

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland 5, Oregon

MANSFIELD COPPER OCCURRENCE

Josephine County
Waldo District

WMS
78/1

Owner: The land is owned by George A. Mansfield, R 1. Box 436, Cave Junction. He has a patented claim on the copper mineralization.

Location: The claim is located in the SE of SW $\frac{1}{4}$, Sec. 27, T. 39 S., R. 7 W. The Mansfield property is reached by traveling out the Oregon Cave Highway 6 miles from Cave Junction, turning ^{South} right on Holland road, going $\frac{1}{4}$ mile past Sucker Creek bridge and continuing straight on Mansfield ranch road.

Development: There are several bulldozer cuts and a trench on the property. The trench is old and caved, but the Mansfields have done some bulldozing recently. There was no equipment at the prospect.

Geology: The prospect is on an E-W shear zone in serpentine. Several inclusions of Upper Triassic (?) Applegate meta-volcanic rocks are present near the deposit. Poor outcrops indicate a size of about 50' in diameter for one of the inclusions.

Copper mineralization was found in three spots along a shear (?) which follows the contact. In two spots malachite and chalcocite have replaced (?) serpentine and magnetite and have been deposited along the boundaries of serpentine "boulders". This is the usual characteristic of the "boulder copper" deposits.

The most promising spot along the shear was marked by a small gossan of less than a square yard in area. Under this gossan was a stringer of solid chalcocite and native copper up to 6" in width.

Polished sections seem to indicate the following sequence of events: shearing of serpentine and deposition of magnetite, deposition of native

copper and chalcocite from solutions deficient in sulphur and/or precipitated in a ferric oxide (magnetite) environment, shearing and deposition of malachite and minor azurite in narrow stringers by ground waters.

The polished sections show different ratios of native copper to chalcocite. An impression of replacement of native copper by chalcocite is ^{obtained} gotten, but there is no concrete criteria for this (or for the advanced explanation, for that matter.)

Economics: The typical "boulder copper" deposit has very little tonnage. This deposit seems to be similar.

There is a possibility that the mineralization may be continuous over the 100' of shear zone exposed but to be economic the ore zone would have to be wider than is shown at present.

Recommendations: The limits of the mineralization should be explored along the shear zone by trenching and by shallow pits in the trench. If the mineralization is not continuous or if the zone does not widen out with a very little depth, I do not believe that there is a possibility of an economic operation.

Assays: Samples 1 & 2 were taken at the spot of gossan -- 1, the gossan itself; 2, below the gossan from a 4" chalcocite, magnetite, serpentine sample. Sample 3 was from serpentine and showed heavy malachite, and #4 was another similar sample from serpentine from another spot along the shear zone. There is probably no economic possibility except the copper.

Sample No.	DOGAMI No.	Au oz/T	Ag oz/T	% Cu	% Co	% Ni
1	OG-389	Tr	1.2	6.1	Nil	0.10
2	OG-430	0.045	1.2	25.50	0.01	0.01
3	OG-390	0.02	1.40	24.7	Nil	0.08
4	OG-391	Tr	Tr	9.7	0.1	0.21

Report by: Max Schafer

Visited by: Max Schafer and Len Ramp Sept. 20 & Oct. 6, 1954.

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RECEIVED
NOV 17 1954
STATE DEPT. OF GEOLOGY
& MINERAL INDS.

Sept 20, 1954

Walden

George Mansfield Claims

Small lens of meta vol
in serp. Seems to trend E-W, dips S40.
Lens about 10' x 40'? Can't
tell for sure. Mineralization
extends for several feet each
side of lens. One spot heavily
gossan - brown + yellow fe-st.
1' of this over ~~stale~~ malachite
& azurite in serp. May be
cobalt bloom.

Samples taken of both
materials. Assay for Au, Ag, Cu,
Ni, Co.

Serp. heavily sheared. Probably
on shear zone. Some fault directo.

Advice - follow one spot to
get direction of body & extent.
Do by hand-work. Cat would
probably foul it up.

Mansfield own land ~~by~~ with
patented claims.

White rock has small shears
tight with some cu - some
Crysacolla & malachite.

Shear trends E-W, S40
Some heavy silicification near
shear. Min. probably late ~~magma~~

hydrothermal phase of serpentine
intrusion. Meta vol serpentinized

Arizona Testing Lab. 15.9% Cu
Phoenix 21.00 Au

SE of SW $\frac{1}{4}$, Sec 27, T39S,
R7W

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION

RECORD NO..... M062089
 RECORD TYPE..... X1M
 COUNTRY/ORGANIZATION. USGS
 DEPOSIT NO..... 127
 MAP CODE NO. OF REC..

REPORTER

NAME..... SMITH, ROSCOE M.
 DATE..... 78 08

NAME AND LOCATION

DEPOSIT NAME..... ^C MANSFIELD PROSPECT

COUNTRY CODE..... JS

COUNTRY NAME: UNITED STATES

STATE CODE..... OR *Waldo*

STATE NAME: OREGON

COUNTY..... JOSEPHINE

QUAD SCALE

1: 62500

QUAD NO OR NAME

CAVE JUNCTION

LATITUDE

42-08-33N

LONGITUDE

123-30-56W

UTM NORTHING

4665500.

UTM EASTING

457400.

UTM ZONE NO

+10

TWP..... 39S

RANGE..... 07W

SECTION.. 27

MERIDIAN. WB & M

ALTITUDE.. 1700

LOCATION COMMENTS: SE 1/4 SW 1/4

COMMODITY INFORMATION

COMMODITIES PRESENT..... CU

DRE MATERIALS (MINERALS, ROCKS, ETC.):

CHALCOHITE, NATIVE COPPER

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:

VEIN

FORM/SHAPE OF DEPOSIT: BOULDER-TYPE

SIZE/DIRECTIONAL DATA

SIZE OF DEPOSIT..... SMALL

DESCRIPTION OF WORKINGS

SURFACE

COMMENTS(DESCRIP. OF WORKINGS):

SEVERAL BULLDDOZER CUTS

PRODUCTION

UNDETERMINED

GEOLOGY AND MINERALOGY

HOST ROCK TYPES..... SERPENTINE

PERTINENT MINERALOGY..... MAGNETITE

IMPORTANT ORE CONTROL/LOCUS.. EAST-WEST SHEAR ZONE IN SERPENTINE

GENERAL REFERENCES

1) RAMP & PETERSON, 1979, DDDGMI BULL. 100