



*REPORT on the Mineral Resources and Permanency of the DEN GOLD FIELD.*

THIS Gold Field, of a limited area, is situated nearly due north of Mount Direction, at a distance of nearly six miles in a straight line. Turning off from the Launceston to Lefroy (or George Town) road, at the second bridge over the Fourteen Mile Creek, and following a track in a north-easterly direction for about two miles and a half across a portion of a large surface depression or basin, a fringe of low ranges is reached, which form a connection with all the other ranges surrounding the basin referred to. The drainage of the region is principally by way of the Fourteen Mile Creek, and the strata consist of recent tertiary clays and drifts. Judging from the formation of this basin, boring for water in Artesian wells promises to be successful. Those ranges which enclose the Gold deposits at the "Den" exhibit at the surface, at the foot, a coarse boulder drift resting on thin-bedded Silurian sandstones and slates. The Fourteen Mile Creek observes a nearly true North from South course, and over twenty years ago gold was found here in the alluvium, which latter averaged from 6 to 20 feet in depth. The yield of gold was, as far as could be learned, pretty good, and the extent of the field for alluvial gold was found to be about a mile along the course of, and in the bed of the creek. Owing to the periodical scarcity of water for mining purposes, the ground has been wrought chiefly by driving in the lower auriferous gravels from numerous shafts sunk for that purpose, but it is held that the whole of the valley deposits now remaining would pay if manipulated in hydraulic ground sluices. I was informed that to bring the water on to this field at a sufficient elevation in order to obtain the pressure requisite was estimated to cost nearly twelve hundred pounds; at the same time the parties averred that it would not remunerate them to do so, because they could not obtain, as in New Zealand and Australia, those extended areas of ground granted under miners' rights in those gold-producing countries, such ground having been abandoned by the miners for a considerable period.

The gold obtained was generally of the coarser kind; and near where the ranges came closer together than above or below, at the creek, some gold was discovered attached to quartz, and on tracing these auriferous specimens it was found that the gravel or wash containing same trended up the sides of a low hill, on which eventually an outcrop of gold-bearing quartz or reef was discovered. About twenty feet were sunk on this auriferous quartz some years ago, and it is only recently that a co-operative prospecting company—the only one now carrying on mining operations at this Den Gold Field—have been sinking a new main shaft 20 feet west of the old reef, in order to test by same that stone at a lower level. They were 50 feet down from the surface at the time of my inspection, and after, through some flat leaders from one to six inches thick, an aggregation of vertical quartz leaders, altogether two feet wide, was met with near the bottom of their shaft. As the old reef underlays as one in three feet, it is probable that in other ten or fifteen feet it may be met with in sinking this new shaft. Those leaders that were intersected hitherto, though interspersed through and impregnated with arsenicates and sulphurates, are thus far non-auriferous. In another shaft located still higher up the hill gold has, it is said, been found in quartz, and the nature of the country or wall rocks in which the old reef occurs is favourable to auriferous deposits in quartz, the upper Silurian schists which comprise the rocks mentioned being more than ordinarily well defined and bedded. Amongst these, a deep black soft band of slate (talcose), which possesses all the properties of a good writing material, was found here, and erroneously termed "a vein of plumbago" by the miners. The influx of water from the quartz leaders is, however, very heavy in the prospecting shaft; and should the reports be accurate as to the auriferous character of the old reef, there are indications in other localities not far off which deserve the prospector's attention.

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