

*Prop. File*

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BETHSADIA COPPER SYNDICATE

Owner: Bethsadia Copper Syndicate, Room 810, 402 West Pender Street, Vancouver.

Location: Almost 26 miles southeast of Ascroft in the Highland Valley Area, Kamloops Mining Division and approximately one mile south westerly from Bethlehem Copper property, southwest corner. Also surrounds Highland Valley Copper Company on three sides.

Elevation: The claims range from 4100 feet to 5000 feet above sea level.

Property: History - The above property is made up of the old Tamarack - Ospery and in part the O.K. properties, now known as Bethsadia Copper Syndicate. These old groups were originally staked at the turn of the century and their owners tried to develop them by shipping high grade copper ore. However, due to the disseminated molybdenum throughout the copper-mineralization on the Tamarack and Ospery Groups, and with no means of separation at that time, their ores were not accepted at the Smelters. Today, molybdenum can be separated from copper by a very cheap process, with at least 90% recovery.

The O.K. property of three crown grants, now Highland Valley Copper Company, is surrounded on the north, east and south by Bethsadia Copper Syndicate. The O.K. during the period 1916 - 1917 mined some 10,000 tons of ore averaging 3.60% copper. The zone showed a length of 250 feet for a wide of 10 to 12 feet. Diamond drilling and bulldozing is now in progress on the property. There is every reason to suspect that the O.K. zone extends eastward onto the Bethsadia ground.

Claims:

- Mineral Claims P.R. #1 to 18, inclusive
- Mineral Claims P.R. #27 to 30, inclusive
- Mineral Claims P.R. #32 to 38, inclusive
- Mineral Claim P.R. #40
- Mineral Claim P.R. #42
- Mineral Claim P.R. #49
- Mineral Claim P.R. #51
- Mineral Claim P.R. #53
- Mineral Claim P.R. #55
- Mineral Claim P.R. #57
- Mineral Claim P.R. #75
- Mineral Claim P.R. #80
- Mineral Claim F.C. #1 Fr.
- Mineral Claim F.C. #3 Fr.
- Mineral Claims "Lucky 13" #1 to 8, inclusive
- Mineral Claims M.D. #2 to 7, inclusive

Crown Granted -

- Mineral Claim Tamarac
- Mineral Claim Shamrock
- Mineral Claim Star
- Mineral Claim Duke
- Mineral Claim Major Fraction
- Mineral Claim IXL Fraction

Exploration: Prospected in part by four experienced prospectors from October 1st to November 15th, 1955. Built 4 miles of bulldozed road from valley bottom to top elevations of property. Seven trenches were established 3 feet deep - 15 feet wide and up to 500 feet long. Cut out by hand 1½ miles of jack pine for jeep road.

Geology: The general geology is a series of intrusives within the Guichon batholith. Generally the geology is similar to the Bethlehem Copper, Jackson Basin, Beaverlodge, Trojan and Skeena Mines, which are favourable for copper and molybdenum mineralization.

Showings: Refer to index map for reference.

- #1 On P.R. #5 mineral claim 3 feet deep - 15 feet wide and 100 feet long - disseminated copper mineralization throughout trench.
- #2 On P.R. #8 mineral claim. This new showing found while putting a bulldozed road across the property. A shear zone, average width approximately 40 feet, length 500 feet, open on both ends.  
Two samples were taken:  
#1 Trench sample across 20 feet 1.15% Cu.  
#2 Trench sample 138 feet east of No. 1 Trench .65% Cu.
- #3 P.R. #3 and P.R. #4 mineral claims - 200 feet long - 15 feet wide - 3 feet deep.
- #4 P.R. #2 and P.R. #80 mineral claims - 100 feet long - 15 feet wide - 3 feet deep.
- #5 P.R. #1 mineral claim - 200 feet long - 15 feet wide - 3 feet deep.
- #6 P.R. #8 mineral claim - 250 feet long - 15 feet wide - 4 feet deep.
- #7 P.R. #10 mineral claim - 150 feet long - 15 feet wide - 3 feet deep.

All of the above showings show copper mineralization throughout their respective zones. Work incomplete due to early winter and inability to acquire a bulldozer.

#8 As shown on your claim map. These are the old Tamarack and Osprey showings. Reference Minister of Mines 1915, page 280 - 281.

- a. Tamarack showings are situated around the 5000 foot elevation. The old development consisted of three or four shafts, each sunk about 25 feet deep and a number of open cuts. These workings show that there is on the property a considerable number of parallel quartz veins having a general north east strike, most of which carry more or less chalcopryrite, bornite and molybdenum. These quartz veins vary considerably in width, but the work done does not prove their continuity. The vein at No. 2 shaft is 4 to 4½ feet wide at the shaft, but no drifts on other workings have been made along its strike. Reference Molybdenum, by V.L. Eardley - Wilmont No. 592 - Geological Survey of Canada, 1925, page 32.

Dr. T.L. Walker gives a detailed description and says that molybdenite of the semi-amorphous variety is found in most of the claims along cracks and joints in the granite, associated with the copper, but that the Tamarack was the only claim worthy of consideration. In 1904 a shaft was sunk to a depth of 20 feet and one ton of molybdenite was shipped for experimental purposes to a firm in Pennsylvania. However, owing to hardness of quartz and the presence of considerable copper, the results obtained were very far from satisfactory.

- b. Osprey - The width of the mineralization varies from 3 to 7 feet and contains copper carbonates, chalcopyrite and bornite, also some molybdenite. The most important work on the Osprey group consists of a cross cut 40 feet long between the Osprey and Tamarack claims. In the adit there is a mineralized zone 7 feet wide of copper and molybdenite mineralization.

Note: The only new work done on the above claims was a bulldozed road to the showings from the valley bottom.

- #9 On the boundary of the I.X.L. Crown Grant and Major Crown Grant a zone about 10 feet wide exists with three high grade sections within the zone made up of massive chalcopyrite. Considerable sericite is in evidence in this zone.

Note: This is an old showing. No new work has been done by Bethsadia Copper Syndicate on this showing. As you will note, new bulldozed road passes within a short distance of showings.

#### General

In early June the area was photographed by Photographic Surveys and a topographical base map was made from the photos. All the work done to date is incomplete due to the early winter and inability to obtain a bulldozer.

#### Conclusions and Recommendations

1. The series of narrow veins on the Bethsadia Copper Syndicate property are likely to continue to considerable depth, due to their fissure type structure.
2. Wall rock conditions and structure are not apt to change markedly to moderate depths, therefore, the character and high grade nature of the veins is likely to remain about the same.
3. Stripping by bulldozer should continue to outline length and width of the carbonatized section of parallel veins on the Tamarack showings (#8 on index map) as in this area several parallel veins are in evidence which are of a high grade copper-molybdenum nature. Country rock between these veins are carbonatized in part. Section here of some 500 feet in width seems worthy of extensive investigation. No assays were taken here by the writer. There is every evidence that mineralization exists between these parallel veins.
4. To carry on further extensive stripping on No. 2 zone.
5. To carry on extensive stripping by Bulldozer on P.S. #37 Mineral Claim, to try to pick up O.K. shear extension.

6. To cross cut all claims by bulldozer where the overburden is not too deep.
  7. To grid and bulk sample all zones of interest.
  8. Note: All known mineral occurrences in the Highland Valley Area were in similar state to the present conditions existing on Bethesda Copper Syndicate until extensive bulldozing was done by Bethlehem Copper Corporation Ltd. (N.P.L.) which has now set a pattern of exploration in the area. No other bulldozer should be considered other than a size D-8 caliber.
  9. Assessments have been completed on the 39 P.R. claims.
  10. The minimum cost of the above program not less than \$100,000.00.
- Note: Molybdenum is now \$1.10 per pound.

*H. H. Huestis*  
*December 15/55*  
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