

will pay them; but the finding and opening of payable claims becomes more and more difficult and costly every year, not solely on account of there being less ground previously prospected, but because the shallow and easily-worked fancy places in the immediate neighbourhood of the rich old leads are nearly all washed away, leaving only new unprospected ground to be tried, which, as a rule, requires strong hearts, much faith, and much time to ascertain if it be of any value. So far the opening of entirely new ground creates a feeling of depressing uncertainty of favourable results. The long tail-race (tunnel and open cutting) from near Drennan's farm to Cloughsey's paddock, which I referred to in my report of last year, is still in hand, but has not been under construction during much of this time. When the party had completed about 26 chains of open cutting and about 27 chains of tunnelling without finding any gold, the want of funds induced them to take a road contract of 84 chains, out of which they hoped to make enough money to enable them to complete their tunnel. Having lately successfully carried out the contract, they have resumed the tunnel work, which is now within about 600ft. of the paddock, where it is calculated to be about 23ft. below the surface, and more than deep enough to drain the ground, the drainage from which is very heavy.

The flat lowest down the creek, and which was formerly the tailing-site for Try-again Terrace, has lately been taken up in two claims, of a total area of fifty-six acres, by Edward Hailey, who purposes forming a company to work it by Perry's hydraulic system, and to get the necessary quantity of water from the Government race, which is about 360ft. above the level intended to be worked. This pressure, with a large and thoroughly good plant, should put through a great quantity of *débris*; and, as the ground in places is known to be good, there is a fair prospect of the venture turning out a success and a profitable investment.

The Brian Boru claim, referred to in my last annual report, has turned out almost a complete failure. There is just now some talk of giving it another trial. Mr. Roche's claim, in the bed of No. 3 Creek, has not, up to the present, proved an unqualified success. There are, however, some grounds for expecting better returns when the work approaches Welshman's Creek.

During the year there have always been two, and some of the time three, men constantly renewing the very bad parts of many of the bridges. Wherever renewals have been made the bridges may be considered good for the next three or four years; but much of the flume-planking will require renewing during that time. I think there are now only four bridges that may be classed as dangerous, and all possible haste is being made by the maintenance-men to renew the most important parts of these to prevent an accident. The timber in many of the tunnels is being constantly renewed, and may be considered in fairly good order. The ditching is in good order throughout the length of the race, as also all non-timbered tunnels. Trial water is still being given from time to time, in the hope of opening out more payable ground. When a payable block is found there is no certainty as to how long it will continue to pay. I therefore find it most difficult to estimate even, approximately, the amount of revenue for the year.

The Under-Secretary, Mines Department, Wellington.

I have, &c.,

J. Gow, Manager.

No. 21.

Mr. D. DOYLE, Manager, Argyle Water-race, to the UNDER-SECRETARY of MINES.

SIR,—

Charleston, 4th April, 1888.

I have the honour to forward report for the twelve months ending the 31st March, 1888, on the working of the Argyle Water-race.

The receipts have not come up to the expectations at the beginning of the financial year, owing to several causes, although the average number of days worked were an increase on last year.

On the 12th April I had to stop the water at Ballarat Creek siphon owing to one of the slip-joints blowing the packing, and the water getting behind the timber in the tunnel, bringing down the sides and slabs, which caused a delay of two days to get repaired again, as we had all the tunnel for two chains to clear out before we could get at the blow, and had to pass the whole of the *débris* up through a small man-hole in the top of the tunnel.

On the supply-races during this month extensive repairs had to be made, owing to a landslip which carried away a portion of the race and flume.

In the last week in June a break occurred in the syphon across Ballarat Creek, which carried away the whole side out of the pipe; this happened at a place where the pressure was not so heavy by 30lb. to the square inch as that on lower portion of the syphon. This took three days to repair, owing to its being on a high scaffolding and very hard to get at. The scaffolding being at the time frozen over made it dangerous to work on.

During this month (July) one of the tunnels on the new portion of the race caved in, and caused the water to overflow and carry away a portion of race, which had to be flumed, causing a stoppage of three days while repairing it. I may say along this portion of the race, whenever a break happens, the whole trouble is getting the timber, as it has to be carried a distance of about three-quarters of a mile, before reaching the race, along a very steep and difficult track.

During September another break occurred in the Ballarat Creek syphon, which necessitated the stoppage of the water in the race for a few days in order to effect repairs. These breaks, although not extensive, together with bad weather, which prevents the miners from working their claims, have, to a certain extent, reduced the revenue, besides increasing the expenditure.

The average time worked by men taking water from Aryle Water-race during the year ending the 31st March, 1888, was 97.29 days per man—slightly over last year.