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PRINTED: 09/21/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: HORSESHOE COPPER GROUP

ALTERNATE NAMES:

ANDERSON MILL
BLACK COPPER MS 2585
EVERYBODY'S
BONITA
PEARSONS
GEM
POPULAR
RANDOLPH
ARGOSY
FUMAROLE
BOGGS RANCH

GRAHAM COUNTY MILS NUMBER: 101

LOCATION: TOWNSHIP 6 S RANGE 27 E SECTION 17 QUARTER NW
LATITUDE: N 32DEG 54MIN 51SEC LONGITUDE: W 109DEG 36MIN 34SEC
TOPO MAP NAME: SAFFORD - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

COPPER OXIDE
SILVER
GOLD
SILICON
IRON

BIBLIOGRAPHY:

ADMMR HORSESHOE COPPER GROUP FILE
ADMMR U FILE
ADMMR FILE
BLM MINING DISTRICT SHEET 821
USGS MAP I-1310-B, P. 2 MINERAL DEPOSITS OF
SILVER CITY 1 X 2 QUAD.

10/22/91

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SILVER CITY 1 X 2 QUAD.

HORSESHOE COPPER GROUP

10/84

GRAHAM COUNTY
LONE STAR DISTRICT
T6S R27E NW $\frac{1}{4}$ Sec. 17

GRAHAM MILS Index #101

AKA: Argosy, Gem, Anderson Hill, Pearsons, Randolph, Popular, Black Copper M S 2585,
Bonita, Everybodys

See: Map I-1310-B p. 2; Mineral Deposit Map of the Silver City 1⁰ x 2⁰ Quad., NM & AZ

Safford 15' Map (included in file)

~~NAME OF~~ MINE: HORSESHOE

COUNTY: GRAHAM
DISTRICT: 1
METALS: CU

OPERATOR AND ADDRESS:

MINE STATUS

DATE:		DATE:	
5/1/44	J.D. Merrill, Box 409, Safford	5/1/44	Idle

HORSESHOE MINE

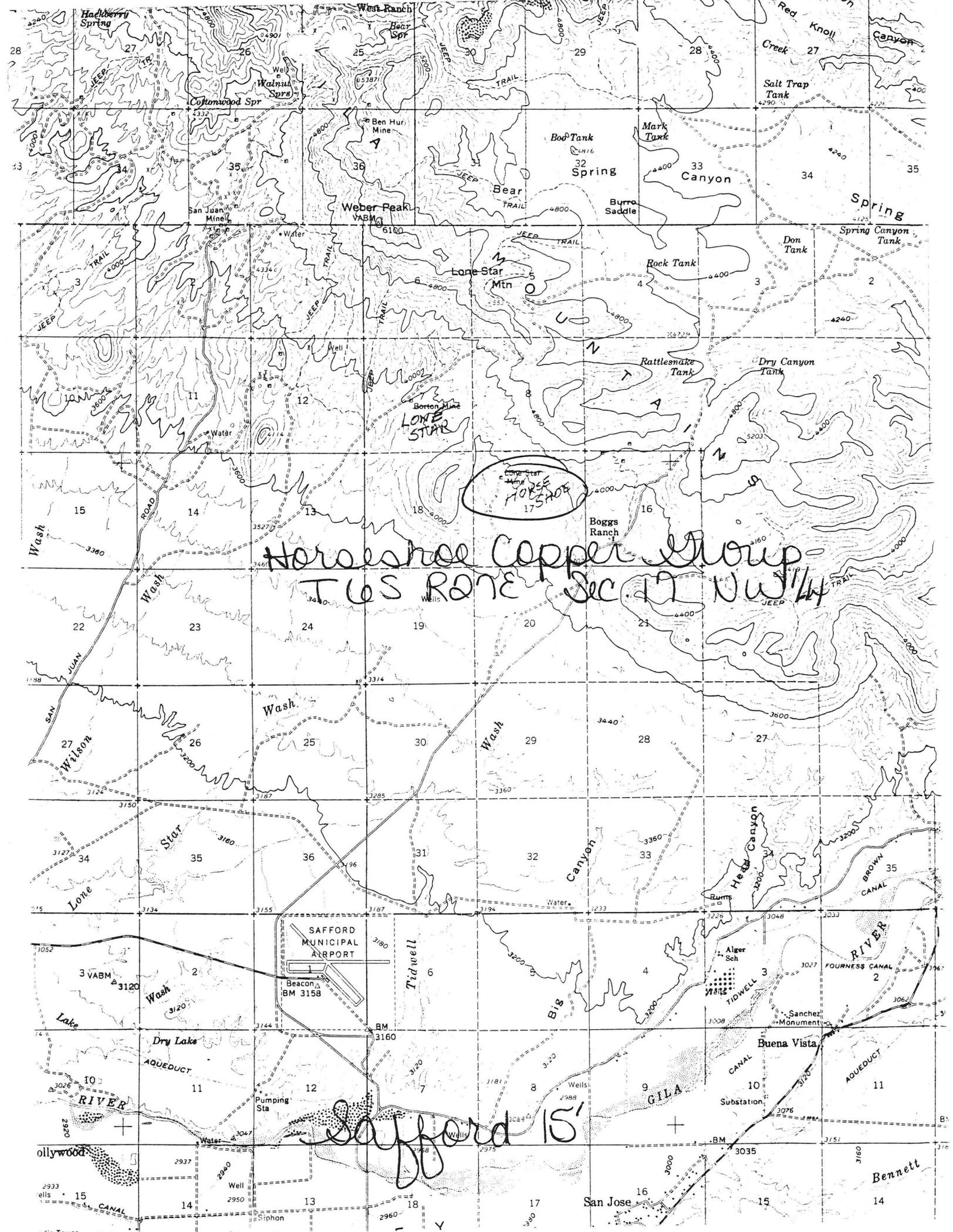
Cu

Graham

5 - 2

T 6 S, R 27 E

J. D. Merrill, Box 409, Safford



Horseshoe Copper Group
TUS RONE Sec 17 NW 1/4

Safford 15'

Lone Star
HORSESHOE

SAFFORD MUNICIPAL AIRPORT

Beacon BM 3158

Pumping Sta

Alger Sch

Wells

Buena Vista

Substation

GILA

San Jose

Bennett

3 VABM

ollywood

Wells

15

SAFFORD MUNICIPAL AIRPORT

Beacon BM 3158

BM 3160

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LEGEND

- Alluvial cover
- Quartz latite - dacite
- Quartz monzonite
- Andesite
- o Drill hole

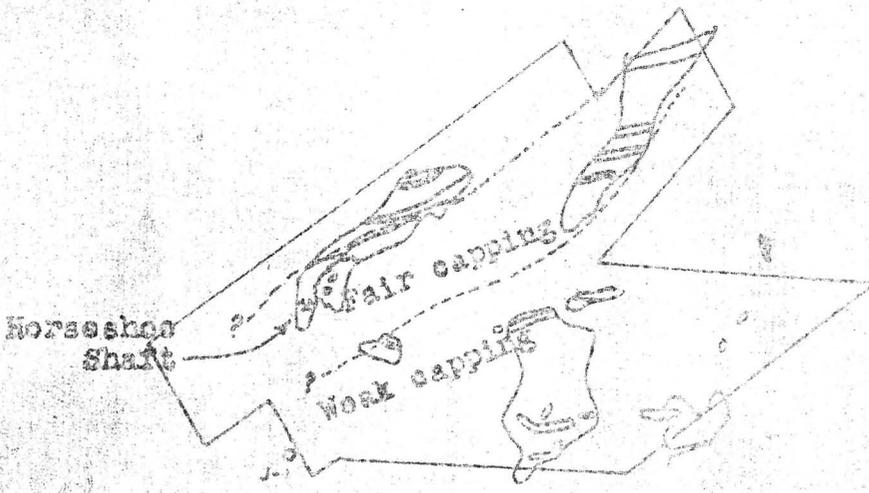
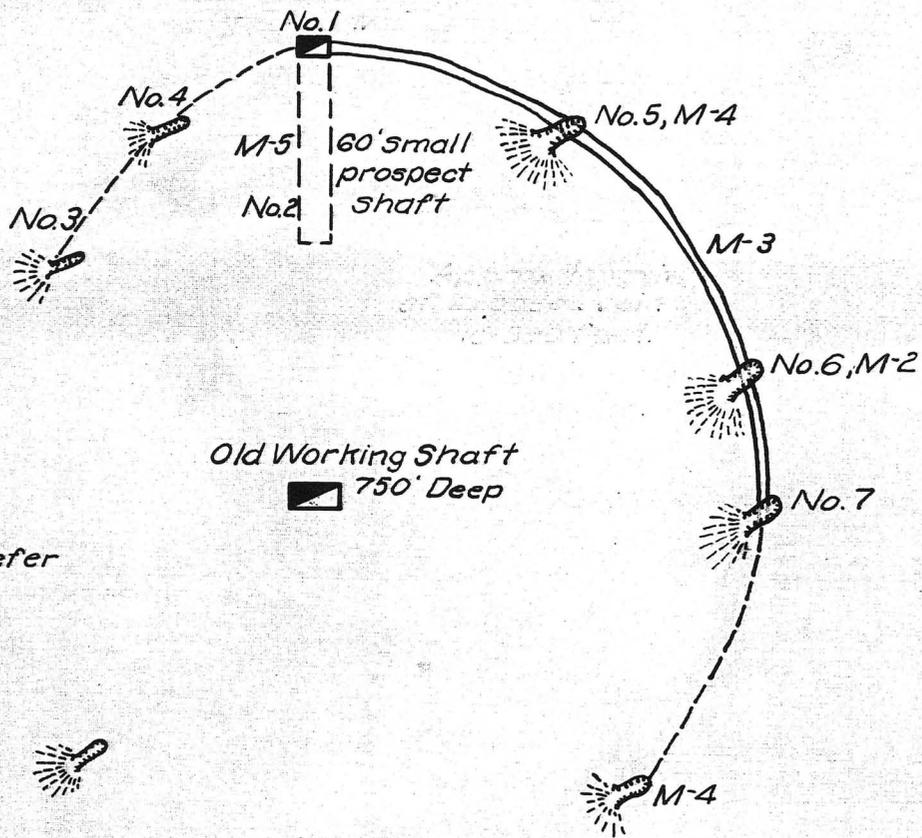


FIGURE 1



NOTE:
Numbers refer
to Assys

PLAN VIEW

Horseshoe
Cu Grp

14003

SKETCH MAP OF HORSE SHOE MINE - J.D. MERRILL - SAFFORD, ARIZ.

0' 25' 50' 100'
SCALE

HORSESHOE COPPER GROUP

GRAHAM COUNTY
LONE STAR DIST.

Visited the Horseshoe Mine on map as (Lone Star). O. L. Hill Drilling and Producing Co. starting a leaching operation.

GWI WR 6/11/66

HORSESHOE COPPER GROUP

GRAHAM COUNTY

Mr. H. D. Owens of 1230 Relation St., Safford and Mr. O. L. Hill, Box 331, Safford, are with Mr. Scruggs in the Scruggs Mining Co. - see American Mine (file) 12-14-66

HORSESHOE

GRAHAM COUNTY

HM WR 7/23/88: A report on the Horseshoe Mine, Graham County was added to the department files. Gold and silver mineralization is reported to occur in a breccia pipe cutting the Safford metavolcanics. The property is peripheral to the Kennecott Safford Deposit and was drilled for copper in the 60's. It is doubtful that the core was analysed for precious metals. The property is at last work, available for lease from the LDS church.

DEPARTMENT OF MINERAL RESOURCES

**STATE OF ARIZONA
FIELD ENGINEERS REPORT**

Mine Horse Shoe
(until a notice of change)
District Lone Star - Graham County

Date Dec. 14, 1966

Engineer G. W. Irvin

Subject: Development project.

The Phelan Sulfur Co., 1226 American Building, Houston, Texas 77002
John Pehlan, President, Marvin E. Weaster, V.P. & Treas.

Have optioned over 100 claims including the Horseshoe, San Juan and
Knob Hill groups, from O. L. Hill, Guy Anderson & others.

The Bechtel Corp. of San Francisco, have contracted to make a feasibility
study, with the possibilities of opening a large leaching operation in the
neighborhood of 400,000 pounds per day capacity of copper.

Information for the above from Mr. Hill and Mr. Anderson.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine HORSESHOE
(note- sign says "Anderson Hill")
District LONE STAR
Subject: MINE VISIT -

Date October 5, 1966
Engineer G. W. Irvin,
(Visit to the property)

REFERENCE . See report of June 8, 1966

LOCATION Sections 8, & 17, T6S, R27E

OWNER Mr. Guy Anderson. 605 Main street, Safford.

OPERATOR Hills Drilling & Producing Co. / Mr. O. L. Hill 508-5th. Street
Safford.
P.O. Box 331, Safford

CLAIMS 7 Patented Claims- , Black Copper, Everybody's, Bonita, Pearson's,
Randolph, Popular, and Argosy. Mineral Survey 2585. Patented May 13
1909.

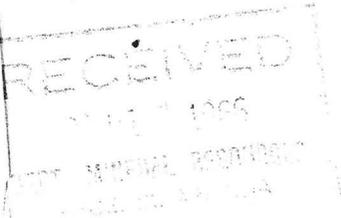
PRINCIPAL METALS Copper,

NUMBER OF EMPLOYEES 3 including Mr. Hill.

POSSIBLE ORE BODY According to Mr. Hill, 8 drill holes have indicated the
following. An ore reserve of 4,000,000 tons in an area
of 1000 by 500 feet to a depth of 169' with 15 feet average
overburden thickness.
(Mr. Clyde Davis has apparently ##### been working on the
project when needed)

PRESENT OPERATIONS Stripping of Waste, the mining of some oxide ore that is
reported to run 7% in oxide copper. This is to be sent to
the Inspiration Smelter. The lower grade material is to be
piled for leaching. An application has been made to the
B.L.M. for permission to run a pipe line from the valley.
(an easement right of way)

At time of visit, the scheduled development planning had not
been completed.



DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

DEPT. MINERAL RESOURCES
RECEIVED
MAR 15 1943
PHOENIX
ASST. DIR.

Mine Horseshoe

Date March 13th, 1943

District Gila Range

Engineer A. Macfarlane

Subject: Mine Examination.

Dear Mr Coupal;

On my return here today from Florence, I received your letter of the 12th, and note the contents.

Enclosed you will find the last page of my report on Mr Merrill's Horseshoe mine, please have a clean copy of the report written, correcting my typewriter mistakes.

As the last clause of this brief report calls for an initial expenditure or capital required of \$3,500. this may be in contradiction of Mr Merrills application.

However and this is for your office; I beleive it would be a mistake for Merrill to apply for more money for this mine, as it is not a very large proposition or outlook.

In fact \$2,000. should be enough to spend for its equipment and labor, prior to shipping.

Therefore; if you consider it improper to make any estimate of requirements in this report, just omit this last paragraph.

Sunday I am going to examin a copper property for Mr Carrow, this is situated some few miles North-westerly from Miami.

Monday I leave for Payson and Sun-Flower: Have had to apply for order to purchase a tire, as since the Morenci trip, one tire has gone bad, If I dont get it, will go with four and a cripple.

Enclosed find this office copy of the Merrill Mine report, with sketches ~~attached~~ attached.

Yours very truly.



A. Macfarlane
Box 506 Globe, Arizona.

Horseshoe Copper Group

March 8, 1943

Lone Star, Gila Range
Graham County, Arizona
Examination

A. Macfarlane

OWNERSHIP: J. D. Merrill and Associates, Safford, Arizona

LOCATION AND

ROAD: This group of seven claims are situated about twelve miles North-east of Safford, in the southern foothills of the Gila Range, approximately seventeen miles South of the Vast Copper Mining District of Morenci.

The mine is reached by good maintained County highway to within four miles, thence over a practical stub road to just under the mine dump. The four miles of mine road will be lightly surfaced on the stony parts to allow of more rapid travel and lessen truck tire consumption.

GEOLOGICAL

FEATURES: The Horseshoe mine workings are found on the southern toe of a high hill of igneous origin which again is faulted by dykes of Dacite, plus the fissuring agencies and subsequent silicification as noted in the Horseshoe vein and a large dyke just east a few hundred feet from the mine workings. The vein mineralization apparently occurs between Granite diorite as a West casing and Schist on the West side.

Immediately southwest, a gulch and low saddle forms the northeastern foot of apparently a remnant of a Volcanic rim, jutting several hundred feet higher than the gulch bed. The movement resulting between the Older Andesite and the more recent lava, seems to be responsible for the fissuring and mineralization occurring along the common foot of the two major hills. Within the morphological area and contacts made by these rocks, is situated the Horseshoe croppings and workings thereon.

VEIN FEATURES: The vein derives its name from the curved or semi-elliptical course of the croppings. Local parties speak of the vein as a fumarole, but I am of the opinion that the curving is not sufficiently pronounced or complete to be classed as a fumarole--rather the bending action of subsequent forces.

However, the southwesterly hill slope as taken from the mine workings, the first cut on the vein cropping is found at the toe of a large dump made by the sinking of a shaft to a stated depth of over 700 feet, thence following the vein along its general northeasterly strike, several open cuts, a surface stope and shaft sixty feet deep, have in all exposed about 225 feet of copper mineralization with a vein width varying from two to five feet.

As the northerly 100 foot section of the elliptical vein has been mined to a depth of four to ten feet some three or four carlots of ore have been shipped and there is about sixty tons, now in piles or dumps below these stopes.

HORSESHOE COPPER GROUP

March 8, 1943

Lone Star, Gila Range
Graham County, Arizona
Examination

A. Macfarlane

Page two

The most important present development on the vein proving the existence of copper to about forty feet below the surface ores, is the sixty foot shaft collared on the North sweep and following down the dip of seventy degrees. No ladders or timbers below the forty foot point, I was unable to cut a sample at the bottom of this shaft.

From collar to nearly the end of ladders the copper ores in vein seemed continuous over a width of three to four feet. This shaft and the continuing adjacent open cut stope, opens the vein on two sides and quite reasonably places in sight ores of the same general tenor as the carlot recently sold to the International Smelter.

The main or 750 foot shaft sunk vertical and eighty feet off the vein is caved for many years. Only one section of the dump material shows copper and as nothing is known relative to lateral headings or vein development in connection with this shaft, therefore, it is not further considered in this report.

EARLY ORE EXPECTANCY: The exposed portion of the vein now may be taken as 250 feet in length and reasonably assumed that the same cropping copper impregnation will reach an average depth of forty feet and the width to be mined at four feet. This gives a vein block of approximately 2,500 tons.

However, it is likely that thirty per cent of this total block will be sub ore and rejected, therefore, 1800 to 2000 tons of shipping grade, in line with the values as now determined by the attached assay list should be a conservative expectancy.

This estimate is only intended to cover the copper ores immediately expectant of production from the forty foot level of the working shaft. The downward trend of the copper ores may better be determined by sinking the shaft and extending drifts therefrom after the present visible ores have been stoped.

MINING AND

MARKETING COSTS: The textures of the vein matter is firm well silicated and cross-fractured, a round of twelve to fifteen air drill holes, four feet in depth, should break eight to ten tons per shift and yield seven tons of shipping grade for each set of three miners.

Inclusive of all expenditures for direct mining, a cost of \$3.50 should be attained:

Horseshoe Copper Group

March 8, 1943

Lone Star, Gila Range
Graham County, Arizona
Examination

A. Macfarlane

Page three

Per Ton <i>mining</i>	\$3.50
Trucking to rail switch, 12 miles	1.00
Smelting charge (may be a little less)	3.50
Rail Freight on ores under \$15.00 Smelter- -Value	<u>1.05</u>
Total mining and marketing Costs	\$9.05

Assuming the average ore grade at Gold, 0.05 oz., cu. 3.5 per cent, we have:

For Gold .05 x 32.20	\$ 1.62	
For Copper 70# less 10# --60# @ 9.27	5.56	Smelter
For Copper 65# premium @ 5.0	<u>3.25</u>	
Average gross value of ore	\$10.43	
Less all operating costs	<u>9.05</u>	
Credit Margin	\$ 1.48	

Insert new page here

FUNDS REQUIRED: To speedily put this small mine into production on a monthly basis of 120 to 180 tons employing three miners, I suggest the following financial requirements:

1 - 8 h.p Gas hoist installed, Head frame, Buckets, guides ore car, 500 feet 8# track rail, ore bin of sixty ton capacity, including labor and small materials, cost	\$1,500.00
1 - Drill portable compressor with Jack Hammer and Stoper (used but servicable equipment)	1,000.00
Reserve for mining and materials	<u>1,000.00</u>
Finance required for first 90 days	\$3,500.00

The major portion of this expenditure is invested in desirable and much required machinery, lumber, trackage etc. and is by no means a loss, but a requirement at any small mine.

The initial investment should be amply repaid out of the ores to be mined and sold and as now apparent within this property.

Last clause

A
 The estimate given as being ores available of 1800 to 2000 tons does not include the ground below the 40' level of the working shaft; in that area it is reasonable to assume, that as much or more ore of the general tenor, ^{per} the list of assays given as part of this report.

On submitting the grade of ore at Gold 0.05 and Copper 3.5% as a practical average of the present exposed ~~xxxx~~ sampled points, the writer is considering the dilution of the clean ores, which nearly always takes place in stoping.

The samples assayed being without wall dilution are fully \$2.00 per ton higher than the assumed average, and it is quite possible that carlot shipments may be maintained at the grade shown by the assay list.

Analysis of the Horseshoe ores discloses that they are suitable for copper converter purposes, and a much better smelter rate may be procured than the usual \$3.50 per ton herein given as smelting costs.

Four to five miners and muckers should average two and one-half shippable ore per shift, if they are provided with good tools and equipment as will be required for this type of mining, this small force would be able to market more than 200 tons monthly. - tons

Development: A drift driven from near the bottom of the present 60' working shaft a distance of 300' or as the ore shoots require for their first exploitation, then stope all ore bodies above the back of this drift, following with this stoping closely behind the drift headings; the results of this work will be the proper guide to the future consideration of the Horseshoe property.

PROSPECT DATA

Prospect Horseshoe Former Name Fumarole
 Metal(s) of Interest Au, Cu Exam. by J.W. Allan Date 9/20/84
E.J. Kessler
 Location 8 mi NE of Safford County Graham State AZ
NW $\frac{1}{4}$ Sec. 17; T 6S, R 27E Map Ref. Safford 15'
 Property & Owner 7 patented claims, Brigham Young Univ (35%), LDS Church (11.5%) and
12 individuals (53.5%)

References, remarks, etc. The Copper Handbook, Vol 8, 1908 (National Mining Exploration
Co.). USGS Mineral Resources of the U.S., 1908 (Fumarole). Misc reports & articles.
Ariz. Dept. of Natural Resources, Phoenix, AZ.

Development Vertical 2 comp shaft 723', 25' adit, several pits and cuts, 6 or more drill-
holes (see map). Drilled as copper prospect by Kennecott and Superior Oil. A churn
drillhole was drilled down the 723' shaft where the casing still remains.

Areal geology Cretaceous andesite and andesite agglomerate are intruded by dikes and
small irregular bodies of Laramide quartz monzonite porphyry and mid to late Tertiary
latite(?) dikes.

Mineralization (minerals, alteration, etc.) Copper-bearing, pyritic stockwork mineral-
ization in the andesite and quartz monzonite occurs over much of the prospect area.
Quartz, pyrite, and minor chalcopryrite are the dominant hypogene minerals. Goethitic
and jarositic limonite, chrysocolla, and malachite are prominent oxidation minerals.
At the surface, the strongest gold values appear to be associated with relatively well
defined veins of massive and crystalline quartz. These veins may be younger than the
surrounding stockwork mineralization.

Structure Stronger fractures within the mineralized stockwork strike generally NE. The
poorly exposed gold-bearing veins also appear to trend NE. Unfortunately, none were
observed underground.

Remarks The property was initially explored as a gold prospect (Copper Handbook, 1908).
During WWII, about 1000 tons of copper ore containing about .05 opt Au were shipped to
a smelter at Miami.

Samples:	Au
Specimen Samples	
1. monz phy, str argillized.	.02 ppm
abund seal brown limonite.	
2. monz phy, str argillized.	.36 "
abund flooded chrysocolla	
3. monz phy, str argillized.	.02 "
chrysocolla & neotocite.	
4. monz phy, silicified, jasper	4.70 "
& chrysocolla veinlets.	
5. monz phy, silicified, jasper	4.10 "
& chrysocolla veinlets.	

Conclusions & Recommendations:
Results of extensive surface sampling indicate gold
values above .01 opt are limited to quartz veins
less than 2' wide and of limited strike length. The
"ore body" mentioned in the Copper Handbook cannot
be examined because of inaccessibility of underground
workings.
The Horseshoe prospect is of no present interest.

February 18, 1943

MEMORANDUM

SUBJECTS: Re-examinations
Gem Mine
Horseshoe Mine

TO: A. Macfarlane

FROM: J. S. Coupal

I am enclosing the analyses on the preliminary development loans on the Gem Mine owned by J. R. Heron, Box 127, Globe, and the Horseshoe Mine owned by J. D. Merrill, Box 409, Safford. Both of these loans seem to warrant the granting of a loan, but the data is so insufficient and so incomplete that as the information now stands both would be rejected. I am therefore requesting you to, at your earliest opportunity, re-examine both properties and along the lines I will indicate.

GEM MINE: Please contact Mr. Gribble and arrange to go to the property and take samples on the ore showing, both in the open cut where they plan to clean out and also on ore exposures in the cuts on either side of the open pit where ore is exposed. In taking these samples, please indicate the width of manganese ore and the width of lead ore, note positions on a revised sketch map, describe the ore occurrences at each point where you take a sample, and indicate the size of sample cut. Have these samples assayed and bill the Department for same.

We do feel as though this property justifies this work even if it takes two days to do the job. Please do a thorough job so that we may submit all possible data which would justify a loan.

HORSESHOE MINE: Due to the fact that this is a low-alumina, high-silica ore, please sample the various pits and open cuts at from 20 to 25 foot intervals over a distance which is indicated as some 500 feet.

As the data stands at present, this could not be recommended for a loan, but if sufficient data is prepared, we believe there is a good chance to obtain the loan on this particular property. I believe Mr. Merrill should be willing to pay for the assays with no charge, of course, for our sampling.

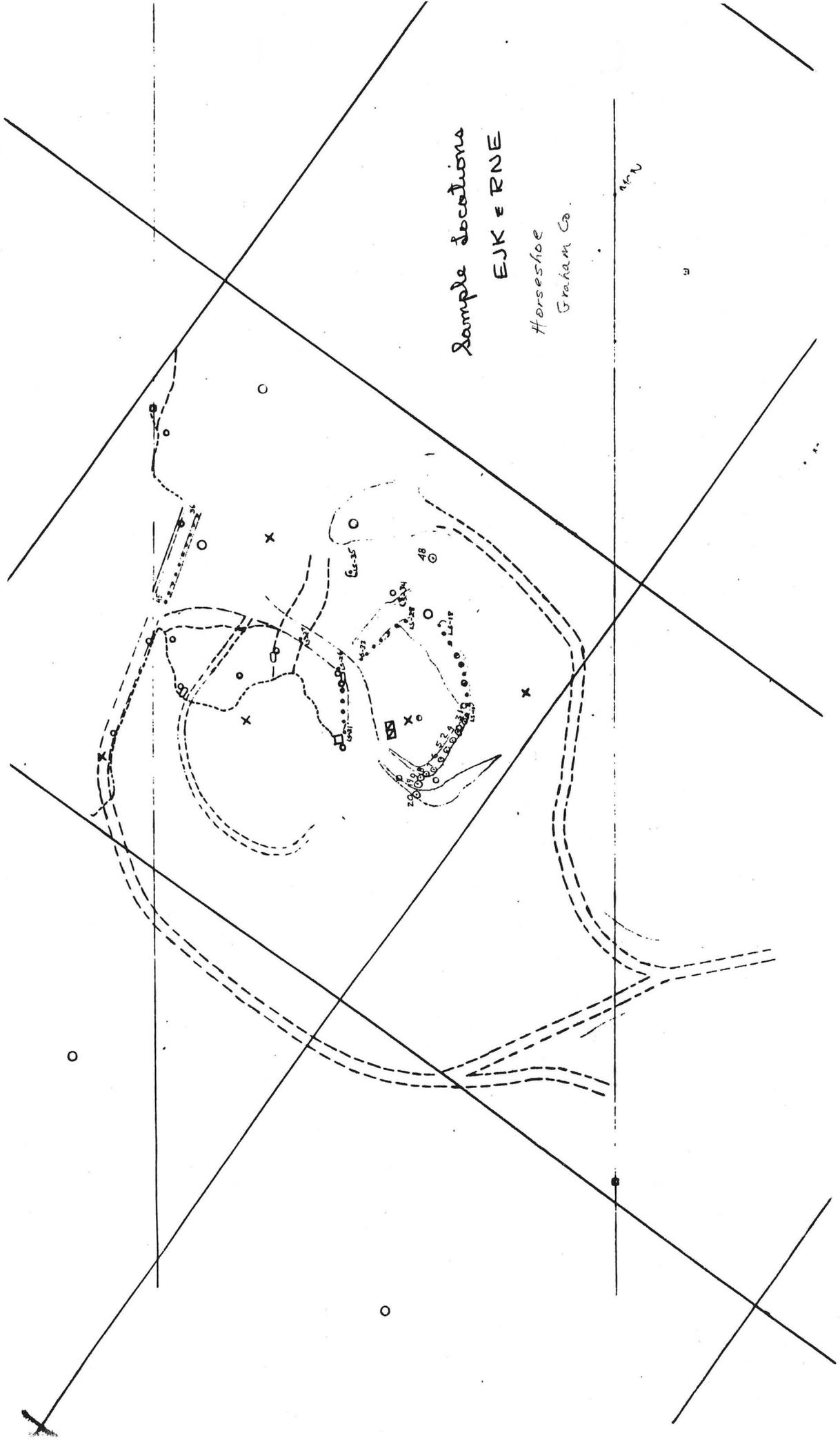
The same data on this sampling should be submitted as requested on the Gem; namely, the width and occurrences where each sample is taken and a general description of the outcrop so as to justify the estimate of ore occurring at the 500-foot length.

I suggest that you do the Gem work first and advise Mr. Merrill by post card when you will arrive in Safford to do the work on the Horseshoe. There are no meetings scheduled for you for next week and I believe this is the most important job that I know of at the time, so please give it your attention and get your reports in as early as possible.

Sample Locations

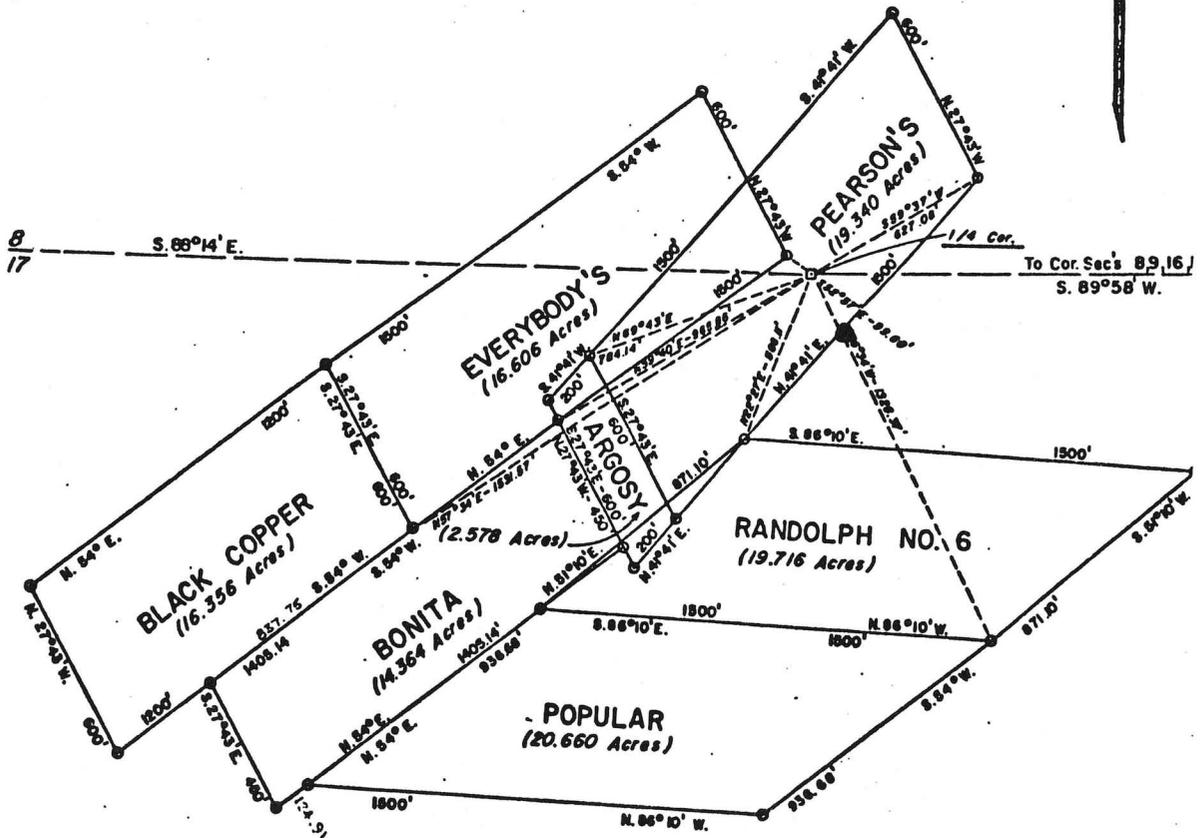
EJK = RNE

Horseshoe
Graham Co.



Bonita, Argosy, Pearson's, Popular, Randolph No. 6, Everybody's and Black Copper Patented Lode Claims, designated by the Surveyor General as Survey No. 2585, Patent No. 183501, embracing a portion of Sections 8 and 17, Township 6 South, Range 27 East, G&SRB&M

Sec. 8

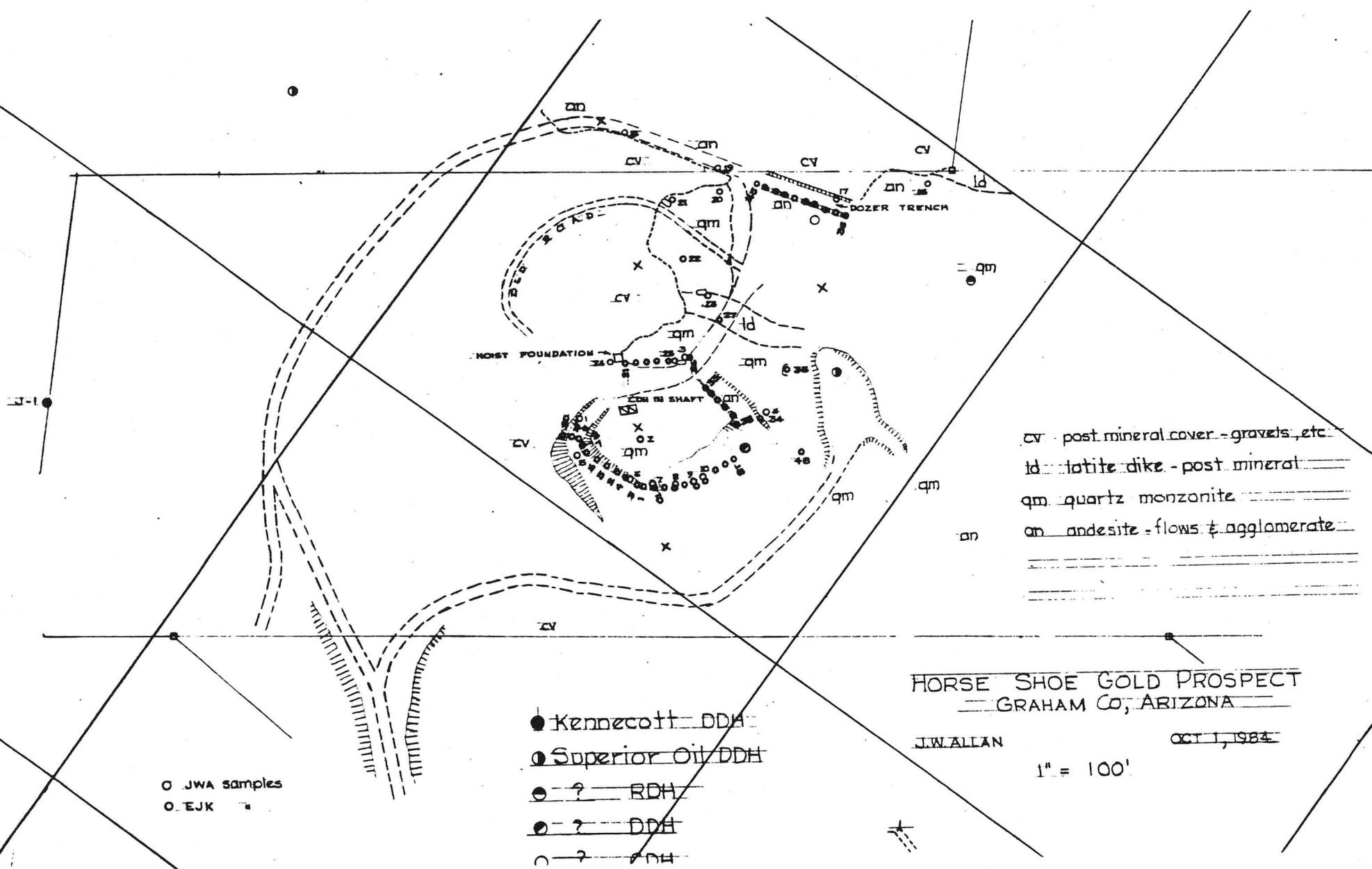


Sec. 17

RECEIVED
 MAR 10 1978
 THE SUPERIOR OIL COMPANY
 HOUSTON, TEXAS
 LEGAL DEPT.

(Map data from MS #2585, modified in accordance with U.S. Dept. of Interior Bureau of Land Management, field notes as recorded in Book 4687, Page 44, Dated 4/12 - 12/19, 1960. Claims patent No. 183501.)

THE SUPERIOR OIL COMPANY Minerals Division	
Title EXHIBIT A - HORSESHOE CLAIM	
Project and Location LONE STAR MINING DISTRICT Graham County, Arizona Sec. 8 & 17 T6S R27E	
Compiled by W. L. J.	Drawn W. L. J.
Checked by	Date



cv - post mineral cover - gravels, etc.
 ld - talcite dike - post mineral
 qm - quartz monzonite
 an - andesite - flows & agglomerate

HORSE SHOE GOLD PROSPECT
 GRAHAM CO, ARIZONA

J. WALLAN

OCT 1, 1984

1" = 100'

O JWA samples
 O EJK

- Kennecott DDH
- Superior Oil DDH
- ? RDH
- ? DDH
- ? DDH

No. 320 Me

Phoenix, Arizona,

CHAS. A. DIEHL

Mar. 11, 1943.

ARIZONA ASSAY OFFICE

Phone 3-4001

815 North First Street

P. O. Box 1148

This Certifies That samples submitted for assay by Judge J.D. Merrill.

contain as follows per ton of 2000 lbs. Avoir.

MARKS	SILVER		VALUE (Oz.)	GOLD		VALUE (Oz.)	TOTAL VALUE Of Gold and Silver	PERCENTAGE				REMARKS	
	Ounces	Tenths		Ounces	Handths			COPPER					
M 1				.04		\$1.40			4.10				
M 2				.08		\$2.80			5.15				
M 3				.10		\$3.50			5.05				
M 4				.20		\$7.00			3.66				
M 5				.10		\$3.50			4.41				

Charges \$ 7.50

Assayer ARIZONA ASSAY OFFICE

H5-15

- | | | |
|----|--|--------|
| 16 | 2' bleached frac zone in and, maroon lim,
no silica | < .005 |
| 17 | and, str arg, mod lim | ✓ |
| 18 | " " " , maroon lim | ✓ |
| 19 | 1" qtz veinlet in arg and, maroon lim | ✓ |
| 20 | mong phy, lxx qtz-jasper vein material | ✓ |
| 21 | lxx qtz min in mong phy- and contact | ✓ |
| 22 | mong phy, str arg w/ qtz veinlets | ✓ |
| 23 | dacite dike?, w/ fld chry & mes | ✓ |
| 24 | qtz vein mat, sl opaline, bluish | ✓ |
| 25 | qtz vein & silic mong phy (see H5-3) | ✓ |

Horse Shoe Prospect - Samples - JWA

Dump Specimens - source location unknown

		Au
HSD-1	mong phy, str arg, abund seal brn lim	< .02 ppm
2	" " " " " " ffd clay	.36
3	" " " " " " clay & mal or mo	< .02
4	" " " " silic, jasper & clay veinlets	4.70
5	" " " " 1/4" jasp-clay veinlet w/ 2" silic envelope	4.10

Selected Surface Samples

HS-1	mong phy, str arg, abund gae lim	< .02
2	" " ? " " " " qtz veinlets	< .02
3	qtz vein & silic mong phy, hard mass	.32
4	and, str arg, abund maroon lim w/ casts	.06
5	qtz vein &/or silic mong phy, abund clay & mal, mod jasperoid veinlets	3.60
6	and, str bleached (arg?), acarcous qtz & maroon lim	3.30
7	qtz vein, mong phy - and contact, bleached mod CuOx	5.60
8	mong phy, str arg, narrow maroon lim veinlet	.04
9	mong phy, str arg, soft maroon lim	.05
10	" " " " " " maroon lim & qtz	.02
11		
12		
13		
..		

~~Accounting~~

~~Purchasing - Panda~~

Horse Shoe Group - Ownership

Brigham Young University	35.0 %
Utaham Stake - LDS Church	11.5
Anderson Estate - 6 children	17.5
Mrs Wheeler	12.5
George Larsen	10.0
Merrill Estate	} 12.5
Lois Choate	
Mrs Wesselioms	
Ruskin Jones	<u>1.0</u>
	100.0

Agent: Charles E. Jones, atty
Arizona Title Building, 18th floor
111 West Monroe
Phoenix, AZ 85018
(602) 262-5877

H. Clyde Davis - BYU Development Office

J. D. MERRILL
ATTORNEY AT LAW
SAFFORD, ARIZONA

March 22, 1943. C

WAR PRODUCTION BOARD, Washington, D. C.
Attention: F. H. Hayes, Assistant Chief,
Primary Production Branch, Copper Division.

Re: 4H-FHH

Application of Horseshoe Mine,
Safford, Arizona, for increased
copper price to sustain silica flux
copper ore production.

Dear Mr. Hayes:

Replying to your letter of March 16th, wherein you request itemized, estimated cost of our production, I am glad to submit the following:

Our R F C Application for a \$5,000 loan to commence production was naturally based on the 17¢ price, and an over-all cost of mining was quoted at \$3.50 per ton, with \$1.80 transportation cost and \$3.00 treatment charge, making a total cost of \$8.30 against ore bringing \$10.57 per ton including premium payment as shown by the liquidation sheet of the 43 ton test car shipped to International Smelter, leaving a profit of \$2.27 a ton. I am frank to admit these figures might be optimistic, and with good luck we might pull out, however, it must be readily agreed this margin is very low considering the amortization of the loan and allowing for increased costs in labor, material and shipping.

Mining cost, with the small miner attempting to get set up from scratch as we are, is a very relative term. It is next to impossible to set up amortization schedules which might prove to be dependable over any period of time. Labor costs, operating costs and maintenance costs etc., can be fairly accurately determined, but the usual optimism indulged in by the small miner as you well know, invariably results in loss in his net return resulting in shut-downs and consequent loss of production. It is this situation obviously that any increased price in copper is intended to remedy, especially with a desirable flux ore such as we have and I am setting forth below a safe, sane and reasonable estimate of our operation. I am using as an amortization period, ten months, for two reasons: First it is common engineering practice to amortize heavy machinery and equipment 10% per month. Second: We have in our opinion, as shown by development to date, 5000

STATUS OF DORMANT MINES

MINE NAME: HORSE SHOE MINE

LOCATION: Lone Star Mining District about 10 miles NE of Safford

OWNER ^S ~~AND/OR LEASED BY~~ J. D. Merrill, Jesse C. Anglin, Lamar Larsen, Carlton Spalding and Est. of Wm. Kuchar, deceased.

ADDRESS: c/o J. D. Merrill, Rm. 262 Business Sec. Hotel Adams, Phoenix, Ariz.

APPROXIMATE PRODUCTION (Year of 1945): I am attaching herewith copy of a report made to U.S. Dept Int for 1943; there was approximately another 150 ton in
COPPER _____ Lbs. LEAD _____ Lbs. 1944.

ZINC _____ Lbs. (OTHER) _____

CHECK THE CHIEF CAUSE OF YOUR DISCONTINUED PRODUCTION:

- (A) Easily available ore worked out.
- (B) Increased costs, but have quantity similar to past grade of ore.
- (C) Too close a margin to develop more ore.
- (D) Sinking to get under East drift showing about 200 feet on 40 ft level all way too expensive for owners.

If you have ore ready to mine please give your estimate of the amount of metal (name each metal) that you could produce in one year (after allowing 60 days to get started) if there were premiums above present market prices. Name amount with a low premium, and amount at a high premium; such as:

Copper at $22\frac{1}{2}\phi$ plus 5¢ premium..... 1,000,000 Lbs.
Copper at $22\frac{1}{2}\phi$ plus 10¢ premium..... 1,500,000 Lbs.

Production could easily be made comparative ^{to} or better than the 1943-1944 production.

If you do not have ore ready to mine please discuss the following:

- (A) Do you think a reasonable development program would produce a justified tonnage of commercial ore at above mine?

In addition to the showing now evident, I am strictly of the opinion that a reasonable development program would produce a justified tonnage of 4% copper ore.

- (B) With a premium price (guaranteed for one year) could you carry out such a development program yourself? What premium?

Carried on the development and mining during the period 1945 and 1944 and could more expeditiously carry it on if financing and guaranteed premium were available.

- (C) If you could not do this yourself, would a quick drilling program by some government agency (at government expense) be sufficient?

Would prefer government agency perform a quick and comparatively inexpensive drilling program

- (D) Or would you prefer a loan plan similar to the arrangements during World War II?

This could easily place the mine on a three car basis of shipments within 60 days.

How about a combination plan in two stages such as follows?

- Stage 1: Government engineers review project and, if a little drilling appears to be justified and a preliminary key to the situation, such drilling program to be agreed upon by owner and government engineer, paid for by the government, but let by contract. Good. But property has already been quite thoroughly reviewed by RFC..all maps records available.
- Stage 2: If results of drilling (or without drilling) justify underground development and/or production equipment, same to be obtainable via a mortgage loan on property.

Please discuss the above: This property was loaned the small \$5000 exploration loan by RFC before its last operation. Operation was begun and RFC later loaned another \$3000. The property was well under way to become entirely liquidated when the ore played out on the West drift and sinking became necessary. I have personally kept all loan records, maps, assays, shipping reports etc., and it would be an easy matter to submit exactly the showings as they now exist. Very little drilling would promptly show tonnage. My estimate is that with an additional 50 feet of sinking with drifting about the same would encourage a large body and make it economical feasible with premium. The average width of the vein is around four to five feet. The ore is oxide with high silica content running average about 80% or better making it highly desirable for the Smelter.

SUGGESTIONS:

I would be glad to prepare and submit all the records I have (RFC probably has copies of everything too) together with an application for the amount of development costs and the premium necessary. All the records now available would shorten the time and examination necessary to review the feasibility of the operation. The legal title other than some back taxes, and all other matters are in good shape. There are nine and a fraction of patented claims. It still, presumably carries the \$8,000 RFC contract against it but we have received no word or statement from them.

DATE August 7, 1950

SIGNATURE

J. H. Lewis
Hotel Adams Bldg
Phoenix Ariz.

tons of ore, and our present plans call for a production and shipping of 500 tons monthly, making a more or less assured operation of ten months. With that in mind, figuring on a four man crew, an outlay of \$7,500 for our set up and a reasonable operating cost, our monthly estimate is as follows:

Labor, including Ind. Ins. Book-Keeping etc.	\$ 1475.00	
Rental or Amortization of machinery & equipment	750.00	
Over-all operating costs	<u>750.00</u>	
Total	\$ 2950.00	\$ 2950.00

Our net payments based on 17¢ price after deducting treatment charge \$3.00 transportation costs \$1.80-- \$10.57 less \$4.80. For 500 ton monthly production	\$ 2885.00	\$ 2885.00
---	------------	------------

Representing a loss of \$65.00 per month, whereas if we were to receive 22¢, our monthly income would be \$4560.00 based on a net value of the ore of \$13.92 less the \$4.80 treatment and transportation costs, leaving us a profit of \$1675 per month with which we could increase production and carry on a little development work.

These figures are submitted in a sincere effort to be helpful to W P B in arriving at a fair price to sustain operations such as ours, and if a further break-down is desired we shall be more than glad to submit the same. As stated in my previous correspondence, we desire very much to have an early determination of this matter so that we might determine our shipping grades upon commencing shipments.

Yours very truly,

J. D. Merrill,
Horseshoe Mine,
Safford, Arizona.

JDM/a

ARIZONA DEPARTMENT OF MINERAL RESOURCES

Mineral Building, Fairgrounds

Phoenix, Arizona

Clem Chase, V.P. & G.M.

1. Information from: _____

Address: Box 226 Safford _____

2. Mine: Peacock Formerly San Juan 3. No. of Claims - Patented 10

Also known as the Horseshoe Group. Unpatented 70

4. Location: S 1-2-3 in T6S R26E & S34-35 in T5S R26E (Safford Quadrangle Map)
(The above information is from the patented claim map).

5. Sec _____ Tp _____ Range _____ 6. Mining District Lone Star

7. Owner: Gay Anderson & Associates. _____

8. Address: Safford, Arizona _____

9. Operating Co.: PRODUCERS MINERALS CORP. A subsidiary of Producers Chemical N.Y.City

10. Address: Box 226 Safford _____

11. President: _____ 12. Gen. Mgr.: Clem Chase

13. Principal Metals: Copper 14. No. Employed: 30

15. Mill, Type & Capacity: 2000 TPD Leach

16. Present Operations: (a) Down (b) Assessment work (c) Exploration
(d) Production Construction x (e) Rate _____ tpd.

17. New Work Planned: Plan to install pipe line from Gila Valley for water.
Plant Supt- Thomas G. White, Chief Geologist- John Snell formerly Pima mining co.

18. Misc. Notes: (Would like to obtain maps of underground workings to prevent
a hazard to open pit operations.)

Date: 12-9-69 _____


(Signature)

(Field Engineer)

March 16, 1943

Mr. W. B. Gohring
325 Heard Building
Phoenix, Arizona

Dear Mr. Gohring:

Subject: Horseshoe Mine
J. D. Merrill

Attached you will find copy of report by our field engineer, Mr. A. Macfarlane.

Inasmuch as the information indicates an early and appreciable production, we will reverse our negative recommendation and concur with the action taken by your office.

Very truly yours,

Earl F. Hastings
Projects Engineer

EFH:kk
Enclosure

March 17, 1943

MEMORANDUM

SUBJECT: Horseshoe Mine

TO: W. B. Gohring

FROM: Earl F. Hastings

Attached you will find sketch of the Horseshoe Mine, J. D. Merrill, owner, which accompanied the report by A. Macfarlane.

March 12, 1943

Judge J. D. Merrill
Safford, Arizona

Dear Judge Merrill:

I am enclosing three copies of the Macfarlane report on the Horseshoe copper group.

The following assays were received on the samples taken by Macfarlane from your property. I will forward the regular assay certificate as soon as it is received. These results were phoned to me by Charles A. Diehl.

	<u>GOLD</u>	<u>COPPER</u>
No. 1	.04 ozs.	4.10%
No. 2	.08 ozs.	5.15%
No. 3	.10 ozs.	5.05%
No. 4	.20 ozs.	3.66%
No. 5	.10 ozs.	4.41%

Very truly yours,

J. S. Coupal, Director

JSC:kk
Enclosures

March.12, 1943

MEMORANDUM

TO: A. Macfarlane

FROM: J. S. Coupal

Your letter without date received explaining your failure to attend the meetings at Winkleman and Ray. Where notices have been given and card sent out stating that an engineer will be at the meeting, appointments should take precedence over any other engagements.

The samples from the Horseshoe Mine, Judge J. D. Merrill, Safford, Arizona, arrived at Diehl's office and he has just phoned me the results. They are as follows:

	<u>GOLD</u>	<u>COPPER</u>
No. 1	.04 ozs.	4.10%
No. 2	.08 ozs.	5.15%
No. 3	.10 ozs.	5.05%
No. 4	.20 ozs.	3.66%
No. 5	.10 ozs.	4.41%

WAR PRODUCTION BOARD

WASHINGTON, D. C.

March 23, 1943

IN REPLY REFER TO:

4H - MJE

AIR MAIL

Mr. J. D. Merrill
Attorney at Law
Safford, Arizona

Dear Mr. Merrill:

This is in reply to your letter of March 15 relative to your Horseshoe Mine.

In view of the fact that you have secured a loan for re-opening the mine, we believe that we should await the time when the workings can be inspected and it is determined how much ore you have and its grade before attempting to set a price for the copper. When the mine is opened and the ore reserves are exposed, an examination and sampling will quickly indicate the possibilities of production and the price required.

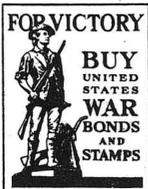
We note that you propose to be shipping within two or three weeks. This will also add valuable information as to the grade and character of the ore.

Please keep us informed of the progress you are making and the silica content of any ore you may ship.

Very truly yours,



F. H. Hayes
Assistant Chief
Primary Production Branch
Copper Division



House

March 11, 1943

Judge J. D. Merrill
Safford, Arizona

Dear Judge Merrill:

Thank you for your letter of March 8. I am sorry to say that we have lost trace of the samples taken by Macfarlane from your property. I have written him to put a tracer on them at once.

I believe there is an excellent chance for a loan on good copper fluxing ores. I hope that we may expedite your application.

With best wishes and kindest regards, I am

Very truly yours,

J. S. Coupal, Director

JSC:kk

J. D. MERRILL
ATTORNEY AT LAW
SAFFORD, ARIZONA

March 8, 1943.

Mr. J. S. Coupal, Director,
Department of Mineral Resources,
413 Home Builders Bldg.,
Phoenix, Arizona.



Dear Sam:

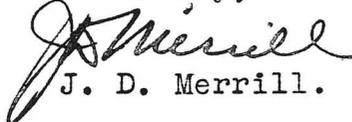
F. H. Hayes, Assistant Chief, Primary Production Branch, Copper Division, War Production Board, wrote me stating that he had information that we had shipped a silicious ore containing 3.44% copper and 82.6% silica. That they were interested in increasing the production of this type of flux ore and wanted all the available information we had regarding the property. He further stated that if we could ship 1000 tons or more monthly they would be willing to consider recommending a price higher than 17¢ per pound for copper. This was concerning the Horseshoe Mine for which I have applied for \$5,000 financing as you know.

I am writing for your good suggestions as to what course to follow to best follow this matter up. I have wrtten Mr Hayes back air mail giving him all the information concerning the property and stressing the fact that if we could receive 20 or 22¢ for copper that the tonnage would be very substantially increased in the body we have blocked out by reason of the fact that we will be able to produce and ship more of the vein and wall at the increased price than we had originally figured at the 17¢ price. I also wired Mr. Hayes this morning requesting that he contact R F C and urge their early action on our application. We feel that we can produce 1000 tons monthly alright if we are granted the loan, however we feel that regardless of the amount produced that properties such as ours should have the additional premium payment in order to enable us to ship more flux ore which is so badly needed.

Your suggestions in this matter will be very much appreciated.

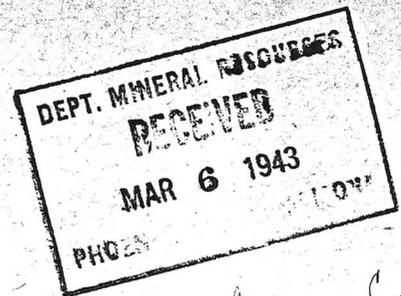
With kind personal regards, I am,

Sincerely,


J. D. Merrill.

JDM/a

March 5, 1943.



Mr. W. B. Gohring,
Supervising Engineer, R F C,
325 Heard Building,
Phoenix, Arizona.

Dear Mr. Gohring:

Re: Application of
HORSESHOE MINE
for \$5,000 Loan.

Included in the above mentioned application was a letter from the International Smelter giving an analysis of the ore shipped from the Horseshoe Mine showing 82% silica, and stating generally that they were desirous of securing this ore because of it's high silicious content. They are particularly anxious that we ship to them what tonnage we can as early as we can because of the large increase in ores from the Dome and other large producers coming in very shortly increasing their need for fluxing ores.

A month's time has elapsed since filing this application. Mr. Macfarlane of the Department of Mineral Resources completed an examination of the property a week ago. Mr. Coupal, in a letter dated March 2nd mentioned an amended application. I do not know in what particular we might amend the application, however we would like to submit any and all information necessary. In the application submitted, sketch map showing several samples, location, width of vein etc., was included. The length of the vein is given as 300 feet. The sample at greatest depth was taken at 50'. Taking the average width as 5.5 feet, this blocks out 5250 ton, figuring ten cubic feet to the ton. The liquidation sheet submitted on the 43 ton test car shows the value of this ore to be \$10.87 per ton including premium payment. We submitted figures of cost to include \$3.00 treatment charge; 80¢ freight Safford to Inspiration; \$1.00 for hauling from Mine to Safford and figure an outside figure of mining at \$ 3.50, leaving a profit of \$2.57 per ton.

It is possible that our application was not specific enough in setting up these figures and I am giving them to you in this letter for your consideration in connection with the application as submitted.

W. B. Corning

Mar. 5 1943

(two)

With the current agitation for an increase in premium payment to bring the price to 20 or 22 cents on this grade of silicious ore particularly, I believe that it is a conservative estimate that the tonnage as shown in our application could be increased almost a hundred per cent by the inclusion of the wall rock or the entire six foot vein which we know to contain sufficient copper values to pay at the increased price. In view of the urgent demand for this type of flux ore, this would seem to be of importance in the War Effort.

I trust that you will be able to pass on this matter within the next few days.

With kind personal regards, I am,

Yours very truly,

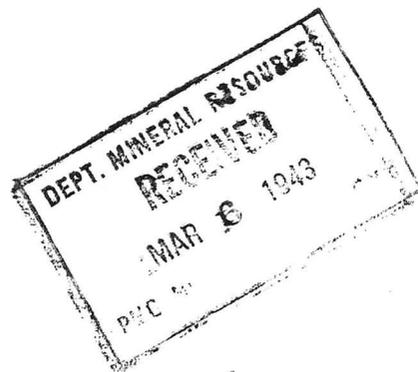
J. D. Merrill.

JDM/a

Copy to J. S. Coupal

J. D. MERRILL
ATTORNEY AT LAW
SAFFORD, ARIZONA

March 5, 1943.



Mr. J. S. Coupal,
Director,
Department of Mineral Resources,
413 Home Builders Bldg.,
Phoenix, Arizona.

Re: R F, C Application
Horseshoe Mine
J. D. Merrill,
Safford, Arizona.

Dear Mr. Coupal:

Your letter of March 2 came to hand yesterday and in reply let me thank you for your kind attention to our Application.

Mr. Macfarlane completed his examination on the property last Friday, February 26th, and expressed the belief that his report would be in by Tuesday March 2, however, I was talking with him this morning on his way back to Globe from another examination he has just completed in Greenlee County, and he tells me that the assays had not been returned to Globe when he left the other day but no doubt would be there by the time he got back. I discussed with him the question of how I might help the cause toward securing the 20 or 22 cent price and he suggested that it would probably be best to wait until we were producing and at that time take the matter up with Metals Reserve or other proper agency. As you know, our Application contains a letter from the International Smelter people giving the analysis of our ore showing 82% silica and states that they are very anxious to receive shipments from our property particularly in the very near future because of a large increase in tonnage from the Dome and other Mines which necessitates securing large tonnages of silicious ores to run with them in order to secure maximum efficiency of recovery. In this connection it would seem to be of paramount importance that production of silicious ores, such as we have, be speeded up in order to help the cause of securing the increased premium, and to that end I would urge the earliest possible consideration of our Application.

J. S. Coupal

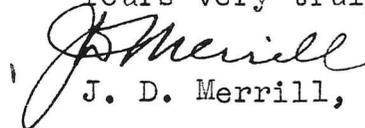
Mar. 5 1943 (Two)

I am sure that The Smelters will cooperate with producers of silicious ores to the end that premium sufficient to keep them in production be paid, and we are naturally anxious to start our shipping at the earliest possible date, in order to receive such assistance. A conservative computation of our tonnage with what little development exists at this time is 5000 ton of this nature of ore. We propose to carry on our work so that this tonnage will reach the smelter within the shortest time possible. The present premium payment allows us some little profit--enough to justify the loan--but with the price at 20 to 22 cents, we could ship a much larger tonnage without sorting since we know that our entire vein carries copper values sufficient to pay it's way at that price whereas at the present price we had planned shipping only 3.5 or 4 feet of the vein. I would say that a conservative estimate of the increase in tonnage justified by the proposed increase in price would be 100%. With the extreme need for silicious flux, this becomes very important in the War Effort.

Please let me know if I can help the cause along in any manner.

With sincere appreciation for the good work of yourself and The Department and trusting that the Horseshoe application will be given your usual prompt attention, I am,

Yours very truly,


J. D. Merrill,

JDM/a

March 2, 1943

Answer

J. D. Merrill
Safford, Arizona

Dear Judge Merrill:

Thank you for your letter of February 20. I hope that with the additional information requested and the samples indicated your loan will get favorable action.

The War Production Board is very desirous for a copper silicious flux and where conditions warrant and a tonnage of ore can be gotten out, I believe it will be possible, once operations are under way, to get better than a 17 cent price for the copper.

In your amended application it might pay to add a remark to the effect that this operation could be made profitable if a 20 or 22 cent price could be paid for the copper.

Very truly yours,

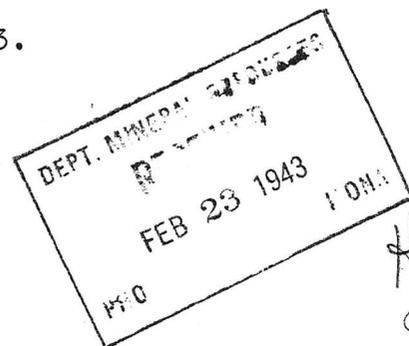
J. S. Coupal, Director

JSC:kk

J. D. MERRILL
ATTORNEY AT LAW
SAFFORD, ARIZONA

February 20, 1943.

Mr. J. S. Coupal,
Director, Dept. of Mineral Resources,
413 Home Builders Bldg.,
Phoenix, Arizona.



Dear Mr. Coupal:

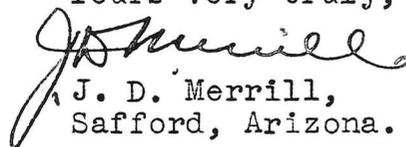
Your letter concerning the Horseshoe Mine R F C Application just came in this morning's mail. I immediately tried to contact Mr. Macfarlane in Globe by 'phone but was unable to locate him. I suppose that he will contact us shortly however.

We shall be glad to have Mr Macfarlane make the examination suggested in your letter and trust he will be able to do so at an early date. We shall be glad to pay for the assays.

I thoroughly believe that this property fully merits a loan and we are extremely anxious that an early consideration be had since we are lined up with the International Smelter to handle whatever tonnage we are able to ship them with a substantial reduction in treatment charge due to the silicious content of the ore all as appears in the letter of Mr. Smith in the application. Mr. Smith has been on the property and I would be glad to have you call or write him concerning his opinion of the same.

Thanking you for expediting this application and for all past favors, I am,

Yours very truly,


J. D. Merrill,
Safford, Arizona.

JDM/a

February 19, 1943

J. D. Merrill
Box 409
Safford, Arizona

Dear Judge Merrill:

The data on the Horseshoe Mine seems insufficient to warrant granting a loan. The general information, however, seems as though sufficient data could be gathered to justify the loan. I have instructed Mr. Macfarlane, at his earliest opportunity, to go to Safford, see you and arrange to examine the property. I have suggested that he cut fifteen or twenty samples giving careful description of the method of sampling, the occurrence of ore on each spot sample, plot same carefully on a sketch map, and submit these to us as early as possible.

I do believe that the sampling should be paid for by you as we do not have the funds available for this purpose except to a very limited amount.

With the proper information I believe a loan can be granted and hope that you approve of this work and that you will be willing to pay for the assays.

I am asking Macfarlane to advise you in advance just when he can visit the property and cut the necessary samples and then get the information to us as quickly as possible.

With best wishes and kindest regards, I am

Very truly yours,

J. S. Coupal, Director

JSC:kk