

te Department of Geology and Mineral Industries

Original notes in
F.W.L. file

702 Woodlark Building
Portland, Oregon

SOUTH UMPQUA MINE (Copper)
(Banfield Mine)

Douglas County
Tiller-Drew Area

Owner: South Umpqua Mining Company, Dr. J. Allen Gilbert, President,
Portland, Oregon; W. S. Long, Secretary-Treasurer, 3471 NE Couch St.,
Portland, Oregon.

Location: Between the forks of Drew Creek, a branch of Elk Creek, about
5 miles south of Drew post office in sec. 34, T. 31 S., R. 2 W.
The property is reached by a wagon road, passable for automobiles in dry
weather, which leaves the Tiller-Trail highway at a gate north of Drew post
office.

Area: 9 unpatented lode claims.

History: It is reported that H. Banfield located the ground in 1900. He
secured financial backing and a company was organized. Under Banfield's
supervision, approximately 3000 feet of development work was done over a
period of nearly 20 years. After Banfield's death in 1920, the property
was operated in a small way by leasers. In 1928 a small mill employing
gravity concentration was built, but there is no record of mill production.
Shenon 34 : 43 states that in 1928 a production was reported of 10,058 pounds
of copper and 19 ounces of silver from 52 tons of ore.

Topography: In the vicinity of the mine there are low mountains generally
covered by second growth timber and brush. Slopes into gulches
are steep, but at several places these steep slopes are surmounted by rela-
tively flat areas. There would be no great difficulty in road or trail
building.

Development: Tunnels 1 to 6, numbered respectively from lowest to highest
in elevation have been driven southerly in the shear zone.

No. 1 Tunnel is 720 feet long and in addition contains other lateral work totalling 200 feet. Two raises were driven from No. 1 through the intermediate level. One, 120 feet long, connects with No. 3 Tunnel, 115 feet higher in elevation. The second raise, farther south, is 85 feet long and was driven to a point 25 feet above the intermediate level.

About 30 feet south of the first raise in No. 1 Tunnel near Sta. 5, a short raise about 10 feet long has been driven northeasterly on a lens of ore several feet in diameter. Much of the ore exposed consists of chalcopryite, magnetite, and pyrite, together with thin seams and small spots of quartz. It is reported that a sample from this raise assayed 0.06 oz. gold, 2.6 oz. silver to the ton and 11.09 percent copper. In the crosscut under this shoot two samples were taken in lower grade material. The left or west section 2½ feet wide, returned trace of gold and silver, and 0.5 percent copper. The right hand section 2 feet in width, assayed gold and silver, trace, and copper 1.2 percent. This sample included an irregular band of chalcopryite a few inches wide. Five more lenses of ore were cut by No. 1 Tunnel, the largest of which was opened by a flat raise 35 feet long driven from Sta. 9. The back of this raise is in ore apparently several feet wide. Two samples from this ore were reported to assay 5.22 percent and 4.89 percent copper respectively. Samples from the other lenses were reported to assay from 5.87 percent to 9.78 percent copper.

The Intermediate level, 60 feet higher in elevation than No. 1 Tunnel, is, according to the mine map, approximately 183 feet long and contains 3 crosscuts totalling 37 feet.

Tunnels 2 and 3, so-called, have the same portal. No. 2 was driven southwesterly in waste for a distance of 275 feet. At Station 2, 50 feet

from the portal, No. 3 Tunnel was driven southerly 116 feet, and in addition there are 5 raise-stopes, all connected, which have a total lineal distance of approximately 150 feet. Ore taken from these raises probably made up the shipment reported under "History". Previous sampling of the ore at several places reportedly returned from 11 to 16 percent copper. A sample across taken in the back of the small stope farthest south returned a trace in gold and silver and 2.4 percent copper.

No. 4 Tunnel, 165 feet in elevation above No. 1, was inaccessible, but according to the mine map, is 438 feet in length and has other lateral work totalling 33 feet. Four samples reported taken at different places in the last 90 feet are stated to range from 0.22 to 8.48 percent copper.

No. 5 Tunnel, 205 feet in elevation above No. 1, has an open cut, 50 feet long, showing considerable copper stain. The tunnel proper is 105 feet in length and contains a winze 10 feet deep sunk on a pyrite vein or lens about a foot wide. Two samples taken previously in the oxidized copper ore - one at the beginning and one at the end of the open cut - were reported to contain 5.22 percent and 7.72 percent copper respectively.

No. 6 Tunnel, 245 feet in elevation above No. 1, is approximately 406 feet long. In addition other lateral work totals 185 lineal feet. Ore is exposed over a distance of about 35 feet between stations 10 and 12 in the last 75 feet of tunnel. Previous sampling in two places reportedly returned 17.0 and 18.0 percent copper. A sample taken by the writers at or near the widest part near Sta. 12 over 3 feet in width returned gold 0.01 and silver 0.6 oz. to the ton and 8.2 percent copper. At this point the chalcopyrite occurs in bands, one of which is over a foot wide.

Geology: The country rock of the immediate area is May Creek schist (Wilkinson, 41). Greenstone is reported to occur half a mile to the northeast, and lower Tertiary agglomerate, half a mile to the southeast. Wells (40) states that the greenstone below the Jurassic Galice formation is metavolcanic and metasedimentary. Wells and Hotz (41) believe that the age is Triassic. The metavolcanic rocks of the Grants Pass quadrangle grade imperceptibly into Diller's May Creek schist, so the conclusion may be drawn that the May Creek schist resulted from metamorphism of volcanic rocks. Diller (24) surmised this relationship in the statement that the May Creek schist is very similar to the contact aureole rocks of the Grants Pass quadrangle. The schist may properly be called gneiss.

At the South Umpqua mine, the quartz-hornblende-mica gneiss mass contains elongated stringers of a granitoid rock. However, field relationships suggest that the "intrusive" as reported by Pardee in Shenon (33)^{may} be the result of "granitization". In other words, it is likely that the "granite" is not intrusive in the usual sense of the word, but that it represents a complex relationship, whereby portions of the gneiss were re-crystallized.

The mine has been opened in a shear zone extending southerly. An apparent footwall dipping 60-75 degrees east, is well-defined; the maximum width of the zone has not been determined. Where opened underground the rock is whitish from hydrothermal alteration and secondary silica together with sericite occurs abundantly. In a few places small bunches of calcite were seen. On and near the surface at the mine openings the rock has weathered to a red color due to iron oxide.

Ore occurs in irregularly shaped lenticular bodies separated by barren or nearly barren rock. Chalcopyrite occurs in bands and bunches together with magnetite, pyrite, and quartz. In many specimens of ore magnetite is in

greatest proportion. A lens of pyrite about a foot in thickness is exposed in a shallow winze from No. 5 Tunnel.

The separate bodies of ore vary in size from a foot to several feet in thickness. Their lateral extent may be several feet. Insufficient work has been done to prove vertical extensions. Boundaries between ore and wallrock are usually indistinct. In most of the ore shoots chalcopyrite occurs mainly as wavy bands showing replacement of the schist.

Secondary silica is being deposited underground from percolating groundwater at the present time. Small stalactites of silica are common, as well as sheets of silica on the adit walls. The silica was white, where few sulphides were present. Within a few feet of copper sulphides, the silica takes on a bluish tint.

On the basis of incomplete evidence, the general sequence of events is interpreted as follows: Triassic volcanic rocks were metamorphosed to meta-volcanic rocks (Diller's greenstone), and later certain portions were metamorphosed to gneiss, (May Creek schist). This later metamorphism further resulted in producing a rock locally called porphyry. Then, following the developing of the north-south shear zone, hydrothermal solutions produced profound bleaching, and it is probable that the ore solutions may have accompanied the closing phases of this alteration.

Report by: F.W.L. and R.C.T.
10/8/43

References:

Oregon State Dept. Geol. & Mineral Industries, Bulletin 14-C,
Vol. I, pp. 128-129, 1940.

Diller 24; Diller, J. S., & Kay, G. F.; U. S. Geological Survey geologic
atlas, Riddle folio (No. 218) 1924.

Wells 40; Wells, F. G. ; Preliminary geologic map of the Grants Pass
quadrangle, Oregon; State Dept. Geol. & Mineral Industries, map
series 5, 1940.

Wells 41; Wells, F. G., & Hotz, P. E.; Mesozoic volcanic series in
southwestern Oregon (abst); Geol. Soc. Am., Bull. Vol. 52, No. 12,
pt. 2, pp. 1937-1938, December 1941.

Shenon 33; Shenon, P. J., Copper Deposits in the Squaw Creek and Silver
Peak Districts and at the Almeda Mine, southwestern Oregon, with
notes on the Pennell and Farmer, and Banfield prospects; U. S.
Geol. Survey Circular No. 2, 1933.

Wilkinson 40; Wilkinson, W. D.; Reconnaissance geologic map of the
Butte Falls quadrangle, Oregon; State Dept. of Geol. & Mineral
Industries, map series No. 4, 1941.

Oct. 6 - 1943 So Kungqua

Sample # 1 ^{chip sample}
on No 3 Tunnel $3\frac{1}{2}$ ft wide
across drift near back of slope
near long # 22 sample but at
H. angles to it. Some bunches
of Chalcopyrite, some $9\frac{1}{3}$ and
considerable Fe stain -
An Tr. Ag Tr Cu 2.4%

10/7

long sample
from H.G. in
small vein
10' up - nice
bunches

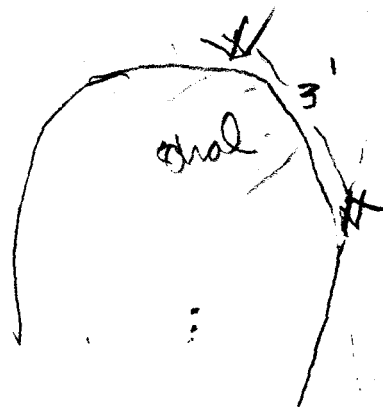
2 - # 1 Tunnel near Sta 5 in small
drift on left of X cut ^{under} long #
Sample # 16 - H.W. Sect. $2\frac{1}{2}$ ft.
very little sulphide perhaps mostly
pyrite - An Tr Ag Tr Cu 0.5%

3 Ditto F.W. Sect. 2 ft.
near bottom 4" seam chalcopyrite
discontinuous - flat seam
An Tr Ag Tr Cu 1.2% ^{looking E}

10/7/43 S. Kempf-

#4

Tun-#6 at Sta 12 - 3' wide
above F.W. contains over a
foot of relatively H.G. Chalcopyrite
in shoot about 25 ft long -
Sampled near best looking
part - may be more ore in
roof



Aw 101
Az 16
Cu 8.2%

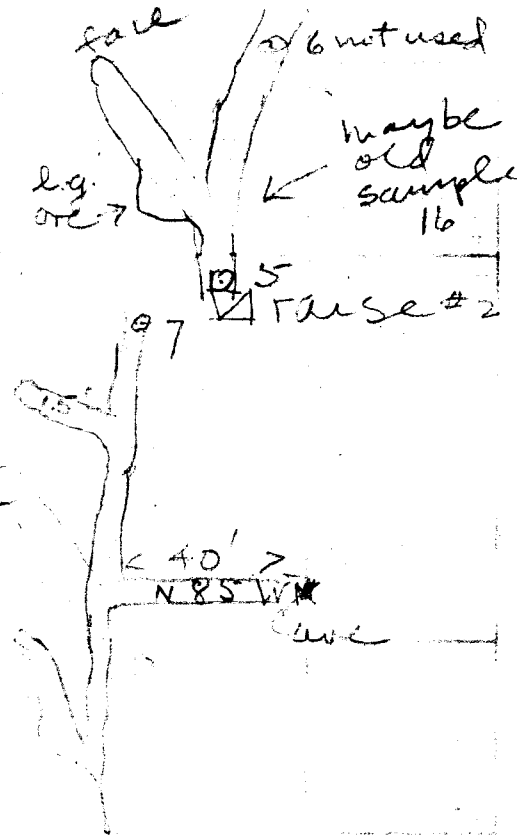
bearing dist
 04 to S 10 E 27 to near side clude
 05 S 10 E 34 to far side clude

05 S 46 E 35 to face left X cut

05 to 07 S 20 E 69.5

05 to S 20 E 18' to 1st H. X cut bearing
 N 85 W 40' to cave

05 to S 20 E 38' to left X cut bearing
 N 73 E 15'



07 to 08 S 14 W 27' to short X cut left bearing S 8 E 17'

08 to 09 S 55 W 31 to RT X cut and slope hangs samples 8 & 15

09 N 38 W 50' to face RT X cut + slope

South Umpqua Metasomatic Rock (P-1954)

The thin section of this rock is characterized by numerous plumose aggregate structures, about 0.5 mm in length, made up of intimately associated siderite and antigorite. Siderite makes up about $\frac{2}{3}$ of the plumose structures and constitutes about 50% of the rock; antigorite, about $\frac{1}{3}$ of each aggregate and 25% of the rock.

Vein quartz in grains as much as 1 mm in diameter forms 20-25% of the mass. Anhedral to euhedral grains of pyrite as much as 0.3 mm in diameter are disseminated throughout the mass and make up about 5% of the rock.

== After the antigorite + siderite had been produced + probably after the pyrite had been dispersed (all possibly by same solutions) the vein quartz was emplaced

S. Umpqua #5 Tunnel
Winze Pyrite ledge
(P-1956)

Polish section

65
~~50~~%
by weight

Bright areas (brassy colored)

1. Pyrite 80%± by volume 90%^{by weight}
2. Quartz (filling fractures) 20%± by volume 10%^{by weight}

35%
by weight

Dark gray areas (cavernous or porous in places)

1. Quartz 75%± by volume 60%

2. Pyrite 20-25% " " 40%

3. Melantherite-chalcanthite
[soluble salt on polished face]
(probably a mixture of
dominantly melantherite
and some chalcanthite)

n circa 1.51 - 1.52
i.e. above melantherite
& below chalcanthite.
taste - sweet, astringent,
strong metallic, somewhat
nauseous

Pyrite is about
75% by weight of total

Rowley (lower N-trending tunnel)
(7-1957)

Minerals present:

1. Pyrite
2. Quartz
3. Calcite
4. Chalcopyrite
5. Hornblende
6. Sphalerite
7. Magnetite

Polish section:

percentage varies with locality	{	Pyrite	45-50%	by volume
		Quartz	25-35%	" "
		Calcite	15%	" "
		Magnetite	7-12%	" "

Believed sequence of deposition

Pyrite, Magnetite, Quartz, Calcite

BLANK B—ANNUAL REPORT

This report must be properly executed and filed with the Corporation Commissioner on or before July 1, 1933, in order to entitle a corporation mining for any of the precious metals, coal, or prospecting or operating for oil, or operating an oil well, to pay a license fee of only \$10. If not so filed, such corporation must pay the same license fees as are required to be paid by other corporations for gain.—Section 25-244, Oregon Code 1930.

ANNUAL REPORT TO THE CORPORATION DEPARTMENT

FOR THE YEAR ENDING JUNE 30, ~~1932~~ 1937

Of SOUTH UMPQUA MINING CO. (Give legal name in full)

a corporation organized and existing under and pursuant to the laws of the State of Oregon.

The location of its principal office is at No. 3618 N.E. Couch Street, in the city of Portland, in the state of Oregon

The names and addresses of principal officers, with the postoffice address of each are as follows:

NAMES	OFFICE	BUSINESS ADDRESS
<u>Dr. J. Allen Gilbert</u>	President	<u>1816 N.E. Halsey St., Portland</u>
<u>W. S. Long</u>	Secretary	<u>3618 N.E. Couch St., Portland</u>
<u>do</u>	Treasurer	<u>do</u>

The date of the annual election of officers is 2d Tuesday in January

The date of the annual election of directors is do

	Common With Par Value	Common No Par Value	Preferred
Amount of authorized capital stock	\$300,000	Shares	\$
Number of shares of authorized capital stock	300,000		
Par value of each share	\$1.00	xxxxxx	\$
Amount of capital stock subscribed	\$208,287	Shares	\$
Amount of capital stock issued	\$208,287	Shares	\$
Amount of capital stock paid up	\$208,287	Shares	\$
Price at which no par value stock issued	xxxxxx	\$	xxxxxx

State amount of capital, represented by stock of no par value, with which the corporation began business \$

Total amount of its properties in Oregon (amount of land, buildings, etc.)
Independent Claim #1 to and including Independent Claim #9, Douglas Co., Oregon

The location of its properties Sec. 34 T. 31 S., R. 2 W. W.M. and Sec. 3 T. 32 S. R. 2 W. W.M.

The amount of work done thereon and improvements made thereon since the time of filing last report none

The amount of output or products of the mines or wells of such corporation from January 1, 1932, to December 31, 1932, inclusive, none

The value of output or products of the mines or wells of such corporation from January 1, 1932, to December 31, 1932, \$ none

IN WITNESS WHEREOF, I, W. S. Long, Secy. Treas.

of said corporation, have signed this report, this 28th day of June, A. D. 1937.
 (signed) W. S. Long

[CORPORATE SEAL]

STATE OF OREGON, }
 County of _____ } ss.