SOUTH UAPQUA 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 organised. 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 lessees. 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 chalcopyrite, 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 2 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 chalcopyrite 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 Hots (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) 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-crystalized.

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 metavolcanic 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:


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.


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 Long Tom

Sample #1  Chip sample on No 3 Tunnel 3 1/2 ft. wide across shot near back of slope near long. #22 sample 1 ft. at angles to H. Some binder at angles to H. Considerable Fe stain on Tr. Ag Tr Cu 2.4%

10/7

#4  #1 Tunnel near Sta. 5 in small draw on left of X cut from long.
Sample #16 - H & W Sect. 2 1/2 ft. Complete sulphide. Perhaps marly.

#3 Ditto E N Sect. 2 1/2 ft.
Near bottom 4" seam shale probably discontinuous. Shale seam.
An Tr Ag Tr Cu 1.2%

Looking
10/7/43  S. Kemp

#4  Turn #6 at Sta 12 - 3' wide
above F.W. contains over a
foot of relatively H.G. Chalkoprite
in shoot about 25' long.
Sampled near west looking
part - may be mine one

A x 101
A x 16
Cu 8.2%
<table>
<thead>
<tr>
<th>Bearing</th>
<th>Dist.</th>
</tr>
</thead>
<tbody>
<tr>
<td>04½ E 5 10E</td>
<td>27' to near side under 10½ E 34' to far side under</td>
</tr>
<tr>
<td>05 E 5 46E</td>
<td>35' to face left x cut</td>
</tr>
<tr>
<td>05 E 07 5 20E</td>
<td>69.5'</td>
</tr>
<tr>
<td>05 E 8 20E</td>
<td>18' to 10½ ft x cut bearing N 85½ W 40' to car to</td>
</tr>
<tr>
<td>05 E 5 20E</td>
<td>38' to left x cut bearing N 73½ E 15'</td>
</tr>
<tr>
<td>07 E 8 08 5 14W</td>
<td>27' to short x cut left bearing S 8 E 17'</td>
</tr>
<tr>
<td>08 E 8 09 5 55W</td>
<td>31' to R+ x cut and slide hang's &amp; drive &amp; 5' 15'</td>
</tr>
<tr>
<td>N 25W</td>
<td>50' to face R+ x cut &amp; slope</td>
</tr>
</tbody>
</table>
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 75% of the plumose structures and constitutes about 50% of the rock; antigorite about 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
Winnie Pyrite ledge
(P-1956)

Polish section
65% Bright areas (brassy colored)
by weight
1. Pyrite 80% by volume 90% by weight
2. Quartz (filling fractures) 20% by volume 10% by weight

35% Dark gray areas (cavernous or porous in places)

1. Quartz 75% by volume 60%
2. Pyrite 20-25% by volume 70%
3. Melanterite - chalcanthite
   (soluble salt on polished face)
   (probably a mixture of
   dominantly melanterite
   and some chalcanthite)
   n ~ 1.51-1.52
   i.e. above melanterite
   & below chalcanthite
taste - sweet, astringent
strong metallic, somewhat
nauseous
Rowley (lower N-trending tunnel)  
(7-1957)

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

Polished section:

\[
\begin{array}{ccc}
\text{Pyr.} & 45-50\% & \text{by volume} \\
\text{Quartz} & 25-35\% & \text{varies with}
\end{array}
\]


\[
\begin{array}{ccc}
\text{Calcite} & 15\% & \text{locality}
\end{array}
\]

\[
\begin{array}{ccc}
\text{Magnetite} & 7-12\% & 
\end{array}
\]

Believed sequence of deposition:

Pyr.ite, Magnetite, Quartz, Calcite.
ANNUAL REPORT TO THE CORPORATION DEPARTMENT
FOR THE YEAR ENDING JUNE 30, 1937

Of SOUTH UMPQUA MINING CO.,

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. 3619 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:

<table>
<thead>
<tr>
<th>NAMES</th>
<th>OFFICE</th>
<th>BUSINESS ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. J. Allen Gilbert</td>
<td>President</td>
<td>1816 N.E. Halsey St., Portland</td>
</tr>
<tr>
<td>W. S. Long</td>
<td>Secretary</td>
<td>3619 N.E. Couch St., Portland</td>
</tr>
</tbody>
</table>

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

The date of the annual election of directors is do.

<table>
<thead>
<tr>
<th>Amount of authorized capital stock</th>
<th>Common With Par Value</th>
<th>Common No Par Value</th>
<th>Preferred</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$300,000</td>
<td>Shares $</td>
<td></td>
</tr>
<tr>
<td>Number of shares of authorized capital stock</td>
<td>$300,000</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Par value of each share</td>
<td>$1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of capital stock subscribed</td>
<td>$208,287</td>
<td>Shares $</td>
<td></td>
</tr>
<tr>
<td>Amount of capital stock issued</td>
<td>$208,287</td>
<td>Shares $</td>
<td></td>
</tr>
<tr>
<td>Amount of capital stock paid up</td>
<td>$208,287</td>
<td>Shares $</td>
<td></td>
</tr>
<tr>
<td>Price at which no par value stock issued</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

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

Total amount of its property in Oregon, as of the date of filing this report

Independent Claim #1 to and including Independent Claim #9, Douglas Co., Oregon.

The location of its properties Sec. 24, T. 31 S., R. 2 W., M., and Sec. 24, T. 32 S., R. 2 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.

(W. S. Long)

[CORPORATE SEAL]

STATE OF OREGON,
County of

ss.