

PROSPECT CARDS

Property Name <u>Chisholm Ca</u>	Code No. _____
Property Owner _____	Followup Recom. _____
Submitted by _____	Later Review Recom. _____
Location: State <u>Oregon</u>	Examined by _____
County <u>Jackson</u>	Company _____
Mining D. <u>Gold Hill</u>	Date _____
T <u>345</u> R <u>2N</u> Sec. <u>19</u> <sup>SE 4</sup>	Where filed _____

Metals	Production Metal
Cu <input checked="" type="checkbox"/>	
Mo	
Pb	
Zn	
Ag	
Au	
Fe	
Mn	
Cr	
Ni	
W	
U	
Re	
P2O5	
K2O	
Sn	
Be	
Coal	
Hg	
Other	

AMS Quad \_\_\_\_\_  
 Other Quad \_\_\_\_\_  
 Production \_\_\_\_\_  
 None 10<sup>2</sup> 10<sup>3</sup> 10<sup>4</sup> 10<sup>5</sup> 505 106  
 TONS 

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 Geology \_\_\_\_\_  
 Host Rock novite + "qtzite"  
micaceous qtzite  
 Mineralization \_\_\_\_\_  
 Type in basic igneous rocks diss + verif. lib.  
 Trend N.E.  
 Ore cpy, aspy, pyrr.  
 Gangue qtz  
 Alteration \_\_\_\_\_  
 Type \_\_\_\_\_  
 Extent \_\_\_\_\_  
 Bibliography \_\_\_\_\_  
 USGS \_\_\_\_\_  
 USBM \_\_\_\_\_  
 Other Jackson Co., ODLMI Bull 14-C

Remarks: good occurrence of cu. & possibly volcanically related.

Field Time

None \_\_\_\_\_  
 1 Day \_\_\_\_\_  
 1 Week \_\_\_\_\_  
 1 Mo \_\_\_\_\_  
 +1 Mo \_\_\_\_\_

Follow-up Recom. \_\_\_\_\_

PRELIMINARY REPORT ON PROPERTY OF DR. W. P. CHISHOLM  
near Gold Hill, Oregon.

I spent four full days on the ground, from July 22-25th in making a reconnaissance examination of the property, and submit my report herewith.

GENERAL.

The general situation and arrangement of the claims is indicated in the annexed map, which is based on a rough sketch made for me by Dr. Chisholm. I did not look up the corner stakes, nor the records.

They are situated on both sides of a steep ridge, which runs approximately North-South; and around the southern extremity of which curves a sharp bend of the right fork of Evans Creek; itself a tributary of Rogue River in southwestern Oregon. The nearest railroad and supply point is Gold Hill, a town on the main line of the Southern Pacific route between Portland and Sacramento.

The district is heavily timbered and well watered; and the physical and climatic conditions are exceptionally favorable for mining work.

GEOLOGY.

In this area the north-south ridge mentioned above corresponds, roughly and in a general way only, with the dividing line between two dissimilar rock-formation; hard, geologically-old, micaceous quartzite and silicified mica-chist on the west and relatively soft, geologically young, shale and sandstone on the east side.

W. N. Winchell has given, as the result of the studies of the region geology, reasons for thinking that the entire district is underlain by a huge buried mass of granodiorite, which outcrops to the south towards Gold Hill. Whether this hypothetical granodiorite batholith exists in depth or not has however no bearing on the question which concerns us, excepting the remote one of possibly furnishing the ultimate source of mineralization.

Intrusive rock has been asserted to extend as a continuous dike, following the quartzite-sandstone contact from north to south. It may do so; there are not sufficient exposures to prove this, one way or the other. I, however, saw evidence of rocks, which were probably volcanic in origin, varying in appearance from rhyolite to andesite, at many points, in close proximity to the quicksilver occurrences as to indicate that they were connected with its origin. It is possible that further study combined with more underground work would enable one to assign these rocks to a definite system of dikes. What is more to the point is that these intrusive rocks are locally highly altered, in places forming kaolin; and in other places the altered intrusive rocks show threads and specks of quicksilver ore. I therefore incline to think them the immediate source of the mineralization, although it has certainly extended from them into the sandstone and shale. In one place, in the War Eagle mine, further north along the same ridge, a fissure in the older quartzite series, nearly at right angles to the general course of the quicksilver-bearing belt, carries

important, and in places, very rich cinnabar. In another place of Mr. D. Dorce's cinnabar claim, a narrow but high-grade vein, which commences in sandstone and continues into an altered intrusive rock which may be andesite runs about 20° W. of N. These were the only well-defined veins I saw carrying cinnabar; several stringers on the Doctor's <sup>own</sup> claim were contorted and irregular, perhaps because of the more complete alteration of the enclosing rocks, the original volume of which has been materially changed. This is indicated partly by the fact that <sup>the</sup> most kaolinized portions of the rock correspond with depressions in the surface; partly by that of the innumerable slips and slickensides which it contains; and partly by the occurrence of an open cavity in the lower tunnel near the entrance. When rocks are thrown into this cavity they can be heard to rebound and fall for a long distance, the rumbling continuing for half-a-minute. Such cavities are usually due to the removal of one or more of the original constituents of the rock; in this case, probably of silica.

#### QUICKSILVER DEPOSITS.

These impressed me as being of a far greater promise. There is undoubtedly a belt of country, very thoroughly mineralized by quicksilver, extending from the Mountain King mine, on the south to the War Eagle on the north, at a distance of about four miles, and possibly further in both directions. This belt is very imperfectly prospected; and the possibility that it contains important ore bodies, besides those already found, is indicated by the comparatively recent accidental discovery of the War Eagle mine. And apart from the richer individual veins, the result of the pannings made by myself, interpreted in the light of actual assays by J. W. Richards and Sons, which shows that the actual content of quicksilver is often higher than the pan had indicated, makes me feel very hopeful that considerable areas might be delimited by a careful study and development, in which the entire mass might be commercially workable ore of  $\frac{1}{2}$  to 6/10% in quicksilver content. Such areas, if they actually exist, should form the basis for an important enterprise.

The assays made by J. W. Richards & Sons of Denver on samples taken by myself, are detailed in the appendix to this report.

It is to be observed that the samples which showed the highest assay content of quicksilver were not always those which panned the best. Clearly, therefore, all the quicksilver present did not show as cinnabar in the pan. This might be accounted for by the presence of meta-cinnabarite, a black mineral identical with cinnabar in composition, but black in color, and easily mistaken for hematite or magnetite. Both metacinnabarite and native quicksilver frequently occur in quicksilver deposits, especially near the surface; I observed small globules of the latter in several of my pannings.

It is possible that the discrepancy between panning and assay results might be accounted for by the large quantity of clay present in many of the samples. To illustrate this, I took a small fragment from the interior piece of what was apparently pure kaolin, except for the presence of a few minute blackish threads and specks. In this material I could detect no cinnabar by panning, nor by examination of the powder under a microscope. But by grinding it very fine in an agate mortar and washing, after adding a few drops of hydrochloric acid, I readily detected several fine specks of cinnabar.

The places at which my samples were taken are indicated in the appendix to this report. It cannot be too clearly emphasized that I took no samples, and made no pannings from the stringers and bunches of ore in which I could see cinnabar actually showing, and these were fairly numerous. Had I done so, I have no doubt that the assays would have been much higher.

The stringers or veins on the Little Jean claim, from which Dr. Chisholm mined his small body of high-grade ore, is worked out above his "upper tunnel", and none of the ore is showing. It is evident from the shape of the openings, that it is very regular; but it is possible it and other stringers near the surface might be more regular in depth, where the alteration of enclosing rock may be less. The breast of the lower tunnel - probably only 35 feet below - is now caved, and it is uncertain whether it has advanced far enough to come under the rich streak.

I however attach little importance to these narrow rich seams, which are likely to be irregular and discontinuous. The important question is to determine whether or not they are sufficiently numerous to make the zone in which they occur, as a whole, workable ore. The softness of the enclosing rock, over a large area, is such that it could be handled without blasting, by a steam (or gasoline) shovel; and by working in successive benches, to a very substantial depth. If the more barren zones of rock were dumped separately as waste and the more mineralized streaks and patches as ore, the latter could be won at a very low cost, so that a yield of  $\frac{1}{2}$ % of quicksilver per ton would be profitable. The percentage of total contents saved by a furnace of standard make could only be ascertained by carefully controlled experiment. It is generally believed to be around 75%, on low grade ore.

It is barely possible that the recently developed methods of construction by flotation, or of leaching with sodium sulphate, might give better results than the time-honored practice of roasting in a shaft furnace; but no opinion as to this could be given without long and careful testing. The extraction obtained is often more complete but the cost of treatment is likely to be higher.

My samples indicate that the gold and silver values present in this material were much lower than Dr. Chisholm had imagined, and are not commercial. The possibility of the occurrence of commercial gold values should however be borne in mind in future work, as spent ore from a furnace would probably be very easy material to leach with cyanide for gold content.

#### CONCLUSION.

A comparison of the foregoing with the sketch-map will make it evident that I was not able in the time available to cover the entire surface of the property, nor all the workings of the claims visited. My conclusions must therefore be regarded as merely tentative, and subject to modification on more detail study.

In my judgment, it is improbable that high-grade quicksilver ore averaging, say over 1% will be found in quantity. Pockets of such ore are certain to exist, and are probably numerous. But they are sure to be treacherous and irregular; so that the cost of finding and mining

them is likely to absorb all the profit. I do not believe that anybody in this district is likely to make a success by mining high grade ore and treating it in retort furnaces. The saving in such furnaces might easily be made as satisfactory as that in any other; but the cost of treatment is prohibitive for any but highgrade ore. Quicksilver mining is a business, like other forms of mining; to be successful, it must be organized and carried out on a scale that will warrant technical control and system.

The areas over which there seem to be scattered stringers and pockets of ore enough to constitute low-grade ( $\frac{1}{2}\%$  to  $\frac{1}{5}\%$ ) of considerable portions, sand may be numerous. If further study and further research confirm this impression, the district may become the basis for a steady mining enterprise that will justify equipment with a shaft or revolving furnace of modern type.

Bearing in mind the large area over which quicksilver occurs, the favorable conditions for operation, the small amount of the total areas that has been prospected, and the favorable result of some of the assays on my samples, I am of the opinion that a program of thorough and scientific prospecting is warranted. Such prospecting should be controlled by a proper system of mapping, records, etc., so that all information once obtained should always be available. I think there is a good chance of opening up one or more commercial quicksilver mines in this district, if the preliminary work is properly guided and systemitized.

Respectfully submitted,

(signed) George E. Collins

Denver, Colorado, Aug. 8, 1922.

# State Department of Geology and Mineral Industries

702 Woodlark Building  
Portland, Oregon

DEC 6 1940

CHISHOLM QUICKSILVER

GOLD HILL DISTRICT

STATE DEPARTMENT OF GEOLOGY  
& MINERAL INDUSTRIES

This property recently was investigated and sampled by Dick Wilmot to ascertain its Cobalt properties. Cobalt has been reported from this mine.

Wilmot found the norite dikes, from which the cobalt was supposed to come. There is a shallow zone of surface oxidation, and some evidence of secondary enrichment. He sampled carefully, - one sample was taken on top of a previous channel, and one was within 25 ft. of the supposed "high-grade". Tests were run by our laboratory and no cobalt was found. Some nickel, probably in a nickeliferous pyrrhotite, was noted.

Wilmot submitted 4 samples to Curtis & Thompkins of San Francisco. Of the four, one showed 0.18 percent Cobalt, and the other three were blank. A composite of the four was run for nickel and showed 1.6 percent nickel. A return of 1.75 percent copper was made.

Wilmot has stated that he will submit copies of the assay returns to the Department for its records.

I believe that Wilmot is competent to sample an ore body to determine its mineral content, and I believe that his samples are as representative as could be taken. This report should do something to laying the cobalt ghost in the Chisholm property.

Ray C. Treasher,  
Field Geologist,  
Dec. 5, 1940.

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## State Department of Geology and Mineral Industries

702 Woodlark Building  
Portland, OregonLaboratory Certificate  
CURTIS & TOMPKINS, LTD.  
236 Front Street  
San Francisco

Laboratory No. 169986/90

November 29, 1940

Mr. R. C. Wilmet

of ore

We have examined the samples  
Received 11/18/40

Marked as below

and found the samples AS SUBMITTED to give the following results:

ANALYSIS

<u>Lab. No.</u>	<u>Mark</u>	<u>Cobalt</u>	<u>Nickel</u>	<u>Copper</u>
169986	(1) 4' shear 5' N of winze Cu stain	Nil	-	-
169987	(2) Character sample 3' below shear 20' N of winze	Nil	-	-
169988	(3) 3' - 15' down winze 15' above lower level. Cut on top of other sample.	0.08%	-	-
169989	(4) Cobalt prospect 3' - 30' N of winze	Nil	-	-
169990	Composite	-	1.10%	1.45%

Curtis & Tompkins, Ltd.  
ANALYTICAL & ENGINEERING CHEMISTS

SITE NAME: SHAMROCK  
SYNONYMS: CHISHOLM COPPER  
OWNER:

COUNTY: JACKSON

LOCATION: 8 MILES WEST OF SHADY COVE  
MINING\_DIS:  
BLM\_FS\_DIS:  
QUAD1: CRATER LAKE  
QUAD2: TRAIL  
RIVER BASIN:  
PHYSIOG: 13

SCALE: 100000 TOWNSHIP:034S  
SCALE: 62500 RANGE:002W  
SECTION:19  
SECT\_FRACT:E

USGS NUM: M061386

LAT:42-36-04N

DOGAMI MLR:

100-58-32W

REPORTER: JOHNSON, MAUREEN G.

UTM\_N:4716300

AFFILIATION: USGS

UTM\_E:502000

REP\_DATE: 76 05

UTM\_Z:+10

UPDATE BY: BRADLEY, ROBIN

ALTITUDE:

AFFILIATION:

UP DATE: 79 04

YR\_DISC: 1900'S

STATUS: 2

PRODUCTION: YES

PRODUCTION SIZE:

COMMODITIES PRESENT: MN CU NI CO PT

YR\_1ST\_PRO:

YR\_LASTPRO:

COMMODITIES PRODUCED: CU NI

ORE\_MAT: PYRRHOTITE, PENTLANDITE, CHALCOPYRITE

GANGUE: GRAPHITE, ZOISITE, QUARTZ, RHODONITE

DEPOS\_TYP: LODE

MIN\_AGE:

HOST\_ROCK: QUARTZ-MICA SCHIST

HOST\_R\_AGE:

ALTERATION: SERICITE, LEACHING ON INTERMEDIATE LEVEL, SERPENTINITE

IGNEOUS\_R: NORITE

IG\_R\_AGE:

ORE\_CNTRL: STRONGEST MINERALIZATION IN NORITE; WEAKLY DISSEMINATED IN SCHIST

DEP\_DESCOM: 2 ORE BODIES; MINE ORE BODY (DATA ABOVE) & SURFACE ORE BODY - 200X200X38FT.

GEOL\_COM: ULTRABASIC SILLS IN SCHISTOSE ALTERED GREENSTONE CONTAINS ORE, AS DESSEMINATIONS, SMALL VEINLETS, AND SOLID MASSES. ORE ZONE BADLY CUT UP BY THRUST FAULTS.

TYPE OF WORKINGS:

WORKINGS DESCRIPTION: UNDERGROUND WORKINGS IN FOUR ADITS TOTAL ABOUT 1,500 FT DIAMOND DRILLING IN 11 DRILL HOLES.

CUMULATIVE PRODUCTION (UNITS IN 1000'S)

ITEM1:

ITEM2:

ITEM3:

AMT1:

AMT2:

AMT3:

UNIT1:

UNIT2:

UNIT3:

YEAR1:

YEAR2:

YEAR3:

ITEM4:

ITEM5:

ITEM6:

AMT4:

AMT5:

AMT6:

UNIT4:

UNIT5:

UNIT6:

YEAR4:

YEAR5:

YEAR6:

GENERAL COMMENTS:

REFERENCES:

HUNDHAUSEN, R. J., 1952, INVESTIGATION OF SHAMROCK COPPER - NICKEL MINE, JACKSON COUNTY, OREGON: U. S. BUR. MINES REPT. INV. 4895, 12 P.



SITE NAME: SHAMROCK MANGANESE  
SYNONYMS:  
OWNER:  
LOCATION:  
MINING\_DIS:  
BLM\_FS\_DIS:  
QUAD1: CRATER LAKE  
QUAD2: TRAIL  
RIVER BASIN:17  
PHYSIOG: 13 KLAMATH MOUNTAINS

COUNTY: JACKSON

SCALE: 100000 TOWNSHIP:034S  
SCALE: 62500 RANGE:002W  
SECTION:19  
SECT\_FRACT:

USGS NUM: M061527  
DOGAMI MLR:  
REPORTER: JOHNSON, MAUREEN G.  
AFFILIATION: USGS  
REP\_DATE:  
UPDATE BY: SMITH, ROSCOE M.  
AFFILIATION: USGS  
UP DATE: 81 01

LAT:42-35-51N  
LONG:122-58-32W  
UTM\_N:4715900  
UTM\_E:502000  
UTM\_Z:+10  
ALTITUDE:

YR\_DISC:  
PRODUCTION:YES  
COMMODITIES PRESENT:MN  
YR\_1ST\_PRO:  
COMMODITIES PRODUCED:MN  
ORE\_MAT: RHODONITE, ALABANDITE, MANGANESE OXIDES  
GANGUE: QUARTZ  
DEPOS\_TYP:  
MIN\_AGE:  
HOST\_ROCK: QUARTZITE SCHIST SCHIST  
HOST\_R\_AGE:PRE-LTRI  
ALTERATION:  
IGNEOUS\_R:

STATUS: 4  
PRODUCTION SIZE:SMALL

YR\_LASTPRO:

IG\_R\_AGE:

CUMULATIVE PRODUCTION (UNITS IN 1000'S)

ITEM1:	ORE	ITEM2:	ITEM3:
AMT1:	0.190	AMT2:	AMT3:
UNIT1:	TONS	UNIT2:	UNIT3:
YEAR1:	PRE 1956	YEAR2:	YEAR3:
ITEM4:		ITEM5:	ITEM6:
AMT4:		AMT5:	AMT6:
UNIT4:		UNIT5:	UNIT6:
YEAR4:		YEAR5:	YEAR6:

GENERAL COMMENTS:

REFERENCES:

APPLING, R N, 1958, MANGANESE DEPOSITS OF SOUTHWESTERN OREGON;  
USBM REPT INV 5472, P 45

PAGE, N J AND OTHERS, 1977, PRELIMINARY RECONNAISSANCE GEOLOGIC  
MAP OF THE WIMER QUADRANGLE, OREGON: USGS GEOL MAP MF-848

OG-22  
mm

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

2033 First Street  
Baker, Oregon

1069 State Office Building  
Portland 1, Oregon

239 S.E. "H" Street  
Grants Pass, Oregon

copy

REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein as fully as possible and submit this blank filled out along with the sample.

Your name in full H. L. Clay

Post office address Route 2, Box 480 Medford, Oregon

Are you a citizen of Oregon Yes Date on which sample is sent 1-25-54

Name (or names) of owners of the property Same

Are you hiring labor? No

Name of claim sample obtained from None Shamrock Mine area

Are you milling or shipping ore? No

Location of property or source of sample (If legal description is not known, give location with reference to known geographical point.)

County Jackson Mining district Gold Hill Lake Creek (?)

Township 34S 35S Range 2W 1E Section 20 5(?) Quarter section Short distance off of Butte Falls road,

How far from passable road and name of road 5 miles from Crater Lake Highway On Evans Creek Road

Channel (length) Grab Assay for Description

Sample no. 1 x Mn

Sample no. 2

(Samples for assay should be at least 1 pound in weight.)

(Signed) H. L. Clay

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Description Gray metamorphic rock containing calcite, epidote, garnet, rhodochrosite (?)

and alabandite. Rock show minor development of gneissic lineation or banding.

Sample number	GOLD		SILVER		MANGANESE			
	oz./T.	Value	oz./T.	Value	Mn			
P-15981 OG-22	---	--	---	--	36.90%	---	---	---

Report issued \_\_\_\_\_ Card filed \_\_\_\_\_ Report mailed 2-10-54 Called for \_\_\_\_\_

Same type of rock and from same location as NG-471



copy

General Laboratory Number P-15814 (NG-471)

Date Received Jan. 19, 1954

Spectrographic Laboratory Number \_\_\_\_\_

Sample received from David White  
(DOGAMI)

QUALITATIVE SPECTROGRAPHIC ANALYSIS  
(Quantities estimated to nearest power of ten)

1. Elements present in concentrations over 10%.

Silicon, manganese

2. Elements present in concentrations 10% - 1%.

Aluminum, iron, calcium

3. Elements present in concentrations 1% - 0.1%.

Magnesium

4. Elements present in concentrations 0.1% - .01%.

Titanium, tin, barium, strontium, nickel

5. Elements present in concentrations .01% - .001%.

Chromium, molybdenum, vanadium, copper, cobalt,  
bismuth

6. Elements present in concentrations below .001%.

Thomas C. Matthews, Spectroscopist

T. C. Matthews



# State Department of Geology and Mineral Industries

702 Woodlark Building  
Portland, Oregon

*Chisholm*

SPRIGNETT MT. PROSPECT (Ni., Cu., Pt., Ag.)

Gold Hill Area  
Jackson County  
Refer Report by: E. A. Youngberg  
December 17, 1945

LOCATION: The prospect is located in S.E. 1/4, Sec. 19, T. 34 S., R. 2 W.

approximately 2 miles above the Angle Ranch. The prospect is about 500 feet above and north of the Evans Creek road on the south slope of Sprignett Mt.

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ECONOMICS:

The vein as exposed in the shaft shows continuity and persistence on the dip. If the ore body has any persistence on the strike, which appears quite possible, the prospect would be of economic importance.

This type of mineralization is unusual in this area. At least it apparently has not been brought to anyone's attention before.

The samples were brought to the office by Mr. Reid of Grants Pass for Mrs. Angle for identification. The staining on the oxidized ore suggested nickel for which I suggested an analysis be made along with copper, gold, and silver. It seems quite possible that the ore may contain some cobalt also. I have requested a spec analysis be made. The presence of platinum is also interesting. Apparently Mr. Hoagland discovered its presence when cupelling. If a good, fresh specimen of the sulphide ore can be obtained possibly a petrographic analysis would be valuable in determining the sulphide minerals present.

Mr. Reid or Mrs. Angle I don't believe have the finances or the know how to develop the prospect. They are also handicapped because of the ownership is O & C. They possibly can get a lease on some basis. If the deposit is of economic importance, at least they should have some protection. I have hesitated in doing any geological work on the prospect



*State Department of Geology and Mineral Industries*

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702 Woodlark Building  
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- 4 -

until the matter of leasing or ownership has been settled.

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