

race, but along this part clays and lignite-seams are chiefly developed, and the quartz drifts are not well exposed if they are present under the other beds of the series. Within five miles of the Marion Burn the beds have assumed a high dip eastward, or towards the range, and near McDonald's Hut, on the water-race, both the lignites and the quartz drifts are well exposed. On the south side of the gully from McDonald's the quartz drifts are standing nearly vertical, and some work has been done in the way of prospecting the beds. Some little gold was found, but this was followed instead of making a cut across the highly-inclined beds to the older rocks on which the lower beds of the series would be found resting, and near which it was probable the best gold would be found. At various places the beds show in positions favourable for prospecting—from McDonald's to Kennedy's Hut in Marion Burn, more especially towards the Marion Burn end of the line. Between the upper end of the gorge of Marion Burn and the foot of the range the beds are exposed over a breadth of nearly half a mile; and at one place there is a hill covered with white cement boulders, beneath which there is a very promising development of quartz drifts. On the banks of Marion Burn itself the grits and lignite-seams show at several places, but towards the upper part, where it leaves the Hawkdun Range, the broad gravel plain of the upper part of the valley of Ida Burn overlies and obscures the beds for some distance; but they again appear to the south in the saddle that lies between this and the source of Gorge Creek and the south branch of Ida Burn. On the northern side of this saddle there are a great number of very large cement blocks strewn over the surface, but on the south side of the saddle, and thence across the hills to the Mount Ida Water-race, the cement masses are absent, and the quartz grits, as good-looking well-rounded quartz-wash is loose, and easily prospected with the pick and shovel.

*Gorge Creek.*—In the head of Gorge Creek the beds have been well exposed in making the water-race which passes this point; and somewhat higher up than the shoulder of the low spur round which the race is taken, a party of miners have opened out the ground and are preparing to work the drifts, after having worked a rewash of the same beds filling up the narrow valley of a blind gully coming from the quartz hills to the north and north-east. Accompanied by one of the party I examined the immediate vicinity of these workings with some care, and pointed out the evidence tending to prove that the gold they had hitherto been getting in the superficial deposit was probably—indeed, beyond question—derived from the quartz-drift deposits occurring higher up the ridge. We followed the gully, and found old prospecting-holes right to the higher part, and right on the crest of the ridge, one or two in the quartz drift itself. These holes had been put down many years ago, and at a time when what would now be considered a good prospect would not be considered sufficient to work the ground. On this place, in his report of last year (Goldfields Report, 1893, p. 118), Mr. Gordon remarks, "There are considerable areas of apparently auriferous drifts between Naseby and Blackstone Hill, and also on a terrace on the upper side of Pearce's Gorge, where very little prospecting has ever been done; and breaks in the Mount Ida Water-race, washing away portions of the drift gravel in the vicinity of the latter place, have disclosed the fact that it is auriferous. A few years ago claims were worked at the Little Ida Burn, and close adjoining this the deep run of quartz drift comes through, but nothing has been done to prospect this deposit in any place between Mount Buster and Blackstone Hill." The beds run west along the valley of Gorge Creek for fully a mile below the point where they are exposed in the Mount Ida Water-race, but it is not clear that they make direct connection with the beds of the same series near to where the coal-mine is worked on the banks of the south branch of Ida Burn.

*The Woolshed, Blackstone Hill.*—Mining has, for the want of water apparently, been discontinued at this place, which lies about from two to three miles westward of Hill's Creek Township, at the foot of Blackstone Hill Range. A very considerable amount of work has been done in the white quartz drift at this place, a line of which runs along the foot of the range and the northern side of Ida Valley to the Pool Burn Gorge. It appears that the wet character of the ground along the line of quartz drift towards Pool Burn Gorge prevented this part from being prospected, and this also may be said of the continuation of the same line beyond the Pool Burn Gorge in the direction of Black's No. 3. There is a general opinion amongst the miners that this line of drift is rich in gold, and a scheme has been mooted of driving a tunnel from the Manuherikia Valley through the western spur of Blackstone Hill to reach and drain this line of drift. This would be a costly work; while, from the incoherent character of the beds and their high dip, the auriferous drifts would also be costly to work if they had to be mined otherwise than by open workings. The gold also is not evenly distributed, as the results of prospecting at Black's No. 3 have shown.

*Black's No. 3.*—"The deep lead, or, more appropriately, deep workings at this [Pool Burn] valley, formerly known as Black's No. 3 Diggings, are situated on the eastern slopes of Raggedy Ridge. The sequence of the lacustrine deposits, at the base of which the auriferous wash occurs, is well exposed at the old workings, which follow in a north-and-south line the outcrop of the wash. In the mode of their deposition, origin, and character the strata here are in every respect similar to those found at Hill's Creek, Naseby, St. Bathans, Tinker's, Drybread, and all the other localities on the margins of the old lake-basins where they have escaped denudation. They were deposited contemporaneously, and, the same causes being in operation all over this area, their sequence is always the same. But the character of the sediments was subject to several outside influences, such as the velocity and set of currents, the inflow of streams from the adjoining mountains, and the nature of the rocks where the material was originally derived. Allowing for the local variations caused by these, it is found that the general character, as well as the sequence, is the same at all places situated on the margins of the old basins.

"At the deep workings at Ida [Pool Burn] Valley the deposits consist of the following members, in descending order: 1. Blue and grey bedded sands and clays. 2. Rusty ferruginous quartz grits. 3. Black carbonaceous quartz sand. 4. Grey quartz sand (very local). 5. White clay (very local). 6. Auriferous wash. 7. White clay. These beds have been subjected to considerable local disturb-