

No. 15 Level: As soon as the north shaft had reached the horizon of No. 15 level, a pilot crosscut was driven east towards the reef, which was intercepted just before the end of the year. Samples of the reef when encountered gave an average value of 16.30 dwt. over a width of 13 in. The reef opened up in the lower levels continues to give very satisfactory values.

North Shaft: This shaft was sunk to 33 ft. below the horizon of No. 15 level, the total depth now being 2,633 ft.

Alexander Mine.—The solution of faulting problems (during stoping operations) on disconnected lenses of ore ultimately led to the exposure of an ore-body 190 ft. in length and averaging 4 ft. of payable ore. The ore won was principally from the stopes above No. 6 intermediate, and prospects of developing further ore reserves in the south end of mine and below the intermediate and main levels are greatly enhanced by the recent improvements of stopes going upwards to No. 5 level.

Big River Mine.—During the year No. 7 crosscut was advanced to a point where the ore channel was intercepted and a rise connection to No. 6 winze effected. The ore-body on this level was broken, and a comparatively small tonnage of ore was won between No. 6 and No. 7 levels, but fortunately values were consistently high and defrayed mining and developing costs. A winze was commenced in No. 7 to follow a rich shoot of ore and continued to a depth of 85 ft. At 88 ft. an intermediate level was driven south on ore for 12 ft., and further development from this winze will be carried out until No. 8 chamber is reached and this level repaired and extended. Repairs to main shaft between No. 7 and No. 8 levels were commenced.

Perseverance Mine.—A considerable amount of crosscutting and driving was carried out on No. 2 level, with disappointing results.

Golden Treasure Mine.—During the year nearly 1,000 ft. of crosscutting and driving were completed on the levels from the surface to No. 3 shaft level. In addition to the investigation and sampling of stopes that had been worked to a small extent by the former licensees, rising and sinking on an ore-body located when driving north on No. 2 intermediate provided additional data respecting the amount of ore available for treatment.

New Welcome Gold-mining Co.—After completion of 1,150 ft. crosscut and cutting on channel, this company carried out only a small amount of driving before suspending operations.

Grey and Westland Counties.

With the exception of small-scale prospecting in the Langdon's Creek area, Grey County, lode-mining operations in both counties received no attention.

Dredge-mining.

Grey River Dredge, Inangahua County.—This dredge, employing an average of thirty-one men, operated for 6,309 hours during the year, which was 84.9 per cent. of the possible working-time. An area of 108.47 acres was dug and 4,609,862 cubic yards handled with 16-cubic-feet buckets. A recovery of 6.52d. was effected.

Ngahere Dredge, Grey County.—This dredge ran a total of 1,737 hours, being 76.173 per cent. of the working-time available. An area of 18.88 acres was worked with 18-cubic-feet buckets in ground averaging 94.3 ft. Realization was 5.77d. and total cost 4.11d. per cubic yard.

Snowy River Dredge, Grey County.—This dredge commenced operations early in January, and completed a successful first year; 58.8 acres of ground were worked of an average depth of 14 ft., and out of the total possible working-time 86.2 per cent., or 7,244 hours, were worked.

Grey County.

Argo Dredge.—This dredge, operating 4½-cubic-feet buckets, dug 381,200 cubic yards from ground averaging 18ft. in depth.

Nemona Gold-dredge.—This dredge resumed operations after being overhauled, and dug with 4½-cubic-feet buckets 174,650 cubic yards. Owing to unsatisfactory returns, operations were suspended and the company went into voluntary liquidation.

Blackball Creek Dredge.—Digging was continued in 45 ft. ground.

Barrytown Dredge.—Dredging operations were carried on for 5,477 hours, this being 74.6 per cent. of possible working-time. An area of 66.1 acres was worked with 12-cubic-feet buckets of an average depth of 23.3 ft. and 2,490,000 cubic yards dug. Average recovery was 1 grain per cubic yard.

Red Jacks Dredge, Associated Gold Dredges, Ltd.—This dredge commenced operations in October, and up till the end of the year had treated 149,000 cubic yards.

Westland County.

Maori Gold-dredge.—Operating with 4-cubic-feet buckets, this dredge handled 326,500 cubic yards won from very tight ground with subsequent heavy expenditure for repairs in addition to a serious loss of dredging-time.

Rimu Dredge.—During the year this dredge, operating 12-cubic-feet buckets, worked 5,942 hours, this being 81 per cent. of the possible working-time. From 20.45 acres of an average depth of 56.9 ft., 1,877,288 cubic yards were handled. This dredge encountered extremely heavy and difficult digging at the eastern end of the property, conditions finally becoming of such a nature that early in the year the dredge had to be turned towards the south in order to avoid damage to the structure and machinery.

Kanieri Dredge.—This 18-cubic-feet bucket dredge worked 22.05 acres of ground of an average depth of 71.3 ft. in 5,150 hours, which was 70.1 per cent. of the possible working-time. The yardage treated was 2,539,000 cubic yards.

Arahura Dredge.—During the year, 30.98 acres of ground averaging 70 ft. deep were dredged with 18-cubic-feet buckets in 6,369 hours, equal to 86.7 per cent. of possible dredging-time, and 3,398,000, cubic yards were treated. The ground treated gave a return of 2.6 grains per cubic yard.

Okarito Five-mile Beach Dredge.—This dredge, operated by hydraulic power, dug and treated 160,610 cubic yards of auriferous blacksand.

Gillespies' Beach Dredge.—This dredge dug and treated 688,141 cubic yards of blacksand.

DREDGE-CONSTRUCTION.

Construction of the *Red Jacks Dredge* was completed, and operations commenced in October.

The *Marsden Dredge*, a duplicate in design and size of the former plant, was ready for a trial run by the end of the year.

The construction of *No. 1 Atarau Dredge* was well advanced when the year ended.

Owing to scarcity of labour and material, Associated Gold Dredges, Ltd., decided to concentrate on the completion of the three dredges mentioned above and defer the completion of *No. 2 Atarau* and *Mawheraiti* dredges until more favourable circumstances prevail.

The Slab Hut Dredge.—The construction of this dredge was well advanced by the end of the year.

White's Electric Dredge, which formerly operated at Barrytown, was dismantled and transported to a claim situated on the Big Grey River at Waipuna.

The construction of two large dredges on the *Taramakau* and *Mikonui* Rivers, Westland County, will not be undertaken until conditions return to normal.

ALLUVIAL MINING.

Buller County.

Addison's Flat Gold-mining Co.—During the year the company worked 20 acres of ground averaging 15 ft. in depth, containing 484,000 cubic yards. Improvements on the claim consisted of replacing the 7 in. pipe-line with 11 in. pipes, thereby raising the effective pressure from 75 lb. to 90 lb. per square inch, and an increase in volume from one and three-quarters heads to two and a quarter heads for sluicing purposes. Out of a total of nine and a quarter heads available, seven are used for the hydraulic elevator, which has a suction pipe 22½ chains in length when working at the limit of pressure.

Inangahua County.

Waitahu Gold-mining Co.—This company operated extremely shorthanded for the greater part of the year.

Mount David Sluicing Claim.—Two men were engaged in main water-race repairs for the whole year, the task of bringing in water having proved to be more formidable than was anticipated by the proprietor when operations commenced.