of an intermediate low-grade gravel zone through which it was necessary to dredge in order to reach higher-grade ground extending to the east of the area being worked. Operating-costs work out for the period at 3·8d. per cubic yard of gravel treated. The figures mentioned cover dredging-work, bush clearing and stumping, electrical energy, machine-shop maintenance, and all overhead expenses. The dredge is in a satisfactory condition, and can still maintain a high output, irrespective of the fact that a contemplated change-over to the new dredge during 1931 resulted in the limitation of expenditure as applied to repairs. The pontoon portion of the company's new steel dredge is about 75 per cent. completed. This is to be an all-steel structure, 110 ft. in length, 56 ft. wide, and 11 ft. deep. The pontoon or hull pontoon, which is divided into nineteen watertight compartments, is most substantially constructed, and is designed in such a way as to ensure that it will adequately resist the maximum stresses likely to be encountered when viewed from past years' dredging experiences. The main superstructure, both longitudinal and transverse trusses, and housing also, are likewise of substantial construction, well braced in all directions to withstand the digging-shock usually met with in dredging gravel of the type found at Rimu Flat. Digging-ladder, stacker, and spud will be entirely new, and much stronger than similar equipment on the present dredge structure. The main digging-motor on the new dredge will have a capacity of 300 h.p., as against a 200 h.p. digging-motor in use, thereby necessitating a corresponding increase in all shafts and gear operated by it. The revolving screen used in the washing and sizing of the gravel will be entirely rebuilt, and all parts that have heretofore shown weaknesses in same will be strengthened. The Kanieri Electric, Ltd., is erecting a new 1,800 h.p. hydro-electric plant in order to supply the additional electrical energy required to operate the new dredge, and with ample power then available it is expected that the yardage treated will be increased by 15 per cent., thereby bringing about a substantial reduction in operating-costs, and also permitting of the treatment of lower-grade gravels than has hitherto been possible. It is hoped to have the new dredge completed and in operation by the 1st July, 1931. The average number of men employed throughout the year was fifty.

Okarito Five-mile Beach Gold-dredging Co., Ltd.—During the year this company has been actively engaged in transporting pipes for the main line and dredging machinery from Okarito to the claim. The heavier portions of the machinery, consisting of the main ladder (in sections), top and bottom tumblers, and crown wheel, were taken along the sea-beach with a team of nine horses. This work was accomplished under the most difficult conditions imaginable, horses and wagon at times being completely enveloped in the breakers when passing outreaching sections of rock. The pipes and lighter portions of the machinery were sledged over a steep and narrow track through heavy bush country to a point at the Three-mile Creek, and thence along the sea-beach to the claim. The laying of the main pipe line from Lake Alpine to the claim was completed in May. The length of the line from the lake to where operations will be commenced with the dredge is 14,460 ft., and the height of the lake above the claim is 314 ft. In June a commencement was made with a small hydraulic elevating-plant to open out a paddock alongside where the dredge pontoons were built, in which the dredge, when completed, will start work. The opening-up of the ground in the manner described has resulted in the winning of gold to the value of £1,810. The pontoons for the dredge were completed early in December and successfully launched—the paddock having previously been cleared of the elevating-plant and afterwards filled with water. The erecting of the gantry and heavy framing for the machinery was proceeded with immediately the pontoons were launched. It is expected that the dredge will be ready to start operations about June, 1931. The hydraulic elevating-plant has been removed to a site some 27 chains to the north of its original position, where it could be kept at work without affecting the water-level in the dredge paddock. The necessary trestle and boxes were erected, and bottom had been reached with the elevator in its new position when work ceased at the end of the year. It is intended to continue operating the elevator until the water is required for working the dredge. Motive power for the dredge will be derived from four pelton wheels on board. A large spread of gold-saving tables will be provided, and the tailings (consisting for the most part of black sand) will be stacked some distance astern of the dredge by means of a hydraulic elevator so designed that the water used in conveying the tailings to where they will be discharged will be returned to the paddock through a pipe-line of the required diameter. An average of twenty-two men was employed throughout the year.

Alluvial Mining.

Mahakipawa Mine (Mr. G. W. Lowes, Manager).—No production work has taken place at this mine for the period under review. Boring was, however, resorted to during the early part of the year, but nothing greatly important was proved in connection therewith, though one hole, out of a fair number sunk, gave highly payable values. Mr. K. M. Barrance, mining engineer, inspected the property in August, and afterwards made a comprehensive report thereon. The work referred to involved the unwatering of the mine so as to permit samples of wash-dirt being taken from the various drives and faces, and absorbed in all a period of eight days. As a result of the examination made, Mr. Barrance came to the conclusion that the wash-dirt followed the south-east drive, then crossed over the south drive, and lay to the west between 240 ft. and 300 ft. south of the shaft crosscut. He further concluded that good-grade dirt existed in the wing drive just started east of the main south-drive face. A truck of dirt taken from the point mentioned returned 1 oz. of gold. Mr. Barrance's report received due consideration by the shareholders of the company, and as a result thereof it was decided to raise capital so as to enable mining operations to be resumed in January, 1931. In the meantime the directors took appropriate action in the Warden's Court for the district, and were successful in obtaining the forfeiture of several road claims that separated an eastern and a western area respectively, which latter comprise the company's two holdings. One of the claims forfeited had been held for twelve years, during which practically no mining had been done on it. Its near vicinity to the Mahakipawa mine restricted development work to the west.

Collingwood (Rocky River, Takaka, &c.).—Seven men were employed, winning 94 oz. 2 dwt. 12 gr. of gold, valued at £354 0s. 9d.

Marlborough (Deep Creek).—Two men were employed, winning 46 oz. 17 dwt. 3 gr. of gold, valued at £178 6s. 3d.

Howard Diggings.—Returns to hand show that nine men were employed, winning 178 oz. of gold, valued at £681 2s. 10d.

Murchison (Matakitaki, Maruia, and *Lyell).*—Three men were employed, winning 24 oz. 7 dwt. 2 gr. of gold, valued at £93 18s. 10d.

Westport (Charleston, Birchfield, &c.).—Four men were employed, winning 154 oz. 2 dwt. 5 gr. of gold, valued at £550 16s. 4d.

*Reefton (*including *Blackwater* and *Merrijigs, &c.).*—One hundred and three men were employed, winning 46 oz. 11 dwt. 16 gr. of gold, valued at £185 1s. 1d.

*Grey (*including *Ahaura, Barrytown,* and *South Beach).*—Two men were employed, winning 136 oz. 14 dwt. 9 gr. of gold, valued at £531 16s. 9d.

*Kumara (*including *Stafford, Greenstone,* and *Callaghans).*—Fifteen men were employed, winning 599 oz. 10 dwt. 7 gr. of gold, valued at £2,442 10s. 11d. The principal producers were the Hohonu Sluicing Co., at Greenstone, with 300 oz., valued at £1,178, and Stubbs and Steel's claim at Maori Point (Greenstone) with 187 oz., valued at £736.

Hohonu Gold Sluicing Co., Ltd. (Mr. J. A. Peever, Manager): Six men employed. Sluicing operations at this claim were curtailed through several breaks in the head race (fourteen miles long) and the collapse of fluming connected with same. These defects were due to the after-effects of the earthquake of June, 1929. There were 230,500 cubic yards of gravel sluiced in 1,620 hours, or an average of 142 yards per hour; 300 oz. of gold were won, worth £1,178, thus showing values of 1·02d. per cubic yard treated. A higher value is anticipated for the succeeding period, as shallower ground will be sluiced. The output also is confidently expected to be higher.

*Hokitika (*including *Rimu, Arahura,* and *Blue Spur).*—Nineteen men were employed, winning 179 oz. 3 dwt. 4 gr. of gold, valued at £697 4s. 5d.

*Ross (*including *Okarito, Waiho,* the *North Beach,* also the *Three* and *Five Mile Beaches, South).*—Eight men were employed, winning 163 oz. 17 dwt. 2 gr. of gold, valued at £626 12s. 11d.