

possible occurrence of the gold in shoots—would be advisable, and might be attended with better results than the first. For opening it at greater depth than hitherto reached, there would be required, however, another main shaft, lower down the hill towards the first workings, and farther off in the direction of its underlie, than the one existing on top of the hill.

The surface round the reefs, and the adjacent gullies have not, as yet, been worked, though they are in all probability payably auriferous.

Alluvial Deposits.—Of these, Ulrich inspected a small gully worked by several parties—one of the claims belonging to Hines, who kindly supplied Ulrich with all the information he asked concerning the occurrence of the gold. The alluvion of this gully is 3 to 5 ft. thick, and consists at the top of brown or brown and yellow mottled sandy clay, and beneath of 1 to 2 ft. of clayey angular quartz gravel, which rests on a very soft bottom, composed of mica-schist. Where it thins out on one of the bounding rises, the surface is found payably auriferous up to a spot covered with a number of loose quartz blocks; and as the gold obtained is throughout of a crystalline, rather spongy character—not the least water-worn—it must have been derived from a quartz reef lying in close vicinity; and this supposition is strengthened by the frequent occurrence of specimens, both of brown iron-ore and quartz, thickly impregnated with gold.

A quartz reef struck below the alluvial at 2 places by Hines, and which apparently strikes right for the spot where the gold was lost and the loose blocks of quartz appear on the surface, is therefore most likely the one which supplied the gold to this portion of the alluvial drift, and certainly deserves to be opened up.

From the fact, however, that the gully continues payably auriferous beyond this point, towards the top of the range, it must be concluded that the gold there occurring in it has been derived from one or several other quartz reefs lying in that direction. Considering that the stuff in its entire thickness pays well, though it has to be carried a distance of fully $\frac{1}{2}$ mile to a puddling-machine erected at the river Torrens, and moreover that, according to the warden, Peterswald, a number of similar small gullies, all payable, have been opened over a belt of country of nearly 14 miles in length, Ulrich thinks sufficient evidence is afforded to consider the gold generally well distributed (most likely in the line of a zone of auriferous quartz reefs, including the German, Criterion, and other reefs discovered), and that there is every probability of its existence in payable quantities in the intervening gullies.

What in Victoria have generally proved to contain the richer alluvial deposits—the main gullies—to which the just-noticed small gullies form