

The rock met with and thus described was probably a quartz-cement similar to what appears at the surface on the hill-slopes where the road-line going up the gorge leaves the flat. This cement-stone consists of fine quartz-sand cemented into a hard rock. In it are many pebbles, and sometimes boulders of considerable size; but the whole is now so closely cemented and so similar in appearance that the different parts are not distinguishable at a glance. This was probably the rock met with in the bottom of the shaft, and which was mistaken for limestone; and this would go to show that the quartz-drifts were not actually bottomed, nor the Silurian rock reached.

From their outcrop at the level of the flat the quartz-drifts stretch up the steep slope on the left bank of the creek from 100ft. to 150ft., and, unless the angle of the junction-line lessens considerably, the depth to the bottom of the drifts, towards the middle and lower end of the flat, must be very great. That it lessens is indicated by the appearance of the older rock towards the north-east end of the flat.

There cannot be a doubt that there is a considerable body of superficial auriferous wash over the south-west part of the flat, known as West's Freehold. The greater part of this has not been prospected further than that it has been ascertained that it would pay for sluicing, provided sufficient fall and get-away for the tailings could be provided. Fall, however, cannot be got to the westward along the course of the creek, and a tunnel 30 chains in length will have to be driven to carry the tailings into the Parapara watershed, at the foot of Glengyle Creek. This tunnel would have to be driven through hard felspathic sandstones and slates, and it is a question whether the probable amount of gold in the ground held by the company would warrant such an undertaking.

If, however, the quartz-drifts underlying the surface rubbly-wash prove moderately rich in gold—and where worked at the surface and shallow levels it is reported to have paid well—even if it were necessary to elevate the wash from the deeper ground, the driving of the tunnel to carry the tailings to the Parapara would thus become a reasonable undertaking, enabling the working of the area of Appo's Flat held by the Parapara Hydraulic Sluicing and Mining Company.

Part also of the north-eastern area held by West, Adams, and Fell might be worked by such a tunnel; but it is doubtful if the deeper ground in that direction could thus be worked. If to work the north-eastern part a second tunnel has to be driven, this would require to be nearly double the length of that which would serve for the south-western part of the flat.

In order to bring water at high pressure and in sufficient quantity on to the ground, a race from the Slate River is projected. This passing Golden Gully, where it is intended to utilise part of the water, would thence follow the slopes of the hills on to the ridge, leading up to the hill that overlooks Appo's Flat, from which a short but deep siphon would carry it on to the hills on the east side of Appo's Flat and the ground held by West, Adams, and Fell. As yet, however, the value of the north-east part of the flat as a gold-bearing area has not been proved, and this should be done before the projected works are carried out. So far as could be seen at the time of my visit, little or no prospecting had at any time been done, and no one could say whether the area held by West, Adams, and Fell is gold-bearing or not. Probably it is, and to a degree that might pay for working were the ground more favourably situated as regards a comparatively cheap water-supply and dump for tailings. In the meantime the ground should be prospected.

The line of quartz-drifts passes through the ridge bounding Appo's Flat on the south-west side, at a point abreast of the middle of the flat. The gravels have been prospected here, but apparently without payable results, since ground remains unworked which could easily have been driven out or sluiced away. The slate-rock is here considerably above the level of the creek to the westward of the ridge. On the opposite side of this small creek, which flows down from Red Hill, there are shallow workings, the wash over which is quartz-drifts that evidently are a continuation of those passing through the ridge into Appo's Flat.

Further up the ridge leading to Red Hill there is another small outlier of quartz-drift, from which 30oz. of gold was obtained from a small area of very shallow ground. And, again, on the steep slope leading down to the lower end of the gorge of the creek above Appo's Flat there is a more considerable patch of quartz-drift, which paid very well for working, and from which, according to Mr. West, nearly four thousand pounds' worth of gold was taken. These facts all tend to show that probably the quartz-drifts under the creek-wash spread over Appo's Flat will be found to contain sufficient gold to enable their being worked.

Gravels or quartz-drifts of this age are next met with in Lightband's Gully, from the saddle at its source, opposite the sharp bend in the course of the Parapara River, to within 20 chains of where it turns to flow to the north. On the saddle the beds consist of fine quartz-sand, which was used in the construction of the dam built by the Parapara Hydraulic Sluicing and Mining Company at the head lift of their race in the Parapara River. These sands, though at a considerable height, and in the vicinity of highly-inclined and disturbed strata of the same age, are yet in a nearly horizontal position, evidently as originally laid down. The various gold-workings that have been carried on, principally along the right bank of the creek, show that the beds dip gently to the north-west, conformably to the slope of the range in that direction. These quartz-drifts are thus as originally deposited *in situ*, and in no sense can they be considered as "a spue from the main slide," which lies along the slope to the Parapara at a considerably lower level.

Lightband's Gully was the locality of the first discovery of gold in the Collingwood district, and very considerable workings have been carried on within its watershed. A considerable area of quartz-drifts yet remains, especially along the upper part of the creek, but at the present time no one is mining for gold in this part. The claims that are being worked lie towards the north-west limit of the area over which the quartz-drifts extend. It may be taken for granted that the abandoned claims along the upper part of the creek did no longer, with the limited supply of water, pay to work. With a larger supply of water they again might, and probably will, be worked. The area of solid gravels or quartz-drifts is somewhat considerable in comparison with what has already been worked, and extends west across the spurs, in the direction of Druggan's Dam.