CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

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10/31/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: CROSBY

ALTERNATE NAMES:
NEIMAN
BELLE
BONANZA
MARCUS MINES

YAVAPAI COUNTY MILS NUMBER: 81

LOCATION: TOWNSHIP 13 N RANGE 8 W SECTION 9 QUARTER N2
LATITUDE: N 34DEG 29MIN 15SEC LONGITUDE: W 113DEG 06MIN 08SEC
TOPO MAP NAME: MALPAIS MESA NE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
GOLD
LEAD

BIBLIOGRAPHY:
USGS MALPAIS MESA NE QUAD
WILSON, E.D. ETAL. AZ LODE GOLD MINES AZBM
BULL 137 1967 P 26
ADMMR CROSBY MINE FILE
CLAIMS ALSO IN SEC. 4

* GENERAL REFERENCES

REFERENCE 1 F1 <ABGMT CLIPP... FILE DATA

REFERENCE 2 F2 <AZ DEPT MIN. RESOURCES FILE DATA

REFERENCE 3 F3 <ABM BULL 137 P. 26-27

REFERENCE 4 F4 <USBM - ABGMT FILE DATA

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,1,1> YR. MO.
*INFORMATION SOURCE B30 <1,2,>
*FILE LINK IDENT. B50 <USBM-004 026 0607>

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

*REPORTER AFFILIATION G8 <ABGMT>
*SITE NAME A10 <CROSBY MINE>
*SYNONYMS A11 <CROSBY-NIEMAN>

LOCATION

*MINING DISTRICT/AREA A30 <CROSBY DISTRICT>
*COUNTY A60 <YAVAPAI>
*STATE A60 <A,Z,>
*COUNTRY A40 <U,S,>
*PHYSIOGRAPHIC PROV A63 <1,2,X,>
*DRAINAGE AREA A62 <1,5,0,3,0,2,0,3,X,>
LAND STATUS A64 <0,1,X,,X,(,,,,,)>
*QUADRANGLE NAME A90 <MALPAIS MESA NE (1967)>
*QUADRANGLE SCALE A100 <2,4,0,0,0,>
SECOND QUAD NAME A92 <(,,,,,)>
SECOND QUAD SCALE A91 <,,,,,,,>
ELEVATION A107 <3,2,0,0,FT,>

UTM

*NORTHING A120 <3,8,1,9,0,5,0,>
*EASTING A130 <3,0,6,8,5,0,>
*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 <0,0,3,W,:,X,,,:,X,,,:,X,,,>
*SECTION(S) A79 <9,:,X,4,:,X,,,:,X,,,>
*SECTION FRACTION(S) A76 <N½; S½>
*MERIDIAN(S) A81 <GILA AND SALT RIVER>

*POSITION FROM NEAREST PROMINENT LOCALITY A82 <2 MILES NE OF THORN PEAK>
*LOCATION COMMENTS A83 <LOCATION MEASURED TO CENTER OF CLUSTER OF 7 SHAFTS AND SEVERAL WORKINGS>

* ESSENTIAL INFORMATION
+ ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

*ORE MINERALS C30 <AURIFEROUS PYRITE AND LIMONITE>
COMMODITY SUBTYPES C41 <>
*GEN. ANALYTICAL DATA C43 <>
COM. INFO. COMMENTS C50 <>

* SIGNIFICANCE

PRODUCER		NON-PRODUCER	
MAJOR PRODUCTS	MAJOR <AU>	MAIN COMMODITIES PRESENT	C11 <>
MINOR PRODUCTS	MINOR <AG, CU>	MINOR COMMODITIES PRESENT	C12 <>
POTENTIAL PRODUCTS	POTEN <>		
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 <4>	STATUS AND ACTIVITY A20 <>

*DISCOVERER L20 <>
*YEAR OF DISCOVERY L10 <> *NATURE OF DISCOVERY L30 <B> *YEAR OF FIRST PRODUCTION L40 <1901> *YEAR OF LAST PRODUCTION L45 <1948>
*PRESENT/LAST OWNER A12 <>
*PRESENT/LAST OPERATOR A13 <R. ELLIOTT AND CROSBY, AND HOSEY AND STOFFER>
EXPL./DEV. COMMENTS L110 <>

DESCRIPTION OF DEPOSIT

*DEPOSIT TYPE(S) C40 <VEIN>
DEPOSIT FORM/SHAPE M10 <TABULAR>
*DEPTH TO TOP M20 <> *UNITS M21 <> *MAXIMUM LENGTH M40 <> *UNITS M41 <>
*DEPTH TO BOTTOM M30 <> *UNITS M31 <> *MAXIMUM WIDTH M50 <> *UNITS M51 <>
*DEPOSIT SIZE M15 (SMALL) M16 <MEDIUM> M18 <LARGE> (circle one) *MAXIMUM THICKNESS M60 <19> *UNITS M61 <INCHES>
*STRIKE M70 <N 10 E> *DIP M80 <25 TO 30 E>
*DIRECTION OF PLUNGE M100 <> *PLUNGE M90 <>
*DEP. DESC. COMMENTS M110 <>

DESCRIPTION OF WORKINGS

*Workings are: SURFACE M120 UNDERGROUND (M130) BOTH M140 (circle one)
*DEPTH BELOW SURFACE M160 <315> *UNITS M161 <FT> *OVERALL LENGTH M190 <> *UNITS M191 <>
*LENGTH OF WORKINGS M170 <300,000> *UNITS M171 <FT> *OVERALL WIDTH M200 <> *UNITS M201 <>
DESC. OF WORK. COM. M220 <LENGTH OF WORKINGS INCLUDE DRIFTS AND STOPAGE> *OVERALL AREA M210 <> *UNITS M211 <>

GEOLOGY

*AGE OF HOST ROCK(S) K1 <P.R.O.T.,T.E.R.T.,W. UNDATED, BUT PROBABLY 1700- 1980 MILLION YEARS OLD; UNDATED - MAY BE TERTIARY>
*HOST ROCK TYPE(S) K1A <GRANITE, QUARTZ MONZONITE, MUSCOVITE SCHIST; RHYOLITE PORPHYRY>
*AGE OF IGNEOUS ROCK(S) K2 <P.R.O.T.,T.E.R.T.,W. AS LINE K1>
*IGNEOUS ROCK TYPE(S) K2A <GRANITE, QUARTZ MONZONITE>
*AGE OF MINERALIZATION K3 <T.E.R.T.,W. UNDATED, BUT PROBABLY MID-TERTIARY>
*PERT. MINERALS (NOT ORE) K4 <QUARTZ>
*ORE CONTROL/LOCUS K5 <FAULTING, SHEARING>
*MAJ. REG. TRENDS/STRUCT. N6 <MINOR FOLIATION IN SCHIST TRENDS NE; IGNEOUS ROCKS MASSIVE>
*TECTONIC SETTING N18 <>
*SIGNIFICANT LOCAL STRUCT. N70 <VEINS OFTEN ARE LOW-ANGLE, DIPPING LESS THAN 40 DEGREES>
*SIGNIFICANT ALTERATION N75 <NONE>
*PROCESS OF CONC./ENRICH. N80 <OXIDATION AT NEAR SURFACE>
*FORMATION AGE N30 <P.R.O.T.,W. U/PB GREATER THAN 1770 MILLION YEARS>
*FORMATION NAME N30A <HILLSIDE MICA SCHIST (MUSCOVITE SCHIST)>
SECOND FM AGE N35 <,W.>
SECOND FM NAME N35A <>
*IGNEOUS UNIT AGE N50 <P.R.O.T.,W. UNDATED, BUT PROBABLY 1700- 1980 MILLION YEARS OLD>
*IGNEOUS UNIT NAME N50A <NO FORMAL NAMES FOR GRANITE, QUARTZ MONZONITE>
SECOND IG. UNIT AGE N55 <C.R.E.T.-T.E.R.T.,W. UNDATED; MAY RANGE FROM LATE CRETACEOUS TO MID-TERTIARY>
SECOND IG. UNIT NAME N55A <RHYOLITE AND MORE MAFIC DIKES (UNNAMED)>
GEOLOGY COMMENTS N85 <DEPOSIT IS LOW-ANGLE QUARTZ VEIN WHICH CUTS PROTEROZOIC IGNEOUS ROCKS. TERTIARY IGNEOUS ROCKS MAY BE PRESENT LOCALLY ALONG QUARTZ VEINS OR MAY BE ABSENT>

GENERAL COMMENTS

GENERAL COMMENTS GEN <>

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

MM-K146 Gold Ore

Yavapai Co.
16 mi. NW of Hillside
Eureka Dist.
Crosby Claim

MLS #81
3 - AKA's
Crosby (file)

G-8

MINERAL SPECIMEN FOR DEPARTMENT OF LIBRARY AND ARCHIVES

(Do not write in this space)

Ore _____

Cabinet _____

No. _____

(Wrap each specimen separately, or place it in a substantial bag, by itself, with a number attached, identical with the number on this card.)

Specimen No. 21, collected by Carl G. Barth, Jr.
Field Engineer

Name of ore Gold Ore

Minerals contained _____

_____

Gangue Quartz

Depth at which taken 135 feet

Approximate mineral content (in terms of average per ton) _____

_____

Name of mine or claim Crosby

Group _____

District Eureka

Location (distance and direction by highway from what town 16 miles north west ~~of Hillside.~~

Owner of property Same

Operator Mrs. Edna Elliott

Mine active or inactive Active

If inactive, when operated _____

Specimen presented by Mrs. Elliott

Date January 1940

Notes (Any general information regarding the history of the property.)

Past production well over $ 100,000 by small scale operators.

If more space is desired for notes, use other side.

This specimen is now in teh ADMR Museum (see K number).

Lawler[10], generally averaged less than $16 per ton in gold.

As seen in the lower adit drifts, which are about 300 feet in length and 170 feet below the collar of the new shaft, the vein ranges from a few inches to about 1½ feet in width. It consists of stringers and irregular bunches of coarse-grained, massive white quartz with irregular bunches and disseminations of pyrite, galena, and sphalerite.

COWBOY MINE

The Cowboy property of four claims is accessible by one mile of road that branches westward from the Bagdad highway at a point 23 miles from Hillside. This deposit, which is reported to have been discovered in the eighties, was relocated in 1923 by G. G. Gray. The U. S. Mineral Resources credit it with a small production of gold-lead ore in 1911, 1925, and 1931. Some of this ore carried about an ounce of gold per ton.

The prevailing rock is micaceous schist, intruded on the east by granite and cut by granite-porphyry dikes. The principal vein strikes northwestward and dips about 60° SW. It has been opened by an inclined shaft, reported to be 200 feet deep, with about 700 feet of drifts. When visited in January, 1934, these workings were under water to the 65-foot level. So far as seen, the vein-filling consists of narrow, lenticular masses of brecciated jasper together with more or less coarsely crystalline shiny gray quartz. It contains small scattered masses and disseminations of limonite, cerussite, anglesite, and galena. The gold occurs mainly with the lead minerals, particularly in the jaspery portions of the vein.

CROSBY MINE

The Crosby property, in Secs. 4 and 9, T. 13 N., R. 8 W., is accessible from the Bagdad highway by 3.5 miles of road that branches westward at a point 13 miles from Hillside.

The U. S. Mineral Resources state that the Nieman and Crosby property produced in 1906-1907, 1911-1916, but do not give the amounts. In 1927, according to Carl G. Barth, Jr.[11], the Red Crown Mines, Inc., produced $1,000 in bullion, and lessees obtained $1,870 from 22 tons of ore. Some production was made during 1928 and 1930. In 1931, according to the U. S. Mineral Resources, 100 tons of ore that averaged more than 1.7 ounces of gold per ton were shipped, and 25 tons were treated by amalgamation and concentration. Lessees were continuing small scale operations in 1934. When visited in January, a little ore was being mined from the adit level and treated in an old 10-stamp amalgamation-concentration mill.

[10] Oral communication.

[11] Oral communication.

The mine is at an altitude of 3,300 feet, in a small area of banded gray schist that is surrounded by light-colored granite and intruded by pegmatite, rhyolite-porhyry, and basic dikes. The vein, which strikes N. 10° E. and dips 25°-30° E., ranges from less than an inch to about 18 inches in width. Its filling, where unoxidized, consists of coarse-textured, glassy, grayish-white quartz with bunches and disseminations of pyrite. Rich ore from the oxidized zone shows brecciated quartz with abundant cellular limonite. The gold appears to occur in the iron minerals and to a less extent as visible particles in the quartz. Considerable sericite has been formed in the wall rocks.

The vein has been opened by an incline, reported to be 350 feet deep, with water at the 235-foot level. According to Carl G. Barth, Jr., the vein has been largely stoped out for a length of 325 feet from the surface to the 165-foot level. He states that it is cut off on the south by a fault occupied by a basic dike.

SOUTHERN CROSS MINE

The Southern Cross Mine, in the southwestern part of the Eureka district, south of Grayback Mountain, is accessible by 4½ miles of road that branches southward from the Kingman road at a point 28 miles from Hillside. This deposit was opened by shallow workings more than thirty years ago. During the first few months of 1934, the present owner, R. L. Gray, shipped from the property about 55 tons of ore that is reported to have contained from 0.75 to 1.0 ounce of gold per ton.

The vein strikes northward, dips from 15° E. to almost flat, and occurs in vertical mica schist. Its gangue is coarse-textured, massive, grayish-white quartz with fractures and small cavities filled with limonite and sparse copper carbonate. The walls show marked sericitization and limonite staining.

Underground workings include a 70-foot inclined shaft that passes through the vein, and two short, near-surface drifts with small stopes on the vein. As shown by these workings, the vein is lenticular and ranges from a thin seam up to 4 feet in thickness.

MAMMOTH OR HUBBARD MINE

The Mammoth property of eight claims, held by Hugh Hubbard and associates, is 8½ miles by road north of Hillside and within ¾ mile of the Santa Maria River.

This deposit, which is reported to be on school land, was discovered many years ago. Since 1931, it has produced several cars of ore.

Here, a moderately hilly pediment is floored by extensively jointed granite. The present shaft, which is 175 feet deep, was sunk on a narrow southward-dipping fault zone that showed a little iron oxide and copper stain. Between the 80- and 100-foot levels, a short drift to the east encountered an ore shoot that

Crosby (P)

COMPLETE AND MAIL TO:

STATE MINE INSPECTOR
1616 WEST ADAMS, SUITE 411
PHOENIX, ARIZONA 85007-2627

NOV 29 1989

FOR OFFICE USE ONLY
START-UP NUMBER 94368268
STATE NUMBER 141596
DEPUTY NUMBER Dave
NEW _____ MOVE _____

NOTICE TO ARIZONA STATE MINE INSPECTOR

In compliance with the Arizona Revised Statutes, we are submitting this written notice to the Arizona State Mine Inspector of our intent to start X, stop ____, move ____ an operation.
Note: This is a restart after being closed for summer months.
Please check the appropriate boxes: Contractor ☐, Owner ☒, Operator ☒, Open Pit Mine ☐, Underground Mine ☐, Mill ☒, Quarry ☐, Aggregate Plant ☐, Hot Plant ☐, Batch Plant ☐, Smelter ☐, Leach Plant ☒.
If this is a move, please show last location: _____
If you have not operated a previously in Arizona, please check: _____ If you want the Education and Training Division to assist with your mine safety training, please check: _____
If this operation will use any hazardous material; ie. cyanide, please check: X

COMPANY NAME: Marcus Mines

MINE OR PLANT NAME: Crosby Mine

DIVISION: _____

CHIEF OFFICER: Alden R. Hibbert TELEPHONE: 967-1798

COMPANY ADDRESS: Box 1

CITY: Congress STATE: AZ ZIP CODE: 85332

MINE OR PLANT LOCATION: (include county and nearest town, as well as directions for locating property by vehicle): Yavapai, Bagdad

1/4 mile NW of Santa Maria bridge on Hwy #96, turn SW 3 miles to mine.

TYPE OF OPERATION: Cyanide Vat leach PRINCIPAL PRODUCT: gold

STARTING DATE: On or after 12/15/89 CLOSING DATE: _____

PERSON COMPLETING NOTICE: Alden R. Hibbert TITLE: Owner-operator

DATE OF REPORT TO STATE MINE INSPECTOR: 11/24/89

FORM 101-106 REV. 03/89

DEPARTMENT OF MINERAL RESOURCES

News Items

Date Jan. 3. 40

Mine Crosby

Location 3.5 mi. N.W. St. Maria Rd

Owner Bridge Mrs. R. Elliott

Address Hillside

Operating Co. Leasers

Address

Pres.

Genl. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold

Men Employed 5 men leasing

Production Rate Ore 4-7 oz.

Mill, Type & Capacity

Power, Amt. & Type Hand drilling
Gas Hoist

Signed Barth

(Over)

May 27, 1957

CROSBY YAVAPAI COUNTY

This property idle.

*

MARK GEMMILL

Sec. 4 + 9, T.13 N, R.8 W.

CROSBY		
Au		
Yavapai	13 - 4	S 6, T 13 N, R 8 W
Edna Elliott, Hillside		'40

MC-51

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Jan. 23, 1940

Mine Crosby

District Eureka

Location 1½ miles west of Santa Maria River on Crosby Mountains

Former name

Owner Edna Elliott

Address Hillside, Arizona

Operator Roy Elliott

Address Hillside, Arizona

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold

Men Employed

Production Rate

Mill: Type & Cap. 1 ten stamp mill - not in operation

Power: Amt. & Type 1 gasoline hoist

Operations: Present

Operations Planned

Number Claims, Title, etc. 5 unpatented claims. Neiman, Bennett, Cassock, Boulder & Bonaza

Description: Topog. & Geog. Granite & Quartz

*

Mine Workings: Amt. & Condition 1 shaft 315 ft. deep. Approximately 300,000 ft. of drifts and stopage. Shaft needing some timber.

(over)

Geology & Mineralization Schist foot and hanging with quartz and iron

Ore: Positive & Probable, Ore Dumps, Tailings

Mine, Mill Equipment & Flow Sheet

Road Conditions, Route Fair road. Leaves Bagdad road a short way west of Santa Maria River's new Jackson Bridge. First road to the left of main road after crossing river - 3½ miles to mine

Water Supply Mine supplies sufficient water for camp use.

Brief History Located by Charles K. Crosby and Jack Neiman in 1897. Has been worked every year since that date. There has been close to $300,000 taken out of the mine to date. Most work has been done by leaser in recent years.

Special Problems, Reports Filed

Remarks Needs capital to develop

X

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

Signed Mrs. Edna Elliott

Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Jan. 22, 1940.

Mine Crosby

District Eureka

Location 1½ miles west of Santa Maria River on Crosby Mountains.

Former name

Owner Edna Elliott ✓

Address Hillside, Arizona.

Operator Roy Elliott. ✓

Address Hillside, Arizona

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold ✓

Men Employed

Production Rate

Mill: Type & Cap. 1 ten stamp mill. not in operation.

Power: Amt. & Type 1 gasoline hoist.

Operations: Present

Operations Planned

*

Number Claims, Title, etc. 5 unpatented claims. Neiman, Bennett, Cassac Boulder & Bonaza.

Description: Topog. & Geog. Granit & Quartz

Mine Workings: Amt. & Condition 1 shaft 315 ft deep. Approxamatly 300,000 ft drifts and stopsage. Shaft needing some timber.

(over)

Geology & Mineralization Shist foot and hanging with Quartz and Iron

Ore: Positive & Probable, Ore Dumps, Tailings

Mine, Mill Equipment & Flow Sheet

Road Conditions, Route Fair road. Leaves Bagdad road a short way's west of Santa Maria River's new Jackson Bridge. First road to the ~~west~~ left of main road after crossing river. 3½ miles to mine.

Water Supply mine supplies sufficient water for camp use.

Brief History Located by Charles H. Crosby and Jack Neiman in 1897. Has been worked every year since that date. There has been close to $300,000.00 taken out of the mine to date. most work has been done by lessee in recent years.

Special Problems, Reports Filed

Remarks Needs capital to develop

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

*

Signed Mrs Edna Elliott

Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

MINE OWNER'S REPORT

Date Jan. 23, 1940

1. Mine Crosby

2. Location 1½ miles west of Santa Maria River on Crosby Mountains

3. Mining District & County Eureka

4. Former name

5. Owner Edna Elliott

6. Address (Owner) Hillside, Arizona

7. Operator Roy Elliott

8. Address (Operator) " "

9. President, Owning Co.

9A. President, Operating Co.

10. Gen. Mgr.

14. Principal Minerals Gold

11. Mine Supt.

15. Production Rate

12. Mill Supt.

16. Mill: Type & Cap. 1 ten stamp mill - not in operation.

13. Men Employed

17. Power: Amt. & Type 1 gasoline hoist.

18. Operations: Present

19. Operations: Planned

20. Number Claims, Title, etc. 5 unpatented claims. Neiman, Bennett, Cassock, Boulder & Bonanza

*

21. Description: Topography & Geography Granite & quartz

22. Mine Workings: Amt. & Condition 1 shaft 315 ft. deep. Approximately 300,000 ft. of drifts and stopage. Shaft needing some timber.

(over)

3. Geology & Mineralization — Schist foot and hanging with quartz and iron

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

24A. Dimensions and Value of Ore body

25. Mine, Mill Equipment & Flow-Sheet

26. Road Conditions, Route — Fair road. Leaves Bagdad road a short way west of Santa Maria River's new Jackson Bridge. First road to the left of main road after crossing river - $3\frac{1}{2}$ miles to mine.

27. Water Supply — Mine supplies sufficient water for camp use.

28. Brief History — Located by Charles K. Crosby and Jack Neiman in 1897. Has been worked every year since that date. There has been close to $300,000 taken out of the mine to date. Most work has been done by leaser in recent years.

29. Special Problems, Reports Filed

30. Remarks — Needs capital to develop.

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

32. Signature Mrs. Edna Elliott

33. Use additional sheets if necessary.

4/8/04

IER Redoing "Report"

Spooner Removed as UP from IER
Bob Dwltz - Palm Springs

IER has "Chastain" old Robison claims
suing Scott Spooner

John Owen background - construction

Kevin Jones working primarily at "Chastain"

NJN '04

4/8/04

SHIELD
ENVIRONMENTAL ASSOCIATES, INC.

Pittsburgh
4326 Northern Pike
Monroeville, PA 15146
Telephone 412.374.0989
Fax 412.374.0959
www.shieldenv.com
E-mail kjones@shieldne.com

Kevin Jones
Managing Principal

Louisville, KY
Lexington, KY
Charlotte, NC
Guadalajara, Mexico

7/3/04

IER International Energy and Resources, Inc.

10112 napa valley drive
frisco, texas 75035 u.s.a.

John Owen
C.E.O.

office: (214) 387-4050
fax: (214) 853-5981
toll free: (866) 543-GOLD
cell: (214) 632-4236

Nyal Niemuth

From: <spooner3@bellsouth.net>
To: "Nyal Niemuth" <njn22r@hotmail.com>
Sent: Tuesday, August 28, 2001 7:51 PM
Attach: reply.htm
Subject: Re: Crosby exploration

Nyal: i will pass this email on to the managers. this will be their decision. remember, i'm only paid labor. hope the heat is not unbearable. i have been home here in louisiana for the past several weeks and hope to return ot AZ this week. scott>

> From: "Nyal Niemuth" <njn22r@hotmail.com>
> Date: 2001/08/28 Tue PM 01:14:27 EDT
> To: <spooner3@bellsouth.net>
> Subject: Crosby exploration
>
> Scott Spooner,
> Spooner and Associates Inc,
>
> I continue to receive inquiries about the project but have not received any exploration drilling, sampling, assaying, etc. data from the principles as I requested. Can you provide me an update on the project?
>
> If you have completed some of this work and can release the data and report to ADMMR I would be glad to review and share it. If I need to contact someone else for release of this information would you forward this or provide me with the appropriate contact.
>
> Thank you,
>
> Nyal J. Niemuth
> Arizona Dept. Mines and Mineral Resources
> 1502 West Washington
> Phoenix, AZ 85007
> Phone 602-255-3795 ext. 14
> Fax 602-255-3777
> www.admmr.state.az.us
> njn22r@hotmail.com
>
>
>

Scott Spooner,
Spooner and Associates Inc,

I continue to receive inquiries about the project but have not received any exploration drilling, sampling, assaying, etc. data from the principles as I requested. Can you provide me an update on the project?

If you have completed some of this work and can release the data and report to ADMMR I would be glad to review and share it. If I need to contact someone else for release of this information would you forward this or provide me with the appropriate contact.

Thank you,

Nyal J. Niemuth
Arizona Dept. Mines and Mineral Resources
1502 West Washington
Phoenix, AZ 85007
Phone 602-255-3795 ext. 14
Fax 602-255-3777
www.admmr.state.az.us
njn22r@hotmail.com

CROSBY MINE YAVAPAI

Mine visit, Crosby Mine (Yavapai County). Mine is accessible by approximately 4 miles of four wheel drive road. The camp contains 6 buildings in various states of disrepair. One building was used as a watchman's house until about 4 years ago. The property, at one time, had a ten stamp mill which has been mostly dismantled. There are numerous inclined shafts on the property, all of which have caved near the entrance. Dumps are surprisingly small for a reported 300,000 feet of drifts and stoppage. A windmill is pumping from one of the wells on the property for cattle water. Although the property is reported to have been a lead producer during WWII, no typical lead minerals were observed on the dumps. Mr. Chillo of Bagdad Copper reported that the Crosby mine was owned in part by Edward and Arizona Sotherland of Bagdad, Arizona. KP Report of 1/29/73

CROSBY MINE YAVAPAI COUNTY

NJN WR 4/6/84: Joe Bardswich of Jorniex Mining (c) reported receiving a submittal of the Crosby Mine, Yavapai County. The submittal contained a report from Hayes Mining Company who employed H. W. Sayers, geologist from the Wickenburg area and California Core Drilling. The report showed they had drilled a quartz monzonite which contained .11 oz Au/ton with intervals of over 50 feet within 200 feet of the surface. The drill assays were performed by Arizona Testing Labs and Copeland's Money Metal Lab. Mr. Bardswich reported he was going to visit the property and investigate further.

KAP WR 12/31/87: On a separate sheet is information received on the Crosy Mine (file) Yavapai County.

NJN WR 12/29/87: Phil Blacet (card) reported that Ron and Ned Hubbard (HIBBERT) own the patented claims which comprise the Crosby Mine (file) Yavapai County. Apparently American Metals and Minerals Company (card) stole some of the Hubbard's high grade tailings and are processing them elsewhere. The Hubbards are setting up a column leach facility to process some of the dump material. Samples are reported to run up to .27 oz/ton Au although most contain .1 oz per ton. They hope to obtain a 75% Au recovery by cyanide with 72 hours retention time at a -1/8" grind. They are assembling steel cylindrical tanks 12' tall by 6' in diameter to use as their column leach vessels. The high grade dumps may total 150 tons while other dumps total 1000 tons.

NJN WR 2/5/88: Jim Mott, Duputy Mine Inspector, reported that a column slurry leaching unit is being set up at the Crosby (file) Yavapai County to process some dump material.

PH - 516-944-2782

Eleonora Swanson
15 Cutter Mill Road
#222
Great Neck, NY 11021

FAX COVER

From: E. Swanson

Fax Number: 602 255 3777

To: Mr. Niemath

Hour: 9:00 am EST

Date: 2/28/01

Comments

Sorry to be so late. I would not mention who asked you to investigate. Actually, I was asked to finance the enterprise through my conacts on Wall Street.

Thank you,

Eleonora Swanson

Date Printed: 10/31/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION SUMMARY

Information from: **Ron Hibberts**

Company:

Address: P.O. Box 844
City, State ZIP: Yarnell, Arizona 85362
Phone: 520-427-6273

MINE: **Crosby Mine**

ADMMR Mine File: Crosby Mine File
County: **Yavapai**
AzMILS Number: **81**

SUMMARY

Ron Hibberts, P.O. Box 844, Yarnell, Arizona 85362, Phone (520) 427-6273 called and reported that and his brother Ned were no longer running their small vat cyanide leach operation at the Crosby Mine in Yavapai County. They were looking for someone to whom they could give the small amount of unused sodium cyanide they had on hand.

Ken A. Phillips, Chief Engineer Date: October 28, 1997

CRo-27 (f)

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

EVAN MECHAM, GOVERNOR

Ron Hilberts

NOTICE OF INTENT TO (ISSUE) (A) GROUNDWATER QUALITY PROTECTION PERMIT(S)

Pursuant to Arizona Compilation of Rules and Regulations, Title 9, Chapter 20, Article 2 the Director of the Arizona Department of Environmental Quality intends to (issue) (a) Groundwater Quality Protection Permit(s) to the following applicant(s), subject to certain special and general conditions.

Public Notice No. 117-87AZGW November 2, 1987

Marcus Mine CROSBY MINE
1242 E. Bishop Drive
Tempe, Arizona 85282
Groundwater Quality Protection Permit No.G-0050-13

The permittee is authorized to operate a closed circuit hydrometallurgical precious metals recovery facility utilizing the cyanide vat leaching method. The facility is located approximately 3 miles off state highway 96 between Bagdad and Hillside, shown as Crosby Mine. The Groundwater Quality Protection Permit shall regulate the containment of cyanide leach solution used in the operation. The barren solution pond should be lined with double imprevious flex membrane liner and have a leak detection and collection system in between the liners to monitor for the presence of liner leakage. The waste ore pad should also be lined with U.S. resistant liner supported with geo-textile. The facility shall be bermed to prevent runoff from a 100-year, 24-hour storm event, and fenced to provide a restricted access.

The permit (application)(Notice of Disposal) is available for public review Monday through Friday, 8:00 a.m to 5:00 p.m. at Arizona Department of Environmental Quality, Water Permits Unit, 2005 North Central Avenue, Phoenix, Arizona 85004.

Persons may submit comments or request a public hearing on the proposed action, in writing, to ADEQ at the above address within thirty (30) days from the date of this notice. Public hearing request must include the reason for such request.

RECEIVED
OCT 29 1987
DEPT. OF MINES & MINERAL RESOURCES

MINE: CROSBY
COUNTY: Yavapai
FILE: Crosby Mine

ENGINEER: Ken A. Phillips
DATE: December 31, 1987

SUBJECT: Information and rumors on activity at the Crosby Mine

Received a call from Chris Schmitz at Cyprus Bagdad Copper regarding an item in the Prescott newspaper that American Metals and Minerals Incorporated [address from BLM Microfiche: P.O.Box 4500, Palm Springs, California 92263 (make card)] is planning to develop a large open pit gold mine on the Crosby Mine (file), Yavapai County. Robert Dultz was reported as President and Chairman. In a effort to learn more about the proposed activity, I contacted Ron Hibbert (card), the owner of the patented Belle and Neiman claims which made up the original Crosby Mine. He was not aware of anyone or company with such plans on his property. He suggested that the owner, Will Canady [W.C. Canady, General Delivery, Bagdad, Arizona 86321], of a group of unpatented claims called the Crosby which surround his patents may have his claims involved in such a promotion, as he has done so in the past. *The Business Journal* of December 21, 1987 has also carried an article by Scott Rodrian (See NJN Dec. 18,1987 weekly report) on the announcement by American Metals and Minerals Incorporated.

During the above conversation with Don Hibberts, information about his property at the Crosby Mine (file), Yavapai was obtained. The Crosby Mine consisted of 2 patented claims; the Belle (MS 3811) and the Neiman (MS 4431) and the unpatented Bonanza claim. They are owned by Alden R. (Ron) and Dolores Hibbert and Ron's brother and sister-in-law, Ned Q. and Verda Hibbert. Ron has had legal difficulties with the above mentioned Will Canady over the Bonanza claim from which Canady had alleged been removing dumps or tailings. Ron explained that he got the court to issue a restraining order to stop the problem. Ron went on to report that he is completing the permitting process to set up a small cyanide vat leaching operation to be located on the Neiman patent. The Ground Water Protection Permit from the Arizona Department of Environmental Quality (notice in file) for the project was issued in the name of Marcus Mine, 1242 E. Bishop Drive, Tempe, Arizona 85282 which is Ron Hibbert's home address. He uses the name Marcus Mine (make a company card but Marcus Mine is not an alternate name for the Crosby Mine) essentially as a company operating name although he does also own a group of claims known as Marcus in another part of Yavapai County. [Belle and Bonanza have been added to the data base, but not the index as akas for the Crosby (AzMILS Yavapai 81)].

STATE MINE INSPECTOR
1624 WEST ADAMS, ROOM 108
PHOENIX, ARIZONA 85007-2606

STATE MINE INSPECTOR
DEC 22 1987

FOR OFFICE USE ONLY
START-UP NUMBER 7440252
STATE NUMBER 10159600
MSHA NUMBER

Crosby (P) Yavapai

Angel

NOTICE TO ARIZONA STATE MINE INSPECTOR

In compliance with the Arizona Revised Statute Section 27-303, we are submitting this written notice to the Arizona State Mine Inspector of our intent to start X stop ____ move ____ (Please check one) a mining operation.

If this is a move, please show last location: ____
If you have not operated a mine previously in Arizona, please check here: ____ If you want the Education and Training Division to assist with your mine safety training, please check here: ____
If this operation will use Cyanide for leaching, please check here: X

COMPANY NAME: Marcas Mines

DIVISION:

MINE OR PLANT NAME: Crosby Mine TELEPHONE: 967-1798

CHIEF OFFICER: Alden R. Hibbert

COMPANY ADDRESS: Box 1

CITY: Congress STATE: AZ ZIP CODE: 85332

MINE OR PLANT LOCATION: (Include county and nearest town, as well as directions for locating property by vehicle: Yavapai County

Crosby Mine 3 miles off Highway 96 between Bagdad and Hillside

TYPE OF OPERATION: Vat leach PRINCIPAL PRODUCT: gold

STARTING DATE: 1/4/88 CLOSING DATE: ?- DURATION: ?-

PERSON COMPLETING NOTICE: Alden R. Hibbert TITLE: Co-owner

DATE NOTICE MAILED TO STATE MINE INSPECTOR: 12/20/87

FORM 101-106 REV. 08/86

CROSBY MINE YAVAPAI

Mr. A.H. Johnson, 55 N. Matlock Street, Mesa, 964-5897, was in for information on the Crosby Mine in Yavapai.County. He has staked the property because he could not find any evidence that the original claims were kept up. His claims are recorded as the Crosby 1-5. KAP 7/10/73

Reference: ABM Bull. 137, p. 26, 27

KP WR 5/4/79 - Lee Cluer & Sonny Owens reported they had visited the Crosby mine, Eureka Dist., Yav. Co. They found the workings have caved and no material of interest on the dumps. 6/20/79 a.p.

KAP WR 3/5/82: Ron Hibbert, 1242 E. Bishop Drive, Tempe, AZ 85282, phone 967-1798 reported he owns the Neiman patented mine which is part of the Crosby Mine, Eureka District, Yavapai County in Sections 4 and 9 T13N R8W. He obtained the property from a Mrs. Kathern Hibbert. The Belle, the other patented property of the Crosby mine is owned by the Bouders in California. Mrs. Hibbert has located the Bonanza claim along the east side of the Neiman. He plans to vat leach 400 tons of stamp mill tailings for gold. He reported the tailings are 60% minus 240mesh and that fraction assay between 0.20 and 0.25 tr.oz. Au/ton. The coarser material (-30 +240) runs 0.13 tr.oz.Au/ton. He later wants to try to leach the dumps which contain about 5000 tons of material. Preliminary samples from the dump show values of 0.05 - o.06 tt.oz.Au/ton.

(From green card, Hayes Mining Limited)
KAP WR 5/13/84: A report was received that Hayes Mining Limited, Partnership is seeking investors in their proposed heap leaching operation near Bagdad. They reportedly have 2500 acres of ground valuable for gold. For $5000, the investor is promised 5% of the bullion from the heap leaching of 30,000 tons of material with cyanide. Ten such investors in each 30,000 ton unit will reportedly be allowed. The 30,000 tons is reported to contain 0.10 tr. oz Au/ton, 70% of which is supposedly recoverable. The investor is to receive (30,000 x 0.10 x 5%) ounces in bullion for his investment. W. C. "Will" Canaby is reported to be in charge. The contact phone number is 445-2054.

BOARD OF GOVERNORS:
CHARLES F. WILLIS, PHOENIX
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DR. N. H. MORRISON, PHOENIX
VICE-CHAIRMAN
SHELTON G. DOWELL, DOUGLAS
J. HUBERT SMITH, KINGMAN
LLOYD C. EDMONSON, GLOBE

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
CAPITOL BUILDING
PHOENIX, ARIZONA

J. S. COUPAL, PHOENIX
DIRECTOR
W. J. GRAHAM, PHOENIX
ASSISTANT TO THE DIRECTOR
AND SECRETARY TO THE
BOARD OF GOVERNORS
FIELD OFFICES AT
GLOBE - KINGMAN
PRESCOTT - TUCSON

June 26, 1940.

REPLY TO

Mrs. Edna Elliott,
Hillside,
Arizona.

Dear Mrs. Elliott:

I am enclosing herewith a copy of Mine Owners Report which you have filed with the Department of Mineral Resources covering your property.

If you have any additional information on this property, I should suggest that you forward it for filing with this report.

Assuring you of my desire to be helpful, and with best wishes, I am

Yours very truly,

J. S. Coupal

J. S. Coupal
Director

JSC-amh

There is no further reports that I know of only we need capital to develop and I am in hope the Sloan bill goes through.

Crosby Mine
Hilltop, Ariz.
May 23, 1945

Small Miners' Association
Tucson, Arizona

Att'n Mr. Ballum

Gentlemen:

I should greatly appreciate any information your office could render on the proper procedure necessary to obtain tires for my car which is in operation here at the Crosby Mine, Hilltop, Arizona.

For the past year, my car, a Chevrolet sedan, has been used as an emergency car here at the mine. I have been working through Mr. J.H. Byrd's office in Tucson on a contract and contract lease here at the Crosby Mine and have produced nineteen cars of copper and nineteen carloads of lead ore from this mine. The government has issued the pre-eminent bonus on these metals so vital under prevailing war conditions.

I have been unable to secure tires for my car for the past month, and have two borrowed tires on my car at the present time borrowed from Hummel Service Station, Tucson, in order to carry on operations between Tucson a nd the Crosby Mine. Applications with proper certification have been made at both Tucson and Willcox and were rejected by both War Rationing Boards. The Tucson board mailed me a slip of paper saying that I was eligible for grade three tires; however, this type of tire is of no benefit to me here on this mountainous road and are good for only one or two trips. While driving an injured person from the mine to Tucson May 5th, I blew out a taird grade tire which necessitated my using a five year old spare. I don't think I should be "put behind the eight ball" in emergency cases of this sort.

At the Small Miners' Meeting last year in Tucson, I was told that we would have no trouble obtaining tires for essential mine work and particularly would be given priority if engaged in lead mining due to the fact that the army and navy are so critically short of this metal and are asking for an increase in its production.

My car is also used to haul supplies such as powder, caps and fuse from Silver City, New Mexico, samples to Douglas, maching and compressor parts from Tucson and Phoenix. My men reside in Tucson--this being my headquarters--which calls for additionnal mileage tp secure their needs as well as mine.

I should appreciate any recommendation your office could render in order that I may obtain the necessary tires as well as gasoline in order to improve the existing conditions here.

Sincerely yours,

C. L. Pat Burney

PB:ld

RECEIVED
MAR 16 1982
DEPT. MINERAL RESOURCES
PHOENIX, ARIZONA

3/14/82

CROSBY MINE
EUREKA DIST
YAVAPAI COUNTY

Ken Phillips
Department of Mineral Resources
Mineral Resources Building
Fairgrounds
Phoenix, Arizona 85007

Dear Ken:

The patent No. for the Neiman Lode is 1209915 dated 6-21-60, Serial No. AR 021503

The patent No. for the Belle Lode adjacent on the north end of the Neiman is 889097 dated 11-27-22, Serial No. 053347

We (my brother and our wives) bought the Neiman from Catherine Hibbert in April 1979. She inherited the Neiman from her mother, Edna Elliott, who, with her husband Roy Elliott, owned the mine for many years. Edna Elliott first aquired the 5 claims, including the Neiman, then unpatented, in 1932 from Catherine Crosby, who I assume was C.K. Crosby's widow, the original locator with T.J. Neiman in 1897. Others have owned part interest in the Neiman over the years, including Ethel A. Sutherland who Quit Claimed her interest to Edna Elliott on 11/24/64.

(over)

I am uncertain about who owns the Belle Lode patented claim. I have copy of a ~~Quit Claim~~ transaction on 7/8/73 in which Grace M. Bauder sold one-half interest in the Belle (deeded to her by William H. Bauder) to Chester E. and Mary I. Barnes and sworn before a notary public in Humboldt County, California.

The Belle was originally located by E.P. Shultz on 3/9/03 and an amended location notice filed 10/12/06 by J.K. Miller and W.H. Bauder. The Belle was patented by James K. Miller and William H. Bauder 11/27/22.

I believe the Neiman was known as the Crosby mine because Crosby was one of the original locators. However, the complex of claims including the Belle may well have been known locally as the Crosby mine. It is so named on the U.S. topog sheet.

I enjoyed our chat last week. Thanks for the information you provided to me about the Crosby. I hope to stop by and see you again sometime.

Sincerely,
Ron

Alden R. Hibbert
1242 E. Bishop Dr.
Tempe, Az 85282

June 4, 1945

Mr. C. L. Burney
Hilltop, Arizona

Dear Sir:

Replying to your request for information relative to your eligibility for Grade 1 tires for your mining operation, it would appear that your record of shipments, 38 cars of copper and lead ores, should be sufficient evidence to present to your local board in support of your claim.

This department has no authority from the O.P.A. to make recommendations in procurement of tires. However, copper and lead are still critical and needed in the war effort. We therefore suggest that you exhibit your smelter returns to the board having jurisdiction, making a formal request for Grade 1 tires.

There has been some increase recently in the allotment of tires for essential uses and the picture may have changed since your last application was denied.

Yours very truly,

George A. Ballam
Assistant to the Director

GAB:LP

U.S. METALS AND MINERALS, INC.

JOINT VENTURE INTEREST IN THE SANTA MARIA MINE

From : PHONE No. : Aug. 10 1999 7:37AM P01

U.S. METALS AND MINERALS, INC.

JOINT VENTURE INTEREST IN THE SANTA MARIA MINE

U. S. METALS AND MINERALS, INC. with a home office at 4706 North 31st Drive, Phoenix, Arizona, is a public company incorporated under the laws of the State of Arizona. The Company currently owns 90% of the leases on one hundred forty-one (141) lode mining claims, located in Yavapai County, Arizona, within 5 miles of the "Baghdad" open pit mining operation processing over 100,000 tons of ores per day and employing over 1,200 people. The properties owned are in the Eureka Mining District and include the historic Hayes, Crosby and Glory Hole mines, which now constitute what the Company refers to as the "Santa Maria Mine." In the early part of the century previously operating mines in the surrounding Eureka Mining District produced over 8 ounces of gold per ton and over 600 ounces of silver per ton. The Company has access to water, power and roads sufficient to commence operations. Certain claims are located between previously producing mines on Jasper Peak with gold carrying mineralization in the Jasperoid. Over the years, numerous geological, geophysical and geochemical studies have been conducted on the property. Core drillings were taken, samples were assayed at an over all average of 0.14 ounces of gold per ton and 0.595 ounces of silver per ton. One aspect of the potential which has not been known until recent technological developments brought it to our attention, is that the claims area actually comprises six distinct mining opportunities: (1) Gold and Silver, (2) Uranium, (3) Complex ores, moly and the platinum group, (4) rare earths and strategic metals, (5) precious and semi-precious gems and (6) granite, boulders and other "common" rocks and stone for decorative use in landscaping.

History

According to one local historical expert the claims area was mined by the first Spaniards who came to the area almost 400 years ago. The local Mesa Indians showed the Spaniards where to mine the gold and silver which was ultimately shipped to Spain. In the 1880's the Eureka Mining District was pioneered by John Lawler and Charles Crosby. In 1883, John Lawler discovered the area was rich in gold, silver, lead and zinc. The mines John Lawler opened eventually became the Phelps Dodge Cypress open pit mine, one of the largest operating in the United States today, and located just 5 miles north of the Santa Maria Mine. The Hayes Silver Mine opened around 1885. The deposit was so rich, with over 300 ounces of gold and silver per ton, that the owners shipped the ore direct to England for smelting and refining. Charles Crosby discovered the property now owned by **U.S. METALS AND MINERALS, INC.**, and worked it from 1906 to 1933. It is on the same structure and flat zone as the Phelps Dodge Cypress deposit.

From : PHONE No. : Aug. 10 1999 7:39AM P03

When the Crosby Mine opened in 1906 it processed 120 ounces of gold per day. The old dumps presently contain 0.25 ounces of gold per ton. The mine utilized a 40 stamp mill from 1907 until World War II. Approximately $20,000,000.00 in gold was extracted from the Crosby Mine at today's prices. The original workings of the Crosby Mine indicate that the vein was lost. Through very low frequency electromagnetic surveys, we have discovered the vein appears again on the other side of the ridge to the west of the mine and continues into the Twin Peaks in the western section of the claims area.

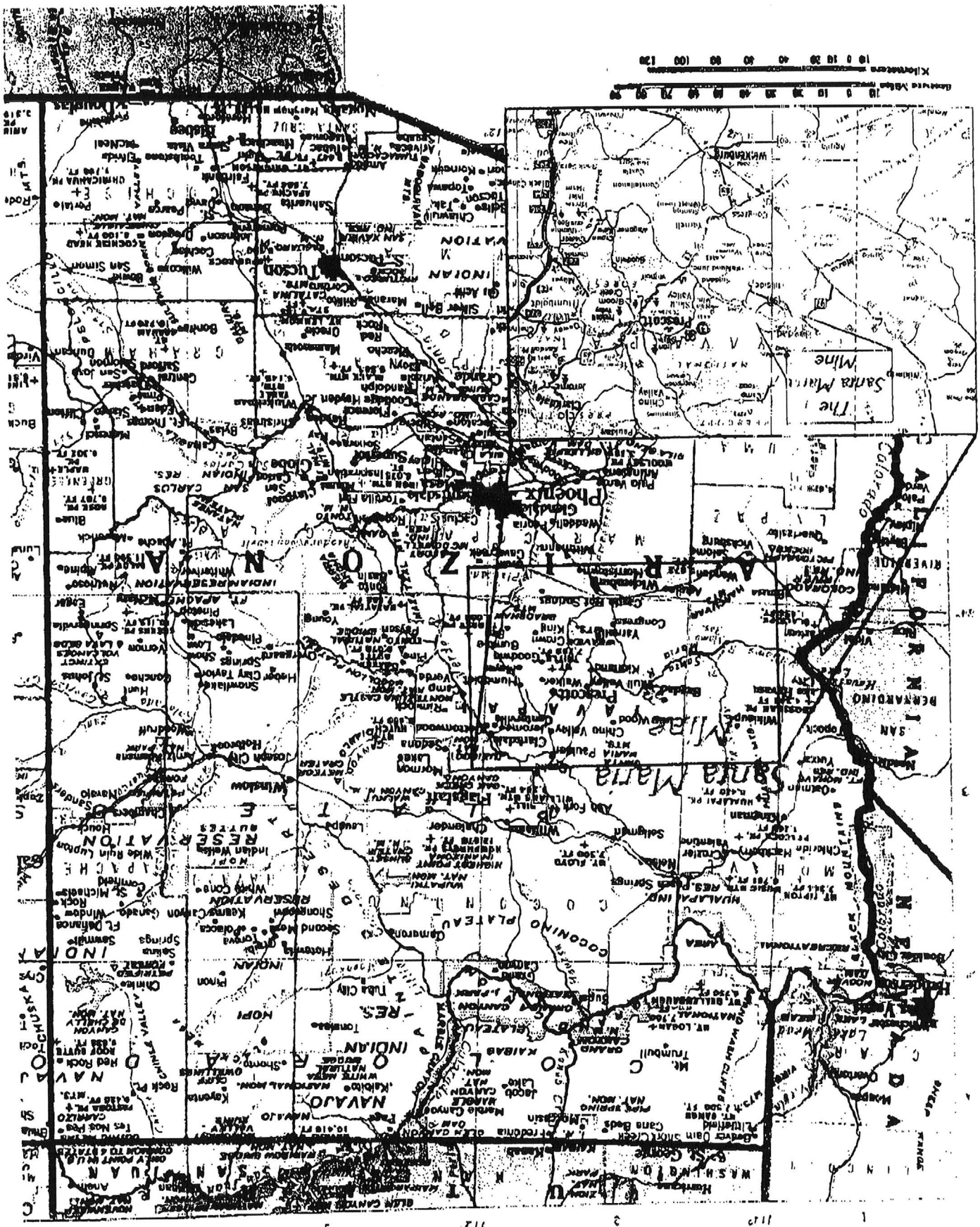
The Glory Hole Mine was worked by a prospector in the 1920's and 1930's. The ore he mined ran over 8 ounces of gold per ton. As recently as 1942, the ore from the Glory Hole Mine produced 2.6 ounces of gold per ton. This ore was shipped to the railhead at Hillside and by train to a smelter in El Paso. The Crosby, the Hayes and the Glory Hole mines are each located within the boundary of the Santa Maria Mine. Neighboring claims are located between and around these previously producing mines as well as on Jasper Peak on the western border of the claims group.

The Santa Maria River traverses the property and **U. S. METALS AND MINERALS, INC.**, is the only company that holds water rights to the river, a valuable asset for a mining company in this arid country.

To date, $1 million has been spent securing the claims, confirming historical assays, establishing estimated reserves and conducting numerous geological, geophysical and geochemical studies from over 10,000 feet of core drillings, and over 1,500 assay samples. Core drillings were taken and samples were assayed at an overall average of 0.14 ounces of gold per ton, 0.595 ounces of silver per ton proving over 652,000 oz. of gold and 2,488,000 oz. of silver in reserve using 1 area of 3 claims, 300' wide x 500' long x 100 deep. At today's prices, this represents over $191,740,000.00. If we extend the depth to 400 ft. (early workings tunneled to this depth and drill results verify ore to this depth) we would multiple this amount by 4 and the value would be $766,960,000.00. If we extend the same areas to a depth of 2,000 feet, which is the depth to which the Phelps Dodge mine in Bagdad is being mined, the estimated reserves would be approximately $3,884,800,000.00! (3.8 billion dollars!).

The geological, geophysical and geochemical studies mentioned above were reviewed and evaluated by Nicholas H. Carouso, president of Geo-Processing, Inc., an independent mining, consulting and geology firm retained by the prior owners of the property to evaluate the commercial feasibility of these claims. Based upon his report and economic study, which recommended continuation of exploration and start of production, the Company intends to start production of the Santa Maria Gold Mine at 1000 tons/day and to increase production within 1 year to 10,000 ton/day and within 2 years to 25,000 ton/day.

From : PHONE No. : Aug. 10 1999 7:39AM P04


Phoenix
Tucson
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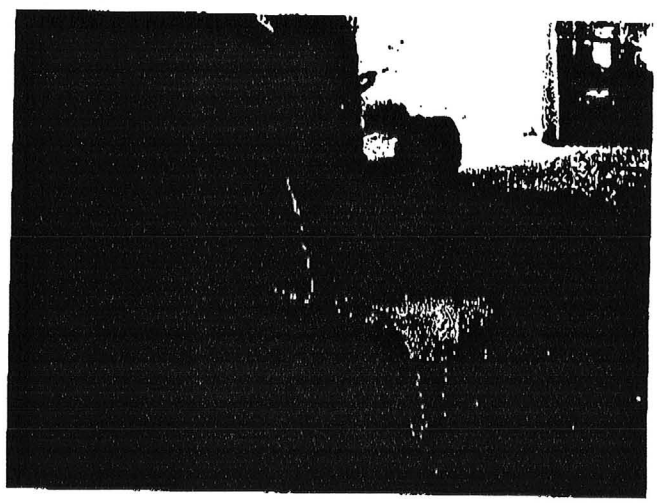
Prescott
Yuma
Mesa
Sierra Vista
Kingman
Lake Havasu City
Page
Show Low
Globe
Casa Grande
Sedona
Santa Maria Mine
Arizona
Nevada
New Mexico
Colorado
California
Utah
Mexico
Grand Canyon
Lake Mead
Lake Powell
Colorado River
Salt River
Gila River
Verde River
Little Colorado River
San Pedro River
Santa Cruz River
Hualapai Mountains
Black Mountains
Superstition Mountains
Mogollon Rim
Coconino Plateau
Navajo Nation
Hopi Reservation
Fort Apache Reservation
San Carlos Apache Reservation
Gila River Indian Community
Tohono O'odham Nation
Colorado River Indian Tribes
Fort Mohave Indian Reservation
Havasupai Reservation
Hualapai Indian Reservation
Kaibab Indian Reservation
Pascua Yaqui Reservation
Salt River Pima-Maricopa Indian Community
San Xavier Reservation
Ak-Chin Indian Community
Cocopah Indian Reservation
Yavapai-Prescott Indian Tribe
Yavapai-Apache Nation
Camp Verde
Cottonwood
Clarkdale
Jerome
Prescott Valley
Chino Valley
Paulden
Ash Fork
Williams
Grand Canyon Village
Tusayan
Valle
Tuba City
Kayenta
Chinle
Window Rock
Ganado
Fort Defiance
St. Michaels
Sanders
Chambers
Holbrook
Winslow
Joseph City
Show Low
Pinetop-Lakeside
Snowflake
Taylor
Heber
Overgaard
Payson
Star Valley
Young
Globe
Miami
Superior
Kearny
Hayden
Winkelman
Florence
Coolidge
Eloy
Casa Grande
Maricopa
Gila Bend
Ajo
Why
Sells
Topawa
Tucson
Marana
Oro Valley
Catalina
Green Valley
Sahuarita
Nogales
Rio Rico
Tubac
Amado
Arivaca
Sasabe
Ajo
Why
Lukeville
Organ Pipe Cactus National Monument
Kitt Peak
Mount Lemmon
Mount Graham
Chiricahua Mountains
Huachuca Mountains
Patagonia Mountains
Santa Rita Mountains
Tumacacori
Bisbee
Douglas
Willcox
Safford
Thatcher
Pima
Duncan
Clifton
Morenci
Metcalf
Greenlee
Apache
Graham
Cochise
Pinal
Gila
Navajo
Coconino
Yavapai
Mohave
Maricopa
Yuma
La Paz
Pima
Santa Cruz
Greenlee
Apache
Graham
Cochise
Pinal
Gila
Navajo
Coconino
Yavapai
Mohave
Maricopa
Yuma
La Paz
Pima
Santa Cruz

U. S. METALS AND MINERALS, INC., is offering a 50% joint venture interest in production of 1000 tons/day of gold and silver from the 141 leases they own for 5 million. When production increases to 10,000 tons/day, the 50% interest will go to 22%.

Use of Funds

Some of the initial funds will be used to drill holes one hundred feet apart in a grid pattern over much of the area for the purpose of determining which sections of the claims area are best suited to start production and claims d to further define our reserves. Two claims, the Crosby and the Hayes (20 acres each), which are in the middle of the claim area have been patented. The company will use some of the funds to acquire these patented claims. It is our intention to develop all of the potential of the Santa Maria Mine. To date modern technology has not been applied to this claims area. We believe the use of the latest in technology available will make it possible for us to locate the strongest concentrations of ores and provide us with the most economical methods for extracting the gold and silver.



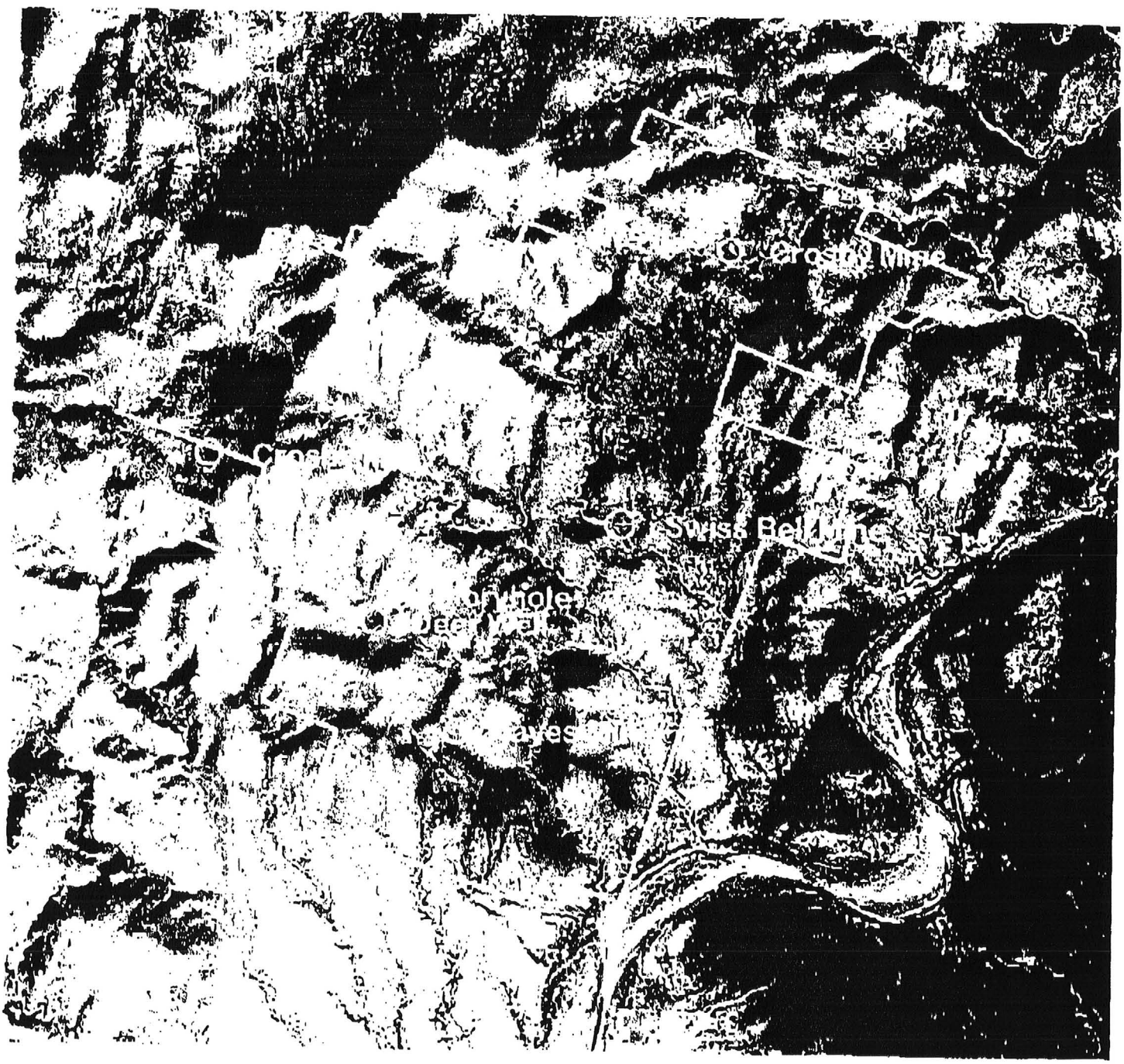
Supplemental exploration efforts, geological surveys, drilling and testing to prove and qualify ore reserves	$ 950,000
Develop and construct a Benefication Plant	$5,000,000
Acquire and develop patented claims	$ 300,000
Labor and Management salaries	$1,000,000
Equipment for commencement of mining operations	$2,000,000
Working Capital	$ 750,000
Total:	**$10,000,000**

From : PHONE No. : Aug. 10 1999 7:40AM P05

Lan[illegible] Image Showing Santa Maria Mi[illegible] Claims Area

Claims area is outlined in white. The Santa Maria River is in the lower right-hand corner of the map.

This is a photograph taken from a satellite and color enhanced to show mineralization. The reddish-burgundy areas indicate the presence of iron ore consistent with gold and silver deposits.



From : PHONE No. : Aug. 10 1999 7:41AM P06

ECONOMICS

Low Side / Projected Yearly Revenue

Gold	
1,000 tons per day x 300 days x .14 ounces gold = 42,000 oz	
42,000 oz x $275.00/oz. = 11,550,00 x 90% =	$10,395,000
Cost 42,000 oz. x $175.00/oz. =	- $ 7,350,000
Profit =	$ 3,045,000
Silver	
1,000 tons per day x 300 days x .595 oz. silver =	$ 178,500
178,500 oz. silver x $5.00/oz = 892,500 x 90% =	$ 803,250
Cost 178,500 oz. x $3.00/oz. =	$ 535,500
Profit =	$ 267,750
Gold profit	$3,045,000
Silver profit	$ 267,750
	$3,312,750
50% to Joint Venture =	$1,656,375
1% participation	$ 16,563.75

50,000 + 16,563.75 = 3.01 year payout

High Side / Projected Yearly Revenue

Gold	
10,000 tons per day x 300 days x .14 ounces gold = 420,000 oz	
420,000 oz x $275.00/oz. = 115,500,00 x 90% =	$103,950,000
Cost 420,000 oz. x $175.00/oz =	- $ 73,500,000
Profit =	$ 30,450,000
Silver	
10,000 tons per day x 300 days x .595 ounces silver =	$ 1,780,500
1,785,000 oz. silver x $5.00/oz = 8,920,500 x 90% =	$ 8,032,500
Cost 1,785,000 oz. x $3.00/oz. =	- $ 5,355,000
Profit =	$ 2,677,500
Gold profit	$30,450,000
Silver profit	$ 2,677,500
Total:	$33,127,500
22% ~~50%~~ to Joint Venture =	~~$16,563,750~~ 7,288,050
1% participation	$ ~~165,637.50~~ 72,880.50

72,880.50 8.23

50,000 + ~~165,637.50~~ = ~~3.62~~ months

ECONOMICS

From : PHONE No. : Aug. 10 1999 7:42AM P07

Aug.10 1999 7:47AM P01
PHONE No. :
From :

TOWNSHIP 13 NORTH RANGE 8 WEST OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA
YAVAPAI COUNTY

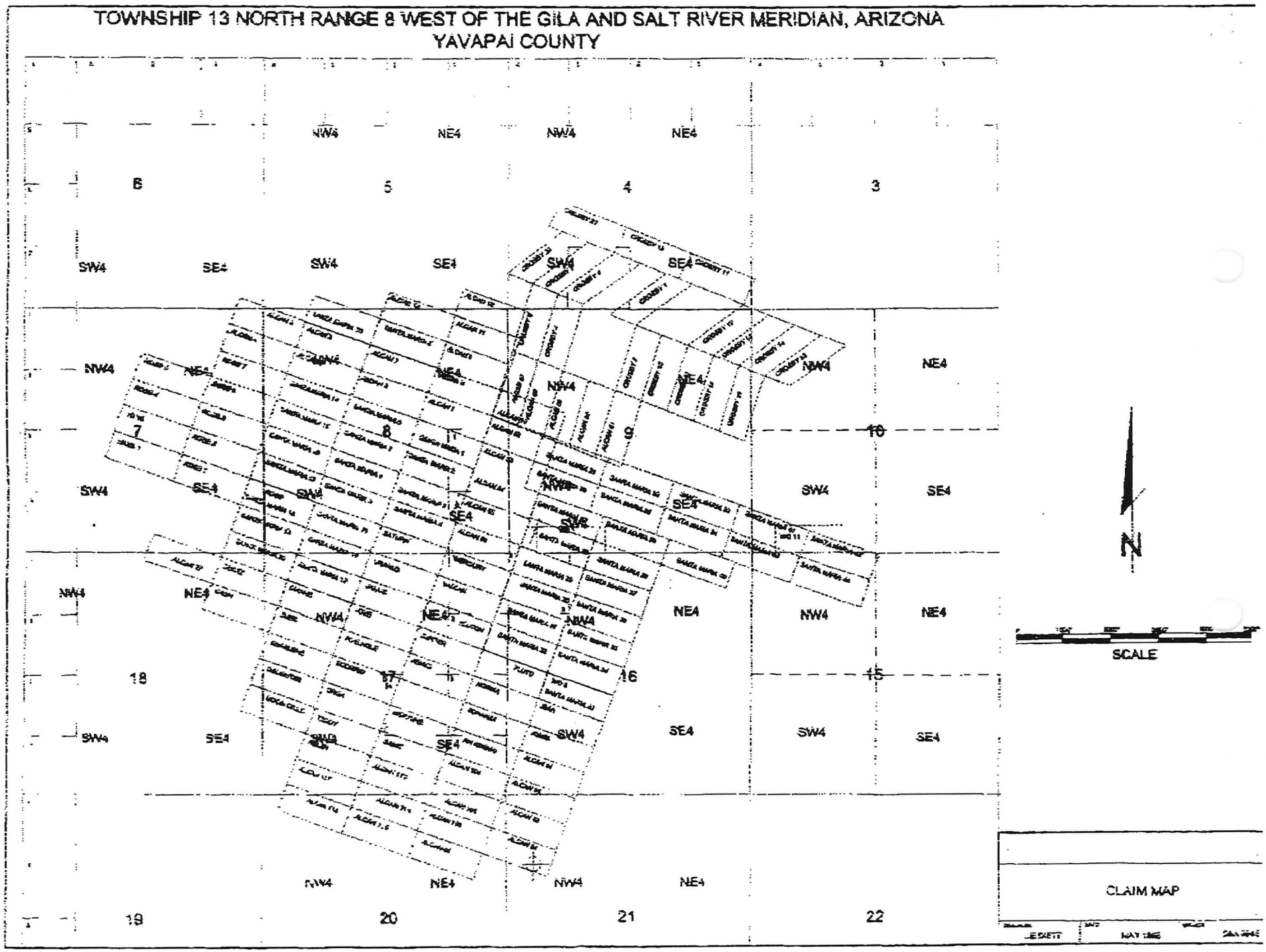


Exhibit 3

GOLDEN WEST INC.
1394 Iron Springs Rd.
Suite 102
Prescott, AZ 86301

MINING SERVICES
EVALUATION
EXPLORATION
DEVELOPMENT
ESTB. 1978

Robert Sturgis
CEO
Santa Maria Resources

September 16,1997

RE: Glory Hole Mine
Inferred Ore Reserves

The inferred studies conducted on the Glory Hole Mine area indicate that two mining claims located on the central area of the mine contain 7,200,000 tons of ore graded at .143 oz. gold and .55 oz. silver. This area also contains cinnabar with recorded assays going back to 1935. Cinnabar is the main ore of Mercury. The assays taken recently with those from the 1930,s and 1940,s indicate a average .08% Hg.

INFERRED ORE RESERVES

AU. 7,200,000 T X .143 = 1,029,600 OZ.

AG. 7,200,000 T X .55 = 3,960,000 OZ.

HG. 7,200,000 T X .08% - 11,520,000 LBS.

The inferred studies reveal probable ore reserves on the Glory Hole Mine property. The core drilling of this area will indicate proven ore reserves ready for mining and processing. Santa Maria Resources will be able to obtain a Gold Bullion loan with certified proven ore reserves from a bank.

CONTINUE FROM PREVIOUS PAGE 001

GOLDEN WEST IN...
1384 Iron Springs Rd.
Suite 102
Prescott, AZ 86301

MINING SERVICES
EVALUATION
EXPLORATION
DEVELOPMENT
ESTB. 1978

PRIMARY METALS
160 Grab Samples
Assay Report - Gold Only

Total Ft.	Samples Line One				Samples Line Two			
	1	2	3	4	1	2	3	4
25 - 100	.010	.023	.114	.005	.041	.005	.010	.003
100 - 200	.016	.134	.031	.004	.058	.114	.098	.042
200 - 300	.021	.038	.084	.001	.028	.014	.038	.004
300 - 400	.011	.002	.045	.031	.115	.065	.038	.009
400 - 500	.009	.074	.036	.000	.068	.043	.189	.087
500 - 600	.032	.114	.005	.043	.045	.150	.289	.181
600 - 700	.028	.014	.035	.008	.015	.035	.038	.008
700 - 800	.145	.053	.030	.041	.001	.040	.000	.001
800 - 900	.005	.138	.023	.065	.069	.028	.039	.014
900 - 1000	.053	.028	.031	.028	.049	.009	.003	.039
1000 - 1100	.011	.036	.067	.009	.178	.049	.001	.009
1100 - 1200	.145	.089	.073	.043	.089	.013	.003	.049
1200 - 1300	.091	.038	.028	.039	.468	.358	.061	.014
1300 - 1400	.043	.051	.037	.111	.009	.139	.087	
1400 - 1500	.009	.081	.019	.009	.063	.100	.116	.043
1500 - 1600	.167	.039	.068	.007	.135	.098	.030	.051
1600 - 1700	.118	.049	.093	.063	.038	.042	.010	.093
1700 - 1800	.009	.001	.031	.050	.029	.014	.381	.038
1800 - 1900	.043	.038	.063	.189	.009	.038	.114	.000
1900 - 2000	.010	.193	.036	.234	.061	.043	.069	.001

From : PHONE No. : Aug. 10 1999 7:49AM P03

GOLDEN WEST IN .
1364 Iron Springs Rd.
Suite 102
Prescott, AZ 8630

MINING SERVICES
EVALUATION
EXPLORATION
DEVELOPMENT
ESTB. 1978

RE: Primary Metals Inc.

This ore structure indicated from inferred maps was then overlayed on the primary metals lode claim map to indicate exact location of the ore structure on the ground. Then surface grab sampling was conducted along the ore structure. The rock samples were taken at 28' intervals running the length of the ore structure. A parallel line of grab samplings were also conducted 200' from the original line of grab samples. A total of 160 grab samples were taken along the two lines running 2000' each within the ore structure. The following assay analysis indicate the average ore values obtained from the 160 samples taken. Assays were run for gold only.

1384 Iron Springs Rd.
Suite 102
Prescott, AZ 86301

EVALUATION
EXPLORATION
DEVELOPMENT
ESTB. 1978

RE: Primary Metals Claims

In conclusion the assays for gold would indicate the ore structure has sufficient gold values to warrant further exploration. This can be accomplished through core drilling the area shown to have good values on the surface.

R.W. Jones
Geologist

CONTINUE FROM PREVIOUS PAGE 001

Exhibit 3

GOLDEN WEST INC.
1364 Iron Springs Rd.
Suite 102
Prescott, AZ 86301

MINING SERVICES
EVALUATION
EXPLORATION
DEVELOPMENT
ESTB. 1978

Robert Sturgis
CEO
Santa Maria Resources

September 16,1997

RE: Glory Hole Mine
Inferred Ore Reserves

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INFERRED ORE RESERVES

AU. 7,200,000 T X .143 = 1,029,600 OZ.

AG. 7,200,000 T X .55 = 3,960,000 OZ.

HG. 7,200,000 T X .08% = 11,520,000 LBS.

The inferred studies reveal probable ore reserves on the Glory Hole Mine property. The core drilling of this area will indicate proven ore reserves ready for mining and processing. Santa Maria Resources will be able to obtain a Gold Bullion loan with certified proven ore reserves from a bank.

Established 1[illegible]
Registered Geologist
7000 HWY 89
Wickenburg, Arizona

January 7, 1982

President
Hayes Mining & Machinery
Bagdad, Arizona 86321

RE: Mining Development for Hayes Mining

Dear

During the past forty-two years I have been connected with and responsible for some of the principal developments in the mining districts of Eureka and Ochocomo. My first experience was with the Bagdad Mine. This mining facility went to an open pit form of mining in 1947. I was involved with the early development of this project. I helped determine with my analysis of the area that a large ore body existed, and the open pit form of mining was the best and most profitable. This has proven to be correct even beyond my early findings. The Bagdad operation at the beginning was profitable and at the present time employs 1200. This mining operation was recently purchased by Standard OIL of Indiana for $450,000,000. The original property started with a 250 ft. shaft and a hearty prospecter named John Lawler.

The mining districts of Eureka and Ochocomo have a history of ore production, numerous mines have production values of $1,500,000. to $20,000,000. The late 1890's were the beginning for such mines as the Bagdad, Copper King, Old Dick, Hillside, Hayes and the Swiss Belle. The Crosby Mine located on the Hayes property with the Swiss Belle and Hayes Silver Mine had a production of Gold and Silver that at todays prices would be $55,000,000. My investigation of this property indicates a considerable body of ore that can be mined at a profit. The Gold and Silver are impregnated thruout the monzanite porphyry dike formations. The entire Hayes property is similar in geological formations to that of the Crosby area.

This report will deal with the eight core drill holes near the Hayes Silver Mine. This diamond drilling was done during the fall of 1979. There is a diorite porphry dike that runs from the Santa Maria River to the Hayes Peak some four miles in lenght. This dike is surrounded by quartz monzonite stock and mica schist. The Hayes Silver Mine has a vertical shaft that enters on the dike. Russell Samson a prospector and a miner who worked for the Bagdad Copper Co. stated his knowledge of the Hayes was that the shaft extended some 200' and the ore was shipped directly to England for smeltering. There is the remains of a rock house that served as a assay office near the mine. The dump around the mine averages 35 oz. silver per ton. They assayed the ore and shipped the highest grade. The grade of silver had to run minimum 300 oz. per ton to ensure a profit in the 1890's.

The core drillings are adjoining the same dike. The core holes were drilled at angles to intersect the dike at eight levels. A total of 4000' of diamond drilling were completed.

CONTINUE FROM PREVIOUS PAGE 001

Established 1938

EXHIBIT 1

W.H. SEVERS
Registered Geologist
7000 HWY 89
Wickenburg, Arizona

Mining; Evaluations

CONTINUE FROM PREVIOUS PAGE 002

About ½ mile up on the dike is a glory hole worked by a prospector in the 1920's. There are the remains of a rock house and an arrasta for milling the ore. I have assayed the ore from around the arrasta and it ran 2.5 oz. gold and 5. oz silver per ton. There are five mine shafts on this claim, the assay values ran from .221 au. to 1.75 au. and .50 ag. to 3.50 ag. per ton from the samplings taken from the mine shafts. I also analyzed the soil and outcropings from around the mine shafts. The soil samples average .115 au. and the outcropings .250 au. This claim shows excellent values and should be the next to be core drilled.

DIAMOND CORE DRILLING
TOWNSHIP 13 NORTH 8 WEST RANGE
SECTION 17

GEOLOGICAL RESULTS
800 SAMPLES TAKEN
4000' DIAMOND DRILLING

HAYES
ROCK HOUSE
DRILL HOLE #

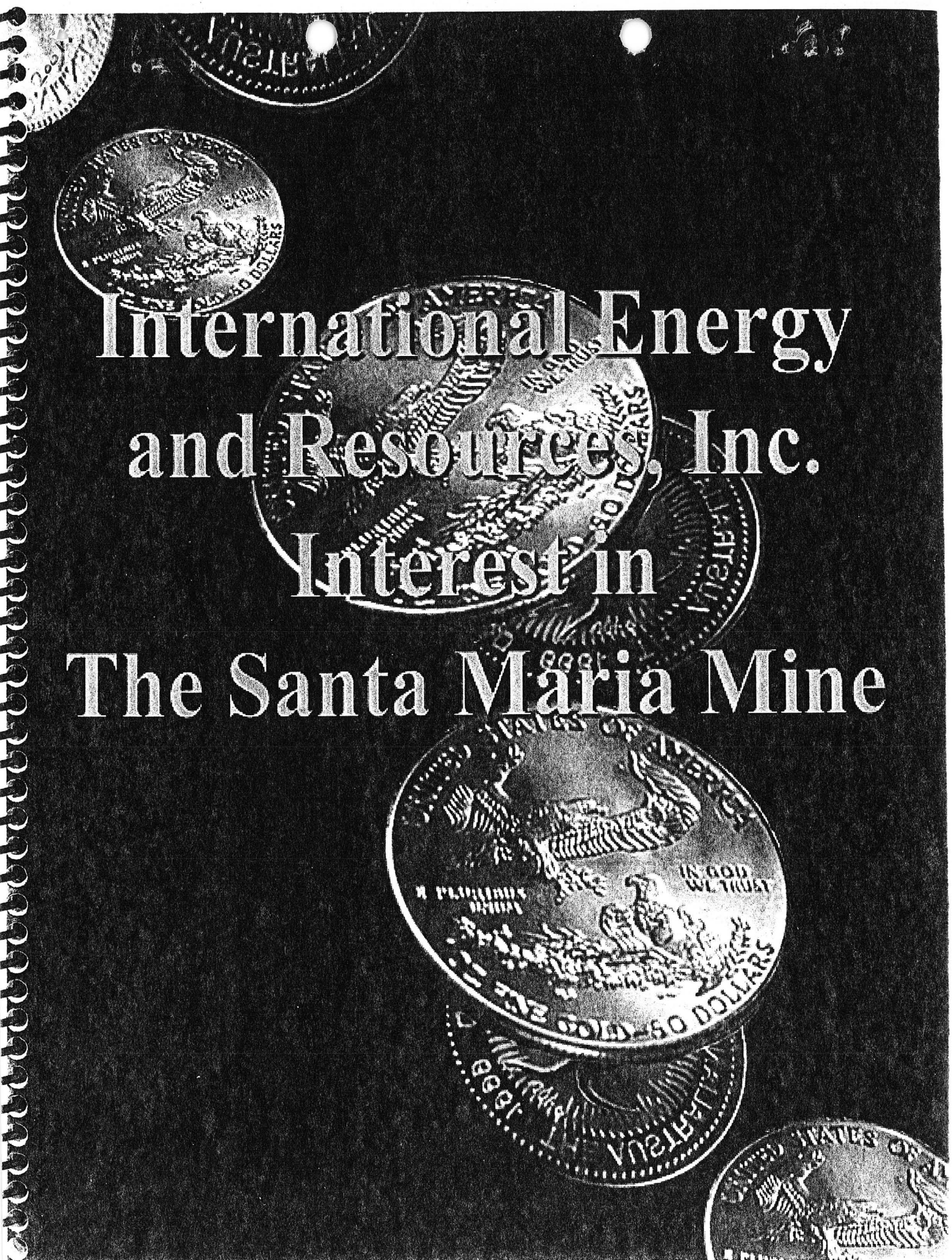
#	DEGREE	DEPTH	100' (20) AU. / AG.	200' (20) AU. / AG.	300' (30) AU. / AG.	400'-500' (30) AU. / AG.	100
			.125 / .337	.201 / .153	.094 / .452	.009 / .131	SAMPLES TAKEN
H-I	50°	500'	.094 / .421	.043 / .470	.002 / .104	.005 / .110	AVERAGE GRADE
			.352 / .076	.057 / .443	.241 / .686	.210 / .093	SAMPLES TAKEN
H-2	55°	500'	.001 / .024	.004 / .068	.046 / .264	.005 / .217	AVERAGE GRADE
			.000 / .002	.024 / .241	.098 / .774	.057 / .478	SAMPLES TAKEN
H-3	60°	500'	.067 / .134	.021 / .654	.325 / .796	.095 / .453	AVERAGE GRADE
			.146 / .579	.334 / .975	.217 / 1.44	.553 / 2.78	SAMPLES TAKEN
H-4	65°	500'	.334 / 3.75	.358 / 1.32	.075 / .336	.033 / .249	AVERAGE GRADE
H-5	70°	500'					
H-6	75°	500'					
H-7	80°	500'					
H-8	85°	500'					

	160	160	240	240 =	TOTAL SAMPLES
AVERAGE GRADE TOTAL	.140 / .667	.130 / .542	.137 / .606	.121 / .564	
	AU. / AG.	AU. / AG.	AU. / AG.	AU. / AG.	

TOTAL GRADE 800 SAMPLES= .132 AU.
.595 AG.

AREA CORE DRILLED 100' x 200' x 500' = 750,000 TONNES PROVEN ORE RESERVE.

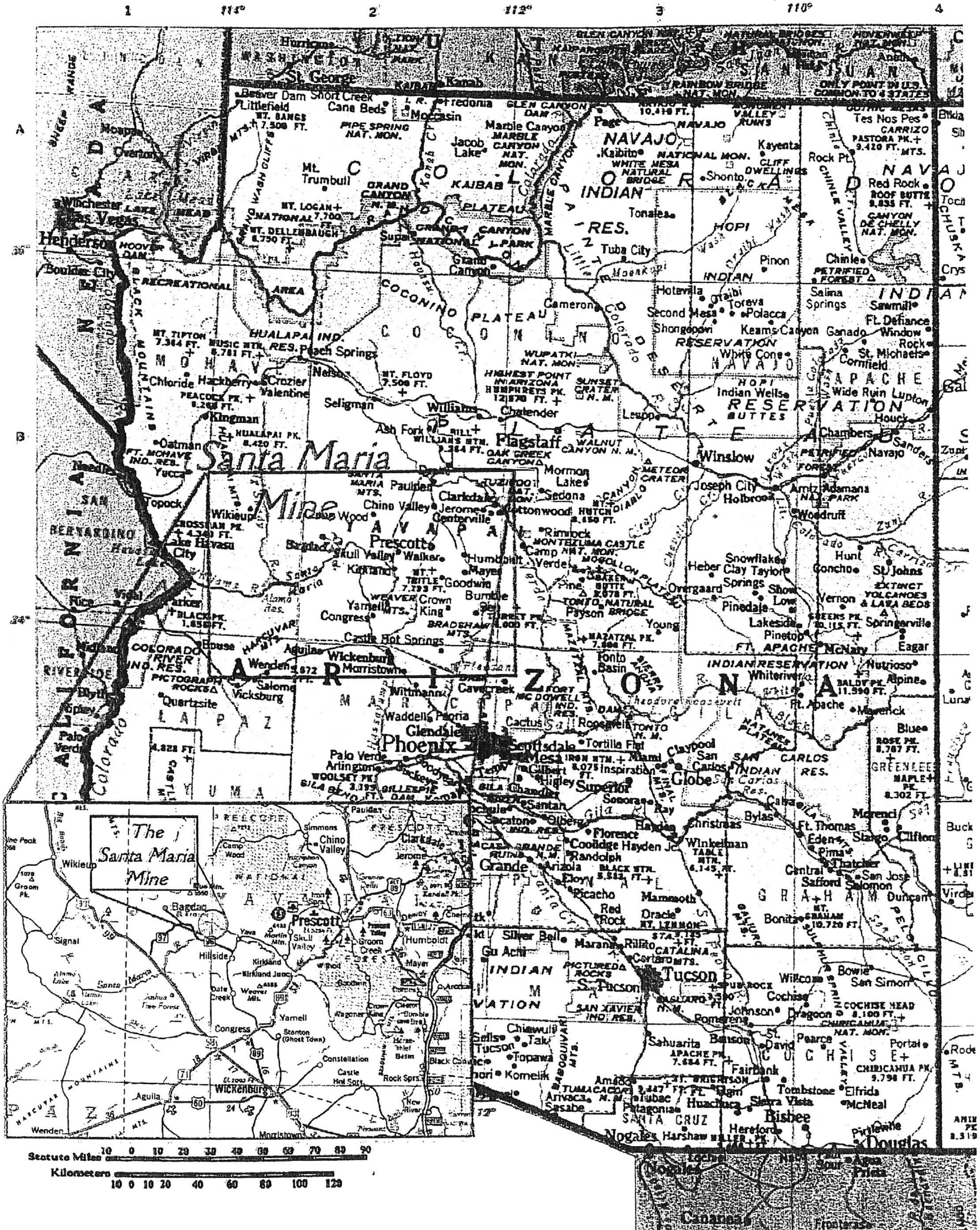
FROM : PHONE No. : Aug. 10 1999 7:50AM P05



International Energy and Resources, Inc.

Interest in

The Santa Maria Mine

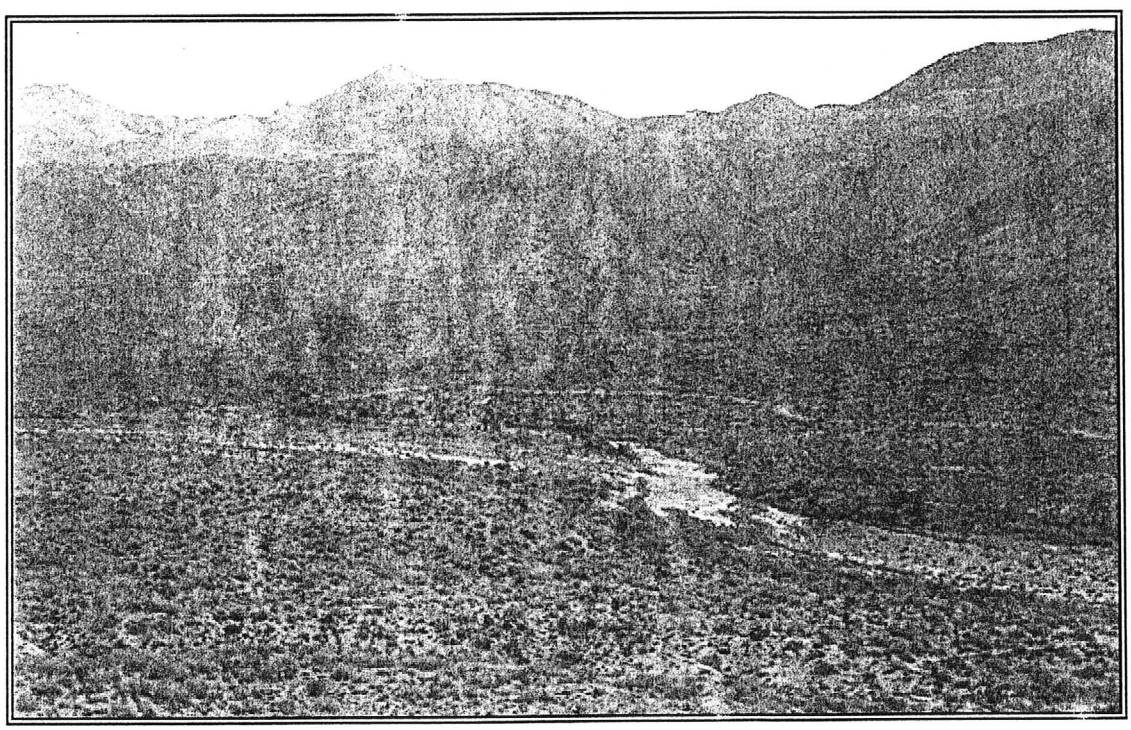


Santa Maria Mine
ARIZONA
UTAH
NEVADA
CALIFORNIA
MOHAVE
COCONINO
YAVAPAI
NAVAJO
APACHE
MARICOPA
PINAL
GILA
GRAHAM
COCHISE
SANTA CRUZ
YUMA
LA PAZ
Phoenix
Tucson
Flagstaff
Prescott
Kingman
Winslow
Holbrook
Yuma
Nogales
Bisbee
Douglas
Globe
Mesa
Scottsdale
Glendale
Wickenburg
Williams
Seligman
Sedona
Jerome
Clarkdale
Cottonwood
Chino Valley
Skull Valley
Kirkland
Congress
Yarnell
Wikieup
Bagdad
Lake Havasu City
Parker
Quartzsite
Las Vegas
Henderson
Boulder City
St. George
Kanab
Fredonia
Page
Tuba City
Grand Canyon
Hoover Dam
Lake Mead
Colorado
HUALAPAI IND. RES.
NAVAJO INDIAN RES.
HOPI INDIAN RESERVATION
FT. APACHE INDIAN RESERVATION
SAN CARLOS IND. RES.
COLORADO RIVER IND. RES.
PETRIFIED FOREST
METEOR CRATER
MONTEZUMA CASTLE NAT. MON.
HIGHEST POINT IN ARIZONA HUMPHREYS PK. 12,670 FT.
The Santa Maria Mine
Statute Miles 10 0 10 20 30 40 50 60 70 80 90
Kilometers 10 0 10 20 40 60 80 100 120

INTERNATIONAL ENERGY AND RESOURCES, INC.
INTEREST IN THE SANTA MARIA MINE

History

The Santa Maria Mine currently consists of one hundred forty one (141) lode-mining claims in Yavapai County, Arizona. According to historical experts, the Spaniards who came to the area over 400 years ago used the Santa Maria River to gain access to the claims area. Local Mesa Indians were used to mine the gold and silver, which was then shipped to Spain.



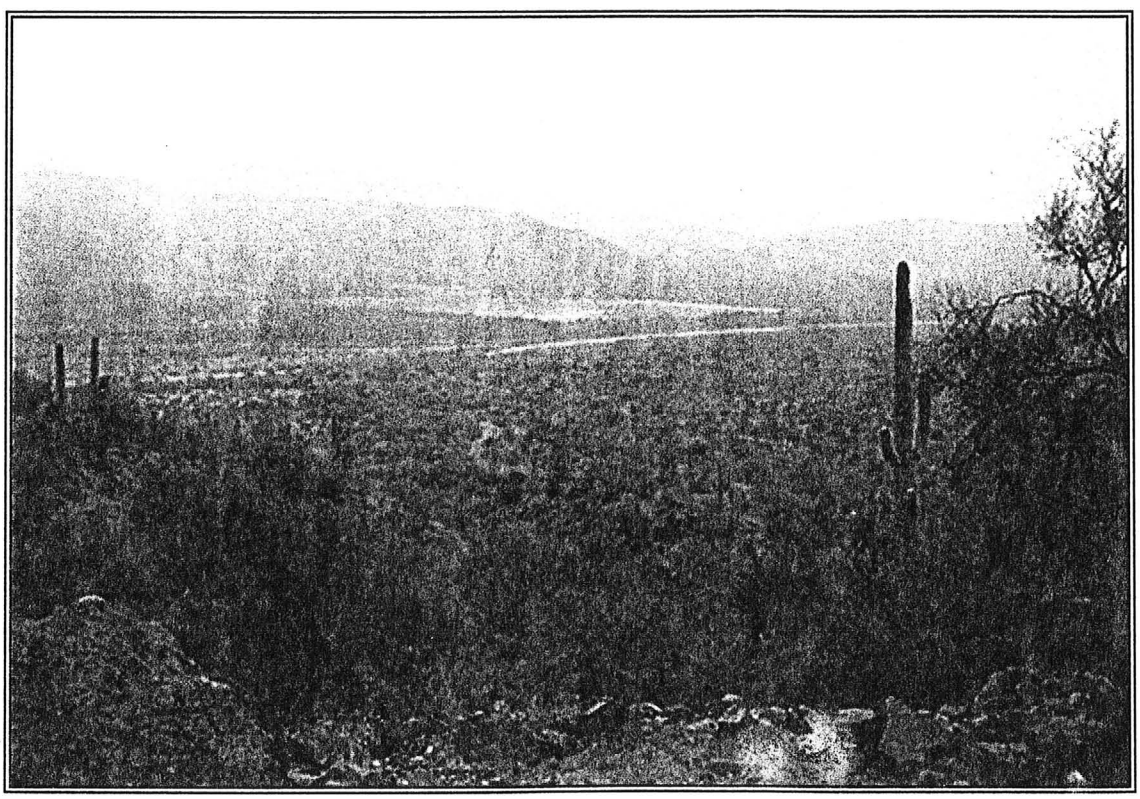
In the 1880's, John Lawler and Charles Crosby pioneered the Eureka Mining District. In 1883 John Lawler discovered the area was rich in gold, silver, lead, and zinc. The mines John Lawler opened eventually became Phelps Dodge Cypress open pit mine. This is one of the largest operating mines in the United States today and is located just 5 miles north of The Santa Maria Mine. The Phelps Dodge Cypress mine currently processes over 100,000 tons of ore per day and employs over 1,200 people.

RECEIVED 8/2001

The Hayes Silver Mine opened around 1885. The deposit was so rich, over 300 ounces of gold and silver per ton, that the owners shipped the ore directly to England for smelting and refining.

Charles Crosby discovered the Crosby Mine in 1906. He developed and processed this mine until 1993. During this time he processed 120 ounces of gold per day. The mine utilized a 40 stamp mill from 1907 until WWII. Approximately 20 million dollars in gold was extracted from the Crosby mine at today's prices.

The Hayes, The Crosby, and The Glory Hole mines are each located within the boundaries of The Santa Maria Mine, which is on the same structural trend as the Phelps Dodge Cypress Mine.



The Santa Maria River as seen from the red conglomerate near the volcanic plug

International Energy and Resources, Inc.
Interest

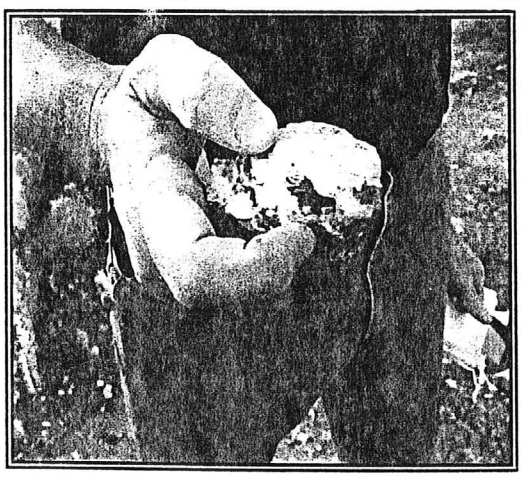
U.S Metals and Minerals, Inc. is a publicly held company incorporated under the laws of the State of Arizona. The Company currently owns a 90% net revenue interest on the 141 lode mining claims now referred to as The Santa Maria Mine. U.S Metals and Minerals, Inc. is the only company that holds water rights to the Santa Maria River. This is a valuable asset for a mining company in an arid climate. In January of 2001 International Energy and Resources, Inc. took a 50% interest in the production of 1,000 tons per day of gold and silver ore.

U.S Metals and Minerals, Inc. and International Energy and Resources, Inc. intend to start production at 1,000 tons per day for the 1st year and increase production to 10,000 tons per day in the 2nd, 3rd, and 4th, years. After the 1st year and continuing into the 3rd and 4th year, International Energy and Resources, Inc.'s interest will reduce to 22%. In the 5th year the companies believe that from the profits of year 1 through 4 that they will be able to increase production to 25,000 tons per day. At this time, International Energy and Resources, Inc.'s interest will reduce to 12%. In year 6, production will remain at 25,000 tons per day. In years 7 and 8 production is planned to increase to 50,000 tons per day. International Energy and Resources, Inc.'s interest will reduce to 10%.

Geological Surveys

Through geological survey it has been determined that The Santa Maria Mine is on the same structure and flat zone as the Phelps Dodge Cypress deposit. The claims and previous producing mines are on the Jasper Peak with gold carrying mineralization in the Jasperoid. To date, numerous geological, geochemical, and geophysical studies have been conducted to confirm historical assays and establish estimated reserves. In the 1980's over 10,000 feet of core drillings were done and over 1,500 fire assays were conducted. These assays showed an overall average of .14 ounces of gold per ton and .595 ounces of silver per ton, which proves over 652,000 ounces of gold and 2,488,000 ounces of silver in reserve using 1 area of 3 claims. The dimensions of this area are 300 ft. x 500 ft. long x 100 ft. deep. At today's prices this represents over $191,000,000.000. If we extend the depth to 400 ft. *(early miners tunneled to this depth and the drilling results verified ore to this depth)* the total amount would be multiplied by 4 and the value would be $766,960,000.00. If we extend the same areas to a depth of 2,000 ft, which is the depth that the Phelps Dodge Mine in Bagdad is being mined, the estimated reserves would be approximately:
$3,900,000,000.000 (3.9 billion dollars).

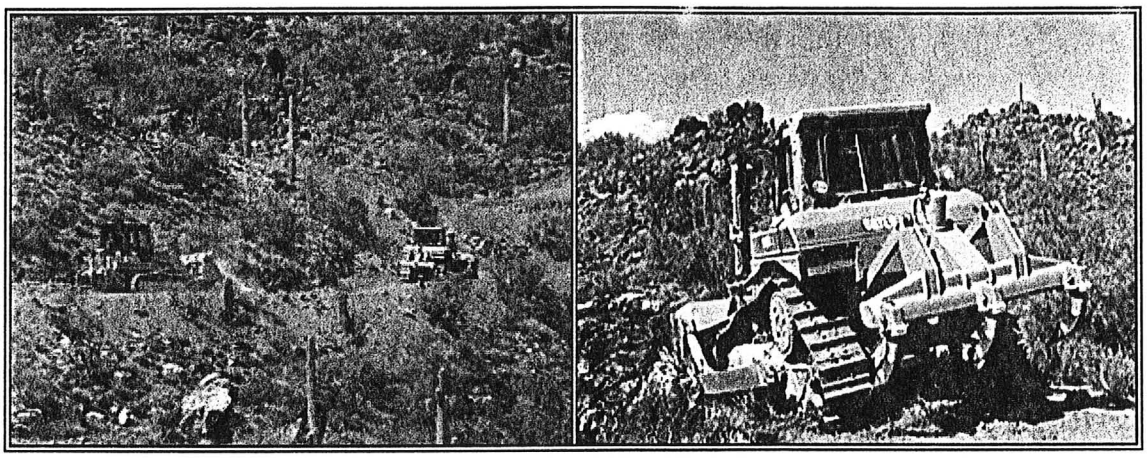
The geological, geophysical, and geochemical studies listed above were reviewed and evaluated by Nicholas H. Carouso, President of Geo-Processing, Inc. which is an independent mining, consulting, and geology firm. The prior owners retained this firm to evaluate the commercial feasibility of these claims. Mr. Carouso's report and economic study recommended the continuation of exploration and start of production. (*excerpts from Carouso's report and assays mentioned above are part of exhibits #4,#5, and#6)

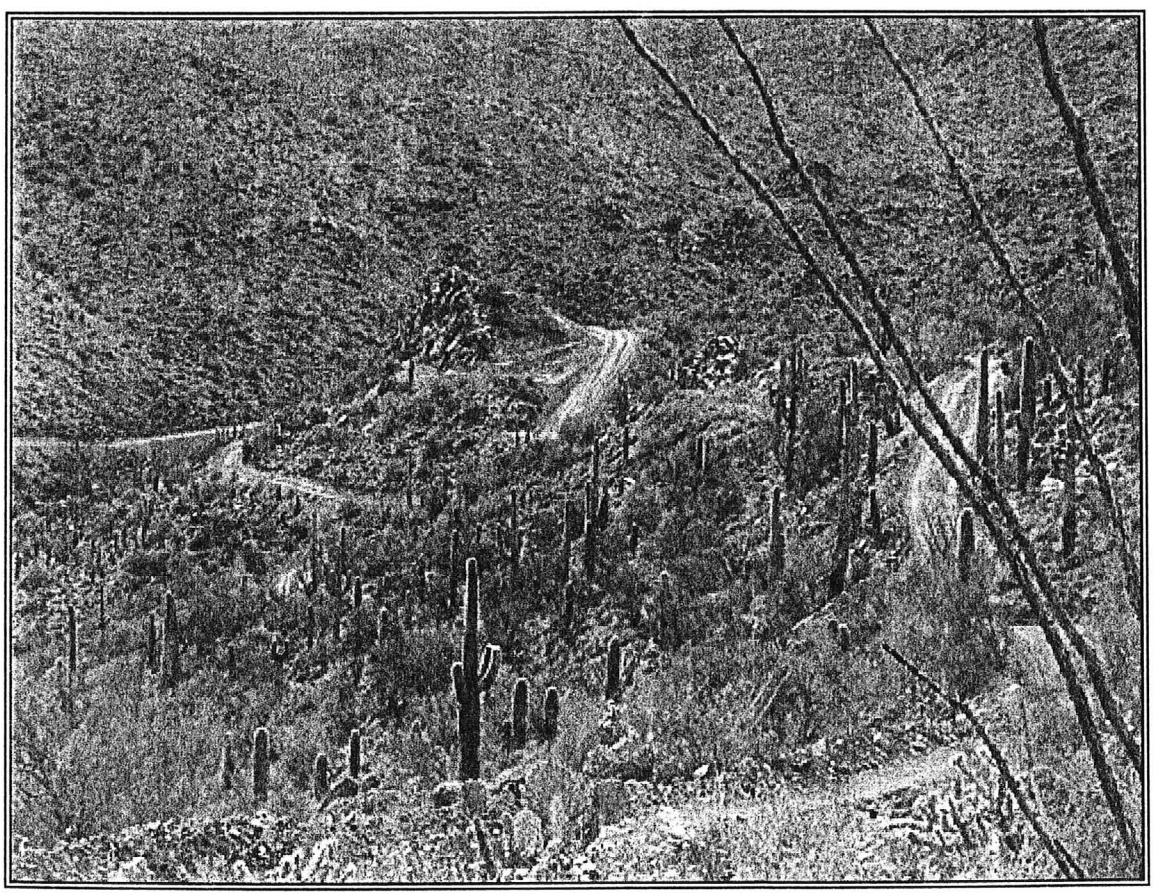


A sample taken from the quartz dike

In January 2001, International Energy and Resources, Inc. hired Spooner and Associates to do further geological studies. Spooner and Associates have over 100 years of mining experience (*see *Santa Maria Mining Team*). After Spooner and Associates' Senior Geologist Scott Spooner and Cad Drawing Survey Specialist Eric C. Monk reviewed the

geological studies previously mentioned they visited The Santa Maria Mine in late January 2001. In March of 2001, by recommendation of Spooner and Associates, International Energy and Resources, Inc. mobilized a crew to build approximately 10 miles of road to gain access to the historic Hayes Mining area. This would enable them to conduct further geological studies. (*see exhibit #1).



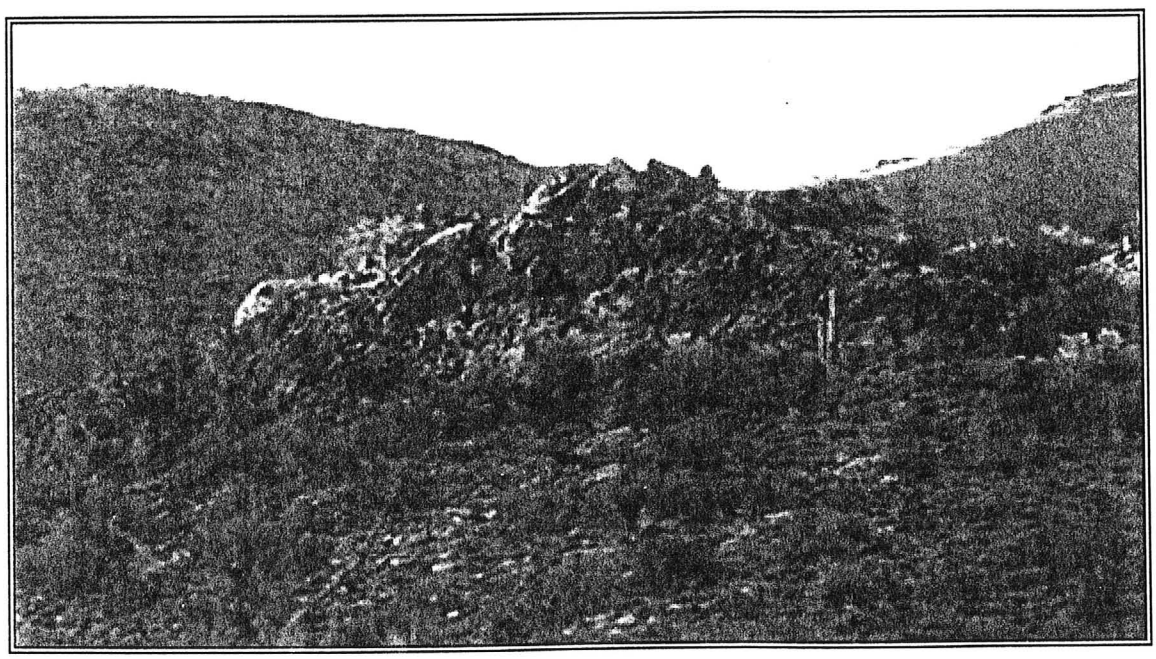


Roads surrounding the quartz dike

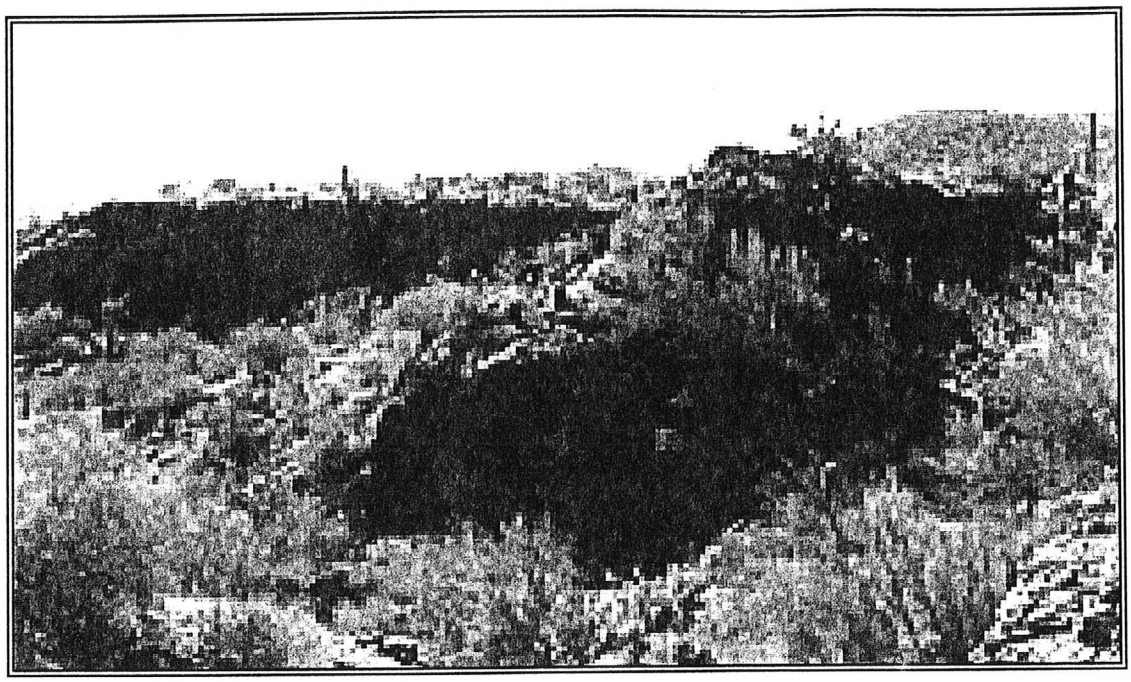
In late March 2001 International Energy and Resources, Inc. hired Hillbrands and Western Mining Co. to drill holes so that ore samples could be collected and assayed. They have currently drilled approximately 30 holes measuring 100 ft. in depth for a total of 3,000 ft. of drill cuttings. Spooner and Associates retained over 30 samples for assaying. In conjunction with the drilling operation, Spooner and Associates have also taken numerous ground samples from two different locations surrounding the historic Hayes Mine. These samples have also been assayed. The results of the geological studies were as follows:

Drill hole #30 was subject to a standard fire assay as well as oxidation prior to standard fire assaying. This assay and oxidation process was conducted on cuttings taken at a depth of 40-50ft. The standard fire assay results revealed gold values of .2 opt (ounces of ore per ton); while oxidation followed by fire assaying showed gold values of 1.16 opt. This structure is approximately 3,400 ft. long x 100 ft. wide x 100 ft. in depth. This gives us reserves of 2,014,815 tons of ore x 1.16 opt gold equaling 2,337,185 ounces of gold. ***The lower results from the standard fire assaying are due to the presence of sulfides and arsenides that tend to drive the gold and silver into the slag phase during standard fire assaying (*see exhibit #2). With this in mind it is safe to assume that all previous standard fire assays done would increase 5.8 times through oxidation prior to fire assaying.***

Rock material from the hanging wall and footwall of the quartz vein were subject to crushing, screening, and fire assaying. The results from the quartz dike revealed an average of .57 opt from fire assaying and5.8 times or 3.31 opt using the oxidation method. That gives us reserves of 16,694,056 ounces of gold.



The quartz dike



The red conglomerate

Rock chips were taken from the red conglomerate located just south of the Hayes Mine and just west of the volcanic plug. The fire assays revealed .2 opt of gold. As stated previously oxidation prior to fire assaying should increase the gold amount by 5.8 or 1.16 opt. This area has ore reserves of 2,395,477 ounces of gold.

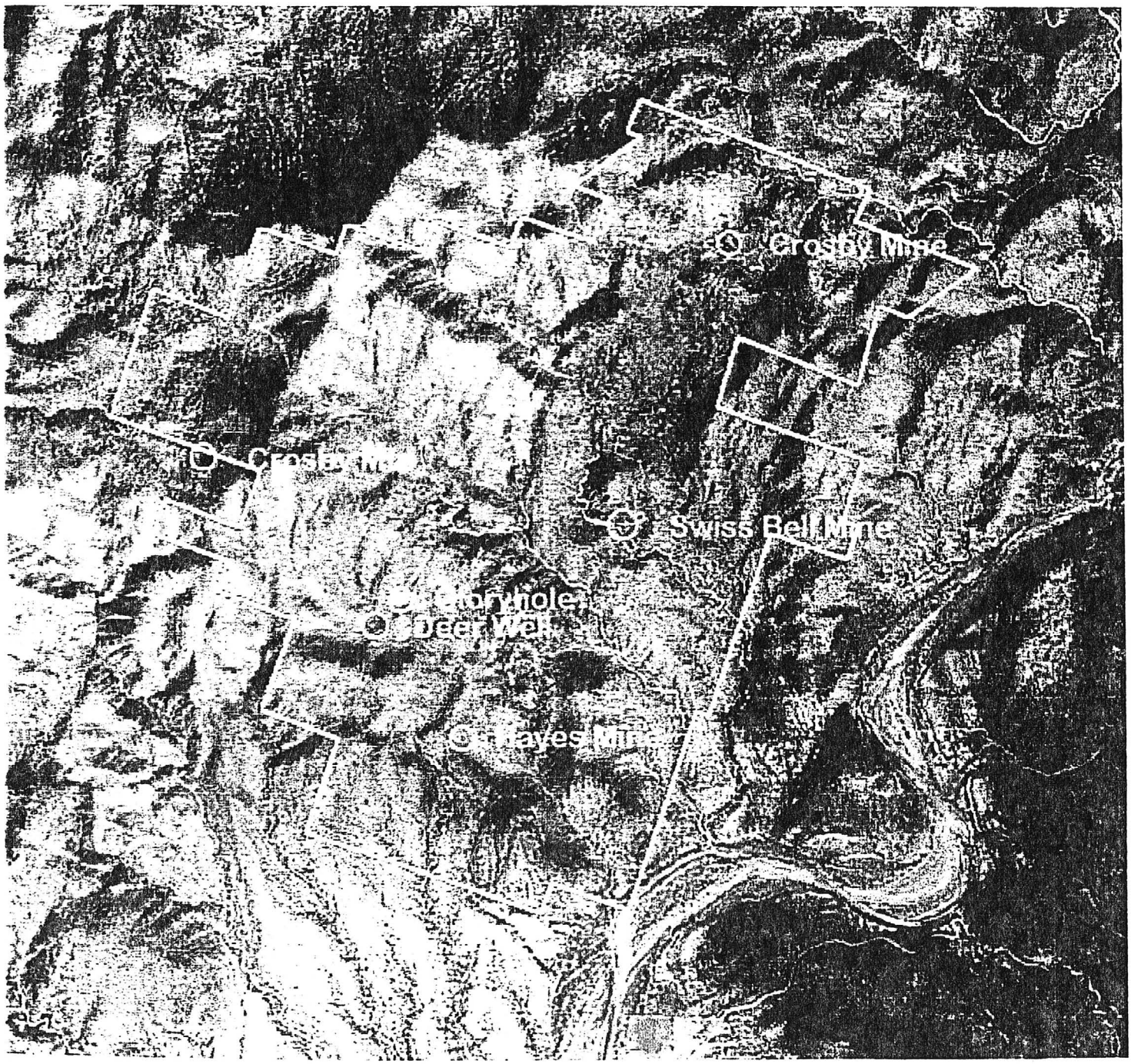
These three areas give us a combined total of 9,138,687 tons of ore, which yields a total of 21,426,718 ounces of gold. This is an average of 2.34 ounces of gold per ton of ore. If we extend the area to a depth of 2,000 feet *(the depth the Phelps Mine is being mined today *see exhibit #2)* the estimated reserves would be 128,041,352 ounces of gold x $250.00 per ounce equaling $32,010,338,000. *Because of the studies conducted by Spooner and Associates it is safe to assume that the previous fire assays done in the 1980's if subjected to the oxidation method would also reveal 5.8 times the value for an estimated reserve of $22,620,000,000.00, thus giving a combined total estimate reserves of $54,630,338,000.00.*

From these studies it is the intention of U.S Metals and Minerals, Inc. and International Energy and Resources, Inc. to do further drilling to support these findings and to determine where the best area to start production is. Spooner and Associates are currently designing the mill to start producing ore. It is estimated that the companies will be in full production by the end of September 2001.

Landsat Image Showing Santa Maria Mine Claims Area

Claims area is outlined in white. The Santa Maria River is in the lower right-hand corner of the map.

This is a photograph taken from a satellite and color enhanced to show mineralization. The reddish-burgundy areas indicate the presence of iron ore consistent with gold and silver deposits.

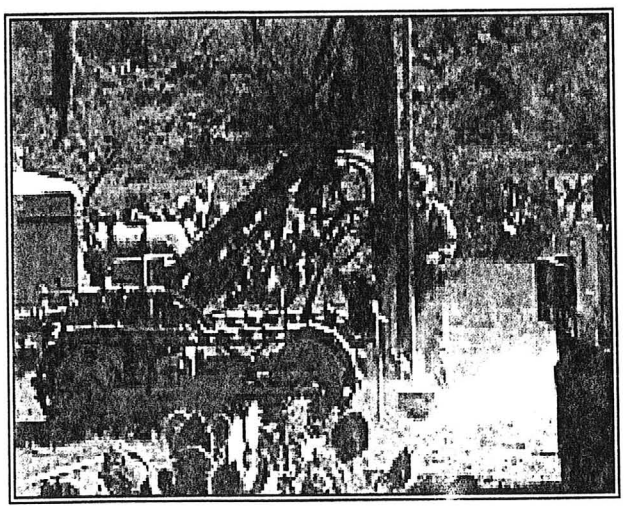


International Energy and Resources, Inc. Offering

International Energy and Resources, Inc. is offering 2% of their working interest for $1,000,000.00. The minimum participation to accredited investors is .10% in International Energy and Resources, Inc.'s interest for $50,000.00. International Energy and Resources, Inc. will hold a 15% back-in interest after the investor regains full investment. The company estimates that the return on investment would be 41:1 after eight years of production. Based on the geological findings on just 10 claims it would take 16 years to produce those claims. It is U.S Metals and Minerals, Inc. and International Energy and Resources, Inc.'s intention to develop all 141 claims and it is estimated that it will take over 100 years to fully develop all 141 claims.

Use of Funds

Initial funds will be used to drill holes over much of the area to determine which sections of the claims area are best suited to start production and help to further define our reserves. Once a starting point is determined we will design a mill that is best suited to refine the ore. The Crosby and The Hayes claims (20 acres each) have been patented. The Company may use some of the funds to acquire these patented claims.



The Hillbrands & Western drilling team

Until 2001, modern technology had not been applied to these claims areas. The use of the latest technology will make it possible for us to locate the strongest concentrations of ores and provide us with the most economical methods for extracting the gold and silver.

Economic Projections Year 5 and 6

25,000 tons/day x 300 days = 7,500,000 tons

7,500,000 tons x 2 oz. gold/ton = 15,000,000 oz. of gold

15,000,000 x $250/oz. = $3,750,000,000.00

$3,750,000,000.00 x 90% N.R.I =	$3,375,000,000.00
Cost	
15,000,000 x $50 per oz.	($750,000,000.00)
Profit	$2,625,000,000.00
12% I.E.R., Inc.'s Interest =	$315,000,000.00
.10% of I.E.R, Inc.'s Interest	$315,000.00
- 15% Back-In Interest =	($47,250.00)
Return on Minimum Investment/Year	$267,750.00

Economic Projections Year 7 and 8

50,000 tons/day x 300 days = 15,000,000 tons

15,000,000 tons x 2 oz. gold/ton = 30,000,000 oz. of gold

30,000,000 oz. of gold x $250/oz = $7,500,000,000.00

$7,500,000,000.00 x 90% N.R.I =	$6,750,000,000.00
Cost	
30,000,000 oz. of gold x $50/oz. =	($1,500,000,000.00)
Profit	$5,250,000,000.00
10% of I.E.R, Inc.'s Interest =	$525,000,000.00
.10% of I.E.R, Inc.'s Interest =	$525,000.00
15 % Back-In Interest =	($78,750.00)
Return on Minimum Investment/Year	$446,250.00

Economic Projections Year 1

1,000 tons/day x 300 days = 300,000 tons	
300,000 tons x 2 oz. gold/ ton = 600,000 oz. of gold	
600,000 oz. gold x $250/oz. = $150,000,000.00	
$150,000,000.00 x 90% N.R.I.	$135,000,000.00
Cost	
600,000 oz. of gold x $50/oz. =	-($30,000,000.00)
Profit	$105,000,000.00
50% (I.E.R., Inc.'s interest) =	$52,500,000.00
.10% of I.E.R., Inc.'s interest =	$52,500.00

Economic Projections Year 2, 3, and 4

10,000 tons/day x 300 days = 3,000,000 tons	
3,000,000 tons x 2 oz. gold/ton = 6,000,000 oz. of gold	
6,000,000 oz. gold x $250/oz. = $1,500,000,000.00	
$1,500,000,000.00 x 90% N.R.I =.	$1,350,000,000.00
Cost	
6,000,000 oz. of gold x $50/oz. =	($300,000,000.00)
Profit	$1,050,000,000.00
22% (I.E.R., Inc.'s interest)	$231,000,000.00
.10% of I.E.R., Inc.'s interest	$231,000.00
- 15% Back-In Interest =	($34,650.00)
Return on Minimum Investment/Year	$196,350.00

Projected Return on Investment

Year 1 – 4

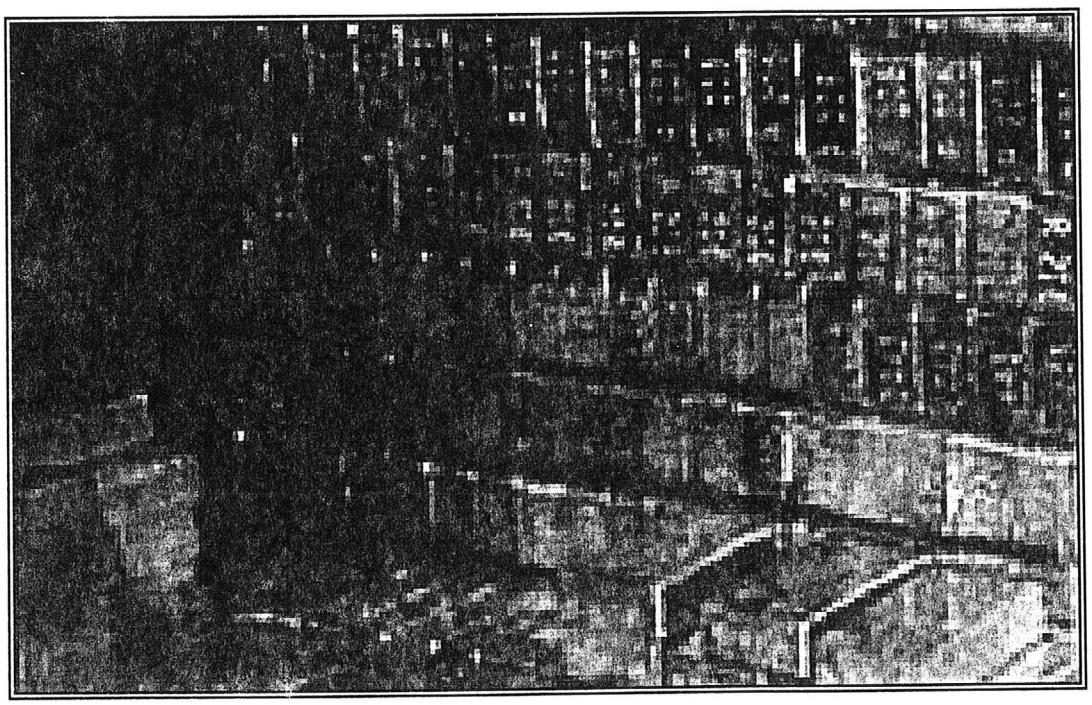
2% of I.E.R., Inc.'s Interest = $12,831,001.00

Years 5 – 6

2% I.E.R, Inc.'s Interest = $10,710,000.00

Years 7 – 8

2% I.E.R., Inc.'s Interest = $17,850,000.00



Total Return

2% I.E.R., Inc.'s Interest = $41,391,001.00

.10% of I.E.R., Inc.'s Interest = $2,069,550.00

Minimum Investment$50,000.00

$2,069,550.00/$50,000.00 = 43:1 R.O.I

The Santa Maria Mining Team

Scott Spooner is a registered professional geologist with 20 years mining experience in government and private industry. His work involved environmental planning, development implementation, and regulatory compliance of major land use projects on public lands. Eleven of the years were with the Bureau of Land Management as a permit reviewer and writer. His major duties were development of the Environmental Impact statements required by NEPA. Mr. Spooner spent the past ten years as a consulting geologist and project manager in mining exploration, permit acquisition, and mine closure reclamation. He holds degrees in Geology, Wildlife Science, Range Science and Biology

Robert A. Chastain has been in the mining industry for over 50 years. He has been recognized by his peers in Utah, Germany, Alaska, and Arizona as an expert in surveying and planning developing mills, and processing plants. He was the chief engineer for Grubstake Mining, which is still operating in Europe. In 1990 he helped to form Spooner and Associates, Inc., and currently works as an advisor to them. Mr. Chastain's knowledge and connections in the mining industry make him a huge asset to our team.

Thomas Couste' is a highly experienced project manager, engineer, and environmental technician. His area of expertise include mining permits, site suitability, reclamation plans, debris and landfill permitting, wetland delineation, and 404 permitting, field inspection, phase II soil and groundwater sampling programs, and engineering design for development projects. Mr. Couste' is currently the project manager of Spooner and Associates.

Russell M. Dugdale has been responsible for process development, operations, and modification for various mines for the past 30 years. Mr. Dugdale was the chief metallurgist for Pegasus Gold Mining Company at the Zortman-Landusky Mine in Montana. There he was responsible for setting up fire assaying and atomic absorption labs. His work then took him the Montana Dept. of State Lands where he supervised heap-leaching operations, and neutralized heaps at Gilt Edge Mine. From 1988-1999 Mr. Dugdale set up an assay laboratory for Tenneco Minerals Company where he trained and supervised personnel. He then founded Metallurgical Services, Inc., assisting new operations to start their projects and to be compatible with government regulations.

Eric C. Monk is the owner and operator of ECM CADD and Graphics. His company provides CAD, Modeling, and GIS services to many local and national engineering and consulting firms, including the United States Core of Engineers, and the Department of Defense at Fort Polk, LA. In the past he has worked in all phases of field surveying, as well as operating software required to perform survey/volume calculations civil and structural design, chemical plant design, and database management.

The Economy Sets the Stage for Gold

The Consumer Price Index for the month of January was up .6%, which makes the yearly inflation rate 7.2%. With energy prices rising, economy slowing, the threat of deflation, and the difficulty for the dollar to retain its strength, many experts agree that the price of gold will soar.

"Gold has traditionally proved to be an excellent store of value in times of economic uncertainty."

*The Prudent Safe Harbor Fund

"Just so you know, it is widely held in close gold-bug circles that physical gold is being held back by certain Central Banks, including our own Fed. They do this in order to make inflation look low, to protect a number of large bullion from getting into derivative problems from their long-time practice of leasing gold and then selling it into the bullion market, and to invest the proceeds into higher yielding investments. Many hedge funds took this practice up. And by now gold has been sold short to and estimated 10,000 to 17,000 tons (no body knows for sure). This represents four to six years of production. In other words, physical gold is the Achilles Heel of the new economy. Gold is not only a commodity, It is a political metal and money...Those who hold the most gold will ultimately win the battle...With the latest CPI and PPI indicators pointing to higher inflation more eyes will turn to gold."

*Steve Hickel / gold-eagle.com

"Since gold is relatively scarce and cannot be manufactured, it is precious. It's value has remained quite stable throughout history...Gold is an asset that does not depend on such institutions' ability to repay or generate income. It is indestructible and portable, thus making it an asset we can keep with us a long time."

*Reungvit Nandhabiwat /AJF Funds-Bangkok

"The Price of gold is a rocket fueled for launch. We know it's ultimate destination approximately. We just don't know the length of the countdown.

*Michael Miller / Quackgrass Press

"... the gold price should move sharply up to $320 within the next four months...It is the ultimate store of value in times of collapse, especially stock market crashes. It is a superb depression hedge against total loss of capital in terms of economic collapse...Stay with gold shares...I must look for at least a 100% return this year in what I believe will be one of the leading market sectors, if not the top sector performer."

*Dr. Clive Roffey - Johannesburg, South Africa

South Africa's leading technical analyst, whose forte is mining stocks

"Silver at $53.91/oz and gold at $923.32/oz would more closely represent free market prices, than the February 22, 2001 depressed prices if the supply of gold and silver exceeded demand, then the 2/22/01 prices would be understandable. Gold and silver, which are valued for their scarcity, and their unique physical and chemical properties which make them valuable in industry, medicine, art, jewelry and especially as money and stores of wealth, are actually in chronic supply deficits (gold as high as 2000 tons/year, and silver as high as 250 million ounces/year over the last 10 years). If the base metal prices are suppressed (to mask inflation), than recalculated gold and silver prices would be even higher. The media's excuse for the current low gold and silver prices includes: (1) over abundance of gold and silver, (2) that some gold and silver are byproducts of base metal mining, and these mining companies don't mind selling their gold and silver at current low prices, (3) poor demand. There is considerable evidence that other factors are suppressing the gold and silver prices which includes: physical shorting, leased metal, producer hedging, official gold and silver sales, and paper gold/silver (which include contracts, certificates, derivatives and exotic hedging schemes). Failure of these price suppression techniques, along with the m3 money supply exploding up, increases in inflation, fewer mines coming into production/mine closures because of depressed metals prices, and above ground/silver supplies being used up, market bubbles, the energy crisis, the Middle East crisis, gold/silver in chronic supply deficits and especially because of the huge short positions in both metals, will at some time in the future to cause gold and silver prices to explode up."

*Donald Poitras

"Central Banks stand ready to lease gold in increasing quantities should the price rise."

*Alan Greenspan

EXHIBITS

1. Scott Spooner's report after first visit to Santa Maria Mine

2. Spooner and Associates reports – April 4, 2001 – August 1, 2001

3. Claims Map showing the 141 claims that make up the Santa Maria Mine

4. Letter regarding core drilling on the Crosby 6 claim as well as a review of the area's mining history dated July 20, 1981 from California Core Drilling Co. to a prior owner of claims in the Santa Maria Mine

5. Selected Assay Logs and Certified Assay Reports

6. Selected quotes from report by Nicholas H. Carouso

Exhibit 1

Scott Spooner's report after his first visit to Santa Maria Mine

SPOONER & Associates, Inc.
Environmental, Geotechnical, & Civil Engineering

January 29, 2001

International Energy and Resources, Inc.
3839 Briargrove Lane, Suite 8206
Dallas, TX 75287
Attn: John Owen

RE: Arizona Mine Visit

Dear Mr. Owen:

I just thought that I would take the opportunity to communicate my impression of your gold mining properties near Bagdad, Arizona. As you are aware, there were two specific properties visited. The first property visited was the Hayes claim group near the Glory Hole mine. This area received approximately 6,000 feet of core drilling in the 1980s with gold results averaging 0.14 ounces per ton (opt). While in the field at this site, I located the drill road and drill pads, which were located along the mineralized zone. Mineralization appeared to be controlled by an east-west trending detachment fault, which exposed both metavolcanics and metasedimentary rocks. Severe fracturing, and deformation are extensive over the group of claims.

The Crosby claim group was situated around the old Crosby Mine. Approximately 4,000 feet of core drilling has been completed in this area with an average gold value of 0.13 opt. Country rock consists of a massive intrusion of granite and granodiorite. Mineralization occurs in this area as veins, veinlets, and based on portions of the exploration drilling data suggests some dissemination.

Due to inclement weather, I was not able to adequately explore all the workings around the Glory Hole or the Crosby Mines. However, extensive mining has occurred at the Crosby with some 6 to 7 shafts present and many underground workings. The Glory Hole also had many underground workings but not to the extent of the Crosby Mine.

Both of the areas visited were relatively easily accessible by four-wheel drive. The topography of the area would lend itself to the development of a leach pad and mining complex. Water wells drilled in the vicinity of the Santa Maria River should provide an ample amount of water.

P.O. Box 12685 Lake Charles, LA 70612

(337) 562-1568 office
(337) 562-1569 fax

Just a fact to entertain you with, almost all the existing gold mines in the United States today were developed in or around existing historical gold mines. This fact, coupled with known gold values and large quantity of ore reserves around these mines suggests a high probability of being a highly profitable mining venture.

I look forward to working with you as you initiate the condemnation drilling phase to determine that you are not placing any of your mining operation over known ore reserves.

If you require any additional information concerning my cursory field visit of the property please let me know.

Sincerely,

Scott Spooner

Scott Spooner PG
Senior Project Geologist

P.O. Box 12685 Lake Charles, LA 70612
(318) 725-6352

Exhibit 2

Spooner and Associates reports
April 4, 2001 – August 1, 2001

SPOONER & Associates, Inc.
Environmental, Geotechnical, & Civil Engineering

April 4, 2001

International Energy and Resources, Inc.
3839 Briargrove Lane, Suite 6307
Dallas, TX 75287

Attn: John Owen

Dear John:

I promised to alert you concerning any noteworthy information that was obtained from the Santa Maria property. Of first interest, I sampled the large E-W trending quartzite dike on the north end of the property. Rock chip samples were collected from the quartz vein, hanging wall and, footwall along the vein. These samples were crushed in a jaw crusher and then gold panned at Kenneth Hill's lab. The resultant metals in the gold pan were studied under a binocular microscope. Much to my amazement and excitement all three samples contained significant amounts of gold and silver associated with the pyrites (iron sulfide) in the pan. The gold and silver were heavily streaked, pitted and, dented due to the crushing of the pyrites but were easily recognized. The presence of the gold and silver in this form suggests concentrating by free milling. The concentrates can then be subjected to treatment to liberate the precious metals. Please keep in mind that the gold panning was for qualitative purposes only and a quantitative value could not be derived at this time.

Secondly, I took a small grab sample of drill cuttings at the 90 to 96 foot depths from a drill hole near the old rock cabin. I examined the cuttings with a 14 power hand lens and noted free gold in the sample at this depth.

Additionally, I panned a portion of drill cuttings from a drill hole located north of the old rock cabin from the 40 to 50 foot depth. Using the binocular microscope, I noted a plethora of alloyed gold and silver. These appeared as small spherical particles (much like lead shot), which resulted from down hole grinding and impact as the malleable particles traveled up the borehole.

I split the drill hole and grab samples and shipped them via UPS overnight to Jacob Assayers in Tucson, Arizona. I hope to begin receiving favorable assay results from the lab in the next couple of days. Until then we will continue the drilling program on prominent veins and fault zones. It appears that the more time and energy spent in the field continues to deliver exciting surprises.

Sincerely,

Scott Spooner

P.O. Box 12685 Lake Charles, LA 70612

(337) 562-1568 office
(337) 562-1569 fax

SPOONER & Associates, Inc.
Environmental, Geotechnical, & Civil Engin

April 9, 2001

US Metals & Minerals, Inc.
3839 Briargrove Lane, Suite 6307
Dallas, TX 75287

Attn: John Owen

Dear John:

This missive is to further update you concerning the most recent data acquired on the Santa Maria property. As stated in my email on April 4, 2001, I sampled the N-S fault zone at drill hole 030 and the E-W quartz vein, hanging wall, and, foot wall rock on the north end of the property. The quartz vein, hanging wall, and, foot wall rock material were subjected to crushing, screening and, fire assaying, while drill cuttings from the 40-50 foot depth at drill hole 030 was subjected to a standard fire assay as oxidation prior to fire assaying.

The values for these samples are as follows:

Fire assay results for the cuttings revealed gold values of 0.20 opt, while oxidation prior to fire assaying (further referred to as oxidation assays) showed gold values of 1.16 ounces per ton of ore. This displacement structure is approximately 3,400 feet in length, 100 feet in width and has a projected depth of 100 feet. Initial ore reserves and value per ton of ore are as follows:

3,400 ft X 100 ft X 100 ft / 27 ft^3 per yard X 1.6 tons per yd^3 = 2,014,815 tons ore
2,014,815 tons ore tons X 1.16 opt gold = 2,337,185 ounces gold
2,337,185 ounces gold X $250 = $584,296,250

The fire assay values for the quartz vein, hanging wall, and, foot wall are as listed:

1. Quartz vein — 0.68 ounces per ton (opt)
2. Foot wall — 0.56 opt
3. Hanging wall — 0.48 opt
4. Average of 3 samples — 0.57 opt

Collectively, the average width of the quartz vein, hanging wall, and, foot wall is approximately 30 feet an,d a projected minimum depth of 100 feet. The visual strike length of the quartz vein is about 2,600 feet in an E-W direction. It is believed that continued drilling in and around this vein would significantly increase the proven ore reserves. The ore reserves and value per ton of ore are as follows:

2,600 ft X 30 ft X 100 ft / 27 ft^3 per yard X 1.6 tons per yd^3 = 462,222 tons ore
462,222 tons X 0.57 opt average = 263,467 ounces gold
263,467 ounces of gold X $250 per ounce gold = $65,866,750

No oxidation assays for gold were performed on the quartz vein, hanging wall, and, foot wall samples. These samples were rock chip samples collected over the entire exposed vein and required further beneficiation by an impact mill. Oxidation assays are pending and results will be forthcoming. However, as in drill hole 030, the oxidation assay produced 5.8 times as much gold when compared to the fire assay. The lower results from fire assaying are largely due to the presence of sulfides and arsenides that tend to drive the gold and silver into the slag phase during standard fire assaying. With this in mind, the projected ounce per ton of ore for the quartz vein group would be 3.31 opt (.057 opt avg X 5.8), which would increase the total ounces of gold to $1,528,108 or $382,027,000. Further work is required to increase the quantity of ore reserves.

Additionally, a rock chip sample of a red conglomerate located on the south end of the property was collected and fire assayed. The fire assay value was 0.20 opt. This conglomerate lies beneath the basalt cap in the area of the

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Santa Maria property. The conglomerate beds have not been completely delineated however, the formation is projected over an area of approximately 1.0 acres and is out 50 feet deep. Projected ore reserves for the conglomerate is as follows:

10 acres X 43,560 ft^2 per acre X 80 ft / 27 ft^3 per yard X 1.6 tons per yd^3 = 2,065,067 tons ore
2,065,067 tons ore X 0.20 opt = 413,013 ounces gold
413,013 ounces gold X $250 = $103,253,350

The total projected ore reserves is estimated at 4,542,104 tons, while the projected gross revenue for this tonnage at $250 per ounce gold is $1,565,192,100.

The drilling program continues to move forward with the conglomerate, quartz vein and, fault zone as major exploration targets. Ore reserves will continue to be developed the longer the duration of the drilling program. Samples collected from drilling will be shipped to the assay lab as well as the Kenneth Hill lab. I recommend we continue the use of Mr. Hill as our umpire assayer and oxidation extraction assayer. His years of experience will be a great asset and benefit to the program during the early stages of exploration and development of ore reserves.

As a final note, our initial intention was to discern the veracity of the geological report prepared by Mr. Nick Caruso in the 1980's. The field geology data and assay information acquired are beginning to support his report and findings.

Sincerely,

Scott Spooner

Senior Geologist

P.O. Box 12685 Lake Charles, LA 70612
(318) 725-6352

SPOONER & Associates, Inc.
Environmental, Geotechnical, & Civil Engineering

June 8, 2001

International Energy and Resources, Inc.
3839 Briargrove Lane, Suite 6307
Dallas, TX 75287
Attn: John Owen

Dear John:

This update is for the week ending June 8, 2001. Blasting Contracting Inc. continues to construct roads and river crossings. Today will be their last day until the decision is made to complete the 1000-ton bulk test, which is contingent on results from the recent bulk samples. As you know, two bulk samples were collected from the quartz vein on the property. One sample was taken from the central portion of the vein while, the other was collected from the west side of the vein. However, these two bulk samples resulted in three actual tests. Sample 1A and 1B was the material from the central portion of the vein that was collected by the loader. This sample consisted of rock sizes ranging from 16-inches minus to fines. This sample was divided into two separate samples; large rocks and fines.

Sample # 2, taken from the west end of the vein, was hand selected with rock sizes ranging from 15-inches minus to 3-inches. For analytical purposes, all samples were pre-weighed prior to milling to provide an accurate weight of the ore. The weights for each respective sample are as follows: Sample 1A=2600 lbs; Sample 1B=3100 lbs; Sample 2=5700 lbs. Each of the samples was subjected to grinding to 1/8th inch minus and then processed through a Knelson bowl concentrator to separate the gold. Inspection of the concentrates after passing through the Knelson bowl revealed visible gold and other metals in all three samples. The concentrates are currently undergoing standard fire assaying and oxidation prior to fire assaying at the Kenneth Hill lab. Results are pending and should be available by close of business Monday. Additional bulk samples will be collected from the hanging wall and the footwall once favorable results are obtained from the bulk samples.

Continued progress is being made on development of the Mining Plan of Operations (MPO). The MPO is undergoing minor revisions and editing at this time. Figures that must accompany the MPO are also currently being developed. The figures include a site map, pit design, reclamation plan, and mining process schematic. The MPO along with the figures will tentatively be available by the end of this coming week.

The preceding week saw the collection of additional field survey data and GIS information from the Bureau of Land Management and the Arizona Department of Lands. This data will be incorporated to produce the figures required by the MPO. Considerable digitizing of contours from the USGS Malpais NE quadrangle was necessary to produce the 3-D map of the property as well as the other figures.

Additionally, two 5-pound rock chip samples of the red conglomerate strata were collected and shipped to Kappes-Cassidy in Reno, Nevada for evaluation. These tests are being subjected to cyanide leach testing at the present and results for these tests will be forth coming late next week.

Drilling will also commence in the area of the Glory Hole and Crosby Mine areas late next week. More field geology is required in this area to located appropriate drill targets.

I will continue to keep you abreast of any relevant findings from the sampling or drilling program as information becomes available. If you require any additional information, please call me at (337) 562-1568 or email me at spooner3@bellsouth.net.

Sincerely,

Scott Spooner

Senior Geologist

P.O. Box 12685 Lake Charles, LA 70612

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SPOONER & Associates, Inc.
Environmental, Geotechnical, & Civil Engineering

June 21, 2001

International Energy and Resources, Inc.
3839 Briargrove Lane, Suite 6307
Dallas, TX 75287
Attn: John Owen

Dear John:

I just wanted to update you on our latest findings at the Santa Maria property. Gold values from a number of samples collected at the quartz dike are averaging better than an ounce of gold per ton. More samples are in the plans for continued analyses. In conjunction with these values, this quartz dike appears to contain a very significant volume. It measures 4300 feet long, 15 feet wide and 1000 feet deep. The depth of this vein is visible on the east end and actual GPS measurements have shown the 1000-foot depth to be accurate. Both the hanging wall and foot wall of the vein also appear to contain significant gold values. We are currently designing tests to determine the most beneficial and efficient extraction methods.

Equally exciting are the gold values that are being found in the volcanic rocks on site. Several hundred pounds of rock chip samples have been fire assayed and were found to possess gold values in excess of 0.25 ounces per ton. But what is more significant is the volume of rock that contains these values. If the gold values from the volcanics continue to show similar values, there is a great potential for a huge ore deposit in these volcanic rocks. Elementary estimates of reserves could be in the millions of tons due to their abundance. This information is tentative and only further exploration and testing will prove our findings.

I will continue to keep you abreast of any relevant findings from the sampling or drilling program as information becomes available. If you require any additional information, please call me at (337) 562-1568 or email me at spooner3@bellsouth.net.

Sincerely,

Scott Spooner

Senior Geologist

P.O. Box 12685 Lake Charles, LA 70612

(337) 562-1568 office
(337) 562-1569 fax

SPOONER & Associates, Inc.
Environmental, Geotechnical, & Civil Engineering

July 8, 2001

International Energy and Resources, Inc.
3839 Briargrove Lane, Suite 6307
Dallas, TX 75287
Attn: John Owen

Dear John:

I just wanted to provide you with an update of the ongoing activities at the Santa Maria property. A topographic survey of the existing dike was performed utilizing GPS (Global Positioning System) technology. The existing surface was projected to a depth of 1,000 feet below Ground Surface and is the basis for volume calculations listed below.

The volumes for the existing Quartz Vein are as follows:
43,369,700 ft / 27 ft^3 per yard = 1,606,285 X 1.6 tons per yd^3 = 2,570,056 tons ore
The volumes for the existing Mineralized Country Rock (Hanging Wall) are as follows:
20,532,800 ft / 27 ft^3 per yard = 760,474 X 1.6 tons per yd^3 = 1,216,758 tons ore
The volumes for the existing Mineralized Country Rock (Foot Wall) are as follows:
21,464,850 ft / 27 ft^3 per yard = 794,994 X 1.6 tons per yd^3 = 1,271,990 tons ore
Collectively, the ore contained within the Quartz Vein and Country Rock has a total volume as follows: 85,367,350 ft / 27 ft^3 per yard = 3,161,754 X 1.6 tons per yd^3 = 5,058,805 tons ore

Although these reserves are based on the 1000 feet of exposed vein on the east end of the quartz dike, one can infer ore volumes to a depth of 2000 feet. This is based on the fact that the Santa Maria property is geologically on the same structural trend as is the Phelps Dodge open pit copper mine in Bagdad, the Crosby Mine, Swiss Belle, Hayes, and the Sultan Mine just to the south. Based upon this geologic inference, the ore volumes at the Santa Maria property can be increased two fold to approximately 10.2 million tons.

More work has been completed on the volcanic rocks located on the south side of the property, which are showing good gold potential. Over fifteen rock chips samples were crushed, screened, and panned. All showed significant quantities of gold with other metals. Concentrates were created from panning a small (5 lb) sample and were fire assayed. This sample had gold values in excess of 0.25 ounces per ton (opt). A 500-pound bulk sample of volcanic rocks has also been processed and concentrates are undergoing oxidation prior to fire assaying. If oxidation assays on the volcanic hosted gold average 5.8 times the fire assay values as with the quartz dike, the gold values on the volcanic rocks will be in excess of 1.45 opt gold.

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(337) 562-1568 office
(337) 562-1569 fax

More samples of the volcanic rocks on the property will be collected in the next few days and subjected to testing. GPS mapping efforts will also continue in an effort to develop ore reserves for the volcanic hosted gold. If the gold values from the volcanic rocks continue to show such promising values, the economic expectations for the Santa Maria property will be far exceeded. There is a great potential for a huge ore deposit in these volcanic rocks. Elementary estimates of reserves could be in the multi-millions of tons. This information is tentative and only further exploration and testing will prove our findings. However, testing is ongoing to determine the most economical milling process for the ore of the quartz dike and volcanic rocks.

I will continue to keep you abreast of any relevant findings from the sampling or drilling program as information becomes available. If you require any additional information, please call me at (337) 562-1568 or email me at spooner3@bellsouth.net.

Scott Spooner

Sincerely,
Senior Geologist

METALLURGICAL SERVICES, INC.

August 1, 2001

International Energy and Resources, Inc.
3839 Briargrove Lane, Suite 6307
Dallas, TX 75287
Attn: John Owen

Dear John:

In the course of defining an assay procedure it has been decided to go with roasting of the samples prior to assaying. Oxidation of the sample, provided in the roasting process, will remove sulfur, arsenic and halides that can interfere with the fire assay procedures.

I recommend that samples should be roasted prior to the fire assay procedure. If you require any additional information, please call me at (406) 494-0600 or e-mail me at DugsMetServices@aol.com.

Sincerely,

Senior Metallurgical Engineer

P. O. Box 4746, Butte, MT 59702

Phone/fax (406) 494-0600

Exhibit 3

Claims Map showing the 141 claims that make up the Santa Maria Mine

TOWNSHIP 13 NORTH RANGE 8 WEST OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA
YAVAPAI COUNTY

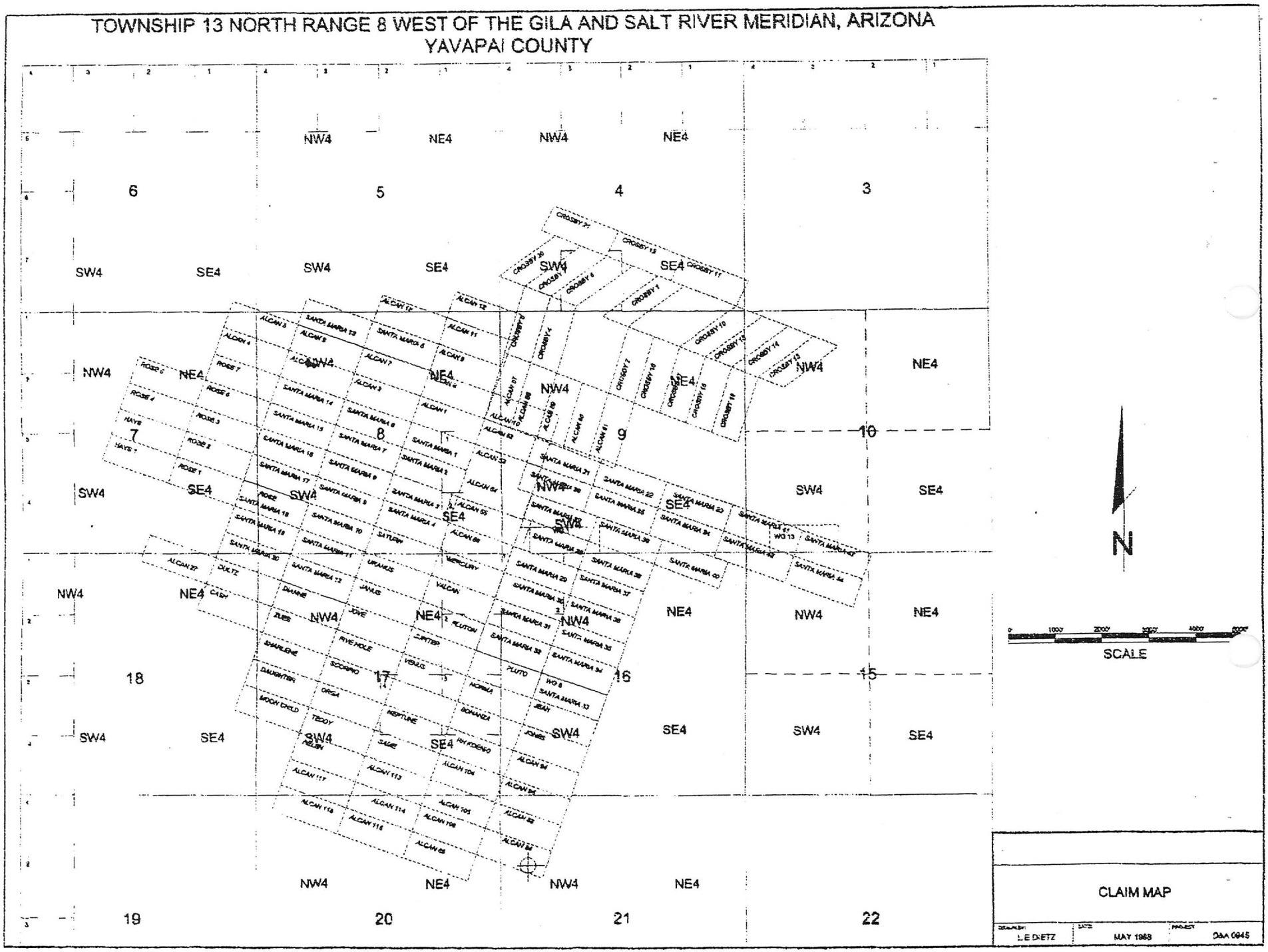


Exhibit 4

Letter regarding core drilling on the Crosby 6 claim as well as a review of the area's mining history dated July 20, 1981 from California Core Drilling Co. to a prior owner of claims in the Santa Maria Mine

CAL ORNIA CORE DRILLING D.
369 E. 17TH ST., SUITE 101
COSTA MESA, CALIFORNIA 92627
(714) ~~760-8145~~
6314118

July 20, 1981

President
Hayes Mining and Machinery, Inc.
Bagdad, AZ 86321

RE: Mining Development
Crosby Mine

Dear

The twenty-eight (28) core drill holes have been completed on Crosby Mine Site No. 6, located 13N Township 8W Range Section 4 Yavapai County, Ariz.

This report is based on 200 Ft. depth cores. As per operator lease footage 50'W x 50'L x 200' Depth. This area is 18,519 cubic yards or approximate 20,000 tons ore reserve. The total area core drilled is 1,500' x 600' x 200'.

A total of 744 core samples were taken from the 6,000 Ft. of core hole drillings. The samples were assayed for gold and silver. The results from the samples are .14 AU per ton and .70 AG per ton. The ground values for an operator lease is 2,800 oz AU and 14,000 oz AG. This ground value is before processing.

The core samples reveal a quartz monzonite porphyry formations through the area of sampling. The gold is held in the pegmatites, mica and quartz veins and mineralized fractures forming the stock.

The many faults located in this area are of considerable importance in controlling supergene enrichment, the largest quantity and highest grade of ore occurs when these faults intersect or are closely spaced. This enrichment is recorded from the samples taken from the area. The gold and silver are natural to the formations of the enrichment zone.

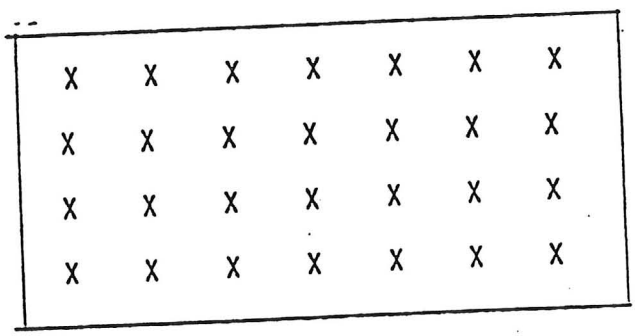
The Eureka Mining District was established in 1882. The Hillside Gold Mine was to become one of the largest and today is the Bagdad Open Pit Copper Mine. This is now owned by Standard Oil of Indiana. This mine extracts 70,000 tons per day and employs 1,200. This operation is four (4) miles in a N.E. direction from the mine known as the Crosby. This mine along with the Hillside were the largest producers of gold and silver in the early part of this century. The core drillings are located adjacent to the original Crosby Mine. The Crosby Mine produced $20,000,000 in gold and silver from 1906 - 1934.

369 E. 17TH ST., SUITE 101
COSTA MESA, CALIFORNIA 92627
(714) 760-8145

The results obtained from geological electronic surveys and core drill samples reveal a large ore body that can be extracted at today's prices and with a cyanide leaching operation warrants investment. The cyanide operation of today is of a low-labor costs that processes large tonnage of ore. The following chart indicates my exact findings from the Crosby Mine Site No. 6.

28 Core Drill Holes 200' Depth

Production Area No. 6



600' Wide

1,500' Length

Average from 950 samples: .14 AU. Per Ton

.70 AG. Per Ton

369 E. 17TH ST., SUITE 101
COSTA MESA, CALIFORNIA 92627
(714) 760-8145

OPERATOR LEASE

50' W x 50' L x 200' D	=	18,519 Cu. Yds.
18,519 Cu. Yds.	=	20,000 Tons Approx.
.14 AU. Per Ton x 20,000 Tons	=	2,800 OZ. AU.
.70 AG. Per Ton x 20,000 Tons	=	14,000 OZ. AG.

Ground Production Value For One Lease

PRODUCTION AREA NO. 6

1,800,000 Tons x .14 AU.	=	252,000 Oz. AU. / Proven Reserves
1,800,000 Tons x .70 AG.	=	1,260,000 Oz. AG. / Proven Reserves

Total Ground Production Values

I HEREBY CERTIFY THE ABOVE RESULTS FROM MY FINDINGS:

R.W. Barnes
Geologist # 11491

Exhibit 5

Selected Assay Logs and Certified Assay Reports

MONEY METALS ASSAY OFFICE

306 South Montezuma Street
Prescott, Arizona 86301
Telephone (602) 445-8206

Custom Ore Assaying

Ariz. Reg. No. 8245

Alcan USA Mining Co.

Sample submitted 11-18-80:

Results of Determinations:

	Gold troy oz. per ton	Silver troy oz. per ton
Rose Mountain Sample	1.167	66.37

Fred L. Copeland

Hugh S. Thomas

MONEY METALS ASSAY OFFICE

306 South Montezuma Street
Prescott, Arizona 86301
Telephone (602) 445-8206

1-31-81

Custom Ore Assaying

Ariz. Reg. No. 8245

Results of Determinations:

Red Concentrate:

Gold: .214 troy oz. per ton
Silver: .15 troy oz. per ton
Lead: .455 %

REGISTERED ASSAYER
CERTIFICATE NO.
8245
FRED LANE
COPELAND
DATE

MONEY METALS ASSAY OFFICE

306 South Montezuma Street
Prescott, Arizona 86301
Telephone (602) 445-8206

Custom Ore Assaying

Ariz. Reg. No. 8245

Alcan USA Mining Co.

Results of Determinations:

Henry Vega Leach Ore: 5.834 oz. per ton gold
.44 oz. per ton silver

70 lb. bucket = 3.5% of a ton = 0.204 oz. gold @ $ 635 = $ 129.54

REGISTERED ASSAYER
CERTIFICATE NO.
8245
FRED LANE
COPELAND
DATE SIGNED
Arizona U. S. A.

Fred Lane Copeland

12-22-80

MONEY METALS ASSAY OFFICE

306 South Montezuma Street
Prescott, Arizona 86301
Telephone (602) 445-8206

Custom Ore Assaying

10-17-80

Ariz. Reg. No. 8245

Alcan USA Mining Co.

Sample submitted 10-16-80:
Results of Determinations:

Hayes Rock House Ore: 11.38 troy oz. per ton silver

REGISTERED ASSAYER
CERTIFICATE NO.
8245
FRED LANE
COPELAND
DATE SIGNED
Arizona U. S. A.

10-17-80

IRON KING ASSAY OFFICE

ASSAY CERTIFICATE

BOX 14 — PHONE 632-7410

HUMBOLDT, ARIZONA 86329

ASSAY MADE FOR 73-A Atlantic Ave.
Long Beach, Calif. 90802

July 16, 1974

DESCRIPTION	oz/ton Au	oz/ton Ag		% Fe	% Pb	% Zn	% C
Wendell, Hi raise	.195	0.50	$				
Wandell, 22"-36" wide	.395	0.57	— GH, TON				
Ruth		52.55					

IRON KING ASSAY OFFICE

ASSAY CERTIFICATE

BOX 14 — PHONE 632-7410

HUMBOLDT, ARIZONA 86329

ASSAY MADE FOR 73-A Atlantic Ave.
Long Beach, Calif. 90802

July 6, 1974

DESCRIPTION	oz/ton Au	oz/ton Ag	$	% Fe	% Pb	% Zn	% C
phillips Arasta	1.750	0.91	$254. TON 1975 PRICES				
#1 dyke, Oliver	.010	0.51	$2.20 TON				
10' in right side 25' incline Wendell	.220	0.40	$42. TON				

CHARGES $12.75

ASSAYER [signature] 7/6/74

ALLISON J. GUNN
ASSAYER

543 EAST ANAHEIM STREET
NEAR ATLANTIC
TELEPHONE 627-91

LONG BEACH, CALIF.

DATE. August 15 1941

CERTIFICATE OF ASSAY

SAMPLES ASSAYED FOR Mr. L. F. Albrecht.

GAVE THE FOLLOWING RESULTS PER TON OF 2000 POUNDS.

NO.	MARKED	GOLD OZ. HDTS	GOLD VALUE AT $35 PER OZ.	SILVER OZ. HDTS	SILVER VALUE AT 71¢ PER OZ.	NO.	METAL	PERCENT	POUNDS PER TON
2	Sample. ------------	2.60	$91.00	1.88	$1.33	****			
	************---	******************	---***	********	**************				
	WENDELL CREEK								
	8" - [illegible] creek [illegible] Albrecht								

WICKENBURG ORE MARKET
ASSAY CERTIFICATE

JOHN C. HERR, Assayer
WICKENBURG, ARIZONA April 8th 1944 19

Len F. Albrecht.

Long Beach , Calif .

Samp. No.	Owner's Mark on Sample	GOLD Ozs. Ton	GOLD Val. Ton	SILVER Ozs. Ton	SILVER Val. Ton	Percent of Cop'r	Percent of Lead	Total Value Per Ton
	Sample # I	0.04	$ I.28	0.20	----			$ I.28
	ALCAN 2	0.I0	3.22	0.90	$ 0.63			$ 3.35
	ROCK HOUSE 3	0.05	I.6I	0.20	--------			$ I.6I
	OLIVERWEST 4	I.20	38.64	0.80	$ 0.56			$39.20
	5	0.03	0.96	0.40	----------			0.96
	WENDEL INCLINE 6	0.56	I8.03	0.50	$ 0.35			$I3.35
	7	0.0I	0.32	0.I0	--------			$ 0.32
	8	0.0I	0.32	0.I0	--------			$ 0.32
	Only traces of copper XXX			Charges Paid .				

Gold at $ 32.20 per Oz.
Copper at Smelter Settlement

see note on back side

John C. Herr ASSAYER

Exhibit 6

Selected quotes from report by Nicholas H. Carouso

A quote from Nicholas H. Carouso, graduate geologist who earned a mining engineering degree from the University of California, Berkley. Served as consulting geologist for more than 30 years in the mining industry: Exploration with Phelps Dodge Corporation, research chemist at the University of California, Berkley, and the U.S Bureau of Mines, Reno, Nevada. Chief Metallurgist with Kennecott Copper Corporation.

"The entire claim group covers several square miles, which is the Crosby, Swiss Bell, the Hayes, and the Glory Hole. All of these are on a mineralized structure. We are looking at only one small phase of the development here.

The transmitters are located in Washington and Maine. They are military stations for underwater communications with submarines and broadcast at over 1 million watts power. It is used in the mining industry to determine subsurface information on the density of the structure and how conductive the structure is. In this area we have some very strong structure zones. When we plot a survey graph, the horizontal line represents the line of survey. The phase reading tells us how strong the structure is and it's conductivity. This is an excellent example of a conductive structure high.

In this area we plan to put in a leach plant for the gold and silver values. They are inexpensive and are very effective. Each vat will handle at least 500 tons of ore. The access to this area and the nearness to water make this a favorable site.

We have calculated our ore reserves, which are very favorable. Using just 30% of the ore reserves we have determined so far, estimated cash flow analysis was conducted, and this area, the property and all the information we found certainly justifies the capitalization and implementation of this operation."