REPORT

OF A PRELIMINARY EXAMINATION

OF THE

BANFIELD MINE

SOUTH UMPQUA MINING CO.

DREW,

DOUGLAS COUNTY,

OREGON.

To
Mr. D. S. Tait,
602 Stock Exchange Building,
Vancouver, B. C.

By
Charles C. Starr, M. E.,
720 Pacific Building,
Vancouver, B. C.

September 11, 1948.

BANFIELD MINE

INTRODUCTION:

The party, consisting of Mr. Tait, Mr. Upton and the writer, arrived at the mine about noon of September 9th and left about noon of the 11th. All levels were visited, except the inaccessible Intermediate level, and 17 samples were taken, most of them with a moil. Copper is the chief metal present.

There was only time for a preliminary sampling and a very superficial study of the character and structure of the orebodies, so that this examination is of a preliminary nature only. The only production made from the mine is 52 tons carrying 9.87% copper, which was shipped some years ago.

LOCATION:

The property is situated about four miles south of Drew P. O., the developed part of the mine being in Sec. 34, Twp. 31 S., Range 2 W. in the southern part of Douglas County, Oregon.

The nearest railroad point is Riddle, on the Southern Pacific Railway, distant 34 miles from the mine. The connecting road is paved for about 21 miles, macadam for 9 miles to Drew, and a dirt road, liable to be soft in wet weather, from Drew to the mine. There are no heavy grades except between Drew and the mine.

PROPERTY:

There are 9 un-patented claims in the group, Banfield No. 1 to No. 9 inclusive which are owned by the South Umpqua Mining Co. of which Mr. W. S. Long of Portland, Oregon, is Secretary-Treasurer.

The claims, totaling about 180 acres, cover the mineralized zone for a length of 6,000 feet north and south and a width of 600 to 1,800 feet.

GENERAL: The topography is irregular and broken, with deep gulches along the creeks. The elevation at Drew is 1345 feet and 2200 feet at the lowest tunnel, making the average road grade 4.1%, however the road is quite steep in places and has some reverse grades for short distances.

Drew Creek passes near the lowest tunnel and will probably furnish sufficient water for domestic use and for milling on a moderate scale.

The property is well timbered with fir of sizes for saw-logs and for mine timber.

There is a high tension power line at Drew but there is some question whether there is any excess power for sale.

C.C.S.

The climate is reported to be excellent, with little snow at the elevation of the mine.

GENERAL GEOLOGY: Partly from "Reconnaissance Geological Map of the Butte Falls Quadrangle" - U. S. G. S.

The country rock at the mine consists of mica schists and slates, probably of Devonian age, and is known as the May Creek formation. The Oregon State Geological Department say that it may be a metamorphosed volcanic rock and should be called gneiss. It is the oldest rock in the district and has been strongly sheared and schisted and bleached and altered by hydrothermal metamorphism.

Greenstones outcrop about a half mile to the northwest, and Tertiary lavas and agglomerates occur a short distance east of the mine, and probably overlie the May Creek formation.

Intrusive masses and dikes of quartz-diorite (Jurassic) outcrop in a long north-south belt about two miles west of the mine. The intrusion and cooling of this rock mass is probably responsible for the formation of the pre-mineral fractures and the schisting of the rock, and is undoubtedly the source of the mineralizing solutions which entered the fractures and deposited the ore.

The geology is of a type which is definitely favourable to the formation of orebodies, and the only apparent unfavourable feature at the Banfield mine is the highly altered and soft condition of the schist, making it too weak to maintain an open fracture, thus impeding the flow of mineralizing solutions and causing them to seep through the sheared rock wherever they could penetrate, rather than forming a definite vein.

Of the local economic geology as seen in the mine, I am not prepared to say very much on account of the short time for studying it. It is quite evident that the mineralization is extensive, though generally weak, with however irregular areas of low grade ore. There is also much shearing and faulting at various angles to the general strike.

MINERALOGY:

Chalcopyrite is the chief copper mineral and is accompanied by considerable pyrite and magnetite in a gangue of altered schist consisting largely of secondary quartz and sericite. In places chalcopyrite and pyrite occur in a fine grained, dense, black rock the relations of which to the schist is not clear.

Near the surface the chalcopyrite has been partly oxidised to malachite. No evidence of any secondary enrichment was noted, although conditions seem rather favourable for it.

C.C.S.

DEVELOPMENT:

Mr. A. M. Swartley, in his report of June 10, 1944, gives the total development as 2,950 feet of which 2,120 feet is "main length" of tunnels, 495 feet branches, and 220 feet raises. This work is done in five tunnels (Nos. 2 and 3 have the same portal) and one intermediate, in 245 feet of vertical depth. No. 1 tunnel is the lowest and No. 6 the highest and is said to have a depth below the surface of 320 feet at the face.

The workings are generally in good condition except at the portals of tunnels Nos. 1, 3 and 4. In No. 1 rotten timber extends some 70 feet in from the portal; this section will have to be re-timbered before it is safe. In the other two tunnels loose earth has broken down the timber at the portal and will have to be cleaned out. The Intermediate level is inaccessible on account of rotten ladders, and possibly also the timbers supporting the ladders.

BRIEF DESCRIPTION OF WORKINGS:

#6 Tunnel There is some weak oxidised mineralization around the portal, but no other mineralization was noted until midway between Stations 9 and 10 where, after crossing a small fault, there is a vein-structure with traces of mineralization which extends to three or four feet south of Station 10. At this point an east-west fault cuts diagonally across the drift and through the face of the short crosscut, throwing the vein about 15 feet to the left. Sub-commercial ore starts immediately south of the fault and continues for 45 feet S 35° E where it passes out of the southwest side of the drift.

#5 Tunnel There is considerable wide-spread mineralization, mostly oxidised, at the portal of this tunnel. Ore, largely sulphide, also shows at the right angle turn to the left but quickly fades into weakly mineralised material to the southward.

#4 Tunnel So far as noted this tunnel shows no mineralization until Station 9 is reached, although the crosscut from the portal passes through the edge of the ore-zone about midway between #3 and #5 tunnels. Southeast of Station 9 mineralization improves for some 20 feet and continues as sub-commercial ore to the face of the drift, a distance of 50 feet.

#3 Tunnel This so-called tunnel is the southern extension of #2 tunnel and the mineralization follows fairly definite walls along the drift for about 100 feet to the southward; it is uncertain whether this ore at the south end passes into one wall of the drift, or fades out.

Four raises have been driven some 30 feet upward flatter than the vein-walls and have exposed a considerable width of partly oxidised vein-matter. There appears to be a second vein in the footwall of that on which the drift is driven, but it could be one vein with a "horse" of waste

CCS

in the middle. The dip of the wall of the vein is 50° to 70° eastward.

#2 Tunnel The vein of #3 tunnel shows in #2 tunnel (a crosscut) as a shear and gouge with only traces of copper.

Within the next hundred feet, more or less, southwest along the crosscut there are three prominent shears from two to four feet wide which strongly resemble the vein of #3 tunnel where it passes through the crosscut, but show no mineralization. It is probable that there are more shear-zones ahead of a cave which nearly closes the crosscut.

#1 Tunnel The first important mineralization encountered in this tunnel is at about Station 5. Between Stations 5 and 6 a short raise, inclined up to the north and little more than a shelf cut in the hanging wall of the drift, shows several feet of fair ore. A bit of ore is left in the floor of the drift at the foot of the raise and a sample at Station 6 shows sub-marginal vein-matter.

For 80 feet south of Station 6 Company samples show fractions of one percent of copper.

At Station 9 a flat raise 30 or 40 feet long has been driven in low grade ore and appears to partially crosscut the ore zone, but it is hard to see much of the structure on account of muck. From Station 9 south-eastward to the face of the drift, a distance of about 200 feet, Company samples taken at 20 to 40 foot intervals indicate almost continuous ore of about 5% copper. This section was not sampled by Mr. Swartley or the writer, but is believed to be of lower grade than 5%. Two samples near the face taken by the writer averaged 3.3% copper.

In the last hundred feet or more of this tunnel there is considerable limestone, or at least some highly calcareous rock, with bands and irregular areas of dense greenish-black very fine grained rock, resembling a fine grained basalt. Pyrite and chalcopyrite in fair amount occur in spots and streaks in the dark rock and to a lesser extent in the limestone; nearly all the sulphide streaks lie approximately horizontal, although the body as a whole appears to have a normal east dip. This structure, and the rocks in which it occurs, have not been found in other parts of the mine except in very small and isolated spots.

SAMPLES:

The following samples were taken:-

NO.	Ft. Wide	% Copper	Tunn. No.	Location	Oxid	Sulph	Remarks
4001	5.3	3.40	6	At * 12	(x)	X	* signifies Survey Station
4002	7.4	1.20	6	*10 S 10'	(x)	X	
4003	3.4	1.10	6	*12 N 23'	(x)	X	

C.C.S.

No.	Ft. Wide	% Copper	Tunn. No.	Location	Oxid	Sulph	Remarks
4004	4.0	0.70	3	Top 4th Rz. X	(x)		
4005	4.4	0.40	3	Top 3rd Rz.(x)	X		30' from drift
4006	5.8	3.20	3	Top 2nd Rz. X	X		N. wall part, 30' from Dr.
4007	16.0	2.00	3	Top 2nd Rz. X	(x)		F. " "
4008	5.0	0.70	3	Bot'm 1st Rz(x)	X		Across back of drift
4009	7.5	0.40	3	" " " X	X		#4008 contin. to hanging
4010	8.3	1.70	3	Dr. @ #4 Rz.(x)	X		Across back of drift
4011	5.2	5.30	1	*6 27' N.		X	Face of raise.
4012	2.0	0.60	1	*6 27' N.	(x)	X	4011 contin. to foot.
4013	5.5	4.10	1	*16 23' S.		X	Vertical cut, flat ore seams
4014	4.3	2.30	1	*15 13' S.		X	" " " " " "
4015	5.6	0.60	4	S. face Dr.	(x)	X	
4016	6.2	2.50	4	12' N of face		X	Vertical cut, flat ore seams
4017	6.5	1.05	4	33' N of face		X	

Except where noted widths are at right angles to the vein.

Composite of all samples assayed Trace gold and 0.15 Oz. silver.

Comparison of Samplings

#6 Tunnel

Company - 2 samples 9.0 feet @ 18.5% copper)
Swartley- 6 " 4.3 " @ 3.2% ") Fairly comparable
Starr - 3 " 5.4 " @ 1.9% ")

#5 Tunnel

Company - 2 samples 8.0 feet @ 6.47% copper) Nos 27 & 5-2 are compar-
Swartley- 2 " 6.0 " @ 3.5 % ") able (8' @ 7.7 & 6' @6.1
Starr - No " Both nearly on strike.

#4 Tunnel

Company - 4 samples (#23 & 24 omitted) 9 feet @ 6.5% copper
Swartley- No samples
Starr - 3 " 6.1 " @ 1.4% "

Fairly comparable.

#3 Tunnel

Company - 6 samples (#17 omitted) 11.2 feet @ 12.8% copper
Swartley- 6 " 5.8 " @ 6.7% "
Starr - 7 " 7.3 " @ 1.5% "

Mostly comparable.

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#1 Tunnel - Between Stations 4 and 6.

Company - 3 samples (#1 & 2 omitted) 7.0 feet @ 11.09% copper
Swartley- 2 " (continuations ?) 12.0(?) " @ 7.9 % "
Starr - 2 " (continuations) 7.2 " @ 3.8 % "

Comparable, except one of Swartleys samples was incorrectly taken if as shown on map.

Between Stations 6 and 8.

Company - One is 2.88% copper, the others are less than ½ of 1% Cu.
Swartley & Starr no samples.

Station 8 to face of level.

Company - 9 samples 12.75 feet @ 5.02% copper.
Swartley- 2 " 7.1 " 5.7 % "

Swartley's samples appear to have been taken nearly along the course of the vein and are roughly comparable to Company #15 - 23 feet @ 4.89% copper.

Starr - 2 samples 4.9 feet @ 3.3% copper. Not comparable to others

Summary of Comparable Samples

Company - Tunnels 1, 3, 4, 5, 6 - 9.3 feet @ 11.1% copper.
Swartley - " 1, 3, 5, 6 - 8.0 " @ 5.7% "
Starr * " 1, 3, 4, 6 - 6.7 " @ 1.3% "

All of the above averages of copper content are weighted averages according to the widths sampled, except the Summary which is weighted according to the number of samples and the widths sampled.

The differences between the three partial samplings of the mine is surprising, although some of the previous samples seemed to have taken a too large proportion of the higher grade spots, and some of them were taken lengthwise of the orebody. There seems to be no valid reason to doubt the approximate accuracy of the "Starr" samples, and it should be assumed that they represent the metallic content of the orebodies within reasonable limits.

CONCLUSION:

Little evidence was seen to bear out Mr. Swartley's theory that post-mineral faulting was followed in the development of the mine rather than the vein proper, however I would not say that his theory is definitely wrong. My own impression (not a final conclusion) is that the so-called vein is more in the nature of a wide lode, or zone of shearing, and that irregular orebodies may occur anywhere within the lode where stronger than usual fissuring allowed access to the mineralizing solutions.

Hand sorting of the ore would, I believe, have to be limited to the picking out a few of the richer pieces of ore, and would not be profitable. Nor does the ore appear to be amenable to mechanical sorting, otherwise known as the "Sink-and-Float process". However a laboratory test would have to be made on the ore to determine definitely whether it can be successfully treated by that process.

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On the basis of the last sampling there is no shipping ore exposed and no ore of a milling grade, unless all conditions were favourable and a very large tonnage could be mined. There is no indication that the orebodies are large enough to furnish sufficient tonnage to make 2% copper a profitable ore, but rather that the orebodies are comparatively small and rather widely separated.

Under these conditions no further examination or consideration of the property is justified.

Respectfully submitted,

Chas. C. Starr

September 11, 1940.

Douglas

BANFIELD

File No. C-66

PROSPECT CARDS

Code No.

Property Name Banfield Mine

Property Owner

Submitted by

Location: State Oregon

County Douglas

Mining D.

T 31S R 2W Sec. 34

Followup Recom.

Later Review Recom.

Examined by

Company

Date

Where filed

Metals		Production Metal
	Cu	✓
	Mo	
	Pb	
	Zn	✓
	Ag	✓
	Au	✓
	Fe	
	Mn	
	Cr	
	Ni	
	W	
	U	
	Re	
	P_2O_5	
	K_2O	
	Sn	
	Be	
	Coal	
	Hg	✓
Other		

AMS Quad

Other Quad

Production

	None	10^2	10^3	10^4	10^5	50^5	10^6
TONS							

Geology

Host Rock May Cr. Schist

Mineralization

Type diss. sulfide & streaks of sulfide

Trend

Ore py, cpy, cinnabar, sphal.

Gangue

Alteration

Type

Extent

Bibliography

USGS

USBM

Other Shenon, Ramp.

Remarkes: Similar to Rowley but not connected (probably)

Follow-up Recom.

Field Time

None

1 Day

1 Week

1 Mo

+1 Mo

Tiller - Drew Area
Douglas County

Banfield Mine (Copper, quicksilver)

Owners: Principals in the Banfield Corp. are reported to be: (NOV. 1970)
W. Lawrence Wilson, Attorney at Law, Suite B, 115 Fourth Ave., South Edmonds, Washington 98020 and
Arnold Moore, 658 Daley Street, Edmonds, Washington, 98020.

Location and Area: Property consists of 9 claims, located in Southern Douglas County, about 35 miles southeast of Riddle and 4 miles south of Drew postoffice, at the head of Drew Creek, one of the branches of the south fork of the Umpqua River, in Sec. 34, T. 31 S., R. 2 W. There is a good ~~wagon~~ road to the mine up the South Umpqua by way of Drew. The elevation is 2400 feet.

History: H. Banfield located the ground in 1900. Up to the time of his death in 1920, he had completed about 3000 feet of development work and built several camp buildings. In 1928, the property was leased and a small concentrating mill built. Gravity concentration methods employed were inefficient and the enterprise was unsuccessful. In 1931, the property was deeded to the South Umpqua Mining Co.

Development: Occurrences of both copper ore and cinnabar are reported. The greatest amount of work has been done in developing copper ore. Five adits with total lineal underground development of over 3500 feet have been driven at different elevations in the ore zone, and these are reported to have partially developed two ore shoots although neither widths nor lengths have been defined. In 1935 some systematic sampling was done with results reported as follows:

> "The arithmetical average of 30 samples taken in the different tunnels and including both ore and waste was: copper 6.35 percent, gold 0.06 ounces to the ton and silver 1.38 ounces to the ton." The average os samples in ore, weighed as to measured distances of samples was: copper 10.65 percent, gold 0.07 ounces and silver 1.7 ounces to the ton."

Cinnabar is reported as occurring both in portions of the underground workings and over an extensive area to the south at a higher elevation. Definite assay results are not available. An engineer's report states that " cinnabar is visible in parts of the copper ore body, and that tunnels farther south show disseminated ore."

Shenon 34:43 gives the following information:

> "The property has had a great deal of development work done, several tunnels having been driven aggregating several thousand feet. It is on a schist belt several hundred feet wide. The general direction of shearing movement was north-south and dipping steeply to the east. The minerals are chalcopyrite and pyrite irregularly distributed through the schist in grains and lens-shaped masses, varying from pea size to an inch or more in thickness, showing by their shape and occurrence that they were formed either previous to or during the movement

" which produced the schist.
No definite information concerning the average copper content in the workings is available. The occurrence is such as to suggest the advisability of systematically drilling the schist to determine the extent of low-grade ore."
The Banfield Mine is about 5 miles southwest of Drew, at an altitude of 2,400 feet. It is said to have been located as the Rainbow Lode, but it is now generally known by the name of H. Banfield, a former owner, who developed the deposit during a period of 20 years or more after 1900. A production of 52 tons of ore containing 10,059 pounds of copper and 19 ounces of silver was reported in 1928. In July 1929 a small crew was employed in repairing a concentrating mill near the mine. According to J.T. Pardee, who visited the mine at that time, the deposit is opened by several adits at different levels, and the underground workings are rather extensive. The country rock is chiefly greenstone that belongs to the older or pre-Tertiary rock group of determined extent. In a zone that trends north and is 20 or 30 feet wide the greenstone and porphyry are bleached nearly white by hydrothermal alteration. Within this zone chalcopyrite and pyrite are irregularly distributed as stringers, grains, and bunches. The sulphides are accompanied by abundant magnetite and, locally, bunches of quartz having a coarse texture like pegmatite. Microscopic examination of a specimen of sulphide ore by M.N. Short shows it to consist chiefly of chalcopyrite studded with small crystals of magnetite. Some pyrite also is present. These minerals are cut by veinlets of carbonate and quartz."

Geology: The country rock of the immediate area, according to Wilkinson (41), is May Creek schist. Greenstone is reported a half-mile to the northeast, and lower tertiary agglomerate, a half-mile to the southeast. Wells (40) has shown that the greenstone below the Jurassic Galice formation, is metavolcanic and metasedimentary rock, and later (Wells and Hotz 41), that the age is Triassic. The metavolcanic rocks of the Grants Pass quadrangle, grade imperceptibly into Diller's May Creek schist, so the conclusion is, that the May Creek schist so called, is a metamorphosed phase of the volcanics. 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 more properly should be called gneiss.
At the mine, the so called schist is a quartz-hornblende-mica gneiss. In this mass is a series of elongated stringers of a granitoid rock. However, field relationships suggest that the "granite intrusive" (Pardee's Porphyry) may more properly be the result of "granitization" or "juicing". In other words, it is believed that the "granite" is not intrusive in the limited sense of the word, but that it represents a complex relationship, whereby portions of the gneiss were re-crystalized. The gneiss and the granitized material are essentially the same rock.

Pardee mentions the zone 20 to 30 feet wide, trending north and south, that is bleached white by hydrothermal alteration.

The lower, or No. 1 adit approximately follows a north and south sheer zone. The footwall is well defined and the hanging wall is less distinct. The dip is usually 60° - 75° eastward.

Metallic minerals are pyrite, magnetite and chalcopyrite. The ore seems to be in bunches or knots and while some assays indicate good copper content, it is believed that the ore-bearing areas are limited in extent. The method of mining and the exposed ore, support this contention. Pyrite bodies with a small amount of chalcopyrite and magnetite were seen in some of the upper adits.

Deposition of sedimentary silica is being effected at the present time. At one point a survey station number not over a year old is almost obscured by silica. Small stalactites of silica are common, as well as sheets of silica on the adit walls. It was noted that the silica was white where few sulphides were present. Within a few feet of copper sulphides the silica takes on a bluish tint, to become quite blue (Chrysocolla) at the ore body. It may be that the blue tinted silica is an indication of copper-bearing sulphides.

On the basis on incomplete evidence, the general sequence of evidence 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 the juices of some of the gneiss, to produce 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. No date can be assigned to the mineralization, other than a guess that similar alteration followed by cinnabar mineralization occurred in adjacent areas.

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, Dec. 1941.

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.

Shenon, Philip J. 1933, Copper Deposits in the Squaw Creek and Silver Peak Districts and at the Almeda Mine, Southwestern Oregon, U.S.G.S. Circular 2.

State Department of Geology and Mineral Industries

~~702 Woodlark Building~~
~~Portland, Oregon~~

Tiller-Drew Area

Douglas County

South Umpqua Mining Co. (Copper, quicksilver)
(Banfield Mine)

Owner: Oregon corporation; Dr. J. Allen Gilbert, president, Portland Oregon; W. S. Long, secretary-treasurer, 3618 NE Couch St., Portland, Oregon. Arnold N. Moore, Edmonds, Wash. (1960?)

Location and Area: Property consists of 9 claims, located in southern Douglas County, about 35 miles southeast of Riddle and 4 miles south of Drew postoffice, at the head of Drew Creek, one of the branches of the south fork of the Umpqua River, in sec. 34, T. 31 S., R. 2 W., There is a good wagon road to the mine up the South Umpqua by way of Drew. The elevation is 2400 feet.

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Reference: Shenon 34:43

South Umpqua Mining Co., Tiller-Drew
Douglas County

8/14/58

I believe that this mine can best be reached from the forest service road from Drew to Diamond Rock L.O. The trail from the Hall ranch is said by the residents there to be passable. Furthermore there is a marked road about 1/2 mile north of the Hall ranch that may be passable by truck, however I did not check this. - GSK

RIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... M055859
RECORD TYPE..... X1M
COUNTRY/ORGANIZATION. USGS
INFORMATION SOURCE... BAILEY, E. H.
MAP CODE NO. OF REC..

REPORTER
NAME..... PETERSON, JOCELYN A.
DATE..... 76 08
UPDATED..... 81 02
BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION
DEPOSIT NAME..... BANFIELD
SYNONYM NAME..... SOUTH UMPQUA MINING CO.

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

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

COUNTY..... DOUGLAS
DRAINAGE AREA..... 17100302 PACIFIC NORTHWEST
PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
LAND CLASSIFICATION..... 41

QUAD SCALE	QUAD NO OR NAME
1: 62500	TILLER

LATITUDE	LONGITUDE
42-50-07N	122-55-53W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4742300.	505600.	+10

TWP..... 031S
RANGE.... 002W
SECTION.. 34
MERIDIAN. WILLAMETTE

ALTITUDE.. 2200

POSITION FROM NEAREST PROMINENT LOCALITY: 6 MI. S. OF DREW

COMMODITY INFORMATION

OCCURRENCE(S) OR POTENTIAL PRODUCT(S):
POTENTIAL.....
OCCURRENCE..... HG

ORE MATERIALS (MINERALS,ROCKS,ETC.):
CHALCOPYRITE; UNKNOWN AG; (CINNABAR)

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 6
PROPERTY IS INACTIVE
PRESENT/LAST OWNER..... SOUTH UMPQUA MINING CO.

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
MINERALIZED SHEAR ZONE
FORM/SHAPE OF DEPOSIT: IRREGULAR STRINGERS AND LENSES

SIZE/DIRECTIONAL DATA
SIZE OF DEPOSIT..... SMALL
MAX WIDTH..... 30 FT
STRIKE OF OREBODY.... N
DIP OF OREBODY..... E

DESCRIPTION OF WORKINGS
UNDERGROUND
LENGTH OF WORKINGS..... 3500 FT

PRODUCTION
YES
SMALL PRODUCTION

CUMULATIVE PRODUCTION (ORE,COMMOD.,CONC.,OVERBUR.)

16 CU	ACC	0010.459 LB		1928,1956	193.44 LB/TON
17	ORE	0000.052 TONS		1928	.365 OZ/TON

PRODUCTION YEARS..... 1928, 1956

PRODUCTION COMMENTS.... DRILLED IN 1968 FOLLOWING A GEOPHYSICAL SURVEY. NO HG PRODUCTION

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... LTRI
HOST ROCK TYPES..... SCHISTOSE GREENSTONE

AGE OF ASSOC. IGNEOUS ROCKS.. JUR

IMPORTANT ORE CONTROL/LOCUS.. ALTERED SCHIST BELT SEVERAL HUNDRED FEET WIDE , WHICH IS BOUNDED ON THE WEST BY DIORITE AND ON THE EAST BY TERTIARY VOLCANICS

LOCAL GEOLOGY

SIGNIFICANT ALTERATION:
HOST ROCKS ARE BLEACHED NEARLY WHITE BY HYDROTHERMAL SOLUTIONS

GENERAL REFERENCES

1) RAMP, L., 1972, GEOLOGY AND MINERAL RESOURCES OF DOUGLAS COUNTY, OREGON: ODGMI BULL. 75, P. 26
2) OREGON METAL MINES HANDBOOK, 1940: ODGMI BULL. 14-C, VOL. 1-COOS, CURRY, AND DOUGLAS COUNTIES, P. 128
3) MERCURY IN OREGON, 1965, USBM IC 8252
4) FREDERICK, F., 1945, STATE OF OREGON MAP SHOWING LOCATION OF QUICKSILVER DEPOSITS: OREGON DEPT. OF GEOL. AND MIN. INDUSTRIES, SCALE 1:1,000,000
5) OREGON METAL MINES HANDBOOK, 1941, BULL. 14-C, V. 1, 133 P.

South Umpqua Mining Co., (Cu, Hg) Tiller-Drew Area
(Banfield Mine) Douglas County

Geology: The country rock of the immediate area, according to Wilkinson (41), is May Creek schist. Greenstone is reported a half-mile to the northeast, and lower tertiary agglomerate, a half-mile to the Southeast. Wells (40) has shown that the greenstone below the Jurassic Galice formation, is metavolcanic and metasedimentary rock, and later (Wells and Hotz 41), that the age is Triassic. The metavolcanic rocks of the Grants Pass quadrangle, grade imperceptibly into Diller's May Creek schist, so the conclusion is, that the May Creek schist so called, is a metamorphosed phase of the volcanics. 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 more properly should be called gneiss.

At the mine, the so called schist is a quartz-hornblende-mica gniess. In this mass is a series of elongated stringers of a granitoid rock. However, field relationships suggest that the "granite intrusive" (Pardee's Porphyry) may more properly be the result of "granitization" or "juicing". In other words, it is believed that the "granite" is not intrusive in the limited sense of the word, but that it represents a complex relationship, whereby portions of the gneiss were re-crystalized. The gneiss and the granitized material are essentially the same rock.

Pardee mentions the zone 20 to 30 feet wide, trending north and south, that is bleached white by hydrothermal alteration.

The lower, or No. 1 adit approximately follows a north and south sheer zone. The footwall is well defined and the hanging wall is less distinct. The dip is usually 60°-75° eastward.

Metallic minerals are pyrite, magnetite and chalcopyrite. The ore seems to be in bunches or knots and while some assays indicate good copper content, it is believed that the ore-bearing areas are limited in extent. The method of mining and the exposed ore, support this contention. Pyrite bodies with a small amount of chalcopyrite and magnetite were seen in some of the upper adits.

Deposition of sedimentary silica is being effected at the present time. At one point a survey station number not over a year old is almost obscured by silica. Small stalactites of silica are common, as well as sheets of silica on the adit walls. It was noted that the silica was white where few sulphides were present. Within a few feet of copper sulphides the silica takes on a bluish tint, to become quite blue (Chrysocolla) at the ore body. It may be that the blue tinted silica is an indication of copper-bearing sulphides.

On the basis on incomplete evidence, the general sequence of evidence 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 the juices of some of the gneiss, to produce 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 been accompanied

the closing phases of this alteration. No date can be assigned to the mineralization, other than a guess that similar alteration followed by cinnabar mineralization occurred in adjanent areas.

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, Dec. 1941.

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.

Banfield, Douglas Co.

In USBM Spokane files is a 4p. rpt. by Swartley dated June 10, 1944 said to be a summary of his 30 p. rpt. This looks like a poor rpt. with "wild" geology.

USBM WMM dated Dec. 1942 turned property down.

Also in file are some unsigned large prints, evidently tape and compass or worse of workings and assays. Dated 1935 or undated. These probably should be borrowed and reduced to sketch size for publication.