

questionable if it would now recoup the expense of getting proper hydraulic plants to work the present faces.

There is a large area of ground in the upper portion of the Waimea Valley and also in the middle branch of the Waimea Creek which will pay for working as soon as the tail-race, which is now commencing to be constructed, and the extension of the branch of the Waimea Race, which is now constructed to Greek's No. 1 Gully, is completed, which means about one mile of race-extension. A party of miners has been working in the upper Waimea Valley for several years from a shaft, and driving out the ground, and when facilities are given for working it by sluicing on the hydraulic principle no doubt good returns will be obtained.

The main portion of the Waimea Race has now been constructed for about twenty years, and towards the upper end there is about 70 chains of high fluming, which is becoming so decayed that it costs a considerable amount annually to keep in such repair that it will carry water; indeed, the boxing is now so rotten that repairs can hardly be effected. This was referred to in my last report; and during last year a survey was made for proposed works which would do away with the most of this fluming by lowering the level of the ditch at the upper end of the long siphon. This siphon is over two miles in length, and 3ft. in diameter, and has a hydraulic gradient at the present time 1 in 155, and is capable of conveying more water than the open conduit can carry. It is proposed to reduce the gradient to 1 in 300, which will give it a carrying capacity of about thirty-four sluice-heads. This can be effected by taking off a quantity of the pipes on the upper end and constructing an open conduit at 40ft. lower level than the present run, which will do away with the most of the fluming. This work can be done for less money than replacing the present flume, and would reduce the annual cost of maintenance. Plans of this deviation are now prepared, and the work ready to let in small co-operation contracts. The estimated cost of this deviation is £2,300.

The extension of the branch to Callaghan's is now nearing completion: the ditching is almost finished, and the siphon across the saddle at the head of the Waimea Valley is expected to be completed in about six weeks. The contract price for the siphon, which is about 25 chains in length, is £489 11s. The actual expenditure last year on the whole of the Callaghan's branch was £672 6s. About one mile of extension will have to be undertaken from Greek's No. 1 Gully to bring the water to command the middle branch of the Waimea Creek Valley, so that the water can be in on the completion of the tail-race which the miners are constructing. These works being completed will insure a considerable increase in the revenue from sales of water from the Waimea Race.

The following statement will show the amount received from the sales of water, the expenditure on maintenance, and the approximate quantity of gold obtained by the men using water from the Waimea Race for the year ending the 31st March last:—

| Month.                | Sales of Water. | Cash received for Sales of Water. | Expenditure. | Outstanding Moneys at the End of each Month. | Number of Men employed. | Approximate Quantity of Gold obtained. | Value of Gold obtained. |
|-----------------------|-----------------|-----------------------------------|--------------|----------------------------------------------|-------------------------|----------------------------------------|-------------------------|
| 1894.                 | £ s. d.         | £ s. d.                           | £ s. d.      | £ s. d.                                      |                         | Oz.                                    | £ s. d.                 |
| April .. .. .         | 81 16 5         | 93 6 3                            | 129 12 11    | 56 15 5                                      | 65                      | 200                                    | 780 0 0                 |
| May .. .. .           | 113 2 1         | 118 1 0                           | 117 6 1      | 56 15 5                                      | 69                      | 280                                    | 1,092 0 0               |
| June .. .. .          | 96 9 2          | 87 15 9                           | 108 4 4      | 56 18 5                                      | 69                      | 240                                    | 936 0 0                 |
| July .. .. .          | 102 16 3        | 91 18 3                           | 101 11 7     | 56 15 5                                      | 66                      | 250                                    | 975 0 0                 |
| August .. .. .        | 98 9 7          | 99 11 8                           | 95 1 10      | 56 15 9                                      | 65                      | 240                                    | 936 0 0                 |
| September .. .. .     | 80 2 11         | 77 4 0                            | 107 19 7     | 56 15 9                                      | 69                      | 200                                    | 780 0 0                 |
| October .. .. .       | 71 11 3         | 77 12 0                           | 101 8 4      | 56 15 9                                      | 68                      | 175                                    | 682 10 0                |
| November .. .. .      | 97 13 4         | 85 12 6                           | 52 0 8       | 56 15 9                                      | 69                      | 240                                    | 936 0 0                 |
| December.. .. .       | 60 10 5         | 28 9 0                            | 59 5 7       | 56 15 5                                      | 72                      | 200                                    | 780 0 0                 |
| 1895.                 |                 |                                   |              |                                              |                         |                                        |                         |
| January .. .. .       | 67 12 1         | 97 2 0                            | 85 15 4      | 56 15 5                                      | 69                      | 160                                    | 624 0 0                 |
| February .. .. .      | 49 5 10         | 42 1 0                            | 43 12 1      | 7 15 3                                       | 72                      | 120                                    | 468 0 0                 |
| March .. .. .         | 68 11 3         | 43 12 0                           | 59 11 0      | 10 2 5                                       | 62                      | 170                                    | 663 0 0                 |
| Totals and average .. | 988 0 7         | 942 5 5                           | 1,061 9 4    | ..                                           | 68<br>Average           | 2,475                                  | 9,652 10 0              |

It will be seen the value of the sales of water for the past year amounted to £988 0s. 7d., as against £828 15s. 8d. for the previous year, thus showing an increase in the revenue last year of £159 4s. 11d. The expenditure on maintenance was £1,061 9s. 4d., whereas for the former year it amounted to £919 9s. 4d., showing an increase in the expenditure on maintenance last year of £142, and a direct loss on the working for the year of £73 8s. 9d. The average number of men employed last year in claims in which water from this race was used was sixty-eight, and the approximate quantity of gold obtained by those was 2,475oz., representing a value of £9,652 10s.; and by deducting the value of the sales of water from this amount it leaves the earnings of the miners employed in claims in which the water was used to be equal to £127 8s. 4d. per annum, or about £2 9s. per week. It has, however, to be borne in mind that this is not the actual earnings, as the cost of boxes, blocks, and tools has to be deducted from this amount. This cannot be correctly ascertained, hence this statement only shows what is left to the men working with water from the river after deducting the value of the sales of water from the total value of the gold obtained. The total cost of this work up to the present time is £131,569 3s. 2d.

#### KUMARA WATER-RACE.

This has been one of the best-paying branch races constructed by the Government; but the upper end of the field, where the ground was first taken up, is gradually getting washed away; and, in order to utilise the available water that the water-race is capable of convey-