the Awaiti Canal in January and February. The total excavation was 27,228 cubic yards, and the cost, including interest and depreciation during time dredge was idle, was 11·29d. per cubic yard.

No. 15 Bucyrus drag-line excavator was employed during the first ten months of the year building the stop-bank on the northern side of the Elstow Canal for the protection of the area known as the Kerepeehi Block. This machine had to work on exceptionally wet and boggy country, and the fact that two shifts were able to work practically without interruption during winter and summer is a tribute to the skill and resourcefulness of the operators and the adaptability of this type of machine. In February last the machine was shipped to the Intercepting Canal, where it will be used to further raise the stop-bank on the northern bank of the canal. This has been a particularly troublesome section of embankment, owing to the poor bearing value of the foundation on which it must be built, and the gradual raising of the bank is the only feasible method of building it to the required height. Throughout the year the dredge was operating with 50 ft. boom and ½ cubic yard bucket. The total output was 143,558 cubic yards, and the cost per cubic yard 5·28d.

No. 16 Bucyrus drag-line excavator has worked two shifts continuously, building stop-bank on the western side of the Awaiti Canal between peg 2 miles 30 chains and 5 miles 70 chains. No difficulty was experienced in completing the bank in one operation to peg 4 miles 40 chains, but from this point, owing to the occurrence of slips, the embankment had to be reduced to half required height. No difficulty is anticipated, however, in raising the partially constructed section of embankment after allowing for consolidation. Using a bucket of ½ cubic yard capacity, this machine handled 110,053 cubic yards of material, at cost of 6·79d. per cubic yard.

No. 19 Michigan dredge, which has not been in use on these works since it was loaned to the Public Works Department in December, 1926, has been recommissioned after extensive alterations. The machine is now equipped with 60 h.p. gasoline engine, new superstructure, and long-reach boom which gives a working radius of 100 ft., using 1 cubic yard bucket. The plant is now being used for widening and deepening the Piako River upstream from the 6 mile peg. The required top width of the