

Mining companies which might be interested in doing work in the Bohemia District

Hidden Splendor Mining Company  
First Security Building  
Box 2306  
Salt Lake City 10, Utah

attention: Mr. Phillip Merritt,  
chief geologist

See Tee Corporation  
Sims Building  
Albuquerque, New Mexico

attention: Miss Stella Dysart

Hecla Mining Company  
305 Fidelity Building  
Spokane, Washington

attention: Mr. Herbert Harper  
chief geologist

New Park Mining Company  
901 Walker Bank Bldg.  
Salt Lake City, Utah

attention: Mr. W. H. H. Cranmer  
president

Silver Buckle Mining Company  
Wallace, Idaho

attention: Mr. Jack Gay

---

Oct 4

---

I am now in Corvallis and I see I have duplicated some of the information in my letter of Jan 1960.

I have some more assays from men or beds in Blue River as high as 3.5 gms

I would like very much to come to Las Vegas next week but guess I will be too busy.

Regards

Ken W. Johnson

EUGENE L. HOAGLAND, ASSAYER  
7018 S.E. Seventeenth Ave.  
Portland 2, Oregon

November 30, 1956

Samples from Kenneth Watkins

Received November 26, 1956

<u>Lab. No.</u>	<u>Sample Marked</u>	<u>Results of Analysis</u>				
		<u>Ounces per Ton</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
		<u>Gold</u>	<u>Silver</u>	<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>
		<u>(Au)</u>	<u>(Ag)</u>	<u>(Cu)</u>	<u>(Pb)</u>	<u>(Zn)</u>
560	Stonewall	0.04	3.64	1.20	9.04	16.20
561	Professor	0.05	17.50	9.20	5.04	15.63
562	Oregon Colorado	0.035	2.60	2.80	Trace	Trace
563	Helena Face	0.05	3.60	2.30	7.04	7.60
564	Sunset	0.04	1.20	0.40	5.11	14.22
565	Leroy	0.02	0.80	0.20	6.60	15.70
566	Miller	0.07	3.50	1.00	2.00	9.90
567	Helena, Taylor Stope	0.60	2.20	0.20	2.55	16.78
568	Musick	0.24	2.80	2.00	5.70	9.48

The attached assay sheet shows metal content of samples sent to Denver Equipment Co. for mill tests. These were representative samples from several Bohemia ore bodies. Gross value was computed using the following metal prices; gold \$35.00 per oz, silver 90¢ per oz, copper 25¢ per lb, lead 12¢ per lb, and zinc 10¢ per lb.

If we take out the Oregon-Colorado, which is too low grade to treat at present copper prices; the Stonewall, which belongs to Stewart's and the Miller, which I have not purchased yet, we will have the following average value: gold .264 oz, silver 4.69 oz, copper 2.39%, lead 6.94% and zinc 12.99%.

Using the approximate value of metals after taking off smelter deductions, smelter charges and freight charges on the concentrates, which values are: gold \$31.8182 per oz, silver 80¢ per oz, copper 19.5¢ per lb, lead 9¢ per lb and zinc 4.5¢ per lb, and then subtracting 10% for tailing loss, we find the ore will have a net value per ton at the concentrate bin of \$42.45.

# General Information -

- A. Lane Minerals Inc. - (Corporation)
- Harold Barton, Pres.
- Jack Kelly Sec. Treas.
- F. H. Stewart Dir
- L. E. Chapman "
- L. H. Stewart "
- Herb Lombard, Jr. atty.
- H. R. Jacobs, Jr. act.

This Co. has no one w/ any mining, ~~mining~~ or geology background or knowledge other than Barton

- This Co. owns the following claims in Bohemia area. (All leased to Emerald Empire Co.)
- 1 - Helena Group
  - 2 - Musick "
  - 3 - President "
  - 4 - Utopian "
  - 5 - Gilbertson "
  - 6 - Nordstrom "
  - 7 - Stonewall "
  - 8 - Ore, Colo " (Mineral only)
  - 9 - Lead Crystal " " "
  - 10 - Champion " (Purchase contract w/ Bartels Mining Co)

11- Other incidental claims which may or may not have mineral values.

This Co. has access to mill site area at Culp Creek. (Can Aguire)

This Co. is asking for your services and would like to have answers to following questions.

• Does an Ore reduction mill located in this area ~~someplace~~ make sense? If so:

- 1- What kind
- 2- " Capacity
- 3- Where located
- 4- How much would it cost.
- 5- How should it operate (Custom-lease, etc)
- 6- Would this deal appeal to a large mining Co.
- 7- Does the Federal Gov. fit into a development program.

Emeral Empire Co. (Corporation)

Wayne Geisy      Pres.  
K.O. Watkins      V.P.

This Co. has a lease on all Lane Minerals Property except mill site at Culp Creek.

This Co own the following claims

- 1 - Sunset      Groupe
- 2 - Warner      "
- 3 - Professor      "
- 4 - Several other      "      for a total  
of 106 claims.

This Co. has an C.M.E. lean w/ the Gov't. for exploration of the Musick

Check w/ Watkins on their operations  
& planning.

William Bartels owns the Noonday group of claims along w/ others on or near Greuse Mtn.

Ray Nelson owns the Vesuvius group of claims along w/ others on or near Fairview Mtn. -



copy & returns KO Watkins  
Emerald Empire Mines Co  
District, Oregon

## 1950 PRODUCTION - BOHEMIA DISTRICT

### CHAMPION MINE

1958 tons milled, recovering 757 oz. Au., 4076 oz. Ag.,  
36,041 lb. Cu., 23,534 lb. Pb., 59,044 lb. Zn.

Net pay from smelters for these concentrates before  
freight and royalty deductions was \$32,776.35. — \$17/ton

This production was in the form of jig concentrates  
and bulk flotation concentrates. No pay for Pb. or  
Zn. at Tacoma, no pay for Zn. at U.S. and only low  
pay for Zn. at International.

### MUSIC MINE

115 tons milled, recovering 31.61 oz. Au., 255.9 oz. Ag.,  
2300 lb. Cu., 6595 lb. Pb., 11,920 lb. Zn.

Net pay from smelter before freight and royalty \$2386.13. — \$21/ton

Some zinc concentrate also produced but not shipped  
yet so not included in above figures.

### HELENA MINE

145 tons milled, recovering 33.52 oz Au., 193.6 oz Ag.,  
1380 lb. Cu., 4303 lb. Pb., 15,340 lb. Zn.

Net pay before freight and royalty (Pb. conc. only) -  
\$1528.93. — \$11/ton

13 tons of 49% zinc concentrate also produced but not  
shipped yet.

COPY

R.I. 3942

KHYAN & STUMBLE ON CLAIMS, Prince of Wales Island

at head Skowl Arm - see magnetic map.  
staked 1937 by Texas Gulf Sulphur - abandoned  
in 1946 all public domain

in hornblende gneiss derived from diorite intrusive.  
lenses of qtz, pyrite, chalcopyrite, 260' x 1100' zone  
lenses 6' to 25' wide.

Stumble has up to 150' of 3-4% Cu in pyritic  
gneiss - work some further work.

in 1946 owned by J. E. Allen & J. F. Augstson of Ketchikan

RI 4373 (1943-44) Tolstoi Mt  $Fe_3O_4$  deposits

in tuffs near <sup>south</sup> contact diorite plug  $\neq$  magnetic anomaly

deposit # 1 - 30% Fe - 0.15 Cu  
" # 2 - 45-50% Fe - 0.10 Cu - one area 50-50' - 1% Cu  
" # 3 - 40% Fe -

deposits flat lenses in greenstones <sup>B</sup> max thickness 5-6'

NO INTEREST

RI 3956

— POORMAN  $Fe_3O_4$  -

has 1,250,000 tons massive iron ore 0.25 Cu not  
recoverable

no Cu value - note is not on magnetic high

RI 4129

— Mt Andrews  $Fe_3O_4$

~~about 1,750,000~~ 2,000,000 tons open pit ore 1:1 ratio 48% Fe, 0.32 Cu  
500,000 tons underground ore same " "  
Indicated

Possible 2-3 x above figures

Indicated ore will produce.

40,000 tons 15% Cu con.  
1,700,000 tons 64% Fe sinter.

This is on good magnetic high.

Combination of Mt Andrews, Mamie, & Steenun would give

roughly

1,250,000 Poorman open pit  
2,000,000 Mt Andrews " "  
1,000,000 Steenun - mass open pit  
4,250,000 open pit ore

Say 2,000,000 tons underground.  
Block casing are all about  
\$120/ton mining



EUGENE L. HOAGLAND ASSAYER  
 7018 S.E. Seventeenth Ave.  
 Portland 2, Oregon

November 30, 1956

Samples from Kenneth Watkins

Received November 26, 1956

Lab. No.	Sample Marked	Results of Analysis					Gross Value
		Ounces per Ton		%	%	%	
		Gold (Au)	Silver (Ag)	Copper (Cu)	Lead (Pb)	Zinc (Zn)	
* 560	Stonewall	0.04	3.64	1.20	9.04	16.20	864.78
561	Professor	0.05	17.50	9.20	5.04	15.63	104.84
562	Oregon Colorado	0.035	2.60	2.80	Trace	Trace	17.55
563	Helena Face	0.05	3.60	2.30	7.04	7.60	47.74
564	Sunset	0.04	1.20	0.40	5.11	14.22	45.18
565	Leroy	0.02	0.80	0.20	6.60	15.70	49.64
⊗ 566	Miller	0.07	3.50	1.00	2.00	9.90	34.00
567	Helena Taylor Stope	0.60	2.20	0.20	2.55	16.78	63.64
568	Musick	0.24	2.80	2.00	5.70	9.48	54.14
606	Medicine - 1st, 1st	0.95	4.60	2.70	16.57	11.51	116.31
Average							69.08

*ERTH*

Leave out Stonewall, Ore - Colorado + Miller

HELENA

Assays Reported by Harold Barten

No. 7 level - 1957 (*Year Portal*)

	<u>Gold, oz.</u>	<u>Silver, oz.</u>	<u>Copper%</u>	<u>Lead%</u>	<u>Zinc%</u>
#1523 35 ft. E. 1st chute; some leaching; 19"-20"	0.015	3.40	0.30	0.80	6.28
#1524 65 ft. E. 1st chute; ditto	0.03	1.75	0.80	1.36	15.10

Underhand Stopes - No. 4 level - 1939:

9/12/39 E. end 401; at left; 6" band, copper heavy	0.84	5.20
9/27/39 Post 1 401; as left; 9 ft. below level; out 12" band	0.56	2.60
9/27/39 Post 2 401; as left; 9 ft. below level/ out 24" band	0.48	2.80
10/3/39 Post 4; 5 ft. below level; out 10"	0.80	1.60
10/3/39 Post 01; 401 out 10"	3.28	3.40

*"401"*  
 (Note: a weighted cross-section of this showed gold-silver value of \$104/Ton at floor level for entire lense of ore)

*1<sup>st</sup> beyond Wyatt Lane*

9/12/39 Post 3; <u>402</u> out 12"	1.46	.30
9/12/39 Post 1; <u>402</u> Cut 14"	4.64	1.80
9/12/39 Post 3W; <u>402</u> Cut 12"	2.76	.80
9/19/39 Post 4; <u>402</u> Cut 8" at -5'; end of sinking	1.94	1.66
10/3/39 Post 16; <u>402</u> Cut 14" (Had Pb, Zn)	0.28	1.00
10/3/39 Post 4; <u>402</u> Cut 12" at -5'	5.24	1.00

*"402"*  
 Below Stope to 200 level

(More)

Assays Reported by Harold Barton

	<u>Am. Oz</u>	<u>Ag. Oz</u>	
12/8/39 Post 3; <u>402</u> -8 ft. cut 12"	1.96	3.00	(as left)
12/8/39 Post 3 plus 2'W; <u>402</u> ; -5'; cut 20"	3.48	3.20	(as left)

- - - - -

Smelter Assays on 5 earloads shipping ore (crude):

<u>Date</u>	<u>Dry Wt.</u>	<u>Au</u> <u>oz</u>	<u>Ag</u> <u>oz</u>	<u>Cu</u> <u>%</u>	<u>Pb</u> <u>%</u>	<u>Zn</u> <u>%</u>	<u>Fe</u> <u>%</u>	<u>SiO<sub>2</sub></u> <u>%</u>
10/11/39	73,935	1.72	1.75	1.11	3.4	4.4	6.9	69
11/11/39	106,368	1.70	1.76	0.98	2.7	3.3	7.3	66.9
12/11/39	94,581	1.72	1.03	0.22	?	0.7	7.8	71.4
12/14/39	96,793	0.98	1.56	0.51	2.1	4.4	6.9	69
12/16/40	68,382	0.78	1.38	0.65	2.1	2.9	7.2	70.0

- - - - -

<u>Level 5-B West at</u>		
X-cut to ore; 15"	1.08	1.60
....10' W'ly from pt.; cut 16"	0.68	2.60
....FW, drift face	1.12	1.50
....Face as ore pinched; cut 10"	0.92	1.10
....W14'; up 4' cut 36"	0.92	2.40
....W18'; up 4' cut 30"	0.48	2.00
....end of slope cut 20"	1.24	2.00
....end of slope cut 12"	1.08	3.20
....slope, 10' from chute cut 20" (10/14)	2.24	2.00
<u>No. 6 level; face,</u> cut 20"	0.48	2.20
....back 10 ft., cut 24"	1.12	2.30

(Note: these mine samples were cut to control production of shipping ore; when values were obvious samples were usually not taken -- H.B.)

HELENA

Assays reported by Kenneth Watkins:

Unsorted development ore from Helena No. 7 drift (1946):

	<u>Gold</u> <u>oz.</u>	<u>Silver</u> <u>oz.</u>	<u>Copper</u> <u>%</u>	<u>Lead</u> <u>%</u>	<u>Zinc</u> <u>%</u>
Smelter Lot 1080	1.23				
1182	1.18	2.55	0.79	2.35	5.63
1731	0.94	2.24			
1319	1.22	3.46	0.92	2.15	
" (U.S.)	0.30	1.98	0.83	3.38	4.75

Samples from Major Stope & pillar on No. 7 level:

#4205	Floor 31"	0.22			
09	E side pillar	2.00	(36")		
4213	Pillar sulphide	1.97	(about 20")		
4214	Grab, 5 cars from pillar	2.24			

Helena Zinc Concentrate (Still at Champion Mill):

0.38	2.4	2.0	50.4
------	-----	-----	------

Fill out all blanks on first sheet to each  
page on following sheets fill out  
only Name, Class Letters and Number  
and sheet No.

Write or PRINT your name and address  
VERY PLAINLY in the space provided

ANSWERS TO EXAMINATION QUESTIONS

Sheet No. \_\_\_\_\_

Class Letters  
and No. \_\_\_\_\_

Bohemia - Champion

Name \_\_\_\_\_

Subject \_\_\_\_\_

Iron in Elmer's report made by  
Champion

Edition \_\_\_\_\_

Part No. \_\_\_\_\_

Post Office  
State or Country \_\_\_\_\_

Old maps show that former operators worked on  
shoot from grass roots down to 350' - This shoot formed  
by enrichment of solutions in v seams & veinlets  
crossing from H.W. to F.W. & the heart of the shoot  
has been extraordinary high in values excellent per centage  
(Shows stopes 4' - 5' wide as high as 1000 per T.) Also  
another good shoot that did not open - 150' from surface  
worked out to 5th level.

~~No 12 level x-c in 319 in 1916 to go 456 to Champion~~

min

No 12 level a x-c 319 below #9 in 456 in 1916 to go

440 to Champion min.

Elmer believes this x-c will cut better



DESCRIPTION OF MINING PROPERTY

1. NAME....."MUSICK".....
2. Location.....Lane County,.....OREGON.....
  - A. District,....."CALIPOOIA".....
  - B. Nearest town.....DIESTON.....
  - C. Distance from transportation..... 16 miles by loop highway,  
no grade over 7%.
  - D. Time required to reach property..... 2 days from Spokane.
3. OWNERSHIP: A.....This property is owned by one individual.
4. PROPERTY.....Consists of 7 or more mineral claims and 1, Timber claim.
5. DEVELOPMENT:
  - A. Open cuts.....
  - B. Shafts.....Refer to cross section.
  - C. Tunnels, 3 principal, and 3 minor tunnels on this property.
  - D. No. 2 Tunnel is 1700 ft. long and extends from portal to daylight.  
No. 3 Tunnel is blind and partly worked out. It lies above No. 2.  
No. 4 Tunnel is 1680 ft. long from portal to face. Cuts 4 ore shutes.  
No. 5 Tunnel is 980 ft. long from portal to face and cuts 3 shutes.  
West Tunnel is 300 ft. long and in ore the full distance.  
A short tunnel on the California vein is also in ore.
6. NATURE OF DEPOSIT.
  - A. What are the valuable metals contained? Gold, Silver, Lead, Zinc and Copper -- Gold being free, with the other metals in sulphide form.
  - B. Character of deposit:- The deposit on this property consists of two true fissure veins which are not quite parallel and intersect at a point about midway of the property.
  - C. Total length of outcrop:--Musick vein, about 6000 ft. and the CALIFORNIA vein, about 4000 ft.
  - D. Average width of ore:--The walls of these fissures are about 16 to 20 ft. apart, Porphyritic gangue carrying both high and low grade ores fill the intervening spaces. High grade ore shutes occur at frequent intervals; these shutes are usually very extensive.
  - E. Assays:--Tests of ores on Dumps shows averages of about \$14.00 per ton, while \$45.00 to \$50.00 per ton is a safe average value for the more than 300,000 tons of ore standing in stopes. Also some assays of selected high grade ores has reached a value of nearly \$700.00 per ton.
  - F. COUNTRY ROCK:--Andesite, Tuffs, Diabase, Porphyry, Basalt and Tertiary lavas.
  - G. There are, very conservatively, 75,000 tons of ore on the dumps with recoverable value much in excess of \$450,000.00.

PRODUCTION:--Most of the ores within the oxidized zone has been worked for the free gold they contained, and the known production was in excess of \$500,000.00 while many thousands of dollars in bullion and high grade specimens were clandestinely taken from this property of which there is no record. These values were all in gold.

**FINANCIAL CONDITIONS.**

- A. Total Purchase Price:-----\$750,000.00.
- B. Terms:-- 10% down upon acceptance; balance in payments spread over a period of years, to be negotiated.

**MISCELLANEOUS.**

- A. What buildings on the property:-- A Mill, Toolhouse and shop. Cook house and bunk house combined, all buildings being fully equipped except the mill which needs some modernizing. Living quarters sufficient to accommodate 10 to 12 men.
- B. There is sufficient quantities of both wood and water for mining and domestic purposes.
- C. The most suitable time for making examination of this property, is between the months of March and November.
- D. Amount and value of ores on dumps, approximately \$400,000.00.
- E. Values standing in Steps over approximately \$4,000,000.00.
- F. Possible ore values above lowest present levels not blocked out, will exceed many times the values in sight.

CALAPOOYA MOUNTAIN REGION, OREGON.

GOLD-SILVER-LEAD AND ZINC ORES

---

The property here considered lies at an elevation of some 6000 feet at the highest point where it crosses the ridge from the Eastern to the Western slope of the mountain. This group of claims covering the ground described consists of seven claims. Title is by location under the mining laws of the United States which have been fully complied with and is good, the mine being free of liens, adverse claims or incumbrances. It lies in the "Calapooya" Mountains, a shoulder of the Cascade Range that juts out from their western slope. The whole region is volcanic, heavily mineralized, its ores being found in true fissure veins which are extensive and well defined, they can be traced by their out-crops for many miles through the country, cropping persistently from the bottom of the canyons upwards across and over the tops of the surrounding ridges and mountains, maintaining their size and strike with great strength and regularity for many miles, they are large veins showing every evidence of depth and permanency. All contours of the district are bold and great working backs may be obtained by adit tunnels driven on the veins, making it possible to extract their ores economically and to keep the workings-drained without the cost of pumping.

A prominent feature of the district, and one characteristic of this entire region is the series of strong Andesite dikes that traverse it, often I may say usually, in contact with dacite porphyries which are much in evidence. Tuffs, Diabase, evidently intruded, and Tertiary lavas are of frequent occurrence throughout the section considered.

Both timber and water are in ample supply for mining and domestic needs. The property is reached by Automobile over the County road, a distance of 35 miles from the trading center, with Railroad and shipping point within 16 miles.

On the property covered by this report, its surface shows considerable glacial action, sufficient to expose the veins making their tracing and prospecting easy, the glacial erosion has not however been sufficiently deep to impair their value as ore producers, and I expect them to go to depth, producing valuable ores for many years of working life, all conditions on the property and throughout the surrounding region justify this expectation of long productive life.

Present development on this mine while quite extensive is merely a scratch on it, and the real mine is yet to be opened below the No. 6 Level, the deepest working on the ground. The neutral zone or point where the descending percolating waters from above meet the ascending thermal waters from below, is in my opinion yet many hundred feet below the present No. 6, the lowest level opened, and greater concentration with consequently higher values may be reasonably expected as more depth is attained and the true sulphide zone reached.

The ores of this region carry good values in Gold-Lead-Zinc, with some copper in places and more or less Silver always present. They may be termed complex ores, yet are easily handled, and the different metals may be readily separated by concentration, being sulphide ores and the various metals mechanically rather than chemically associated in the ore makes their separation a simple matter.

duction, as such high grade ore and bullion is said to have been removed from the property of which there is no record, so the actual gold produced to date can never be known, while all other values were wasted.

The main vein developed, I say main vein because this is the term used, it really appears to consist of three parallel veins encased in a single wall defined fissure with walls about 20 feet apart. The three veins are separated by thin bands or seams of gangue, varying in thickness from a few inches to several feet, in places the veins come together with no separation between for short distances. Not enough cross-cutting has been done to really determine what bodies of ore may lie between the walls of this large fissure, which as at present opened shows a smooth Andesite foot-wall, with porphyry on the hanging wall side of the ore, but I believe the true hanging will also be andesite. I feel, at least I am justified in indulging the hope, that proper prospecting by cross cuts within the walls of this fissure will disclose rich bodies of ore which have never been opened or touched. The ore shoots are large and extensive, occurring at frequent intervals along the various levels, and extending from the upper levels downward through No. 6 Level, the lowest opened on this mine, and may be seen continuing down through its floor. These shoots of ore are separated by short intervals of gangue material of low value. I believe it extremely conservative to say that over two thirds of the length of the various levels opened are in paying ores of excellent value in Gold, lead, silver, zinc and with copper showing in some of the shoots.

Lying across the hillside above the main developed fissure on which most of the present development has been done, and almost parallel to it is a second large vein known as the "California" Vein. This is a large strong vein apparently equal in size to the one developed, from which it is separated by about 750 to 800 feet on the eastern end of the property and gradually approaches it on its westerly strike until at the west end of the No. 4 Level (to be described later) these two large veins are coming together and will evidently merge at a point some 30' to 50 feet beyond the present westerly face of No. 4 level. At its western face No. 4 is now undoubtedly just entering the zone of intersection with the California vein, here the change is very marked, the porphyritic gangue of the California has been entered and shows a width of 20' to 25 feet, with gold values of \$4.00 to \$6.00 per ton, assay sample, taken across the entire width, as stated to me by those in charge of the mine, this is gold value, no determination of its value in other metals having been made, it plainly indicates increasing mineralization as the work has advanced, and I have no doubt carries the values claimed. This gangue is soft, oxidized and easily broken, and there is every reason to anticipate the opening of an immense shoot of ore just ahead which should be reached within the next 30' to 50 feet, perhaps less, where the main core and solid ore of the California vein should be encountered, it is a most promising showing, and I am justified in believing that further development here will speedily open the large shoot of ore already cut by No. 2 Level above, and which must extend downward from that level to No. 4 and on down through No. 6 level to depth below. There out in No. 2 level this shoot shows a body of ore 16 feet wide carrying good gold values, much ore has been milled out of it, being in the oxidized zone on No. 2 the values are mostly in free gold. A short cross cut tunnel on the east end of the ground, not far beneath the surface, has been driven to the California vein proving it and its values at this point, from which it may be traced by the croppings clear across the property. That this will prove to be as large a vein as that now developed I am convinced, while the surface values shown afford convincing proof that its development must open large shoots of good ore.

This mine is developed by four levels - Nos. 2-3-4 and 5 respectively:

No. 3 is a blind level, driven as a drift from the top of a raise for convenience in stoping, and is in good ore. All levels are connected by raises and stopes, as the ore shoots, raises and stopes run up to and through No. 3 level, which is above No. 4, without change, no description is given of this level.

It can as well be stated here as elsewhere in this report, that while the ores break easily and free from the walls, having a soft gouge between the ore and walls, yet both vein and walls stand well and but little timbering is necessary. For the length of time the workings have been open their condition is remarkably good, the walls standing firmly and the only evidence of caving is some scab and sluff from the ore and gangue material.

All levels throughout the mine are connected by raises and stopes affording perfect ventilation, so that air and working conditions are always good in every part of the underground workings.

No. 5 Level: This is the deepest development on the mine, it has a total length of 960 feet on the vein, and is about 500 feet deep beneath the surface crop-pings. The only accurate map of the underground workings, made from an actual survey, has been lost or misplaced but the figures here given are approximately correct and may be so accepted. The No. 6 level is on the northeast slope of the mountain, as are all the other levels described in this report, it is driven southerly between 400' and 500 feet as a cross-cut tunnel or adit until the vein is reached, it is then carried east on the vein for 150 feet and west for about 780 feet, most of the distance on good milling ore, some of which is high grade sulphide ore carrying gold, lead, zinc, silver and some copper sulphides, much of the ore remaining may be considered of high grade with excellent gold values, in mines of lower average values this ore would be considered rich. The ore is going down strongly in the floor of No. 6 and promises both depth and permanency below this level in all the ore shoots so far opened by this drift. Ore is most continuous along all levels opened on this mine, the shoots are of frequent occurrence, with only short intervals of low grade gangue between them, and much of this could be milled at a profit in a plant of adequate capacity. The present west face of No. 6 level is 780 feet east of the western face of No. 4 level, to be described hereafter, and No. 6 must be driven about that distance further west to enter the ore shoot and intersection of the California vein with the main developed vein on which No. 6 is driven, and which is mentioned on page 3 of this report, in the description of the California vein. It will undoubtedly also pierce all other shoots lying in between.

No. 4 Level: Four is vertically 165 feet above No. 6, and is reached from the surface by an Adit driven as a cross-cut tunnel southerly a distance of 150 feet to the vein. From the Adit it is drifted east 80 feet on the vein and west 1600 feet, making a total length of 1680 feet on the vein and ore. Like No. 6 the ore is persistent along this level with the same short intervals of low grade ore and gangue between the ore shoots as described above. Some 700 feet back or east from the west face of No. 4 there is a very fine shoot of high grade lead and gold ore, it is opened by a short underhand stope possibly 15 feet deep in the floor of this level, above it has been stoped through to near the surface, but is going down most strongly in the floor of 4, and undoubtedly will continue to depth below, it is a beautiful large body of ore. After entering the vein through the Adit by which No. 4 is opened, and while drifting west along the vein, a shoot of very rich ore was entered having a length of 120 feet along the vein, this is known as the "Bonanza Shoot", and has been stoped upward to the surface from No. 4, and later from No. 6 to No. 4 it was partly stoped, but much of the high grade lead and gold ore is left

much in it, and a Mr. Gilberson who knows the property for the past twenty years and who has done much contract and other work in the mine, all three parties being intelligent and capable men whose opinions and statements are deserving of consideration and belief, and also getting the statement of a most capable mining man who had charge of the mine during the last fourteen months of its active operation, and who was both thorough and careful in sampling his ores, I believe the estimate of developed and probable ore, and average ore values which follows will prove to be most conservative. The first three gentlemen mentioned all placed the ore reserve now standing in the developed portions of the mine ready to be taken out at 300,000 to 400,000 tons. The gentleman last mentioned as having been very careful and thorough in his sampling says that the ores will safely average \$50.00 per ton in all metals, meaning gold, lead, silver, zinc and what ever copper may be present and recoverable, this applies to the sulphide ores from No. 2 level down, it would hardly apply to the ores in the zone of almost complete oxidation above No. 2 level and such ores must be figured at their gold values alone, for although a considerable amount of valuable concentrates will unquestionably be recovered in working the oxidized ores there is no available data from which to determine its value.

With the above explanation the following figures and estimates are respectfully submitted in the belief that they are well inside of the actual facts and will be proven conservative by investigation.

**ORE RESERVES AND VALUES.**

**POSITIVE DEVELOPED ORES:**

There is not less than 75,000 to 80,000 tons of ore in dumps of No. 4 and No. 6 levels, having examined them I am sure of this. As previously stated much high grade sulphide ore was thrown in these so called waste dumps. I am sure from personal observation that they contain much ore of high grade. An average value of \$14.00 per ton is the average value claimed for this dump material which can be milled at very low cost, and I believe a recovery of \$10.00 per ton may be expected by working them. They have been estimated to contain 100,000 tons by several experienced mining men. I am not prepared to go on record positively as to their average value per ton, but will make the positive statement that I am sure I could work them at a handsome profit.

**BLOCK No. 1: No. 4 and No. 6 Dumps:**

At 75,000 tons of ore,	
average value per ton recovery at only \$10.00	\$750,000.00

**BLOCK NO. 2:**

On No. 4 level from a point directly above the present face of No. 6 level to the face of No. 4 level the length is 780 feet, from No. 4 to No. 2 level the height is 200 feet. Figuring an average width of milling ore of 5 feet we get a block of ore 780 feet long, by 200 feet high, by 5 feet wide, this computed at 12 feet of unbroken ore in place to a ton of ore gives for this block 65,000 tons of ore. This ore at an average recovery of \$30.00 per ton has a gross value of

Total - - - - -	\$ 1,950,000.00
	\$ 2,700,000.00

By amount forward

\$2,700,000.00

**BLOCK No. 3:**

No 6 level has an open length on the vein of 980 feet and all ore shoots in this distance are proven, and the ore where ever opened continues from No. 6 up through No. 4 level and on upward to No. 2 level. The height from No. 6 to No. 4 is 165 feet, and from No. 4 to No. 2 level it is 200 feet additional height, this gives a block of 980 feet long by 365 feet high, by 5 feet wide, of milling ore, at 12 cubic feet unbroken to a ton of ore this will contain 145,000 tons. Figured at an average recovery of \$30.00 per ton it has a gross value of

4,380,000.00

**BLOCK No. 4:**

Above No. 2 level to the surface there is 40,000 tons of recoverable ore, as this is in the oxidized zone it must be figured for gold value alone, and this at \$10.00 average recovery per ton has a gross value of

400,000.00

\$7,480,000.00

In the above estimate the blocks are figured as solid ore for convenience, but in fact they are not solid and to allow for stoped ground, barren or low grade spaces between the ore shoots and the foregoing figures and estimate of positive available developed ore is to be cut in half and figured at 50% of the amounts shown above, except the ore in No. 4 and No. 6 Dumps, on these no reduction need be made, and none is made here. Cut 50% I feel the estimates are very conservative and believe that more ore than is here estimated, after cutting down 50%, will be found. Excluding the dumps and cutting down 50% we get for Block No. 2 and Block No. 3 a gross value in positive ore of  
For Block No. 4, No. 2 level to surface, at \$10.00 per ton a gross value of  
To this we must add for ore in the two dumps  
Total value in positive ore - - - - -

\$3,165,000.00

200,000.00

750,000.00

\$4,115,000.00

To the investor wishing to be ultra conservative this estimate may be again cut in half and still leave a value in positive ore of \$2,067,500.00, to do this seems unnecessary, but if done the mine will show a greater value in positive available ore than the total production of many mines that are considered good properties.

**PROBABLE ORE**

**BLOCK No. 5:**

Between the present face of No. 6 Level to ring it under the face of No. 4 Level the distance is 780 feet which has still to be driven on No. 6 to put it under the face of No. 4, as this 780 feet is already opened on No. 4 and practically all in ore, and all ore shoots opened in the mine have continued down through all levels opened under them, we are justified in expecting that No. 6

level when driven ahead this 780 feet will open the same ore now developed on No. 4, and may confidently figure that No. 6 will be in ore for the 780 feet still required to bring it under the face of No. 4. This will give a block 780 feet long by 165 feet high by 6 feet wide, and this figured at 12 cubic feet unbroken ore to a ton will contain 63.625 tons of ore, and this ore at an average recovery of \$30.00 per ton will have a gross value of \$1,608,750.00.

**BLOCK No. 6:**

From the east end of the California vein to where it joins the main developed vein, near the top of the ridge, the distance is 2000 feet, and this figured to only the depth of No. 4 level will give an average height of 300 feet, with the average width placed at 6 feet, gives a block of ore 2000 feet long by 300 feet high by 6 feet wide, computed at 12 cubic feet to a ton of ore equals 300,000 tons of ore for this area. At an average recovery of \$20.00 per ton it has a gross value for this block of \$6,000,000.00.

**BLOCK No. 5:**

Value of probable ore \$1,608,750.00

**BLOCK No. 6:**

Value of Probable ore \$6,000,000.00

Total Value of probable ore as figured \$7,608,750.00

Again to be conservative and cutting the estimate of "probable ore" down one half, we get for 50% of Block No. 5 a gross value of \$804,375.00

For Block No. 6 a gross value of \$6,000,000.00  
 Total gross value of probable ore \$6,804,375.00

It is my belief that the tonnage of positive ore will greatly exceed the figures given after cutting them down 50%, while putting the average values in all metals, in the sulphide ores at \$30.00 per ton recovery seems too low in face of the information given me by the former manager, and of what I know of ore values in the district, in figuring the ore at 12 cubic feet of unbroken ore in place to a ton I have done so because these ores, especially the sulphide ores are very heavy and much of it will not require 12 feet to make a ton. I also feel that the probable ore between No. 6 level, from its face until it gets under the face of No. 4 level, and up to No. 4, especially after cutting it down 50%, leaving a gross value for this ore in Block No. 5 of \$804,375.00 could be safely placed in the column of "Certain Ore."

The foregoing estimates take no account of ore below No. 6 level, and on the California vein no ore is figured as "probable ore" below No. 4 level, to the depth figured the estimates cover only a scratch on the property, yet they show an unusually large reserve of valuable ores.

If the probable ore to be developed by driving the tunnel on the west side of the mountain, now in 500 feet as stated earlier in this report, and in good ore, was included in the estimate for the entire distance of 4500 feet on the vein in virgin ground, and 500 feet deeper than No. 6 level, both the figures of tonnage to be developed, and of values would be startling. I wish to here add that with the



knowledge of what development has proved on the east side of the mountain, that the showing in this tunnel on the west side should be sufficient to prove this mine even without a ton of reserve ore above No. 8 level.

Even with the estimates of developed ore cut in half, and the 75,000 tons of ore in the two dumps added we get a gross tonnage of 200,000 tons of ore, or enough ore to keep a plant of 100 tons daily capacity running steadily for five years at its full limit without developing another pound of ore. This ore figured to concentrate five tons into one, and this will be about the average rate of concentration for these ores. Where the sulphides are heavier and the number of tons concentrated into one will be less, the value per ton of ore will be higher so that the value per ton of concentrates will be the same or better, so that the following figures are based on a concentration of five tons of ore into one ton of concentrates, with an average recovery of \$30.00 per ton of ore.

By 100 tons of ore treated daily and concentrated 5 tons into one, and a recovery of \$30.00 per ton of ore, is equal to 20 tons of concentrates having a gross value of \$150.00 per ton.

By 20 tons concentrates daily at \$150.00 per ton	\$	3,000.00
To cost of mining and milling 100 tons daily at \$3.00 per ton	\$300.00	
To hauling to railroad, including sacks \$10.00 per ton, for 20 tons	200.00	
To freight to smelter \$6.00 per ton for 20 tons	120.00	
To treatment of 20 tons concentrates at Smelter \$15.00 per ton	300.00	
To extraction loss 5%	150.00	
To new development and incidentals per day on 100 tons of ore 50¢ ton	50.00	
	<hr/>	
	\$1120.00 Net	\$ 1,820.00 (or \$1500.00)

These figures are based on working the sulphide ores, which must always compose the bulk of all ores treated hence-forth on this property, and which I expect to yield a recovery of \$50.00 per ton. The oxidized ores, and those in the dumps, are to be figured at the values given for those ores, and may be figured to concentrate from 8 tons to 10 tons into one, with a plate recovery, if plates are used, of about 50% of their gold content.

For equipment I would advise for the present at least, and to obtain quick results, using the stamp mill now on the property as an auxiliary crushing plant, putting a half inch screen in front of the stamps and letting them take the ore direct from the rock crusher, passing the ore from the stamps to a ball or rod mill to be installed in front of them, then pass the ore from the ball mill over plates to recover what gold will amalgamate, and then pass the pulp over the concentrating tables, not concentrating too close, and then put the concentrates through a flotation unit, by this method I believe an almost complete recovery of all values can be made at minimum cost. Nothing but the ball mill and flotation plant will have to be bought, everything else is on the property now, and there is room in the mill building for the additional installation. Given the additional equipment mentioned I would undertake to work the amount of ore daily and to obtain the results as figured on page 7 of this report. By selective mining working only the oxidized ores, I

believe from \$3000.00 to \$5000.00 monthly can be made now through free gold recovery from the oxidized ores by plate and battery amalgamation alone, saving the concentrates for future shipment after further refining then by flotation.

#### SUMMARY AND REMARKS

If handling the property for myself or in charge for others, I would immediately drive No. 4 level ahead into the California vein and shoot now being entered at its west end and opening that shoot for productive stoping, with this work done I would then continue No. 6 level on west until under the California shoot on that level, and after this was accomplished drift back easterly on the California vein to determine its value, if the result of this work was satisfactory and I feel sure it will be, I would continue the No. 6 Adit as a cross cut straight to the California vein, after intersecting the vein drift both ways on it and raise to the surface on the first good shoot of ore encountered to provide ventilation and open the ore for stoping, with the cross cut serving as a main working tunnel through which ore can be drawn from both veins. This work if done should open an immense ore reserve, sufficient to supply the reduction plant for many years. Finances permitting, I would then put two shifts on to drive the tunnel on the southwestern slope of the mountain, now in 300 feet, ahead and opening the mine from that side, it can be continued on the vein, and I believe in ore, clear through the mountain, and its successful accomplishment will make of this property one of the largest mines in the country, one that should produce at a handsome profit for a generation.

After the mine and equipment is all paid for and the property producing the requisite money, I would undertake the final major development on the western side and drive the low tunnel spoken of, later when the work is sufficiently advanced, and the ore developed justifies it, I would transfer the entire cost of operations to that side.

I will here repeat with confidence the statement, already made, that I could keep a mill of 100 tons daily capacity running steadily for the next five years on ore already developed and available without the necessity of doing further development, but I do not recommend this method of handling any property, but the ore is there, and good ore too, from which production can be maintained to accomplish this result. I will also repeat, that I am confident the mine can be made to earn a monthly profit now, with its present equipment, by mining and milling those ores from which free gold can be recovered by amalgamation, although not over 60% of the gold content can be recovered by this method at the outside.

In conclusion I take pleasure in submitting this property, knowing as I do that sufficient values are contained in the ores now blocked and on the dumps to not only speedily return the original investment and cost of equipment, but also to return a large and handsome profit over a period of years.

This property offers an exceptional opportunity for safe conservative investment such as is seldom met with, and in which I can see no element of risk or possible loss to the operators.

Respectfully,

(sgd.) G. F. RODFISH, E. M.

SUBJECT - GOLD-SILVER-LEAD-ZINC & COPPER PROPERTY

This Report covers a property consisting of 20 lode mining claims, containing 400 acres of mining ground. Title is by location under the mining laws which have been fully complied with over a period of years and is good, with no liens or adverse claims of any character.

The property lies at an elevation of about 4000 feet, at the point where the principal development work has been done, which is near the center of the group, and rises easterly from this spot to 5000 feet or over towards its easterly end, where the veins cross the top of the mountain within the confines of the claims, which are so located that they cover a total length on the strike of the lodes of 12000 feet.

Easterly from Tunnel No. 1, which is the main development on this ground, the hill slopes steeply to the creek below, the veins crop persistently to the creek level, and may be seen crossing the creek in the canyon floor. A tunnel driven on the vein, at or near the canyon bottom, will have all of 3000 feet of backs when under the highest exposed ore croppings on this property.

Located on the southwestern slope of a shoulder of the Cascade Range, from which it projects boldly, the whole district is one of sharp contours and exceedingly bold relief, affording exceptional opportunity for deep development of its ore bodies and veins economically by a series of adit tunnels connected by raises, affording both drainage and ventilation, two of the most necessary conditions for successful mining at minimum cost.

The whole region is eruptive in character. Igneous rocks predominate and consist of Andesites, Tuffs, Dacite, Fertairy lavas, Basalt and Diabase, evidently intruded, also porphyry.

We have here as the most marked feature of this region a series of strong well defined andesite dikes, which traverse the country for many miles, and are very extensive, forming the walls of most of the lodes or veins, which are true fissures following the andesite dikes, in contact with dacite porphyry, this frequently occurring as gangue along one wall of the vein, it may be said that this condition is of most frequent occurrence with all veins throughout the whole region.

There is an abundance of the finest Fir and Pine timber on the property, more than sufficient to meet all requirements for mining, buildings and all other purposes, it is easy of access, and by installing a small saw mill on the ground the cost of lumber and timber will be very low indeed.

Power: A large creek flows at the base of the mountain and has sufficient volume to produce 100 to 150 horse power throughout the year, and this can be made available to supply all power required by installing a Hydro-Electric plant, which when installed will supply power at no other cost than maintenance and attendance. This installation can be easily made at moderate cost. Domestic and mining water is available on the ground.

The camp, plant and development of this property will all be located on the south slope of the mountain, where owing to its southern exposure the snowfall is light, from a foot to two feet, seldom reaching the latter depth, and this melts

rapidly, rarely lasting more than two or three weeks at a time, so that working conditions are excellent the entire year. The climate is very pleasant and summers are beautiful.

The No. 1 Tunnel, which is the present lowest point developed on the property, and is where development will be continued until a lower tunnel is driven marks about the edge of Snowline, so that the road from this point to railroad, distant about ten miles will be always open and ore or concentrates may be hauled and shipped the entire year.

Transportation: A good road, now being improved and surfaced, leads from the railroad to the foot of the mountain some two miles below the portal of No. 1 Tunnel, from this point an old road leads up over the hill passing the portal of No. 1 tunnel within 200 feet, this road is steep and needs repairs. Automobiles are driven over it during the Summer and Fall, the new road mentioned as now under construction, will be carried on over the divide crossing it near the upper end of the property, and passing over the Gold Bug claim and millsite some 3000 feet below No. 1 Tunnel, this road will solve the transportation problem in a most satisfactory manner for this mine. From the mine to railroad it will all be a down grade haul.

ORE AND VEINS: Three strong parallel veins traverse this property their strike is almost east and west, with a high angle of dip to the south of about 65°. These veins are separated at the Eastern end of the ground where there is a large blow-out or dike of low grade ore at the extreme east end line of the claims, by about about 250 feet of country rock. This blow-out, which carries values of three or four dollars gold per ton, is apparently the original source from which the three ore channels or fissures that form the three main veins of the property described had their beginning, they may be plainly traced to this blowout, from which they break out, westerly, at intervals of 250 or 300 feet gradually diverging until they are separated by about 600 feet from the central one of the three veins on each side, making the total width of the zone containing the three veins 1200 feet. These veins may be traced by their croppings throughout the entire length of the property, their out-crops are strong and persistent, showing values on the surface exposures \$3.00 to \$10.00 per ton in gold. In places where a few feet of work has removed the weathered surface rock gold values of \$12.00 to \$15.00 or higher are found, this shows a marked increase of value with very little depth and indicates what may be reasonably expected as the result of development on this property.

These veins have an apparent width of 5 feet to 10 feet and up to 15 feet or over, I look for them to average from 7 feet to 12 feet as their minimum widths, should they only average 5 feet the ore tonnage will be immense.

From the point on top of the mountain where these veins cross it from the southern to the northern slope, for a distance of 3000 feet the vein croppings are practically continuous all the way clear to the blowout or mother dike above referred to, with good milling values in gold where ever opened. A short distance westerly down the hill, or west on veins from the 3000 feet of almost continuous croppings, here described, for a length of 200 feet the surface values are lower indicating a zone of low grade ore for this distance which is probably not on an ore shoot, from the west end of the 200 feet of low grade croppings, the values are good and so continue to and beyond Tunnel No. 1 giving promise of strong rich shoots for the entire distance, that this expectation is fully justified is proven by tunnel No. 1, the present face of which is now advanced 25 feet into a shoot of Gold, Lead and Zinc ore, which assays show to average \$50.00 per ton of ore. This fully warrants the belief that from tunnel No. 1 to the low grade croppings mentioned, and from there east to the end of the property for the 3000 feet of continuous surface values beyond the low grade zone 200 feet long, we may confidently expect

4000 feet of good pay ore for that length along all three veins east from Tunnel No. 1 to the east end line of the claims. We know by an open cut faced up for a tunnel some 200 feet lower than tunnel No. 1, that the values extend that far west, From this point down the mountain to the creek level little work has been done, but it is sufficiently prospected to prove continuity of the veins and ore to the creek level below and across this creek to the opposite mountain side, making the opening of good shoots of ore on the west end of the mine when ever it is desired to develop there, a practical certainty.

If development Eastward from Tunnel No. 1 justifies the promise it gives and that the surface showings indicate, which present work done in tunnels Nos. 1 and 2 certainly is more than doing by the ore already opened, there will be such a vast tonnage of good ore shown east of this development, that it will be many years before ore need be sought west of this point, that it will be found when wanted I have no doubt.

I believe, and certainly am justified in hoping that fifteen thousand dollars property expended in extending development east from No. 1 tunnel will open and block a million dollars worth of good ore in a short time, all or nearly all of this work, in my opinion, will be done on ore of a grade and value to not only pay the cost of opening the ground, but also yield a handsome profit besides while the work is being done, provided a suitable crushing and concentrating plant is installed in which to work the ores extracted.

The surface ores carry mostly gold values in the oxidized zone and should be milled at fine profit for their gold content alone, at 50 to 60 feet depth both lead and zinc are present in the ores, with a little copper in some ore shoots, the gold values continue and increase with depth, so far as development has shown, as does the lead and zinc content in these ores. This condition is characteristic of all ores throughout the entire district, they are complex to the extent of containing lead, zinc and copper in lesser quantity with their gold and silver content, yet by reason of the various metals being mechanically instead of chemically associated in the ore they are readily amenable to separation by simple methods of concentration, either table or flotation and a high extraction of values, their treatment presents no difficulty or expensive problem. These ores are easily mined, breaking good and readily crushed. The veins have well defined walls, of Andesite, Porphyry, the porphyry occurring usually on the hanging wall so far as I have observed generally throughout the district and on the ground here described.

DEVELOPMENT: Tunnel No. 1 is the principal development on the mine at this time, it is 750 feet in length from portal to face, The first 400 feet of this tunnel is not on the vein, due to a mistake in starting their work on a side cropping of rock which those who started No. 1 tunnel mistook for the vein proper, which is blind and does not crop at this particular spot on the surface, by reason of this error No. 1 was driven 400 feet before entering the vein on which it has since been carried ahead 350 feet to its present face, it seemingly cut the vein between two ore shoots, one opened by the No. 2 level above is a fine shoot of gold, lead and zinc ore, its gold content being from ten to twenty dollars per ton and is opened by No. 2 level for a length of 125 feet along the vein, east from its portal. No. 2 is 150 feet vertical height above No. 1, and about the same depth beneath a small flat on the hillside, (See appended diagram showing approximate contour of the hill and how the veins lie within the confines of this property.) Had no mistake been made and No. 1 level been driven directly in on the vein, it almost certainly must have opened a shoot of ore, of which there is evidence between the point where No. 1 level entered

the vein and the surface, or 400 feet westerly or outward from the place at which the vein was actually intersected, and where the true portal of No. 1 would have been if no error had been made. If no mistake had occurred in starting No. 1 it probably would have been most all in ore, instead of the first 400 feet being of the vein and ore, beyond that point it is on the vein in oxidized vein material which carries milling values in gold.

At its face No. 1 is driven 25 feet into the gold, lead and zinc ore which has been recently entered on this level, with the vein 7-1/2 feet wide and the ore showing an average value by assay of \$50.00 per ton.

No. 2 Level is an Adit tunnel driven 350 feet easterly on the vein and 150 feet vertically above No. 1 level. This drift has cut a gold, lead and zinc ore shoot 125 feet in length along the vein, as stated above in describing the No. 1 level. Like No. 1 the vein carries milling values in gold and concentrates in its gangue outside of the ore shoot just described, the ore in this 125' shoot is of about the same value per ton as that in the shoot opened at the face of No. 1 level, which is beyond doubt the same shoot of ore but it has widened from 5 feet wide on No. 2 level, to 7-1/2 feet on No. 1 level without any diminution in value in fact the ore is somewhat cleaner and of a little higher value on No. 1 than on No. 2 level.

Both of these levels described above are on the "Cape Horn" vein which is the central vein of the three, and from which both the "Good Friend vein", the largest of the three veins, and most northerly vein of the system and the "Scott Brooks" vein, which is the most southerly, can be opened at depth by cross-cuts from the No. 1 level, or at a lower level when one has been opened below the present No. 1 level. Such a cross-cut if driven will not only open the three parallel veins for production, but will at the same time cross cut and thereby prospect the whole width of 1200 feet between the north and south veins with I believe most satisfactory results, and disclose bodies of ore entirely blind on the surface. There is evidence of ore and of cross veins between the Cape Horn or central vein of the three and the Scott-Brooks vein on the south, with equally strong showings to indicate ore and other veins between the Cape Horn vein and the Good Friend, most northerly vein of the system. To reach these veins from the Cape Horn Tunnel (the No. 1 tunnel) the cross cut will have a length of 600 feet each way from the central vein and serve as a main working tunnel through which ores from both the north and south veins can be extracted, and their further development carried on. There are indications of a cross vein capable of producing good ores on which the cross cuts to reach the north and south veins may be driven on ore, if this is possible it will minimize the cost, and may also open rich ore in the cross cuts, it is not however the cross vein shown in the appended diagram of the claims. This cross vein should produce good ores, but it crosses the property at too long an angle to make its use for a working cross cut feasible.

While I believe that any one of the three parallel veins of this property is capable of making and will prove to be a good mine in itself if worked alone never-the-less think that the Good Friend, or most northerly vein will, when developed, prove the largest and richest producer, it certainly is the largest and the face showings most remarkable, with exceedingly encouraging values showing when opened by two or three shallow workings not over 15' or 20 feet deep, one of which is a small shaft on top of the mountain down about 15 feet, which shows gold values of \$10.00 to \$20.00 per ton across its full width. The other is a short cross-tunnel just over the crest of the ridge on the north slope, where a sample taken

across a width of 15 feet gave an assay return of \$17.00 gold per ton, this is not over 20 feet beneath the surface of the ground.

**Developed Ore:** Taking only the two gold, lead and zinc ore shoots, but one of which is opened by Nos. 1 and 2 tunnels, with a length of 125 on this shoot opened by No. 2 level, and the face of No. 1 tunnel already in 25 feet in the same shoot and ore 150 feet deeper than on No. 2, with the apparent certainty that by coming back on the vein in No. 1 level it will open, on that level, the ore missed through its being driven for the first 400 feet off the vein, we are conservatively entitled to figure a length of 150 feet of ore, by 200 feet in height, by 7-1/2 feet wide on No. 1 level and 5 feet wide on No. 2 level, and call it an average width of ore for the two levels of 6 feet, we get a body of ore 150 feet, by 200 feet by 6 feet wide and this divided roughly by 14 cubic feet of unbroken ore in place to a ton, and throwing the average against the mine as shown by the odd feet or additional tonnage above that here given, we get for this block of ore 12,000 tons of ore, and this figured to average \$40.00 recovery per ton of ore, shows a gross value for this small block of ore, of \$480,000.00 developed ore. These figures take no account of ore on the dumps, or of the known ore carrying values in gold, lead, and zinc, outside of the small development here described and which is hardly a scratch on the property.

While the development done has hardly made a mark on the surface of this great property, yet it has exposed and opened sufficient ore, as above figured, to not only pay for the mine, its equipment and further development, and leave a substantial profit besides. That the above figures are all against the mine giving it the worst of it, can not be denied by any open minded person who may examine this most attractive group of mining claims.

For quick results and present immediate development of the property I would advise driving No. 1 Tunnel ahead as rapidly as possible, and when further advanced into the ore now open at its present face, raising to the surface, this will not only open the ore for stoping, but also provide most necessary ventilation for the mine. While this is being done No. 1 level should be trimmed out and widened to make it a main working tunnel, and at the same time it should be carried back westerly on the vein to the surface, this work will straighten the working, and at the same time open the ore in the first 400 feet of the vein west of the point where No. 1 entered the vein and which was missed through the error previously mentioned herein. With this work done the mine is ready to produce moderately, and this production can be rapidly increased if development is kept up properly and pushed.

This work as outlined will not be expensive, the ground breaks good and stands well, needing but little timber, much of the development work, perhaps all of it will be in pay ore and done on the vein.

A Compressor and air must be supplied before starting work on No. 1 level, with this done it can be rapidly advanced.

The possibilities for future development on this property are almost unlimited, and I take pleasure in recommending it to those seeking a conservative safe mining investment as one of the best and most promising showings for a large mine that I have seen for years.

This property has passed the initial stage of prospecting development and has stood the test successfully, all now required is further intelligent

opening of the ground to bring it into production and this can be quickly accomplished at small cost, with the certainty that properly opened so that ore may be drawn from the three veins its production can be brought up to almost any desired amount.

Respectfully,

(Sgd.) G. F. HODFICH, P. E.

July 26, 1927.



From MINING WORLD  
September, 1946  
Page 35

Purchase of the Musick mine in the Bohemia district of Lane County has been completed by the Tar Baby Mining Company, 21 Stock Exchange Building, Salt Lake City, Utah. The Tar Baby concern purchased the H. and H. Mines contract on the property in July, 1945, and this year acquired the ground from the late L. M. Capps of Idaho. The Musick is a gold-silver-lead-zinc-copper property, formerly worked by the Minerals Exploration Company and later by the H. and H. Mines. The new owners are attempting to buy a mill in the district and do not intend to reopen the property until milling facilities are provided because of high transportation costs.

*Under lease to Helena Mines, Inc.  
Re-organized in Coquille - no longer held by Tar Baby*