

OWL MINE (Including Red Bird Group)

Greenhorn District  
Grant County

Owner: E. E. Petty, Whitney, Oregon.

Location: N $\frac{1}{2}$  of Section 10, T 10 S, R 35 E; 2 $\frac{1}{2}$  miles northeast of Greenhorn.

Area: 7 unpatented lode claims in two groups.

History: The Red Bird Mine was located in October, 1915 and produced about \$12,000 from two veins. One ledge is said to have run as high as \$150.00 per ton with \$20.00 in the tails. This property was developed by 700' of shafts, raises, drifts, and one crosscut. A small three stamp mill is on the property.

The Owl was located in 1921 and has had a total production of \$13,896.00 (all since 1932).

Geology: The vein strikes about N 35° W and dips 75° S near the surface, becoming steeper with depth, being 85° at 50'. The ore consists of a highly sheared and altered, iron-stained granite mixed in with angular quartz fragments. This zone is at least 22' in width, and a sample along 22' of crosscut assayed \$3.20. Higher values appear on the hanging wall in more massive quartz from 8" to 2' in width (5' at one point). *Highest values said to be in quartz in a matrix of green (mariposite?) clay, highly stained with manganese and some times of rose variety.* Lenses of a hard calcareous nature accompany the values in quartz. Gold is said to be about 700 fine, the average ore from the mill running \$18.00 free gold ~~(with a concentration ratio of 191:500.)~~ *omit*

Equipment: Hoist run by automobile engine; 5 stamp mill (2 $\frac{1}{2}$  tons capacity) fed by 65 ton ore bin and powered by Fordson tractor; 4 x 10' amalgamation table and Wilfley concentrating table.

Development: 50' shaft in ore has been put down and a drift run 75' to the northwest, a raise 35' distant was driven to the surface and all ore stoped out between shaft and raise. A 22' crosscut on the 35' level and drifts between the shaft and raise on the 15' level have been driven. The surface outcrop of the vein *is* developed by shallow pits *for* several hundred feet and appears to be offset to the north. *→*

*OMMT* Remarks: The high degree of alteration of the rock and its very soft character and intense movement which has occurred make it very difficult to work out the geological problems on this property. It is quite possible, however, if the wide low-grade ore body is developed, that a mine of considerable magnitude may be developed.

Informant: E. E. Petty. *via JEA.*

June 30, 1938

*John Eliot Allen*

John Eliot Allen  
Field Geologist

References: This includes  
the Virginia, which  
see: Lindgren: 01:696  
Swartley 14:187  
P. & S. 16:229

**PRELIMINARY  
REPORT ON**

THE

OWL  
GROUP

This property is situated in Township 10 South, Range 35 East, Willamette Meridian, Greenhorn Mining District, Grant County, Oregon at an altitude of 6000 feet above sea level, the locality and environs of which will be better understood by reference to the USGS quadrangle map attached hereto.

The OWL group is reported by the owner, Mr. E. E. Petty, to consist of six full lode claims held by right of location, including in the group, the property known as the RED BIRD.

At the time this property was visited, the imminence of snow caused the scope of the examination to be limited in hurried detail to the underground workings.

Consequently, the customary divisions of a report of this nature reciting the geography, general description of the property, its history etc., are not set forth herein. Suffice it to say that such limited observations as it was as it was possible to make, indicated that there was no obviously adverse factors falling within these divisions such as would constitute factors precluding successful operation of the property.

GEOLOGY: - District

While no detailed study of the geology has ever been published, Swartley in "Ore Deposits of Northeastern Oregon", describes the area within the immediate geological horizon as difficult to make out since the rocks are so badly altered and weathered. He reports a complex of greenstones, argillites and serpentines with a slightly porphyritic diorite of medium grain as the intrusive rock.

Using the writers notes, the areal geology of the district, can be roughly pictured by drawing a line southeasterly from the Red Boy Mine traversing Alamo and extending thru Geiser. This line will approximate the western limits of the main argillite belt.

Another line, drawn southwesterly, along Clear Creek and passing thru Vinegar Mountain will mark substantially the border of the plutonic intrusion to the west.

Projection of these lines on a map will make an inverted V whose apex is at the Red Boy Mine. Converting this symbol into a triangle by projecting a base line running east and west thru the old town of Greenhorn will circumscribe the area under discussion, and within whose boundaries, the rock is largely of the old greenstone series in which are considerable lenses of serpentine that were probably originally small intruded sills of a still more basic rock.

GEOLOGY-MINE:-

The OWL group of lode mining claims appears to be located upon the highly metamorphosed border of the intrusion. The strike of the metamorphosed foliation appears to parallel the foliation of the intrusive granodiorite to the west and corresponds in general with that in the adjacent intruded argillite on the east.

The geological significance of this structural trend can best be understood when it is pointed out that elsewhere in the district that has been visited by the writer, the above condition does not prevail and in its stead there is a structural discordance of such a nature that no definite, continuous fissures were ever formed but rather, in general innumerable irregular fractures running in various directions. Thus the contemporaneous or subsequent vein stuff or ores filling these cavities was not concentrated in definite lodes, but was widely distributed thru the rocks in small veins, veinlets and stringers, few of which are continuous except for short distances.

Therefore, it is logical to expect that the resultant fissuring and ore deposition in the concordant structural contacts of the OWL should be the diametric opposite of the discordant contacts cited above and that continuous fissures providing definite lodes should be found in the OWL

The vein system, where exposed by the under-ground workings of the OWL, likewise parallels the foliation of the enclosing rocks. The definite vein and wall structure evidenced in the limited exploratory work tends to confirm and illustrate the possibilities of a substantial vein system, as advanced by the preceding geological theory.

The EAST vein has a strike of North 32 West and a dip averaging about 75 degrees to the South.

The WEST vein has a strike North 44 West and an average dip of 75 degrees to the South and at the present writing is thought to be a lateral fracture which converges with the EAST vein on the south drift as shown by drawing 240-1.

The gangue matter consists of a major filling of quartz, generally found adjacent to the hanging wall and carries good values in free gold. The minor constituent is brecciated fragments of wall rock cemented with quartz and some calcite.

The sole oxidation product noted was hematite. No sulphides were observed, which is to be expected in this shallow oxidized zone.

PRESENT DEVELOPMENT:-

The development work on the OWL is shown on Drawing 240-1 and aggregates 300 feet exploring the area to a depth of 60 feet and a length of 70 feet.

As shown by this drawing, this prospect is opened by a well equipped two compartment shaft which is sunk on ore near the junction of the two veins. Incline of the shaft for the first 40 feet is 70 degrees from which point to the sump the angle is 80 degrees.

South from the 45 foot level, there is a twelve foot drift heading into the junction of the East and West veins showing a well defined confluence measuring seven feet in width.

At the 60 foot level, there is a drift to the north on the West vein, a total distance of 53 feet. This drift is connected with the surface by Raise No. 1.

From the above drift, the face of a 17 foot cross cut opens up the East vein and from this point Raise No. 2 follows the dip of the East Vein to the surface.

There is a short drift on the East vein off the 50 foot level of Raise No. 2 showing good vein structure and carrying good values in free gold. Likewise a short drift on the West vein at the 40 foot level off Raise No. 1 shows the entire face in ore. At the end of this drift a 22 foot cross cut toward the foot wall discloses 15 to 18 feet of striated quartz matter, said to average \$5.00 per ton.

On the surface Mr. Petty advises of numerous surface cuts, and of particular interest was the cut located on the strike of the East vein about 150 feet from the collar of Raise No. 2. This shows 12 feet of nice quartz, which samples \$15.00 per ton. This cut is shown on the drawing.

PRODUCTION, SAMPLING & ORE VALUES:-

Mr. Petty has kept a record of production from the OWL, evidenced by statements of sales of bullion to the United States Assay Office and others, going back to the inception of milling in 1932 and extending to date. The production totals \$14,405.64. It come from intermittent operations, averaging about five months per year and more or less on a one man basis.

From this record of production, compared with total tonnage removed from mine shows a recovery in excess of \$15.00 per ton, with a probable tailing recovery by concentration of \$5.00 per ton. In view of the fact that excavated material from mine so nearly checks with ore milled, and the further fact that the ore was sorted when mined, leaving a low grade dump, I am of the opinion that Mr. Petty over-charged himself on tonnage and that the ore milled would show a recovery in excess of \$20.00 per ton by amalgamation.

MAP OF THE OWL MINE

BAKER COUNTY

SKETCH SHOWING PRESENT WORKINGS

DWG 240-1 12/2/39 F.J.ROSENBERG

This is borne out by checking and correlating the numerous assays which make a part of the records. These have been averaged as follows-

Average Mill heads		\$35.00
Mill Tails	\$9.00	
Concentrates, Est 40.1-\$200.00	5.00	14.00
Recovered by amalgamation		21.00

Therefore, these facts indicate that all the ore removed from the OWL can be conservatively estimated at an average of \$15.00 per ton.

As a matter of information, Mr. Petty's records also show a total production from the RED BIRD, which is a part of the group under discussion, of \$4,667.14. This was at the old gold price of \$20.67 per ounce. Of interest is the fact that the expense of production was \$364.11 for other than labor which took 564 shifts and shows a profit of \$7.63 per shift.

SAMPLING:-

It must be borne in mind that small hand samples on free gold ores are not a true index to ore values. Careful mill records on this type of ore should be given preference over mine sampling. In the absence of production records, my procedure would be, to take 20 pound samples, carefully pan and reduce all recovery to bullion, multiply this recovery by 100 and add the assay value of pan tailings.

Therefore, with this foreword in mind, I set forth below an abstract of assays from Mr. Petty's records on a group of samples from development ore

Sample No.	Width	Value	Foot Dollars
1	2'	5.40	11.80
2	1.5'	5.10	7.65
3	3'	10.04	30.12
4	3'	7.15	21.45
5	5'	22.52	112.60
6	4'	35.77	143.08
7	9'	24.16	217.44
	<u>27.5'</u>		<u>544.14</u>
Average	3.9'	\$19.78	

Of eight samples taken by the writer, but two were cut for the purpose of



ore value; five were cut to aid in the determination of the peculiarities of the deposit, particularly as to nature of the deposition in the vein gangue material; the eighth sample was a grab sample from the open cut which assayed \$16.80 per ton.

The results from the two samples mentioned above were as follows:

Sample No.	Width	Value	Foot Dollars
184	1.5	\$12.60	\$18.90
185	<u>3.0</u>	19.60	<u>58.80</u>
	4.5		77.70
Average	2.25'	\$17.27	

The evidence related above all tends to indicate an average value of \$15.00 per ton. As stated, deposits the value of which are largely in native metals cannot be assayed and sampled in the usual way, consequently if the recommended program of development is initiated all control work and value determinations will be made by bulk runs in the stamp mill on the property.

RECOMMENDATIONS:-

I recommend this prospect for development and a systematic plan suggests the following work:-

A. Sink Main shaft an additional	100 feet
B. Drift to North on 160' level	200 feet
C. Drift to South on 160' level	100 feet
D. Drift to North on 60' level	140 feet
E. Raise connecting 160' and 60' levels	100 feet

<u>Recapitulation</u>		Cost Est.
Shafts and Raises	200' @ \$25.00 per ft.	5000.00
Drifts	440' <del>400'</del> @ 10.00 per ft.	<u>4440.00</u>
	Total	\$9440.00

This work to progress in three phases, each succeeding phase dependant on favorable indications as to character and size of ore body developed in preceding phase. The three phases are

1st phase - main shaft extension	\$2500.00
2nd phase - partial drift development 160 foot level	2000.00
3rd phase - completion of drifts and raises	<u>4940.00</u>
	\$9440.00

Assuming the continuance of present value and size of orebody, completion

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of this development work will provide an assured ore reserve, sufficient to produce profits that will more than return the capital required to put the property into successful operation. My tonnage estimate is as follows:-

BLOCKED OUT and ready for mining	7000 tons
Assured ore above 60 foot level	1700 tons
Assured ore below 160 foot level (25 feet)	2700 tons
TOTAL	11400 tons*

\* (After deducting 20% for dilution in mining)

VALUE OF ASSURED ORE @ 15.00 per ton \$171,000.00

SCALE OF OPERATIONS:-

All factors in this connection having been determined as far as practicable, the scale of operations recommended is on the basis of 25 tons per day.

With regard to the milling equipment to handle this tonnage, consideration has been given to the fact that some change in the character of the ore may be expected with depth and provisions have been made in my estimate for this and other possible contingencies. My preliminary estimate for a 25 ton amalgamation-flotation plant erected is \$800.00 per ton or a total of \$20,000.00.

CAPITAL REQUIREMENTS:-

Thus the Capital requirements from the development and operating standpoint may be summed up as follows

Development	\$10,000.00*
Milling Equipment	20,000.00
Mine and Camp Equipment and Facilities	5,000.00
60 Day Operating Reserve	5,000.00
Total	\$40,000.00

PROFITS:-

Profits from operations on the Assured Ore supply should be substantially as shown by the following statement.

ASSURED ORE	\$171,000.00
Less	
Invested Capital	\$40,000.00
Mining Costs @ 4.00 per ton	45,600.00
Milling Costs 1.50 per ton	17,100.00
Administration 1.00 per ton	11,400.00
	<u>\$114,100.00</u>

Plus-

Contingencies 5%	5,700.00	
Milling loss-10% of Assured ore	17,100.00	136,900.00
Profit from Operation		<u>34,100.00</u>

Under the proposed scale of operation, namely 25 tons per diem, the above statement is the estimated effect of 455 days of mill operations and reflects the fact the assured ore was sufficient to not only repay the invested capital, but to make a very substantial profit.

Another important factor is that this initial reserve of assured ore was so large that its extraction at the proposed rate cannot exhaust it in a reasonable length of time necessary to prove and block out additional reserves.

It is also pointed out that the profits per ton from milling all ores produced after this first period of operations will be enhanced by the amount of the initial capital investment which stands completely amortized when the first reserves have been exhausted.

Before concluding my recommendations, I refer back to the item of \$10,000 (Page 7) shown for Development work on Page 10./ I want to qualify this amount by stating that in all probability, by the time the second phase of the proposed development work has been entered into, sufficient recovery can be had from milling the development ores in the existing stamp mill to pay for the ensuing development work. Consequently, I feel quite certain that the Development account will receive a credit of at least \$5,000.00 and that only \$5,000.00 need be appropriated at this time to inaugurate the proposed work.

By the same methods, should the initial phase of the work be conclusively contrary to expectations, any moneys invested up to that point, could probably be recovered by suspending further development work and in lieu thereof mill the ores exposed by the limited development in the upper workings, which in my opinion are sufficient to return at least \$3000.00.

CONCLUSION:-

In conclusion I will say: While this property possesses considerable merit as a prospect, the development work is not sufficiently extensive to warrant a definite opinion as to its ultimate future. I am, however, led to believe from the facts herein given that the further explorations as recommended will result in the discovery of important ore bodies, such as would place the property in the rank of important producers.

Respectfully submitted

Fred J. Rosenberg, E.M.

Dated at Portland, Oregon Dec. 11, 1939.

ADDENDA  
REPORT ON  
THE  
OWL  
GROUP

As the result of a second visit to the property in question, paragraphs 1 to 4 inclusive, page 1 of the Preliminary Report, dated December 11th., 1939, are hereby amended and corrected as follows:-

GEOGRAPHY:-

This property is situated in Sections 2, 10 and 11, Township 10 South, Range 35 East W. M., Greenhorn Mining District, Grant and Baker Counties, Oregon, one and one-half miles east of the old mining town of Greenhorn which is shown on the map accompanying the Preliminary Report.

Climatic Conditions:- The chief climatic characteristics are a scanty rainfall, large ranges in temperatures, low absolute humidity, rapid evaporation and an abundance of sunshine.

Temperature and Precipitation:- The U.S. Weather Bureau advises that the mean temperature ranges around 43 degrees. The warmest month as a rule is July, and the coldest is January. Average of readings taken at Sumpter, Oregon for a portion of the year are indicative of average temperature and total precipitation and are shown on the following page.

<u>MONTH</u>	<u>AVERAGE TEMP.</u>	<u>TOTAL PRECIPITATION</u>
Jan.	17.4 deg.	6.50"
Feb.	29.8 "	3.77"
Mar.	24.0 "	6.90"
Apr.	32.4 "	1.90"
May	42.0 "	.50"
Oct.	41.6 "	.85"
Nov.	27.6 "	4.21"
Dec.	25.0 "	7.51"

A large part of the precipitation occurs as snow and depths of from two to four feet are common during the winter months. Precipitation is heaviest during the winter months and least during the months of July and August.

The occasional heavy snows during the winter months should in no wise limit a well organized organization. Year around operations are the rule in other mines in the vicinity and the adjoining districts of this region.

Accessibility:- The following is a table of distances by road to various points of supply and transportation facilities:-

<u>To</u>	<u>Distance</u>	<u>Road Condition</u>	<u>Remarks</u>
Tipton, Ore.	10 mi.	Fair	RR Sta. (Flag)
Sumpter, Ore.	24 mi.	Fair	RR & Supplies
Baker, Ore.	59 mi.	Mostly Good	Main Supply Pt.

The property may be reached from Baker, Oregon over several different routes, the choice being dependant on weather conditions. Transportation costs are reasonable and in keeping with costs elsewhere for the mileage involved. Local and long distance telephone serves the property. Mail is routed thru the Whitney, Oregon Post Office.

DESCRIPTION OF THE PROPERTY:\*

Claims:- The OWL group embraces an area in excess of 120 acres, consisting of six full lode claims held by right of location, as follows

OWL  
WEST VIRGINIA  
VACANT  
RED BIRD  
RED BIRD NO. 2  
CAMP BIRD

The accompanying Claim Map, Drawing 240-2 will illustrate this more fully. This map was made from notes of a compass survey. It is on a scale of 300 feet to the inch and is fairly correct and represents the metes and bounds, and claim area of the property as designated to me by Mr. E. E. Petty, the owner.

Surface Property and Improvements:- Coming under this caption are the structures shown in the following Table:-

<u>Structure</u>	<u>Dimension</u>	<u>Condition</u>	<u>Remarks</u>
West Virginia Mill Bldg.	50 x 100	Abandoned	Contains salvageable lumber
Owl Mill Bldg.	19 x 53	Fair	(Frame)
Hoist House	15 x 17	Poor	(Frame)
Red Bird Mill Bldg.	14 x 34	Poor	(Frame)
Red Bird Hoist House	10 x 25	Poor	(Frame)
Shop	10 x 15	Fair	(Frame)
Cabin	15 x 30	Good	(Log)



PICTURE OLD WEST VIRGINIA MILL

Mining and Milling Equipment:- The following table indicates equipment under

this caption:-

<u>Description</u>	<u>Condition</u>	<u>Remarks</u>
West Virginia -		
5 Stamp Battery (850#)	Good	*All the West Va. equip- ment should be salvaged.
Steam Hoist Engine	Good	
Steam Plant	Poor	
Owl -		
1-16 cf Ore Car	Good	
Single Drum Hoise dc to 4 cyl. Ford Eng.	Good	Rope Speed 50 ft. per
#5 Cameron Pump bc	Good	Minute
3 HP Meco Gas Eng		
1-10" x 12" Jaw Crusher	Good	
1-5 Stamp Battery (850#)	Good	From West Va. Mill
1 Challenge Ore Feeder	Good	
4' x 8' Amal. Plates	Good	
1-Std. Gravity Concentrator	Good	25 ton capy.
1 Fordson Tractor	Good	Power Unit
1 FB-Morse 3 HP Gas Eng.	Good	Not in Use
Red Bird -		
1 - 16 cf Ore Car	Good	
Blacksmith Equip	Good	Usual Tools
1-8" x 12" Jaw Crusher	Fair	
1-3 Stamp Battery (400#)	Fair	
1-Ore Feeder	Fair	
1-4' x 4' Amal. Plate	Good	
1 -Johnson Vanner	Junk	
1-Case Thresher Eng. (Steam)	Junk	Power Unit
Transmission	Junk	

The Owl Mill is in good workable condition, transmission equipment is in good shape and necessary small tools and repair materials on hand. I also believe there is sufficient relay rails for immediate use and that the hoisting gear now on the Red Bird and Owl will suffice for the proposed development work.

Timber:- There is a sufficiency of good timber on and adjacent to the claims suitable for mining, fuel and building purposes. Lumber can be procured from nearby mills at Sumpter and Whitney, Oregon for around \$20.00 per thousand for #1 Fir, structural and dimension stock. Cordwood for domestic use can be contracted for, delivered at not to exceed \$4.50 per cord.

Water Supply:- Mine seepage will furnish adequate water supply for mining purposes.

Domestic Water Supply - a Camp located at any place on the property other than in the vicinity of the Red Bird Mill will necessitate the development of water

PICTURE OF OWL MILL

for domestic use. Near the Red Bird Mill, a water right has been granted to 1/2 cfs of water from a spring for domestic utilization. I do not consider the development of suitable water supply for this purpose elsewhere on the property as a serious problem.

**Mill Water Supply** - At the Owl Mill, milling water is secured at the present time from two sources, namely, the mine, which makes about 1000 gallons per day and from what is known as the Water Tunnel, an old cross cut adit, shown on the map as a short distance northwest of the Owl Mill. This opening was intended to cross cut the West Virginia lode. Seepage is impounded in this adit by a 2½ foot dam which furnishes sufficient water to operate the Owl Mill for a period of seven hours. On this basis and assuming a stamp duty of 1.5 tons and a water consumption factor of 15 tons of water for each ton of ore milled would indicate that the storage capacity in the Water Tunnel at 7875 gallons. Observations made at the spill-way of the dam, indicate a flow calculated at about 3000 gallons per day; thus to replenish the storage in the Water Tunnel would require approximately 2½ days. Obviously then, the water supply for milling purposes is entirely inadequate and it will be necessary to develop a dependable supply. A substantial sub-surface flow is indicated by springs and verdure in Irish Gulch, to the north of the mill, and in all probabilities this could be developed to furnish an adequate mill water supply.

In concluding this subject, Mr. Petty has a permit for the un-appropriated water of Olive Creek, which is made appurtenant to the Red Bird Mill. Nature of the terrain restricts this questionable supply, however, to use solely in the Red Bird Mill vicinity.

**Labor:-** Experienced workmen, such as miners and millmen are available. Current wage scales are \$3.50 to \$4.00 for ordinary labor; \$4.00 to \$4.50 for muckers; and \$4.50 to \$5.50 per day for miners and millmen.

**HISTORY:-**

The Red Bird was located by H. J. Abel and E. E. Petty in 1915. Red Bird

#2 and Camp Bird were filed on shortly thereafter. Development work was confined to the Red Bird and production during intermittent operations for the following five years totalled approximately \$9,000.00, of which amount Mr. Petty has absolute records for \$4,667.14, the amount reported in the Preliminary section of this report.

In 1921 and 1922 the Owl, West Virginia and Vacant were located and development activities switched over to these new claims. The West Virginia was first to go in operation and is credited with a production of about \$30,000.00. This operation was conducted by eastern interests under lease and bond. A large, substantial and well equipped mill erected without any ore reserves, remains as mute evidence that the venture was strictly promotional.

Shortly after the West Virginia closed down, development work on the Owl was instituted and in 1931 he moved part of the West Virginia milling equipment to the Owl. In 1932 he began milling, <sup>and</sup> as stated in the Preliminary Report, he has, for the most part, single handed, and from intermittent operations, produced about \$15,000.00.

Of the nearby properties, the Bonanza Mine is the most notable, with a total production of \$1,750,000. This property is in the Argillite belt about 2½ miles southeast of the Owl.

Immediately south of the Owl is the Rabbit mine, which borders on the serpentine zone, and has a production, variously estimated at \$50,000.00 from periodical operations.

The Snow Creek Group, 3 miles south-west, is in slate and serpentine, from which, the owner advises, some \$52,000.00 has been produced.

To the north, and in Argillite, but near the main granodiorite intrusion is the Red Boy, which has a record of \$800,000.00 to \$1,000,000.00

The ore deposits of the Owl Group do not seem to differ mineralogically from those of some of the principal producers of the district when these were in the early stage of development, and while the two largest producers were in Argillite and

and the Owl is in a diorite or gabbro gradation of the main granodiorite intrusive, the geological characteristics pertaining to structure are regarded as similar.

RED BIRD VEIN SYSTEM:-

This vein system, where exposed, parallels the foliation of the enclosing rocks in the same manner as noted at the Owl. The country rock is distinctly diorite, with both walls firm and showing considerable lateral movement but little alteration, and thin gouge seams between vein matter and wall rock.

Vein No. 1 has a strike of North 50 West and an average dip of 74 degrees to the North.

Vein No. 2 has a strike of North 35 West and an average dip of 76 degrees to the North.

The gangue matter consists for the most part of quartz except in the stoped area of No. 2 vein where quartz is found uniformly deposited for about a foot in width on each wall with a filling between of from one to one and a half feet of brecciated country rock lightly cemented by silicification. The values occur as free gold associated with the quartz. No sulphides were noted.

The insufficiency of the exposures make it impossible to classify this vein system and while from the paragraph above one might suspect a true fissure type, I am prone to regard it merely as a lateral fault fissure or fracture, lacking sufficient movement to produce substantial avenues for mineralization. Inability to observe the surface due to heavy timber growth etc precluded obtaining any information from this source as to the genetic occurrence of the veins.

Suffice it to say, that at the present time and from the available facts, I do not regard the Red Bird veins, from a mineralogical and geological standpoint, in the same favorable light as the Owl vein system. Further comment in this connection is found under "Recommendations".

PRESENT RED BIRD DEVELOPMENT:

PICTURE OF OWL TRAM TRESTLE  
Looking North

PICTURE OWL GALLOWS FRAME

The development work on the Red Bird aggregates 515 feet, exploring the area to a depth of 40 feet and a length of 179 feet. The workings consist of 405 feet of drifts on two levels, 80 feet of shaft and raises and 30 feet of cross-cut.

The upper levels on both veins are opened by adits; the lower levels of each vein are opened up by a two compartment shaft sunk on No. 2 Vein and from the bottom of this shaft or 40' level, a cross-cut connects the two veins. There is a 35 foot drift north on the 40 foot level of No. 2 vein and a 41 foot drift north at this level on the No. 1 vein, at the face of which a raise connects the two levels of this vein.

No. 2 vein has been stoped to the surface for a distance of 151 feet north of the portal of the adit level. This is a shallow stope, running from a few feet of backs at the portal to about 40 feet at the raise. It was in this stope that the quartz stringers were found on both walls, as related in the description of the Vein on page 9.

I was able to explore only 69 feet of Adit Level, Vein No. 1; all of adit level of vein No. 2 - the balance of the workings were inaccessible and the description herein is as related to me by Mr. Petty.

WEST VIRGINIA VEIN SYSTEM:

No statement can be made regarding this lode as the underground workings were inaccessible and surface cuts or exposures so badly filled or covered by snow as to preclude observation.

The mine is opened by shaft to shallow depth with short drift each way on the vein. Strike of vein was determined by sight along the surface subsidence occasioned by underground drifts.

Samples of ore from the dump shows typical quartz gangue, heavily stained, badly fractured and with some little showing of both copper and iron sulphides.

RECOMMENDATIONS:

From the further facts obtained in the concluding phase of the examination,



no additional evidence has been procured which would in any way alter the recommendations relating to development of the property as set forth in the Preliminary Report. My complete analyses of all the facts confirms my first conclusion that the Owl offers the strategic point of attack for the exploration of the property as a whole.

As concerns the Red Bird and West Virginia lodes, I recommend no immediate consideration be given these lodes. In the event the Owl development is favorable, then a plan concerning these two vein systems can be evolved based on further needed prospecting.

Your attention is now invited to the Claim Map. On this you will note that when the veins are extended northerly that they would converge in an area around the north end of the Vacant Claim. This convergence is very significant. I am recommending that as soon as the ground is exposed in the Spring, that the strike of the several veins be run out by surface prospecting and that filings be made to cover the area of convergence, which I understand is now open for entry. This work I regard of great import.

You will also note from this map that the claims involved do not protect the holdings viz the West Vein of the Owl projects thru the west side line of the Owl - also that the West Virginia appears to be an over-size claim as regards its length. I am therefore recommending that as soon as possible after completion of the development phase that a careful transit survey be made to correct and amend present filings and to file on such additional claims as are obviously needed to round out the group and protect the established areas.

Respectfully submitted,

(signed) Fred J. Rosenberg, E.M.

Dated at Portland, Oregon, Dec. 21, 1939

BLUEPRINT THE OWL MINE (BAKER COUNTY)