

Mullocky Creek workings and the McKay block, which is located adjacent thereto. Bull block: The intermediate level was continued on reef and driven to 60 ft. south of the prospector's winze, where the stone was completely cut off by a fault plane. The average value was £3 12s. 6d. per ton, and the width 45 in. Some 20 ft. below the intermediate the kindly grey rock hitherto prevailing gave place to a brown rock, at which stage the reef tapered and disappeared. The block described was subsequently stoped to the outcrop, and produced in all some 900 tons of good milling-ore. Firmiston block: This is a small make of reef situated between the Bull and McVicar blocks, which are about 12 chains apart. The block was traced for a length of 1 chain to the south, where it is cut off by a fault. At the north end it appears to pass into reef formation, where further work is required. The reef averages 3 ft. in width to a depth of 10 ft. below the outcrop, and then appears to pass into a low-grade formation. Some 200 tons of ore were sent to the battery from this block. McVicar block: This block furnished about 2,500 tons, or 68 per cent. of the ore sent to the mill. At the north end of the block there is evidence of considerable earth-movement in the form of a fault-line 2 ft. wide, which is filled with a dark-blue mineralized pug. The reef splits into stringers at the south end, and finally terminates in oxidized brown country in all levels and stopes above No. 3. Some values continue below the change in reef formation, and it is proposed to follow the outcrop south from No. 1 level in order to ascertain whether or not there is another make of stone between the McVicar and Firmiston blocks. At 40 ft., under No. 2 level, an intermediate was started on 6 in. of stone, and driven south of No. 1 winze for 110 ft. Stoping was subsequently carried out from this intermediate to No. 2 level. No. 3 level (entrance crosscut): A reef track followed at 30 ft. made into stone with values ranging from 15s. to £1 15s. per ton, over a width of 36 in. This stone was followed by a rise for 15 ft., where it disappeared, but on breaking the hanging-wall a companion section of reef was encountered. The rise is now up 28 ft. above No. 3 level in the hanging-wall make of quartz—width, 30 in.; value, 12s. per ton. Bruno block: No work has been done on this section during the year. McKay block: No. 1 crosscut was advanced 6 ft., making the total measurement 149 ft. from the entrance, where reef-matter, 36 in. wide, consisting of mullock veins and white mineralized quartz, was cut; value, 12s. per ton. Driving south from No. 1 crosscut was continued for 105 ft., with the stone gradually turning into reef-track. No. 2 rise was started at 90 ft. south of the crosscut and holed through to No. 2 winze, the distance from outcrop to level being 119 ft. The rise followed a reef-track, 12 in. wide, with a flat dip of 1 in 4 for the first 57 ft. At this point a head was encountered, and the track was replaced with a 6 in. reef carrying average values of £1 for the next 10 ft. The reef then widened out to 15 in., and values for the last 22 ft. of winzing averaged £3. Intermediate off No. 1 winze (this was put in on account of the flat dip in the reef): Driving has been advanced north 17 ft. and south 6 ft., with average values of £2 17s. and £1 6s. 6d. over 40 in. and 21 in. respectively. Northern outcrop (McKay), 40 ft. above No. 1 Mullocky Creek level: An outcrop on a spur (probably a continuation of the McKay reef) has been driven on for 19 ft.; average values, £1 7s. 6d. per ton; width, 36 in. At this point the reef made into two tracks, one running south-east and the other south-west. Driving on these has advanced 9 ft. and 13 ft. respectively. Downey's reef: A winze has been sunk thereon to a depth of 16 ft. This started on stone with a width of 60 in., but same rapidly diminished in size until it disappeared at 14 ft., where hard grey country came in. Value of stone, £1 7s. 6d. per ton; and average width of reef, 27 in. Mullocky Creek No. 1 level: A little stoping south of No. 1 rise on the Loftus reef has been carried out here. Values, £1 9s. 6d. per ton; and width of reef, 30 in. The reef-filling is very irregular in width, and consists of a series of splices of quartz, both vertical and lateral. The quartz and mullock in this section of the mine are too hard for hand steel. New tram-line: The northern part of the mine was connected to the battery by tram-line during the year. From the battery-hopper an incline tram-line rises 330 ft. in a distance of 14 chains. One-half the tramway is supported on trestles and the other half is benched out of a spur. A ground tram-line, 40 chains in length, leads from a hopper situated at the head of the incline to an exit tunnel from a large ground hopper below No. 1 Mullocky Creek level. The ground hopper can be filled direct from No. 1 Mullocky Creek level, and also by aerial connections laid to the McKay and Bruno sections of the property. The first aerial—that to the McKay block—delivers ore very effectively in 4 cwt. self-trapping boxes, over a distance of 12 chains, with a fall of 200 ft. Power plant: During the year the directors considered the question of installing a suitable power plant at the mine, together with a compressor, but, finances not permitting, the scheme was abandoned. Battery: The ten-head treatment plant has been kept running for two shifts daily over the greater part of the year; 3,686 tons of ore were crushed for a yield of 3,096 oz. 2 dwt. 10 gr., of which 2,457 oz. 2 dwt. 6 gr. were obtained by amalgamation and 639 oz. 0 dwt. 4 gr. by cyanidation, the value of the whole being £13,927 11s. 6d.

Homer Mine (Owners, Messrs. Harrison and Absalom).—This is a new mine situated at a distance of one-half mile (air-line) south of the Blackwater Mine, and in the vicinity of Quartz Creek. Operations thereat have been confined to driving two levels, 65 ft. apart, on a lode averaging from 2 ft. to 3 ft. in thickness, with values varying from good, to medium, and to zero. The levels referred to (Nos. 1 and 2) have been advanced south over total distances of 78 ft. and 170 ft. respectively, all on quartz. The lode is somewhat troubled at a point 100 ft. in from the surface on No. 2 level, and continues so, on the level mentioned, for 50 ft., then firms, but shows later signs of crush at the face. Both reef and enclosing country have a favourable appearance on No. 1 level. Values obtained from the former are low, however, especially so over the latter portion of stone exposed. The reef is most interesting in spite of general low average values, and is full worthy of considerable additional prospecting, both in a southerly direction and at depth. The erection of a five-stamp mill, together with an amalgamating table, is in progress on the property.

New Big River Mine.—This mine remained idle throughout the year. It is, however, understood that negotiations are in progress that might result in a resumption of operations in the ensuing year.

The North Big River, Progress, and Hercules Mines have been idle throughout the year.

The South Blackwater, New Millerton, and South Big River companies have gone into liquidation.

Wealth of Nations Mine.—No work of any description has taken place at this company's mine during the year. The mill, however, continues to operate on residues formerly dumped on account of the difficulty attached to treating same. Sands from the old Progress mill are also treated at this plant, satisfactory returns being obtained in both cases. The material treated amounted to 957 tons, from which 467 oz. 6 dwt. 14 gr. of gold were obtained, with a value of £1,259 18s. 1d. Six men were employed throughout the period.

Murray Creek Mine.—No work has been done at this mine during the year. Experiments, however, were made at the Thames School of Mines on respective representative samples of ore and sands taken from the mine and forwarded to that Institute. The experiments were undertaken in order to determine the best method of treating the ore, as its arsenic and antimony content had hitherto prevented it being treated at a profit, though contained values were satisfactory. As a result of the tests made it was concluded that the arsenic and antimony would require to be removed by roasting, either with or without lime, if the ore were to be treated successfully.

Westport District.

Britannia Mine.—No work of any description has been done on this company's property during the year.

DREDGING.

Rimu Flat Dredge.—This company's 10-cubic-foot dredge was in continuous operation throughout the year, several short periods excepted during which times necessary repairs were effected. Actual dredging covered 269½ working-days, or 6,464 hours, out of a possible 7,200 hours, representing 89 per cent. of the possible digging-time. The year's operations resulted in 2,055,096 cubic yards of gravel being won and treated from an area of 31·74 acres, over an average depth of 40 ft. From this material 9,840 ounces of gold, valued at £40,207, were obtained, which shows a falling-off in values of £6,763, or 0·79d. per cubic yard, when compared with the previous year's yield. This decrease in gross production was anticipated, as the results of borehole tests had shown the existence