1256-TRANS

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LEASE NO. 70/51 - E.J. CORNISH - NORTH DUNDAS

(SECOND REPORT)

INTRODUCTION

The previous investigation of this lease was carried out by D. Burger and results compiled in the report dated 19th November, 1951. Since that date the lessee has done some additional prospecting work and applied for a second investigation. Subsequently two areas of the lease have been examined on 16th April, 1952. The areas are hereunder referred to as Area 1 and Area 2.

The general topography and geology have been described in the previous report.

AREA 1

This area includes the workings in the alluvials along the stream. A new trench 55 feet long has been dug in a north-easterly direction. The gravel deposit is here 3 to 4 feet thick and is lying on a bedrock of decomposed serpentine.

Two samples of the gravel just above bedrock were washed. The first about halfway along the trench, the second at the north end. The first yielded abundant concentrate of coarse and fine wolframite fragments. The size of the coarse fragments is up to 1 inch. They are slightly to medium waterworn while some cassiterite fragments up to $\frac{1}{8}$ inch are also present.

The second sample was poor in mineral content.

AREA 2

This area is situated about 200 yards upstream from Area 1. The workings include an old adit and two small costeans. The old adit is partly collapsed and was apparently driven along a small galena lode as could be concluded from the presence of galena on the dump heap. The country rock is serpentine.

North east of the adit an old costean (hereafter referred to as No. 1 costean) has been cleaned by the lessee. The exposed rockface at the west end of the costean is an irregular wall of serpentine, striking North and dipping to West at 65°. The wall is probably a prominent jointplane. East of this wall the serpentine is much jointed and partly weathered; it contains irregular quartzblebs and veins, while limonite occurs along the jointplanes. The silicified serpentine in this portion contains traces of galena and a little vein of dark mineral one inch thick and 2 feet long. It strikes N26°W and dips at 67° to NE. Two chip samples were taken along the north face of the costean and one sample from a series of specimens on the dump heap which carried a mineral similar to that found in the abovementioned vein. Subsequent tests in the office showed that the mineral was sphalerite.

Another small costean has been excavated 30 feet north of No. 1 costean. Its bottom consists of hard serpentine containing a few little quartzveins. A chip sample over a width of one foot was taken.

Thirty feet upstream from No. 2 costean a small serpentine cliff occurs containing a number of 1 inch thick quartzveins striking N75°W and dipping at 25° to N. They carry small amounts of limonite and micaceous material. A sample was taken from one of the veins.

In addition a dish of gravel from the stream bed was washed but yielded only a small amount of concentrate.

ASSAY RESULTS

The assays were done by the Mines Department Laboratory, Launceston.

TABLE 1 - (CHIP SAMPLES)

No. Z	Hor. width: feet	Location	Percentage Pb	Zn	WO_3
Z36	2	No.1 costean	1.8	2.1	Nil
Z37	4	No.1 costean	0.5	1.2	Nil
Z38		Dumpheap No.1 costean	1.9	5.9	Nil
Z39	1	No.2 costean	Nd	Nd	Nil
Z40	2	along 1" quartz vein in serpentine outcrop	Nd	Nd	Nil

(Nd = not determined)

TABLE 2 - (DISH CONCENTRATES)

No.	Weight dish conc grams	WO_3 %	Sn %	Sn/WO_3 ratio	Lbs per cubic yard (based on 90 dishes per cub. yard) WO_3	Sn
Z41	30.6	3.0	25.9	8.63	0.18	1.57
Z42	226.6	34.8	22.8	0.60	15.70	10.20
Z43	18. 6	16.9	7.4	0.44	0.62	0.27

Location of samples.
Z41 25 feet upstream from Z40
Z42 New trench (halfway along)
Z43 New trench (north end)

CONCLUSIONS

From the assay results of the samples shown in Tables 1 and 2 the following is concluded:

(1) A feeble lead-zinc mineralization exists in a zone 35 feet long and 6 feet wide including the old adit and a portion of No. 1 costean.

(2) From the absence of wolfram in the samples Z36 to Z40 it is evident that this metal is not associated with quartzveins in the serpentine.

(3) The samples of Table 2 confirm again a considerable, but irregular distribution of wolfram and tin in the alluvials in and along the stream.

The average content of nine samples is:

WO_3 2.13 lb/cubic yard

Sn 2.55 lb/cubic yard

Sample No. Z41 proves the presence of a rich pocket or zone in the alluvial.

RECOMMENDATIONS

(1) Further systematic prospecting by pits or trenches of the alluvials in Area 1 is highly recommended. Subsequent work should be limited to rich pockets or zones.

(2) Search for primary wolfram in serpentine should be discontinued, as this metal is in general associated with igneous rocks of the acidic type. An area likely to be more promising is therefore Area 3. This area consists mainly of quartz porphyry. It was here that the now abandoned Penzance Mine, producing tin, was situated.
Prospecting along the quartz-porphyry-serpentine contact is especially recommended.

(SGD) D. Burger A.M. Aus. I.M.M.

Zeehan, 27th June, 1952

The Director of Mines,
HOBART