

Stafford Dredge, Westland County (D. McRae, Dredgemaster).—This electrically driven 8 cubic feet bucket dredge operated throughout the year and treated 419,562 cubic yards for 2,185 oz. 5 dwt. 1 gr. of alluvial gold, valued at £16,660. Since the commencement of operations 6,207 oz. 11 dwt. 2 gr. of gold, valued at £48,684 10s. 10d., has been won, and the sum of £3,750 paid in dividends. The average number of men employed during the year was sixteen. The average depth of ground dredged was 33 ft.

Rimu Dredge, Westland County (F. B. Lewis, Dredgemaster).—During the year this electrically operated 12 cubic feet bucket dredge operated consistently and treated 2,590,990 cubic yards which yielded 13,419 oz. of alluvial gold, the estimated value being £116,745. Since the commencement of operations 201,363 oz. of gold, valued at £1,136,633, has been won. The amount paid in dividends during the year was £20,834, making a total of £119,550 since the commencement of operations. During the year the average number of men employed was forty-three. The dredge worked a superficial area of 31,627 acres to an average depth of 51 ft. The total operating-time was 6,538 hours 3 minutes, or 88 per cent. of the possible: 396 cubic yards per hour were excavated and treated. The dredge worked steadily up the flat towards Rimu Township and encountered coarser and more tightly compacted gravels. The total connected horse-power of the electric motors is 922.

Okarito Five Mile Beach Dredge, Westland County (D. A. Mitchell, Dredgemaster).—During the year the dredge employed an average of nine men and treated 294,000 cubic yards for 1,239 oz. of alluvial gold, valued at £9,098: the sum of £2,333 6s. 8d. was paid in dividends. Since the year 1931, 13,776 oz. 9 dwt. of gold, valued at £89,862 6s. 3d., has been won, and £33,833 6s. 8d. paid in dividends. The dredge is operated by water-power: the built-up buckets have all been replaced with 5 cubic feet one-piece buckets with manganese-steel lips. During the year the bucket-well was punctured and the consequent influx of water resulted in the dredge sinking. The refloating of the dredge and repairs to both the hull and the digging ladder, which was badly damaged when the dredge sank, was responsible for a loss of eight weeks' dredging-time. The average depth of the ground dredged during the year was 21 ft.

Gillespie's Beach Dredge, Westland County (Geo. Pettigrew, Dredgemaster).—During the year this 5 cubic feet bucket dredge treated 548,911 cubic yards and recovered 2,463 oz. 16 dwt. of gold, valued at £20,758 12s. 3d. The amount paid in dividends during the year was £5,833 6s. 8d. Since the commencement of operations 8,536 oz. 13 dwt. of gold, valued at £67,440 0s. 10d., has been won, and the sum of £18,083 8s. 11d. has been paid in dividends. The average number of men employed during the year was fifteen. The dredge is electrically operated, power being supplied by the company's own hydro-electric plant. The average depth of ground was 27 ft. The construction of a new road to replace the pack-track from the Cook River Road to Gillespie's Beach (a distance of approximately 7½ miles) was commenced during the year, and will be completed in the autumn of 1938.

DREDGE-CONSTRUCTION.

Grey River Dredge, Inangahua County (Grey River Dredging Co., Ltd.).—During the year construction of this company's dredge was commenced at Ikamatua. The dredge is to be of all-steel construction, and will operate on one spud only. The pontoon dimensions are: Length, 147½ ft.; width, 65 ft.; depth, 11 ft. The buckets are 16 cubic feet capacity, and the maximum digging depth will be 40 ft. below water-level. The dredge is to be electrically driven, and is designed to handle 4,500,000 cubic yards per year. An erection site and pond were prepared, and the construction of the pontoon began in September: twenty men were engaged on this latter work until the end of the year.

Ngahere Dredge, Grey County (Ngahere Gold Dredging, Ltd.).—During the year this company prepared a site for the erection of its dredge at Montgomery's Terrace, and also a road to the site about half a mile from the Moonlight Road. Four men were engaged in this work, using various hydraulic and mechanized equipment. Contracts have been let for the design and fabrication of the dredge, and fabrication of the pontoons had commenced by the end of the year. The dredge will be an all-steel electric dredge, operated with spuds, the pontoon dimensions being: Length, 170 ft.; width, 72 ft.; depth, 12 ft. The total weight will be approximately 2,600 tons. Bucket capacity will be 18 cubic feet, and the dredge is designed to dig 75 ft. under water and carry 25 ft. bank.

Blackball Creek Dredge, Grey County (Blackball Creek Gold Dredging Co., Ltd.).—During the year this company purchased the Brian Boru Dredge at German Gully and let a contract for dismantling and re-erection at an area near the confluence of Ford's and Blackball Creeks. The machinery and superstructure of the Brian Boru Dredge, but only portions of the pontoons, were used in the construction of the Blackball Creek dredge, the remainder of the pontoons being new. The overall dimensions of the wooden pontoons are: Length, 118 ft. 6 in.; width, 36 ft. 6 in.; depth, 8 ft. 6 in. The close-connected buckets are 5 cubic feet "Hadfields" manganese steel, and weigh ¾ ton each. Separate motors are provided for the bucket-line and ladder hoist, being of 155 h.p. and 55 h.p. respectively. The winch and screen are both operated by 30 h.p. motors. The remaining motors are: Stacker, 25 h.p.; high-pressure pump, 55 h.p.; low-pressure pumps, 20 h.p., and 15 h.p.; barge-pump 3 h.p. The total connected horse-power is 383. Power is being obtained from the Grey reticulation at 11,000 volts, and stepped down to 400 volts by a 250 kv.a transformer situated on shore. The bucket speed will be approximately twenty per minute, and the dredge will be head-line operated. The construction work was well advanced by the end of the year, and the dredge was scheduled to begin operating in March, 1938. From June, 1937, an average of fifteen men were employed by the contractor on this work.

Kanieri Dredge, Westland County (Kanieri Gold Dredging, Ltd.).—In June, 1937, work commenced on the construction of this dredge at Kanieri, and the pontoons were well advanced by the end of the year. The dredge is of all-steel construction, with 18 cubic feet buckets, and is designed to dig 85 ft. below water-level in addition to carrying a face of 30 ft. above water-level. The dimensions of the pontoons are: Length, 186 ft. 8 in.; beam, 72 ft.; depth, 11 ft. aft and 12 ft. bow. There are 107 buckets at 3 ft. 5 in. pitch in the bucket-line. The revolving screen will be 54 ft. long by 9 ft. diameter and set at a slope of 1¼ in. to the foot. Gold recovery will be by Bendelari jigs and riffles. The dredge will be electrically driven and spud operated. The average number of men employed on dredge-construction was thirty-eight: during the first half of the year fifteen men were employed on excavating the dredge pit and preparing the site for construction.

Arakura Dredge, Westland County (Arakura Gold Dredging, Ltd.).—Towards the end of the year the construction of this dredge was begun at the Arakura Valley. The dredge is a sister-ship to the Kanieri Dredge, and the same dimensions apply. The capacity of the dredge is estimated to be 4,800,000 cubic yards per annum. The men employed on construction work numbered twenty-five: in addition to these, twelve men were employed in the preparation of the dredge pit and construction site.

ALLUVIAL MINING.

Marlborough County.

Alluvial mining in this county is restricted to that carried out by men subsidized by the Employment Division of the Labour Department. Work of this class is chiefly confined to the Deep Creek and Wakamarina River beds during periods of water shortage and on the terraces when the races are carrying their normal flow.

Sparkes and party working from a shaft 70 ft. deep at the head of the Mahakipawa Valley are meeting with fair success in driving out the lead left between the King Solomon and Hibernian mines.

Seventy-seven men were employed in the county and won 213 oz. 9 dwt. 15 gr., valued at £1,498 10s. 3d. *Waikakaho Deep Lead Gold Mining Co.* (R. C. Ruffin, Manager). The company commenced sinking operations towards the end of the year through schist rock on the eastern side of the stream and approximately 300 ft. from the gold-bearing gutter. An attempt to sink over the lead and through alluvial cover was not successful owing to an influx of water, but no difficulty should be experienced in reaching the gutter from the rock shaft now under construction, and the crosscut from shaft to gutter will be for most of its distance in rock, consequently pumping will be reduced to a minimum. A three compartment shaft 11 ft. 8 in. by 4 ft. 6 in. is down 50 ft., and the head gear and winding-plant will be erected early in the ensuing year.