

apparently traverses the country towards St. Bathans, and follows on round the foot of the high range to near Clyde. Some portions of this quartz drift give high returns of gold for sluicing, and most probably a fresh discovery will yet be made between the Manuherikia River and Naseby. A prospecting shaft at the upper end of the Hog-Burn Valley was put down several years ago to a depth of about 120ft., which got into the quartz-drift wash containing a little gold, but this shaft was never bottomed. The same run of ground is found at Mount Buster.”\*

During 1893 Sir James Hector reported “On the Deep-sinking at Naseby,” carried on under the auspices of the Naseby Deep-lead Prospecting Association, the aim of which “has been to discover auriferous layers in the white quartz drifts which skirt the northern margin of the Maniototo Plains, being part of the shore-deposit of an ancient lake-basin. A shaft has been sunk to a depth of 300ft. at a point in the Hog-Burn Creek about a mile above the Township of Naseby. For the first 200ft. this shaft passed through beds of the Upper Tertiary gravel, sand, and silt derived from the disintegration of sandstone rocks, while the last 100ft. sunk passed through white quartz drift of a moderately fine grain, and somewhat subangular character, and evidently derived from the mica-schists. In these—the lower drifts—some of the quartz gravel near the bottom of the shaft was proved to be gold-bearing, but the percentage of gold obtained was so small that it was hopeless to think of working such deposits, and the association has endeavoured to continue sinking in order to test the white drifts where they rest on the main bottom. . . . There are sound reasons, founded on experience obtained elsewhere, for believing that the quartz drifts are sufficiently auriferous to warrant a considerable expenditure in prospecting them; but there are localities in the vicinity of the present shaft where this object could have been attained at much less cost, as there is very little chance of the main bottom being reached by the prospecting-shaft in less than 400ft. At the same time it may fairly be urged that, as in these quartz drifts the gold does not always lie on the main bottom, a bed of payable gravel might be struck not far below the depth already reached. Moreover, were it rendered certain that payable gold-wash does exist, the position of the shaft has been judiciously chosen, being at a point whence the strata rise to the north and north-west, thus commanding the drainage of a considerable area of the drifts in these directions, as shown by the dips observed. . . . At the same time . . . the quartz drifts could have been quite as effectively prospected at the surface, where they crop out both to the north and west, and are exposed on the Hog-Burn Creek 240 yards up stream from the point where the shaft is being put down. At this place the quartz-drift layers are seen to dip at considerable angles, and where they rest on the schistose rocks or true bottom are almost vertical. Here, therefore, there is every facility for testing at the surface-outcrop the same beds attempted to be reached in the shaft; and equal facilities are afforded along the eastern outcrop of the area surrounding the distributing-dam of the Mount Ida Water-race. In the latter locality it is not certain that the drifts are all of the same age, those west and north of the dam being little more than gritty greensands, which contain fossils of Upper Cretaceous age, being the same as those which occur elsewhere in the roof of the upper coal-formation. To the east and south the beds are overlain by white clays with beds of lignite, the latter being in turn overlain by quartz drifts having the same character and position as the quartz drifts in the Hog Burn. No effective prospecting has been done in these quartz drifts [in the vicinity of Naseby], which is very remarkable, the examination of the old surface-workings proving that, with few exceptions, the creeks have become comparatively poor in gold above the point where they intersect the quartz drifts, evidently pointing to these as the source of the gold. These drifts should, therefore, be carefully prospected by ground-sluicing where they are exposed along the west side of the creek, and there seems every reason to believe that the prospecting shaft should have been located somewhere within the outcrop of the quartz drifts, in order to avoid the 200ft. of the upper sandstone drifts, or ‘Maori bottom’ as it is locally termed, which it has been necessary to sink through to reach the auriferous beds, which could have been examined and tested on the surface at a distance of 240 yards from the prospecting-shaft.”†

*Foot of Mount Ida Range, Hog Burn to Little Kye Burn.*—The quartz drifts continue from the Hog Burn across the upper part of One-spec Gully to the Little Kye Burn, and the beds are being worked in at least one claim within the Kyeburn watershed, near the foot of the mountain-road leading to Clark’s Diggings, on the saddle between Mount Buster and Kyeburn Peak.

*Clark’s, or Mount Buster, Diggings.*—In 1884 a report was published on the auriferous-quartz drifts on the saddle between Mount Buster and Kyeburn Peak, and which thence extend some distance to the northward; and here may be reproduced such parts as describe the position and character of the auriferous drifts:—

“Auriferous quartz drifts are not rare in central and eastern Otago, and on these grounds alone the deposit at Clark’s merits no special consideration. Its claim to such rests on the peculiarity and great height of the situation, coupled with the fact that what evidently are the same beds are now found at much lower levels, and this within such short distances as to show that, since the period of their deposition, considerable displacements of strata have taken place, whereby some parts of the district were elevated to a height of 2,000ft. or more, over and above the amount of elevation which has affected the same beds but a few miles distant. There being a double series of auriferous quartz drifts in the district, it is of interest to know to which of these the deposit at Clark’s should be referred, whether to the Miocene quartzose grits or to those of Cretaceous-tertiary age. As a continuous mountain-range the Kakanui Mountains terminate on the south side of the Kye Burn, north of which to the southern end of the Kurow Mountains the higher peaks are not linear in arrangement, but form a central knot from which three mountain-ranges—the Kakanui, the Kurow, and the eastern part of the Mount Ida Range—appear to radiate. Of the central cluster of mountains Kyeburn Peak is the most westerly. It is separated from Mount Buster at the

\* Report on the Mining Industry of New Zealand, 1891, p. 71.

† Geological Reports, 1883–84, pp. 44 and 45.