

Perseverance No. 2 Level: From the 635 ft. mark in Perseverance-Golden Treasure crosscut the lode-channel was driven on for 245 ft. north. Owing to the northerly pitch of the ore-body developed in the upper level, the extension of the low level will be necessary to exploit the ore-bodies overhead.

Golden Treasure Mine: The crosscut was extended 957 ft. for the period, and the face is now 1,592 ft. from the portal, leaving approximately 200 ft. of driving to reach the Treasure shaft, which is 308 ft. deep and contains water to within 20 ft. of the collar-set. The State prospecting scheme gave continuous employment to an average of twenty men, most of the underground work being carried out on contract at the usual rates prevailing in the district.

Diamond Drilling—The Consolidated Goldfields Co. on the Globe-Progress area completed No. 1 bore-hole, which could not be extended beyond a depth of 1,165 ft. owing to the loss of circulating water through fissured strata encountered at the depth reached. No. 2 hole was started early in the year, and at the end of the period had reached a depth of 1,278 ft. The drilling was carried on through difficult country and casing had to be used of sizes varying from 3 in. for 202 ft., decreasing to "E" casing of 1½ in. diameter. The Goldwater Mines Co. at the Homer Mine put in No. 1 hole at an angle of +5 degrees from the No. 2 level to prospect for a parallel ore-body. They reached a length of 86 ft. 8 in. through greywacke without locating ore. No. 2 hole was bored from No. 3 intermediate level at an angle of -75 degrees from horizontal for the purpose of proving the lode below this level. It reached a depth of 90 ft. and penetrated 12 in. of quartz at 72 ft. Both holes were 1½ in. in diameter, and the plant was driven by compressed air.

Grey County.

In this county lode-mining was restricted to prospecting operations at the Upper Moonlight Creek and Langdon's Creek in the Paparoa Ranges, and some surface prospecting at the Waikiti and Trent Rivers, Upper Ahaura district. The foregoing prospecting operations were all carried out under the gold-prospecting scheme of the Employment Division, Department of Labour. Reefs were investigated systematically in these localities, but the results in every case proved the lodes either too low in grade and/or lacking in continuity, and of insufficient bulk to be of economic value. Prospecting work was discontinued at Langdon's Creek in July, 1938, and at the Upper Ahaura in March, 1938; work at the Upper Moonlight will probably be completed early in 1939.

Westland County.

During 1938 there was no production of gold from lode-mining. Some lode-prospecting was carried out near the Seven-mile, Taipo Valley, and in the Totara Valley near Ross, the results in both cases being inconclusive.

Greenland Gold, Ltd., Mount Greenland.—This company took over the property formerly held by Bierworth's Gold Reefs, Ltd., and at the end of the year, after repairing the pack track, it was engaged in the erection of an improved battery and cyanide plant at the former mill-site below No. 2 adit level. No work was done at the mine during the year. Six men were engaged during the latter half of the year.

DREDGE MINING.

Mataki Dredge, Murchison County (T. B. Gillooly, jun., Dredgemaster).—This steam-powered dredge, with 7-cubic-foot buckets, was operated throughout the year in the Mataki River, the average depth being 17 ft. The average number of men employed was fifteen; 423,121 cubic yards were dredged and treated for a return of 1,745 oz. 8 dwt. 7 gr. of alluvial gold valued at £13,191 7s. 7d., and £1,405 16s. 7d. was paid in dividends. Since the commencement of operations this dredge has won 8,942 oz. 8 dwt. 8 gr., valued at £65,547 8s. 10d., and dividends total £8,435 10s. 5d. Towards the end of the year a series of heavy floods interfered with dredging. The dredge is now operating in the No. 3 area, and the time is approaching when river work will be finished and the dredge can operate in its own pond.

Mataki Junction Dredge, Murchison County (F. McFelin, Dredgemaster).—During the year this Diesel electric dredge, with 6-cubic-foot buckets, treated 953,000 cubic yards of gravel and recovered 2,756 oz. 4 dwt. of alluvial gold bullion valued at £23,137 10s. 3d.; and £2,500 was distributed in dividends. Since the inception of operations 8,368 oz. 3 dwt. 8 gr. of alluvial gold have been won, valued at £66,431 2s. 2d.; and £5,000 has been paid in dividends. During the year the average number of men employed was sixteen; the average depth dredged was 19 ft.

Workshop Dredge, Inangahua County (N. Curnow, Dredgemaster).—During the year the dredge treated 457,300 cubic yards of gravel, which yielded 1,732 oz. 15 dwt. of alluvial gold valued at £13,079 3s. 5d., the sum of £4,800 being paid in dividends. The average number of men employed was twelve. Since the commencement of operations 8,209 oz. 18 dwt. 17 gr. of alluvial gold have been recovered, valued at £64,055 1s., and the sum of £20,800 has been paid in dividends. The average depth of the ground was 12 ft. The dredge is driven by Diesel engine and is equipped with 4-cubic-foot buckets.

Mossy Creek Dredge, Inangahua County (A. Keith, Dredgemaster).—During the year this electrically driven 4-cubic-foot-bucket dredge treated 397,000 cubic yards and recovered 1,300 oz. 4 dwt. 8 gr. of alluvial gold, valued at £10,724 3s. 7d.; the sum of £1,250 was paid in dividends. Since the commencement of operations 6,852 oz. 12 dwt. 6 gr. of alluvial gold have been won, valued at £56,304 9s. 5d.; and £15,000 has been paid in dividends, this latter amount being equal to the original capital of the company. The average number of men employed throughout the year was eleven; the average depth of ground was 12 ft. During the year the company prospected 100 acres at the top end of the area above their special dredging claim; the shafts were stated to have disclosed an average depth of 12 ft., with satisfactory results.

Grey River Dredge, Inangahua County (A. Samson, Dredgemaster).—During the first eleven months of the year the dredge was under construction; the pontoon was launched on 23rd April, and actual dredging operations commenced on 3rd December. From that date until the 31st idem, the dredge operated 396½ hours, representing 71 per cent. of the possible digging-time, and worked a superficial area of 4,954 acres to an average depth of 27.4 ft., from which a total of 218,499 cubic yards of gravel was excavated. This yardage is equivalent to 551 cubic yards per digging-hour, but this yardage will be increased considerably when operations have reached a normal working basis. (Early in 1939 averages as high as 720 cubic yards per hour were attained during weekly runs.) During the period 438 oz. of bullion were obtained, the estimated value of which was £3,626 12s. 10d. The average number of men employed in dredging operations during the year was twenty-four. The dredge is of all-steel construction with 16-cubic-foot buckets, and electrically driven, power being obtained from the Greymouth reticulation, which is to be linked with the Coleridge generating-station early in 1939. The pontoon dimensions are—length 147½ ft., width 65 ft., depth 11 ft., and there are thirty-one watertight compartments; total weight of hull, 550 tons. The digging-ladder is 108 ft. 7¾ in. between centres and weighs 95 tons; the maximum digging depth is 40 ft. below water-level. The buckets are 16-cubic-foot capacity, and there are seventy-seven in the line, each weighing 1.7 tons with lip; the rate of discharge is twenty-eight per minute. The bucket-pins are 7 in. diameter and 38 in. pitch. The screen is 8 ft. 3 in. inside diameter, 47 ft. 7½ in. length overall, slope 1½ in. to the foot, and revolutions 7½ per minute. The size of the holes are constant throughout, ½ in. to ¾ in., but the density of the spacing is variable. The stacker-ladder is 144 ft. between centres, the conveyer-belt being 48 in. in width. Two sand-elevator wheels, each 12 ft. 8 in. in diameter, are fitted to elevate, if necessary, excess sand from the tail chutes to the transverse conveyers, which, in turn discharge on