The Red Cloud mercury mine near Drew, in Douglas County, is being returned to production by J.R. Davies, Commercial Hotel, Yakima, Wash., and his son, J.R. Davies, Jr., who is in charge at Drew. About twenty men are employed and equipment includes a 25-ton retort. Oscar Anderson is mine superintendent and J. Houglund is in charge of retorting. F.E. Hobson in mining engineer.

From Mining World
Vol. 8, no. 6
May, 1946
page 73
You will be interested in the fact that the auditor, Mr. Whitely, located the original of our letter and had the shorthand notes made for you.
October 13, 1941

The Red Cloud Mining Company
Portland,
Oregon

Attention: Mr. G. D. McCutcheon

Dear Mr. McCutcheon:

In compliance with your request this is to inform you that I have spent about ten days in the survey and examination of your Red Cloud Mining property, and at this time I am submitting for your information a preliminary report upon the conditions as I find them.

We have completed the underground survey of the workings as far as they are accessible. By the extension of this survey information and checking with the surface openings in the neighborhood of the caved areas in the mine, we have definitely located the nearest points of approach to the ore bodies which have been for some time inaccessible on account of the caved areas and some of the recent workings having been carried to points which have been somewhat indirect in their courses. This work, however, is by no means lost, and we are now able to determine the most practical methods of entering the ore bodies that are known to exist in the old workings.

Some small-scale retort tents have been made during this time to determine the immediate availability of commercial ore and find that there are at least three openings which may be used at the present time to supply at least a 20-ton plant for continuous operations.

I see no reason why the general plan of mine development which you have in mind should not be carried on as proposed with the few changes that are shown to be necessary from the survey. Contour and plan maps will be submitted for your information within a few days and upon which the mine work should be based and the drawings extended from time to time as the work is continued.

In reply to your inquiry concerning the plant and its early operation, have this to say that, so far as the plant is constructed, materials and workmanship are of the best and in accordance with approved methods for the installation of such equipment. However, it is very evident that, in order to make a positive, stabilized recovery for continuous operation under your variable climatic conditions, it will be necessary to make some
changes and additions in the condensing portion of the equipment. For such proposed changes and additions, I am submitting to you a detailed estimate of materials required, and while we hope to do much better, it is not safe to figure on the work of installation to be completed within less than thirty days from the present time. However, when this work is completed, I feel certain that the plant will be one upon which you may depend for a maximum recovery at a minimum cost for fuel and labor and that you may, also, be certain of an adequate supply of ore to keep the plant in continual operation at a very satisfactory profit.

While it may appear to your company that some unnecessary work, and likewise expenditures, have been imposed, yet what extra work may have been done in the mine, aside from some small caved areas, is by no means lost and the few hundred tons of probable commercial ore which has been run through the plant with only partial recovery comprises no different conditions from what are generally required in the early development and operation of mercury mine property the country over. In the future, your mine work will all be used for development and operation so that the expenditures for that portion of the work is by no means lost, and with your plant completed in accordance with well-standardized methods of plant construction, you will quickly overcome what losses have been made during the usual routine of plant and mine tests and experimentations.

As soon as possible within the next two weeks, I shall have carried out some extended tests and measurements upon the ore values and volumes as now determined by mine work and survey which, I believe, will be highly gratifying to your company. But at this time I have no hesitancy in recommending that you proceed with the mine development as contemplated with the assurance that, with your plant revised as proposed, your entire project should yield profit fully up to your earlier expectations.

Respectfully submitted,

[Signature]

[Registered Professional Engineer]

[Stamp: Registered Professional Engineer 1472]

[Stamp: Frank E. Hobson]

[Stamp: Sept. 30, 1930]
Claimants: John P. and Frances Adams
Rt. 2, Box 392C
Eugene, Oregon

Reason for Examination: Verified Statements filed by the claimants with the Bureau of Land Management on September 11, 1961, serialized as Oll471-G/C (Cow Creek Area) and Oll487-A (Divide Area). Field examination indicates the subject claims lie entirely within Cow Creek Area.

Subject: Validity of Mining Claims.

Lands Involved: Eight (20-acre) lode claims:

- Boy Scout, Red Cloud Annex No. 1,
- Red Cloud Annex No. 2, Red Cloud Annex No. 0, Red Cloud No. 0,
- Red Cloud No. 2, Last Chance, and Mars Fraction,

comprising some 160 acres in Sections 16 and 21, T. 32 S., R. 2 W., W.M., Umpqua National Forest, Douglas County, Oregon.

Land Status: National Forest lands open to mineral entry.

Location Data: See page 2.

Mining District: Upper Cow Creek Mining District.

Mining Engineer: Zean R. Moore

Date of Examination: June 5, 1965

Accompanied by: John P. and Frances Adams, Claimants


4. Red Cloud Annex No. 0 lode claim, located October 17, 1927, by F. E. Nivison, recorded in Book 10 at page 237, Douglas County, Oregon.

5. Red Cloud No. 0 lode claim, located October 17, 1927, by F. E. Nivison, recorded in Book 10 at page 236, Douglas County, Oregon.

6. Red Cloud No. 2 lode claim, located July 11, 1932, by F. E. Nivison, recorded in Book 10 at page 432, Douglas County, Oregon.

7. Last Chance lode claim, located October 25, 1937, by F. E. Nivison, recorded in Book 11 at page 88, Douglas County, Oregon.

8. Mars Fraction lode claim, located October 21, 1930, by F. E. Nivison, recorded in Book 10 at page 349, Douglas County, Oregon.
ABSTRACT

This report covers eight lode cinnabar claims in the Cow Creek mining district. The claims were originally located by Mrs. Adams' father, Mr. F. E. Nivison.

The claimants have done considerable work in the past on these claims.

Although some float was found by the claimants, the results were not encouraging. The claimants admit no discovery at the present time.

Due to the fairly high prices for mercury, the claimants are hoping to get an interested party to come in and do some exploration work. However, so far as it is known at this time, no one has become interested in these claims.
Location and Topography

The claims are situated along the slopes of the East Fork of Cow Creek in Sections 16 and 21, T. 32 S., R. 2 W. This location is about 7 miles by dirt road west of the Divide Guard Station, which is on Oregon Highway 227, approximately 11 miles north of Trail, Oregon.

These claims can further be described as being in the northern Klamath Mountains of southwestern Oregon. The topography is rugged with elevations up to 3,000 feet. Streams are numerous and swift, and canyons are narrow with steep walls. Narrow ridges separate the streams.

Surface Values

These claims are covered with a fair stand of timber. Timber harvest, watershed and grazing appear to be the best use for this land.

Areal Geology

The area of these claims is in the extreme northern end of the Klamath Mountains in southwestern Oregon. These mountains are made up largely of pre-Tertiary strata that have been steeply folded, faulted and in places intruded by serpentinized masses of ultra-basic and granitoid rocks.

Rocks of the Klamath Mountains are much older than those in other parts of western Oregon. Both Paleozoic and Mesozoic volcanic and sedimentary rocks are present, which locally have been altered to schist, phyllites and marble.

Local Geology

Rocks in the area of the claims comprise massive to schistose amphibolites and quartz mica schists of the Triassic Applegate group locally overlain by Tertiary lavas. Because of the scarcity of exposures, the general attitude of cleavage laminae in the older rocks cannot be confidently determined. Several nearly vertical shear zones have been exposed by mine and prospect workings. Most of the shear zones trend north 20° to 40° west.

History and Production of the Area

The upper Cow Creek area includes a group of mines and prospects situated along the slopes of the East Fork of Cow Creek in Sections 16 and 21, T. 32 S., R. 2 W. In this group are the Red Cloud mine and adjacent Nivison and Thompson prospects in Douglas County, and the Elkhorn prospects in Jackson County. The area lies in the Tiller quadrangle.
Only at the Red Cloud mine is any appreciable amount of cinnabar known to have been found in place. Although it occurs as float and pannings in the surface mantle of many parts of the area, the fact that the many other workings penetrated barren or only weakly mineralized rock, suggests that the float was probably derived from numerous occurrences which alone are too small and widely scattered to permit profitable exploration.

Occupancy

There is none at this time. Picture 1 with this report shows an old cabin which the claimant and his family lived in years ago. It is no longer being used and has been left to fall into a state of disrepair.

Pertinent Information

None.

Discovery

Reference is made to the appended map that shows the pertinent features.

All of the workings visited were caved and the claimants admitted that they had not found any quicksilver except some showings in the long adit near the south end of Red Cloud No. 2 lode claim. The remains of this adit are shown in Picture 2 with this report. Pictures 2, 3, and 4 are typical of the conditions found on the rest of the claims in this group.

Conclusions

Since the claimants have admitted that they have no discoveries, and from the caved conditions of all the workings, I conclude that there is not a discovery of a valuable mineral deposit on any of the claims in this group.

Date: May 20, 1966

APPROVED:

Date: 5-25-66

-5-
RED CLOUD MINE (hg)
Douglas County
Tiller - Drew Area

Former name: Mother Lode Mine.

Location: Near the center of the NW¼sec. 21, T. 32 S., R. 2 W

Owner: Mrs. B. E. Hanson.

Production: 6 flasks recorded; probably 63 produced.

History: Cinnabar was discovered in the area in 1907 by R. W. Thomason, Lewis Thomason, and William Sasse. Some development work was done between 1908 and 1911 by the Scotia Development Co. No production was made and the prospects lay idle until 1932. The Research Mining Co. operated the mine from 1932 through early 1934, producing 39 flasks with a small 3-pipe retort. In 1935 the property was purchased by Dr. Russell Kaizer. During 1936-38 at least 14 flasks were produced from his operations and from those of subsequent lessees.

In 1940 the property was acquired by the Red Cloud Mining Co., headed by Chas. H. Greely, and during 1940-41, 10 or 12 flasks were produced with a newly installed 20-ton rotary furnace. Ownership was later transferred to J.A. Jaeckel, C.S. McDowell, A.A. Headrick, Horace White, and B. E. Hanson. In 1946 the property was leased to J.R. Davies, but there is no record of production from his operations. Assessment work has been kept up in recent years by Mrs. B. E. Hanson. In 1957 the furnace and other servicable equipment were moved to the Angel Peak Mine in the Quartz Mountain area in Lake County.

Development: The mine is developed by several adits and open cuts. The uppermost adit of the three shown in figure 21 was open for about 170 feet when visited. The other workings are caved.

Geology: The following information on the geology is based on inspection of the open workings by the writer, supplemented by earlier reports by Williams and Compton (1943) and Dole (unpublished Oregon Dept. Geology and Mineral Industries mine-file report, 1946).

The Red Cloud mine workings explore a fault zone cutting rocks of the Applegate Group consisting of dark green, massive, fine-grained amphibolites alternating with quartz hornblende and quartz mica schists. Contacts between the various rock types appear to be gradational.

The fault zone contains a series of sub-parallel veins or mineralized shear zones that trend N. 25° to 35° W and are either vertical or dip eastward at angles in excess of 70°. The trace of the fault zone is marked by a shallow ravine, along which the workings are distributed.

The shear zones generally contain soft masses of limonitized and carbonatized clay gouge; enclosed lenses of sheared but relatively less altered amphibolite are also common. Numerous branching veinlets and small bunches of calcite and minor amounts of quartz cut both the gouge and the sheared amphibolite and locally penetrate the wall rocks. Pyrite is sparsely distributed through the gouge and in the adjacent wall rocks.
Some of the shear zones are as much as 12 feet in width but the average width is 4 or 5 feet. Cinnabar was observed as paint-thin coatings on fractures and as faint disseminations in the gouge. A sample taken across 4 feet of gouge in the west drift of the upper adit assayed 0.4 pounds of quicksilver per ton. It is said that the better ore is associated with concentrations of calcite in the clay gouge. Cinnabar also occurs with pyrite in calcite veinlets cutting the wall rocks. Specimens of fractured calcite containing cinnabar veinlets half an inch wide were observed on the dump of the upper adit.

MOTHER LODE (mercury) Tiller-Drew Mining Dist.
(Red Cloud) Douglas and Jackson Counties

Lessee: J. R. Davies, 1409 Fort St., Boise, Idaho, or J. R. Davies,
Jr., P. O. Box 653, Medford, Oregon. Under bond and lease for 5 years
from: J. A. Jaeckel, C. S. McDowell, A. A. Headrick, Horace White, and
Mrs. B. E. Hanson. (Mrs. Hanson deceased)

Location: See map. Principally in the NW¼, Sec. 21, T. 32 S., R. 2 W.,
and the SE1 and SW¼, Sec. 16, T. 32 S., R. 2 W., Douglas County. The
property is 22 miles by road northwest of Trail, and is reached by turning
west at the Divide Guard Station on the Tiller-Trail Highway. By the Drew-
Cow Creek Forest Service road the property is 30 miles east and north of
Azalea, a Postoffice on Highway 99 thirty seven miles north of Grants Pass.
The Drew-Cow Creek road is kept open throughout the year.

Area: 7 claims in the Mother Lode group; 3 claims in the Red Cloud
group; and 5 claims in the Thomason group. All held by location.

History: Wilkinson (1.) reports that the property was first worked in
1906 for gold, and that it wasn't until 1930 that cinnabar was mined. He
gives a reported total production of 60 flasks.

Schuette (2.) states that the Thomason group was located in 1931 and
the whole property was acquired in 1932 by the Research Mining Company
who worked it in 1932 and 1933. He further reports that the property was
idle in 1934 and that Dr. Russell Keizer bought it in 1935. Total produc-
tion is given as 35 to 40 flasks with 30 of the flasks being produced in
the period 1932-1933.

Mr. Frank Hobson the present engineer reports that total production
up to 1941 will not exceed 75 flasks.
Topography and Climate: The portals of the prospect are between 4100 feet and 4300 feet. The topography is rough and mountainous. The climate is mild. Several inches of snow fall in the winter months but does not seriously impede mining.

Development work: See map. To date there is approximately 1300 feet of drift in 3 tunnels. An additional 200 feet, which includes a fourth adit, is inaccessible.

There are two raises, both in bad condition; their total height is approximately 45 feet. Some stoping has been done in previous operations but it has never gone above 2 sets in height or 7 sets in length. Their present condition makes them unsafe for investigation.

Geology: The adits of the Mother Lode are in a fault zone within the May Creek schist (Devonian?). One half mile to the east, Tertiary volcanic flows form the top of a ridge. (3.)

The trace of the fault zone is marked by a shallow ravine on the side of the hill and a low spot on the ridge. In the upper tunnel (No. 1) the fault zone has a strike from S. 32° E. to S. 36° E. and a dip to the northeast from 78° to vertical. In the No. 2 tunnel, 36 feet vertically below, the strike is from S. 25° E. to S. 34° E. with dips to the northeast from 68° to vertical. Sixty-three feet below No. 2 tunnel and in tunnel No. 3 the strike varies from S. 27° E. to S. 35° E. with dips from 76° to vertical. The width of the gouge and mineralized zone between the walls varies from 3 feet to 12 feet. An average width would probably be around 4 to 5 feet. Fractures within the gouge zone are fairly frequent but their continuity is unknown. Near the face of tunnel No. 2 one such fracture occurs which, according to the company maps, appears to show continua-
uity but due to a cavein closing off the westerly portion of the drift the face and backs could not be examined. However, the back at the cavein showed over 6 feet of gouge while the face at the easterly drift showed four feet, thus indicating that the split may have strength.

The May Creek schist at the Mother Lode was mapped as a quartz-hornblende schist, a quartz-mica schist, and a quartz-mica schist with color banding. The quartz-hornblende schist is a massive, dense, dark-greenish to black rock. The schistosity and foliation is either poorly developed or has been obliterated and the attitudes taken on it are somewhat questionable. The rock is usually quite difficult to drill. When it breaks, it sometimes shows a fairly strong joint pattern with its main axis NE-SW and a slight dip to the SW. The quartz-mica schist is a lighter colored rock, varying from a buff to a light green. It is not as dense as the quartz-hornblende phase and when exposed to the air for a short time becomes quite soft. Lineation of the mineral grains appears to be better developed than in the quartz-hornblende schist. Color-banding within the quartz-mica schist is discernible at times and is accentuated by exposure to the air, the lighter colored bands becoming soft and spalling. The banding is probably due to seams of high concentrations of feldspars. Whether or not the color-banding has the same attitude as the schistosity was not satisfactorily determined but it is thought that it has.

There was no sharp break noticed between the quartz-hornblende and the quartz-mica schist. As far as could be determined they were gradational. Whether they represent a difference in degree of metamorphism or a difference in the mineral content of the original material is not known but it is believed the latter is the case.
Because of the gradational change between the hornblende and mica schist, the value of mapping these units within the prospect might be questionable. It was hoped that it would give some clue to the mineralization, but no satisfactory conclusions were arrived at.

The ore mineral is cinnabar. Gangue minerals are pyrite, calcite, and quartz. The cinnabar is disseminated through the gouge mainly, and in the walls where the rock has been highly altered occasionally. At no place was it found in more than paint-thin streaks in the gouge. Mining has been limited so far to this zone. Exploration of the altered rock showing slight dissemination of cinnabar was starting at the time of the examination. The place chosen was in tunnel number 3 where a fracture within the gouge zone gave indication of solutions penetrating the wall. A sample of the altered rock assayed 0.4 lbs. per ton (GG-181). Pyrite is found scattered through the gouge zone and occasionally in the wall rocks. The latter is undoubtedly original to the rock and in part, at least, owes its formation to metamorphic processes. In a band from several inches to a foot or more wide in the middle of the gouge zone is a concentration of calcite, quartz, and pyrite. The calcite and quartz are found in thin veins and as linings of vugs in this band. Other small veinlets of quartz and calcite are occasionally found in the schist and the altered rock.

Mining and Metallurgy: See flow sheet on map. Prospecting only. Any rock that shows a few colors is put into the ore bin. Most of this is a gouge. So far all rock has been taken out of drifts. Mucking and tramming is by hand methods. Drilling is with a drifter.

Equipment on the property consists of: (1) Gardner-Denver Stoper, (1) Gardner-Denver Drifter, (2) Gardner-Denver jackhammers, (1) 285 cubic
feet Gardner-Denver air compressor, (1) 105 Atlas compressor on retort, 600 feet of Flexipipe and a 3 HP fan, (1) D 13,000 caterpillar generator, (1) Allis Chalmers 60 caterpillar with a 10 foot Baker Dozer blade, (1) 6 x 6 International truck, 1946, (1) GMC Army Ambulance Truck (Surplus property).

PINK SHEET

Economics: Seven samples were cut from the different levels (see map for location). All but one (GG-181) were from the gouge zone. The results were very disappointing: four showing but a trace and the other three running 0.2, 0.4, and 0.6 of a pound per ton. If these samples are at all indicative of the rock, and I believe they are, it is very doubtful if any ore has been developed to date. And from the amount of drift work already done it is questionable in my mind if further work will find sufficient ore to justify a continued prospecting program.

The present operators have been in the mining business for some time (mostly in Idaho) but their development program for this mine is open for criticism in some respects, e.g., they never sampled the property before beginning work; they have no assay furnace, so what ground they go through and what material is put in the ore bins is only checked by an "eye ball" assay; they have not timbered much of their work on number one and two tunnels and as the ground is heavy they stand a good chance of losing the work they have done. Never-the-less, they seem to be quite enthusiastic about the property and from all indications will continue work.

There is an abundance of good timber on the property. There is also sufficient water if it was utilized properly; however, it is not, so the supply for camp usage is insufficient.

The roads to the mine are good.
References:
(1) DCGAMI Bull. number 14-C, Vol. 1, page 127
(2) DCGAMI Bull. number 4, page 124-5.
(3) U. S. Geol. Survey Bull. 850, page 47.

Informants:
Mr. Frank C. Hobson, E. M. Mother Lode Mine
Mr. J. R. Davies.

Grants Pass, Oregon

Sample submitted by J. E. Morrison, Mining Geologist -- Grants Pass, Oregon

Sample description: Following are the results of assays made on samples from the Mother Lode Mine owned by Mr. Law Thomason:

The assay results given below are made without charge as provided by Chapter 176, Section 10, Oregon Laws 1937, the sender having complied with the provisions thereof.

NOTICE: The assay results given below are from a sample furnished by the above named person. This department had no part in the taking of the sample and assumes no responsibility, other than the accuracy of the assay of the material as furnished it by the sender.

<table>
<thead>
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<th>Sample Number</th>
<th>GOLD Ounces per ton</th>
<th>Value</th>
<th>SILVER Ounces per ton</th>
<th>Value</th>
<th>Mercury Percent</th>
<th>Value</th>
<th>Total Value</th>
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</table>

Market Quotations:
- Gold $ per oz.
- Silver $ per oz.
- Silver $ per lb.
Seven samples were cut from the different levels (see map for location). All but one (GG 181) were from the gouge zone. The results were very disappointing: four showing but a trace and the other three running 0.2, 0.4, and 0.6 of a pound per ton. If these samples are at all indicative of the rock, and I believe they are, it is very doubtful if any ore has been developed to date. And from the amount of drift work already done it is questionable in my mind if further work will find sufficient ore to justify a continued prospecting program.

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There is an abundance of good timber on the property. There is also sufficient water if it was utilized properly; however, it is not, so the supply for camp usage is insufficient.

The roads to the mine are good.

References:
(2) DOGAMI Bull. # 4, page 124-5
(3) U. S. Geological Survey Bull. 850, page 47

Formants:
Mr. Frank C. Hobson, E. M., Mother Lode mine prospect
Mr. J. R. Davies.
**Record Identification**

- **Record No.:** 065830
- **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:** Red Cloud Mine
- **Synonym Name:** Mother Lode
- **Mining District/Area/Subdistrict:** Upper Cow Creek
- **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:** 01

**Quad Scale**

- 1: 62500

**Latitude**

- 42-46-46N

**Longitude**

- 122-56-41W

**UTM Northing**

- 4736028.0

**UTM Easting**

- 504521.2

**UTM Zone No.**

- +10

**TWP**

- 032S

**Range**

- 002W

**Section**

- 21

**Meridian:** Willamette

**Altitude:** 4300

**Location Comments:** Near center of NW/4 Sec 21
ORE MATERIALS (MINERALS, ROCKS, ETC.):
CINNABAR

COMMODITY COMMENTS:
PAINT-THIN COATINGS IN FAULT SOUGE, WITH PYRITE IN CALCITE VEINLETS

ANALYTICAL DATA (GENERAL)
ASSAYED 0.4 LB./TON OF HG

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 6
PROPERTY IS INACTIVE
YEAR OF DISCOVERY...... 1907
BY WHOM................ R. W. THOMASON, LEWIS THOMASON, WILLIAM SASSE
PRESENT/LAST OWNER...... MRS. B. E. HANSON, 1963

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
MINERALIZED FAULT ZONE

FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA
SIZE OF DEPOSIT....... SMALL
MAX WIDTH............... 12 FT
STRIKE OF OREBODY.... N 25 W
DIP OF OREBODY....... VERTICAL

COMMENTS (DESCRIPTION OF DEPOSIT):
AVERAGE WIDTH OF FAULT ZONE IS 4 OR 5 FT

DESCRIPTION OF WORKINGS
SURFACE AND UNDERGROUND

LENGTH OF WORKINGS................ 1250 FT

COMMENTS (DESCRIPTION OF WORKINGS):
MOST OF WORKINGS HAVE CAVED

PRODUCTION
YES
SMALL PRODUCTION

CUMULATIVE PRODUCTION (ORE, COMMODITY, CONC., OVERBUR.):

<table>
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<th>ITEM</th>
<th>ACC AMOUNT THOUS. UNITS</th>
<th>YEAR</th>
<th>GRADE</th>
<th>REMARKS</th>
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<tbody>
<tr>
<td>15 HG</td>
<td>EST 0000.063 FL</td>
<td>TO 1963</td>
<td>3 LB/TON</td>
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</tr>
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</table>
SOURCE OF INFORMATION (PRODUCTION) - BROOKS

COMMENTS (RESERVES) - MAY BE SOME RESERVES

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS - PERN-TRI

HOST ROCK TYPES - AMPHIBOLITE QUARTZ-MICA SCHIST QUARTZ-HORNBLende SCHIST

PERTINENT MINERALOGY - FAULT ZONE CONTAINS LIMONITIZED AND CARBONATIZED GOUGE, SHEARED COUNTRY ROCK AND SMALL VEINLETS AND CLOTS OF CALCITE, QUARTZ AND PYRITE

IMPORTANT ORE CONTROL/LOCUS - FAULT ZONE

LOCAL GEOLOGY

NAMES/AGE OF FORMATIONS, UNITS, OR ROCK TYPES

1) NAME: APPLEGATE GROUP
   AGE: PERN-TRI

SIGNIFICANT ALTERATION:
   LIMONITIZED AND CARBONATIZED CLAY GOUGE

GENERAL REFERENCES

1) BROOKS, H. C., 1963, QUICKSILVER IN OREGON, OREGON DEPT. OF GEOLOGY AND MINERAL INDUSTRIES, BULL. 55, 223
2) BAILEY, E. H., USGS, PERSONAL FILES
3) MERCURY IN OREGON, 1965, USBM 1C 0252
4) FREDERICK, F., 1945, STATE OF OREGON MAP SHOWING LOCATION OF QUICKSILVER DEPOSITS: OREGON DEPT. OF GEOLOGY AND MINERAL INDUSTRIES, SCALE 1:1,000,000
5) OREGON METAL MINES HANDBOOK, 1941, BULL. 14-C, V. 1, 133 P.
6) WELLS, F. S. AND WATERS, A. C., 1934, QUICKSILVER DEPOSITS OF SOUTHWESTERN OREGON, USGS BULL. 850, 58 P.
7) WILLIAMS, H. AND COMPTON, R. R., 1944, QUICKSILVER DEPOSITS OF THE TILLER, TRAIL AND BROWNSBORO AREAS AND PHILLIPS MINE, ASHLAND: USGS UNPUBLISHED

QUAD SCALE
1: 62500

QUAD NO OR NAME
TILLER

LATITUDE
42-46-43N

LONGITUDE
122-56-41W

UTM NORHTING
4736028.0

UTM EASTING
504521.2

UTM ZONE NO
+10

TWP.... 032S
RANGE.... 002W
SECTION... 21
MERIDIAN. WILLAMETTE
SOURCE OF INFORMATION (PRODUCTION): BROOKS

COMMENTS (RESERVES): MAY BE SOME RESERVES

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS: PERM-TRI
HOST ROCK TYPES: AMPHIBOLITE QUARTZ-MICA SCHIST QUARTZ-HORNBLende SCHIST

PERTINENT MINERALOGY: FAULT ZONE CONTAINS LIMONITIZED AND CARBONATIZED GOUGE, SHEARED COUNTRY ROCK A SMALL VEINLETS AND CLOTS OF CALCITE, QUARTZ AND PYRITE

IMPORTANT ORE CONTROL/LOCUS: FAULT ZONE

LOCAL GEOLOGY

NAMES/AGE OF FORMATIONS, UNITS, OR ROCK TYPES
1) NAME: APPLEGATE GROUP
   AGE: PERM-TRI

SIGNIFICANT ALTERATION:
   LIMONITIZED AND CARBONATIZED CLAY GOUGE

GENERAL REFERENCES
1) BROOKS, H. C., 1963, QUICKSILVER IN OREGON, OREGON DEPT. OF GEOLOGY AND MINERAL INDUSTRIES, BULL. 55, 223
2) BAILEY, E. H., USGS, PERSONAL FILES
3) MERCURY IN OREGON, 1965, USBM 1C 8252
4) FREDERICK, F., 1945, STATE OF OREGON MAP SHOWING LOCATION OF QUICKSILVER DEPOSITS: OREGON DEPT. OF GEO. A
   MIN. INDUSTRIES, SCALE 1:1,000,000
5) OREGON METAL MINES HANDBOOK, 1941, FULL. 14-C, V. 1, 133 P.
6) WELLS, F. G. AND WATERS, A. C., 1934, QUICKSILVER DEPOSITS OF SOUTHWESTERN OREGON, USGS BULL. 850, 58 P.
7) WILLIAMS, H. AND COMPTON, R. R., 1944, QUICKSILVER DEPOSITS OF THE TILLER, TRAIL AND BROWNSBORD AREAS AN
   PHILLIPS MINE, ASHLAND: USGS UNPUBLISHED
Sample submitted by J. E. Morrison, Mining Geologist -- Grants Pass, Oregon

Sample description: Following are the results of assays made on samples from the Brew Mine, owned by Mr. Lew Thomason:

The assay results given below are made without charge as provided by Chapter 176, Section 10, Oregon Laws 1937, the sender having complied with the provisions thereof.

NOTICE: The assay results given below are from a sample furnished by the above named person. This department had no part in the taking of the sample and assumes no responsibility, other than the accuracy of the assay of the material as furnished it by the sender.

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>GOLD</th>
<th>SILVER</th>
<th>Mercury</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Ounces per ton</td>
<td>Value</td>
<td>Ounces per ton</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<td>3</td>
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</tr>
</tbody>
</table>

Market Quotations:

<table>
<thead>
<tr>
<th>Metal</th>
<th>Per oz.</th>
<th>Per lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>Silver</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

State Assay Laboratory
Assayer
STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
ASSAY LABORATORIES
Baker, Oregon
Grants Pass, Oregon

SAMPLE INFORMATION REQUESTED

The law passed by the Legislature, governing the free assaying and analyzing of samples sent to a State Assay Laboratory, provides that certain information be furnished to the Laboratory regarding samples sent for assays, etc. A copy of the law will be found on the back of this blank. Please read the law carefully. Will you please fill in the information called for in the following blank, as far as possible, and return the same to the nearest State Assay Laboratory, along with your sample. If you have made out a blank, this copy is for your future use. Keep a copy of the information on each sample for your own reference.

Your name in full __________________________
Postoffice address ________________________________________
Are you a citizen of Oregon? __________ Date on which sample is sent __________
Name (or names) of owners of the property ______________________________________
Name of particular claim and date of location __________________________
Location of property or source of sample:
(1) County ____________________ (2) Mining District __________
(3) Township ____ 5 __________ (4) Range __ 2 __________ (5) Section __ 13 __________
(6) Quarter Section __________
How far from passable road? __________
For what do you wish sample tested? __________________________
Does your sample represent a new discovery? __________
On a newly located claim? __________ Old? __________
Has any ore from this claim been milled or shipped? __________

Width of ore where sample was taken (length of channel cut) __________
Remarks: The Department would be pleased to have you add to the above, such information as you think would be of interest and value. Use the reverse side of this sheet or a separate sheet. This could best be shown by a pencil sketch, indicating the development on the claim with the widths of vein, especially the width of ore at the place where this sample was taken.

A sample, to be of value, should be taken in an even channel across the vein from wall to wall. Its position in the workings should be marked and the width measured. Assays of unlocated samples, without widths, are of little value. They create but little interest in the minds of experienced investors and engineers.

(Over)

(signed) __________
STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

ASSAY LABORATORIES

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Grants Pass, Oregon

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Your name in full

Postoffice address

Are you a citizen of Oregon? Date on which sample is sent

Name (or names) of owners of the property

Name of particular claim and date of location

Location of property or source of sample:

(1) County
(2) Mining District
(3) Township
(4) Range
(5) Section

How far from passable road

For what do you wish sample tested

Does your sample represent a new discovery

On a newly located claim? No Old

Has any ore from this claim been milled or shipped?

Width of ore where sample was taken (length of channel cut)

Remarks: The Department would be pleased to have you add to the above, such information as you think would be of interest and value. Use the reverse side of this sheet or a separate sheet. This could best be shown by a pencil sketch, indicating the development on the claim with the widths of vein, especially the width of ore at the place where this sample was taken.

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(Over)