

# State Department of Geology and Mineral Industries

702 Woodlark Building  
Portland 5, Oregon

## BLUE STAR #3 TUNGSTEN MINE

Jackson County  
Gold Hill Dist.

Owners: Blue Star 1, 2 & 3 and Lucky Strike 1, 2 & 3 purchased by Northwest Mining Co. — Wm. D. Rhea, Ivan W. Lanham, Glenn W. Badley and Charles R. Jackson. Office is at the Consolidated Lumber Co., Central Point.

Location: Blue Star claims are in SE $\frac{1}{4}$  sec. 14, T. 37 S., R. 4 W. Lucky Strike Claims in NE $\frac{1}{4}$  sec. 14, T. 37 S., R. 4 W. They are reached by traveling up the Foots Creek road to the south for 1.3 miles, taking the left fork for 3.3 miles and traveling .3 miles on a private mining road which leads to the mine.

Geology: The occurrence being mined is on the contact between a quartz-diorite and meta-volcanics of the Applegate formation. (Wells, et al). In the mine workings extremely decomposed quartz-diorite is exposed and to the east across the contact is a clayey argillite. No real tactite is exposed. The argillite may be a large inclusion. One inch quartz stringers cut quartz-diorite.

The quartz-diorite and argillite have been sheared severely. Two prominent sets are N. 15° W. and N. 25° E. These shears dip steeply to the W & E. Slickensides trending 30° N. 15° W. were seen on one shear.

The scheelite occurs disseminated through the argillite. Small grains average 1/16 inch and rarely as large as 1/4 inch. The ground exposed in the mine workings was very poor in scheelite values. No attempt was made to delineate mineralized zones as the inspection was made in daylight. A sample of the rock being shipped to the mill was sampled. This sample (5 lb. of the shipping dump) ran nil WO<sub>3</sub> and 0.10%

TiO<sub>2</sub>.

Development: An open cut has exposed the contact for about 80 feet. The cut is 28 feet at the deepest part and 40 feet wide at the widest point.

Mining is done by bulldozers and trucks are loaded by a power shovel. The rock is hauled 26 miles to the Laughlin Alloy Steel Co. concentrating mill 1.5 miles west of Eagle Point.

Milling: At the mill the ore is dumped into a hopper with an 8 inch Grizzly, carried by a belt to a jaw crusher which crushes to 1 inch then by belt to a 400 T. ball-loaded rod mill. A hydraulic classifier returns plus 20 mesh to the mill and the fines and middlings to 4 Pan-American jigs. The jigs empty the heavies onto a bank of 3 Wilfry tables.

The mill is handling about 200 TPD, the production of the mine. Seven men per day run 3 shifts.

The concentrates have not attained the 55-60% WO<sub>3</sub> required. Ilmenite (?) is present in the cons. This will be removed by a magnetic separator.

The mill head probably are running less than 0.5% WO<sub>3</sub>. Tailings were not sampled.

The 20 mesh grinding is not fine enough to completely separate the rock from the scheelite. Also much scheelite is being lost in slimes in the classifier.

The main problems are: low-grade ore, loss of scheelite in slimes, and loss of scheelite with rock attached.

Economics: Oliphant, the manager of the mill says that the mill can be run for \$3/ton. Haulage probably costs at least \$1.50/T. Mining costs

Blue Star #3

- 3 -

about \$5+/T (?). At this rate the minimum grade that can be handled is about 0.5% WO<sub>3</sub>. The mine is not producing ore like this. Ore is the main problem.

Visited: By Max Schafer Sept. 22, 1955.

Report: By Max Schafer Oct. 14, 1955.

References: Medford Quad.; Wells, et al, U.S.G.S.  
Tungsten in Oregon; Wolfe & White, D.O.G.A.M.I.

\* \* \* \* \*

RECORD IDENTIFICATION

RECORD NO..... M061508  
RECORD TYPE..... X1M  
COUNTRY/ORGANIZATION. USGS  
MAP CODE NO. OF REC..

REPORTER

NAME..... JOHNSON, MAUREEN G.  
UPDATED..... 77 05  
BY..... SMITH, ROSCOE M.

NAME AND LOCATION

DEPOSIT NAME..... BLUE STAR PROSPECT

COUNTRY CODE..... US  
COUNTRY NAME: UNITED STATES

STATE CODE..... OR  
STATE NAME: OREGON

COUNTY..... JACKSON

QUAD SCALE 1: 62500  
QUAD NO OR NAME GOLD HILL

LATITUDE 42-20-01N  
LONGITUDE 123-08-16W

UTM NORTHING 4686600.0  
UTM EASTING 488650.0  
UTM ZONE NO +10

TWP..... 37S  
RANGE..... 04W  
SECTION.. 14  
MERIDIAN. W.M.

LOCATION COMMENTS: SE 1/4

COMMODITY INFORMATION

COMMODITIES PRESENT..... W

COMMODITY SPECIALIST INFORMATION:

SPECIAL FIELD 3 CONTACT/DISSEM

ORE MATERIALS (MINERALS, ROCKS, ETC.):  
SCHEELITE

EXPLORATION AND DEVELOPMENT  
STATUS OF EXPLOR. OR DEV. 2

DESCRIPTION OF DEPOSIT  
FORM/SHAPE OF DEPOSIT: DISCONTINUOUS

DESCRIPTION OF WORKINGS

COMMENTS(DESCRIP. OF WORKINGS):  
SHAFT 20, PITS, TRENCHES 2000

PRODUCTION  
NO PRODUCTION

ANNUAL PRODUCTION (DRE, COMMOD., CONC., OVEBURD.)  
23 W, OCCUR

GEOLOGY AND MINERALOGY

HOST ROCK TYPES..... METAVOLCANICS  
IGNEOUS ROCK TYPES..... QUARTZ DIORITE

PERTINENT MINERALOGY..... CALCITE, GARNET

GEOLOGICAL DESCRIPTIVE NOTES. METAVOLCANICS ARE GRAY BASALTIC OR ANDESITIC LAVAS

GENERAL REFERENCES

1) WOLFE & WHITE, 1951

General

The Blue Star tungsten prospect is located on a ridge between the Middle and Right forks of Footh Creek in Jackson County. The property consists of 3 lode claims located in the SE $\frac{1}{4}$  sec. 14, T. 37 S., R. 4 W. The claims were located in December 1950 by C.B. Harrison, H.A. Harrison, and Leo Thompson, Gold Hill, Oregon. The principal occurrences are at about 1,900 feet elevation.

Scheelite was detected in drainages of the area in the fall of 1950 by the owners, who later succeeded in locating several widely dispersed scheelite occurrences mainly by "pocket-hunting" prospecting methods. A shaft 20 feet deep was sunk in addition to several pits.

The property was leased for a short time early in 1951 by the Cordero Mining Company who did about 2,000 lineal feet of trenching with a bulldozer.

Geology

The scheelite occurrences are in rocks of the Applegate group, predominantly metavolcanics, marginal to a granitic intrusive. This intrusive, which has been mapped as quartz diorite by Wells and others (1940), is half a mile in diameter and apparently has a very irregular contact. In places blocks of pale lime-silicate rocks occur well within the margins of the intrusive.

Scheelite in metavolcanic rocks occurring near the contact with the granitic intrusive has been noted at one point on the Blue Star No. 1 claim. These metavolcanics may represent either an inclusion or a small body which projects into the granitic intrusive along the contact. The occurrence has been explored by surface pits and a 20-foot location shaft. Decomposed granitic rock is exposed in cuts within 50 to 100 feet to the east, south, and west of the location shaft. The rocks exposed in the shaft consist of gray metamorphosed basaltic or andesitic lavas containing a considerable amount of calcite. Scheelite occurs as scattered grains as large as half an inch in diameter in the more altered portions of the metavolcanics. The zone has been traced by surface panning for possibly 20 to 30 feet to the northeast.

One point of scheelite mineralization has been noted on the Blue Star No. 2 claim about 500 feet south of the location shaft on the Blue Star No. 1 claim. This is exposed in one shallow surface cut only.

The Blue Star No. 3 claim contains several discontinuous points of scheelite mineralization in the contact zone along the east margin of the granitic intrusive. These have been exposed in shallow trenches and bulldozer cuts. The most southerly of these points is at the location cut and in a bulldozer cut a few feet to the south. Scheelite occurs here in a dense, gray-green, very siliceous contact rock, presumably a lime-silicate rock, which might properly be termed a tactite. Megascopically, garnet is the only mineral easily identified. Scheelite occurs as small indistinct "spots" or areas in the more dense, siliceous contact rocks. The extent or nature of this zone cannot be determined from the present limited development work.

Approximately 200 feet north of the location cut, three points of mineralization are exposed in the two bulldozer cuts and one small trench. The most northerly of these points has been explored by a broad east-west bulldozer cut which exposes the contact between the intrusive on the west and rocks of the Applegate group, presumably metavolcanics, on the east. On the south side of this cut the contact rocks consist of several feet of a dense, fine-grained, white rock, possibly lime-silicate. Outward from the contact this white rock grades into dense, dark gray, siliceous material. Scheelite occurs as disseminated grains and as narrow stringers in parts of the latter zone. Scheelite mineralization extends to the northeast from the south side of the cut for about 10 feet. The exact width of the scheelite-bearing zone cannot be determined from present exposures but is reported to range from 2 to 4 feet. In the upper portion of the cut a very high-grade "pocket" of scheelite was encountered.

Several hundred feet to the southeast of the location cut on Blue Star No. 3, scheelite has been reported from a contact zone exposed on Moore Gulch. A zone of tactite composed largely of garnet was noted immediately east of the Blue Star No. 2 claim on private land. This zone, which is exposed in an irrigation ditch, appears to be several feet in width but no scheelite was found.

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

2033 First Street  
Baker, Oregon

1069 State Office Building  
Portland 1, Oregon

239 S.E. "H" Street  
Grants Pass, Oregon

LG-659  
WO<sub>3</sub>

*copy*

REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein as fully as possible and submit this blank filled out along with the sample.

Your name in full Homer A. Harrison

Post office address Rt. 1 Box 344 Gold Hill, Oregon

Are you a citizen of Oregon Yes Date on which sample is sent 12-4-51

Name (or names) of owners of the property H. A. Harrison

Are you hiring labor? \_\_\_\_\_

Name of claim sample obtained from Blue Star Tungsten

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 Jackson Mining district Gold Hill

Township 37 S Range 4 W Section 14 Quarter section SE<sup>1</sup>/<sub>4</sub>

How far from passable road and name of road On Fooths Creek Rd.

Channel (length) Grab Assay for WO<sub>3</sub> Description contact metamorphic

Sample no. 1 \_\_\_\_\_ x WO<sub>3</sub> contact metamorphic

Sample no. 2 \_\_\_\_\_

(Samples for assay should be at least 1 pound in weight.)

(Signed) H. A. Harrison

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

Description Gray, finely-banded contact metamorphic rock containing coarse grains of scheelite.

Sample number	GOLD		SILVER		TUNGSTEN			
	oz./T.	Value	oz./T.	Value	WO <sub>3</sub>			
P-12232 IG-659	---	--	---	--	3.93%	---	---	---

Report issued \_\_\_\_\_ Card filed \_\_\_\_\_ Report mailed 12-24-51 Called for \_\_\_\_\_