

rocks must first be removed; and this is simply a mechanical problem, the solution of which seems to be solely a question of sufficient power. The blocks of rock are of all sizes, ranging from a few pounds to a hundred tons in weight, with occasional masses of even greater dimensions.”*

From German Hill along the same side of Pool-Burn and Ida-Burn Valleys the quartz drift is nearly continuous all along the foot of the Rough Ridge to its eastern termination. At several places work is, or has lately been, carried on, and there are many localities at which the beds could be easily prospected; they have not, however, been prospected. It seems that in but few instances have the beds been prospected independently, but in most cases, the rough rubble of the nearly adjoining creeks being found to be gold-bearing, the following-up of this would lead to the discovery of gold in the quartz drifts.

Wether Burn.—Between the south branch of Ida Burn and Wether Burn there is a considerable development of the quartz drifts associated with white clays and beds of lignite. The lower beds crop out east of the road-line on the saddle at the end of Rough Ridge, and up to the road-line masses of white cement stone are scattered over the flat terrace-lands; and it is also apparent that the beds extended at one time along the White Sow Valley to the Gimmer Burn. The schist appears in the bed of the Wether Burn, a little below the crossing of the Clyde-Naseby Road, and forms a rocky ridge between this part of the Wether Burn and the White Sow Valley. The presence of gold has been ascertained in the white quartz drifts near the Wether-burn Hotel, but, as remarked above, since the rough mountain-shingle of the creek-bed has not yielded to the gold-miner, the quartz-drifts lie unprospected.

Gimmer Burn and Garibaldi Diggings.—The line of quartz drift along the eastern foot of the Rough Ridge from the White Sow Valley is continued to, and past, the foot of the Gimmer-Burn Gorge, and for some unknown distance up the Upper Taieri Valley. “On the summit of Rough Ridge, some few miles south of the Otago Central Mine, lies the Garibaldi Diggings, from whence some rich yields have been taken in times past, but there has always been a lack of water, which has usually to be stored, always an expensive operation. The shallow ground has been worked by means of sluicing, but the auriferous deposits are becoming deeper, necessitating heavy expenditure in constructing deep tail-races through hard metamorphic rock. An attempt is now being made to do this, and it may be some time before the result can be made known. The ore is all heavy reef gold, and cannot have travelled far, as its surface has not been much abraded by the action of water.”†

The gold found in the gorge of the Gimmer Burn, said to be of a coarse description, probably in part has been directly derived from the schist rocks of the Rough Ridge; in part, however, it may have been derived from a development of quartz drift in the upper part of the valley known as the Garibaldi Diggings. The Garibaldi Diggings are, in the material of the wash and associated beds, similar to the German Hill workings, Mr. Park’s description of which has just been quoted. At present the Garibaldi Diggings are almost abandoned; formerly a good deal of gold was obtained from this place.

Sowburn Diggings.—On the opposite south-eastern side of the Taieri Valley a line of quartz drift runs along the north-western base of the Rock and Pillar Range, from Patearoa Ford by way of the Sow Burn to Hamilton’s. These have principally been worked at the Sowburn and Hamilton’s, but they are present along the line indicated at many places, and certainly deserve to be further prospected. The Sowburn Diggings were opened shortly after Hamilton’s (in 1863), and work has been carried on ever since that date.

Patearoa.—“In December last [1888] portions of the Taieri River-bed and adjacent terraces, near Patearoa Ford—in all, about 100 acres—were taken up by a number of miners, who amalgamated and jointly prospected the ground with boring-rods and tubes. The depth of auriferous wash was found to average 20ft., and to be of a quartz-drift nature, similar to the drift now being worked at St. Bathans. The prospects obtained showed a result of from $\frac{1}{4}$ dwt. to 1dwt. of gold to the load. This was considered quite ample to justify a more systematic and costly scale of operations.”‡ The Upper Taieri was not visited, but the evidence of the presence of the quartz drifts is sufficient. So far it has not been ascertained that quartz drift occurs at any place in the Serpentine Valley.

Hamilton’s.—The gold-workings at Hamilton’s have been almost wholly in quartz drifts. On the northern slope of the Rock and Pillar Range the drifts form a kind of basin, which shallows to both ends and to the north, but on the side towards the range the beds of drift are crushed under the spur, or overridden by it, and this margin of the basin is consequently somewhat irregular. Hamilton’s is 1,800ft. above sea-level, and consequently about the same level as Naseby, on the opposite side of the Maniototo Plain, the Wetherburn Saddle, &c. For a number of years Hamilton’s was a very rich diggings, but gradually the ground got exhausted, or too poor to pay for driving out, and, the supply of water that can be brought on to the ground being very limited, hydraulic sluicing is only carried on during a few months of the year, and then not on a large scale. On the north side the basin is bounded by a low ridge of slate, to the north of which there is another line of quartz drifts. This, trending nearly east-and-west across the creek, to the westward passes through the high terrace close to the schoolhouse, and thus reaches the western base of that terrace in the gully that bounds it on that side. From the lip of the basin to some distance below the schoolhouse the bed of the creek and its banks have been worked for gold. These workings in ordinary mountain-creek wash showed the presence of the quartz drifts as a false bottom, and in this rich gold was found and traced to the eastward beyond the immediate banks of the creek. The same line of drifts was followed between the outcrop of the slate rock and the cap of volcanic rocks that to the north-west overlies and obscures these sands. Open workings along

* Geological Report, 1888-89, pp. 24-26.

† Warden Hickson, reporting to the Under-Secretary of Mines, 7th May, 1885.

‡ Warden Dalgleish to the Under-Secretary of Mines, 31st May, 1890.