

this line have been carried to a depth of 40ft. from the surface over a distance of some 300 yards; and from what could be gathered it was the difficulty of contending and dealing with water, not the lack of gold, that prevented the continuance of mining along this line. No one was working on any part of the line at the time of my visit; but a miner who had been on Hamilton's for many years acted as guide over the ground, and informed me that in the deeper part of the cut prospects of  $\frac{1}{2}$ dwt. to the dish could be obtained when the ground was abandoned on account of water. If it be as above stated there is yet a large area of ground that would pay to work, and which could easily be drained by tunnelling from the creek to the westward. The quartz drifts pass underneath the basalt sheet that lies between Hamilton's and Taieri Lake and the river to the bridge on the road to Naseby. As this area of basaltic rock has a synclinal arrangement, and terminates before reaching the Taieri River, the white clays and quartz drifts again make their appearance between the edge of the basaltic sheet and the river. This lower outcrop is at some 500ft. to 600ft. below the upper, and, should it prove that throughout gold in paying quantities is present, there could be no difficulty in working the ground under the basaltic sheet.

*Shepherd's Hut, Hamilton's.*—This is a basin-like area similar to Hamilton's, and lying about a mile east, at nearly the same level above the sea. The grits shelve on to shallow ground to the north, but on the south side the ground is deep, and to drain this a tunnel has been driven from the creek to the westward. The ground at moderate depths was driven out, but at the present time the deeper ground is worked by hydraulic sluicing. The ground is said to have paid well. Further to the eastward, on the saddle leading to the Taieri River, near its junction with the Hound Burn, auriferous quartz drifts have been worked, but the results have not equalled anticipations, and work is now at a standstill. The northern lower slopes of the Rock and Pillar Range, from the foot of the Taieri Lake to the bridge on the Hamilton's-Naseby Road, are largely covered with basaltic rocks, partly resting on slate rock and partly on white clays and quartz drift, the latter undoubtedly auriferous at many places. Wherever, therefore, these grits can be easily reached they constitute a promising field to the prospector.

*Taieri Bridge above the Lake.*—It has been noted that the white clays and quartz drifts appear from underneath the sheet of volcanic rocks near the Taieri Bridge, and on the upper side of the bridge the clays are exposed in a cliff on the bank of the river, and the grits are present in the downs that lie to the westward between the Hamilton's Road and the river.

*Maniototo Plain between the Lower Parts of the Hog Burn and Ewe Burn.*—After crossing the Hog Burn, on the road from the Taieri Bridge to Ewe Burn and Naseby, the road follows a low ridge exposing quartz drifts at the surface. These lie at low angles, and spread over a considerable breadth of country. To the south-east they pass under the basaltic sheet developed in the middle of the Maniototo Plain, while to the north-west they are overlain by the recent sandstone gravels of Ewe-Burn Creek. Along the double ridge striking in the direction of Ewe-Burn Schoolhouse they extend four or five miles, and these beds are so disposed and situated that they might be prospected to very considerable depths without encountering water. The borehole put down at the Ewe Burn for the purpose of proving the existence of artesian water in its deeper part passed through these beds, and gold was found in the material brought up from a considerable depth in this borehole. Much lower beds would be met with at the surface within a mile or so of the Taieri Bridge. This area is well worth prospecting, even though the quartz drifts could not be passed through or bottomed, because gold in paying quantities does occur at different horizons in these quartz drifts. No prospecting has been done over this area other than one or two shallow holes put down to prove the rewash deposit on the sides of the low spurs within a short distance of the junction of the Hog Burn with the Taieri.

*Ewe Burn above the Clyde-Naseby Road.*—Little gold has ever been obtained from the Ewe-Burn creek-bed, but the line of quartz drift traced east from the Wether Burn is returned considerably to the north, and crosses the Ewe-Burn Valley in the line of Butcher's Gully, where some workings, now abandoned, have been carried on; also in the bed of the Ewe Burn, at about where the quartz drifts cross, gold-workings once were, though no one is working there at present. The rocks of the Mount Ida Range are not gold-bearing, and it is from this source that the recent gravels of the Eweburn Valley are supplied: hence their non-auriferous character, except near the point where the line of quartz drift crosses the creek.

*Government Dam, Naseby.*—The quartz drifts on the east side of the Ewe-Burn Valley trend round the spur of the isolated schist hill north of the Government dam, beyond the southern spur of which they again strike to the north-east towardst he head of Hog Burn. In the terrace west of the dam the grits lie close to the spur of the range, and are overlain by gritty and finer-grained greensands, with marine shells (*Pecten*, &c.). In the lower grounds the quartz drifts and impure lignite-beds are exposed. North and east of the dam several prospecting-holes have been put down in the quartz drifts, but they do not appear to have passed through gold-bearing drifts.

*Hog-Burn Valley, near Naseby.*—"This is a field where there is a large area of auriferous ground, but in many places the wash-drift is shallow, and the claims are quickly worked out. This, together with the ground containing very little gold, prevents many of the miners placing a good hydraulic plant on their claims, they being content to follow the methods of sluicing used in the early days—namely, a canvas hose with very little head, the ground being broken with picks before turning on the water. . . . There is no doubt that there is a large area of drift-wash containing a little gold, but it requires a constant supply of water and all the improved hydraulic appliances to make this character of ground pay for working." Mr. Gordon is here speaking of the surface-wash and more superficial gravel deposits that constitute the shallow ground in the vicinity of Naseby. There is deeper ground in the terraces on both sides of the Hog-Burn Valley, and there is, besides, the run of deep quartz-drift country which it is my more especial purpose to describe. Of this Mr. Gordon says, "There is a large extent of country between St. Bathans and Naseby, and the run of the old quartz drift which is successfully worked at Mount Buster