

Lower down the slope two claims are being worked—Druggan's and Cottir's. These are in heavy bodies of rusty-coloured quartz-drifts; and it may be presumed that it is due to the scarcity of water that not more claims are being worked in the similar deposits, as more or less extensive patches are scattered over this part of the sloping tableland between the Parapara and the Aorere Rivers. This line of isolated patches of quartz-drifts trends westward somewhat, down the sloping table-land in the direction of the Limestone Knobs and the lower part of the Slate River; beyond which, so far as is known to me, they have not been traced.

Returning to the Parapara Inlet, on the southern side of this there is a considerable development of the quartz-drifts and gravels under consideration. In this part of the district these, for the most part, have been taken up by the Parapara Hydraulic Sluicing and Mining Company, with a view to their being worked for gold. For a series of years prior to the formation of the above company prospecting was carried on in these gravels; and from the early days claims in these gravels were worked and again abandoned. In some of these a considerable amount of work was done, both on the face to Washbourne's Flat and on the opposite side of the ridge in Glenmutckin Claim; and up till the purchase by the company work in connection with these drifts may be said to have been continuous in Glengyle Gully.

At various times the Director of the New Zealand Geological Survey, or his officers, made examinations of these deposits; and in the Progress Report for the year 1890–91 Sir James Hector brings together all the information relating to these deposits that was at the time available. He describes the quartz-drifts of the south-eastern side of Parapara Inlet as lying in and extending along a line of fracture, traceable from the mouth or entrance to Parapara Inlet to Golden Gully, or beyond that to the Castles on the Rocky River. The north-eastern part of this line was more particularly examined by him; and he so far satisfied himself as to the auriferous and payable character of the deposit that the Parapara Hydraulic Sluicing and Mining Company commenced operations with apparently good prospects of immediate returns from the works which they projected and then had (in 1892) in course of construction.

Unfortunately, up to the present time the results obtained by the company have scarcely been what was anticipated by some. And there are those who maintain that the basis of facts upon which Sir James Hector calculated the amount of gold which each particular area was theoretically supposed to contain may have been erroneous—*i.e.*, the prospects obtained, or that unwittingly were thought to represent the conditions, were unduly favourable, and therefore did not constitute an indication of the average richness of the ground. Nevertheless, there is no occasion for sweeping condemnation in this matter, since it behoves any company to satisfy themselves as to the correctness of the estimates made before undertaking heavy and costly works.

That, in the determination of the main slide, and the description he gives of it, and the different leads connected therewith, Sir James indicates a great source of wealth in the Collingwood district, those best competent to judge will admit, and that at places the quartz-drifts were fully as rich in gold as his most extravagant estimate requires will also be admitted. The whole error lay in assuming a constant and continuous yield of the estimated amount per ton throughout a great body of drift.

In the Lower Parapara Basin, the line of deep ground containing auriferous gravels commences on the shore of Golden Bay, a little to the east of the entrance to Parapara Inlet, and extends south-west across the mud flats to the western side of the flat lands at the head of the inlet. The Parapara Hydraulic Sluicing Company prospected the Mud Flat, and proved the existence of a line of quartz-drifts underlying the recent deposits of the inlet, and the occurrence of gold on the outer beach in the line of its extension north-east indicates the continuity of the lead so far in that direction. On the main land the line continues to the south-west, and at the head of the flat shows in the low spurs before reaching the dividing ridge separating Washbourne's Creek from the Parapara. In the north-east face of the higher ridge the gravels are clearly exposed as nearly vertical strata, showing strata of various material more or less mingled with quartz-pebbles and grit. Usually the gravelly beds are yellowish brown. These strata, extending through the ridge to the Glenmutckin Claim and the Parapara, have on the north-west side limestones of Silurian age; on the south-east side, talc schists. The width of the gravels, &c., is variable, but may be taken at from 3 to 6 chains; and the depth to which the gravels reach is variable from considerably below sea-level towards the north to slightly above sea-level at points beyond the Parapara.

Over the flat to the south-east of the line of gravels, *in situ* Secondary deposits, largely derived from the gravels in the hills, are spread over a considerable acreage. This area has been distinguished as Lead No. 3; the gravels in Leads Nos. 1 and 2 are *in situ* as first deposited, preserving their original stratification, and consist largely of pure quartz-gravels mixed with bands of dark pyritous clay.*

Crossing the Parapara, the lead of deeply-involved gravels is next found running along Glengyle Creek to the saddle by which it leaves that and enters the valley of the upper part of Appo's Creek. In Glengyle Creek the gravel strata have been extensively worked, and might have yielded large profits had it not been that the walls of the slide or fissure in which the auriferous gravels are lodged are so broken and disturbed by the movements that have taken place that on the removal of the auriferous gravels slips of great volume are liable to, and have in the past, buried the workings, and great cost has been incurred in clearing away the *débris* thus brought into the workings. These difficulties more than a want of a payable prospect in the actual wash-drift of the ground, debar this ground from being worked. The shallow ground gave wages for working, and the difficulties began when the foot was removed from the hill-slopes, thus provoking the slips that have been referred to.

* For a more extended description of these and the other ramifications of the Main slide, the reader is referred to the special report by Sir James Hector. See Progress Report for the year 1890–91, pp. x.–xxii.