CONTACT INFORMATION
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Arizona Geological Survey
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Phoenix, AZ 85007
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Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED: 04-19-2013

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: ORO FLAME PROPERTY

ALTERNATE NAMES:
ORO GRAND PATENT MS 2024
OLD OHIO PATENT MS 2025
MESCAL CLAIM
STERLING PROP. OR GOLD BUG PAT
AMERICAN EAGLE PATENT
MORMON PATENT
LUCKY CHARM
SILVER KING

YAVAPAI COUNTY MILS NUMBER: 1141

LOCATION: TOWNSHIP 12.5N RANGE 2 W SECTION 20 QUARTER W2
LATITUDE: N 34DEG 27MIN 05SEC LONGITUDE: W 112DEG 29MIN 51SEC
TOPO MAP NAME: GROOM CREEK - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
GOLD
SILVER
LEAD
ZINC
COPPER

BIBLIOGRAPHY:
ADMMR ORO FLAME FILE
BLM MINING DISTRICT SHEET 244
ELSING, M.J. & R.E.S.HEINEMAN AZ METAL PROD.
AZBM BULL 140 1936 P 101
WILSON, E.D. ET.AL. AZ LODE GOLD MINES AZBM
BULL 137 1967 P 41
ADMMR AMERICAN EAGLE MINE FILE
ADMMR AMERICAN EAGLE MINING CO COLVO FILE
YAVAPAI MAGAZINE JUNE 1921 P 10 SHARLOT HALL
MUSEUM PRESCOTT, AZ
CLAIMS ALSO IN SEC. 29 T12.5N-R2W AND
SEC. 31 T13N-R2W
ADMMR ORO FLAME MINE COLVO FILE

PRINTED: 05/31/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: ORO FLAME PROPERTY

ALTERNATE NAMES:
ORO GRAND PATENT MS 2024
OLD OHIO PATENT MS 2025
MESCAL CLAIM
STERLING PROP. OR GOLD BUG PAT
AMERICAN EAGLE PATENT
MORMON PATENT

YAVAPAI COUNTY MILS NUMBER: 1141

LOCATION: TOWNSHIP 12.5N RANGE 2 W SECTION 20 QUARTER W2
LATITUDE: N 34DEG 27MIN 05SEC LONGITUDE: W 112DEG 29MIN 51SEC
TOPO MAP NAME: GROOM CREEK - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
GOLD
SILVER
LEAD
ZINC
COPPER

BIBLIOGRAPHY:
ADMMR ORO FLAME FILE
BLM MINING DISTRICT SHEET 244
ELSING, M.J. & R.E.S.HEINEMAN AZ METAL PROD.
AZBM BULL 140 1936 P 101
WILSON, E.D. ET.AL. AZ LODE GOLD MINES AZBM
BULL 137 1967 P 41
ADMMR AMERICAN EAGLE MINE FILE
ADMMR AMERICAN EAGLE MINING CO COLVO FILE
YAVAPAI MAGAZINE JUNE 1921 P 10 SHARLOT HALL
MUSEUM PRESCOTT, AZ
CLAIMS ALSO IN SEC. 29 T12.5N-R2W AND
SEC. 31 T13N-R2W
ADMMR ORO FLAME MINE COLVO FILE

AMERICAN EAGLE MINE

REFERENCES

YAVAPAI COUNTY
HASSAYAMPA DIST.
T12½N R2W Sec. 20

Yavapai County MILS Index #1141

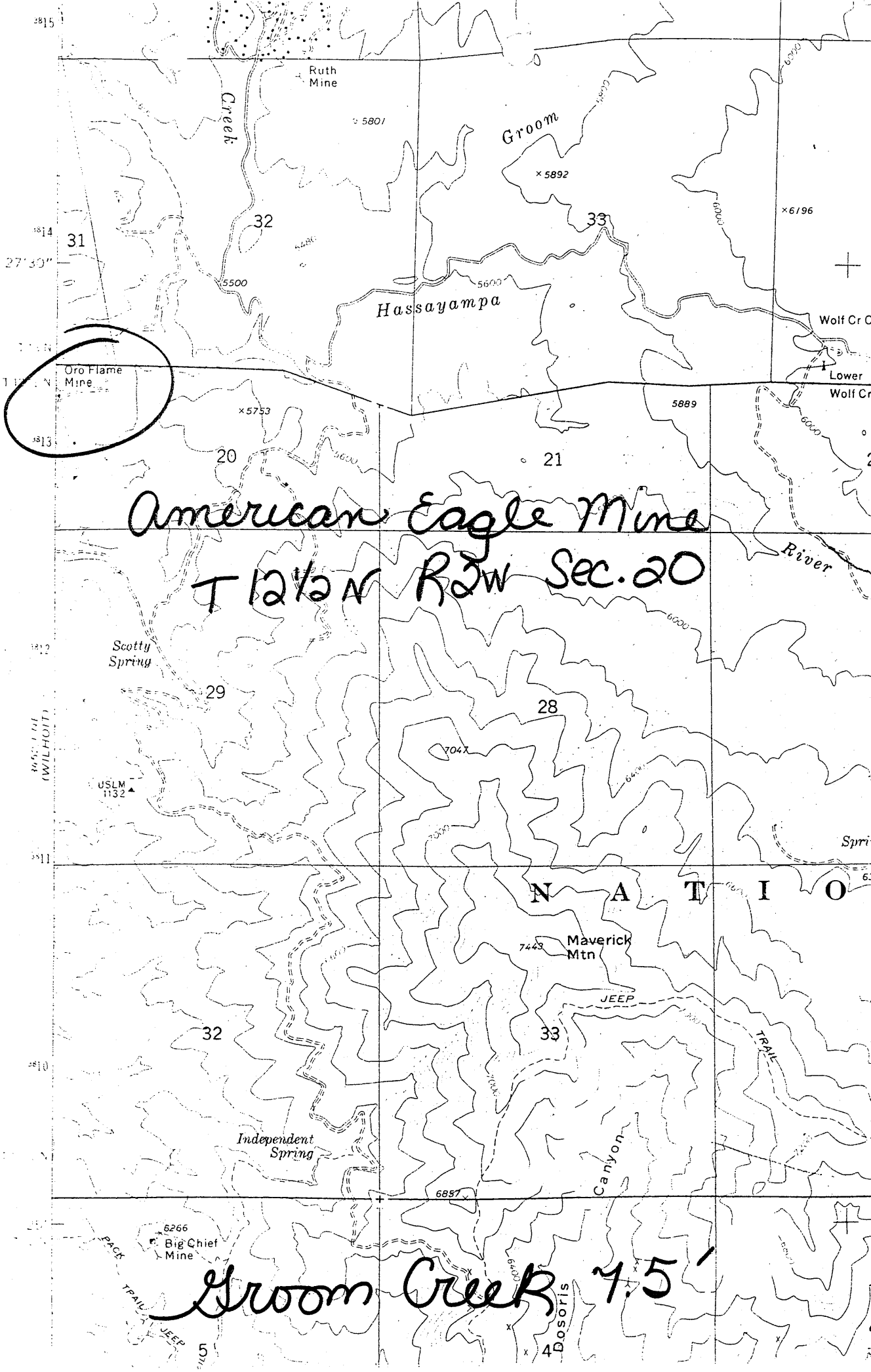
AKA: Oro Flame Property, Oro Grand Patent M S 2024, Old Ohio Patent M S 2025, Mescal Claim, Sterling Property or Godl Bug Pat., Mormon Patent

Oro Flame (file)

BLM Mining District Sheet 244

ABM Bull. 140, p. 101

Groom Creek 7.5' Topo (included in file)


Ruth Mine
Creek
5801
Groom
×5892
×6196
32
33
31
27'30"
5500
5600
Hassayampa
Wolf Cr C
Lower
Wolf Cr
Oro Flame Mine
×5753
5889
20
21
American Eagle Mine
T 12½ N R 2W Sec. 20
River
Scotty Spring
29
28
7047
USLM 1132
Spri
N A T I O
7443
Maverick Mtn
JEEP
TRAIL
32
33
Independent Spring
Canyon
6857
6266
Big Chief Mine
PACK
TRAIL
JEEP
Groom Creek 7.5'
Dosoris
5
4

ORO FLAME YAVAPAI COUNTY

KAP WR 11/21/86: John Fornes, Rt 1, Box 199, Buckeye, Arizona 85526, 386-3441, 386-2409, 386-2540, 932-2409 called and reported that he has brought a bull-dozer and crawler loader to his patented Oro Flame - file and American Eagle - file, Hassayampa District, Yavapai County from his farm in Buckeye and has begun to build roads to all of the old portals on the west end of his property. He explained that he will continue to open up those that have caved and catch up those that are in bad repair so as to maintain access and facilitate sampling.

RRB WR 11/27/87: Augie Summers, 4100 N. Sheridan Lane, Prescott Valley, AZ 86314 phone 772-7357 reports that he has three claims (Emmy Lou) between the Sunny South and the American Eagle. Claims cover two old adits and drifts. It appears to have been a part of the Oro Flame operation.

ORO FLAME MINE YAVAPAI COUNTY

NJN WR 7/13/84: Larry Rader (c) reported he and 5 people are driving an underground drift and working one stope. The mining is being done by mostly selective hand methods on a narrow vein. Recovery of precious metals is by thiosulfate vat leaching. They will be pouring dore bars after completing the installation of a new furnace. Their operation is on the Oro Flame Mine, Yavapai County.

NJN WR 8/17/84: Keith McKinney, P O Box 899, 434 S. Cortex #4, Prescott, Az. 86302 visited and reported that the activity I reported 7/13/84 at the Oro Flame Mine (file) Yavapai County is not taking place at the main Oro Flame workings but nearby at an old short drift located in T13N R2W Sec 32, SW¼. This is on 2 unpatented claim groups known as the Lucky Charm and Silver King. He also reported that the recovery process used is cyanide as the thiosulfate process was unsuccessful.

RRB WR 5/10/85: Dennis Brian, a consultant in Reno, NV called for information about the Silver King Mine (Oro Flame (f) south of Prescott. He has a client who is considering investing in the property. I read him pertinent information from the file as to location, history and latest rumors. I also referred him to a Prescott consultant familiar with the property and the area.

KAP WR 6/20/86: John Fornes, Rt 1, Box 199, Buckeye, Az. 85526 was in and reported he has just purchased three patented claims which are part of the Oro Flame Mine (file) Yavapai County. The patented claims are the American Eagle, Gold Bug and the Morman, all MS 1771. He plans to first repair the roads and then to clean out the openings.

KAP WR 10/10/86: In the company of John Fornes a visit was made to the American Eagle Mine, Yavapai County (data included in both the America Eagle file and the Oro Flame mine - file). The property held by Mr. Fornes consists of the American Eagle, Gold Bug and Mormon patented claims in Sec. 31, T13N R2W.

AMERICAN EAGLE MINE yavapai county

KAP WR 10/10/86· In the company of John Forne a visit was made to the American Eagle Mine, Yavapai County (data included in both the American agle file and the Oro Flame - file). The property held by Mr. Forne consists of the American Eagle, Gold Bug and Mormon patented claims in Sec. 31, T13N R2W.

KAP WR 4/24/87: John Fornes Sr. (card) hired Larry Dietz of Dietz and Associates to redraw 3 maps (2 - underground and 1 - surface) from the American Eagle Mine (file) Yavapai County. The copies in the file were poor quality, faded blue line prints of circa 1910 maps and were unusable. The maps were redrawn on mylar. Mr. Fornes provided us with new blackline copies for the file. He is continuing to repair roads on the property and clean out portals. He hopes to be able to access drifts that are shown to be in ore on the old maps.

KAP WR 7/17/87: In the company of John ("Jay") Fornes Jr. a visit was made to the American Eagle Mine (file), Hassayampa District, Yavapai County. Here John Fornes has hired family members to open up and clean out 2 drifts on old workings. Since my previous visit extensive road construction has been completed on the patented properties and nearly all sites of old workings are now accessible by 4 wheel drive vehicle. A small amount of sampling has been done. Four samples were taken during my visit and delivered to Iron King Assayers. The descriptions and results have been provided for the file.

Arizona Department of Mines and Mineral Resources

VERBAL INFORMATION SUMMARY

May be Reproduced

1. Information from: John Fornes
   Address: Rt. 1, Box 199, Buckeye, Arizona 85526
2. Mine: part of Oro Flame 3. ADMMR Mine File Oro Flame Mine
4. County: Yavapai 5. District Hassayampa
6. Township _____ Range _____ Sec(s) _____
7. Location: _____
8. No. of Claims - Patented3(subject of this report) Unpatented _____
9. Owner (if different from above) _____
10. Address: _____
11. Operating Company: _____
12. Pertinent People and/or Firm: _____
13. Commodities: Gold, silver, copper, lead
14. Operational Status: long idle
15. Summary of information received, comments, etc.: _____

Mr. Fornes reproted he has purchased the following three patented claims:
American Eagle
Gold Bug
Morman
All three are covered by Mineral Survey MS 1771 and are part of what is known as the Oro Flame Mine (file). He explained that most of the old workings have caved and the roads have deteriorated.

He plans to repair the roads and open the portals to the old drifts. His primary objective is a small mining operation, but he is securring his property acquisition cost by only considering patented properties.

He has equipment and manpower available to do the road work and earth moving. He may have to contract some underground work.

Date: June 17, 1986 Ken A. Phillips (Signature) ADMMR

LAB JOB #: MSC01024

Client name: J. & A. Fornes Ltd.

Billing address: Rt. 1, Box 199
Buckeye, AZ 85326

Phone number: 932-2409 or 386-2409

No. Samples: 2
Date Received: 9-15-86
Submitted by:

INVOICE ATTACHED

ANALYTICAL REPORT

Client ID MSC01024	Lab ID	Fire Assay Au oz/ton	Ag oz/ton	AA Cu wt%	Pb wt%	Zn wt%
Amer. Eagle 1	09-15- 9	2.370	4.55	0.340	0.028	0.006
Amer. Eagle 2	09-15- 10	1.162	<.01	0.125	0.013	0.018

Mr. Fornes (John Fornes Sr.) reported these samples were slected from the dumps of workings. Material was vugy, iron stained quartz. KAP 10-10-86

T11N R2W

ORO FLAME MINE

YAVAPAI COUNTY

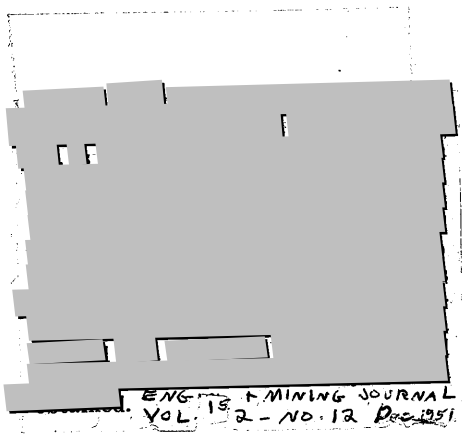
USGS Bull. 782 p. 134-No

ABM Bull. 137 p. 41
ABM Bull. 140 p. 101

Big Bug District - General Report (file)
by A. F. Mercier, Geol. (geology file)

SMI - 1955
MW - 1956 BJS

Arizona Mining Journal Sept 1917 p. 13 -No



* GENERAL REFERENCES

file

REFERENCE 1 F1 <ABGMT CLIPPINGS FIL ATA

REFERENCE 2 F2 <AZ DEPT MIN RES FILE DATA

REFERENCE 3 F3 <USBM- ABGMT FILE DATA FILE

REFERENCE 4 F4 <ABM BULL. 137 pp 41-43

L110< AS JUMBO 1 TO 9, SILVER STAR 1 AND 2 AND SURE SHOT. THE STERLING MINE, AS OF 1870 WAS COMPRISED OF THE GOLD BUG AND AMERICAN EAGLE CLAIMS AND AS OF 1927 HAS BEEN A PART OF THE ORO FLAME GROUP.>

M110< ALTERATION TO SERICITE AND CARBONATE. VEINS ARE 200 FT APART >

A82 < OF MAVERICK MOUNTAIN >

F5 < USGS GQ MAP GQ 997 >

A83 < CLAIM IN NORTHERN PART OF CLAIM BLOCK >

N85 < VEIN SYSTEM TO THE NORTH IN THE AMERICAN EAGLE VEIN >

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

*RECORD NUMBER B10 <>

*RECORD TYPE B20 <X,1,M,>

DEPOSIT NUMBER B40 <>

*REPORT DATE G1 <8,1,b,1,1,> (YR. MO.)

*INFORMATION SOURCE B30 <1,2,>

*FILE LINK IDENT. B50 <USBM-004025 0956>

*REPORTER(SUPERVISOR) G2 <LARABA, PETER (DEWITT ED)> (last, first, middle initial) (last, first, middle initial)

*REPORTER AFFILIATION G5 <ABGMT>

*SITE NAME A10 <ORO FLAME MINE>

*SYNONYMS A11 <STERLING, MESCAL CLAIM, GOLD BUG>

LOCATION

*MINING DISTRICT/AREA A30 <HASSAYAMPA DISTRICT>

*COUNTY A60 <YAVAPAI>

STATE A50 <A,Z,>

*COUNTRY A40 <U,S,>

*PHYSIOGRAPHIC PROV A63 <1,2,b,>

*DRAINAGE AREA A62 <1,5,0,7,0,1,0,3,b,>

*LAND STATUS A64 <0,0,b,,b,(,,,,,)>

*QUADRANGLE NAME A90 <GROOM CREEK (1,9,7,4,)>

*QUADRANGLE SCALE A100 <2,4,0,0,0,>

SECOND QUAD NAME A92 <WILHOIT (1,9,6,9,)>

SECOND QUAD SCALE A91 <2,4,0,0,0,>

*ELEVATION A107 <5,6,0,0,bFT,>

UTM

*NORTHING A120 <3,8,1,2,7,6,0,>

*EASTING A130 <3,6,2,2,9,0,>

*ZONE NUMBER A110 <+,1,2,>

*ACCURACY

ACCURATE ACC (circle)

ESTIMATED EST <>

GEODETIC

*LATITUDE A70 <,,-,,-,,N,>

*LONGITUDE A80 <,,-,,-,,W,>

CADASTRAL

*TOWNSHIP(S) A77 <1,2,5,N,:,b,,,,,:,b,,,,,:,b,,,,,>

*RANGE(S) A78 <0,0,2,W,:,b,,,,,:,b,,,,,:,b,,,,,>

*SECTION(S) A79 <20 :,b, 19 :,b, :,b,>

*SECTION FRACTION(S) A76 <FAR W ½ ; FAR E ½>

*MERIDIAN(S) A81 <GILA AND SALT RIVER>

*POSITION FROM NEAREST PROMINENT LOCALITY A82 <5.9 MILES NW OF MT. UNION LOOKOUT TOWER. 2.0 MILES NORTHWEST>

*LOCATION COMMENTS A83 <UTM TAKEN TO OROGRANDE SHAFT, NORTH OF SHAFT IS AN ADIT WHICH IS ON THE OLD MILL SITE CLAIM WHICH IS PART OF THE ORO FLAME MINE GROUP. STERLING WORKINGS ON GOLD BUG>

* ESSENTIAL INFORMATION

+ ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

COMMODITY INFORMATION

*COMMODITIES PRESENT C10 <K,U, ,AG, ,PB, ,ZN, >
*ORE MINERALS C30 <GALENA, PYRITE, GOLD, CHALCOPYRITE, SPHALERITE
COMMODITY SUBTYPES C41 <
*GEN. ANALYTICAL DATA C43 <Au
COM. INFO. COMMENTS C50 <

* SIGNIFICANCE

		PRODUCER	NON-PRODUCER	
MAJOR PRODUCTS	MAJOR	<A,U, >	MAIN COMMODITIES PRESENT	C11 < >
MINOR PRODUCTS	MINOR	<AG, ,C,U, >	MINOR COMMODITIES PRESENT	C12 < >
POTENTIAL PRODUCTS	POTEN	<PB, ,Z,N, >		
OCCURRENCES	OCCUR	< >	OCCURRENCES	OCCUR < >

*PRODUCTION

PRODUCER	NON-PRODUCER
PRODUCTION YES (circle) PRODUCTION SIZE SML MED LGE (circle one)	PRODUCTION UND NO (circle one)

EXPLORATION OR DEVELOPMENT

*STATUS

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 <U>	STATUS AND ACTIVITY A20 < >

*DISCOVERER L20 <
*YEAR OF DISCOVERY L10 <1866> *NATURE OF DISCOVERY L30 <B> *YEAR OF FIRST PRODUCTION L40 <1910> *YEAR OF LAST PRODUCTION L45 <1955
*PRESENT/LAST OWNER A12 <GROVES AND SONS (1927) ORO FLAME MINING CORP. (1934)
*PRESENT/LAST OPERATOR A13 <
EXPL./DEV.COMMENTS L110 <PROPERTY OF THE ORO FLAME MINING CORP. LISTS 7 PATENTED CLAIMS AS, ORO FLAME, ORO GRANDE, OID MILL, OLD OHIO, AMERICAN EAGLE, GOLD BUG, MORMON, 12 UNPATENTED CLAIMS LISTED

DESCRIPTION OF DEPOSIT

*DEPOSIT TYPE(S) C40 <VEINS
DEPOSIT FORM/SHAPE M10 <TABULAR
*DEPTH TO TOP M20 < > *UNITS M21 < > *MAXIMUM LENGTH M40 <11,250> *UNITS M41 <FT
*DEPTH TO BOTTOM M30 <350> *UNITS M31 <FT> *MAXIMUM WIDTH M50 <350> *UNITS M51 <FT
*DEPOSIT SIZE M15 <SMALL> M15 <MEDIUM> M15 <LARGE> (circle one) *MAXIMUM THICKNESS M60 <16> *UNITS M61 <FT
*STRIKE M70 <N20W> *DIP M80 <70 NE
*DIRECTION OF PLUNGE M100 < > *PLUNGE M90 <
*DEP. DESC. COMMENTS M110 <VEINS NAMED - ORO FLAME, GOLD BUG, STERLING. VEINS PARALLEL EACH OTHER. ABOVE FACTS COME FROM THE GOLD BUG VEIN. VEINS FOUND IN FAULT ZONES. SOME (CONT.)

DESCRIPTION OF WORKINGS

*Workings are: SURFACE M120 UNDERGROUND M130 BOTH M140 (circle one) *OVERALL LENGTH M190 <750> *UNITS M191 <FT
*DEPTH BELOW SURFACE M160 <350> *UNITS M161 <FT> *OVERALL WIDTH M200 <15> *UNITS M201 <FT
*LENGTH OF WORKINGS M170 <1800> *UNITS M171 <FT> *OVERALL AREA M210 <11,250> *UNITS M211 <SQ FT
DESC. OF WORK. COM. M220 <THE ORO GRANDE HAS A SHAFT 110 FT AND 125 FT OF DRIFTING. THE GOLD BUG HAS AN INCLINED SHAFT TO A DEPTH OF 420 FT AT A 42 DEGREE ANGLE. AMERICAN EAGLE HAS 3 SURFACE TUNNELS. THE OTHER CLAIMS HAVE MANY INACCESSIBLE SHAFTS AND TUNNELS.

GEOLOGY

*AGE OF HOST ROCK(S) K1 <P,R,O,T, ,U/PB ZIRCON DATE EQUAL TO 1770 MILLION YEARS
*HOST ROCK TYPE(S) K1A <GRANODIORITE, DIORITE, SCHIST
*AGE OF IGNEOUS ROCK(S) K2 <P,R,O,T, , AS LINE K1
*IGNEOUS ROCK TYPE(S) K2A <GRANODIORITE, DIORITE, SCHIST
*AGE OF MINERALIZATION K3 <L,C,R,E,T-T,E,R,T, UNDATED, PROBABLY 75 TO 65 MILLION YEARS; POSSIBLY PRECAMBRIAN
*PERT. MINERALS (NOT ORE) K4 <QUARTZ, PYRITE, HEMATITE, LIMONITE
*ORE CONTROL/LOCUS K5 <FAULTING, SHEARING
*MAJ. REG. TRENDS/STRUCT. N5 <GRANODIORITE RATHER MASSIVE; FOLIATION IN SCHIST TRENDS N20W TO N-S
*TECTONIC SETTING N15 <
*SIGNIFICANT LOCAL STRUCT. N70 <VEINS TREND N20 W
*SIGNIFICANT ALTERATION N75 <MINOR TO SIGNIFICANT SERICITIZATION
*PROCESS OF CONC./ENRICH. N80 <OXIDATION AND ENRICHMENT AT NEAR-SURFACE. OXIDATION TO ONLY 50 - 75 FT DEPTH.
*FORMATION AGE N30 <
*FORMATION NAME N30A <
SECOND FM AGE N35 <
SECOND FM NAME N35A <
*IGNEOUS UNIT AGE N50 <P,R,O,T, ,U/PB ZIRCON EQUAL TO 1770 MILLION YEARS
*IGNEOUS UNIT NAME N50A <GOVERNMENT CANYON GRANODIORITE
SECOND IG UNIT AGE N55 <
SECOND IG UNIT NAME N55A <
GEOLOGY COMMENTS N85 <DEPOSIT IS QUARTZ VEIN WHICH CUTS PROTEROZOIC GRANODIORITE. NO SPECIFIC MENTION MADE OF RHYOLITE DIKES IN THE SOUTHERN PORTION OF THE VEIN SYSTEM, ALTHOUGH DIKES DO PARALLEL THE

GENERAL COMMENTS

GENERAL COMMENTS GEN <

IRON KING ASSAY INC.

16-Jul-87

LAB JOB #: MSC01752

Client name: John Fornes

Billing address: 1220 Solar Heights
Prescott, AZ 86301

Phone number:

CC: Ken Philips,
AZ Dept. of Mines & Minerals
No. Samples: 5
Date Received: 07-13-87
Submitted by: Ken Phillips

INVOICE ATTACHED

ANALYTICAL REPORT

Client ID MSC01752	Lab ID	Fire Assay Au oz/ton	Ag oz/ton
AET #2/ 2+14	1752- 1	<.001	0.19
AET #2/ 2+36	1752- 2	0.033	<.01
AET #2/ 2+47	1752- 3	0.013	0.24
AET #2/ 2+88	1752- 4	0.164	0.16
Jay Select	1752- 5	<.001	0.22

~~Past Cognac Bay
Right Woods Road go to old hwy 89,
left on old hway
~ 2 mile past Purpoint
Right toward river, east side of river
near alfalfa
NOT THIS PROPERTY~~

REGISTERED ASSAYER
CERTIFICATE NO.
14315
ROBERT G.
CROOK
Date Signed 7-16-87
ARIZONA, U.S.A.

RECEIVED
JUL 17 1987
DEPT. OF MINES &
MINERAL RESOURCES

P.O. Box 56 • Humboldt, Arizona 86329 • Phone (602) 632-7410

* GENERAL REFERENCES

American Eagle File

REFERENCE 1 F1 <

REFERENCE 2 F2 <

REFERENCE 3 F3 <

REFERENCE 4 F4 <

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

RECORD NUMBER B10 <

*RECORD TYPE B20 <X,1,M>

DEPOSIT NUMBER B40 <

REPORT DATE G1 <8,1,X,1,2> (YR. MO)

*INFORMATION SOURCE B30 <1,2,

*FILE LINK IDENT. B50 <USBM-004 025

REPORTER(SUPERVISOR) G2 < DEWITT, ED, H. (last, first, middle initial)

REPORTER AFFILIATION G5 < USGS

*SITE NAME A10 < AMERICAN EAGLE MINE

SYNONYMS A11 < AMERICAN EAGLE CLAIM

LOCATION

MINING DISTRICT/AREA A30 <

STATE A50 <AZ>

*COUNTRY A40 <U.S.>

COUNTY A60 < YAVAPAI

PHYSIOGRAPHIC PROV A63 <1,2,X,

*LAND STATUS A64 <0,1,X, ,X,(,)>

DRAINAGE AREA A62 <1,5,0,7,0,1,0,3,X,

*QUADRANGLE SCALE A100 <2,4,0,0,0>

QUADRANGLE NAME A90 < WILHOIT ,(1,9,6,9,)>

SECOND QUAD SCALE A91 <

SECOND QUAD NAME A92 <

ELEVATION A107 <,6,0,0,0,X,F,T>

UTM

*NORTHING A120 <3,8,1,4,7,8,0>

*EASTING A130 <3,6,1,3,9,0>

*ZONE NUMBER A110 <+,1,2>

*ACCURACY

ACCURATE ACC (circle)

ESTIMATED EST <

GEODETIC

*LATITUDE A70 < - - N>

*LONGITUDE A80 < - - W>

CADASTRAL

*TOWNSHIP(S) A77 <0,1,3,N.:X, :X, :X,>

*RANGE(S) A78 <0,0,2,W.:X, :X, :X,>

*SECTION(S) A79 < 31 :X, :X,

*SECTION FRACTION(S) A76 < N2 OF NW

*MERIDIAN(S) A81 < GILA AND SALT RIVER

*POSITION FROM NEAREST PROMINENT LOCALITY A82 < 3.3 MILES NORTHWEST OF MAVERICK MTN

*LOCATION COMMENTS A83 < 1.2 MILES WEST OF RUTH MINE; APPROXIMATELY 1.3 MILES NORTH-NORTHWEST OF ORO FLAME MINE. UTM COORDINATES TO TUNNEL IN FAR NORTHEAST CORNER OF CLAIM.

* ESSENTIAL INFORMATION

+ ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

COMMODITY INFORMATION

*COMMODITIES PRESENT C10 < A,U, A,G, U, P,B, >
*ORE MINERALS C30 < GOLD, CHALCOPYRITE, GALENA, ALSO DESCRIBED "SELENITE" AND "BLACK TELLURIUM" >
COMMODITY SUBTYPES C41 <
*GEN. ANALYTICAL DATA C43 <
COM. INFO. COMMENTS C50 <

* SIGNIFICANCE

	PRODUCER		NON-PRODUCER	
MAJOR PRODUCTS	MAJOR < A,U, >		MAIN COMMODITIES PRESENT C11 < >	
MINOR PRODUCTS	MINOR < A,G, C,U, >		MINOR COMMODITIES PRESENT C12 < >	
POTENTIAL PRODUCTS	POTEN < P,B, >			
OCCURRENCES	OCCUR < >		OCCURRENCES	OCCUR < >

*PRODUCTION

PRODUCER	NON-PRODUCER
PRODUCTION (YES) (circle) PRODUCTION SIZE (SMU) MED LGE (circle one)	PRODUCTION UND NO (circle one)

EXPLORATION OR DEVELOPMENT

*STATUS

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 < D >	STATUS AND ACTIVITY A20 < >

*DISCOVERER L20 <
*YEAR OF DISCOVERY L10 < > *NATURE OF DISCOVERY L30 < B > *YEAR OF FIRST PRODUCTION L40 < 1931 > *YEAR OF LAST PRODUCTION L45 < 1932 >
*PRESENT/LAST OWNER A12 < LOUIS SCHRADE (1932) >
*PRESENT/LAST OPERATOR A13 <
EXPL./DEV.COMMENTS L110 < AMERICAN EAGLE CLAIM IS PART OF ORO FLAME GROUP. HOWEVER, AMERICAN EAGLE IS SEPARATE MINE FROM ORO FLAME >

DESCRIPTION OF DEPOSIT

*DEPOSIT TYPE(S) C40 < VEIN >
DEPOSIT FORM/SHAPE M10 < TABULAR >
*DEPTH TO TOP M20 < > *UNITS M21 < > *MAXIMUM LENGTH M40 < 1200 > *UNITS M41 < FT >
*DEPTH TO BOTTOM M30 < 100 > *UNITS M31 < FT > *MAXIMUM WIDTH M50 < 100 > *UNITS M51 < FT >
*DEPOSIT SIZE M15 < SMALL > M15 < MEDIUM > M15 < LARGE > (circle one) *MAXIMUM THICKNESS M60 < 8 > *UNITS M61 < FT >
*STRIKE M70 < APPROXIMATELY N 60 W > *DIP M80 < STEEPLY >
*DIRECTION OF PLUNGE M100 < > *PLUNGE M90 <
*DEP. DESC. COMMENTS M110 < MAXIMUM STOPE LENGTH ~ 50 FT LONG >

DESCRIPTION OF WORKINGS

*Workings are: SURFACE M120 UNDERGROUND (M130) BOTH M140 (circle one) *OVERALL LENGTH M190 < 780 > *UNITS M191 < FT >
*DEPTH BELOW SURFACE M160 < 120 > *UNITS M161 < FT > *OVERALL WIDTH M200 < > *UNITS M201 <
*LENGTH OF WORKINGS M170 < 780 > *UNITS M171 < FT > *OVERALL AREA M210 < > *UNITS M211 <
*DESC. OF WORK. COM. M220 < TUNNEL #1 = 325 FT LONG. TUNNEL #2 = 450 FT LONG >

GEOLOGY

*AGE OF HOST ROCK(S) K1 < P,R,O,T, U/PB ZIRCON DATE EQUAL TO 1770 MILLION YEARS >
*HOST ROCK TYPE(S) K1A < GRANODIORITE >
*AGE OF IGNEOUS ROCK(S) K2 < P,R,O,T, AS LINE K1 >
*IGNEOUS ROCK TYPE(S) K2A < GRANODIORITE >
*AGE OF MINERALIZATION K3 < L,C,R,E,T-,T,E,R,T, UNDATED, PROBABLY 75 TO 65 MILLION YEARS; POSSIBLY PRECAMBRIAN >
*PERT. MINERALS (NOT ORE) K4 < QUARTZ, PYRITE >
*ORE CONTROL/LOCUS K5 < FAULTING, SHEARING >
*MAJ. REG. TRENDS/STRUCT N5 < GRANODIORITE RATHER MASSIVE >
*TECTONIC SETTING N15 <
*SIGNIFICANT LOCAL STRUCT. N70 < VEINS TREND N30W TO N60W >
*SIGNIFICANT ALTERATION N75 < MINOR >
*PROCESS OF CONC./ENRICH. N80 < OXIDATION AND ENRICHMENT AT NEAR-SURFACE >
*FORMATION AGE N30 <
*FORMATION NAME N30A <
SECOND FM AGE N35 <
SECOND FM NAME N35A <
*IGNEOUS UNIT AGE N50 < P,R,O,T, U/PB ZIRCON EQUAL TO 1770 MILLION YEARS >
*IGNEOUS UNIT NAME N50A < GOVERNMENT CANYON GRANODIORITE >
SECOND IG UNIT AGE N55 <
SECOND IG UNIT NAME N55A <
GEOLOGY COMMENTS N85 < DEPOSIT IS QUARTZ VEIN WHICH CUTS PROTEROZOIC GRANODIORITE >

GENERAL COMMENTS

GENERAL COMMENTS GEN <

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA 85007

June 6, 1969

W. Arnold Freeman
232-E Ave P-5
Palmdale, California 93550

COPY

Dear Mr. Freeman:

Your letter to the Prescott Chamber of Commerce has been referred to this office for reply.

Our last mailing address on the Oro Flame Mining Co. was a post office box in Phoenix in 1953. The Arizona Corporation Commission advises us that the charter of the company was revoked November 3, 1965. At that time a Mrs. Sylvia Troyer of Prescott was statutory agent for the company.

Sorry not to be of more assistance in this matter.

Very truly yours,

FRANK P. KNIGHT, Director

by:
Adm. Assistant.

P

80M 12-50 Cairns

AMERICAN SMELTING AND REFINING COMPANY

EL PASO SMELTING WORKS

BOUGHT OF Oro Flame Mg. Co.
ADDRESS P. O. Box 6096 Phoenix, Arizona
SHIPPING POINT Prescott, Ariz.
NAME OF MINE

EL PASO, TEXAS, 7-19 19 51
SMELTER LOT 2011
SHIPPERS LOT
CLASSIFICATION Ore

RATES, EXCEPT ON CONTRACTS, SUBJECT TO CHANGE WITHOUT NOTICE

Mix	Arrival Date	Car Number	Car RR	Gross Weight	Containers No.	Containers Weight	Wet Weight	% H2O	Dry Weight
	7/10	169549	AT				73220	0.2	73074

Quotations		
Coinage Silver	90.0	¢ per oz.
Foreign "	90.16	¢ per oz.
Lead $	17.00	per cwt.
Copper		¢ per lb.

B/L Date:

Assays	Oz. per Ton Gold	Oz. per Ton Silver	Wet Lead %	Copper %	Insol %	SiO2 %	Iron %	Mn %	Lime %	Zinc %	S %	Al2O3 %	As %	Sb %	Bi %	%
Smelter O	0.87	2.2	3.0	0.15						2.0					0	
D	0.87	2.2	3.0	0.15												
	.87	2.2	3.0	.15												
Shipper																
Umpire																
Metallics																
Settle																

Values Per Ton

Payment	Pay Content	Price	Amount	Freight (Fixed)
Gold	.87	32.3185	28.12	
Silver, Less % Min. 5oz	1.7	.885	1.50	
Lead, Less @ %				
Copper, Less @ %				

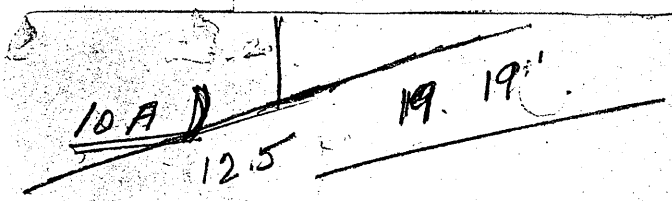
Deductions	Charge	Credit
Base, Incl. Labor Adj.	4.50	
Excess Value Over $	1.46	
¢ Per Unit Pb + − %		
Cu Deficiency @ .21	0751.05	
Lead—Copper Price Escalator		
Bullion Freight Tax		
Insol—Silica		
Iron—Lime		
Zinc		
As: Sb: Bi:		
Net Charge	7.01	

Gross Value	29.62		
Less Deductions (Net Charge)	7.01		
Freight Value	x x x	= 22.56 Wet Ton	
Net Value	22.61 @ 36.537	Dry Tons	
Less Freight: 36.61 Wet Tons @ 6.61	P.T. 241.99	Tax 7.26	

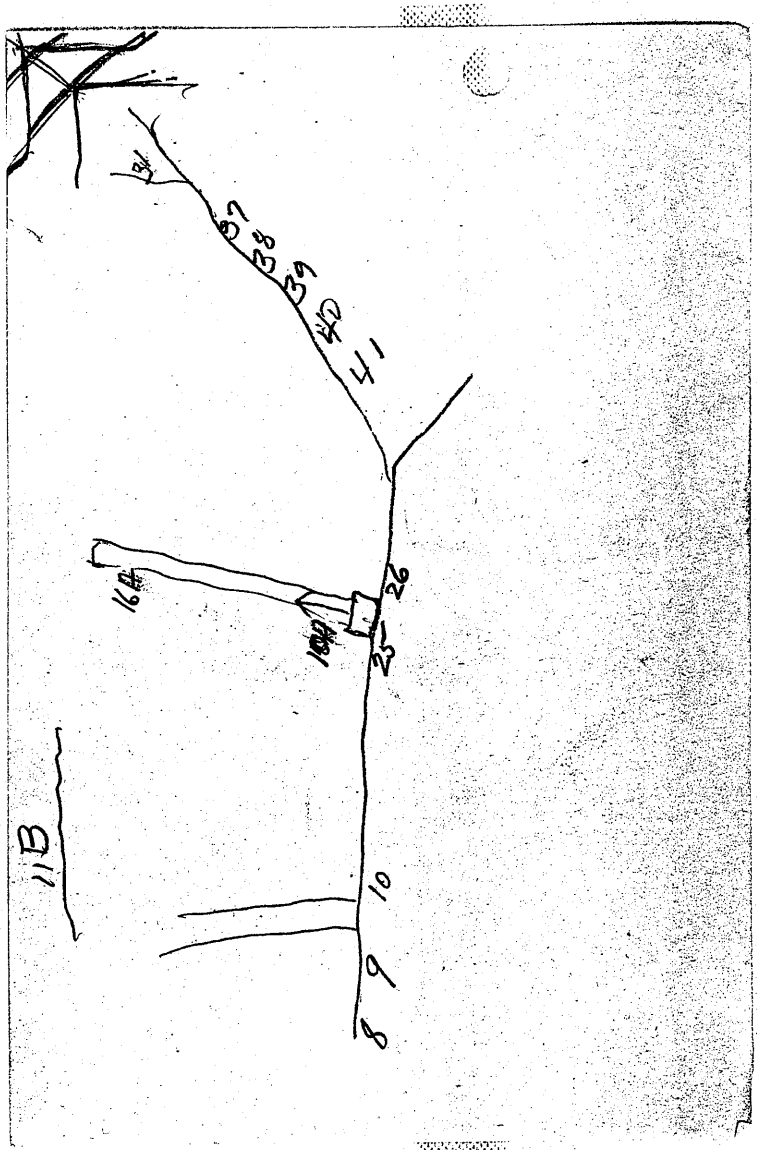
	Debits	Credits
Net Value		826.10
Tax	249.25	
Less Switching		
Less Hauling		
Less Representation $ Umpire $ Sampling $		
Amount Withheld Pending Receipt of Silver Affidavit H4241		
Less Royalty		
Balance Due Shipper	576.85	
	826.10	826.10

Checked Correct NER Approved

Nos 8-41 in main tunnel across back.
"A" samples in Phase
"B" samples in upper tunnel



16A	20.00
15A	37.00
14A.	17.00
13A	14.50
12A	11.00
11A	7.00
10A.	10.00
7 11	5.50 116.50



Results Car Load Shipments - Oro Flame Group of Mines

H.K. Grove Owner Prescott Arizona.

Date-	Tons.	Au	Ag	Cu	Pb	Si	Workings	Value	Net total Value
1928	49.2535	3.54	2.80	.46		77.	Oro Flame	70.7054	3383.98
1928	50.9945	.67	2.43	.47		74.	" "	14.5793	641.48
1928	43.283	.78	2.42	.55		71.2	" "	16.9391	646.61
1928	44.035	.71	2.40	.61		72.6	" "	15.7252	604.38
1928	49.554	.86	2.44	.55		69.	" "	18.4954	817.41
1928	45.124	.84	2.40	.55		71	" "	18.0824	725.70
1929	53.7275	.92	2.80	.71		68.6	" "	20.3291	984.78
1929	40.5605	.95	3.05	.85		71.6	" "	21.5170	791.62
1929	49.7575	.74	2.80	.55		70.	" "	16.4412	718.56
1929	46.592	.06	.70	4.73		40.2	" "	14.1828	567.62
1929	43.2135	.76	2.64	.53		71.6	" "	16.5505	628.78
1929	46.708	.98	2.90	.81		73.6	" "	21.7208	921.12
1929	39.6395	.66	2.10	1.02		69.	" "	15.7439	544.80
1929	40.4275	.91	2.80	.56		69.	" "	19.6161	712.17
1929	47.149	.88	2.40	.66		73.	" "	19.1311	807.71
1929	51.579	1.04	2.60	.54		72.	" "	21.9828	1030.69
1929	47.797	1.00	2.30	.57		72.	" "	21.1105	913.42
1929	43.7185	.93	2.10	.47		75.6	" "	19.3426	758.19
1929	46.718	.87	2.10	.62		74.8	" "	18.6076	775.87
1929	47.5	1.00	2.70	.47		75.	" "	20.9837	901.73
1929	49.2625	.97	2.30	.53		76.4	" "	20.3958	906.22
1929	48.213	.88	2.40	.49		75.4	" "	18.5670	798.74
1929	44.3025	.88	2.40	.62		73.0	" "	18.9498	750.92
1929	48.985	1.04	2.50	.80		74.0	" "	22.6451	1011.30
1929	47.134	.94	2.10	.54		72.2	" "	19.7278	835.58

#6

ORA FLAME - Continued

93 Cars - 3620 Tons valued $72,184.13

104 Tons concentrates valued $29,910.48

$102,094.61.

Notation. Several returns of car shipments have been lost or loaned and not returned by Mr Groves, that do not appear here.

These returns of 104 tons of concentrates were made from ore extracted from the Ora Grande Shaft. And approximately 90% of ore extracted was to the north of shaft and from the 200' Level up and above the 100 to within a few feet of surface. This ore body extended about 200 feet in length. 4 feet to 8 feet in width.

#4 Oro Flame Mining Corp (cont)

Date	Tons	Au	Ag	Cu	Pb	Sil	Workings	Val per Ton	Value Net
Forward	93.2590								69198.53
1936-conc	2.4595	6.23	4.4	1.43			Oro Grande	209.89	500.83
" "	1.4705	6.87	5.9	1.47	0.4		" "	231.56	332.42
" "	.063	91.95	35.1	.15	.5		" "	3102.95	195.12
" ore	11.1175	3.27	7.6	1.21		69.02	" "	111.82	1187.68
" (conc)	1.0750	3.94	1.5	.10			" "	130.06	133.47
1935 "	2.1390	10.70	12.8	1.37	2.6	27.8	" "	363.78	766.36
(conc)	(104.7568)							Concentrates	$29,910.48
Forward (ore)	2466.4298								
By Gross									
1938	37.1745	.58	4.2	.10		74.	Oro Flame	18.84	537.17
"	35.0165	.62	4.2			76.5	" "	20.04	541.71
"	36.5015	.57	38	.095			Oro Grande 300 Level	18.31	509.93
"	27.621	60	.39	0.115			Oro Grande 300 Level	19.27	408.79
1939	38.3725	1.045	2.42	.23			Oro Flame	35.27	1122.01
"	28.757	1.10	2.64	.29			" "	37.02	890.32
"	35.0165	131	2.87	0.295			" "	44.11	1322.22
"	29.601	.97	2.575	.22			" "	32.98	806.33
"	42.8075	.825	2.11	.225			" "	27.99	969.59
"	44.0155	.85	1.865	0.245			" "	28.62	1023.80
1940	14.236	.81	1.7	22	2.4	71.2	" "	27.32	331.98
"	28.7005	.982	2.85	.28	3.8	71.6	" "	33.65	732.37
"	28.8955	.815	2.30		3.10	81.4	" "	27.58	688.29
"	43.748	1.07	2.55		4.85		" "	36.00	1373.69

#3

Date	Tons	Au	Ag	Cu	Pb.	Si2.	Workings	Value per Ton	Value
Forwarded	2187.3451								38208.51
1932	27.72	.83	2.10	.38		71.	Oro Flame	16.7586	429.90
1932	52.63	.89	2.30	.39		70.6	" "	18.0023	881.67
1932	40.006	.61	3.20	.49		75.8	" "	12.8356	463.49
1932	31.977	.76	2.10	.54		74.0	" "	15.4927	455.44
1932	26.6705	.68	2.90	.71		75.4	" "	14.2228	345.99
1932	27.72	.83	2.10	.38		71.	" "	16.7586	429.90
1932	36.6895	.80	2.10	.16			" "	16.00	490.91
1932	36.551	1.10	2.50	.05			" "	21.98	698.12
	2466-4298								
1936 - Oro Flame Mining Corp. John L. Alexander									
1936 (Conc)	5.08	10.70	17.2	3.91	3.1	36.4	Oro Grande	368.81	1845.61
1936-(Conc)	4.4445	10.75	16.8	2.42	2.7	33.4	" "	368.94	1615.31
" "	5.0800	10.82	17.35	2.91	3.1	36.4	" "	373.17	1867.76
" "	4.3955	11.40	18.4	2.36	2.8	34.4	oxidized	392.47	1700.93
" "	6.1575	10.03	11.8	1.65	1.3	24.9	" oxidized	340.94	2065.47
" "	4.4045	9.40	9.4	1.13	1.2	25.3	" sulphide	317.66	1374.91
" "	5.7830	7.58	7.9	2.47	0.1	23.	Oro Grande	257.78	1455.68
" "	7.7135	7.90	7.8	3.35		18.4	" "	269.38	2035.44
" "	13.5145	8.54	7.8	2.87		16.1	" "	290.03	3845.28
" "	9.3370	8.88	8.2	1.85	1.8	22.00	" "	300.38	2753.29
" "	9.1515	6.17	5.6	1.16	0.8	18.04	" "	207.70	1850.43
" "	5.6580	10.06	6.00	1.00	0.4	24.00	" "	336.88	1874.95
" "	.7220	5.35	4.03	.88	0.4	16.2	" "	179.17	125.39

#2

Date	Tons	Au	Ag	Cu%	Pb	Sil	Workings	Val-per ton	Value
Forward →	1257.2840								23796.77
1930	49.223	.87	2.60	.54		.74	Oro Fino	18.4856	871.47
1930	45.877	.72	2.14	.38		80.56	" "	14.75	516.12
1930	51.688	1.00	2.80	.53		73.6	" "	20.9270	978.30
1930	48.2945	1.00	2.80	.56		68.2	" "	20.9913	917.18
1930	52.4835	.91	2.59	.40			" "	18.76	900.62
1930	50.6845	.76	2.60	.85		68.4	" "	16.6649	743.28
1930	44.345	.90	2.55	.24			" "	18.41	730.81
1930	45.027	.83	2.60	.29		79.4	" "	17.0341	676.94
1930	33.866	.81	2.80	.55		76.	" "	16.9905	533.07
1930	49.014	.89	2.63	.18			" "	18.20	794.03
1930	51.077	.91	2.35	.16			" "	18.53	844.30
1930	42.867	65	2.05	.44		71.2	" "	13.4498	522.97
1930	32.3275	.66	2.24	.41		71.	" "	13.6533	400.97
1930	32.1255	.78	2.90	.72		72.4	" "	16.6320	509.54
1930	26.934	1.10	3.30	.64		71.	" "	22.9717	585.05
1930	26.017	84	2.66	.57		74.4	" "	17.5118	423.08
1939.1345									
1931	34.264	.93	2.87	.49		74.	" "	19.1149	612.12
1931	46.696	.76	2.74	.51		67.4	" "	15.6594	637.84
1931	35.374	.70	2.30	.69		70.	" "	14.5535	470.60
1931	49.893	.79	.905	.30			" "	15.53	695.01
1931	46.696	.76	2.74	.51		67.4	" "	15.6594	637.84
1931	35.374	.70	2.30	.69		70.	" "	14.5535	470.60

#5

Date	Tons	Au	Ag	Cu	Pb	Si%	Markings	Value per Ton	Value
Forward	2987.2843								$84890.24
1940	32.4125	.88	2.06		3.85	78	Oro Plume	29.52	878.79
"	35.333	.96	2.05	.38	3.10	69.1	" "	37.10	985.44
"	38.709	.99	2.66	.18		74.1	" "	33.49	1129.98
"	9.6325	.845	2.1	.20	2.4	72.2	" "	28.72	238.12
"	25.1755	.80	2.00	.73		61.3	" "	27.40	595.65
"	25.255	1.20	2.60	.12	2.95	77.3	" "	40.23	889.75
"	26.720	1.09	2.35	.18	3.15	78.5	" "	36.51	851.30
1941	32.5185	.59	1.44				" "	19.72	544.68
"	38.3425	.92	3.00	.30	3.20	76.5	" "	31.46	1047.13
"	38.0455	.88	3.05	.25	3.20	76.8	" "	30.52	1007.06
"	34.0065	.998	3.05	.20	3.45	73.7	" "	34.01	1006.93
"	34.1945	.985	3.16		3.80	77.8	" "	33.67	1001.90
"	37.402	.98	3.44	.36	3.85	75.1	" "	33.70	1097.00
"	36.927	1.045	3.20	.27	4.80	76.3	" "	35.64	1147.69
"	38.511	.95	2.80	.20	30	72.6	" "	32.29	1080.62
"	32.7095	1.014	2.50	.20		69.7	" "	34.15	972.45
"	38.4585	.48	1.40					16.13	519.96
1942	28.370	.79	2.70	.23	3.25	73.9	" "	27.05	662.15
"	32.710	1.06	3.25	.35	3.20	74.8	" "	36.16	1019.29
"	17.424	1.07	3.9	.30	4.03	75.	" "	37.20	578.48
Grand Total	3620.5013 Tons								$102,094.61

ARIZONA TESTING LABORATORIES

PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX

Chemists . . . Engineers

For Oro Flame Mining Company

Date October 19, 1951

Sample of Ore

Received:

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $35.00 per ounce.

Silver figured at $0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value	Copper	Lead
84131	#6					0.05	0.20
84139	#7					0.40	
84132	#9					0.20	0.30
84140	#10A					0.10	
84133	#11A					0.20	0.40
84141	#13					0.10	
84134	#14A					0.20	1.20
84142	#15A					0.10	
84143	#19					0.10	
84144	#21					0.05	
84145	#26					0.30	
84135	#28					0.10	0.10
84136	#33					0.05	0.10
84137	#35					0.05	0.10
84146	#36					0.10	
84138	#41					0.10	0.10

REGISTERED ASSAYER CERTIFICATE EXPIRES CLAUDE E. McLEAN DEC. 31, 1951 ARIZONA, U.S.A.

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean

Charges: $ 30.00

ARIZONA TESTING LABORATORIES
PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX
Chemists . . . Engineers

For Oro Flame Mining Company

Date October 19, 1951

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		Oz. per Ton	Value	Oz. per Ton	Value	Copper	Lead
84131	#6					0.05	0.20
84139	#7					0.40	
84132	#9					0.20	0.30
84140	#10A					0.10	
84133	#11A					0.20	0.40
84141	#13					0.10	
84134	#14A					0.20	1.20
84142	#15A					0.10	
84143	#19					0.10	
84144	#21					0.05	
84145	#26					0.30	
84135	#28					0.10	0.10
84136	#33					0.05	0.10
84137	#35					0.05	0.10
84146	#36					0.10	
84138	#41					0.10	0.10

REGISTERED ASSAYER
CERTIFICATE EXPIRES
CLAUDE E. McLEAN
DEC. 31, 1951
ARIZONA, U. S. A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Charges: $ 30.00

Claude E. McLean

ARIZONA TESTING LABORATORIES
PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX
Chemists . . . Engineers

For Oro Flame Mining Company Date October 16, 1951

Sample of Ore Received:

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $ 35.00 per ounce. Silver figured at $ 0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value		
84079	R-26	0.18	$6.30				

REGISTERED ASSAYER CERTIFICATE EXPIRES CLAUDE E. McLEAN DEC. 31, 19[illegible] ARIZONA, U.S.A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Charges: $ 1.25

Claude E. McLean

ARIZONA TESTING LABORATORIES
PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX
Chemists . . . Engineers

For Oro Flame Mining Company
Mr. Frank Harmonson
1217 W. Jefferson
Phoenix, Arizona

Date October 15, 1951

Sample of Ore

Received:

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $ 35.00 per ounce. Silver figured at $ 0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value		
83870	#26 original Pulp	0.18	$6.30				

REGISTERED ASSAYER CERTIFICATE EXPIRES CLAUDE E. McLEAN DEC. 31, 19[illegible] ARIZONA, U.S.A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Charges: $ ~~1.25~~ no charge

ATL
ARIZONA TESTING LABORATORIES
PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX
Chemists . . . Engineers

For Oro Flame Mining Company

Date October 16, 1951

Sample of Ore

Received:

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $ 35.00 per ounce.

Silver figured at $ 0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value		
84079	R-26	0.18	$6.30				

REGISTERED ASSAYER
CERTIFICATE EXPIRES
CLAUDE E. McLEAN
DEC. 31, 19[illegible]
ARIZONA, U. S. A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Charges: $ 1.25

ARIZONA TESTING LABORATORIES
PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX
Chemists . . . Engineers

For Oro Flame Mining Co.
% Mr. Frank Harmonson
1217 W. Jefferson
Phoenix, Arizona

Date October 10, 1951

Sample of Ore

Received:

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $ 35.00 per ounce. Silver figured at $0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value	Lead	
83793	#6-Ore dump, General	0.36	$12.60	0.40	$0.36		
83761	#11B-Contact 35" across face top level	0.36	$12.60	3.20	$2.88		
83779	#10B-92" cross sec.	0.52	$18.20	0.90	$0.81		
83780	#12B-out crop 18" across vein	0.54	$18.90	0.60	$0.54		
83781	#21-57" back,Floor 1	0.01	$ 0.35	0.80	$0.72	0.20	
83782	#22-Floor 1,Back 51"	0.01	$ 0.35	0.60	$0.54		
83783	#23-Floor 1,Back 57"	0.01	$ 0.35	0.40	$0.36		
83784	#24-Floor1, 70"	0.01	$ 0.35	0.60	$0.54		

REGISTERED ASSAYER
CERTIFICATE EXPIRES
CLAUDE E. McLEAN
DEC. 31, 1951
ARIZONA, U.S.A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Charges: $ 13.00

ARIZONA TESTING LABORATORIES
PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX
Chemists . . . Engineers

For Oro Flame Mining Co.
% Mr. Frank Harmonson
1217 W. Jefferson
Phoenix, Arizona

Date October 10, 1951

Received:

Sample of Ore

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $35.00 per ounce. Silver figured at $0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value	Lead	
83785	#25-Floor 1,Back 45"	0.16	$ 5.60	0.40	$0.36		
83786	#26-Floor 1,Back 50"	0.18	$ 6.30	1.60	$1.44	1.05	
83787	#27-Floor 1,Back 44"	0.01	$ 0.35	0.40	$0.36		
83794	#28-Floor 1,Back 70"	0.04	$ 1.40	0.40	$0.36		
83788	#29-Floor 1,Back 75"	0.04	$ 1.40	0.20	$0.18		
83789	#30-Floor 1, 66"	0.02	$ 0.70	0.20	$0.18		
83790	#31-Floor 1,Back 48"	0.28	$ 9.80	0.90	$0.81	0.75	
83791	#31A-Floor 1 face	0.08	$ 2.80	0.60	$0.54		
83795	#32-Floor 1,Back 60"	0.01	$ 0.35	0.20	$0.18		
83796	#33- Back 63"	0.28	$ 9.80	0.30	$0.27		

REGISTERED ASSAYER
CERTIFICATE EXPIRES
CLAUDE E. McLEAN
DEC. 31, 1951
ARIZONA, U.S.A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Charges: $ 17.00

ARIZONA TESTING LABORATORIES
PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX
Chemists . . . Engineers

For Oro Flame Mining Co.
% Mr. Frank Harmonson
1217 W. Jefferson
Phoenix, Arizona

Date October 10, 1951

Sample of Ore

Received:

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $35.00 per ounce. Silver figured at $0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value	Lead	
83792	mark Hasted #34-Floor 1,Back 60"	0.02	$0.70	0.40	$0.36		
83762	#35- Back 45"	0.12	$4.20	0.80	$0.72		
83763	#36- Back 50"	0.01	$0.35	0.60	$0.54	0.10	
83797	#37-Floor 1,Back 55"	0.02	$0.70	0.40	$0.36		
83764	#38-Floor 1,Back 50"	0.01	$0.35	0.80	$0.72		
83765	#39-Floor 1,Back 65"	0.01	$0.35	0.20	$0.18		
83798	#40-Floor 1,Back 70"	0.01	$0.35	0.20	$0.18		
83766	#41-Floor 1,Back 70"	0.60	$21.00	0.40	$0.36	0.10	
83767	#42-Floor 1, Survey area 30" cross sec.	0.28	$9.80	0.30	$0.27		

exp 30

REGISTERED ASSAYER
CERTIFICATE EXPIRES
CLAUDE E. McLEAN
DEC. 31, 1951
ARIZONA, U. S. A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Charges: $ 15.50

ARIZONA TESTING LABORATORIES
PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX
Chemists . . . Engineers

For Oro Flame Mining Company
Mr. Frank Harmonson
1217 W. Jefferson
Phoenix, Arizona

Date October 3, 1951

Sample of Ore

Received:

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $35.00 per ounce.

Silver figured at $0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value	Lead	
83675	Ore dump outside all over pile	0.76	$26.60	3.40	$3.06	1.60	
83676	#8 - back 37"	0.06	$ 2.10	0.80	$0.72		
83677	#9 - back 48"	0.08	$ 2.80	1.00	$0.90		
83678	#10 - Floor #1 - 63" back	0.06	$ 2.10	0.80	$0.72		
83679	#10A - Upraise 58"	0.28	$ 9.80	0.70	$0.63	0.70	
83680	#11 - Floor #1 - 57" back	0.04	$ 1.40	0.60	$0.54		
83681	#11A - Upraise 45"face	0.16	$ 5.60	1.20	$1.08		
83682	#12 - Floor #1 - 35" back	0.08	$ 2.80	1.20	$1.08		
83683	#12A - Upraise 45"face	0.28	$ 9.80	1.50	$1.35		
83684	#13 Floor #1 - 67" back	0.06	$ 2.10	1.60	$1.44	0.40	
83685	#13A - Upraise 40" Cross sec. vein	0.36	$12.60	2.00	$1.80		

REGISTERED ASSAYER
CERTIFICATE EXPIRES
CLAUDE E. McLEAN
DEC. 31, 1951
ARIZONA, U.S.A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Charges: $ 19.50

ARIZONA TESTING LABORATORIES
PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX
Chemists . . . Engineers

For Oro Flame Mining Company
% Mr. Frank Harmonson
1217 W. Jefferson
Phoenix, Arizona

Date October 3, 1951

Received:

Sample of Ore

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $35.00 per ounce. Silver figured at $ 0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value	Lead	
83686	#14 - Floor #1 - 68" back	0.10	$ 3.50	1.20	$1.08		
83687	#14A - Upraise 30"- Cross sed. Vein	0.44	$15.40	1.60	$1.44		
83688	#15 - Floor #1 - 63" back	0.06	$ 2.10	1.20	$1.08		
83689	#15A - Upraise 25" Cross sec. vein	1.00	$35.00	1.20	$1.08	2.20	
83690	#16 - Floor #1 - 65" back	0.04	$ 1.40	1.40	$1.26		
83697	#16A - Upraise 30" - Cross sec. vein	0.52	$18.20	1.00	$0.90		
83698	#17 - Floor #1 - 61" back	0.04	$ 1.40	1.20	$1.08		
83699	#18 - Floor #1 - 56" back	0.02	$ 0.70	1.20	$1.08		
83700	#19 - Floor #1 - 26" back	0.01	$ 0.35	0.60	$0.54	0.60	
83701	#20 - Floor #1 - 30" back	0.04	$ 1.40	0.40	$0.36		

REGISTERED ASSAYER
CERTIFICATE EXPIRES
CLAUDE E. McLEAN
DEC. 31, 19 51
ARIZONA, U.S.A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Charges: $ 17.00

ARIZONA TESTING LABORATORIES

PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX

Chemists . . . Engineers

For Oro Flame Mining Company

Date October 18, 1951

Sample of Ore

Received:

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $35.00 per ounce.

Silver figured at $0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value	Copper	Lead
84114	#N15	0.60	$21.00	0.60	$0.54		
84115	#N26	0.62	$21.70	1.20	$1.08	0.30	1.40

REGISTERED ASSAYER
CERTIFICATE EXPIRES
CLAUDE E. McLEAN
DEC. 31, 19[illegible]
ARIZONA, U.S.A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Charges: $ 5.00

ARIZONA TESTING LABORATORIES
PHONE 3-6272 ~~823 E. VAN BUREN~~ 817 W. Madison P. O. BOX 1888 · PHOENIX
Chemists . . . Engineers

For Oro Flame Mining Company

Date October 18, 1951

Sample of Ore

Received:

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $35.00 per ounce.

Silver figured at $0.90 per ounce.

Lab. No.	Identification	Gold		Silver		Percentages	
		Oz. per Ton	Value	Oz. per Ton	Value	Copper	Lead
84114	#N15	0.60	$21.00	0.60	$0.54		
84115	#N26	0.62	$21.70	1.20	$1.08	0.30	1.40

REGISTERED ASSAYER
CERTIFICATE EXPIRES
CLAUDE E. McLEAN
DEC. 31, 19 51
ARIZONA, U.S.A.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Charges: $ 5.00

Report on the

AMERICAN EAGLE MINE

by

Francis J. Hobson, E. M.

Arizona Copper and Mining Corporation,

Prescott, Arizona. T12N, 2 & Sec 20, 29
T13N R2W Sec 31

Supplementing my report on your property of April, 1917, I herewith submit the following:

In June of last year work was commenced sinking a double compartment shaft on the Golden claim, which has now attained the depth of 650 feet. The shaft was sunk in diorite intrusive alongside of one of the reefs of sericite schist in which we expected to find the ore deposits. At about 200 feet from the surface seams and cracks in the diorite schist exposed copper pyrite mineralization, but no cross cutting was done until a depth of 500 feet had been reached.

At this point cross cuts were run east and west as shown on annexed drawings No. 12-A and 15. Seventeen feet west of the shaft in the cross cut an ore body was encountered fourteen feet wide, assaying an average for the entire width of 4.2 % copper, the copper occuring chiefly as chalcopyrite together with some bornite.

Fifty-five feet from the shaft, eight feet of siliceous ore was encountered carrying some copper, gold and silver. The quartz has associated with it considerable iron oxide, its whole general character indicating the near proximity of pay ore. The schist between the ore bodies, and continuing to the next flow rock, shows much evidence of leaching, all assaying a small amount of gold and silver.

The face of the cross cut, ninety-eight feet from the shaft, is reached through the last named intrusive sheet to the sericite schist to the west. A diamond drill hole was bored for two hundred and fifty feet to the west. The drillings of the first ten feet showed some copper, gold and silver, and then thoroughly leached schist to another intrusive reef. To the west of the last diorite and quartzite (which had shown twenty-five feet on the surface and was cut twelve feet wide on this level) to the diorite mass forming the footwall of the system, more than one hundred feet of thoroughly leached sericite schist, assaying gold, silver and copper, was encountered. Although less than commercial grade, it is conclusive evidence that increased depth will expose commercial ore bodies in this sericite reef.

Exhibit G.

The cross cut to the east was driven out of the diorite, in which the shaft was sunk, to a thirty foot mineralized reef of sericite schist, the last eight feet of which assayed some gold, silver and copper, and shows much evidence of leaching.

On the 500 foot level drifts north and south have been run on the ore bodies. The drift to the north at about fifty feet arrived at the apparent limit of the ore lense, but the drift to the south continues in ore for its entire length, and good ore still shows in the face, demonstrating that this lense will prove to be one of considerable consequence and a large producer of ore of a commercial grade.

At the 600 foot level the cross cut is being made to the west, which at this writing has attained a length of forty-one feet from the edge of the shaft. A few feet from the edge of the shaft ore was encountered, but owing to the nature of the ground a drift could not be started on it at the point of intersection, consequently drifts were started at the side of the best of the ore twelve feet from the edge of the shaft. These drifts have been turned back into the ore, the one to the north being now twenty-one and a half feet from the cross cut, and the south drift in twenty-four feet from the cross cut, both faces north and south showing ore of good value.

The cross cut to the west of the north and south drifts has cut several stringers of copper ore and it is the present intention to continue it until ore body No.2 is encountered. If ore body No.2 maintains its relative position to ore body No.1 on this level the same as that on the 500 foot level, it should be encountered within the next ten feet.

The annexed drawing No.15 shows the location of samples taken on the 500 and 600 foot levels. These assays fully confirm the opinion that the ore so far developed is of a profitable milling grade and includes bunches of ore of a shipping grade. The assays are as follows, the index number being marked on the map.

Sample	Copper Percent
A	3.4
B	5.6
C	4.7
D	4.0
E	4.25
F	4.7
G	5.8
H	1.5
I	7.25
K	2.75
L	0.5
M	7.2
N	8.35
O	7.7
P (High grade on 600' level)	13.9
R (" " " " ")	15.45
S (15" streak " " ")	11.65

The development so far done insures the making of a mine of great importance, taking into consideration the character of the mineralization and the nature of the ore deposits. In the district an ore lense of this size has never been bottomed, the almost invariable rule being that with increased depth similar deposits increase in length, breadth and value, up to a certain limit. The ore bodies near their apex are smaller because of partial leaching. The Blue Bell Mine shows ore body No. 1 increased in width from four feet on the top levels to twenty-eight feet on the 1000 foot level. Its length increases from two hundred and seventy five feet on the 200 foot level to four hundred and twenty five feet on the 1000 foot level. The No. 5 ore body in the same mine, on the 300 foot level is fifty feet long and eight feet wide, on the 1000 foot level it is more than four hundred feet long and forty feet wide. A characteristic of ore lenses below the leached areas is uniformity in length, width and copper content.

Sufficient ore has been developed to justify the installation of a one hundred and fifty ton unit of a concentration plant. With such a plant the production of copper should be from five to six tons daily from the grade of ore exposed. Practically no profit could be made shipping this grade of ore to the smelter after paying freight, treatment, and penalties on the barren rock, which would be largely removed by concentration. St the Binghampton Mine all ore assaying less than twelve percent copper, as broken in the mine, is run throught the concentration plant, while ore of higher grade, which can be mined separately, is shipped direct to the smelter.

The cost of grinding and concentrating ores of similar character at the neighboring Binghampton Mine, is less than two dollars per ton. There the daily capacity is approximately the same as contemplated for the American Eagle Mine. The cost of mining at the Binghampton, including development of new ore bodies, is four dollars per ton. Consequently we may estimate cost for our mining and milling at the same figure, although they will be somewhat less here as the Binghampton has a five mile haul for supplies and concentrates to the railroad. With the present price of copper twenty-six cents per pound and silver at one dollar per ounce, four percent ore (the grade which I estimate we will mill, although the assays show a somewhat higher average) would be a gross value of $21.80 per ton. Estimating a saving of ninety percent in the concentrator (the saving at the Binghampton is ninety three percent) the gross saving would be $19.62 per ton. Deducting from this mining and milling cost of $6 per ton and $3.60 per t ton for marketing the concentrates(five cents per pound of copper content) the net profit on this grade of ore would be $10.02 per ton. This grade of ore would leave no profit shipping directly to the smelter.

Everything is available for plant operation including electric power, an abundance of water, and immediate proximity to the railroad and to a customs smelter.

The cost of a one hundred and fifty ton concentrator, utilizing used machinery obtainable in the immediate neighborhood, should not exceed $40,000 and by the time the plant can be completed, all preparations for stoping the ore can be made in the mine. In normal times the advisable mode of proceedure would be further development before building a concentrator, but considering the present great need of copper and the need of applying all possible labor to actual copper production, the writer recommends the immediate installation of the plant and the postponing of further development, except on No. 1 ore body, until the plant is in operation.

Yours very truly,

(Signed) F. J. Hobson,

Consulting Engineer.

October 15, 1918.

7

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date Oct. 10, 1939

Mine Oro Flame - Sterling

Engineer ~~Carl G. Burk Jr.~~

District Hassayampa

Location On Hassayampa River 10 miles S.E. Prescott

Former name "

Owner Grove & Sons Mining Co.

Address Prescott

Operator Same

Address

President H.K. Grove

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold. Silver

Men Employed

Production Rate

Mill: Type & Cap.

Power: Amt. & Type Portable Compressor

Operations: Present

Leasing

Operations Planned

Number Claims, Title, etc.

7 Patented

Description: Topog. & Geog.

Steep slope of Hassayampa River

Mine Workings: Amt. & Condition

320' shaft - several hundred feet Tunnels & drifts.

(over)

Geology & Mineralization

Schists, intruded by Diorite & Granite
Vein N 20° W Dip 76° N.E.
Quartz – irregular bunches & masses galena & pyrite

Ore: Positive & Probable, Ore Dumps, Tailings

Mine, Mill Equipment & Flow Sheet

Last Mill dismantled - building remains

Road Conditions, Route

Good – 6 miles south of Prescott, to Wolf Creek Road 3 miles to Mine

Water Supply

Hassayampa River

Brief History

Located 1866 – Operated by various companies & leasers. 50 Ton Flotation Mill operated 1934 by Fields & Alexander. $200,000 prod. 1930

Special Problems, Reports Filed

Remarks

R.F.C. Loan $13,500. Lease from R.F.C on a 10% Royalty by H.K. Grove & doing well – shipping 1 car per month to date.

If property for sale: Price, terms and address to negotiate.

Signed Carl G. Barish Jr

Use additional sheets if necessary. Separate sheets on each problem.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Oct. 10, 1939

1. Mine ORO FLAME STERLING
2. Mining District & County Hassayampa
3. Former name Hassayampa
4. Location On Hassayampa River 17 miles SE Prescott
5. Owner Grove and Sons Mining Co.
6. Address (Owner) Prescott
7. Operator Same
8. Address (Operator)
9. President H. K. Grove
10. Gen. Mgr.
11. Mine Supt. H. K. Grove
12. Mill Supt.
13. Principal Metals Gold, Silver
14. Men Employed
15. Production Rate
16. Mill: Type & Cap.
17. Power: Amt. & Type Portable, Compressor
18. Operations: Present Leasing
19. Operations Planned
20. Number Claims, Title, etc. 7 patented
21. Description: Topography & Geography Steep slope of Hassayampa River
22. Mine Workings: Amt. & Condition 320' shaft, several hundred feet Tunnels and drifts

(over)

23. Geology & Mineralization Schists intruded by diorite and granite
Vein N 20° W Dip 76° NE
Quartz - irregular bunches - masses galena and pyrite

24. Ore: Positive & Probable, Ore Dumps, Tailings

24-A Vein Width, Length, Value, etc.

25. Mine, Mill Equipment & Flow Sheet Last mill dismanted building remains

26. Road Conditions, Route Good 6 miles south of Prescott, to Wolf Creek Road 3 miles to mine

27. Water Supply Hassayampa River

28. Brief History Located 1866, operated by various companies and leasers.
50 ton flotation mill operated 1934 by Fields and Alexander.
$200,000 Prod. 1930

29. Special Problems, Reports Filed

30. Remarks REC Loan $13,500. Lease from RFC on a 10% royalty by H. K. Grove & doing well shipping 1 car per month to date.

31. If property for sale: Price, terms and address to negotiate.

32. Signed CARL G. BARTH, JR.

33. Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Oct. 10, 1939

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2. Mining District & County Hassayampa
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24-A Vein Width, Length, Value, etc.

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shipping 1 car per month to date.

31. If property for sale: Price, terms and address to negotiate.

32. Signed CARL G. BARTH, JR.

33. Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

OWNERS MINE REPORT

Date Oct. 10, 1939

1. Mine ORO FLAME STERLING
2. Mining District & County Hassayampa
3. Former name Hassayampa
4. Location On Hassayampa River 17 miles SE Prescott
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7. Operator Same
8. Address (Operator)
9. President H. K. Grove
10. Gen. Mgr.
11. Mine Supt. H. K. Grove
12. Mill Supt.
13. Principal Metals Gold, Silver
14. Men Employed
15. Production Rate
16. Mill: Type & Cap.
17. Power: Amt. & Type Portable, Compressor
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19. Operations Planned
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(over)

23. Geology & Mineralization Schists intruded by diorite and granite
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30. Remarks RFC Loan $13,500. Lease from RFC on a 10% royalty by H. K. Grove & doing well shipping 1 car per month to date.

31. If property for sale: Price, terms and address to negotiate.

32. Signed CARL C. BARTH, JR.

33. Use additional sheets if necessary.

BURNETT, JAY (OWNER) 6-8- ?
St. Michael Hotel
Prescott, Arizona

MINE - STERLING, 8 Mi. S of Prescott - adjoins Oro Flame - Yavapai Co.

Sold to Luther Elkins, 315 Montgomery St. Rm. 421, San Francisco Calif.

ELKINS, LUTHER (OWNER) 6-8-?
315 Montgomery St.
Rm. 421,
San Francisco, Calif.

MINE - STERLING, 8 Mi. S of Prescott - adjoins Oro Flame-
Yavapai County.

DEPARTMENT OF MINERAL RESOURCES

News Items

Date 6/8

Mine STERLING

Location 8 MILES S OF PRESCOTT
ADJOINS ORO FLAME

Owner JAY BURNETTE

Address ST MICHAEL HOTEL
PRESCOTT ARIZ

Operating Co. SOLD TO LUTHER ELKINS

Address 315 MONTGOMERY ST.
RM 421 - SAN FRANCISCO

Pres.

Genl. Mgr. PLAN TO INSTAL

Mine Supt. 50 TON FLOTATION MILL

Mill Supt.

Principal Metals GOLD & SILVER.

Men Employed NONE PENDING

Production Rate FINANCING MILL

Mill, Type & Capacity

Power, Amt. & Type

Signed JBC

(Over)

DEPARTMENT OF MINERAL RESOURCES

News Items

Date Mch. 11/40

Mine Oro Flame

Location Hassayampa Dist

Owner Grove & Sons Mng Co

Address Prescott

Operating Co. Gordon Leof

Address Los Angeles Calif.

Res. Prescott

Pres. Lessor —

Genl. Mgr. Lease & Option

Mine Supt.

Mill Supt.

Principal Metals Au, Ag, Cu

Men Employed 9

Production Rate Development

Mill, Type & Capacity

210' Compressor

Power, Amt. & Type

Signed Barth

(Over)

DEPARTMENT OF MINERAL RESOURCES.

News Items

Date Aug. 10, 39

Mine Oro Flame

Location 10 mi S. E. Prescott

Owner R.F.C. & Grove & Sons

Address Mining Co

Prescott

Operating Co. Lease by

Address Grove & Sons.

Pres.

Genl. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Au - Ag

Men Employed

Production Rate

Mill, Type & Capacity

Power, Amt. & Type Portable Compressor

Signed Barth

(Over)

NOTES RE ORO FLAMME MINE

By G. M. Colvocoresses --- June 27th, 1938

I visited this property in December 1933 and again, - for the purpose of witting an up-to-date statement, - in June 24th, 1938.

The property is located on the Hassayampa River, 10 miles by road from Prescott, - last two miles of road is rather poor. The elevation is about 5000 feet.

It consists of 7 patented claims only three of which are described in the enclosed reports, owned by W. F. and H. K. Grove (father and son) of Prescott, subject to a mortgage for $11,000 in favor of the R. F. C. except for which I am assured that the title is clear. A contract has now been made with the R. F. C. whereby the Groves or their assign can work the mine without interference with payment of 10% royalty to R.F.C. to apply on repayment of the mortgage.

The Groves would also want a minimum royalty or rental of about $100 per month on a long term lease with provision for increase of royalty or rental after the mortgage is satisfied and would give option to purchase at any time for $100,000 from which payment they would clear the mortgage. This price could probably be reduced.

The shafts and some of the underground workings (except on the Ohio Claim) are in good condition and accessible for sampling and there is a large mill building with ore bins in good condition.

They have a good hoist at the Oro Grande Shaft, good head frame and bins with track to mill, a portable Ingersoll Rand Compressor, - suitable for development work, - blacksmith shop with I. R. drill sharpener and heating furnace and adequate camp buildings and living accommodations for a small crew. The Central Arizona Power line is 4 miles distant and connection would have to be made or a Diesel plant installed. Water is obtained from the river with lift 120' to mill through a 250' pipe line, but new pump and pipe would be required. Water supply is said to be ample

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except during three or four weeks each year. A small spring furnishes domestic water.

There is a Western oil engine in the mill but it does not belong to Grove and is old and inefficient.

A portion of this mine (on the Ohio Claims and further north) was worked in the 90's or earlier and much high grade ore is said to have been shipped while lesser grade ore was treated in a stamp mill by amalgamation. The recovery is reported to have been poor and no records of production are available.

In the early 1900's the property was acquired by a man named Tomlinson who opened up the vein on the Oro Grande and Ore Flamme claims and shipped considerable ore containing 1 oz. or more of gold per ton. Grove purchased the mine in about 1929 and leased to a stock selling company headed by Kirkbride who did some development but failed during the depression and Grove resumed possession and successively leased with option to purchase to two local concerns, the first of which built the present mill building but could not make a proper recovery of values. The second company altered the mill and recovered about 93% of values by flotation but did little development work and soon ran out of pay ore and money and their mill machinery was sold and removed.

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The recent history of the mine is certainly not favorable but knowing something of the owners and the parties who previously operated I believe that the repeated failures since 1933 were due to improper financing and poor management while prior to that date the lower value of the gold content would not appear to have made the venture attractive from any conservative mining standpoint. The mine as it stands today should be considered on its merits.

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Without attempting to describe in detail the present workings and ore showings which are fairly well represented on a set of maps that I have examined and of which copies can be secured, I may say that the owners now claim a positive and highly probables: -

In the Oro Framme	5000 @ 16.00
In the Oro Grande	17000 @ 10.00
In the Ohio	6000 @ 14.00
Total	28,000

In addition they claim in small showings some 2,000 tons of $20.00 ore, say a total of 30,000 tons averaging $12.00 or better. The values are based in part on the record of shipments and last mill operations but largely on the sampling of the R. F. C. engineers. The average width of this ore where I examined it, may be taken as slightly in excess of 3' and I should roughly estimate that working costs would be as follows:

Mining & current development	$4.00
Milling with concentration 30-1	1.75
Freight, treatment of concentrates,etc.	1.25
Overhead and general	1.00
Total	$8.00

Leaving a net profit of $3.00 per ton on a recovered value of $11.00.

COPY

The chances for developing a much larger tonnage appear to be excellent, especially in the Ohio where the old workings indicate greater average width of values and cleaning out the old adit drifts and connecting them up with raises might well serve to prove up an addition of nearly 100,000 tons of ore.

The further sinking of the Oro Grande Shaft for 100' with connection along the vein to the Oro Flamme would also serve to develop the downward extensions of two shoots in which some 20,000 tons might be expected and drifting from the Oro Grande to the Ohio would develop a virgin territory along the vein in which other shoots may reasonably be found.

In addition the workings on the Sterling Claims and in the hanging wall veins, which I did not visit, are said to indicate over 10,000 tons of $15.00 ore but ore from the Sterling would have to be trucked some distance to the mill.

The record of the last mill operations in late '35 and '36 indicate a very poor mechanical condition with high percentage of lost time but the recovery of values appears to have been 93% and the ratio of concentration from 25 to 1 to 30 to 1 depending largely upon the percentage of sulphides in the ore.

My general opinion of this mine is favorable, - subject to a more thorough investigation which I believe to be justified. The last development work on the 300' level fromthe Oro Grande shaft was discouraging since the vein had been faulted and broken up by the intrusion of the porphyry but I think that this disturbance will prove to be local and ore may be expected at a lower level. In other portions of the mine it appeared that there were excellent changes of proving up large additional reserves of ore and that this could be done with comparatively small expense. Some of the ore makes out into the diorite away from the contact.

The terms on which the mine would be obtained appear to be reasonable and the sampling by the R.F.C. engineers may be taken as generally reliable although this should be checked to some extent and additional samples taken in other portions of the mine.

The vein is not uniformly mineralized and the pay ore occurs in shoots, as

COPY

is the case with practically all mines in the Bradshaws, but these seem to have sufficient length and width to form the basis for a profitable mining operation and give promise of extending downwards for some hundreds of feet below the present workings. It appears particularly important to drift south along the vein from the Oro Grande to the Oro Flamme and to clean out the old workings on the Ohio where the ore shoot is wider than at any other point and between which and the Oro Grande (a distance of about 1/2 mile) there seems to be good reason to hope that other shoots will be developed.

Copies of assay maps and other data can be secured and forwarded but as this will involve some expense I shall not do so until hearing from you further, - meantime, am enclosing copies of two reports made some years ago by Kirkbride and Tomlinson both of whom were interested in the mine at the dates of writing and appear to me to have considerably exaggerated the width and values of the ore, some of which was subsequently milled and other portions resampled by the R.F.C. engineers and others.

COPY

Visited by G. M. Colvocoresses and Geo. Harbauer on December 10th, 1933

ORO FLAMME MINE

Situated on the Hassayampa River and adjoins the Sterling and Oro Grande and now all operated by the Oro Grande Mining Co. Pres. R. S. Witcher (formerly with the Big Jim at Oatman,) Box 632 Prescott. Groves is with him as Superintendent.

Have erected a 50 ton mill and expect to produce about 100 tons of concentrates per month. These should carry - - -

Au.	60 oz. per ton ??? (probably 6.0)
Pb.	30 %
Fe	20

Practically no cu. or zn.

They might also ship some high grade crude ore. Shafts are all in the same vein, about 3' wide and adjoin the old Mescal Mine. Developed to a depth of 330' and about 15000 tons of ore blocked out. The main ore body is 100' long and 8' wide and carried 0.55 oz. gold. On the Sterling there is another ore shoot 90' long and 5' wide opened up for depth 200'. Values are erratic but should average 0.45 in gold.

The trucking cost to Prescott, over the Wolf Creek cut-off and White Spar Road will be $1.75 per ton.

Mill has a 9 by 5 crusher, a small gyratory and 4' ball mill. Vein has a quartz filling in grano-diorite which has a schistose structure in places.

Looks as if this might become a steady shipper of lead concentrates. Groves is a very capable miner and his statements should be reliable, but he has had little if any milling experience.

October, 1937.

The mill referred to above did not give satisfactory results, also the grade of ore was lower than expected and the water supply failed. Operations of Witcher and Groves were discontinued in 1934.

Toward the close of that year the property was taken over by Howard Fields and Wayne Heffner who organized a company and sold quite a lot of stock on the

COPY

basis of some rather loose representations. They redesigned the mill and operated for a time in 1935 but failed completely in 1936 leaving some $40,000.00 of unpaid accounts. The company went thru bankruptcy and the mine reverted to Grove who has organized a new company in conjunction with his Attorney, T. J. Byrne, of Prescott, and they have obtained an R. F. C. loan of about $20,000 and are now resuming operations.

There is unquestionably some good ore left in this mine but the quantity seems doubtful and in view of the poor record of the last two operations the future would appear to be very uncertain.

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COPY

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

RECEIVED
JAN - 8 1953
DEPT. MINERAL RESOURCES
PHOENIX, ARIZONA

Mine Ora Flame

Date Jan. 7, 1953

District Hassayampa

Engineer Mark Gemmill

Subject: Present operations

OWNERSHIP

About two years ago the property was acquired from Harry Grove and is now owned by Ora Flame Mining Co. Frank Harmonson, President, Box 6096, Phoenix, Ariz. Mr. Grove retained an interest in the new company and also holds a mortgage against the mine.

HISTORY

It wasone of the early mine locations in the area and has been worked intermittantly for 50 or 60 years. Grove and Sonsaacquired tha property about 25 years ago and during the 30s shipped several thousands tons of ore having a gross value of about $150,000. Production prior to that is estimated to have been about $100,000. After shipment of the ore mentioned Grove & Sons leased the mine to a group headed by Howard Fields who built a small mill and operated for a short time. Their production was about $32,000. So in all the production from the mine was abput $300,000 all in gold and silver.

RECENT OPERATIONS

Sinceaaquiring the property the Ora Flame company has engaged only in exploration and development work. They have done approximately 1350 ft. of drifts, xcuts and raises and 1500 ft. of diamond drilling. They estimate now that they have in sight about 80,000 tons of ore which will run about $15.00 per tone in gold and silver and about 1% lead.

PRESENT PLANS

The company has recently arranged for the purchase of the Yarnell mine and mill from the Winslow Gold Mining Co. Some changes will be made in the mill to treat Ora Flame ore and the plans are to haul the ore there for treatment. As soon as the mill is ready production is expected to get under way.

Note- Most of the above information was furnished by Harry Grove

ORO FLAME MINING GROUP
synopsis of report.

To the Oro Flame Mining Co.,
Mr. Frank Harmonson. Pres.,
Phoenix ariz.

Location

The Oro Flame Mining Group consists of 7 patented and 8 unpatented mining claims situated 8 miles south of Prescott Ariz on the Hassayampa River. The property is owned by Mr. Harry Grove of Prescott and under lease and option to the Oro Flame Mining Co.,

The group consists of four separate loci of development In order from south to north are: The Oro Flame; Oro Grande; Ohio; and Sterling. These are contiguous and on the same mineral zone but not connected by underground workings.

History

The group is an old one, the first locations having been made in 1866. Various periods of ownership, management aand production have transpired, some of which have been successful and some unsuccessful - depending on the management.

Between 1928 and 1942 Mr. Grove shipped 140 cars of ore (aprox 7000 tons) ore that averaged .90 oz gold; 2.5 oz silver, and .75% copper. There would also have been a lead content of about 2.00% but same was not reported or paid for by the smelter.

The mineralization occurs as vein in schist at or near a granite contact. The mineralized zone strikes N 20 W, with the granite mass on the northeast, and the commercial ore occurs as shoots in two or more veins. It has been found expedient when following a vein to frequently probe the walls with short diamond drill holes for parallel ore occurrances. This condition is typical of mines in Yavapai schist.

Development:

Developement at the Oro Flame shaft consists of the 350 foot shaft and four levels or drifts. There is about 1500 feet total of drifts and raises. The ore has been mostly worked out above the 300 level. The bottom workings are inaccessable at present but maps show samples on the bottom level averaging 36 inches in width and $20.00 per ton.

Conditions at the Oro Grande shaft are similar to the Oro Flame. This shaft is also 350 feet deep with four levels totalling 1000 feet of drifting - mostly to the north. There is a developed (3 sides) block of ground 200 feet long between the 300 and 400 levels that was thoroughly sampled by W.B.Goring, RFC engineer, on the 400 level. This averaged 38" wide and .31 oz gold. It was only assayed for gold but with anominal content of silver it would be $14.00 ore.

A nominal lead content would add about $5.00 per ton.

The Ohio workings consist of a tunnel about 750 feet long and a raise of 80 feet. The value and size of the vein in these workings are sporadic, and because the high grade quartz ore is very hard and the barren schist or granite inclusions are quite soft it is exceedingly difficult to get accurate hand samples.

The 80 foot raise averaged 39 inches in width and 16.19 in assay (also 1.5 pb)
This shoot only showed about 20 feet long in the tunnel, but there may be an extension to the south behind the tunnel wall.

Further in the tunnel (from the 580' to 750') a 120 foot long ore shoot produced a dump of 10 tons of selected lump high grade averaging $30.00 (similar to recent shipment, copy attached) and about 250 tons of "mill"grade averaging $13.00 - (plus approx in lead). This would account for nearly all the material coming from that section of the tunnel. (A 5 ft x 7 ft tunnel will produce about 3 tons per linear ft) The irregularities of this condition in the Ohio are themain reason why I am advocating more raises, winzes and sub-levels there before any definate tonnage can be counted on from that area.

The Sterling group was not examined as Mr. Grove stated the workings are in bad shape. It was a famous old mine and old reports show that the main difficulty was in extracting the gold from the"Sulphurettes". Nowdays, of course, with the flotation process, such ore is the easiest of all to handle. The proper way to explore the Sterling would be to continue the Ohio working with the Sterling as an objective. The 4500 feet between is all good exploration territory,and the tunnel would reach the Sterling at a depth of about 750 ft.

Ore Available:

According to the strict rules of the term there is very little "ore developed" -,that is blocked out on four sides. However considering development on two or three sides I would consider the following blocks as being reasonably assurred ore available:

Oro Flame	300 x 100 x 4	10,000 tons
Oro Grande	200 x 200 x 4	20,000
Oro Flame stope fills (low grade)		10,000
Ohio, considerable but problematical		
Sterling, unknown.		

These estimates do not take into consideration any ore below the present lowest levels. It is reasonable to assume that when an ore shoot comes down strong to a certain level that it will continue for a reasonable distance below that. The areas between the various workings are favorable, and no doubt additional shoots will be developed when such areas are explored.

Mining Facilities:-

Beingonly about eight miles from Prescott transportation is no proble. Many employees will prefer to live in Prescott and camp requirements will be moderate.

Commercial power from the Northern Arizona Light and Power Co can be obtained by running a line about 2½ miles to Groom Creek. This is syrongly advised rather than trying to use internal combustion engines on the ground.

The Hassayampa River would supply water except during dry periods. A dam to hold four months requirements should be installed on the river. A good dam site is available.

Tailings would probably have to be pumped to a nearby side gulch and impounded with a small dam as a started.

The ore is a clean sulphide and should give a high extraction and low milling costs by straight bulk flotation. This would recover the lead which has not been heretofore recovered, and which would amount to $2.50 to $5.00 per ton.

Operating Costs:

The mine should be equipped with all possible labor saving devices such as mucking machines, power tramming etc. The vertical nature of the vein together with the fact that the walls stand well should permit the practice of shrinhage stoping provided some dilution of the ore is permitted and allowed for where the vein is narrow. On a 100 ton per day milling basis I would estimate the operating costs as follows, if the mine is so equipped and operated:

Item	Cost per ton.
General overhead	.50
Development to maintain ore supply	.50
Mining - Breaking and delivering to surface	2.50
Milling	1.50
Freight and treatment on concent'tes	1.00
Royalty5% (assuming $10.00 per ton recovered values	.50
	$6.50

The above would include equipment depreciation, repair or replacement, but not ore depletion, profit taxes, or amortization.

With the expected good milling recovery any ore assaying over $7.50 should be profitable, but it must be born in mind that the above is predicated on shrinkage stoping.We cannot have both clean ore and low costs. Where the vein is under 36" it would be necessary to mine waste up to that width, and then an overall 10% dilution should be allowed. If mined for clean ore by the stripping method mining costs would be increased by $5.00 per ton.

Recommendations:

I would strongly recommend that the actual erection of a mill not be undertaken until approximately $50,000 further is spent in testing the continuation of the values at greater depth, developing more ore, and preparing the mine for the steady and economical production of enough ore to supply the mill.

A plan to finance this work and also provide for a mill in one lump seems feasible, but it is too much of a burden on a new mine to expect a mill to carry the load without every possible preparation to keep it supplied efficiently.

More specifically I would recommend:
The Oro Grande shaft be sunk one level deeper and drifts run and raises or stopes started.
The Ohio tunnel be continued at least 400 feet.
Two more raises should be run from the Ohio tunnel with a sub-level about 75 feet above the tunnel, and a connection through to old upper workings for air.
At least one winze should be sunk below the Ohio tunnel (50 - 75 ft)with some drifting to determine what happens to that ore with more depth.
Where actual mining is anticipated short crosscuts should be run into the footwall, and raises started, in order to use mucking machines and avoid building and using chutes.

It is my opinion that the present showing at the Oro Flame Group justifies this further development, and that if it is carried out the installation of a mill will also be justified.

Respectfully Submitted,

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date Oct. 10, 1939

Mine ORO FLAME-STERLING

Engineer

District Hassayampa

Location On Hassayampa River - 17 miles SE Prescott

Former name "

Owner Grove & Sons Mining Co.

Address Prescott

Operator Same

Address

President H.K.Grove

Gen. Mgr.

Mine Supt. "

Mill Supt.

Principal Metals Gold - silver

Men Employed

Production Rate

Mill: Type & Cap.

Power: Amt. & Type Portable Compressor

Operations: Present Leasing

Operations Planned

Number Claims, Title, etc. 7 patented.

Description: Topog. & Geog. Steep slope of Hassayampa River

Mine Workings: Amt. & Condition 320' shaft - several hundred feet Tunnels & drifts

(over)

Geology & Mineralization Schists, intruded by Diorite & Granite
vein N 20°W Dip 76° NE
Quartz - irregular bunches - massess galena & pyrite

Ore: Positive & Probable, Ore Dumps, Tailings

Mine, Mill Equipment & Flow Sheet Last mill dismantled - building remains

Road Conditions, Route Good - 6 miles south of Prescott, to Wolf Creek Road, 3 miles to mine.

Water Supply Hassayampa River

Brief History Located 1866 - operated by various companies & leasers.
50 ton flotation mill operated 1934 by Fields & Alexander.
$200,000 prod. 1930

Special Problems, Reports Filed

Remarks RFC Loan $13,500. Lease from RFC on a 10% royalty by H. K. Grove & doing well - shipping 1 car per month to date.

If property for sale: Price, terms and address to negotiate.

Signed CARL G. BARTH, JR.

Use additional sheets if necessary. Separate sheets on each problem.

C O P Y

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COPY

The country is Bradshaw granite and diorite (both pre-Cambrian) and the one strong vein which runs through these claims can be traced for several miles. It is a contact fissure with diorite foot wall and strike about 5° to 10° west of north, dip to east varying from 68° to 78° , dykes of later intrusive porphyry referred to as a felsite in the old reports form a hanging wall or fill the mineralized zone and cut through this vein and fault it slightly at intervals and in places there is an agglomerate or brecchia in the fissure. The ore bearing vein swells to a width of 15' or more and elsewhere narrows down to a thin seam only a few inches in width. The original filling appears to have been a barren quartz and later quartz with sulphides of iron, lead and copper came in with gold and a little silver associated with the sulphides.

Without attempting to describe in detail the present workings and ore showings which are fairly well represented on a set of maps that I have examined and of which copies can be secured, I may say that the owners now claim a positive and highly probables: -

In the Oro Framme	5000 @ 16.00
In the Oro Grande	17000 @ 10.00
In the Ohio	6000 @ 14.00
Total	28,000

In addition they claim in small showings some 2,000 tons of $20.00 ore, say a total of 30,000 tons averaging $12.00 or better. The values are based in part on the record of shipments and last mill operations but largely on the sampling of the R. F. C. engineers. The average width of this ore where I examined it, may be taken as slightly in excess of 3' and I should roughly estimate that working costs would be as follows:

Mining & current development	$4.00
Milling with concentration 30-1	1.75
Freight, treatment of concentrates, etc.	1.25
Overhead and general	1.00
Total	$8.00

Leaving a net profit of $3.00 per ton on a recovered value of $11.00.

The chances for developing a much larger tonnage appear to be excellent, especially in the Ohio where the old workings indicate greater average width of values and cleaning out the old adit drifts and connecting them up with raises might well serve to prove up an addition of nearly 100,000 tons of ore.

The further sinking of the Oro Grande Shaft for 100' with connection along the vein to the Oro Flamme would also serve to develop the downward extensions of two shoots in which some 20,000 tons might be expected and drifting from the Oro Grande to the Ohio would develop a virgin territory along the vein in which other shoots may reasonably be found.

In addition the workings on the Sterling Claims and in the hanging wall veins, which I did not visit, are said to indicate over 10,000 tons of $15.00 ore but ore from the Sterling would have to be trucked some distance to the mill.

The record of the last mill operations in late '35 and '36 indicate a very poor mechanical condition with high percentage of lost time but the recovery of values appears to have been 93% and the ratio of concentration from 25 to 1 to 30 to 1 depending largely upon the percentage of sulphides in the ore.

My general opinion of this mine is favorable, - subject to a more thorough investigation which I believe to be justified. The last development work on the 300' level fromthe Oro Grande shaft was discouraging since the vein had been faulted and broken up by the intrusion of the porphyry but I think that this disturbance will prove to be local and ore may be expected at a lower level. In other portions of the mine it appeared that there were excellent changes of proving up large additional reserves of ore and that this could be done with comparatively small expense. Some of the ore makes out into the diorite away from the contact.

The terms on which the mine could be obtained appear to be reasonable and the sampling by the R.F.C. engineers may be taken as generally reliable although this should be checked to some extent and additional samples taken in other portions of the mine.

The vein is not uniformly mineralized and the pay ore occurs in shoots, as

is the case with practically all mines in the Bradshaws, but these seem to have sufficient length and width to form the basis for a profitable mining operation and give promise of extending downwards for some hundreds of feet below the present workings. It appears particularly important to drift south along the vein from the Oro Grande to the Oro Flamme and to clean out the old workings on the Ohio where the ore shoot is wider than at any other point and between which and the Oro Grande (a distance of about 1/2 mile) there seems to be good reason to hope that other shoots will be developed.

Copies of assay maps and other data can be secured and forwarded but as this will involve some expense I shall not do so until hearing from you further, - meantime, am enclosing copies of two reports made some years ago by Kirkbride and Tomlinson both of whom were interested in the mine at the dates of writing and appear to me to have considerably exaggerated the width and values of the ore, some of which was subsequently milled and other portions resampled by the R.F.C. engineers and others.

- Copy -

Visited by G. M. Colvocoresses and Geo. Harbauer on December 10th, 1933

ORO FLAMME MINE

Situated on the Hassayampa River and adjoins the Sterling and Oro Grande and now all operated by the Oro Grande Mining Co. Pres. R. S. Witcher (formerly with the Big Jim at Oatman,) Box 632 Prescott. Groves is with him as Superintendent.

Have erected a 50 ton mill and expect to produce about 100 tons of concentrates per month. These should carry - - -

Au.	60 oz. per ton ??? (probably 6.0)
Pb.	30 %
Fe	20

Practically no cu. or zn.

They might also ship some high grade crude ore. Shafts are all in the same vein, about 3' wide and adjoin the old Mescal Mine. Developed to a depth of 330' and about 15000 tons of ore blocked out. The main ore body is 100' long and 8' wide and carried 0.55 oz. gold. On the Sterling there is another ore shoot 90' long and 5' wide opened up for depth 200'. Values are erratic but should average 0.45 in gold.

The trucking cost to Prescott, over the Wolf Creek cut-off and White Spar Road will be $1.75 per ton.

Mill has a 9 by 5 crusher, a small gyratory and 4' ball mill. Vein has a quartz filling in grano-diorite which has a schistose structure in places.

Looks as if this might become a steady shipper of lead concentrates. Groves is a very capable miner and his statements should be reliable, but he has had little if any milling experience.

October, 1937.

The mill referred to above did not give satisfactory results, also the grade of ore was lower than expected and the water supply failed. Operations of Witcher and Groves were discontinued in 1934.

Toward the close of that year the property was taken over by Howard Fields and Wayne Heffner who organized a company and sold quite a lot of stock on the

basis of some rather loose representations. They redesigned the mill and operated for a time in 1935 but failed completely in 1936 leaving some $40,000.00 of unpaid accounts. The company went thru bankruptcy and the mine reverted to Grove who has organized a new company in conjunction with his Attorney, T. J. Byrne, of Prescott, and they have obtained an R. F. C. loan of about $20,000 and are now resuming operations.

There is unquestionably some good ore left in this mine but the quantity seems doubtful and in view of the poor record of the last two operations the future would appear to be very uncertain.

G. M. C.

SUPPLEMENT TO ORO FLAME REPORT

Under date of July 10, 1932

Wing has been sunk 100 feet north of cross cut to a depth 130 feet with drifting 90 feet both ways. Ore is continuous in both drifts. Shipments made from this level brought $ 23.50 per ton.

See map for samples taken.

Respectfully submitted,

M. K. Grove

ARIZONA MACHINERY CO., Inc
PRESCOTT, ARIZONA

ARIZONA MACHINERY CO., INC.
PRESCOTT, ARIZONA

SUPPLEMENT TO STERLING REPORT

Under date of June 1, 1932

Since report was made by Mr. Tomlinson the following work has been done on this group.

"Gold Bug" shaft was dewatered and timbered to the 200 level, on this level going North 60 feet, 15 samples were taken averaging $13.50 Gold. Averaging 4½ feet wide, drift was caved 60 feet in from shaft.

No. 2 tunnel was cleaned and timbered and shaft was sunk 40 feet on No. 3 shoot. 3 cars of ore were shipped averaging $11.50 Gold. One car was shipped from No. 2 shoot averaging $14.00 Gold.

Respectullly Submitted

H. K. Grove

REPORT ON

THE ORO FLAME GROUP OF CLAIMS

HASSAYAMPA MINING DISTRICT

YAVAPAI COUNTY, ARIZONA

BY

GEO. A KIRKBRIDE

Mining Engineer

OPTION TO PURCHASE

This agreement between Grove & Sons Mining Company, party of the first part, and George Davis, party of the second part, agrees to sell the following mining property on the following terms:

Four patented mining claims in Hassayampa Mining district, Oro Flame, Oro Grande, Mill and Ohio Group of Claims.

The purchase price to be Eighty Thousand ($80,000.00) Dollars to be paid at ten per cent (10%) royalty on net smelter returns, to pay taxes, to do at least one hundred (100) shifts of work per month, or pay Two Hundred ($200.00) Dollars per month as advance royalty.

The first Eleven Thousand ($11,000.00) Dollars to be paid within two (2) years (plus interest) to the Valley National Bank, Phoenix, Arizona, to the credit of Grove & Sons Mining Company Trust Account.

Thereafter to Grove & Sons Mining Company, Valley National Bank, Prescott, Arizona.

This option is for thirty (30) days and if parties are on ground sampling, thirty (30) days additional time will be granted. Party of the second part will be allowed to remove machinery within thirty (30) days if contract is forfeited.

GROVE & SONS MINING COMPANY

BY H. K. Grove
H.K. Grove, Sec.-Treas.

Dated September 10th, 1938

THE CLAIMS:

Consist of three full claims and a fraction, all patented; namely, The Ore Grande, Old Ohio, Ore Flake and Mill claim.

The property is situated eight miles in a southerly direction from Prescott and is reached by a good road from Prescott. Elevation of the mines is about 5000 feet.

TOPOGRAPHY:

The Surface of all the claims is steeply hilly and rough. A main canyon formed by the erosion of the Hassayampa River, which flows southerly and crosses the strike of the veins at a right angle on the Ore Grande claim, with steep sides rising to high ridges. This permits advantageous mine development by tunneling on the vein.

FORMATION:

The prevailing rocks of the country are granite and diorite, with diabase dikes and felsite porphyry. On the surface of these claims is shown a sheet of felsite, in dike like form, intruded through the formation, ranging north and south with a dip to the west of 78 degrees.

This resulted in creating a strong fault fissure, which occupied a position between the felsite as the hanging and the diorite as the foot wall. It is along this line of contact, where for seven miles in length, is found sheets of gold bearing material, in form of veins or veinlets of quartz, or crushed zones in form of breccia, which consists mainly of quartz in wide lenses. This carries

On these claims, along line of vein, white and honeycomb quartz is everywhere noticeable. This mineralized zone is from 80 to 240 feet in width, with three planes, which carries ore in veinlike form lying on either foot, middle or hanging plane. At some point below the surface, estimated at 500 feet, they all dip together and form one wide vein of ore.

PRESENT CONDITIONS:

The 110 foot shaft on the Ore Grande is in fairly good condition.

The Old Ohio workings are in part inaccessible but it is possible to check the statements of Mr. Tomlinson's report with regard to these claims.

The Ore Flame workings are now depleted of ore reserves above the 140 foot level with the exception of perhaps six or eight cars of shipping grade ore. Further development will have to be carried out below the 140 feet tunnel level.

DEVELOPMENT AND ORE:

"Old Ohio":

The following information is taken from the report of Mr. Tomlinson. This report was made in 1909 during the time that the property was in operation under his direction. My work has been only to insofar as possible to check his statements and I have found them to be exceptionally accurate.

Continuing south, along the strkie of vein is the claim named "Ohio", the principal developments being in the form of tunnels on vein. These are driven from the Mass-

Tunnel No. 1 started on a level 40 feet above the river, runs northerly a distance of 800 feet. It is run the entire distance on the hanging wall plane, next to the felsite. One cross cut is made to the east under ore shoot No. 1, but no upraising or steping was done. A large tonnage of mill ore may be mined from this opening as the grade is good, and while the tunnel is badly caved in places, it will not cost much to put it into good working conditions, and it should be extended a further distance north in order to cut ore shoot No. 4, which shows large bodies of $18.00 ore, opened by shaft and tunnel on the surface near the south end line of the claim.

Ore shoot No. 1 was discovered by outcrop on the surface which scattered pieces of quartz, some of which weighed from two to three tons, each, over a wide area. This float all panned well in free gold, assay value per ton being one ounce, or $20.00. A shallow crosscut tunnel was started and run at right angle to course of vein. This cut under the outcrop at 40 feet in depth, crossing 16 feet or ore. This was run through mill, yielding $12.80 per ton saved by amalgamation with tails assaying $7.00 and $8.00 per ton. A winze sunk to a depth of 50 feet in this ore opened 8 feet of sulphide ore with average grade of $42.00 per ton. This ore too, was mined and concentrated with a tailing loss of $12.00 to $18.00 per ton.

Ore shoot No. 2 was opened by driving a tunnel under No. 1, opening on vein 126 feet north a body of sulphide ore was cut four or five feet in width, showing average value of $37.00 per ton. Above shoot No. 1, while building a wagon road to get to the ore at shoot No. 4,

Continuing up the mountain, near the north end line, shoot No. 4, on the hanging wall plane is opened for 70 feet in length by tunnel, and also by shaft to a depth of 35 feet. Width of ore is from 3 to 5 feet with average value per ton of $18.00.

"Mill Claim":

Adjoining end lines on the south is the "Mill Claim". This is 518 feet by 541 feet in size. On this claim a shaft was sunk to depth of 30 feet in center of vein, in order to provide means of centralizing the water for milling purposes. At the depth named, a crosscut was made under the stream for 105 feet. All this was in vein matter, and streaks of ore of good grade showed at intervals through the full distance to the felsite wall.

"Ore Grande":

This joins with the south end line of the "Mill Claim". Development s made near the center of claim are in the form of tunnels on the foot wall vein from both sides of a ridge, with a shaft sunk from the high part of the ridge, in the vein, to a depth of 110 feet. All workings are in low grade ore consisting of quartz and slate. The entire ore streak for 8 to 12 feet in width will average $7.80 per ton in gold. The bottom level is well timbered and now ready for stoping. A cross section through vein shows what may be cut or found with depth as the vein is a large one and will pick up the hanging wall streak at the same depth as on the "Mormon" and "Gold Bug".

"Ore Flame"

The Ore Flame claim is on the extreme south end of the group. It is the work on this claim that has been

The ore occurs on the foot wall plane on a granite porphyry-schist contact.

The development consists of a tunnel driven in on the south side of the ridge, along the vein at a shallow depth. It is above this level that ore is now being removed.

Another tunnel driven a length of about 500 feet is only in part on the vein having been driven a distance of 350 feet paralleling the vein. A crosscut was driven a distance of eight feet from this tunnel and cut the vein at a depth of 140 feet.

An ore shoot 150 feel long was opened by this work and has been stoped clean to the upper level. The production from this work has grossed about $50,000 in shipping ore of which about $30,000 has been net profit. Values of ore shipped as shown by smelter return sheets have averaged about $20.00 per ton in gold.

The ore shoot in the bottom of the drift shows strongly a width of about two and a half feet average in places swelling to four feet.

The ore has a galena base, which would indicate permanency with depth and there is no reason to believe that values will decrease as deeper development is carried out.

The presence of copper has been noted in all shipments although in quantities only about sufficient to avoid the smelter penalty for lack of it.

PARALLEL VEINS:

The hanging wall vein which has been opened on the adjoining claims, the Mormon, American Eagle and Gold Bug, shows very plainly on the surface the entire length of the claims and could be cross cut in a distance of about 125

PROPOSED DEVEL MENT:

The present plan of development embraces sinking in the ore to a depth of 100 feet below the 140 foot tunnel level, drifting to open the ore shoot on this level. With the work completed and timbering for stopes started it will be possible to ship at least two cars of ore per week.

Additional later development should include cross cutting to the hanging wall vein and additional drifting on the foot wall vein to open other ore shoots indicated on the surface. Possibilities for a later mill operation are excellent on the Old Ohio and Oro Grande Claims and should be given consideration.

PROFIT POSSIBILITIES:

Using as a criterion the recent production and the fact that with a total operating force of three men the present owners have been able to net about $30,000 during the past two years it is logical to assume at least a profit of this amount if values are consistent with depth.

By deviding the ore shoot into two stopes it would be possible to double the income and I believe there is no question but that this property will net $40,000 per year in addition to returning the original investment, from shipping ore along without taking into consideration the available mill ore on the Old Ohio and Oro Grande claims. The later development of the mill ore should prove attractive.

In conclusion, I have no hesitation in recommending this group of claims as being an excellent opportunity to develop a good paying property with a small preliminary investment.

Respectfully submitted,

REPORT ON THE PROPERTY

OWNED BY

GROVE AND SONS MINING COMPANY

The holdings consist of three patented mining claims, shaft houses and gas hoist.

Beginning at the northerly end, the mine claims are named "American Eagle", "Gold Bug", "Mormon". Each of the claims ~~is~~ ARE 600 by 1500."

The section in which this property lies, is situated eight miles in a southerly direction from the town of Prescott, the county seat of Yavapai County, Arizona. This is a main station on the Santa Fe, Prescott and Phoenix Railroad, which joins the main Santa Fe Line at Ash Fork, Arizona.

The property is reached by a good wagon road from Prescott, which crosses the Sierra Prietas, a mountain range lying east and south of the town. The greatest elevations of this range is 7,178 feet with elevation at the mines of 5,000 feet.

TOPOGRAPHY:

The surface of all the claims is steeply hilly and rough. A main canyon formed by the erosion of the Hassayampa River which flows southerly and crosses the strike of the vein at a right angle on the "Oro Grande" claims with steep sides rising to high ridges. This permits advantageous mine development by tunneling on the vein.

FORMATION:

The prevailing rocks of the country are granite and diorite, with diabase dykes and felsite porphyry. On the surface of these claims is shown a sheet of felsite, in dyke like form, intruded through the formation, ranging north and south with a dip to the west of 78 degrees.

This resulted in creating a strong fault fissure, which occupied a position between the felsite as the hanging and the diorite as the foot wall. It is along this line of contact, where for seven miles in length, is found shoots of gold bearing material, in form of veins or veinlets of quartz, or crushed zones in form of breccia, which consists mainly of quartz in wide lenses. This carries gold in payable quantities, with the ore bodies frequent and permanent.

On these claims, along line of vein, white and honeycomb quartz is everywhere noticeable. This mineralized zone is from 80 to 240 feet in width, with three planes, which carries ore in veinlike form lying on either foot, middle or hanging plane. At some point below the surface, estimated at 500 feet, they all dip together and form one wide vein of ore.

PRESENT CONDITIONS:

Much work has been done on all the claims in the past. This was done in the form of tunnels and shafts where ore was found by outcrop. Long tunnels were driven on the veins in these places, and several shafts were sunk where depth could not be obtained by tunnel. At this time the main shafts are filled to the top with water and all the timbering on any openings has rotted out, letting in the ground and rendering them almost impassable. Tunnels on the "American Eagle" have been

stopes over levels. Main shaft on "Gold Bug" is full of water, which renders it impossible to get into the long drift run on the A-E vein which was reached by a crosscut from the 300 foot level in "Gold Bug" shaft; The "Mormon" shaft is full of water.

DEVELOPMENTS AND ORE:
(See Map)

"American Eagle":

Is developed by Tunnels Nos. 1 and 2. Tunnel No. 1 is driven south on vein for a distance of 325 feet from mouth. The vein is all ore of a milling grade, showing width from 18 inches to 8 feet; average width 5 feet, showing ore vein in roof and floor of tunnel. This averages in value $16.00 per ton. On opposite side of ridge from Tunnel No. 1, Tunnel No. 2 is run in on the vein for a full distance of 450 feet. This has a course northwest and cuts ore shoot No. 2 at a point near mouth. Along floor of level this shoot shows a distance of 120 feet with average width of ore vein of 3-1/2 feet. The fround in back of tunnel has been stoped to the surface and winze sunk in floor shows the same size of vein with values per ton of $15.00. At a point near heading ore shoot No. 3 has run through, with a vein of ore averaging two feet in thickness, this ore shoot being 30 feet in length, average value per ton being $18.00. Assays taken in the outcrop on surface of shoot three ran as high as $550. per ton, and consisted of selenite with spots of black tellurium. In these two shoots where opened, the ore seems regular and permanent in the vein. In order to fully demonstrate the continuance of the ore in the shoots of the A-E vein a crosscut was run from the 300 foot level in the shaft on the "Gold Bug" vein. Starting at a point in from the

north on vein, shoot No. 2 was found in place, with 3 feet of ore assaying from one to thirteen ounces of gold per ton. Continuing along course of vein shoot No. 3 was cut showing two feet of ore which ran as high as 3 ounces. The drift was then continued until it was within 75 feet of shoot No. 1, when all work was stopped. In a short time this shaft was filled with water and has never been cleared. This level as indicated by map, is 276 feet lower on the vein than where shoot No. 2 and No. 3 were opened by level No. 2. It will cut under shoot No. 1 at a depth under the floor of Tunnel No. 1 of 330 feet. This is the main ore shoot, and should become a large producer of high grade ore.

The deep ore is a brecciated quartz, with high grade iron sulphides. This carries high gold values entirely different from any other ore mined in this section. The vein is regular in size with a large gouge on the foot wall side.

Estimates of tonnage available when the water is taken out is placed at 15,000 tons from the crosscut level to surface. The average value per ton is $17.00. This ore may be mined and hoisted from the deep shaft on the "Gold Bug" and when drifts are run at the four hundred foot point at bottom of shaft, this will approximate a further tonnage of at least one third more, or more than $300,000.00 without considering anything from shoot No. 1, which is the main ore shoot of this mine, and it will afford double the quantity of ore, represented by shoots No. 2 and No. 3.

"Gold Bug":

The main shaft on this claim is sunk on the foot wall plane at an angle of 42 degrees, to a depth of 420 feet. As the A-E vein dips at angle of 78 degrees the two veins should

vein matter 46 feet in width. Being off the ore shoot it assays only $2.40 per ton. Drifts run each way from the shaft at this depth will open up some good ore bodies in the several shoots opened in the levels above. On the 300 foot level drifts are run each way from shafts, in the foot wall vein. The one to the west is in a distance of 179 feet from shaft. The ore shoot was cut and upraise made to the 200 in the ore. No stoping is done at this point. The level east has gone in from shaft to a point 146 feet, nothing found along line of drift of a pay nature. This level may be turned to the north and the "American Eagle" vein be cut in a distance of less than 100 feet of cross cut. At a point where it would be cut, it shows a good vein of ore on the surface two feet in width which carries average value $14.00 per ton. This is in shoot No. 4 and should prove to be a good producer of ore.

The 200 foot level is in west from shaft 240 feet, most of the distance in ore varying in width from 4 to 14 feet, It is a body of ore averaging $12.00 per ton, and supplies much solid smelting ore that carries as high as 10 ounces gold per ton. The ground is ready to stope, being well timbered for that purpose.

From the 100 to surface the vein has been staped and is now caved in. The air from the surface through to the 300 level was timbered through this old stope, but is now closed. Opening it for a clear air passage will be one of the first things to be done after unwatering.

"Mormon:"

The next claim south is the "Mormon", which is developed by shaft to a depth of 110 feet below surface outcrop of vein. Ore shows from top to bottom of shaft with average of

A cross section through Mormon shaft to the farthest point east, where ore veins will be found, is a distance of not less than 300 feet, the ground is all mineral bearing and large bodies of milling grade will be opened in cross cut at depth. The chance for opening a big ore producer at this point is not equalled anywhere on the whole property.

ADVANTAGES:

This group of mining claims is favorably situated for economical operation and general conveniences. The whole section is well watered and covered with a heavy growth of pine, juniper, and oak timber.

Respectfully submitted,

THE TOMLINSON ENGINEERING COMPANY,

J. B. Tomlinson, E.M.

Prescott, Arizona

1927

REPORT ON PROPERTY

OWNED BY

GROVES AND SONS MINING

COMPANY

The holdings consist of three patented mining claims, shaft houses and gas hoist,

Beginning at the northerly end, the mine claims are named "American Eagle", "Gold Bug", "Mormon". Each of the claims are 600' x 1500'.

The sectionin which this property lies, is situated eight miles in a southerly direction from the town of Prescott, the county seat of Yavapai County, Arizona. This is a main station onthe Santa Fe, Prescott andPhoenix Railroad, which joins the mainSanta Fe Line at Ash Fork, Arizona.

The property is reached by a good wagon road from Prescott, which crosses the Sierra Prietas, a mountain range lying east and south of the town. The greatest elevations of this range is 7,178 feet with elevation at the mines of 5,000 feet.

TOPOGRAPHY:

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FORMATION:

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three planes, which carries ore in veinlike

COPY

form lying on either foot, middle or hanging plane. At some point below the surface, estimated at 500 feet, theyall dip together and form one wide vein of ore.

PRESENT CONDITIONS:

Much work has been done on all the claims in the past. This was done in the form of tunnels and shafts where ore was found by outcrops. Long tunnels were driven on the veins in these places, and several shafts were sunk where depth could not be obtained by tunnel. At this time the main shafts are filled to the top with water and all the timbering on any openings has rotted out, letting in the ground and rendering them almost impassable. Tunnels on the "American Eagle" h have been retimbered and are in workable shape for mining the ore in the stopes over levels. Main shaft on "Gold Bug" is full of water, which renders it impossible to get into the long drift run on the A-E vein which was reached by a crosscut from the 300 foot level in "Gold Bug" shaft; The "Mormon" shaft is full of water.

DEVELOPMENTS AND ORE:
(See Maps)
AMERICAN EAGLE:

Is developed by Tunnels Nos. 1 and 2. Tunnel No.1 is driven south on vein for a distance of 325 feet from mouth. The vein is all ore of a milling grade, showing width from 18 inches to 8 feet; average width 5 feet, showing ore vein in roof and floor of tunnel. This averages in value $16.00 per ton. On opposite side of ridge from Tunnel No. 1, Tunnel No. 2 is run in on the vein for a full distance of 450 feet. This has a course northwest and cuts ore shoot no. 2 at a point near mouth. Along floor of level this shoot shows a distance of 120 feet with average width of ore vein of 3 ½ feet. The ground is back of tunnel has been stoped to the surface and winze sunk in floor shows the same size of vein with values per ton of $15.00. At a point near heading ore shoot No. 3 has run through, with a vein of ore averaging two feet in thickness, this ore shoot being 30 feet in length, average value per ton being $18.00. Assays taken in the outcrop on surface of shoot three ran as high as $550. per ton, and consisted of selenite with spots of black tellurium. In these two shoots where opened, the ore seems regular and permanent in the vein. In order to fully demonstrate the continuance of the ore in the shoots of the A-E vein a crosscut was run from the 300 foot level inthe shaft on the "Gold Bug" vein. Starting at a point in from the shaft 100 feet, crosscut from the footwall plane was run and the "American Eagle" vein was cut at 135 feet. Turning to the north on vein, shoot No. 2 was found in place, with 3 feet of ore assaying from one to thirteen ounces of gold per ton. Continuing along course of vein shoot No. 3 was cut showing two feet of ore which ran as high as 3 ounces. The drift was then continued until it was within 75 feet of shoot No. 1, when all work was stopped. In a short time this shaft was filled with water and has never been cleared. This level as indicated by map, is 276 feet lower on the vein than where shoot No. 2 and No. 3 were opened by level No. 2. It will cut under shoot No. 1 at a depth under the floor of Tunnel No. 1 of 330 feet. This is the main ore shoot, and should become a large producer of high grade ore.

The deep ore is a brecciated quartz, with high grade iron sulphides. [illegible] carries high gold values entirely different [illegible]

The deep ore is a brecciated quartz, with high grade iron sulphides. This carries high gold values entirely different from any other ore mined in this section. The veinis regular in size with a large gouge on the foot wall side.

Estimates of tonnage available when the water is taken out is place d at 15,000 tons from the crosscut level to surface. The average value per ton is $17.00. This ore may be mined and hoisted from the deep shaft on the "Gold Bug" and when drifts are run at the four hundred foot point at bottom of shaft, this will approximate a further tonnage of at least one third more, or more than $300,000.00 without considering anything from shoot No. 1, which is the mainore shoot of this mine, and it will afford double the quantity of ore, represented by shoots No. 2 and No. 3.

"GOLD BUG"

The main shaft on this claim is sunk on the foot wall plane at an angle of 42 degrees, to a depth of 480 feet. As the A E vein dips at angle of 78 degrees the two veins should dip together at about 500 feet in depth. This is plainly shown at the bottom of the shaft where the vein is opened in quartz and vein matter 46 feet in width. Being off the ore shoot it assays only $5.40 per ton. Drifts run each way from the shaft at this depth will open up some good ore bodies in the several shoots opened in the levels above. On the 300 foot level drifts are run each way from shafts, in the foot wall vein. The one to the west is in a distance of 179 feet from shaft. The ore shoot was cut and upraise made to the 200 in the ore. No stoping is done at this point. The level east has gone in from shaft to a point 146 feet, nothing found along line of drift of a pay nature. This level may be turned to the north and the "American Eagle" vein be cut in a distance of less than 100 feet of cross cut. At a point where it would be cut, it shows a good vein of ore on the surface two feet in width which carries average value $14.00 per ton. This is in shoot No 4 and should prove to be a good producer of ore.

The 200 foot level is inwest from shaft 240 feet, most of the distance in ore varying in width from 4 to 14 feet, It is a body of ore averaging $12.00 per ton, and supplies much solid smelting ore that carries as high as 10 ounces gold per ton. The ground is ready to stope, being well timbered for that purpose.

From the 100 to surface the vein has been stoped and is now caved in. The air from the surface through to the 300 level was timbered through this old stope, but is now closed. Opening it for a clear air passa ge will be one of the first thing to be done after unwatering.

"Mormon"

The next claim south is the "Mormon", which is developed by shaft to a depth of 110 feet below surface outcrop of vein. Ore shows from top to bottom of shaft with average of 5 feet in width, Average value per tonwill exceed $20.00 with some high grade smelting ore which carries 5 ounces of gold to the ton.

A cross section through Mormon shaft to the farthest point east, where ore veins will be found, is a distance of not less than 300 feet, the ground is all mineral bearing and large bodies of milling grade will be opened in cross cut at depth. The chance for opening a big ore producer at this point is not equalled anywhere on the whole property.

ADVANTAGES:

This group of mining claims is favorably situated for economical operation and general conveniences. The whole section is well watered and covered with a heavy growth of pine, Juniper, and oak timber.

RESPECTFULLY SUBMITTED,

THE TOMLINSON ENGINEERING COMPANY,

1927
Prescott, Arizona

J. B. Tomlinson, E. M.

SUPPLEMENT TO STERLING REPORT

Since report was made by Mr. Tomlinson the following work has been done on this group.

"Gold Bug" shaft was dewatered and timbered to the 200 level, on this level going north 60 feet, 15 samples were taken averaging $13.50 Gold. Averaging 4½ feet wide, drift was caved 60 feet in from shaft.

No. 2 tunnel was cleaned and timbered and shaft was sunk 40 feet on No. 3 shoot. 3 cars of ore were shipped averaging $11.50 Gold. One car was shipped from No. 2 shoot averaging $14.00 Gold.

Respectfully submitted,

June 1, 1932.

H.K. Grove

COPY

AMERICAN SMELTING & REFINING COMPANY
EL PASO SMELTING WORKS
EL PASO, TEXAS

ORE PURCHASING DEPARTMENT
HOWARD H. FIELDS,
ORE PURCHASING AGENT

PLANTS:
EL PASO, - TEXAS
AMARILLO, TEXAS
HAYDEN, ARIZONA

November 13, 1931.

Grove & Sons Mining Company,
202 N. Pleasant Street,
Prescott, Arizona.

Dear Sirs:

The lead on the sample you recently submitted to us is 6.4%.

Yours very truly,

Howard H. Fields

HOWARD H. FIELDS.

This on Lot #551

REPORT ON THE PROPERTY

OWNED BY

GROVE AND SONS MINING COMPANY

The holdings consist of three patented mining claims, shaft houses and gas hoist.

Beginning at the northerly end, the mine claims are named "American Eagle", "Gold Bug", "Mormon". Each of the claims ~~is~~ ARE 600 by 1500.

The section in which this property lies, is situated eight miles in a southerly direction from the town of Prescott, the county seat of Yavapai County, Arizona. This is a main station on the Santa Fe, Prescott and Phoenix Railroad, which joins the main Santa Fe Line at Ash Fork, Arizona.

The property is reached by a good wagon road from Prescott, which crosses the Sierra Prietas, a mountain range lying east and south of the town. The greatest elevations of this range is 7,178 feet with elevation at the mines of 5,000 feet.

TOPOGRAPHY:

The surface of all the claims is steeply hilly and rough. A main canyon formed by the erosion of the Hassayampa River which flows southerly and crosses the strike of the vein at a right angle on the "Oro Grande" claims with steep sides rising to high ridges. This permits advantageous mine development by tunneling on the vein.

FORMATION:

The prevailing rocks of the country are granite and diorite, with diabase dykes and felsite porphyry. On the surface of these claims is shown a sheet of felsite, in dykelike form, intruded through the formation, ranging north and south with a dip to the west of 78 degrees.

This resulted in creating a strong fault fissure, which occupied a position between the felsite as the hanging and the diorite as the foot wall. It is along this line of contact, where for seven miles in length, is found shoots of gold bearing material, in form of veins or veinlets of quartz, or crushed zones in form of breccia, which consists mainly of quartz in wide lenses. This carries gold in payable quantities, with the ore bodies frequent and permanent.

On these claims, along line of vein, white and honeycomb quartz is everywhere noticeable. This mineralized zone is from 80 to 240 feet in width, with three planes, which carries ore in veinlike form lying on either foot, middle or hanging plane. At some point below the surface, estimated at 500 feet, they all dip together and form one wide vein of ore.

PRESENT CONDITIONS:

Much work has been done on all the claims in the past. This was done in the form of tunnels and shafts where ore was found by outcrop. Long tunnels were driven on the veins in these places, and several shafts were sunk where depth could not be obtained by tunnel. At this time the main shafts are filled to the top with water and all the timbering on any openings has rotted out, letting in the ground and rendering them almost impassable. Tunnels on the "American Eagle" have been

stopes over levels. Main shaft on "Gold Bug" is full of water, which renders it impossible to get into the long drift run on the A-E vein which was reached by a crosscut from the 300 foot level in "Gold Bug" shaft; The "Mormon" shaft is full of water.

DEVELOPMENTS AND ORE:
(See Map)

"American Eagle":

Is developed by Tunnels Nos. 1 and 2. Tunnel No. 1 is driven south on vein for a distance of 325 feet from mouth. The vein is all ore of a milling grade, showing width from 18 inches to 8 feet; average width 5 feet, showing ore vein in roof and floor of tunnel. This averages in value $16.00 per ton. On opposite side of ridge from Tunnel No. 1, Tunnel No. 2 is run in on the vein for a full distance of 450 feet. This has a course northwest and cuts ore shoot No. 2 at a point near mouth. Along floor of level this shoot shows a distance of 120 feet with average width of ore vein of 3-1/2 feet. The frewnd in back of tunnel has been stoped to the surface and winze sunk in floor shows the same size of vein with values per ton of $15.00. At a point near heading ore shoot No. 3 has run through, with a vein of ore averaging two feet in thickness, this ore shoot being 30 feet in length, average value per ton being $18.00. Assays taken in the outcrop on surface of shoot three ran as high as $550. per ton, and consisted of selenite with spots of black tellurium. In these two shoots where opened, the ore seems regular and permanent in the vein. In order to fully demonstrate the continuance of the ore in the shoots of the A-E vein a crosscut was run from the 300 foot level in the shaft on the "Gold Bug" vein. Starting at a point in from the

north on vein, shoot No. 2 was found in place, with 3 feet of ore assaying from one to thirteen ounces of gold per ton. Continuing along course of vein shoot No. 3 was cut showing two feet of ore which ran as high as 3 ounces. The drift was then continued until it was within 75 feet of shoot No. 1, when all work was stopped. In a short time this shaft was filled with water and has never been cleared. This level as indicated by map, is 276 feet lower on the vein than where shoot No. 2 and No. 3 were opened by level No. 2. It will cut under shoot No. 1 at a depth under the floor of Tunnel No. 1 of 330 feet. This is the main ore shoot, and should become a large producer of high grade ore.

The deep ore is a brecciated quartz, with high grade iron sulphides. This carries high gold values entirely different from any other ore mined in this section. The vein is regular in size with a large gouge on the foot wall side.

Estimates of tonnage available when the water is taken out is placed at 15,000 tons from the crosscut level to surface. The average value per ton is $17.00. This ore may be mined and hoist-ed from the deep shaft on the "Gold Bug" and when drifts are run at the four hundred foot point at bottom of shaft, this will approximate a further tonnage of at least one third more, or more than $300,000.00 without considering anything from shoot No. 1, which is the main ore shoot of this mine, and it will afford double the quantity of ore, represented by shoots No. 2 and No. 3.

"Gold Bug":

The main shaft on this claim is sunk on the foot wall plane at an angle of 42 degrees, to a depth of 420 feet.

vein matter 46 feet in width. Being off the ore shoot it assays only $2.40 per ton. Drifts run each way from the shaft at this depth will open up some good ore bodies in the several shoots opened in the levels above. On the 300 foot level drifts are run each way from shafts, in the foot wall vein. The one to the west is in a distance of 179 feet from shaft. The ore shoot was cut and upraise made to the 200 in the ore. No stoping is done at this point. The level east has gone in from shaft to a point 146 feet, nothing found along line of drift of a pay nature. This level may be turned to the north and the "American Eagle" vein be cut in a distance of less than 100 feet of cross cut. At a point where it would be cut, it shows a good vein of ore on the surface two feet in width which carries average value $14.00 per ton. This is in shoot No. 4 and should prove to be a good producer of ore.

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Respectfully submitted,

THE TOMLINSON ENGINEERING COMPANY,

J. B. Tomlinson, E.M.

Prescott, Arizona

1927 (?)

Form 505—10M 4-31

$40.67

AMERICAN SMELTING & REFINING CO.
EL PASO SMELTING WORKS
ASSAY CERTIFICATE

Date Assayed 11-9 1931

Marked Grant

LOT NO.	GOLD OUNCES PER TON	SILVER OUNCES PER TON	WET LEAD %	COPPER %	INS. %	SIO2 %	FE %	MN. %	CAO TOTAL	CAO AVAIL. %	ZN. %	SUL. %	AL2O3 %	AS. SB. BI.
551	1 76	3 2	6.4	0 vv	Represents one days shooting									

EL PASO SMELTING WORKS

By _____ Ass.

_____ Chemist

FORM 505 10M

2873

AMERICAN SMELTING & REFINING CO.

HAYDEN PLANT

ASSAY CERTIFICATE

Half samples

MARKED Gypsey Sam

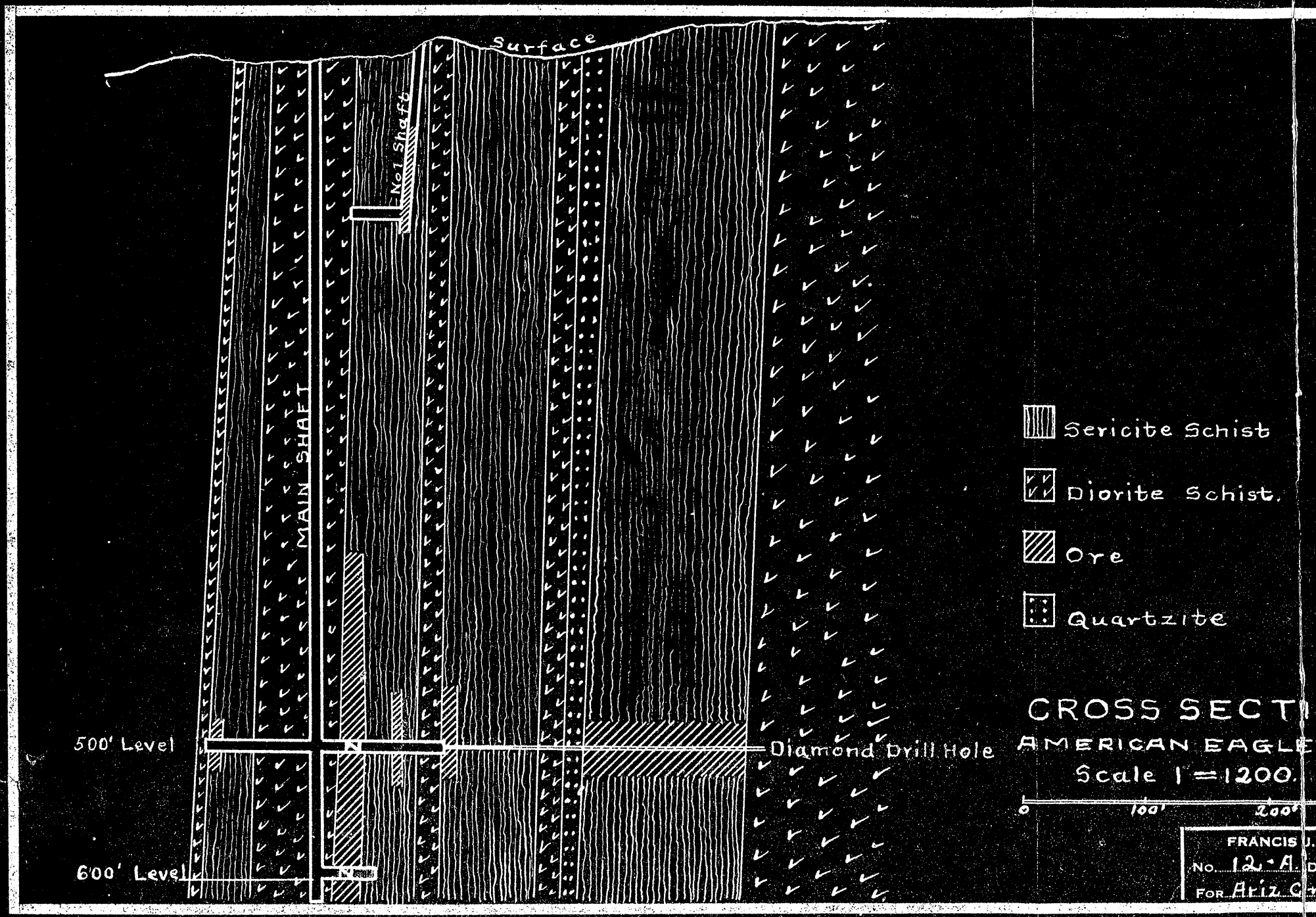
DATE ASSAYED 9-10 19??

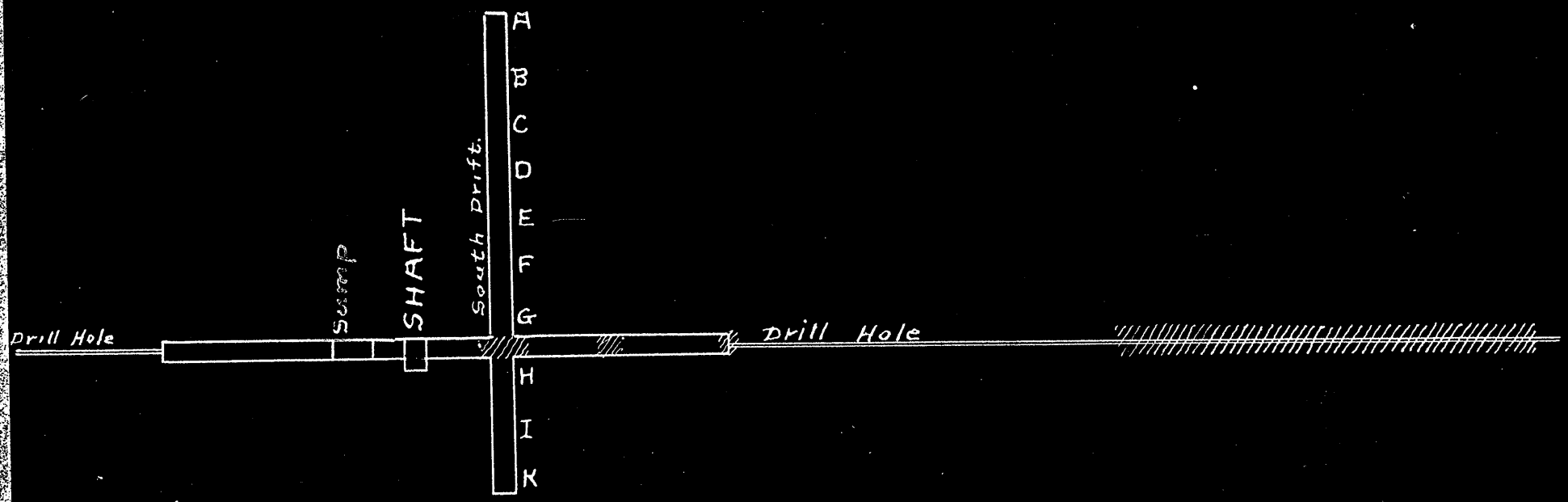
LOT NO.	GOLD OUNCES PER TON	SILVER OUNCES PER TON	LEAD FIRE %	LEAD WET %	CU. %	INS. %	SIO2 %	FE %	MN. %	CAO. TOTAL %	NI %	ZN. %	SUL. %	AL2O3 %	SBI BI
1	1.26	4.60			0.60		Represents one days shooting								
2	0.26	1.10			0.0		"	strippings							

AMERICAN SMELTING & REFINING CO.

By ..... Assayer

..... Chemist

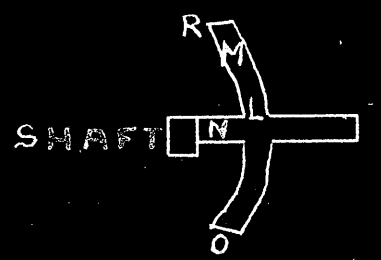

Surface
No 1 Shaft
MAIN SHAFT
500' Level
600' Level
Diamond Drill Hole
Sericite Schist
Diorite Schist.
Ore
Quartzite
CROSS SECTI
AMERICAN EAGLE
Scale 1 = 1200.
0
100'
200'
FRANCIS J.
No. 12-A.
For Ariz. C



PLAN 500 FOOT LEVEL

Scale 1 = 600.

0 50' 100' 150'



PLAN 600 FOOT LEVEL

FRANCIS
No. 15
FOR Ariz. C