

NOTES ON THE GEOLOGY OF THE BELLS PLAINS & GOLD CREEK AREA

Sustenance under the "Aid to Mining Act, 1927" for a period of six weeks from August 14th, 1937 was granted to L.F. and F.W. Krushka to prospect in the vicinity of Bells Plains. From 14th to 16th September inclusive, as instructed, I made a brief geological reconnaissance of the area and examined the prospects.

The area examined extends, from where the Mount Paris Tin Mines Ltd. water-race 2395/W and 2466/W crosses the old Star of Peace road near the summit of Dead-horse Hill, north easterly for over two miles to Blue Stocking Creek and for over one mile in a south easterly direction along the old Star of Peace road. From Blue Stocking Creek it extends in a general south easterly direction over Bell Hill to Ah Foo Creek, a distance of approximately two miles. The area occupied by the head waters of Black Creek was not examined.

Although of relatively high altitude, the area is one of low relief.

GEOLOGY:

The area is essentially one of great granite massif with remnants of Cambro-Ordovician quartzites, slates and sandstones of the Mathinna series, which probably extended over the whole area formerly, but has since been denuded, exposing the underlying granite.

Rocks of Cambro-Ordovician age extend, in a narrow belt approximately 20 chains wide, from Gold Creek, in a general south easterly direction, flanking the western slopes of Bell Hill; here the belt turns south westerly across the head of the Black Creek basin and widens, although the actual width was not mapped. The continuity of the belt is broken about three quarters of a mile south east of the summit of Dead-Horse Hill where the granite is exposed along the old Star of Peace road for about half a mile. This granite is continuous with that exposed by two small creeks on the south western fall of the hill; an approximate section from the point where the Mt. Paris Tin Mines Ltd. water-race crosses the old Star of Peace road south easterly along the race is as follows:-

Slates and sandstones	45 chains
Granite	30 "
Slates and sandstones	40 "
Granite	20 "
Slates and sandstones	not determined

The slates and sandstones were mapped along the ridge to the north west of the summit for over three quarters of a mile.

CAMBRO-ORDOVICIAN:

The slates and sandstones have weathered to various shades of brown and red. The quartzites are not present to any great extent and generally contain mica along the bedding planes. Those present are highly indurated or silicified. The general strike is north 5° to 20° east, with a fairly steep westerly dip from 55° to 60° .

The contacts near Gold Creek indicate the intrusive nature of the granite. No definite evidence of age of these rocks is available, but by analogy with the adjacent areas they are referred to the Cambro-Ordovician (Mathinna Series) System.

DEVONIAN:

Granitic rocks occupy a considerable proportion of the area and underlie much of the remainder. A considerable number of types occur. The most common type is the usual medium to coarse grained one containing quartz, plagioclase with lesser orthoclase and biotite.

The granitic rocks are characterised by numerous veins and dykes of quartz greisen, pegmatites and quartz etc.

It has already been shown that the granite is intrusive into the Cambro-Ordovician slates and sandstones. No other evidence of age is available, but in conformity with other granites in Tasmania, it is regarded as being intruded in the Devonian period.

PROSPECTING OPERATIONS:

Prospecting, apparently, has been confined to previously worked areas and, furthermore, an excessive waste of time has resulted through the party living at Ringarooma and not camping in the area.

Commencing at the "old gold show", worked by chinamen in the early days, on the divide between the Pera Flats to the south and Black Creek to the north, just south of the old Star of Peace road, about ten chains west of the western boundary of A.L. Wardlaw, Pur., 199 ac. 3 rd. 32 per. some old prospect holes, a few chains to the south, were tested and showed fair prospects of water-worn cassiterite in an angular sandstone wash. One hole was reported to be 20 feet deep but was filled with water and could not be examined. Some ground has been worked lower down the hill to the south.

Crossing the divide and following down a small creek, part of the headwaters of Black Creek, several prospects were taken; near intake B of 128W, the wash, composed chiefly of angular to sub-angular milky-white quartz, is very shallow, a few inches being the maximum. This is overlain by loamy material two and three feet deep.

The wash contains fair prospects of angular cassiterite and some specimen wolfram attached to quartz.

Little work has been done between here and the big flat known as Bells Plains.

It is claimed that prospecting was carried out by means of boxing the shallow terrace ground, north of a deep cut on old section 4997/93M, worked by a man named Bishop, about two years ago. An area of five square yards has been stripped, showing an average depth of 12 to 18 inches of detritus; deep pot-holes occur in the granite bottom. The tin is fairly coarse. Some pieces are angular while others are well water-worn; one well water-worn piece weighing approximately one pound.

Bishop's workings consist of a deep cut approximately two chains long and half a chain wide and has been put down in the soft, kaolinised granite on each side of an 18 inch, quartz mica greisen vein coursing N 66° W with a steep north

easterly dip of 70°. Some tin occurs in the altered granite but the best prospects are obtained in the hard greisen.

Krushka was under the impression the tin obtained from the surface (terrace ground) was connected with this soft granite "formation" and that good prospects would be obtained by following the formation in a westerly direction, but it is quite apparent when the true relationship is understood that they are entirely independent. The terrace ground would most probably extend to the south east.

The only other area in which prospecting was reported to have been undertaken was in the narrow belt of slates and sandstones in the vicinity of Gold Creek, a tributary of Tin Pot Creek; here again the only work to be seen was a small cut into the western bank of the creek, the material from which had been boxed.

The western bank is composed of a deep, red soil about four feet deep while on the eastern side is a few inches of an iron-cemented breccia consisting of angular sandstones and increasing in thickness up stream. Several prospects were washed and showed up to 50 to 60 colours of fine-rough gold.

This prospect is a few chains north of the prospect shafts put down by Dally and Good for the old Tin Pot Company. The quartz vein on which these shafts have been put down has an apparent strike of 290° with a slight north easterly dip. No quartz can be seen in the dump material. One shaft is reported to be 50 feet deep while the other 25 feet to the north west is said to be 30 feet deep.

CONCLUSIONS:

From this brief examination, it is obvious that L.F. & F.W. Krushka have not materially added to the knowledge of the tin and gold deposits of this area as most attention has been paid to old prospects. The area is undoubtedly a potential tin bearing one and fair prospects can be obtained almost anywhere. It appears that much "miner's right" ground exists, but the difficulty is the lack of water, as practically all the available water supply is already secured under licence.

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