

drift areas, and to the north-west of Wilson's workings forms a hill of quartz-gravel that have yet to be worked. In this the strata are standing nearly vertical, but are more regular in their disposition than farther to the eastward and in Wilson's Claim. In Sailors' Gully, which lies the furthest to the west of the different divisions of the Golden Gully area, there is again a development of the breccia-conglomerates that underlie the quartz-drifts. These, though gold-bearing, have not the importance of the overlying quartz-drifts, neither as regards bulk nor the amount of gold which they are supposed to contain. They are, however, of great interest otherwise owing to their being in a nearly vertical position, more especially at the head of Golden Gully. At this place their exposure at the surface is but a few yards wide, but a shaft sunk in them reached a depth of 130ft. without reaching bottom.

This particular locality was examined with considerable attention and care, as it did not appear on a cursory examination that the breccia-conglomerates could descend to such great depth with hard rock of Silurian age within 12ft. or 15ft. on each side of the mouth of the shaft. This shaft was sunk many years ago, and the depth reached is a matter of common report and comment among the miners, and has also been the occasion of the supposition and conclusion arrived at by others who have examined this part of the area that a great body of drifts are deeply involved between the older rocks along this western side of the northern part of the area. My examinations, however, showed that such is not the case, and that the breccia-conglomerates extend but a few yards farther to the north-east, and that they shortly, in that direction, wedge out altogether; nor is there any trace of them along the same line farther to the north-east.

At the time of my visit, during November last, mining was at a low ebb on the Golden Gully area, three parties only being at work. This was occasioned by the working-out of the shallow ground and the scarcity of water for mining purposes. It is proposed to alter this by bringing in a water-race from the upper valley of the Slate River, which race, with a constant supply of fifty Government heads, may be made available under a pressure of 300ft. This work, which is proposed to be undertaken by West, Adams, Fell, and Co., should enable the moving of much ground known to be auriferous, the working of which could not be undertaken or completed under the old system and with the means formerly available. It would be rash to prognosticate, or without qualification to make the statement, that this work, when carried out, must prove a financial success; but, in view of the past history of Golden Gully and the prospects that are yet to be obtained, there is hope for the undertaking.

Lying between the Parapara and the Slate River, at the source of Blue Creek, is a flat-topped hill or broad ridge, which may be spoken of as the Blue Creek Plateau. This is in part covered with a deposit of coarse gravel resting on an irregular surface of Silurian rocks. These gravels occur at a height of 1,550ft. above the sea, and are thus fully 400ft. above the level of the Golden Gully deposits of somewhat similar character and of the same age. The gravels on Blue Creek Plateau dip at gentle or moderate angles to the westward, and consist of coarse boulders derived from the rocks of the immediate neighbourhood, mixed with finer quartz-gravel and quartz-sand. The lower part, at least, of this deposit is auriferous, and work has been carried on in it for a period approaching twenty years. Evidently, however, the gain in precious metal has not been very great, as the principal workings have been made by one miner, who is even now engaged in the work single-handed. These lie at the north-eastern end of the deposit, and, though others working there may be on different parts of this area, I heard nothing of them, and they were not visited by me. This ground is so situated that water, under no great head of pressure, but perhaps sufficient, could be brought on to it, and it is finely situated for the disposal of tailings.

In as far as concerns this report, the chief interest attaching to the gravels of Blue Creek Plateau lies in the fact that they so much resemble the gravels and quartz-drifts of Golden Gully that in view of the occurrence of several small patches of quartz-drift at intermediate heights on the ridge leading from the Golden Gully to the plateau, there can be no doubt but at one time the two were connected. There is, however, an apparent change in the character of the gravels, but the considerable proportion of quartz-drifts indicate further the connection between the two deposits.

The Castles lie on the left bank of Rocky River, and nearly in a line between Blue Creek Plateau and the Quartz Ranges. These consist of limestone or calcareous sandstone similar to what lies at lower levels in the Aorere Valley. The locality was not visited by me, but it is reported as well known that quartz-drifts underlie calcareous rocks, and that these, on being prospected, proved gold-bearing. Gold-workings have been at the eastern base of the calcareous cliffs, and there, there may be gravels of a different type, in which the gold was principally found; but, nevertheless, it seems beyond dispute that the quartz-drifts under the limestones are gold-bearing.

Between the Castles and the Quartz Ranges, commencing on the south-west side of Salisbury Creek, nothing is known as to the occurrence of intermediate patches and small areas of quartz-gravels occupying the same horizon in the geological series.

The Quartz Ranges is the last and the largest connected area of these gravels in the south-west part of the district. They occupy part of the area lying between Salisbury Creek and Clark's River, and extend along the foot of Pine Ridge and the granite mountains on the south-east side of the Aorere Valley. They do not constitute distinct ranges, and their name is thus in some sense a misnomer. They are in reality the upper higher levels of the sloping plain on the south-east side of the Aorere Valley, separated from Pine Ridge by the depression in which, for the most part, the auriferous drifts lie. On the downward side, towards the Aorere, the one side of the depression along which the auriferous drifts are found forms, with the slopes to the lower levels, a ridge or series of ridges which must be considered the Quartz Ranges proper. Towards the north-east this ridge is fairly well marked, and continues so through the middle part; but towards the south-western end of the line of auriferous gravels it merges into the general slope from Pine Ridge to the Aorere.