

State Department of Geology and Mineral Industries

1069 State Office Building
Portland 1, Oregon

BI-METALLIC MINE (Au-Ag)

STATE DEPARTMENT OF GEOLOGY
& MINERAL INDUSTRIES

T. 10 S; R. 35 E; Sec 6 & 7
Greenhorn District
Grant County

Owner: Mrs. Fred Wickan and associates with the property currently held under lease and option by Hank C. Schwabrow, Pete Burfening and Harold Aycock of North Powder, Reno and Sumpter, respectively.

Foreword: This property has been inactive with most of the old workings caved and inaccessible over the past several decades; however, the present lessees are currently re-opening certain of the major workings as is described hereafter. This is therefore the first in a series of progress reports that will be made if the re-opening is completed as planned.

General: There are two sets of old caved working levels which penetrate a shear zone from which tetrahedrite-bearing quartz with high silver values and variable gold values was recovered by the earliest sets of operators during the forepart of the century. These are located on the upper flanks of a prominent ridge constituting the northern flank of a cirque from which Salmon Creek originates.

The lowermost working on the property is located at the base of the hill and not far above the springs which feed Salmon Creek. This is a cross-cut reportedly around 2100 feet in length; albeit reportedly short by an estimated 80 to 100 feet laterally at its terminus from connecting with the structures and orebodies previously developed in the upper two levels.

To date the lessees have rehabilitated the first 710 feet of the lowermost cross-cut and are currently continuing this effort with the intent of re-opening said workings to its face. They also plan in the immediate future to clean at least enough of the upper intermediate-level workings to expose the strike and dip of the vein structure for measurement so that a proper survey can be made between the levels concerning the projection of the vein structure with reference to the face of the lowermost cross-cut. They then plan to do enough new work in the crosscut to expose and explore the vein situation at that depth.

While the tetrahedrite-silver-quartz lode is the primary objective of this work, some consideration is currently being given to the possibility that the cross cut workings may have penetrated the leached top of a possible nickle sulphide occurrence. At least the cross-cut was found to have passed through 90 plus feet of brecciated green material that

is variably characterized by leaching, limonitization and random development of a quartz stringer stockwork. Occasional scarce clusters of thin, radiating bronze-colored crystals which correspond to the textbook description of Millerite are sometimes found in the protected interior of some harder and relatively fresh fragments of material occurring in the leached zone. This plus the widespread brecciation and alteration plus analyses ranging from 0.6% Ni upwards to as high as a reported 1.6% is what makes the lesscos feel that the mineralogic situation merits further study in line with the question of whether or not nickle sulphide has been extensively leached from the presently exposed material. Just what form any such investigation will take has not yet been decided; however the crosscut is so near the bottom of the hill that un-drained and un-oxidized ground cannot be too very much deeper. If fresh nickle sulphides are therefore present in significant quantities in this breccia zone, the fact should be disclosed readily enough by a couple comparitively shallow core drill holes.

The Brown and Thayer map of the Canyon Quadrangle shows that most of the workings on this property, including the last 1500 or so feet of crosscut, can be anticipated to be in Paleozoic-Mesozoic metavolcanic host rocks; however there is some diorite in the immediate vicinity and quite a bit of serpentine and relating ultrabasics nearby.

Property visited June 24, 1971
Report by N.S. Wagner, June 26, 1971

Bi-metallic Group ✓

Intrinsic

Gold - Silver - Molybdenum

NAME

OLD NAMES

PRINCIPAL ORE

MINOR MINERALS

420

T10S

R35E

Sec. 6-7

PUBLISHED REFERENCES

T

R

S

Oregon Metal Mines Handbook 14B:73
Parks & Swartley 16:37

.....Grant..... COUNTY

.....Greenhorn..... AREA

.....about 6500..... ELEVATION

MISCELLANEOUS RECORDS

..... ROAD OR HIGHWAY

..... $9\frac{1}{2}$ mi. Tipton..... DISTANCE TO
SHIPPING POINT

PRESENT LEGAL OWNER (S) M.C. Carson

Address Elm St., Baker, Ore.

OPERATOR

Name of claims Area Pat. Unpat.

Name of claims Area Pat. Unpat.

EQUIPMENT ON PROPERTY

REPORTS

SHIPMENT AND ASSAY RECORDS

MAPS

*Be. Melalla group of Quartz Mining Claims
by W. Irving Spencer - Sept 26, 1913*

x



BI METALLIC GROUP (Gold, silver, molybdenum)

Greenhorn Area

Owner: M. C. Carson, Elm Street, Baker, Oregon.

Location: In secs. 6 and 7, T.10 S., R.35 E., near the headwaters of Salmon Creek, and about $2\frac{1}{2}$ miles from the Ben Harrison mine in a straight line and about the same distance from the town of Greenhorn with which it is connected by wagon road.

History: Formerly called Intrinsic. The mine was located by S. C. Richardson who sold it in 1907. Little work was done and it reverted after one payment. One-half interest was sold to Anthony Moore in 1917, who with Richardson's partner, Andrew Larson, sold to the Eccles Company. About 2000 feet of tunnel was driven; but no drifting was done. M. C. Carson has been owner since 1920.

Geology: "The principal country rock is diorite, a peripheral differentiate of the granodiorite intrusion. Much serpentine and greenstone was observed on the opposite side of Salmon Creek. The immediate geology is complex. Large dikes which are neither a true granodiorite-porphry nor an aplite, but a sort of intermediate which might be called a granodiorite-porphry aplite strikes north and south on the east side of the property. They were probably walled up in fissures at a period of time midway between the time when the two types of dikes were being formed elsewhere. After this dike had become solidified, the dike and the adjoining diorite along its western side was shattered in a series of parallel breaks partaking of the nature of a shear zone. This must have been at a period considerably after the time when true aplites were formed elsewhere in the intrusion because it has been filled with almost pure quartz. The bands or ribbons of quartz are so completely cemented to the intervening dike rock that cross sections with the splendid luster of the quartz in contrast with the creamy but dull color of the dike rock makes a decidedly pleasing appearance.

"On the northeastern part of the claims, just beyond the saddle, is a light-colored rock composed almost entirely of calcite impregnated with chalcopyrite and tetrahedrite and containing some secondary feldspar and quartz. This has low values in gold and silver.

"The general direction of the veins is E-W, but these veins are the result of a more or less complex fracturing. The principal workings are in a basin about halfway up to the saddle from the creek. There has been a great deal of weathering and decomposition of the rock generally which may have been due to a centralizing of the fracturing in the basin.

"On the side hill west of the development is a large cropping at least 25 feet wide, which appears to be the result of a partial replacement of country rock with quartz, in which there are many veinlets and quartz crystals. Manganese is evident throughout, although in small percentages, and samples taken from this exposure assay about \$1 in gold. It could not be determined with the limited amount of development on the surface nearby whether or not this is a harder portion of the same lode seen in the principal workings to the east, which because of its more resistant nature, has not weathered as fast as the country rock or the softer part of the vein.

"The underground workings were so poorly ventilated that candles would not give sufficient light to observe very much, but it appears that there is a wide zone of softened badly decomposed rock in which there are lenses of good ore either along the walls or at places between them. How much value, if any, is contained throughout the mass is unknown, but from its appearance it is probably too low grade to mine outside of these lenses. Whether these lenses, which in places are of stoping width, have much vertical or horizontal extent was not ascertained.

"On the dump there is quite a tonnage of ore in which there is varying amounts of tetrahedrite with some pyrite and chalcopyrite. It is said that this ore has been sorted over twice and the first shipment contained between two and three hundred dollars a ton, and that the second sorting brought between one and two hundred dollars, while a third sorting, which has been begun, assays about \$75. The main ore dump will naturally average much less than the latter amount.

"The gold values are usually between one and two dollars per ton, and the amount of gold present seems to bear but little relation to the amount of silver present."

Disseminated molybdenite is present in the diorite in places. Banded cherts occur adjacent to the serpentine just above the lower tunnel portal. Small bodies of chromite occur in the serpentine half a mile west of the lower tunnel.

Development: The mine was shut down from 1914 to 1919, when 700 feet of the old upper tunnel was retimbered.

Development consists of a crosscut 2152 feet long, with drifts extending 410 feet south.

Informant: M. C. Carson; J. E. A. (11/2/38)

Reference: Parks and Swartley 16:37 (quoted).

State Department of Geology and Mineral Industries

1069 State Office Building
Portland 1, Oregon

BI-METALLIC MINE (Au, Ag, Mo)

T. 10 S; R. 35 E; Sec 6 & 7
Greenhorn District
Grant County

Foreword: This is supplement #1 to the memorandum report made by this author, June 26, 1971.

General: Re-habilitation of the lower workings was completed on this property during the past season to the extent needed to permit access to the face of the crosscut. The findings thus disclosed are that the crosscut was 2152 feet long, that it was driven on such a dead straight course that the portal was visible from the face and that it had been driven on a course of N 54 E which was much further to the north than was previously thought. Another surprise finding was that two drifts had been driven to the southeastward on intercepted veins.

The first drift takes off from the crosscut at about the 1500 foot mark but was only partially accessible due to major caving a short distance from the crosscut. This drift is about 220 feet long according to one of the miners who had crawled over the cave when the drift was first encountered.

The second drift which is believed to be on the main Bi-Metallic vein takes off from the crosscut at the 1850 mark and extends for a drift length of 410 feet with no stoping having been done. Mapping by the operators indicates that a 300 foot extension of this drift should intersect the previously mentioned vein if their respective courses continue without change and it is felt that this intersection could identify as the controlling factor that accounts for the ore encountered in the old upper workings.

The main crosscut terminates in serpentine; however a considerable body of granodiorite was penetrated before this contact was reached. Exactly how much, and exactly where, can't be described at this time because the walls throughout the entire crosscut and along the drifts need to be washed down and cleaned before any precise geologic mapping can be done. In any event, molybdenite in the form of pin-head sized crystals is apparent at several places in the workings disseminated throughout the wall rocks over widths approaching 30 feet in some places according to measurements reported by the operators. Two grab samples of this material from occurrences situated in close proximity to the Bi-Metallic vein and the other vein yielded returns of 0.06 and 0.01% Mo respectively according to analyses made by this department (AFB 65 - 66); However the operators report Mo contents of 0.85 and 0.55% respectively for independently made analyses of quartered bulk samples taken by them at these same locations at a later date. Considering their size and character the latter samples can be presumed

Bi-Metallic

(cont'd)

to be more nearly representative of the true character of the mineralization than were the department's smaller grab samples insofar as the Mo content is concerned. In any event the analytical results from both sets of samples agree in showing a gold-silver content ranging from nil to not over 0.03 oz per ton Au and only a few tenths of a percent Ag.

Extending the Bi-Metallic drift to its intercept with the other vein would appear to be a logical exploration target for work next season as this would serve to explore ground in the vicinity of a structural intersection that can be construed as the possible downward extension of the condition which accounted for the localization of the orebodies mined in the upper workings. Further investigation into the nature and character of the disseminated MoS_2 mineralization in the country rock walling both veins would also appear to be in order to the extent of supplementing present data by driving a few short crosscut spurs into the country rock, or by long-hole sampling, from strategic locations in each of the drifts.

Report by N. S. WAGNER
November 5, 1971
covering an inspection
made October 12, 1971

These accompany NSW report, June 26, 1971

STATE OF OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
1069 State Office Building - Portland, Oregon 97201

AFB-35

AFB-36

REQUEST FOR SAMPLE INFORMATION

The State law governing free analysis of samples sent to State Assay Laboratories requires that certain information be furnished the laboratory regarding samples sent for assay or identification. A copy of the law will be found on the back of this blank. Please fill in the information requested completely, and submit it along with your sample. Keep a copy of the information on each sample for your own reference.

Baker Office - Wag
Please print your name and address in space above

Date sample is sent:

June 25, 1971

Name of claim sampled:

Bi Metallic

Name of property owners "Toots" Wickan - under option to Schwabow, Aycock & Durfening

Are you hiring labor? _____ Are you milling or shipping ore? _____

Location of property or source of sample. (If legal description is not known, give location with reference to known geographical point.)

County Grant Mining district Greenhorn

Township _____ Range _____ Section _____ Quarter section _____

How far from passable road and name of road _____

Channel (length) Grab Assay for Description

Sample No. 1 _____ A Ni _____

Sample No. 2 _____ X Ni _____

(Samples for assay should be at least 1 lb. in weight; clay samples for ceramic testing at least 5 lbs.) IMPORTANT: A vein sample should be taken in an even channel across the vein from wall to wall. Location of sample in the workings, together with the width measured, should be recorded.

(Signed) N. S. Warner

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Description AFB-35 At cave at 715' in lowest level X cut

AFB-36 Near above but with occasional (sparse) thin, radiating bronze-colored X-tabs believed to be millerite (?)

Sample Number	GOLD		SILVER		NICKEL			
	oz./T.	Value	oz./T.	Value	Ni			
AFB-35								
P-36547	---	---	---	---	trace	---	---	---
AFB-36								
P-36548	---	---	---	---	trace	---	---	---

Report mailed July 12, 1971

REQUEST FOR SAMPLE INFORMATION

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Baker Office - Warner

Please print your name and address in space above

Date sample is sent:

June 25, 1971

Name of claim sampled:

Bi - Metallic

Name of property owners "Toots" Wickam - under option to Schwabow, Arcock & Burfening

Are you hiring labor? _____ Are you milling or shipping ore? _____

Location of property or source of sample. (If legal description is not known, give location with reference to known geographical point.)

County Grant Mining district Greenhorn

Township _____ Range _____ Section _____ Quarter section _____

How far from passable road and name of road _____

	<u>Channel (length)</u>	<u>Grab</u>	<u>Assay for</u>	<u>Description</u>
Sample No. 1	_____	<u>X</u>	<u>M</u>	_____
Sample No. 2	_____	<u>X</u>	<u>M</u>	_____

(Samples for assay should be at least 1 lb. in weight; clay samples for ceramic testing at least 5 lbs.) **IMPORTANT:** A vein sample should be taken in an even channel across the vein from wall to wall. Location of sample in the workings, together with the width measured, should be recorded.

(Signed) N. S. Warner

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Description AFB-37 West wall 75' back towards portal from AFB-35

AFB-38 " " 100' " " " " "

Sample Number	GOLD		SILVER		NICKEL			
	oz./T.	Value	oz./T.	Value	Ni			
AFB-37 P-36549	---	---	---	---	0.1%	---	---	---
AFB-38 P-36550	---	---	---	---	0.1%	---	---	---

Report mailed July 12, 1971