

Homer Mine.—D. Absalom, manager, and two men carried out the driving of a low-level crosscut and construction of a rise for a syndicate which has an option over the mining privileges held by the manager. The crosscut, which is a new level 100 ft. vertically below No. 2, was advanced 126 ft., and according to survey the lode channel should be cut at 190 ft. from the new No. 3 level. The amount of ore between No. 2 level and the outcrop that is available for stoping will be considerably increased by the development of the new level. A rise 75 ft. in height was put up between Nos. 2 and 1 levels on ore averaging 3 ft. in width. No ore was treated during the period under review. The total amount of gold won from this mine up to date is 162 oz. 3 dwt. 9 gr., valued at £791 3s. 6d.

Lankey's Creek (T. C. Watts and Party).—This party of four men, assisted by the Department of Labour, is developing a section of the auriferous cemented gravels which cover a fairly extensive area between the Inangahua River and Murray Creek. An air-compressor and rock-drills are to be installed, and the substitution of this plant for hand labour will materially increase the output of rock and return of gold. During the year 205 tons of ore was mined, and 38 oz. 8 dwt. 3 gr. of gold, valued at £272 8s. 5d., was recovered therefrom.

Globe and Merrijigs Area.—From 1931, when Great Britain went off the gold standard, this area, with the exception of some prospecting on the Cumberland and Golden Lead leases, has lain neglected until October of this year. Following an extensive geological and geophysical surveying campaign, the Mines and Labour Departments collaborated in drawing up a prospecting programme that would entail an initial expenditure of £5,000. The work is now in progress under the joint direction of the Labour, Scientific and Industrial Research, and Mines Departments. Twenty men are engaged on this scheme under the direction of a mining engineer.

Diamond-drilling.—In addition to the foregoing work, the Consolidated Gold-fields of N.Z., Ltd., has constructed a road and laid out sites for three deep boreholes on the Globe area. The latest type of diamond drill was imported by the company, also a drill superintendent with a lengthy experience of deep diamond-drilling in many parts of the world. At the end of the period all plant was in position and drilling had commenced. The Mines Department granted a substantial sum towards the cost of this project and the borehole sites were chosen after careful examination by the company's officials and members of the Mines Department and of the Geological Survey Branch of the Scientific and Industrial Research Department.

Grey County.

Lode mining in this County has been restricted to prospecting in the Ten-mile Creek, Garden Gully, Moonlight Creek, and Langdon's Creek. The reopening of several old drives is in progress; some driving is also being carried out to prove at lower levels exposed outcrops and others that were exposed by trenching.

Westland County.

Bierwirth's Gold Reefs, Ltd.—W. O. Bierwirth, manager, with nine employees, mined 286 tons of ore and recovered by amalgamation 157 oz. 8 dwt. 9 gr. of gold, which realized £1,101 6s. The total quantity of gold won from this mine since the commencement of operations by the present company amounts to 2,075 oz. 19 dwt. 9 gr., valued at £10,571 3s. 8d., making the amount produced from the mine since 1917, when it was operated by the Mount Greenland Gold Quartz Mining Co., Ltd., 4,106 oz. 13 dwt. 14 gr., valued at £18,679 3s. Work in the mine has been confined to stoping the tonnage mentioned from No. 2 level. A new company is being formed with the object of mining on a larger scale.

Lode Prospecting.—Two parties, each consisting of a geologist and seven prospectors, have been organized by the Mines and Labour Departments for prospecting selected areas in South Westland. While South Westland has attracted individual attention and efforts of prospectors from time to time, very little organized work has been carried out, and there are few mineralogical records of this part of the country. In November, 1936, one of the parties commenced an investigation of the country between the Main Alpine Range and the western coastline from the Paringa River south to the Moeraki or Blue River. The second party is scheduled to commence operations early in 1937 in the Waikukupa-Cook Rivers district. During the year reef prospecting was also carried out in the Taipo River Valley, Ross, Wataroa River Valley, and McDonald's Creek areas.

DREDGE MINING.

Mataki Dredge, Murchison County (T. B. Gillyooly, Dredgemaster).—This steam-powered dredge, with 7 cub. ft. buckets, operated throughout the year in the Mataki River; 416,548 cub. yards were dredged for a return of 1,723 oz. 12 dwt. 15 gr. of gold, which realized the sum of £12,577 1s. 3d. During the year dividends were paid amounting to £2,811 13s. 2d., making a total of £7,029 13s. 10d. paid since the commencement of operations; employment was given to an average number of seventeen men. The total quantity of gold won to date amounts to 5,890 oz. 8 dwt. 1 gr., worth £42,728 3s. 2d.

Mataki Junction Dredge, Murchison County (S. G. Lyon, Dredgemaster).—This diesel-electric powered dredge commenced operating early in 1936, and during the year treated 764,100 cub. yards for a return of 2,526 oz. 18 dwt. 9 gr. of gold, and 22 oz. 2 dwt. of silver, which together realized the sum of £18,656 8s. 4d. The average number of men employed during the year was sixteen. The average depth of the ground is 20 ft. The dimensions of the hardwood pontoon are—Length, 104 ft.; beam, 36 ft.; depth, 8 ft.; there are eight water-tight compartments. There are sixty-six manganese-steel 6 cub. ft. buckets moving at twenty-one per minute. Water is supplied by three pumps, direct-coupled to individual motors: Low-pressure pump, 150,000 g.p.m. against 50 ft. head, 55 h.p. motor; No. 1 high-pressure pump, 96,000 g.p.m. against 100 ft. head, 70 h.p. motor; No. 2 high-pressure pump, 27,000 g.p.m. against 100 ft. head, 23 h.p. motor. The screen is of the revolving single-shell type 37 ft. long by 6 ft. in diameter, perforated with $\frac{1}{4}$ to $\frac{3}{8}$ in. diameter holes. Gold-saving is effected by expanded-metal and coir-matting tables, the tails from which are delivered aft by long chutes and deposited above the screen-rejected debris. The power plant consists of a 400 volt 3-phase 50-cycle generator direct-coupled to a 5-cylinder 370 h.p. diesel engine, the plant being on board.

Workshop Dredge, Inangahua County (N. Curnow, Dredgemaster).—This diesel-powered 4 cub. ft. bucket dredge operated throughout the year, an average of fourteen men being employed. 452,220 cub. yards were treated for a return of 1,920 oz. 4 dwt. 3 gr. of alluvial gold, which realized £15,581 3s. 10d. During the year dividends amounting to £4,800 were paid making a total of £12,800 paid since the commencement of operations. The total amount of gold won to date amounts to 5,020 oz. 5 dwt. 17 gr., and the value is £39,276 9s. 10d. The average depth of ground dredged was 15 ft.

Mossy Creek Dredge, Inangahua County (Duncan McRae, Dredgemaster).—This electrically driven, four cub. ft. bucket dredge worked throughout the year, and treated approximately 600,000 cub. yards, which yielded 2,303 oz. 1 dwt. 8 gr. of alluvial gold, valued at £18,874 17s. 4d. During the year dividends amounting to £7,500 were paid, making a total of £11,250 paid since the commencement of operations. The average number of men employed during the year was twelve. Since the inception of dredging, 4,086 oz. 14 dwt. 23 gr. of gold has been won, worth £33,573 0s. 8d. The average depth of ground dredged was 11 ft.

Brian Boru Dredge, Grey County (W. B. Hepburn, Dredgemaster).—This electrically driven dredge was again put into commission during the year, but closed down finally on 11th December, 1936, after operating for three months. Ten men were employed while the dredge was working, and the average depth of the ground was 35 ft. The alluvial gold won during the year amounted to 43 oz. valued at £316 16s. 9d. Since the commencement of operations 2,633 oz. 11 dwt. 16 gr. of gold has been won, valued at £20,655 1s. 4d.