

*St. Bathans.*

*Cambrians.*—There has been a considerable quantity of gold obtained at this place, but the best portion of the ground is, no doubt, worked out, at the same time it is believed by a number of miners that there is a considerable area of good ground that would pay well for hydraulic-sluicing if properly carried on. The want of a good supply of water here is the great drawback, the same as in many other localities; indeed, there is not a field in the colony where a plentiful supply of water has been brought on to the ground. There is only one party of Europeans—Fordam and party of three men working in the gully—who use three sluice-heads of water. They are working ground higher up than the former workings, and getting much coarser gold than was formerly obtained. The same quartz-drift wash occurs here as at Tinker's, Matakani, and St. Bathans. In the lower end of the gully there are some parties of Chinese at work, who are said to be doing very well, but they have a very indifferent method of working.

*Vinegar Flat.*—There are four parties of miners working in Vinegar Flat—namely, Watson and party, three men; Morgan and Hughes, two men; Morgan and party, three men; and Davis and party of three men. Each of these parties have water-races of their own; but, with the exception of Watson and party, who are said to have averaged about £5 each per week, the rest have only made small wages. The average depth of ground worked here last year was about 18ft.

*Vinegar Hill.*—The only claim being worked here is that of Mr. John Ewen, who makes mining a specialty, and uses all modern appliances to work the ground to the best advantage. Every mining claim he is interested in is carefully prospected before laying out any money on plant; but after this is done, and he is satisfied with the results, no expense is spared in placing a good hydraulic-plant on the ground, and he is always careful to see that a fair supply of water is available. The consequence of this is that every claim he takes up, where he can superintend the working of it, he has made it a successful mining venture. Since my last visit to Vinegar Hill he has purchased the water-race he formerly used to rent, and cut it at a higher level, so that now he has about 280ft. of head or pressure at his workings. He has also substituted a new line of pipes, 15in. in diameter, for the former one, which was only 11in. in diameter, and has a supply of water equal to about ten sluice-heads. The ground he is working is about 70ft. in depth, consisting of a greenish clay mud full of small spiral shells and vertebræ of fishes. It is an exceedingly tough substance when first broken down, but after lying exposed to the atmosphere for some time it crumbles and melts away with the water. The whole of this 70ft. of overlying deposit on the auriferous wash-drift has to be removed before any gold is obtained, the wash-drift consisting of from 6in. to 1ft. of quartz-gravel. Anyone looking at the face of these workings, and seeing the ground stand in a perpendicular face, if they were not acquainted with the character of the material, would think it almost impossible to dispose of it fast enough to be able to get a sufficient area of the auriferous wash-drift to pay for the expense of running off the top stuff. The tail-race is not sufficiently deep to be able to run away the material in the ordinary manner; it has to be lifted for 25ft. by a hydraulic-elevator. In order to prevent any rubbish or large stones from getting into the elevator, there is a grating round the end of the pipe. The elevator used is fitted with Robinson's patent atmospheric nozzles, which leaves an equal space all round the end of the elevator, and not the same as those used in the Valley of the Clutha and elsewhere, with the opening all at one side. From the time of commencing to work, after the frost in winter, to the time of my visit in January last, Mr. Ewen had obtained 180oz. of gold, but he has not been able to wash up the main paddocks this year. The only gold obtained has been from the tail-boxes. There is about one acre stripped in each paddock, ready to take up the wash-drift, where it is expected to yield 800oz. of gold. There are eight men employed in connection with the work.

*St. Bathans's Sludge-channel.*—This channel has been in course of construction for the last six years, and is still a good way from being completed. During the last year they have been working at the head of the channel, running off the top stuff; all the material is washed down a tail-race and over a wide set of tables covered with cocoanut matting. They have taken out the upper portion to a width of 200ft., and after this season the different companies at St. Bathans will be able to utilize this tail-race, but it will yet take some years to construct it to the proper depth. In its present state it will allow the claims to be worked to about 25ft. deeper level than formerly. About 350ozs. of gold has previously been obtained in the construction of this channel, in addition to 450ozs. for this season. The channel is being constructed jointly by the claimholders, but as each of these have different interests, a company was formed in a certain number of shares, and the shares allotted to each individual according to the interest he held, and to the extent he was considered to be benefited. The year's returns of gold last season are very encouraging to those who hold claims in this basin, and it is important to state that, out of the yield of 450oz., over 100oz. were got from the tables at the lower end of the tail-race, which would have been entirely lost if these tables had not been used.

*The St. Bathans's Water-race Company.*—This company have a fairly good supply of water, but they have been working extremely poor ground, and may be said to only have earned about wages for the number of men employed after paying other expenses. They have about eight sluice-heads of water, and employ five men. The yield of gold last season was about 110oz.

*Eagle and Gray.*—These gentlemen have a good claim if they had a good supply of water, but as they only hold an inferior water-right, they were scarcely able to do any work the season previous to the last one; it is said that they had not more than one month's water in two years. When such a state of things exist the ground must be extremely good to hold on to under these conditions.

*Gallagher and Party.*—This party has a very good claim. They are elevating the material to a height of 28ft. The ground on top of the wash-drift consists of a very tough clay mud, which, being highly compressed, breaks down in cubical blocks, and is hard to break up with the water; but the atmospheric action, when the broken-down material is allowed to lie for some time