

an infinitesimal, certainly, but still a profit on the cost of working. The output for the year has decreased as under; total gold won 1903-4, 1,669.48 oz., value £6,632 19s. 9d.; 1904-5, 1,524.80 oz., value, £6,062 6s. 2d.: a decrease of 144.68 oz., and £570 13s. 7d. Total expenditure in 1903-4, £4,375 5s. 10d.; in 1904-5, £4,558 4s. 3d.: an increase of £183 4s. 3d. The mean value of the cement treated this year as compared with last shows a serious falling-off, amounting to 1.095 gr. (2.168d.) per yard, while the cost of winning the gold increased from last year £2 12s. 6d. per ounce or 65.96 per cent. of its value, to this year £2 19s. 9½d. per ounce or 75.19 per cent. of its value—an increase of 9¼ per cent. The pump used for unwatering the mine in place of the last drain having been altered and improved on lines suggested by experiments made by the mine-manager, Mr. John Uren, during last year has worked very satisfactorily and at a much higher efficiency than previously, the percentage of water abstracted from remunerative work for the purpose of pumping being reduced by more than one-half. The record shows 605,061,000 cubic feet used for sluicing and elevating, and 21,260,300 cubic feet used for pumping—a total of 626,321,390 cubic feet of water for all purposes. The ratio of pumping water is therefore 3.391 per cent. against 7.787 per cent. last year, a substantial saving of 4.396 per cent. I do not anticipate that this ratio can be lowered. Last year's work produced 5 dwt. 7 gr. (£1 0s. 11d.) per hour; this year's work produced 4 dwt. 7 gr. (16s. 8d.) per hour—a very serious reduction of 1 dwt. 2 gr. (4s. 3d.) per hour. Pumping, 555 hours at 16s. 8d. per hour, £463 6s.; less 75 per cent., £347 9s. 6d.: leaving the cost of pumping, £115 16s. 6d. Cost last year, £250 13s. 11d.: a saving of £134 17s. 6d. for the year. Wages paid, 1903-4, £2,675 14s. 8d.; 1904-5, £3,001 1s. 2d.: an increase of £325 6s. 6d. It was found impossible to keep down the wages to last year's level. Unless an ample quantity of cement is broken to keep the sluicing-nozzles and elevators employed at their full efficiency while working, waste of time is unavoidable and loss consequently occurs, while inefficient working entails loss of water—the unpardonable sin in hydraulic mining. The head races have not proved either troublesome or expensive for maintenance. Water-supply for 1903-4, 636.9 eight-hour days; 1904-5, 903.5 eight-hour days: an increase of 316.6 eight-hour days. Pumping 1903-4, 1,382.6 hours (172 days); 1904-5, 555 hours (69.4 days): an increase of 827.6 hours (103.4 days). Water used in mine for sluicing and elevating: No. 1 Division—1903-4, 3,769 hours (471.1 days); 1904-5, 4,525 hours (565.6 days): No. 2 Division—1903-4, 1,726.5 hours (215.8 days); 1904-5, 2,703 hours (337.9 days): total, 1903-4, 5,495.5 hours (686.9 days); 1904-5, 7,228 hours (903.5 days). An increase over last year of 1,732.5 hours (216.6 days), but less than 1902-3 by 275.5 hours (34.3 days). The total increased supply due to variations in the rainfall, &c., as compared with last year amounts to 904.9 hours (113.2 days). The following is a statement of work and values for the year 1904-5: No. 1 Division—hours sluicing, 4,525; cement, 113,125 cubic yards; gold, 941.01 oz.; value per cubic yard, 3.9927 gr. (7.88d.): No. 2 Division—hours sluicing, 2,703; cement, 90,010 cubic yards; gold, 583.79 oz.; value per cubic yard, 3.1132 gr. (6.14d.): total—hours sluicing, 7,228; cement, 203,135 cubic yards; gold, 1,524.8 oz.; value per cubic yard, 3.603 gr. (7.11d.). Mean value, 3.603 gr. or 7.11d. per cubic yard."

*Kitt and Party's Hydraulic Sluicing and Elevating Claim, Munro's Gully.*—The cement is brought down as usual by large blasts. It is then broken up and sluiced through a long run of boxes. Nine men are employed.

*E. Brown and Party's Hydraulic Sluicing and Elevating Claim, Munro's Gully* (lately Mills and party).—An improved water-supply has been obtained, and sluicing operations are still being carried on in the bed of Tuapeka Creek with fair success.

*P. P. Thomas and Party's Claim, Munro's Gully.*—A large area of terrace ground has been sluiced away during the year with payable results.

*W. Hogg and Party, Tuapeka Flat.*—Area of claim, 30 acres, comprising terrace ground in the valley of the Tuapeka River. The necessary arrangements for putting plant on the claim are not yet completed.

*A. N. Wakefield and Party, Tuapeka Flat.*—It is proposed to generate electricity at the Blackcleugh Stream and transmit the current to the claim, where it will be utilised to drive pumping plant in order to elevate water on the Tuapeka terraces for sluicing purposes.

*John Roach and Party, Tuapeka Flat.*—This party holds a claim on Tuapeka Flat which it is intended to work by hydraulic sluicing and elevating. A water-race from Gabriel's Gully has been applied for and granted subject to compensation being paid to freeholders *en route*. Pending settlement of these claims operations have not been commenced.

*Dredging.*—Three dredges continue steadily at work in this district, while two were dismantled during the year.

#### Waipori.

*William Brown and Party's Sluicing Claim, Bungtown Flat.*—Sluicing operations have been continued throughout the year, but the plant being small and the water-supply poor only a limited area of ground has been turned over.

*Golden Padlock Hydraulic Elevating Claim, Mitchell's Flat* (J. Gare and party).—Four working shareholders find remunerative employment in this claim.

*Reef Creek Hydraulic Sluicing and Elevating Claim, Mitchell's Flat* (F. Sandager and party).—Sluicing operations were commenced during the year and continued for some time. The results obtained not being satisfactory the owners have sold the property to F. W. Knight, of Waipori.

*Farrell's Deep Lead Hydraulic Sluicing and Elevating Claim.*—This claim is now being worked on tribute by Richard Cotton, who has removed the sluicing plant to a portion of the claim on the Lammerlaw Creek. The ground is easily worked and, since starting, operations have been conducted with success.