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PRINTED: 07/05/2001

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: GIBSON MINE

ALTERNATE NAMES:
- BELLEVUE-OLD SITE
- KUNO PROPERTY
- CLAIMS MS 2219
- SUMMIT PROPERTY
- REYNOLDS GROUP
- PASQUALE GROUP

GILA COUNTY MILS NUMBER: 87B

LOCATION: TOWNSHIP 1 S RANGE 14 E SECTION 21 QUARTER W2
LATITUDE: N 33DEG 19MIN 40SEC LONGITUDE: W 110DEG 56MIN 45SEC
TOPO MAP NAME: PINAL RANCH - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
- COPPER SULFIDE
- COPPER OXIDE
- SILVER
- GOLD
- BERYLLIUM

BIBLIOGRAPHY:

- ADMMR GIBSON MINE FILE
- ADMMR TUCSON-GLOBE GROUP FILE (VARIOUS RPTS)
- RANSOME F L GEO GLOBE CU DIST USGS PP 12 1903 P 162
- AZ MNG JRL NOV 1919 P 46, ABM BULL 180 P 105
- PETERSON N P GEOL PINAL RANCH QUAD USGS 1141-H 1963 P H11-H13
- STEVENS S J CU HANDBOOK VOL 10 1911 P1618-162

GIBSON MINE GILA COUNTY

NJN WR 7/8/88: Frank Cody and Don Ross of Lodestar Minerals (card) P O Box 1089, Mesa, Arizona 85211 are looking for a financial arrangement, whether it be limited partnership, joint venture or sale, for the development of the Gibson (file) Gila County. They provided two reports on the property, one dated Feb '85 by L. Bayrock for Ida May Resources Ltd, and the second by James Fletcher and Thomas Clary, dated Aug '84, also prepared for Ida May Resources.

GIBSON MINE

KAP WR 5/8/81: Lester Cox reported that the Gibson includes an old property known as the Pasqual vein. The Pasqual is located in a canyon southeast of and contiguous to the Gibson.

RRB WR 6/26/81 - Bob Wagner, 1325 E. Lemon Street, Tempe 968-4002, working for Tri Gold of Vancouver, B.C., reports that Tri Gold has leased the Gibson Mine from Lester Cox who has it leased from others. Tri Gold will try to promote the property to one of the major copper companies.

RRB WR 11/13/81: Edward W. G. Fluskey, Project Geologist, Granges Exploration Akteibolag (Swedish) Canadian Division, 1110-625 Howe St., Vancouver, B. C. VGC 2T6, 687-2831 was in for information on the Gibson Mine, Gila County. They are drilling it and wanted information as a guide for drilling program. He has heard "Miners' stories" of 9% cutoff grade and the bottom 100 feet of a 600 foot shaft being in 9% disseminated ore. Also that there are 1 million tons on the dump running 1-1½% copper.

KAP WR 2/5/88: Discussed acid soluble oxide copper properties with Troy W. Ray, 1306 Live Oak, Miami, Arizona, phone 473-3180. The subject of the Gibson Mine (file) Gila County was brought up as to whether or not the property has leach potential. He believes that Bob Franks of Globe is either part owner or heas knowledge of the current ownership. He (Mr. Ray) thought that Nick Carouso was probably the last leach operator in the late 1970's. Further, he thought the last efforts there were of a Texas operator that tried to recover gold from the mine water and which subsequently sold out to a Canadian group.

RRB WR 4/29/88: Jerry A. Covey, Lodestar Minerals, 2329 N. Recker, #122, Mesa, AZ 85025, phone 985-8300 and Don ~~(or John?)~~ Ross report they have the Gibson Mine (file) Gila County and they intend to leach it. I discussed the leaching process with them and referred them to books on leaching and to Dr. Brnet Hiskey at the U of A.

GIBSON MINE

At the Gibson Mine, Nick Caruso's company, Geo-Processing, was attempting to heap leach some low-grade copper ore. FTJ Annual Report 6/28/73

Went to Gibson mine but Mr. Caruso was in Tucson so visited with Mrs. Caruso and left owner's report for Nick to complete and return. Bob Ranks could not be located. There was no activity but core drilling planned by Franks. FTJ WR 10/11/73

Nick Carouso said Kayser intends to drill several deep holes on the Gibson property. He is now drilling south of Sutton Summit. FTJ WR 2/15/74

Kayser, who has the Gibson mine, was exploring in the Oak Flat area south of Sutton point. FTJ AR 73-74

Mine visit - the Gibson mine, Sec. 22, T1s, R14E. Paul Kaiser is reported to be doing leaching experiments. Appears to be considerable work going on. GWI WR 6/22/76

CH/WR 1/3/80 - Visited the old Gibson Mine workings south of Miami. A copper heap leach and iron precipitation of old mine dumps had been conducted and is now apparently abandoned. Took a number of pictures.

KAP WR 1-3-80: In the company of Cliff Hicks, traveled to Florence, Miami, Globe, and the Gibson Mine. (A separate report will be written on the Gibson Mine.)

KAP WR 4/17/81: In the company of Dick Beard, a visit was made to Gibson and nearby claims (possibly part of Gibson property). Recent work consists of new roads in a gulley southwest of the original Gibson dumps. The roads appear to be cut for possible drilling sites or investors. Copper oxide impregnated schists, schisty specular hematite, pyrite, chalcopyrite, and covelite were seen in specimens from one of the small old dumps. The property needs further detailed exploration and might prove to be a strata bound massive sulfide deposit.

KAP WR 4/24/81: Lester Cox reported that his property position on the Gibson Mine, Summit District, Gila County, is an option from Bob Franks. Core drilling noted on the property during my last visit is reported to have been done by Kaiser while the dozer work was done by Mr. Cox. He explained that he now has an Iranian investor group which is planning work on the property.

GIBSON MINE GILA COUNTY

Active Mine List Oct. 1969 - 5 men - Robert Franks, Mgr. - Paul Kayser, Pres.

Visited the Gibson Mine, where they are mining (open pit) in several areas and started construction of heaps - 2 of 20,000 tons each. FTJ WR 5-29-70

Active Mine List May 1970 - 5 men - Robert Franks, Mgr., Box 532, Globe

Arizona Mining Properties, Inc. were preparing pads for heap leaching copper ore at the Gibson mine. FTJ Annual Report 6-30-70

Active Mine List Oct. 1970 - 2 men - Robert Franks, Mgr. Box 532, Globe

To Gibson mine SE of Miami - idle except for watchman and geophysical crew conducting an IP survey. Called Bob Frank re the Gibson - he said IP results are being evaluated. FTJ WR 1-29-71

Called Bob Franks re Gibson mine. He said Longyear was drilling and were having a hard time keeping drill on target. No indication of values. FTJ WR 3-31-71

Arizona Mining Properties, Inc. were exploratory drilling the Gibson Mine and vicinity. FTJ QR 4-5-71

The Gibson Mine was idle but other prospects in the area were under study. FTJ QR 9/71

Called Bob Franks several times with no answer so do not know exact status of the Gibson mine. Said to be operated by Arizona Gold and Silver Inc., P.O. Box 547, Miami, Arizona, 85539. According to reports, Kayser's Arizona Mining Properties are drilling for deeper ores. FTJ WR 6/16/72

The Gibson mine was undergoing evaluation and more exploration drilling anticipated. FTJ QR 3rd¼ '72.

Being operated by joint venture. Arizona Gold & Silver Co., Inc. and Geo-Process Co., Inc. Nick Caruso and Sheldon Heath with Geo Process. George Bevins, Director of Geo Process. Clarence Strouse, Sec.-Treasurer. Have shipped some + 90% precip. to Bagdad. JHJ 7/5/72

The Gibson Mine SW of Miami was being prospected and operated as a joint venture between Arizona Gold and Silver Company, Inc. and Geo-Process Company, Inc. They had shipped a 90% copper precipitate by July 1, 1972. Arizona Mining Properties will explore for deeper ores on the claim. FTJ 4 ¼ '72

To Gibson Mine, Nick Caruso in the hills surveying. Talked to Mrs. Caruso who said things were badly mixed up. Geo-processing, Nick Caruso, resident, in partnership with Arizona Silver Company. Paul Ferrin of Phoenix, attorney for both parties. Apache Drilling (Pruitt Henderson, et al) may help financing. FTJ WR 12/14/72

DO NOT PHOTOCOPY

GIBSON MINE

GILA COUNTY
MIAMI DISTRICT

Stevens stated that Mrs. Ross Findley, Shandon, California and he, each have ½ interest in the Gibson mine. It has recently been leased by Harlen Fountain, Miami, Arizona, who will do development work.

Interview with A. D. Stevens, 1500 S. Palm Street, San Gabriel, California.

Memo LAS 3/1/63

Conference with Woodrow Simmons, Chief Geologist for Miami Copper Co. 1/29/64.

Mr. Simmons stated that H. F. Fountain, Chemist for Miami Copper Co., and Reed Nix of Globe are setting up to leach the Gibson dumps. Leaching will be done in heaps. Consensus of opinion is that the Gibson ore is very high in alumina and will therefore be hard to leach.

Memo LAS 1/29/64

See: Metal Mining and Processing April, 1964 p26

1973

GIBSON MINE

INTRODUCTION

The Gibson mine property was leased by Geo-Processing, Inc., from Arizona Mining Properties, Inc.

Geo-Processing, Inc. interest in this property is two-fold. One, to derive a profit from the leaching operation and two, to research and develop hydrometallurgical induced oxidation techniques for conversion of sulfides to an acid leachable form and thereby greatly increasing the ore reserves of this property. The proposed techniques, which should be patentable, could be used for heap leaching, vat leaching, in place leaching and mill concentrates. The latter could eventually eliminate the need for pyrometallurgical smelters.

PROPERTY AND DEVELOPMENT

The leased property consists of 16 patented mining claims and 53 unpatented mining claims, situated in the Pinal Mts., 9 miles SW of Miami, Arizona, at an elevation of about 4700 feet above sea level. The property was developed by several incline shafts, a vertical shaft 600 feet deep and approximately 2600 feet of underground workings on two copper bearing veins, the Summit and Pasquale veins. Total production to 1934 is recorded as $2,100,000. Average grade of ore shipped to the Old Dominion smelter was about 20% copper. It is reported that ore grade much below 15% was left in the workings. This was because shipments to the smelter were made by 10 horse teams and wagons and the price of copper was low. If the lower grade material was raised to the surface to allow working room underground, it was piled in large waste dumps. These dumps are now a part of the ore reserves and consist of approximately 250,000 tons of average grade of at least 1.5% total copper per ton.

GEOLOGY

Country rock is Pinal schist and granite carrying several approximately parallel fissure veins having a NE strike. The Summit vein of

NICHOLAS H. CAROUSO

4 to 7 feet in width, traceable for a distance of 1¼ miles, and the Pasquale vein, about 250 feet to the west and of equal length, were the principal veins mined during the early operations.

The zone of oxidation is at least 200 feet in depth with copper sulfides at depth. The oxidized zone contains malachite and azurite copper mineralization and the sulfide ore at depth is mainly massive chalcopyrite. The oxidized ore is favorable for leaching as very little, if any, acid consumers are present. In fact, acid is generated in both the heap leaching dumps and the in place leaching site.

Exploration efforts, utilizing induced polarization geophysical survey methods, geochemical survey methods with geological correlation studies and drilling indicate that the Gibson mine area has excellent ore reserves potential.

ORE RESERVES

It would be difficult to assign a definite ore reserves tonnage to this property, at least, until the exploration phase has been completed, however, an approximate ore reserves tonnage and dollar value will be estimated.

The old mine dumps have been estimated to be in excess of 250,000 tons with an average grade of 1.5% total copper per ton. This amounts to about 7,500,000 pounds of copper with a gross dollar value of $5,000,000. However, it is expected that the leachable portion of ore, by dilute sulfuric acid solution, will be approximately 0.75% copper per ton, and with an expected recovery of 80%, thus by simple leaching, the above gross dollar value should be adjusted to about $2,000,000. One must assume that the sulfide minerals in the dumps will be recovered to some extent by simple acid leaching, however, technological breakthroughs can be expected in the leaching processes, expecially in the induced oxidation of sulfide copper minerals. A recently published technical report by the U. S. Bureau of Mines, "Simulated In Situ Leaching of Copper From a Porphyry Ore", Technical Progress Peport 69, May 1973, discusses the small additions of sodium chloride or nitric acid to the weak sulfuric acid leaching solution which greatly increases the dissolution of copper sulfides 2 times and 8 time res-

pectively than with only sulfuric acid alone. These reagents have been tested at the Gibson Mine by Geo-Processing, Inc. a year or more ago and were found to be effective and were part of a continuing research and development program. This type of technological advances will greatly expand the recoverable ore reserves picture. Therefore, it is expected that the gross dollar value recoverable could be about $4,000,000 for the processing of the old mine dumps.

Ore in place expands the ore reserves estimate many fold. The Forester No. 1 vein alone can be estimated to be at least 1,000,000 tons of about 1% copper per ton. This amounts to 20,000,000 pounds of copper with a gross dollar value of approximately $12,500,000. Assuming the acid soluble portion as 0.5% copper per ton with an expected recovery of 80%, this would adjust the gross dollar value to about $5,000,000. If the induced oxidation techniques are successful, then one can expect to double this dollar value to about $10,000,000.

To summarize the ore reserves potential at this property, the writer feels that a conservative estimate should be at least 5,000,000 tons of ore with a grade of at least 1% copper per ton, gross dollar value of $65,000,000 based on the current selling price of cement copper. This estimate includes the potential of leaching in place the underground workings of the Summit and Pasquale veins.

LEACH PLANT

The present leaching plant includes heap leaching and in place leaching of copper ore, however, to approach the cash flow potential of this property, the leaching facilities should be expanded. This would include construction of a vat for agitated leaching, a crushing plant, a decant sump for copper precipitates and expanded pregnant and barren water reservoirs.

To implement this expansion of the facilities to treat 500 tons of ore per day, a realistic estimate is as follows:

CONCRETE VAT FOR LEACHING 500 TONS
-3/16 INCH CRUSHED ORE PER DAY

Cost of construction of vat		
Excavation	$1,500	
Gunite concrete	7,500	
Steel mesh and gallery concrete	1,000	
Dump valve and air lines	1,000	
	$11,000	
Pump & piping	5,000	
Compressor, 250 CFM	6,000	
	$11,000	
		$22,000
MATERIAL HANDLING FACILITIES		
Crusher - Hammermill type	$10,000	
Coarse ore bin	2,000	
Fine ore bin	4,000	
Conveyors	10,000	
	$26,000	
		$26,000
OTHER FACILITIES		
Expand and modify pregnant water head pond	$2,000	
Barren water pond	3,000	
Decant sump for iron launders	5,000	
Electric generating plant	6,000	
Tailings pond, pumps and piping	5,000	
	$21,000	
		$21,000
		$69,000
CONTINGENCY AND WORKING CAPITAL		10,000
ESTIMATED FINANCIAL REQUIREMENT		$79,000

Expected production should be at least 3 tons cement copper per day, thus, at 65¢ per pound copper (current buyer's price) this should give a daily gross dollar value of $3,900 or $117,000 per month.

This assumes one complete leaching cycle per 24 hours, however, it is not unrealistic to consider that a complete cycle could be run in 12 hours, then this could double the estimated daily production. If this proves to be the case, then a vertical precipitator should be considered to supplement the existing horizontal iron precipitation launders.

CONCLUSIONS

This property has the potential of being a successful producer. The writer has working knowledge at this property and is convinced that with the proper production facilities, substantial cash flow is assured.

Nicholas H. Carouso

NICHOLAS H. CAROUSO
P. O. Drawer X
Miami, Arizona 85539

November 1, 1973

GIBSON MINE

IN SITU LEACHING CONSIDERATION

The Summit and Pasquale veins and other strong veins on the property should be strongly considered for in situ leaching. Approximately 130 feet of the Summit vein has been tested by in situ leaching and the results were satisfactory.

The following is presented as possible annual gross dollar earnings from the Summit vein:

Leaching width (potential)	40 ft.
Depth	600 ft.
Cubic feet per lineal foot	24,000 cu. ft.
Tons per lineal foot	2,000 tons
Tons per 1,000 lineal feet	2,000,000 tons
Confidence factor of 50% (adjusted)	1,000,000 tons
Grade of copper @ 10 lb. per ton	10,000,000 lb. cu
Five years leaching time	2,000,000 lb. cu/yr.

If dollar value of copper per pound is 65¢ per pound (current buyer's price), then the annual gross dollar value will be in excess of $1,000,000 per 1000 feet of vein.

Nicholas H. Carouso

NICHOLAS H. CAROUSO
P. O. Drawer X
Miami, Arizona 85539

November 1, 1973

GIBSON MINE

Gila County, Arizona

PROJECT SCOPE
and
Preliminary Property Evaluation Report

Prepared for

Ida-May Resources, Ltd.
Vancouver, British Columbia

Brij Sharan, President

Prepared by

Vanguard Mines, Inc.
Globe, Arizona

James B. Fletcher, Mining Engineer
Thomas A. Clary, Geologist
Floyd J. Ingram, Geologist

August, 1984

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FIGURES

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1. EXECUTIVE SUMMARY

A. Proper s

B. Location

C. Land Position

D. Agreements

E. Terms

F. Mineral Potential

G. Mining Concepts

H. Gibson Mine Model

I. Pre-mining Exploration and Planning Costs

J. Economics

I. EXECUTIVE SUMMARY

- telegraphic-

A. Properties:

Gibson Mine - Copper, minor gold and silver
Lydia - Gold, silver and copper

B. Location

80 miles east of Phoenix, Arizona

10 miles west of Miami, Arizona

3 miles of gravel road

C. Land Position

Gibson Mine - 17 patented claims
- 140 unpatented claims

Lydia - 22 unpatented claims

Total acreage - Approximately 2,900 acres

D. Agreements

Letter agreements executed with Lester R. Cox, et al. of Miami, Arizona

Formal agreement being prepared

E. Terms

Holding costs are good

F. Mineral Potential

Gibson Mine:

Dumps	250,000 Ton @	1.5%	Cu
Existing Workings	100,000 Ton @	2.0%	Cu
Veins	672,000 Ton @	5.0%	Cu
Disseminated	10,800,000 Ton @	0.7%	Cu
	or 43,000,000 Ton @	0.4%	Cu

Gold and silver are significant
More work required for reserve estimate

Lydia Property:

Significant vein system - spot samples range from trace up to 2 oz. gold, 40 oz. silver, 10% copper

G. Mining Concepts

1. Construct SX-EW plant at the Gibson Mine for leaching copper

2. Construct a sulfide flotation plant at the Gibson Mine for processing high-grade gold and silver ore from the Lydia property

3. Construct a small cyanide leach plant on the Lydia property for leaching high-grade oxide gold and silver ores

4. Most of facilities capitalized out of net profits

H. Gibson Mine Model

1. Mine Life:

10-year mine life (360 days/yr.)

2. Production Rate:

70% recovery
8,400 lbs. Cu per day
252,000 lbs. Cu per month
3,024,000 lbs. Cu per year

PLUS GOLD AND SILVER (not estimated)

3. Mining Rate:

300 tons per day at 2.0% copper
9,000 tons per month
108,000 tons per year
1,080,000 tons required for mine life

4. Solvent Extraction Plant

Plant capacity 200 gal. per min.
Plant feed grade 4 gpl Cu
Production capacity 9,600 lbs./day Cu
Required production 8,400 lbs./day Cu

5. Electrowinning Plant

Plant capacity	20 gpm
Plant feed grade	40 gpl
Production capacity	9,600 lbs./day
Required capacity	8,400 lbs./day
Product grade	99.99% Cu

6. Sulfide Flotation Plant

Recommendations have been made for installation of a 50 T/day flotation plant to process high-grade gold ore from the Lydia Property

I. Pre-mining Exploration and Planning Cost

Phase I -	$37,000
Phase II -	$57,000
Total	$94,000

J. Economics

Capital Requirement	_____
Operating Costs	_____
Gross Sales	_____
Net Cash Flow	_____
DCF-ROI, etc.	_____

Economics of the properties will be calculated after Phase I and Phase II work has been completed.

However, it is anticipated that copper can be produced for approximately 30¢ to 40¢ per pound.

Gold and silver production costs are anticipated to be very competitive.

II. INTRODUCTION

II. INTRODUCTION

Vanguard Mines, Inc. has been retained, by Ida-May Resources, Ltd. of Vancouver, British Columbia, to make a preliminary mine evaluation study of the Gibson Mine property, located in Gila County, Arizona, U.S.A.

The purpose of this study is to:

- Evaluate the geologic potential ore reserves;
- Develop preliminary mining plans and make recommendations;
- Develop preliminary processing and production plans and make recommendations; and
- Make recommendations on anticipated pre-production work requirements.

Generalized parameters for the scope of this report are to determine if the Gibson Mine has potential for becoming a profitable mining operation.

III. GIBSON MINE HISTORICAL SUMMARY

III. GIBSON MINE HISTORICAL SUMMARY

The Gibson Mine operated from 1906 until 1918. Various authors have reported that during this time period 12,000,000 pounds of copper were produced at an average grade of 20% copper. Using 400 pounds of copper per ton of ore, this equates to 30,000 tons.

It is reported that the ore was shipped 14 miles to the Globe smelter via 10-horse wagon teams. Ore averaging 15% copper was left in the mine for stope backfill.

During this period of operation, the mine was developed with several inclines, a 600-foot vertical shaft and approximately 26,000 feet of workings.

Since 1918, the mine has been leased by several small-scale operators. Data available at this time is vague. There are vague reports that at one time there was a 150-ton-per-day, steam-driven mill on the property, however, there is no information on its operating time. Other reports mention that 260,000 pounds of copper were produced from hand-sorting the mine dumps, during the period 1937-1953.

IV. LOCATION

A. Access

B. Climate

IV. LOCATION

The Gibson Mine is located in western Gila County, approximately 10 miles west of Miami and 80 miles east of Phoenix, Arizona.

The property is located on the southern slope of the Pinal Mountains at an average elevation of 4,500 feet. Vegetation is scrub oak, pinon, jojoba brush, manzanita, cat-claw and other desert-type vegetation.

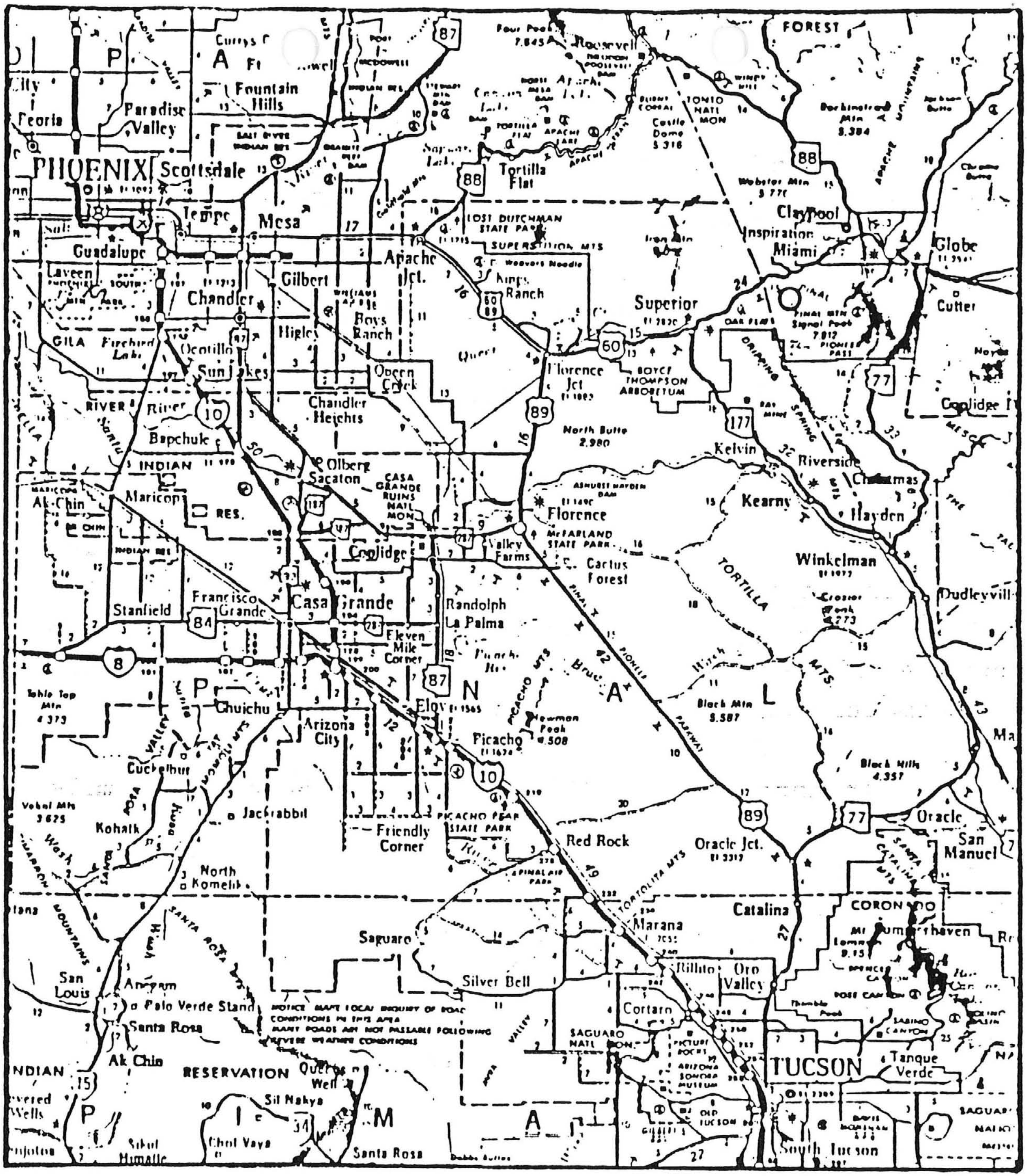
A. Access

Access can be gained to the property from Phoenix Sky Harbor Airport via Interstate 10, State Highway 360 and U.S. 60-70. Figure 1 shows the Sky Harbor Airport located at the juncture of I-10 and 24th Street. After traveling east approximately 80 miles through Apache Junction and Superior, the junction of the gravel access road leading to the property is approximately 10 miles east of Superior at mile post 239.2. Figure 2, Pinal Ranch Quadrangle Map, shows approximately 3 miles of gravel road, Forest Service Road 349, leading to the Gibson Mine.

B. Climate

The Gibson Mine property lies in the mineral rich Intermountain Region of Central Arizona. Climatic conditions are mild with maximum temperature ranges from 104° to 108° F. Generally the warmest days are in June and July. Minimum temperatures, occuring in January and December, range from 11° to 22°F. The mean annual temperature is 61° F.

Precipitation occurs in two periods: July and August are characterized by short duration, heavy showers and January and February are characterized by light, steady rains with occasional light snow. The mean annual precipitation is 17 inches.



Phoenix Sky Harbor Airport

Gibson Mine Property

Figure 1 - Location map showing Phoenix Sky Harbor Airport, Globe and highways to the Gibson Mine property

V. LAND STATUS

A. Agreements

1. Gibson (Bellevue) Mine Property

2. Lydia Property

V. LAND STATUS

A. Agreements

1. Gibson (Bellevue) Mine Property

Ida-May Resources, Ltd. acquired the Gibson Mine property with a Letter Agreement dated June 22 and executed on July 20, 1984. This agreement is with Lester R. Cox, et al. who resides on U.S. Route 60-70 between Superior and Miami, Arizona.

Terms of the Letter Agreement call for the finalization of a formal agreement prior to 60 days from the date of execution.

The Gibson Mine property consists of 17 patented mining claims and approximately 140 unpatented mining claims. Due to overlapping and less than full-sized mining claims, the property covers approximately 2,500 acres.

Figures 2 and 3 are land status maps showing patented mining claims, unpatented claims, utilities, access and other mining and mineral prospects.

2. Lydia Property

The Lydia property is located approximately 3 miles southeast of the Gibson (Bellevue) Mine. The property consists of 22 unpatented mining claims or approximately 400 acres.

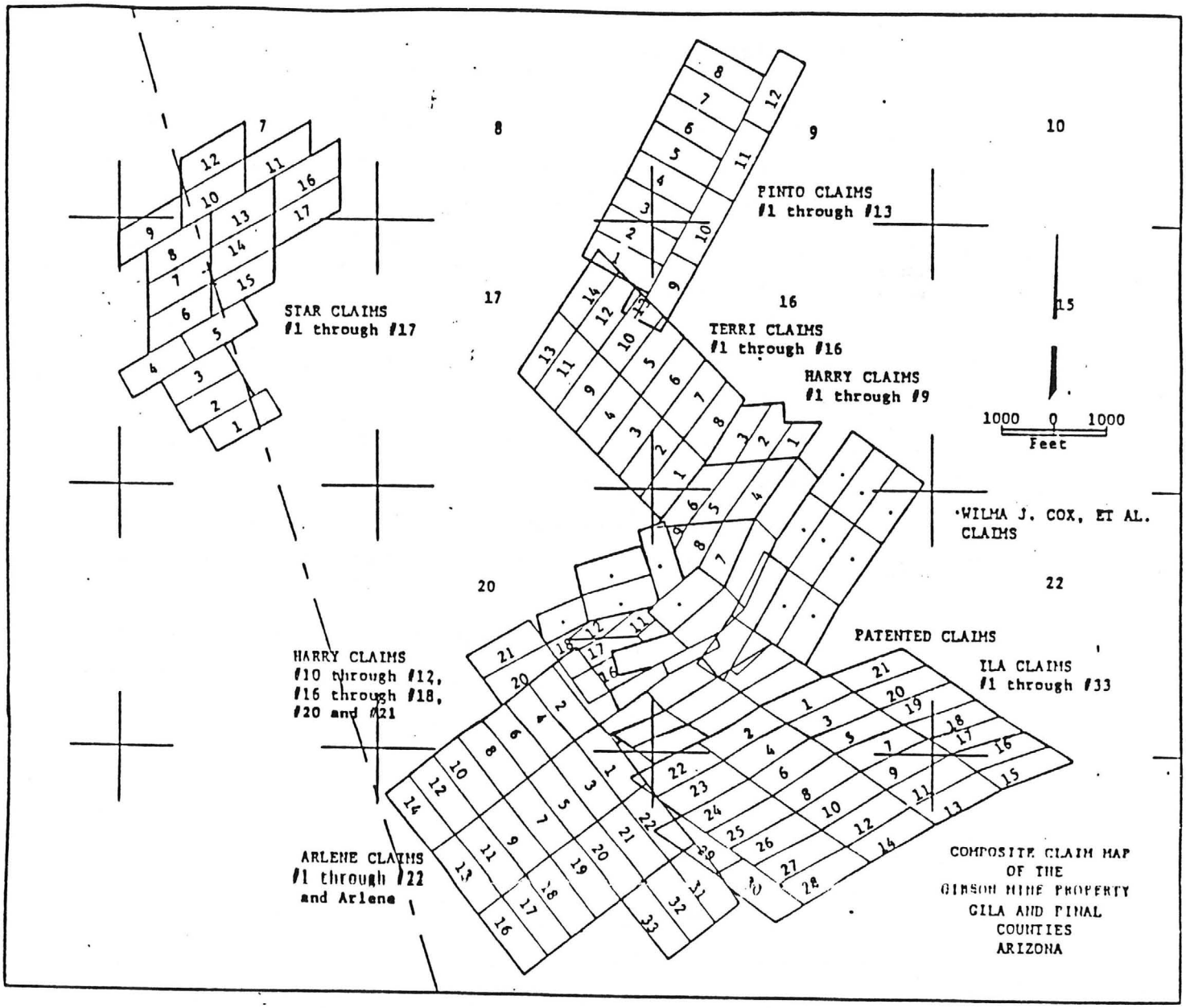

PINTO CLAIMS
#1 through #13
STAR CLAIMS
#1 through #17
TERRI CLAIMS
#1 through #16
HARRY CLAIMS
#1 through #9
WILMA J. COX, ET AL.
CLAIMS
PATENTED CLAIMS
ILA CLAIMS
#1 through #33
HARRY CLAIMS
#10 through #12,
#16 through #18,
#20 and #21
ARLENE CLAIMS
#1 through #22
and Arlene
1000 0 1000
Feet
COMPOSITE CLAIM MAP
OF THE
GIBSON MINE PROPERTY
GILA AND PINAL
COUNTIES
ARIZONA

Figure 3

VI. PROPERTY POTENTIAL

VI. PROPERTY POTENTIAL

The Gibson and Lydia mineral deposits are spatially related to the Schultze granite and its late stage differentiates which are responsible for the mineral occurrences in the Globe-Miami mining district. Figure 4 shows the Schultze granite and the spatial relationships of local mines and mineral deposits.

These properties are located in an area that is favorable for delineating very large mineral deposits. However, the mining concepts for this project are very small compared to other operations in the area. This alone generates a very high confidence level for success.

Suggested mining concepts for this project have been designed to enhance the merits and potential of the properties. Coupling the Gibson and Lydia properties together creates a unique mining property because the mining venture will have potential for gold, silver and copper and will have dump ore, ore in existing workings, vein ore and disseminated ore. These factors plus the size of the proposed operation optimizes the likelihood of a successful operation.

Due to the alternatives:

- For producing multiple products;
- Using multiple mining methods; and
- Having multiple ore reserve sources,

this project has a very high potential for success with low risk and low capital investment.

Projected potential geologic mineral reserves indicate that the property has potential for a small high-grade mining operation with sufficient potential reserves to develop into a large-scale, low-grade mining operation.

Section VIII-A of this report discusses the mineral potential.

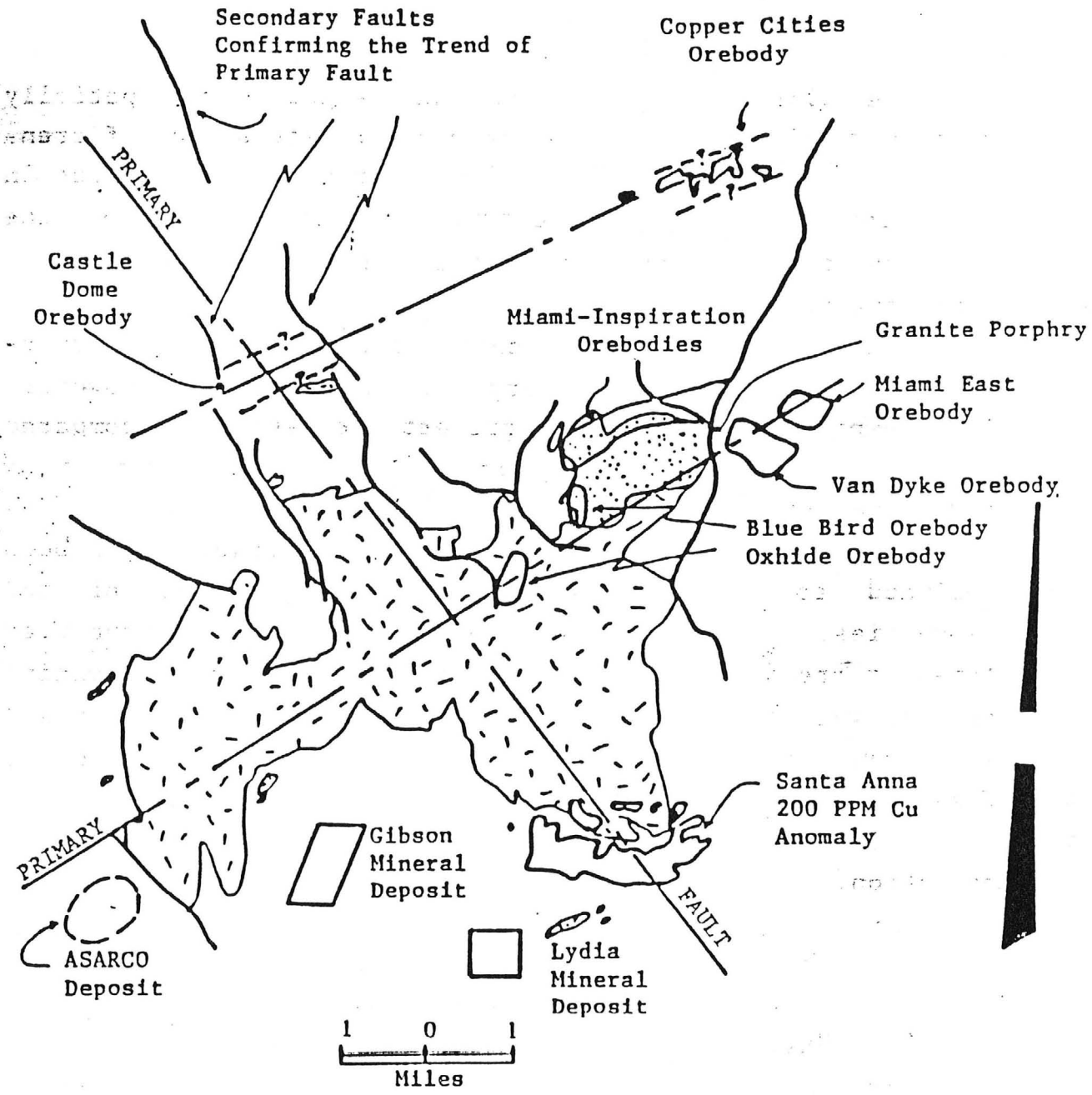


Figure 4 - District geologic map showing spatial relationships of the Gibson Mineral deposit and the Lydia mineral deposit to inferred primary faults, secondary faults, Schultze granite, granite porphyry and other mineral deposits

VII. PROJECT CONCEPT

A. Conceptual Mine Model

1. Mine Life

2. Production Rate

3. Mining Rate

4. Solvent Extraction Plant

5. Electrowinning Plant

VII. PROJECT CONCEPT

Initial conceptual plans for the Gibson Mine are to delineate areas and sources of sufficient mineral reserves to justify capitalization of a mining operation of 300 tons of ore per day at an average grade of 2% copper or of the equivalent, e.g., 150 tons per day at an average grade of 4% copper. Using a 70% recovery factor, this equates to a mining operation that will produce approximately 8,400 pounds of copper per day.

It is envisioned that substantial gold, silver and other metals will also be products of this operation.

The initial concept is to construct a very small solvent extraction plant with plans for expansion after the operation is generating a net profit. This will require minimum capital at the onset of the operation and will permit expansion of the operation out of net profits if desired. This concept will also permit operations on a pilot plant scale prior to considering a larger optimized mining operation.

Conceptual plans are to initially heap leach existing mine dumps with possible pregnant leach solutions obtained from acidifying mineralized solutions presently being produced from the existing mine workings. It is contemplated that ore on the leach pads will be upgraded with ore from open-cut mining in the disseminated mineralization and in the very high-grade veins.

Anticipated future plans include construction of a sulfide flotation plant which will recover gold and silver from the Gibson property and will also be utilized to process ores from high-grade gold and silver properties that exist within an economic radius of the proposed Gibson plant site.

Potential ore reserves on the Gibson property are of such a large magnitude that it is assumed that delineating sufficient proven ore reserves to satisfy the conceptual

mine model will not require a typical minerals exploration program. However, it will be necessary to locate high-grade target areas that can be mined at the lowest optimum mining cost.

A. Conceptual Mine Model

1. Mine Life

10-year mine life

Operating days - 12 x 30 day months = 360 days per year

2. Production Rate

(a) 70% recovery rate

(b) 8,400 pounds of copper per day

(c) 252,000 pounds of copper per month

(d) 3,024,000 pounds of copper per year plus gold and silver (not estimated)

3. Mining Rate

(a) 300 tons per day

(b) 9,000 tons per month

(c) 108,000 tons per year

(d) 1,080,000 tons required for 10-year mine life

(e) Average ore grade 2.0% copper

4. Solvent Extraction Plant

(a) Plant capacity - 200 gallons per minute

(b) Plant feed grade - 4 grams copper per liter

(c) Production capacity per day - 9,600 lbs. Cu

(d) Required production per day - 8,400 lbs. Cu

5. Electrowinning Plant

(a) Plant capacity - ~~20~~ gpm 55 gpm

(b) Plant feed grade - ~~40~~ 55 grams per liter

(c) Production capacity - 9,600 lbs. Cu/day

(d) Required capacity - 8,400 lbs. day

(e) Product grade - 99.99 percent copper

VIII. INITIAL PROGRAM OBJECTIVES

A. Potential Mineral Reserves

1. Areas of Disseminated Mineralization
2. Vein-Type Mineralization
3. Mineral Reserves in Existing Mine Dumps
4. Mineral Reserves in Existing Mine Workings
5. Summary of Geologic Potential Reserves

B. Processing Facilities Concepts

1. Leach Pad
2. Solvent Extraction Plant
3. Electrowinning Plant
4. Sulfide Flotation Plant
5. Power Source
6. Ancillary Installations

C. Mining Concepts

1. Case I
2. Case II
3. Case III
4. Case IV
5. Case V

D. Water Resources

1. Water Requirements
2. Potable Water

VIII. INITIAL PROGRAM OBJECTIVES

Initial objectives are to do sufficient conceptual planning to substantiate and demonstrate that the Project Concept has been through the thinking process and that the Project Concept has economically favorable merits.

The objectives will be to evaluate conceptual models on:

- Potential mineral reserves;
- Processing plant concepts;
- Mining concepts; and
- Water resources.

In addition to evaluating the conceptual models of various components of a mining operation, which are listed above, a two phase sequential work scope will be prepared to gain sufficient factual data for preparing a pre-construction mine plan and feasibility study, including capital requirements, preproduction time, payback period, cash flow analysis, etc.

A. Potential Mineral Reserves

During Phase I and Phase II, program objectives are to delineate more than the required 1,080,000 tons of minable ore reserves. Since the Gibson property is located in a large mineralized area with the possibility of potential reserves in:

- Areas of disseminated mineralization;
- Vein-type mineralization;
- Mineral reserves in existing mine dumps; and
- Mineral reserves in existing mine workings,

program objectives are to prove sufficient minable reserves without following a typical minerals exploration program that would initially evaluate the full potential of the property.

As outlined in Phase I and Phase II of Section XI, Proposed Scope of Work, plans are to prove minable reserves by:

- Aerial photography of the area;
- Cursory geologic mapping of the rock types, structures, mineralology and mine dumps; and
- Limited drilling, trenching and sampling.

Potential mineral reserves in the four categories outlined above are described in the following sections of this report.

1. Areas of Disseminated Mineralization

Figure 2 shows that the Gibson property contains a mineralized area of high-grade veins and disseminated mineralization that is approximately 3,000 feet square. It can be assumed that at various ore grades this area has the following geologic disseminated mineral reserve potential.

(a) Calculation I (0.70% Cu)

- Assume a grade of 0.70% copper;
- Total mineralized area - 9 million sq. ft.;
- Potential depth of mineralization - 500 ft.;
- Tonnage in this area - 360,000,000 tons;
- Percentage of area containing 0.70% Cu = 3%; and
- Potential reserve at 0.70% Cu = 10.8 million tons.

Assuming that 3% of this area contains 0.70% copper, then the area has a geologic potential of 10,800,000 tons or 151,200,000 pounds of copper.

(b) Calculation II (0.40% Cu)

- Assume a grade of 0.40% Copper;
- Total mineralized area - 9 million sq. ft.;
- Potential depth of mineralization - 500 ft.;

- Percent of area containing 0.40% Cu = 12%; and
- Potential reserves at 0.40% Cu = 43.2 million tons.

In this type of mineralized environment, it is reasonable to assume that there will be four times as much 0.40% copper as there is 0.70% copper. Therefore, this area has a geological potential of 43,000,000 tons of 0.40% copper or 345,000,000 pounds of copper.

These calculations do not include any value for the high-grade veins.

2. Vein-Type Mineralization

Several veins outcrop on the property, see Figure 2. The Pasquale and Summit veins are the most prominent. Most of the estimated 12,000,000 pounds of copper produced from the property were mined from these two veins.

(a) Potential Geologic Reserves from Veins

- Number of veins used in calculations - 8;
- Total strike length - 24,000 ft.
- Average mine width - 7 ft.
- Potential depth of mineralization - 500 ft.
- Tonnage of vein system = 6.72 million tons
- Estimated minable grade = 10% Cu

Using the above assumptions, the geologic reserve potential is 6,720,000 tons of 10.0% copper.

If it is assumed that 10% of this vein system contains minable reserves and that the grade is only one-half the possible 10% copper, then the potential geologic reserve is 672,000 tons at 5.0% copper.

Since previous mining operations used a 15.0% mine cut-off grade, it is reasonable to use a grade of 5.0% copper in the potential geologic reserve estimate.

3. Mineral Reserves in Existing Mine Dumps

Existing reports give conflicting estimates of tonnage contained in the mine dumps. For the purpose of this report, it is estimated that the existing mine dumps contain approximately 250,000 tons of reserves at a grade of 1.5% copper.

4. Mineral Reserves in Existing Mine Workings

There are 26,000 feet of mine openings in the Gibson Mine. At the time of this report, the extent of mine stopings and backfilling is not known. However, it is known that the stopes were backfilled with material containing minus 15.0% copper.

Without the benefit of further study and for the purpose of this report, a guess is that there are more than 100,000 tons at 2.0% copper of backfill and caved material that is available for in-place leaching from surface drill holes.

5. Summary of Geologic Potential Reserves

(a) Disseminated reserves - 10,800,000 tons at 0.70% Cu;
(b) Vein-Type reserves - 672,000 tons at 5.0% Cu;
(c) Mine dumps - 250,000 tons at 1.5% Cu;
(d) Mine workings - 100,000 Tons at 2.0% Cu.

From the above summary, it is apparent that the feasibility of delineating the equivalent of the required 1,080,000 tons at 2.0% copper is very favorable.

B. Processing Facilities Concepts

During Phase II, as outlined in Section XI, Proposed Scope of Work, plans are to design the plant, site and ancillary installations. The objective is to do this work after delineating proven minable reserves and after determining metallurgical parameters.

Major components of a solvent-extraction electrowinning operation (SX-EW plant) are:

- Leach pad;
- Solvent extraction plant;
- Electrowinning plant;
- Sulfide flotation plant;
- Power source;
- Surge storage capacity;
- Emergency catchment capacity; and
- Offices and shops.

Processing plant parameters were outlined under Section VII-A, Conceptual Mine Model. This is a very small plant that may be considered a pilot plant in the event future plans call for developing the optimized potential of the property.

1. Leach Pad

Conceptually a heap leach pad for a 200 gpm plant would be designed using the following parameters:

- 0.005 gal. per min. per sq. ft. of surface area = 40,000 sq. ft. leach pad;
- Design pad with 33.3% excess capacity for stacking room;
- Required pad 60,000 sq. ft. or the equivalent of a 200' x 300' rectangular pad;
- Assuming leaching in 18-foot heap lifts - this pad would hold one ton of ore per sq. ft. of surface area or 60,000 tons/18 ft. lift;

- Assuming the pad was used for 3 lifts or 54 ft. in height - the pad would hold 180,000 tons (pad slope not considered because it may result in more or less capacity, depending on construction site);
- 180,000 tons = a 1.66 year life at 300 TPD or 108,000 TPY at 360 dys/yr.;
- Normalized cost per sq. ft. = 50¢ or $30,000;
- Cost per ton of ore = 16¢ (30,000/180,000);
- 180,000 tons x 40 lbs. Cu/Ton = 7,200,000 lbs.;
- Cost per lb. Cu = 0.4¢/lb.; and
- The cost per pound of copper may be reduced depending on site conditions.

It is envisioned that the first year production will come from leaching 108,000 tons of the possible 250,000 ton dump with a blend of some high-grade ore.

2. Solvent Extraction Plant

Parameters for this plant are (Section VII-A):

- Required production - 8,400 lb. Cu/dy;
- Plant capacity - 200 gpm;
- Plant feed grade - 4 gpl; and
- Production capacity - 9,600 lb. Cu/dy (200 gpm x 4 gpl x 12 = 9,600 lb. Cu/dy).

It is envisioned that this small plant should have eight loading cells and two stripping cells. This would prevent production loss from down time and would allow for possible increased production rates. Plus, it would permit desirable operating flexibility. Costing and designing this plant is beyond the scope of this report. However, it is likely that a very efficient plant can be fabricated and constructed on site for approximately $150,000. Depending on the availability of used but like-new equipment, this cost may be reduced.

It is anticipated that the solvent extraction plant will be constructed near the existing mine dumps.

3. Electrowinning Plant

It is too early in the program to determine if an electrowinning plant will be required. During Phase II of the Proposed Scope of Work, plans are to determine the optimum final product.

It is envisioned that an electrowinning plant will eventually be constructed, however, the timing of this construction is important because it may be more desirable to pay for the installation out of net profits or finance it after the operation has reached a stage of sustained production.

Alternatives are available for a marketable product:

- It may be possible to pay a toll fee and process the solution concentrate at existing local facilities;
- It may be feasible to evaporate or partially evaporate the solution concentrate to produce a high-grade copper sulfate product; or
- Initially, it may be feasible to produce cement copper.

Site location for the electrowinning plant will require investigating the cost of bringing commercial power to the property or pumping the solution to or closer to existing power, see Figure 2.

Existing electrical power and a major highway is located approximately 2.5 miles from the Gibson Mine.

(a) Required Capacity

Pregnant solutions from solvent extraction plants generally average 40 to 60 grams per liter.

If it is assumed that the solvent extraction plant is:

- Operating at 200 gpm;
- 4 gpl copper feed grade;
- 40 gpl copper concentrate; and
- Producing 9,600 lb. Cu per day,

then the EW plant will be receiving 20 gpm at 40 gpl Cu.

Therefore, the plant must be sized to handle 20 gpm of solution, but of more importance, it must be sized to produce 9,600 lb. of copper per day.

Plans are to cost this plant during Phase II.

4. Sulfide Flotation Plant

Plans are to construct a small sulfide flotation plant to process high-grade gold and silver ores from the Lydia property. The Lydia property is located approximately 3 miles from the Gibson Mine property.

It is suggested that these plans be formulated after the Gibson mine is in production.

It is envisioned that the initial flotation plant will:

- Process 50 tons per day;
- Be used for Lydia and Gibson sulfide ore; and
- Will process high-grade ore from other properties.

If a small flotation plant processes ore averaging 0.5 ounces of gold and 10 ounces of silver per day, it will have a significant cash flow.

5. Power Source

Electrical power lines parallel U.S. Highway 60-70 approximately 2.5 miles north of the Gibson Mine.

Future planning will include optimizing the possibilities of taking the plant to the power or bring the

power to the plant or locating the plant between the mine and existing power source.

This planning will require optimization of many factors and is beyond the scope of this report. This planning is a Phase II objective.

6. Ancillary Installations

Other installation costs that must be considered in evaluating the operation are:

- Surge storage capacity between the leaching areas and the plant. This installation is necessary to provide a constant flow to the plant and to provide storage for pregnant leach solutions in the event of power outage or pump failure.
- Emergency catchment capacity is recommended for unanticipated events and are helpful in the event of a temporary mine shutdown. These installations are generally impermeable ponds that are sized in accordance with the volume of solution in the leaching circuit.
- Offices and Shops - These facilities may or may not be required at the mine site. Present thinking is that requirements for these facilities are very small and it may be more feasible to rent space in nearby communities. These facilities at the mine site will probably be comparable to similar facilities found on a small construction site.

C. Mining Concepts

Section VII-A outlines the conceptual mining rates:

- 300 tons/day;
- 9,000 tons/mo.;

- 108,000 tons/yr.;
- 1,080,000 tons for a 10 yr. mine life; and an
- Average ore grade of 2.0% Cu.

The Gibson property has many alternatives for satisfying the conceptual mine production rate of 300 tons/day at 2.0% Cu or the equivalent, e.g. 8,400 lbs. of copper per day.

1. Case I

250,000 tons of dumps averaging 1.5% Cu or 30 lbs./ton x 250,000 tons x 70% rec. = 5,250,000 lbs. Cu. 3,024,000 lb. Cu/yr. = 1.74 years mine life.

This material could be moved to a leach pad within 300 feet of the dump with a cat 988 loader for less than 20¢/ton/30 lbs. Cu per ton x 70% rec = approximately 1.0¢ per lb. of copper.

Case I would satisfy the conceptual mining production rate for 1.74 years without doing any mining.

2. Case II

Case II would involve in-place leaching of the existing caved and backfilled stopes. This would require drilling a few injection and recovery wells in addition to the existing wells.

Case II would satisfy conceptual mining production rates for about 2 years by insitu leaching areas near the mine workings.

Phase II objectives are to evaluate this case.

This case would reduce initial capital expenditures because leach pad facilities would not be required.

3. Case III

Case III involves open cut mining and heap leaching.

For the purpose of satisfying the conceptual model, this method would only be considered on a limited scale.

4. Case IV

Case IV involves in place mining of the caved and backfilled workings and insitu mining of enough adjacent areas to satisfy mine life requirements.

5. Case V

Case V involves any combination of the above cases. For example, a combination of Case I and Case II would satisfy production requirements for 3.74 years and require minimum exploration expenditures.

This case would assume that acid solutions would percolate through the workings and be pumped to the plant at 100 gpm at 4 gpl. Then 100 gpm at 4 gpl would go to the plant from the heap leach. This method would require a smaller pad and less capital.

In addition to evaluating combinations of mining methods, during Phase II, an evaluation will be made of combinations of leach circuits. For example, if 200 gpm at 4 gpl leach solution went from the mine to the mine dump heap leach pad, then it is likely that the plant feed would be 200 gpm at 6 gpl Cu. This would indicate that a host of factors would have to be optimized, such as, increasing production, reducing flow rates, etc.

Objectives are to evaluate and optimize all these combinations during Phase II, when maps, geology, mineralogy and ore reserves are better understood.

D. Water Resources

Water requirements for the conceptual model are very small compared to other mining operations.

Work done to date indicates that there are ample sources of water from wells only or from only the mine workings. Initial planning indicates that both sources of water will be developed.

Work done to date indicates that there is not only adequate water for expansion, but there may be sufficient water resources that would be desired by other nearby operating mines.

This may be an important factor if final plans call for negotiating toll fees for processing the Gibson plant concentrate through an existing plant facility.

1. Water Requirements

Capital expenditures for water surge capacity will be reduced because of the availability of water. Thus, avoiding some costs of pumping and storage.

(a) Plant Water Requirements

For leaching operations in an arid climate such as Arizona, it is customary to use a factor of 10% for make-up water. Since the conceptual model calls for a 200 gpm operation, make-up water requirements will be 20 gallons per minute.

It is assumed that the mine workings will produce this quantity of water without additional development.

IX. PRELIMINARY METALLURGICAL CONCEPTS

A. Metallurgy

B. SX Plant Concept

C. Leaching Process Concept

IX. PRELIMINARY METALLURIGCAL CONCEPTS

Initially, plans are to inject a leaching solution containing approximately 40 grams per liter sulfuric acid into the existing caved and backfilled mine stopes. This solution will later be reduced to less than 5 gpl acid.

Order of magnitude acid consumption will be less than 4 pounds per pound of copper if electrowinning is not used and less than 2.5 pounds per pound of copper if electrowinning is used.

After the solution has trickle leached through the mine workings, it will be recovered from mine openings at a point approximately 400 feet lower in elevation than the collars of the injection wells. This pregnant solution will then be pumped to a four-stage heap leach pad which will have the flexibility to further enrich the solutions in a fashion similar to countercurrent vat leaching. The pregnant solution will then be retained in a catchment pond before going to the SX plant.

There are many parameters which must be optimized, for example, the leach solutions from the mine workings may contain more than 4 gpl Cu and the pregnant solution from the heap leach pad may contain more then 4 gpl Cu especially if high-grade open pit ore is placed on the heap in addition to the dump ore. In this case, it may be more desirable to send 400 gpm at 4 gpl to the SX plant rather than upgrading and sending 200 gpm at a higher feed grade to the SX plant. Consideration will be given to this and other parameters when the SX plant is designed during Phase II of the proposed scope of work.

A. Metallurgy

Leachable ores on the Gibson property are:

- Oxides;
- Mixed oxides and sulfides; and
- Sulfides.

Leachable minerals are:

- Azurite;
- Malachite;
- Cuprite;
- Chrysocolla; and
- Chalcocite,

and to some extent chalcopyrite and bornite.

Chemical reactions for leaching the Gibson ore are as follows:

Oxides

Azurite:

$$Cu_3(OH)_2 \cdot (CO_3)_2 + 3H_2SO_4 \text{ -- } 3CuSO_4 + 2CO_2 + 4H_2O$$

Malachite:

$$Cu_2(OH)_2 \cdot CO_3 + H_2SO_4 \text{ -- } 2CuSO_4 + CO_2 + 3H_2O$$

Cuprite:

$$Cu_2O + H_2SO_4 + Fe_2(SO_4)_3 \text{ -- } 2CuSO_4 + H_2O + 2FeSO_4$$

Chrysocolla:

$$CuSiO_3 \cdot H_2O + H_2SO_4 \text{ -- } CuSO_4 + SiO_2 + 3H_2O$$

Sulfide

Chalcocite:

$$Cu_2S + 2Fe_2(SO_4)_3 \text{ -- } 2CuSO_4 + 4FeSO_4 + S$$

B. SX Plant Concept

Optimizing the SX plant will depend on many variables. Present plans are to investigate the possibility of purchasing existing SX and EW plants that are used but like new.

To date, an SX and an EW plant have been located. Plans are to negotiate with the owners at the appropriate time in the near future.

Figure 5 is a schematic diagram of an SX plant that may be designed from an existing plant. In this conceptual plan, the plant is shown to have a feed flow of 400 gpm, however, by changing the size of the mixers, this plant has the capacity to operate at 1,000 gpm. Future plans may include leaching lower-grade disseminated ore which will require larger flow rates.

It will be noted that Figure 5 is a schematic diagram of a solvent extraction plant with countercurrent flow of pregnant solution and solvent.

The direction of solvent flow is shown in dashed lines and the pregnant solution flow is shown with solid lines. This flow is also true in the stripping system.

The stripping system is designed as a dual system because there are 10 cells in one of the existing plants. However, a dual system avoids down time for repairs. This stripping section alone has the capacity to operate at 200 gpm as an SX plant using a 2 bank, 3 cell SX system and a 2 bank, 2 cell stripping system.

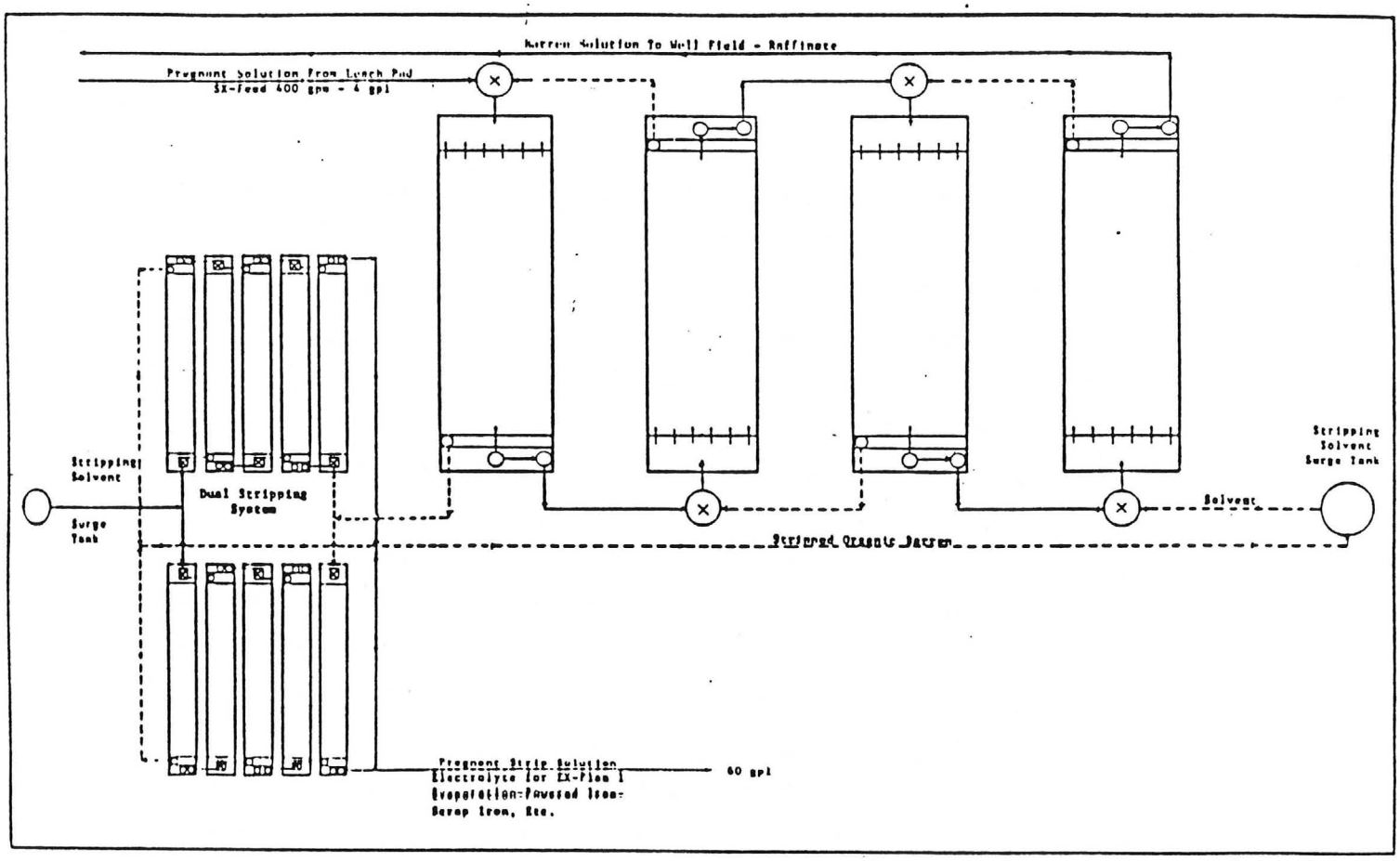


Figure 5 - Schematic Diagram of
The Gibson Conceptual
Solvent Extraction Plant

C. Leaching Process Concept

Figure 6 is a schematic diagram showing, in plan view and in cross section, the proposed initial concept of in-place leaching of the existing mine workings and heap leaching of the existing mine dumps.

Figure 6 does not show possible heap leaching from open-cut mining and possible dump leaching.

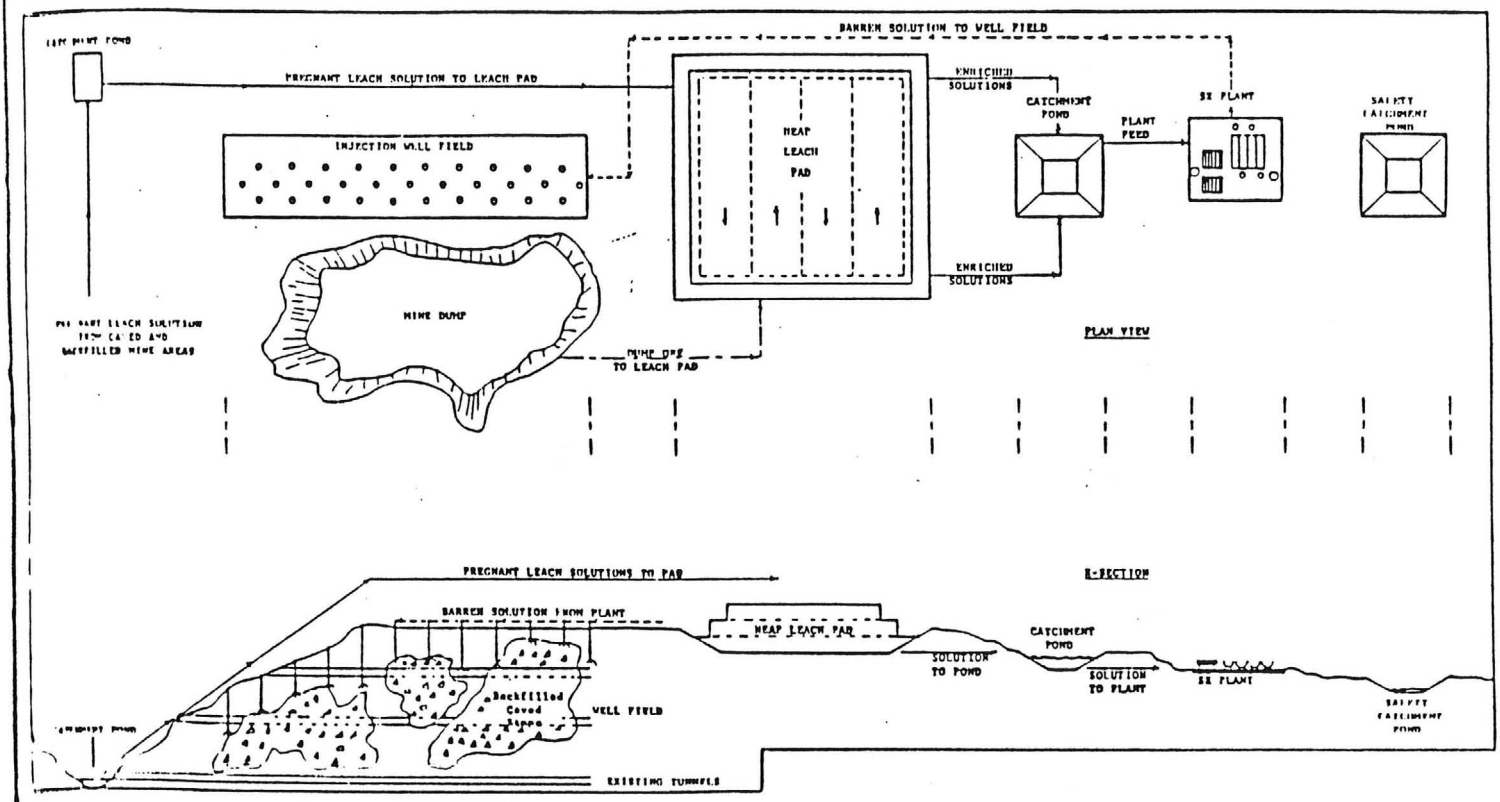


Figure 6 - Schematic Diagram of
The Gibson Conceptual
Leaching System

X. STATE OF ARIZONA TAXES AND PERMITS

A. Arizona State Sales Tax

B. Arizona State Income Taxes

C. Advalorem (Property) Taxes

D. Percentage Depletion Allowance

E. Laws and Regulations Governing Mineral Rights in Arizona

F. U.S. Forest Service

G. State Mine Inspector

H. Mine Safety and Health Administration (MSHA)

I. Labor Laws

J. Atomic Energy Commission

K. Arizona Corporation Commission

L. No-Lien Notice

M. State Health Department

N. Workmen's Compensation

O. Taxes

P. Bureau of Land Management

Q. Water

R. Vegetation and Native Plants

X. STATE OF ARIZONA TAXES AND PERMITS

A. Arizona State Sales Tax

Arizona State Production Sales Taxes (transaction privilege taxes) are 2.5 percent of gross sales.

B. Arizona State Income Taxes

Arizona State Income Taxes are approximately 4.5 percent of the state taxable income. It is suggested that an Arizona Mining tax accountant be consulted prior to determining the amount of taxes to be used in a DCF-ROI analysis.

C. Advalorem (Property) Taxes

Property taxes in Arizona after a mine goes into production are subject to negotiations. These taxes for existing mines varies from 1¢ per lb. to 4¢ per lb. Therefore, it is suggested that 3¢ per lb. of copper produced be used in computing a DCF-ROI.

Production property taxes are calculated by taking 10% of 27% of the investment. However, this tax can also be negotiated. It is likely that this tax would be insignificant in calculating a DCF-ROI.

D. Percentage Depletion Allowance

The percentage depletion allowance for copper is 15 percent.

E. Laws and Regulations Governing Mineral Rights in Arizona

A booklet, Laws and Regulations Governing Mineral Rights in Arizona, giving the essence of the more important

features of the mining laws together with instructions regarding avoidance of common errors in locating and maintaining valid mining claims is available from the Department of Mineral Resources. Federal and State lands are covered, and there are brief discussions of general matters including those listed herein, property taxes, roads, rights-of-way and waste disposal, water and water rights, mining partnerships and grubstakes.

F. U.S. Forest Service

Anyone proposing prospecting or mining operations under the Mining Laws of 1872 on National Forest lands which might cause disturbance of surface resources must give the local (district) Forest Service office a "notice of intention to operate." The operator must submit a proposed plan of operation if the authorized officer (District Ranger) determines that such operations will cause a significant disturbance to surface resources. If an operator believes he will cause "significant surface disturbance," he should file an operating plan instead of a letter of intent. The plan must describe such things as the type of operation proposed and how it will be conducted; proposed roads or access routes and means of transportation; and the time period during which the proposed activities will take place. Copies of the regulations and procedures contained in Forest Service Current Information Report No. 14, Mining In National Forests, November 1979, can be obtained from the nearest Forest Service office.

The District Ranger must be notified in advance of any changes in plans of operations, as well as cessation of operations. The District Ranger also must be notified of temporary cessation of operations which will include a statement as to (1) verification of intent to maintain the structures, equipment and other facilities; (2) the expected

reopening date, and (3) an estimate of extended duration of operations.

The authorized officer of the Forest Service may require a bond to assure restoration of the surface. A listing of bonding companies (sureties on Federal bonds) may be obtained from the Forest Service or from the Audit Staff, Bureau of Government Financial Operation, Treasury Department, Washington, D.C., 20226. Current Information Report No. 14 should be kept available as a ready reference to answer questions and hopefully resolve problems as they arise.

G. State Mine Inspector

Whenever mining operations are initiated or permanently suspended, the State Mine Inspector, at his office, 705 West Wing, Capitol Building, Phoenix, Arizona 85007, must be notified in writing prior to the commencement or the suspension of an operation. The operator or operators should obtain from the Mine Inspector's office a copy of the mining code and regulations. This booklet should be kept available in the mine and timekeeper's offices subject to inspection as it contains statutes required by law to be posted. The Mine Inspector has the authority to regulate the health and safety conditions of all mines, mills and smelters, regardless of the number of workers and whether or not they are owners, partners or employees. He also may adopt rules reasonably necessary to effectuate the provisions of the laws administered by him. Mine Safety Instruction to comply with MSHA regulations is available at no charge. Phone: 255-5971.

H. Mine Safety and Health Administration (MSHA)

In addition to the State Mine Inspector, it is also necessary to notify the Mine Safety and Health

Administration, an agency of the United States Department of Labor. This agency also inspects operating mines for health and safety of the employees. Notification should be in writing to their office at 2721 North Central Avenue, Suite 900, Phoenix, Arizona 85004, phone (606) 241-2030. Notification should contain the mine name, location, the company name, mailing address, person in charge and whether operations will be continuous or intermittent. They should also be notified at the same address when the mine is temporarily or permanently closed.

I. Labor Laws

The mining code booklet issued by the State Mine Inspector also contains information about laws and regulations pertaining to mine labor. Such information is also available from the Industrial Commission of Arizona, 1601 West Jefferson, Phoenix, Arizona 85007.

No one under 18 years of age can be employed in or about underground operations or other places connected with mining or metallurgical operations specified by state law.

Small mine operators must conform to wage and hour regulations by the Department of Labor the same as any other large or small business. Copies of regulations and procedures may be obtained free by calling or writing the Department of Labor, Wage and Hours Division, 1306 North First Street, Phoenix, Arizona 85004, 261-4223.

J. Atomic Energy Commission

Permits for uranium mills are required from the Arizona Atomic Energy Commission, 2929 W. Indian School Road, Phoenix, Arizona 85017.

K. Arizona Corporation Commission

Arizona or out-of-state corporations must clear with the Arizona Corporation Commission at Phoenix before starting business within the state.

An annual registration fee and an annual report are required.

Anyone seeking to raise money through the sale of securities should check first with the Commission.

Detailed information is available from the Corporation Commission, 222 W. Encanto Boulevard, Phoenix, Arizona 85009. Also State Office Building, 402 W. Congress, Tucson, Arizona 85701.

L. No-Lien Notice

The owner of a mining property should protect himself against liens by posting a non-liability notice as provided in Arizona law (A.R.S. § 33-990) when his property is being worked by others. The law requires that the owner shall conspicuously post the notice at the collar of all working shafts, tunnels and entrances to the mine and boarding houses, on or before the day the lessee or those working the claim under bond, lease or option, begin operations. A copy must be recorded in the office of the county Recorder in the county in which the mine is located within 30 days from the date of the lease, bond or option. Failure to post such a notice renders the property liable for labor and material liens. The operator is required by law to keep the notices posted.

M. State Health Department

Mining and associated activities that may discharge water must contact the State Health Department and permits must be obtained. Some permits may require up to six months

advance notice and may be obtained from Bureau of Water Quality Control, Arizona Department of Health, 1740 West Adams, Phoenix, Arizona 85007.

Facilities such as smelters, roasting plants, etc., that will discharge into the atmosphere must operate under a permit. Although some counties issue permits, initial inquiry should be made to the State Health Department. Prior to beginning construction, contact the Bureau of Air Quality Control, Arizona Department of Health, Engineering Services Section, 1740 West Adams, Phoenix, Arizona 85007.

N. Workmen's Compensation

Insurance should be carried for all workers and is mandatory under the state's Workmen's Compensation Act when one or more are employed. The Underwriters Department of the Arizona Industrial Commission must be notified and insurance provided for before one or more are employed. The employer is not required to insure with the Commission but instead may do so with a company that has met the standards set by the Commission, provided that all employees sign a written rejection of the provisions of the compulsory compensation law of Arizona for payment of compensation (A.R.S. § 23-906). The employer shall keep posted in a conspicuous place a notice of the employee's coverage under the Act unless they exercise their right of rejection prior to a sustained injury.

Complete information may be obtained from the Industrial Commission of Arizona, 1601 West Jefferson, Phoenix, Arizona 85007.

O. Taxes

When shipment or sales are made, the Tax Commission requires a license to do business. This should be applied for on a regular form supplied by the Sales and Use Tax

Division, License Department, Department of Revenue, West Wing, Capitol Building, Phoenix, Arizona 85007.

Production taxes, labelled "transaction privilege taxes," total 2-1/2% of the "gross proceeds of sales or gross income from the business of mining." A use tax of 2% is imposed on the storage, use or consumption in mining and metallurgical operations of expendable materials purchased from a retailer who does not maintain a place of business in the state. Monthly returns of such sales and usages, with payment of taxes due, are required on forms prescribed by the Commission.

P. Bureau of Land Management

Bureau of Land Management regulations for surface management of public land under U.S. Mining Laws have been proposed. If made official, each miner and prospector should obtain a copy. These new regulations will apply only to public lands under the jurisdiction of BLM, and will be available at 3707 N. 7th Street, Phoenix, Arizona 85014, phone: (602) 241-5547.

Q. Water

If an operation requires the development of a new water supply, the operator should consult with the Department of Water Resources, 222 North Central, Suite 850, Phoenix, Arizona 85004, phone: (602) 255-1550. (NOTE: This agency will be moving after January 1, 1981, however, the telephone number will remain the same. After January 1, 1981, please call for address.)

R. Vegetation and Native Plants

Arizona has enacted legislation to prohibit removing native plants from their original growing sites on federal,

state and privately held land. It is suggested that the Arizona Commission of Agriculture and Horticulture, 1688 West Adams, Room 421, Phoenix, Arizona 85007, phone (602) 255-4373 be contacted before starting any mineral related activity that may affect native plants.

XI. PROPOSED SCOPE OF WORK

A. Phase I Work Scope

1. Data Research
2. Photogrammetric Aerial Survey
3. Geological Mapping
4. Operations Site Layouts
5. Recommendations

B. Phase II Work Scope

XI. PROPOSED SCOPE OF WORK

This proposed scope of work has been planned in sequential work tasks to provide factual data and information needed for formulating and developing the Project Concept, Section VII, and the Initial Program Objective, in Section VIII, of this report.

Plans are to accomplish this work in two phases. Each phase will provide data and information necessary for conducting the next phase.

Philosophically, it can be stated that minable ore reserves and profitable mines are developed and made -- not necessarily just simply discovered.

At this point in time, we feel the Gibson Mine has already been discovered and that the next endeavor is to learn the property, locate the optimum minable ore reserves and make a mine consistent with the Project Concept.

This process requires a phase by phase learning process.

A. Phase I Work Scope

It is of foremost importance that the No. 1 engineering priority be the delineation of optimum adequately proven minable ore reserves. It is also important to demonstrate that there are no other engineering problems that may preclude the possibility of mining, after sizeable expenditures have been made.

Phase I work tasks include,

1. Data Research

It is proposed that time be spent on a cursory data research program to gain information and to determine if there is usable data that will not need to be duplicated. There should be some data available, such as:

- Geological reports;
- Geological maps;
- Geophysical data;
- Drill hole data;
- Production reports; and
- Previous property evaluation reports.

2. Photogrammetric Aerial Survey

An aerial survey is necessary for:

- Stereoscopic mapping;
- Preparation of a topographic base map;
- Preparation of a geological map;
- Measuring mine dumps;
- Site layout planning;
- Plotting existing workings;
- Ore reserve calculations;
- Mine planning; and
- To show cultural features; etc.

Plans are to conduct the aerial photogrammetric survey in the areas shown on Figure 2.

3. Geological Mapping

Plans are to prepare a cursory geological base map during Phase I. This map will serve as a base map for anticipated future detailed mapping and will serve as a base for plotting sample stations, assays, drill holes and future geologic observations.

Initially, mapping will be done to permit plotting of:

- Leached outcrops;
- Rock types;
- Alteration;
- Mineralology;

- Drill holes;
- Trenching; and
- Veins and other structures and target area.

Geological mapping will only be done to the extent necessary for making cursory surface and subsurface geological and mineralogical interpretations.

These interpretations will be necessary for determining target areas for delineating optimum minable reserves.

4. Operations Site Layouts

During Phase I, plans are to design the layout plans of the conceptual operation. These layout plans will be formulated after the topographic map and geological map have been almost completed. Present plans are to prepare a composite layout plan which will show the relative position of all the major facilities such as:

- Plant site;
- Anticipated mining area;
- Minable dumps;
- Leach pad;
- Proposed access roads; and
- Ponds and etc.

Detail maps will be prepared to the extent possible on the above-listed facilities.

5. Recommendations

Recommendations will be made at the completion of Phase I.

B. Phase II Work Scope

It is anticipated that Phase I recommendations will include pre-mining engineering requirements such as:

- Proving minable reserves by drilling, trenching and sampling;
- Optimum ore reserve calculations;
- Mine planning;
- Final site layout;
- Plant design;
- Market studies;
- Feasibility studies; and
- Recommendations.

XII. PRE-MINING COST ESTIMATES

A. Phase I Cost Estimates

B. Phase II Cost Estimates

C. Summary of Cost Estimates

XII. PRE-MINING COST ESTIMATES

In addition to cost estimates for the Gibson Mine property, the following cost estimates include preliminary work on the Lydia property, such as:

- Control surveying;
- Aerial photography;
- Topographic map;
- Cursory geologic map; and
- Spot sampling.

A. Phase I Cost Estimates

Gibson Mine Project Scope and Prelimiary Property Evaluation Report	$ 10,000
Surveying Aerial Photogrammetric Control Stations	$ 2,000
Aerial Photography and Topographic Map (1" = 200' - 5' contours)	$ 4,000
Geological Field and Office Work	$ 11,000
Engineering Planning and Site Layouts	$ 4,000
Report Writing and Recommendations	$ 4,000
Assaying	$ 1,000
Out of Pocket Expenses	$ 1,000
Subtotal	$ 37,000

B. Phase II Cost Estimates

Anticipated projected cost estimates for Phase II are contingent upon the success of Phase I.

It should be emphasized that the program objectives are to prove 1,080,000 tons of minable proven ore reserves. It is further emphasized that if one-half of these reserves are delineated during Phase I, this will be ample justification for mine planning and plant construction.

In the event ɔ00,000 tons of proven minable reserves are delineated in Phase I, then Phase II will only entail mine planning and design work. The minerals exploration work of Phase II can be deferred, thus taking advantage of the time value of money. However, if the costs are less than anticipated, then it is recommended that the work scope for the Lydia property be expanded.

Drilling (2,000 ft. @ $10/ft.)	$ 20,000
Trenching, Drill Pads and Road Building (100 hrs. @ $100/hr.)	$ 10,000
Assaying (700 @ $10)	$ 7,000
Engineering Studies	$ 20,000
Subtotal	$ 57,000

C. Summary of Cost Estimates

Phase I	$ 37,000
Phase II	$ 57,000
Grand Total	$ 94,000

XIV. PHASE I A[illegible] ASE II WORK SCHEDULE

XIV. PHASE I AND PHASE II WORK SCHEDULE

Figure 7, Work Schedule, shows Phase I work being completed on October 1, 1984 and Phase II being completed on November 15, 1984.

A geologist was assigned to work full time on the project on July 23rd in an effort to expedite the topographic work. Almost all of Phase I work, such as, geological mapping, planning and site layouts require the use of an accurate large-scale topographic map.

To date, weather conditions have precluded aerial photography. However, it is anticipated that the Gibson and Lydia properties will be flown during the latter part of August.

Plans are to have two professional people working full time on the project. Outside help will be used, on various disciplines, when necessary.

PHASE I AND PHASE II WORK SCHEDULE

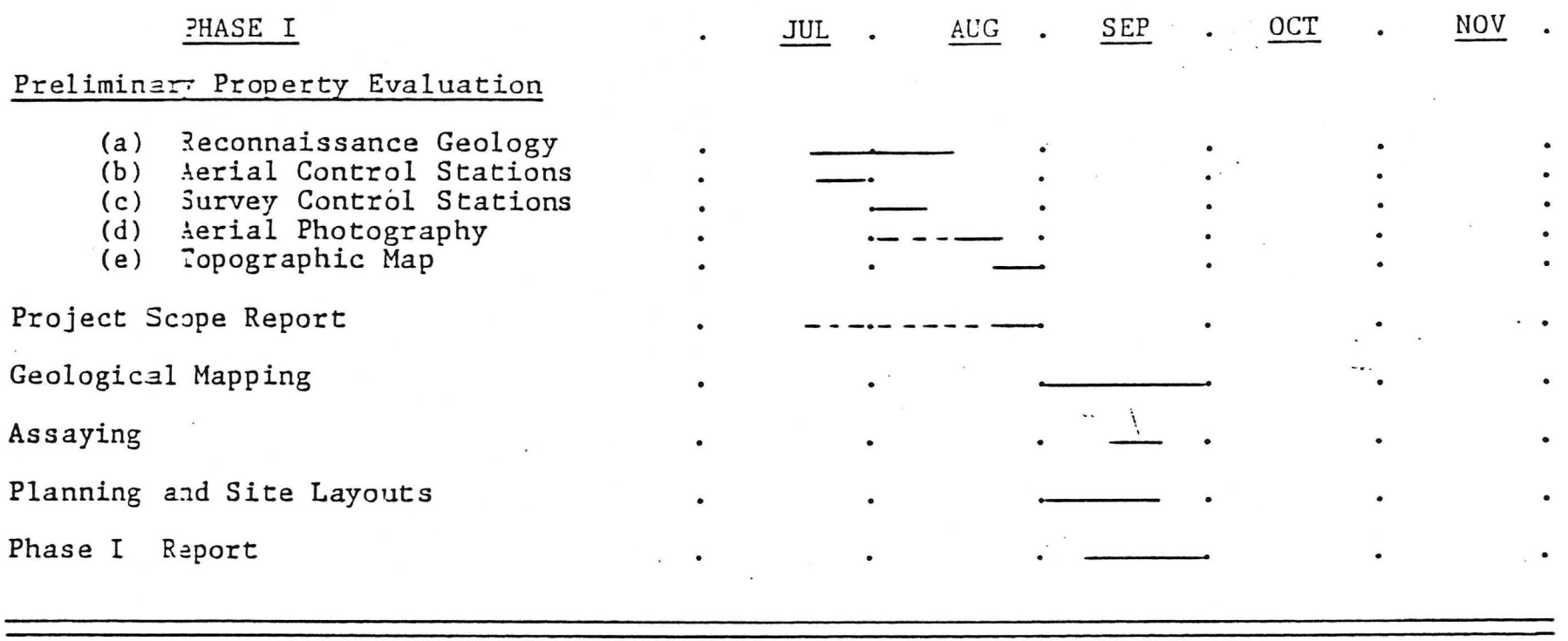


Figure 7

XV. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

B. Recommendations

XV. CONCLUSIONS AND RECOMMENDATIONS

A. - Conclusions

Property reconnaissance work done to date indicates that there are sufficient minable reserves on the Gibson and Lydia properties to satisfy the proposed mine model. However, additional work will be required to delineate optimum minable ore reserves.

It is concluded that the pre-exploration conceptual mining and processing models are conservative and are adequately thought out for this phase of the project.

It is concluded that the project is unique because it has potential for gold, silver and copper and has dump ore, ore in the existing workings, vein ore and disseminated ore, thus, reducing the investment risk due to the alternatives for multiple products and multiple mining methods.

Terms of the executed agreement are favorable.

B. Recommendations

It is recommended that:

(a) Phase I and Phase II work be done sequencially as outlined;

(b) When 500,000 tons of minable reserves are proven on the Gibson property, the balance of Phase II work be done on the Lydia property;

(c) Some metallurgical work be included in the assaying budget;

(d) An in-house feasibility study be made using Ida-May corporate parameters;

(e) The existing property title report be updated;

(f) Pla. of operation reports b prepared for various government agencies;

(g) The formal agreement be timely executed and a memorandum be timely recorded;

(h) A corporate employee be assigned as full-time project manager;

(i) Application be made for state business license;

(j) Notices of non-liability be posted;

(k) The status of adjacent land be checked;

(l) Consulting agreements, excavation contracts and drilling contract be prepared;

(m) Local publicity be minimized; and

(n) Low-keyed contacts be made with local companies to ascertain the possibility of selling water, pregnant solutions, concentrated solutions or hydrated copper sulfate solutions.

XVI. SUPPLEMENTAL MINE PLAN

XVI. SUPPLEMENTAL MINE PLAN

In Section XV-B, Recommendations, of this report it was recommended that an in-house feasibility study be made using Ida-May corporate parameters.

This recommendation was made because corporate philosophy on business risks varies with each company and varies with the merits of each business venture.

It will cost approximately $100,000 to complete the proposed pre-mining engineering work. The proposed plant can be constructed in less than 60 working days at an order of magnitude cost of approximately $300,000. This includes, plant, leach pad, power and an evaporation pad.

Since it will require approximately $50,000 to retain professional people that can build the facilities from experience, the risk factor is spending $50,000 and 4 months time to protect a $300,000 dollar investment.

Assuming the corporation is willing to take a minimum risk, then construction of the plant and facilities can start during Phase I and be on stream within 60 days. This timing is assuming no problems with permits.

This philosophical approach can be justified on the basis of the ore in the mine dumps.

For example, assuming:

1. 250,000 tons of ore in the dump;
2. 1.5% copper - 30 lbs. Cu/Ton;
3. A total of 7,500,000 lbs. of copper;
4. 5,250,000 recoverable lbs. @ 70% rec.;
5. 40¢ per pound production costs;
6. 25¢ per pound net profit before taxes;
7. 300 tons per day production;
8. 6,300 lbs. Cu per day - 2,268,000 lbs./yr.;
9. $1,575 per day - 30 day months - 360 days/yr.;
10. $47,250 per month net before taxes;
11. $567,000 per year net before taxes;

12. $350,000 capital investment;
13. 7.4 months for payback;
14. 2.3 year mine life on dump only;
15. $3,412,500 gross value of dump @ 65¢/lb. Cu;
16. $1,312,500 net before taxes in 2.3 yrs.

Based on the above assumptions, corporate parameters and assuming the explorations work continues, there is sufficient justification that a prudent man may choose to start plant construction at the onset of the project.

This model gives no credit for pregnant leach solutions from the mine workings which will be used as heap leaching solutions.

These solutions alone may contain more copper, gold and silver than the dump material used in this Supplemental Mine Plan.

PAUL KAYSER
1006 MAIN STREET
HOUSTON, TEXAS 77002

January 6, 1977

Mr. R. J. MacDonald
Greenback Industries, Inc.
Greenback, Tennessee, 37742

Dear Mr. Greenback:

I understand that Mr. Nicholas H. Carouso is conducting with you certain matters involving the production of cement copper in the Gibson Mining District, Globe, Arizona.

I have the highest regard for Mr. Carouso. He is a man of splendid education and experience, and I have found him trustworthy in all of the transactions we have had with him.

Yours truly,

/s/ Paul Kayser

PK-b

cc-Mr. Nicholas H. Carouso
P.O. Drawer X
Miami, Arizona, 85539

NICHOLAS H. CAROUSO
MINING EXPLORATION METALLURGY
P.O. Drawer X
Miami, Arizona 85539
September 29, 1978

Mr. Paul Kayser
President
Arizona Mining Properties, Inc.
1006 Main St., Suite 1420
Houston, Texas 77002

Dear Mr. Kayser:

I hope this letter finds you in excellent health and your eye operation very successful.

I am writing this letter with some regret that I could not complete all my plans for the Gibson mine operation. I was unsuccessful in acquiring the necessary financing to implement the type of plant that would have produced cash flow. The sluggish copper market did not help my situation. Therefore, I will terminate my lease agreement as of October 31, 1978.

I have prepared the annual assessment affidavit and I have given it to Bob Franks to record. Also, I will have spent enough time and expenses during this current assessment year to be able to file an affidavit for the year 1978-1979 assessment year.

I will remove my personal effects and equipment soon.

My friend, Mr. John Johnson of Phoenix, Arizona, has informed me that he has a friend who presumably is a successful promoter, and he will contact you soon to discuss a lease-option agreement with you for the entire property.

I will assist you anyway I can, to help, if you are interested.

Mr. Kayser, I consider that meeting and working with you will always be a treasured relationship, which I hope will continue for many years to come.

Sincerely yours,

Nicholas H Carouso

Nicholas H. Carouso
President
GEO-PROCESSING, INC.

PAUL KAYSER
1006 MAIN STREET
HOUSTON, TEXAS 77002

October 9, 1978

Mr. Nicholas H. Carouso
President, Geo-Processing, Inc.
P.O. Drawer X
Miami, Arizona, 85539

Dear Mr. Carouso:

Answering your letter of September 29, 1978, I note that you have a friend in Phoenix who might be interested in at least part of the Gibson. I will be glad to discuss the matter with any reliable person in regard to working out further operations of these leases.

I will remember what you said about your willingness to assist in any way you can to help me develop this property.

With kind regards.

Yours truly,

Paul Kayser

PK-b

Mariposa Spectrographic Laboratory

Mariposa, California 95338 Telephone 966-2591

Mr. T. E. Hawes
P. O. Box 888
Globe, Arizona 85501

October 29th, 1972

Dear Mr. Hawes:

Enclosed, find spectrographic analysis report #19659, covering the analysis of your submitted sample as marked.

The sample analyzed is principally composed of Quartz that appears to be of hypogene origin(deep seated). Minor feldspar is also present, along with Iron in the mineral forms of Limonite, Pyrite, and perhaps some minor Pyrrhotite.

We made a concentrate of the reject(unused) portion of the pulp from your sample and examined the concentrate under the microscope. We noted that your Silver mineral appears to be Argentite Mr. Hawes. In view of the presence of a"straight Silver" mineral and is not present as a companion element to Copper or Lead, it is our considered opinion that you have a dandy Silver "prospect" here.

Our sincere thanks to you Mr. Hawes and our best wishes in your mining. If we can serve your future analytical needs, please call on us.

Sincerely,

George H. Graves

1ce

Mariposa Spectrographic Laboratory

Mariposa, California 95338 Telephone 966-2591

ASSAY REPORT

Submitted By: Mr. Thomas E. Hawes
P.O. Box 888
Globe, Arizona 85501

Charges: $3.50-Prepaid

Date: January 9, 1973

Lab. No.	Sample Mark	Per Ton of 2000 Pounds				% Other Metals		
		GOLD		SILVER				
		Ounces	@ $.65.00	Ounces	@ $. 1.80			
R-7983	Quartz Ore (No. 3 sample)	Trace	-----	79.15	$142.47	NO. 1 ~ 13, West		
			Thank you					

Remarks:
lcc

cent to ton (2,000 lbs.)
% = 20.0 Lbs. AVOIR.
0% = 2.0 Lbs. AVOIR.
1% = 3.2 oz. AVOIR.
01% = 0.32 oz. AVOIR.
001% = 0.032 oz. AVOIR.

By: J. P. Sullivan
Assayer-Chemist

Mariposa Spectrographic Laboratory

Mariposa, California 95338

Telephone 966 2591

ASSAY REPORT

Submitted By: MR. T. E. Hawes
Box 888
Globe, Arizona 85501

Charges: $7.50 Prepaid (includes spectrographic analysis).
Date: October 17, 1972

Lab. No.	Sample Mark	Per Ton of 2000 Pounds				% Other Metals		
		GOLD		SILVER				
		Ounces	@ $.65.00	Ounces	@ $.1.80			
R-5598	No mark	0.006	$0.39	4.74	$8.53	No-B		

Note: The spectrographic analysis of your sample will follow as soon as possible, Mr. Hawes.

Thank you

Remarks:

lcc

Percent to ton (2,000 lbs.)
.01% = 20.0 Lbs. AVOIR.
.001% = 2.0 Lbs. AVOIR.
.0001% = 3.2 oz. AVOIR.
.00001% = 0.32 oz. AVOIR.
.000001% = 0.032 oz. AVOIR.

By: [signature]
Assayer-Chemist

3441 East Milbe

Phone 889-5787

AMERICAN ANALYTICAL and RESEARCH LABORATORIES

ASSAYERS · CHEMISTS · METALLURGISTS

TUCSON, ARIZONA 85714

SAMPLE SUBMITTED BY Mr. Ramon Shannon DATE Feb. 7, 1978

SAMPLE MARKED	GOLD OZ / TON	SILVER OZ./TON	PER CENT COPPER	PERCENT LEAD	PERCENT ZINC	PERCENT MOLYBDENUM	PERCENT IRON
BJ Wallrock		0.03					
BJ-8 Alt.Vein Chann. Samp.		0.64					
BJ Adit Vein 2.5'		0.89					
BJ # 3 Powder Mag.		5.90					
BJ #4across4' Chann. Samp.		1.14					
BJ # 5 1' Ox Outcrop		0.26					

Dale S. Stone
2/7/78
ASSAYER-CHEMIST

CHARGES $ 21.00

[illegible] NO 15617

GREENBACK INDUSTRIES, INC.

GREENBACK, TENNESSEE 37742
AREA CODE 615 856-3021

R. J. MacDONALD
PRESIDENT

December 16, 1976

Mr. N. H. Carouso, President
Geo-Processing, Inc.
P. O. Drawer X
Miami, Arizona 85539

Dear Nick:

Greenback Industries, a subsidiary of Handy & Harman, has been a major producer of nonferrous metal powders since 1946. In addition, the Company is the largest manufacturer of ferrite powders for refrigeration gaskets.

In 1975 and 1976, Greenback developed a process and constructed a plant facility in Mesa, Arizona to produce a specific grade of copper powder. The process uses copper cements or concentrates as a starting material.

The plant in Mesa will begin operation in January, 1977, and during the year, will require about 1.0 million pounds of copper. In 1978, this should increase to 2.0 to 2.5 million pounds. Assuming that preliminary tests with your material are satisfactory, we would be willing to enter into an agreement with Geo-Processing to purchase such quantities. You will recall that our price objectives would place this material about $0.25 below that of the Copper Producers.

We hope that this will permit you to obtain the required financing. Our new process has good potential and we see considerable growth provided that satisfactory sources of copper ore can be obtained.

Sincerely,

R. J. MacDonald

RJM:mm

348 519

AFFIDAVIT OF LABOR PERFORMED AND IMPROVEMENTS MADE

STATE OF ARIZONA)
)ss.
COUNTY OF GILA)

Nicholas H. Carouso, President, Geo-Processing, Inc., being duly sworn, deposes and says that he is a citizen of the United States and more than twenty-one years of age, and resides at the Gibson mine, (mailing address: P.O. Drawer X, Miami, Arisona 85539), in Gila County, State of Arizona, and is personally acquainted with the mining claims known as follows:

Unpatented mining claims situated in Gila County, Arizona, in the Gibson Mining District, Location notices of which are recorded in the office of the Gila County Recorder, as follows:

Name	Book	Page
Ila No. 1	301	304
Ila No. 2	301	305
Ila No. 3	301	306
Ila No. 4	301	307
Ila No. 5	301	308
Ila No. 6	301	309
Ila No. 7	301	310
Ila No. 8	301	311
Ila No. 9	301	312
Ila No. 10	301	313
Ila No. 11	324	342
Ila No. 12	324	343
Ila No. 13	324	344
Ila No. 14	324	345
Ila No. 15	324	346
Ila No. 16	324	347
Ila No. 17	301	320
Ila No. 18	301	321
Ila No. 19	301	322
Ila No. 20	301	323
Ila No. 21	301	324
Ila No. 22	301	325
Ila No. 23	301	326
Ila No. 24	301	327
Ila No. 25	301	328
Ila No. 26	301	329
Ila No. 27	324	348
Ila No. 28	324	349
Ila No. 29	324	350
Ila No. 30	324	351
Ila No. 31	324	352
Ila No. 32	324	353
Ila No. 33	324	354

that between the 1st day of September, A.D. 1972, and the 31st day of August A.D. 1973, at least Thirty-three Hundred Dollars ($3300.00) worth of work and improvements were done and performed upon said claims. Such work and improvements were made by and at the expense of Geo-Processing, Inc., lessee of said mining claims for the purpose of complying with the laws of the United States pertaining to assessment of annual work and the employees of Geo-Processing, Inc., were the men employed by said lessee and

who lat ed upon said claims, did said work and improvements, the same being as follows, to-wit:

Active mining and ore processing on a commercial basis.

Exploration and development work on mineralized structures, which includes geological and geochemical surveys.

Engineering design work for additional ore processing facilities.

Nicholas H. Carouso, President
Geo-Processing, Inc.

Subscribed and sworn to before me this 1st day of October A.D. 1973

Notary Public

(My commission expires_____)

OTHER FACILITIES

Expand & modify pregnant water head pond	$2,000	
Barren water pond	3,000	
Decant sump for iron launders	5,000	
Electric generating plant	6,000	
Tailings pond, pumps and piping	5,000	
	$21,000	
		$21,000
CONTINGENCY AND WORKING CAPITAL		$15,000
ESTIMATED FINANCIAL REQUIREMENT----------		$84,200

Expected production should be at least 3 tons cement copper per day, thus, at 50¢ per pound copper (current buyers price) this should give a daily gross dollar value of $3,000 or $90,000 per month.

This assumes one complete leaching cycle per 24 hours, however, it is not unrealistic to consider that a complete cycle could be run in 12 hours, then this could double the estimated daily production. If this proves to be the case, then a vertical precipitator should be considered to supplement the existing horizontal iron precipitation launders.

CONCLUSIONS

This property has the potential of being a successful producer. The writer has working knowledge at this property and is convinced that with the proper production facilities, substantial cash flow is assured.

Nicholas H. Carouso

NICHOLAS H. CAROUSO
P.O. Drawer X
Miami, Arizona 85539
July 17, 1973

AFFIDAVIT OF LABOR PERFORMED AND IMPROVEMENTS MADE

STATE OF ARIZONA)
COUNTY OF GILA)ss.

Nicholas H. Carouso, President, Geo-Processing, Inc., being duly sworn, deposes and says that he is a citizen of the United States and more than twenty-one years of age, and resides at the Gibson mine,(P.O. Drawer X, Miami, Arizona 85539),in Gila County, State of Arizona, and is personally acquainted with the mining claims known as follows:

Unpatented mining claims situated in Gila County, Arizona, in the Summit Mining District, Location notices of which are recorded in the office of the Gila County Recorder, as follows:

NAME	BOOK	PAGE
Delores #1	188	607
Delores #2	188	608
Delores #3	188	609
Delores #4	188	610
Delores #5	188	611
Delores #6	188	612
Delores #7	188	613
Delores #8	188	614
Delores #9	206	123
Delores #10	206	124
Delores #11	206	125
Delores #12	206	126
Delores #13	206	127
Delores #14	206	128
Delores #25	206	129
Delores #26	206	130

Unpatented mining claims situated in the Summit and Bellevue Mining Districts, Gila County, Arizona, the location notices of which are recorded in the office of the County Recorder of Gila County, Arizona, as follows:

NAME	BOOK	PAGE
Elaine	186	296
Edith	186	297
Lucky No. 1	182	233
Lucky No. 2	182	234
Harry #1	205	653
Harry #2	205	654
Harry #3	205	655
Harry #4	205	656
Harry #5	205	657
Harry #6	205	658
Harry #7	205	659
Harry #8	205	660
Harry #9	205	661
Harry #10	205	662
Harry #11	205	663

NAME	BOOK	PAGE	DATE
Harry #12	205	664	
Harry #13	205	665	
Harry #14	205	666	
Harry #15	205	667	
Harry #16	205	668	
Harry #17	205	669	
Harry #18	205	670	
Harry #19	205	671	
Harry #20	205	672	
Harry #21	206	539	
Roadway	49	27	
Wagon Bed	49	28	
Teamster	49	29	
Lily No. 2	186	614	
Summit No. 2	167	425	
Rough Lock	48	529	
Gene David Cox	200	200	
Lesley Paul Cox	200	201	
Rhonda J. White	200	202	
Stacy L. Cox	200	203	
Danny R. Cox	200	204	
Wilma J. Cox	200	205	
Terri #1	303	427	
Terri #2	303	428	
Terri #3	303	429	
Terri #4	303	430	
Terri #5	303	431	
Terri #6	303	432	
Terri #7	303	433	
Terri #8	303	434	
Terri #9	303	435	
Terri #10	303	436	
Terri #11	303	437	
Terri #12	303	438	
Terri #13	303	439	
Terri #14	303	440	
Arlene	200	93	11-7-66
Arlene No. 1	200	94	11-7-66
Arlene No. 2	200	95	11-7-66
Arlene No. 2 (Amended)	201	328	11-25-66
Arlene No. 3	200	96	11-7-66
Arlene No. 3 (Amended)	201	329	11-25-66
Arlene No. 4	200	97	11-7-66
Arlene No. 5	200	98	11-7-66
Arlene No. 6	200	99	11-7-66
Arlene No. 7	200	100	11-7-66
Arlene No. 8	200	101	11-7-66
Arlene No. 9	200	102	11-7-66
Arlene No. 10	200	103	11-7-66
Arlene No. 11	200	104	11-7-66
Arlene No. 12	200	105	11-7-66
Arlene No. 13	200	106	11-7-66
Arlene No. 14	200	107	11-7-66

NAME	BOOK	PAGE	DATE
Arlene No. 15	202	564	12-12-66
Arlene No. 16	205	245	1-17-67
Arlene No. 17	205	246	1-17-67
Arlene No. 18	205	247	1-17-67
Arlene No. 19	205	248	1-17-67
Arlene No. 20	205	249	1-17-67
Arlene No. 21	205	250	1-17-67
Arlene No. 22	205	251	1-17-67

that between the 1st day of September, A.D. 1972 and the 31st day of August A.D. 1973, at least Nine Thousand and Two Hundred Dollars ($9200.00) worth of work and improvements were done and performed upon said claims. Such work and improvements were made by and at the expense of Geo-Processing, Inc., lessee of said mining claims for the purpose of complying with the laws of the United States pertaining to assessment of annual work and the employees of Geo-Processing, Inc., were the men employed by said lessee and who labored upon said claims, did said work and improvements, the same being as follows, to-wit:

Active mining and ore processing on a commercial basis.

Exploration and development work on mineralized structures, which includes geological and geochemical surveys.

Construction of ore processing facilities.

Engineering design work for additional ore processing facilities.

x Nicholas H. Carouso

Nicholas H. Carouso, President
Geo-Processing, Inc.

Subscribed and sworn to before me this 28th day of September A.D., 1973

Katie Weimer

Notary Public

(My commission expires 8-12-77)

GIBSON MINE

IN SITU LEACHING CONSIDERATION

The Summit and Pasquale veins and other strong veins on the property should be strongly considered for in situ leaching. Approximately 130 feet of the Summit vein has been tested by in situ leaching and the results were satisfactory.

The following is presented as possible annual gross dollar earnings from the Summit vein:

Leaching width (potential)	40 ft.
Depth	600 ft.
Cubic feet per lineal foot	24,000 cu. ft.
Tons per lineal foot	2,000 tons
Tons per 1,000 lineal feet	2,000,000 tons
Confidence factor of 50% (adjusted)	1,000,000 tons
Grade of copper @10 lb. per ton	10,000,000 lb. Cu
Five years leaching time	2,000,000 lb. Cu/yr.

If dollar value of copper per pound is 50¢ per pound (buyer price), then the annual gross dollar value will be $1,000,000 per 1000 feet of vein.

Nicholas H. Carouso

NICHOLAS H. CAROUSO
July 17, 1973

ARIZONA MINING PROPERTIES, INC.
1006 MAIN STREET
HOUSTON, TEXAS 77002

May 23, 1977

RE: Contract dated August 19, 1971.

Geo-Processing, Inc.
P.O. Box X
Miami, Arizona, 85539

Attention, Mr. Nicholas H. Carouso

Gentlemen:

This letter is to state that we agree that your lease shall be extended for five years from this date.

We understand that you will take care of the assessment work as usual.

Yours truly,

ARIZONA MINING PROPERTIES, INC.

By _____
President.

ACCEPTED:

GEO-PROCESSING, INC.,

BY Nicholas H. Carouso
President

Date: May 26, 1977

EFCO LABORATORIES
North Freeway at Ruthrauf Road P. O. Box 5526
TUCSON, ARIZONA 85703
PHONE (602) 887-4241

Laboratory Analysis Report

Mr. Robert M. Franks
P.O. Box 532
Globe, Arizona 85501

REPORT NO. 722816
DATE SUBMITTED 3/30/72
DATE REPORTED 4/3/72

Sample Number	PPM Copper	PPM Molybdenum
Ky-7-200 WA	327	1
400 WA&R	287	20
600 WA	189	23
800 WA	397	23
1000 WA	577	8
1200 WA	154	11
1400 WA	207	29
1600 WA&R	157	18
1800 WA	230	20
2000 WA	195	29
2200 WA	100	3
2400 WA	107	3
2600 WA	92	3
2800 WA&R	289	4
3000 WA&R	116	3
3200 WA&R	205	6
3400 WA	328	<1
3600 WA	112	<1
3800 WA	269	1
4000 WA	129	11
4200 WA&R	92	3
4400 WA&R	130	4
OA	+1000	6
200 EA	165	1
400 EA	383	1
600 EA	94	3
800 EA&R	209	3
1000 EA&R	232	6
1200 EA&R	212	3
1400 EA	144	3
1600 EA	96	<1
1800 EA	190	11
2000 EA&R	543	17
2200 EA	710	6
2400 EA&R	169	<1
2600 EA&R	+1000	3
2800 EA&R	123	3
3000 ? 2000 ER	107	3
3200 EA	125	6
3400 EA&R	91	3
3600 EA	312	13
3800 EA&R	167	6
4000 EA	201	7
4200 ER	235	3
4400 EA&R	572	6
4600 EA&R	418	6
Ky-10-200 WA	106	13
400 WA	39	6
600 WA&R	50	6
800 WA&R	71	11
1000 WA	42	4
1200 WA&R	128	7

XXXXXXXXXXXX
Signed

Sample Number	PPM Copper	PPM Molybdenum
Ky-10-1400 WA&R	80	6
1600 WA	143	4
1800 WR	82	3
2000 WA&R	148	3
2200 WA	229	14
2400 WA	130	6
2600 WA&R	163	6
2800 WA	473	4
3000 WA	336	6
3200 WA	149	10
3400 WA	73	10
3600 WA	70	3
3800 WA&R	164	3
4000 WA&R	214	7
4200 WA	105	4
4400 WA	57	3
0A	49	6
200 EA	90	11
400 EA	130	7
600 EA	125	6

Sample Number	PPM Copper	PPM Molybdenum
Ky-10-800 EA	184	11
1000 EA	342	20
1200 EA	289	13
1400 EA&R	317	6
1600 EA	598	18
1800 EA&R	324	13
2000 EA&R	187	8
2200 EA	171	8
2400 EA&R	378	8
2600 EA	516	20
2800 EA	136	14
3000 EA&R	380	<1
3200 EA	79	3
3400 EA	51	8
3600 EA	133	3
3800 EA	98	6
4000 EA&R	38	3
4200 EA&R	60	6
4400 EA	64	7

Geochemical Assay

Sample Number	% Copper
Ky-7-0A	0.12
2600 EA&R	0.11

W W Brown
Signed

EFCO LABORATORIES
North Freeway at Ruthrauf Road P. O. Box 5526
TUCSON, ARIZONA 85703
PHONE (602) 887-4241

CORRECTED REPORT

Laboratory Analysis Report

Robert M. Franks
P.O. Box 532
Globe, Arizona 85501

REPORT NO. 722816
DATE SUBMITTED 3/30/72
DATE REPORTED 4/3/72

Sample Number	PPM Molybdenum
Ky-7-1400 WA	29
Ky-7-2000 WA	29

Incorrect numbers due to typographical mistake.

W W Turner
Signed

EFCO LABORATORIES
North Freeway at Ruthrauf Road P. O. Box 5526
TUCSON, ARIZONA 85703
PHONE (602) 887-4241

Laboratory Analysis Report

Arizona Mining Properties, Inc.
1006 Main Street
Houston, Texas 77002

R. Franks

REPORT NO. 722901
DATE SUBMITTED 5/2/72
DATE REPORTED 5/4/72

Sample Number	PPM Copper	PPM Molybdenum
Ky-8 200-S A&R	174	4
400-S A&R	200	1
600-S A&R	152	<1
800-S A&R	265	<1
1000-S R	126	3
1200-S A&R	129	<1
1400-S A&R	+1000	<1
1600-S A&R	286	<1
1800-S A&R	160	3
2000-S A&R	139	10
2200-S R	29	1
2400-S A&R	521	3
2600-S A&R	129	<1
2800-S A&R	158	<1
3000-S A&R	172	4
0 A&R	200	6
200-N R	123	11
400-N A&R	300	6
600-N A&R	118	3
800-N R	54	<1
1000-N A&R	296	<1
1200-N A	102	10
1400-N A	117	6
1600-N A&R	256	3
1800-N R	369	10
2000-N A&R	132	6

Sample Number	PPM Copper	PPM Molybdenum
Ky-8 2200-N A&R	51	7
2400-N A&R	96	3
2600-N A&R	49	9
2800-N A	77	9
(?)3200N→ 3000-N A&R	87	10
3400-N A&R	36	<1
3600-N R	52	<1
3800-N A&R	56	<1
4000-N R	69	6
4200-N A&R	68	6
4400-N A&R	31	6
PK-1 200- E A&R	303	3
400- E A&R	76	4
600- E R	45	1
800- E A	88	3
1000-E A&R	53	1
1200-E A&R	38	6
1400-E A&R	60	6
1600-E A	187	3
1800-E A&R	24	9
2000-E A&R	73	<1
2200-E A&R	137	4
2400-E R	73	3
2600-E A&R	43	<1
2800-E A&R	85	<1
3000-E A&R	186	1

XXXXXXXXX
Signed

Sample Number	PPM Copper	PPM Molybdenum
PK-1 0 A&R	191	3
200-W A&R	315	4
400-W A&R	97	4
600-W A&R	112	6
800-W A&R	81	1
1000-W A&R	327	14
1200-W A	103	<1
1400-W A&R	181	7
1600-W A&R	126	6
1800-W A&R	114	7
2000-W A&R	97	1
2200-W A&R	132	3
2400-W A&R	201	3
2600-W A&R	203	4

Sample Number	PPM Copper	PPM Molybdenum
PK-1 2800-W A&R	106	<1
3000-W A&R	175	11
3200-W A&R	201	<1
3400-W A&R	292	9
3600-W A&R	300	11
3800-W A&R	122	<1
4000-W A&R	112	1
4200-W A&R	73	<1
4400-W A	690	6
4600-W A&R	623	<1
4800-W A&R	145	4
5000-W A	95	3
3200N (No Number)	57	<1

Geochemical Assay

Sample No.	% Copper
Ky-8 1400-S A&R	0.17

Signed

EFCO LABORATORIES
North Freeway at Ruthrauf Road P. O. Box 5526
TUCSON, ARIZONA 85703
PHONE (602) 887-4241

Laboratory Analysis Report

Arizona Mining Properties, Inc.
1006 Main Street
Houston, Texas 77002

R. Franks

REPORT NO. 722911
DATE SUBMITTED 5/12/72
DATE REPORTED 5/15/72

Sample Number			PPM Copper	PPM Molybdenum
PK-2	200E	A	248	1
	400E	A&R	266	6
	600E	A&R	541	24
	800E	A&R	332	34
	1000E	R	181	3
	1200E	A&R	220	7
	1400E	A&R	323	6
	1600E	A&R	160	1
	1800E	A&R	112	1
	2000E	A&R	508	50
	2200E	A&R	501	6
	2400E	A&R	143	14
	2600E	A&R	213	3
	2800E	A&R	194	3
	3000E	A&R	204	9
	3200E	A&R	98	4
	3400E	A&R	132	4
	3600E	A&R	148	13
	3800E	A&R	98	6
	4000E	A&R	91	17
	4200E	A&R	62	7
PK-2	0	A&R	+1000	39
	200W	R	332	6
	400W	R	573	16

Sample Number			PPM Copper	PPM Molybdenum
PK-2	600W	A	148	11
	800W	A&R	257	4
	1000W	A&R	331	6
	1200W	A&R	+1000	11
	1400W	A&R	+1000	3
	1600W	A&R	876	3
	1800W	A&R	560	6
	2000W	A	113	6
	2200W	A&R	262	17
	2400W	A&R	203	11
	2600W	A&R	109	6
	2800W	A&R	98	6
	3000W	A	84	6
(3200W)?	4200E	A&R	68	3

Geochemical Assay

Sample No.	% Copper
PK-2-0-A&R	0.20
PK-2-1200W A&R	0.19
PK-2-1400W A&R	0.10

Signed

E. CO LABORATORIES
North Freeway at Ruthrauf Road P. O. Box 5526
TUCSON, ARIZONA 85703
PHONE (602) 887-4241

EFCO

Laboratory Analysis Report

Arizona Mining Properties, Inc.
1006 Main Street
Houston, Texas 77002

REPORT NO. 722834
DATE SUBMITTED 4/19/72
DATE REPORTED 4/24/72

R. Franks

Sample Number	PPM Copper	PPM Molybdenum
Ky-9-0'-A	111	6
200-WA&R	136	<1
400-A&R	59	9
600-WA&R	96	7
800-WA	54	13
1000-A&R	55	1
1200-WA	66	4
1400-WA&R	58	7
1600-WA	184	4
1800-WA	115	25
2000-WA&R	95	3
2200-WA&R	18	11
2400-WA&R	46	23
2600-WA	41	26
2800-WA	26	14
3000-WA&R	99	17
3200-WA	130	26
3400-WA	132	20
3600-WA	108	20
3800-WA	137	19
4000-WA	323	29
4200-WA&R	193	31
4400-WA&R	400	<1

Sample Number	PPM Copper	PPM Molybdenum
Ky-9 200-EA&R	524	<1
400-EA&R	204	1
600-ER	46	<1
800-EA&R	+1000	1
1000-EA&R	644	3
1200-EA&R	795	1
1400-EA&R	460	6
1600-EA&R	441	3
1800-EA&R	230	3
2000-EA&R	193	6
2200-ER	108	6
2400-EA&R	490	1
2600-EA&R	832	3
2800-EA&R	433	<1
3000-EA	444	<1
3200-EA&R	480	7
3400-EA&R	189	11
3600-EA&R	77	11
3800-EA&R	49	14
4000-EA&R	43	17
4200-EA&R	72	3
4400-ER	50	9

Geochemical Assay

Sample No.	% Copper
Ky-5-800-EA&R	.14

KY-5 → KY-9 IP

Signed

E O LABORATORIES
North Freeway at Ruthrauf Road P. O. Box 5526
TUCSON, ARIZONA 85703
PHONE (602) 887-4241

EFCO

Laboratory Analysis Report

Arizona Mining Properties, Inc
1006 Main Street
Houston, Texas 77002

R. Franks

REPORT NO. 722906
DATE SUBMITTED 5/8/72
DATE REPORTED 5/11/72

Sample Number		PPM Copper	PPM Molybdenum
KY-5	200-E A&R	218	<1
	400-E R	16	7
	600-E A&R	135	<1
	800-E A&R	135	<1
	1000-E A&R	162	6
	1200-E A&R	69	3
	1400-E A&R	65	3
	1600-E A&R	164	<1
	1800-E A&R	159	3
	2000-E A&R	130	6
KY-0	A&R	269	11
	200-W A&R	85	<1
	400-W A&R	339	6
	600-W A&R	401	<1
	800-W A&R	204	<1
	1000-W A&R	46	3
	1200-W A&R	85	<1
	1400-W A&R	93	3
	1600-W A&R	244	3
	1800-W A&R	10	<1
	2000-W A&R	51	1
	2200-W A&R	21	<1

Sample Number		PPM Copper	PPM Molybdenum
KY-5-0	2400-W A	34	<1
	2600-W A&R	29	<1
	2800-W A&R	81	3
	3000-W A&R	27	<1
	3200-W A	27	6
	3400-W A&R	35	<1
	3600-W A&R	52	6
	3800-W A&R	53	3
	4000-W A&R	+1000 (2000)	46
6N KY-6	200-S A&R	143	6
4N	400-S A&R	210	1
2N	600-S R	25	1
0	800-S A&R	96	3
2S	1000-S A&R	73	<1
4S	1200-S A&R	100	<1
6S	1400-S A&R	95	<1
8S	1600-S A&R	113	3
10S	1800-S A&R	69	<1
12S	2000-S A&R	63	4
14S	2200-S A&R	69	6
16S	2400-S A&R	100	<1
18S	2600-S A&R	140	<1

XXXXXXXXXX
Signed

Sample Number	PPM Copper	PPM Molybdenum
20S KY-6 2800-S A&R	98	<1
22S 3000-S A&R	165	<1
24S 3200-S A&R	56	1
26S 3400-S A&R	78	3
28S 3500-S A&R	113	3
30S 3900-S A&R	83	3
32S 4000-S A&R	131	1
34S 4200-S A&R	121	3
36S 4400-S A&R	101	6
38S 4600-S A&R	134	1
40S 4800-S A	166	1
42S 5000-S A&R	156	3
8N KY-6-0-A	136	3
10N 200-N A&R	140	6
12N 400-N A&R	74	4
14N 600-N A&R	488	3
16N 800-N A&R	100	6
18N 1000-N A&R	230	3

Sample Number	PPM Copper	PPM Molybdenum
20N KY-6 1200-N A&R	207	7
22N 1400-N A&R]	251]	9
24N 1600-N A&R	640	14
26N 1800-N A&R	541	4
28N 2000-N A&R	509	3
30N 2200-N A&R	172	6
32N 2400-N A&R	619	8
34N 2600-N A&R	477	6
36N 2800-N A&R	98	11
38N 3000-N A&R	66	3
40N 3200-N A&R	223	11
42N 3400-N A&R	222	9
44N 3600-N A&R	175	6
46N 3800-N A&R	91	<1
48N 4000-N A&R	60	3

Geochemical Assay

Sample No.	% Copper
KY-6-4000-W A&R	0.20

1000 ppm = 0.1%

W W Turner

Signed

LINE N—11 ~

Sample No	PPM Copper	PPM Molybdenum		
PK-3-W				
0	42	3		
200'-W	65	6		
400'-W	67	1		
600'-W	79	11		
800'-W	50	1		
1000'-W	74	3		
1200'-W	76	3		
PK-3-E				
200'-E	302	1		
400'-E	287	3		
600'-E	374	6		
800'-E	353	4		
1000'-E	116	6		
1200'-E	154	1		
1400'-E	22	10		
1600'-E	64	4		
1800'-E	60	11		
2000'-E	81	1		
2200'-E	174	3		
2400'-E	30	1		
2600'-E	42	1		
2800'-E	197	1		
3000'-E	43	4		
3200'-E	78	4		
3400'-E	100	3		
3600'-E	71	1		
3800'-E	44	1		

EFCO LABORATORIES
North Freeway at Ruthrauf Road P. O. Box 5526
TUCSON, ARIZONA 85703
PHONE (602) 887-4241

Laboratory Analysis Report

Arizona Mining Properties, Inc.
1006 Main Street
Houston, Texas 77002

REPORT NO. 722926
DATE SUBMITTED 6/1/72
DATE REPORTED 6/6/72

Sample Number	PPM Copper	PPM Molybdenum
PK-4- 200' W R	33	15
400' W A&R	76	1
600' W A&R	126	3
800' W R	37	<1
1000' W A&R	82	<1
1200' W A&R	40	11
PK-4-0 A&R	74	1
200' E A&R	158	<1
400' E A&R	168	<1
600' E A&R	245	1
800' E A&R	361	<1
1000' E A&R	171	1
1200' E A&R	175	6
1400' E A&R	178	11
1600' E A&R	250	1
1800' E A&R	92	1
2000' E A&R	90	3
2200' E A&R	71	<1
2400' E A&R	78	1
2600' E A&R	52	<1
2800' E A&R	28	1
3000' E A&R	72	3
3200' E A&R	54	3
3400' E A&R	63	<1
3600' E A&R	53	6
3800' E A&R	64	1
4000' E A&R	71	<1

Signed

LODESTAR MINERALS INC.

P.O.BOX 1089 MESA, ARIZONA 85211 JULY 25, 1988

SUMMARY of the GIBSON COPPER MINE

INTRODUCTION

The goal of Lodestar Minerals Inc. is to develop the Gibson property into a profitable mining operation. Based on the data collected to date, the company feels that, without doubt, there are sufficient minable reserves on the Gibson to produce a sucessful mining operation and a substantial profit.

COPPER PRICE

New York COMEX spot copper today is 100.55 cents per pound. The average first half 1988 copper price is 105 cents per pound.

AVERAGE YIELD OF COPPER ORE RESERVES

In the report, "History of the Gibson Mine," shipments from the mine show that the property has produced extremely high grade ore. The average yield of U.S. copper ores has fallen from 1.88% in 1910 to 0.49% in 1979 (J. Brent Hiskey's Fieldnotes). The Gibson, as reported by Fletcher et al has:

a) .70% copper average identified in 10,800,000 tons of dissiminated ore reserves.
b) 5.0% copper average identified in 672,000 tons of vein ore reserves.
c) 1.5% copper average identified in 250,000 tons of mine dump ore reserves.
d) 2.0% copper average identified in 100,000 tons of the underground mine workings ore reserves.

All of these averages exceed the U.S. average.

COPPER ORE RESERVES

In the Fletcher report on "Areas of Disseminated Mineralization", Calculation I (0.70% CU), reports that the areas has a geologic potential of 151,000,000 pounds of copper. In his Calculation II, (0.40% CU), Fletcher reports a potential of 345,000,000 pounds of copper. Based on the copper ore reserves identified, Fletcher et al designed a Conceptual Mine Model. A conservative figure 1,080,000 tons of reserves averaging 2.0% copper for a 10 year mine life, was reached. With a 70% recovery rate, the mine will produce 30,024,000 pounds of copper. It is expected gold and silver will also be produced but that has not been estimated. The entire property area used to obtain these figures is less than 10% of the total Gibson property.

Heinrichs Geoexploration Company conducted and completed an ore reserve estimate on a small area of the Gibson property. Based on their report, an additional 421,000 pounds of copper are identified as a reserve.

In his report on the "Gibson Mine Potential", Nicholas H. Carouso says that a conservative estimate should be at least 5,000,000 tons of ore with a grade of at least 1.0% copper per ton. This would yield 100,000,000 pounds of copper. The Carouso report also supplies data on vat leaching and in-situ leaching potential.

TECHNOLOGY

Hydrometallurigcal processing of ore deposits by soloution mining or in-situ (in place) is now state-of-the-art technology as reported by Dr. J. Brent Hiskey, Dr. L.E. Murr and Dr. M.E. Wadsworth. Considerable cost savings can be recoginized by in-situ soloution mining. Since the ore is not moved or crushed, the production costs per pound of copper is substantialy reduced.

The leaching of combined oxide and sulphide copper ore has been improved with the use of Thiobacillus Ferroxidands and Thiobacillus Thiooxidands in the leach soloution. The use of leach solvents other than sulfuric acid, such as ferric sulfate and ferric chloride, have been observed to be more effictive on some copper ores. The Gibson mineralization, 5 miles of underground workings, 2 sets of leach pads, and topography make the property very suitable to the latest techonology available.

CONCLUSION

It is Lodestar's opinion that there is substantial virgin ground yet to be discovered on the Gibson property. Reports such as a "9% disseminated ore body below the 600 foot level", the Carouso report on the Arlene Claims indicating potential economic mineralization, and actual mined ore of 46% copper, lead us to believe that the present identified reserves are only a portion of what may be available. In our interview with James Fletcher, it was reported that the Van Dyke and Inspiration ore bodies were overlayed by veins similar to that of the Gibson and that when Oxidental Petroleum drilled past the old mine working of the Van Dyke mine, they found a disseminated ore body below. Fletcher said the ore body goes under the city of Miami.

Arizona produces two thirds of the U.S. copper, much from this area. There is obvious foreign interest in U.S. copper mines. Phelps Dodge has two mines that produce copper for Japanese co-owners. The most conservative estimate reporting over $30,000,000.00 of copper reserves in sight minus gold and silver, lead us to believe the initial capital required is small in comparison to the potential return.

It appears since copper prices have stabilized around the $1.00 mark (40% higher than the mid 1980's) that much of the risk to place the Gibson into production has been substantialy reduced. Now that the mine has over 4 square miles of land, plus in-situ, heap leach and solvent extraction recovery techniques for copper ore are well proven, a bright future is certain for the Gibson.

HISTORY OF THE GIBSON COPPER MINE
GILA COUNTY, ARIZONA

The following is a journey thru the history of this grand and colorful mining property. This is a look at one of the Globe - Miami first rich copper mines. Located in the center of one of the largest copper and silver ore bodies in the world, the Gibson is surrounded by ore bodies such as Pinto Valley and Castle Dome 4 miles north, Miami-Inspiration ore body 6 miles northeast, the Blue Bird and Oxhide 5 miles east, the Van Dyke and Miami East 7 miles east, ASARCO deposit 5 miles west, and the Ray Mine 10 miles south. The Gibson workings, which cover only approximately 10% of the present total property area, have a recorded production of more than 12,000,000 pounds of copper.

The Gibson Mine property is located in the Summit Mining District in Gila County, 9 miles west of Miami, Arizona. Access to the property from Phoenix is via Route 60 for approximately 90 miles and 3 miles of good gravel road (Forest Service Road 349) wich leads directly to the Gibson Mine.

The property was originally part of a small group of claims, 16 of which were patented in the early 1900's. The property has over the recent years been expanded to a total of 157 claims covering about 4 square miles including 15 of the original patented claims.

1903
The Gibson claims were located by S. L. (Sam) Gibson and W. M. (Tip) Henderson. At least 7 veins run through the property. The strongest veins are the Pasquale and Summit running over 7,000 feet.

1906
The "Gibson Copper Company" was formed. Stock was sold and the company installed a "Vulcan" double steam hoist and compressor. A three compartment shaft was sunk on the Pasquale Vein. The town of Bellevue is founded.

1906 Sep. 24
The Summit, Daisy Lily, Little Mans, and McKinly claims are patented. Total acerage is 84.924.

1909
Gibson and Hendersons company has produced 6,500,000 pounds of copper to date from the underground workings. Due to the high cost of transportation and smelting charges, only 20% or better grade copper ore is being shipped by 10 horse team to the Dominion Smelter 18 miles away.

1910
W. A. Eaton and Associates form the Summit Copper Company and lease the Gibson property. Summit Copper sank a vertical shaft 576 feet on the Pasquale Vein. During the next year they yielded over 350,000 pounds of copper. The Summit Copper Company relinquished their lease/option in October 1911, partly on account of the large asking price of $440,000.00.

1911 Jan. 11
The Hillside, Congress, and Little Jim claims are patented. Total acerage is 35.513.

1911 Nov. 28
The Annex, Hardscrabble, Sycamore, Apex, Cracker Jack, Oak Spring, and Westbrook Ajax claims are patented. Total acerage is 87.684.

1912
The Gibson Copper Company resumed operations of the mine until April 1913, when it closed because of financial difficulties.

1912 May.
Single claims are leased to individuals that pay 30% a royalty to the Gibson Copper Company.

1913 May.
Frank Dowell (a lessee) at the Gibson struck 18" vein at 38% copper.

1913 Jun.
Average grade of ore being shipped by lessee's is 26%.

1913 Jun.
Sultan and Wayne obtained the lease in June, 1913, but relinquished it in Aug. after unsuccessful attempts to concentrate the ore with jigs.

1914 Jan.
The Gibson Copper Company has its claims leased to 35 different lessees. A high grade chalcopyrite ore vein 2 feet in width and running 29% copper is located by Feagles brothers and associates. 300 tons of ore are shipped from the property from January 1914 to May 1914.

1914 May.
The Gibson Copper Company is sold. The new manager, O. B. Kemp, is mapping a more organized approach to mining the property. A 100 ton a day floatation plant is being planned. U.S. Circuit Court hands down opinion that the basic floatation process cannot be patented.

1915 May.
Lessees George Zapp and Lou Riddle ship 38.18% copper ore from the Gibson. Entire output of the Gibson has been approximately 200 tons this month.

1915 Jul.
81 men are leasing on the Gibson. 100 people live at Bellevue. 20 to 30 cars (350 to 400 tons) of 20% or better copper are being shipped per month to the Old Dominion smelter. Copper price is 20 cents per pound.

1915 Nov.
Frank F. Towle takes over the management of the Gibson property, which is now very famous for its high grade sulphide ore. 350 to 400 tons per month are shipped. Copper grade of 20 to 25%. Bellevue has 10 families in the camp and 85 men are eating at the boarding house.

1916 Jan.
Robertson brothers locate 15 tons of 46.69% copper, a grade never before equalled in this district or any other mine in Arizona.

1917 Jun.
Gibson mine sold to Harold Bierce and Col. A.F. Peake. The new name will be Gibson Consolidated Copper Company, a Delaware corporation, with $1,000,000 of capitalization. Stock value @ $1.00 per share. 300 ton per day floatation mill is planned.

1917 Nov.
The Gibson is shipping 1,000 tons of high grade per month. Production records show the mine has produced $2,100,000.00 net smelter return to date.

1918 Aug.
Demand for copper for war industries keeps copper prices high. At least 7 veins running lengthwise of the property and only 3 have been partially developed to 600 feet.

1918 Dec.
The mine closes due to low copper prices. Plans for work on the floatation plant continue.

1919 Jan.
700,000 tons of positive ore and 300,000 tons of probable ore are identified in stopes and mine dump. Gibson has 26,000 feet of under ground workings. A dam is built on Pinto Creek (150 feet long and 32 feet high) to impound 6,000,000 gallons of water for the concentrator plant.

1919 Jul.
The new floatation plant concentrator starts regular operations treating 125 to 160 tons of ore per day, producing 11 tons of concentrates per day.

1920 Aug.
Drifting on the 300 foot level continues and ore reserves are being steadily blocked out for future milling.

1919 Dec.
A vein on 400 foot level of the mine contains 24% copper and 92 ounce silver. Drilling is in process to the 1200 feet level to pick up extentions of known ore bodies.

1920 Sep.
Gibson Consolidated Copper Company temporarily closed and will not reopen until better copper market develops.

1923 Jul.
Gibson remains closed. Rain causes the top of a 480 foot shaft to cave.

1925 Aug.
Forclosure suit filed against Gibson Consolidated Copper for $200,000 for delinquent loan with Old Domenion Commercial Company.

1926 Jul.
Holdings of the Gibson sold at sheriffs sale for $200,000 to satisfy judgement in favor of Old Dominion Commercial Company.

1928 Sep.
Keyes and Miller have the Gibson leased. They are operating a 100 ton a day concentrator with 80% recovery and 22% concentrates. Operate until 1929.

1930
Copper prices drop to 12.9 cents per pound during 1930, 8.14 cents in 1931, and 5.5 cent in 1932.

1939 Sep.
Castle and Bush, speaking of the Gibson " I believe it is without doubt the best thing yet undeveloped in the Globe, Miami district." Copper is 10.9 cents per pound.

1942 Jan.
M.H. Yeager aquires 7 patented claims through a tax sale. Yeagers mine owners report plenty of good water available. The property needs prospecting. Copper is 11.7 cents per pound.

1942 Feb.
Yeager reports the southeastern portion of the Summit Vein was not mined at all. Little or no work was done below the 400 foot level in any of the mine. Leads widened out a depth. Ore handled at that time was called "Black Sulphied" (chalcocite) and chalcopyrite.

1942 Sep.
Ross Finley, an assayor, and Albert Stevens buy 8 of the patented claims. Copper is 11.7 cents per pound.

1942 Oct.
Fred H. Perkins, an engineer for the Arizona Department of Mines and Mineral Resources, wrote a report on the Gibson for Ross Finley. Numerous sites on the property would give commercial blocks of ore. With the proper financing the owners could have ore on its way to the smelter inside 30 days.

1943 Jun.
A. MacFarland, an engineer for the Arizona Department of Mines and Mineral Resources wrote a report on the Gibson dumps. Assays of the dumps average 2.08% copper. A screened 15.5 ton shipment of ore on November 28 1942 assayed 4.96% copper. Copper is 11.7 cents per pound.
1945 Jun.
G.M. Butler, Dean of the School of Mines in Tucson, Arizona wrote a report that is referred to in the letter to E. F. Walsh. The property requires deeper new mine development. We agree with Mr. Butler that the mine has much merit for a development proposition.

1950 Aug.
Gary Roberts has one of the Gibson claims leased. Roberts uncovered a ore vein 16 to 24 inches thick that is up to $46.75 per ton at 22 cents per pound copper.

1950 Sep.
Ross Finley is trying to raise money for development.

1956 Nov.
Ross Finley passed away. Finley left his 50% interest in the 8 patented claims to his daughter Dorothy Striegel.

1958
The property is known as the Kuno Mine. Little known activity. Copper is 25.7 cents per pound.

1963 Mar.
Mrs. Ross Finley and Albert Stevens lease their 8 patented claims to Harlem Fountain, the chief chemist at Miami Copper, and Reed Nix. Fountain and Nix are leaching the Gibson dumps. After his death, Stevens left his 50% interest in the claims to the Franciscan Fathers of California.

1965
Two leach pads and 4 cement tanks were installed and operated just south of the present dump site by the owner Reed Nix. Copper is 35 cents per pound.

1966
Mr. Paul Kayser, (age 79) who was the founder of El Paso Natural Gas Company, buys the Gibson property from Nix. Kayser's company is called "Arizona Mining Properties Inc." Copper is 36.1 cents per pound.

1968
Six 8' X 16' cement tanks were built and pipe lines installed at the head of Mineral Creek for a pilot in-situ leaching operation on a portion of the 26,000 feet of underground workings. Ken Hammes and Lester Cox assisted on the project, and Robert Franks is the mine manager. Operations began in 1969. Copper is 41.8 cents per pound.

1969 Oct.
The Gibson is put on the active mine list. Two large asphalt pads were built near the Gibson shaft. The in-situ operation and the heap leach operation were placed in service as a pilot operation thru 1970. Copper is 47.5 cents per pound.

1971 Nov.
Nick Carouso, a mining engineer, and his family live on the property until 1978. Carouso's company, Geo-Processing Inc., is leasing the property from Kayser. Nick is doing work for Paul Kayser also and writes two reports, one in 1973 on the Gibson potential and in 1978 on the Arlene claim group. The property now has 16 patented claims and 53 unpatented claims. Copper is 50.6 cents per pound.

1972 Jul.
Nick Carouso et al ship 90% precip to Bagdad.

1974
Kayser is reported drilling to the 5,000 foot level near Sutton Simmit on the Star claims.

1979 Nov.
Robert Franks is given the property by Mr. Paul Kayser. The property size has increased to a total of 153 claims. Copper is 92.3 cents per pound.

1980
Franks is injured, and leases the property to Lester Cox, who owns some drilling equipment. All metal prices are up. Gold hits $850.00 per ounce. Copper price is high, $1.01 per pound

1981 Apr.
Dick Beard from the Arizona Department of Mines and Mineral Resources visited the Gibson. Mr. Beard reports the property needs further detailed exploration and might prove to be a strata bound massive sulphide deposit. Mr. Edward Fluskey, project geologist for Granges Exploration, spoke with Mr. Beard about miners stories he had heard of 9% cutoff grade at the bottom 100 feet of the 600 foot shaft, being in 9% disseminated ore.

1981
Cox does not work the the property but sub leases to a list of different companys who attempt to promote the mine to one of the major copper companys over the next 4 years. Copper prices drop from 83 cents per pound in 1981 to 66 cents in 1985.

1985
Cox takes in a partner, Don Boaz. Some concentrates are produced however the amount is unknown.

1987 Nov.
Lester Cox passed away. Control of the property is returned to Robert Franks. Little is known about the property from 1980 till now because Cox kept little or no records. Copper is 65 cents per pound.

1987 Sep.
AQUAMET, Inc. has a 6 month lease to do research on the water.

1988 Mar.
Lodestar Minerals, Inc. is in control of the Gibson property. Research is begun to prove the ore reserves. The history, all reports and any supporting data on the mine are being collected. Sampling and assaying is started. Equipment is moved to the property and preparations for pilot operation are underway. Copper is $1.02 per pound.

REFERENCES CITED

The data for this summary has been collected from numerous documents, records, reports, and interviews including:

* The Arizona Department of Mines and Mineral Resources in Tucson and Phoenix, Az;
* The Bureau of Land Management in Phoenix, Az;
* The Gila County Recorders office in Globe, Az;

Reports on the Gibson Mine potential written by:

* Fred H. Perkins, Mining Engineer, Arizona Department of Mines and Mineral Rescources, Phoenix, Az. Oct. 1942;.
* A. Macfarlane, Mining Engineer, Arizona Department of Mines and Mineral Resources, Phoenix, Az. June, 1944;
* Harvey S. Durand, Geologist, Heinrichs Geoexploration Company, Tucson, Az. April, 1967;
* Nicholas H. Carouso, Mining engineer, Geo-Processing Inc. Globe, Az. Nov. 1973, and Aug. 1978;
* James B. Fletcher, Mining Engineer, Thomas A. Clary, Geologist, Floyd J. Ingram, Geologist, of Vanguard Mines Inc. Globe, Az. Aug. 1984;
* L. A. Bayrock, Geologist, Bayrock Surfical Geology LTD. Vancouver B.C. Feb. 1985.

Newspaper articles about the Gibson supplied the historical chain of events from the early 1900's to the 1940's.

The interviews were used to support data that was vague or missing. Some of these people have in depth knowledge on facts that are not public record or published in any reports. The following people were contacted:

* Robert M. Franks
* James B. Fletcher
* Mrs. Dorothy Striegel
* Nicholas H. Carouso
* Mrs . Lester Cox
* Rocky A. Miller

The technology for heap leaching and in-situ leaching (solution mining) on copper ore was written by:

* J. Brent Hiskey Ph.D., Assistant Director, Arizona Bureau of Geology and Mineral Technology, Tucson, Az. "The Renaissance of Copper Solution Mining." Fieldnotes, Vol. 16, No. fall 1986.

* L. E. Murr Ph.D., Head of the Department of Metallurgical and Minerals Engineering at the New Mexico Institute of Mining and Technology. Socorro, New Mexico. "Theory and Practice of Copper Sulphide Leaching in Dumps and In-Situ." Minerals Science and Engineering, Vol 12, No 3. July, 1980.

* Milton E. Wadsworth Ph.D., Associate Dean of the College of Mines and Mineral Industries. Salt Lake City, Utah. "Interfacing Technologies in Solution Mining." Dec. 1977

THE GIBSON MINE POTENTIAL
GILA COUNTY,
ARIZONA

FEBRUARY 1985

Prepared for

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by

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EXECUTIVE SUMMARY

A survey and sampling of the Gibson Mine dumps were conducted in December of 1984. The estimated tonnage of the dumps is 143,000 tons. The average grade is 0.71% of copper. At a recovery rate of 80% using pad leaching techniques, and a copper price of $0.60 U.S. per pound, $6.82 U.S. per ton could be obtained. If the cost of recovery would be $5.00 U.S. per ton, $1.82 U.S. per ton could be realized.

In situ copper ore is present in high grade veins and as disseminated low grade ore. There are at least seven veins on the property that range in width from a few to over twenty feet and in length from half a mile to over a mile. The ore in the veins may average 5% of copper per ton for a minable tonnage of half a million tons. The disseminated copper ore averages about 0.7% copper and may comprise a minable tonnage of over 10 million tons. The above has been gathered from available literature. A cursory field examination showed both high grade copper ore and disseminated ore present at the surface.

The amount of copper ore in situ combined with the dump materials may constitute a viable economic situation for a leaching prospect.

It is recommended that a detailed geological mapping and sampling program be conducted in order to prove the grade and quantity of the in situ copper ore. Following the survey a feasibility study should be conducted.

TABLE OF CONTENTS

The Gibson Mine Potential
Gila County, Arizona

INTRODUCTION

Terms of Reference:

The terms of reference were given orally by Mr. B. Sharan, President, Ida-May Resources Ltd., in December of 1984, and were to evaluate the Gibson Mine property for potential production of copper using mine tailings, lode mining and in situ leaching of the old mine workings.

It was decided to evaluate the potential ore reserves of the mine dumps as a first step to providing immediate leachable ore reserves and thus cash flow in the very near future.

The Gibson Mine Property and Location:

The Gibson Mine property is comrpised of 17 patented and approximately 140 unpatented mining claims, some of the claims overlapping. The total area of the claims cover approximately 2,500 acres, (3.9 sq. miles). Ida-May Resources Ltd. acquired the claims from Mr. Lester R. Cox, et al., Miami, Arizona. The terms of agreement are on file with Ida-May Resources Ltd., Vancouver, B.C.

The Gibson Mine property is situated in Gila County, Arizona, and is approximately ten miles west of Miami, Arizona. The access to the property may be gained from Phoenix via U.S. Route 60 for approximately 90 miles and 3 miles on a gravel road (Forest Service Road 349) which leads directly to the Gibson Mine. The general location of the Gibson Mine is shown of Figure I. The distribution of the claims is shown on Figure 2, (from Fletcher et al, August, 1984).

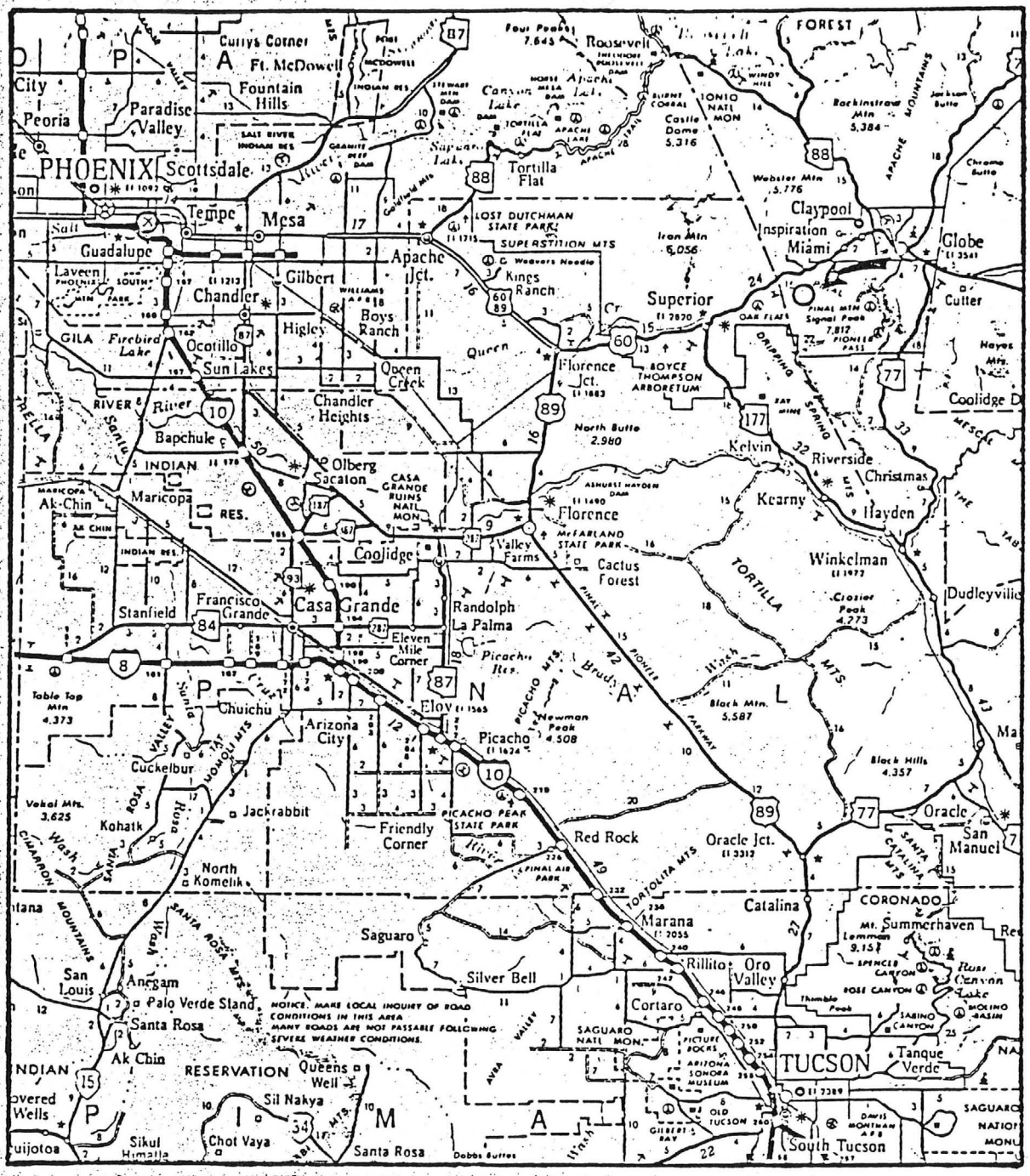

Figure 1 - Location map showing Phoenix Sky Harbor Airport, Globe and highways to the Gibson Mine property

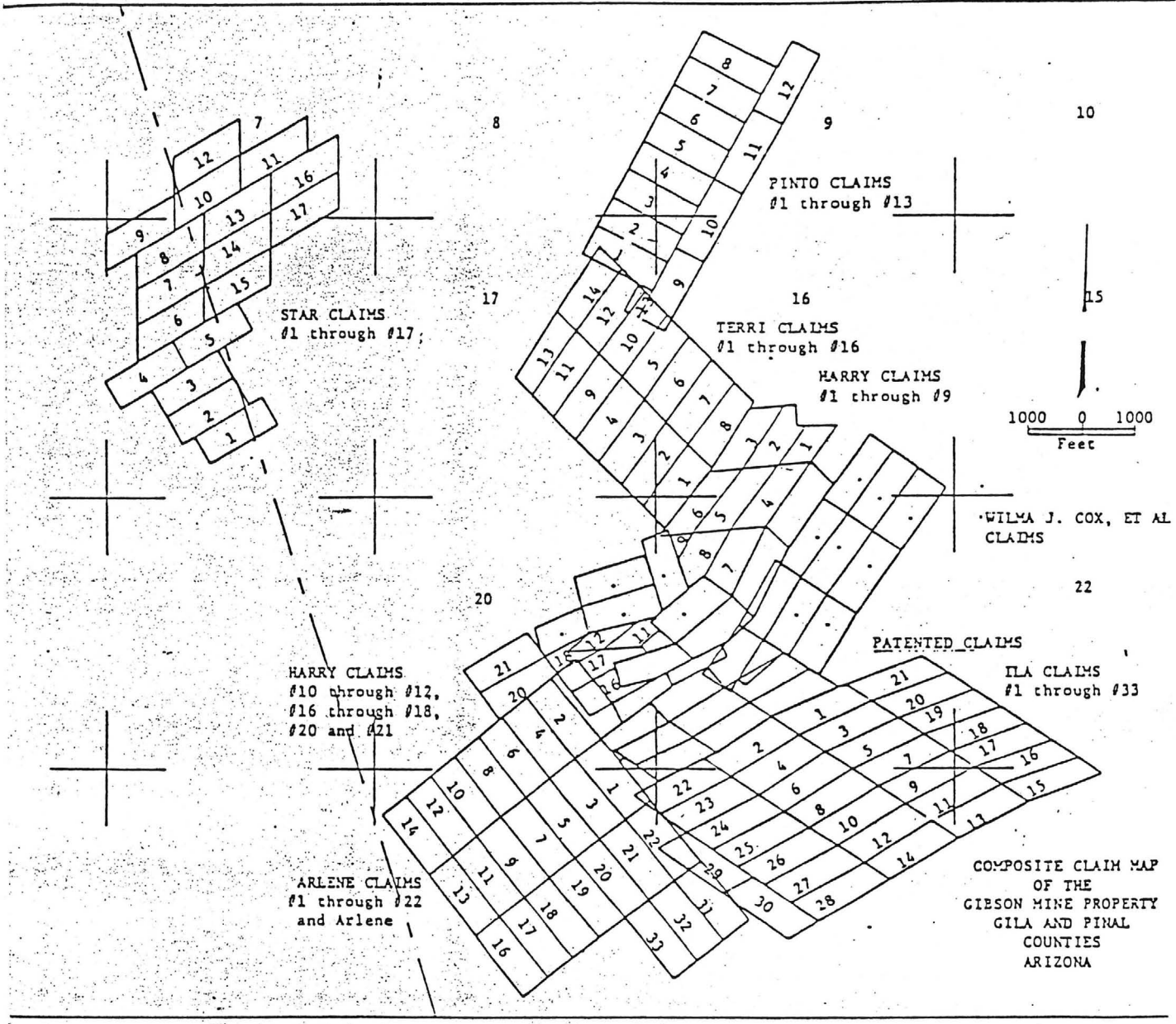

Figure 2 - Distribution of claims.

Previous Work:

Three previous reports on the Gibson Mine have been made available to the writer, which are: Carouso, N.H., 1973, Gibson Mine Report; Perkins, F.H., 1942, Increase Production Survey of the Kuno Mine (Old Gibson); and Fletcher, J.B., Clary, T.H., and Ingram, F.J., August 1984, Gibson Mine, Gila County, Arizona.

The last report, Fletcher, et al, lists five additional reports dealing with the Gibson Mine which to date have not been available to the writer. None of the above report give any original work on the calculation of ore reserves, both in the dumps and in the rock, and also no original work on the in situ leaching potential. Carouso and Fletcher et al estimate mineral reserves of the existing mine dumps as being 250,000 tons with a grade of copper of 1.5%. Carouso's estimates of ore reserves in place have been at least one million tons of copper per ton. Fletcher et al estimate the reserves at being 10.8 million tons at 0.7% copper as desimated occurences and 672,000 tons at 5% of copper in the veins. Also, they estimate 100,000 tons of ore at a grade of 2% copper present in the mine workings.

On the basis of the above, Fletcher et al. present a detailed evaluation of development plans for the leaching of the copper from the mine dumps and the ore reserves in place.

Fieldwork:

Fieldwork was carried out between December 18th and 20th, 1984. The mine dumps were surveyed in detail in order to arrive at the total volume of the material. A backhoe was used to dig trenches in the mine dump material. A total of 21 trenches were dug and sampled. The samples, being from 20 to 100 pounds each, were shipped to Min-En Laboratories, North Vancouver, B.C., and submitted for analyses for silver and copper.

THE GIBSON MINE DUMP

The Gibson Mine dumps are made up of two large and eight small dumps. The main dump is approximately 130 meters long and 130 meters wide. It is situated on the side of a hill approximately 20 meters high. The centre of the dump is located over a small valley and the sides are positioned on bedrock hillside. At the bottom of the main dump are two old leaching pads each of which is about 20 meters wide and 35 meters long. These leaching pads are approximately 4.5 meters high. The total volume of the dump is 43,630 cubic meters excluding the old leaching pads. Assuming a density of the rocks being 2.8 grams per centimeter cube, and a perosity of 30% there are 94,000 tons of material in the dump. The second large dump, situated a few hundred feet east of the main dump, contains 29,000 tons of material using the above assumptions for density and perosity. The other small dumps were not surveyed although some of them were trenched and sampled. It is estimated that these contain an additional 20,000 tons. Thus, the total tonnage of all of the dump material in the Gibson Mine area is approximately 143,000 tons.

Fletcher et al. and Carouso assume that the dumps contain 250,000 tons of material. Our survey shows only 143,000 tons, which is approximately 57% of the total as estimated by the former. The samples were collected as channel samples across the bedding plane of the dump material. The samples were numbered from A to U inclusive. Sample A was collected from a trench dug beside the road and it did not contain appreciable ore. Samples B,C, and D, come from trenches of the old leach pads and also are not included in the calculations. Sample T is from a small dump at the head of a small valley about 500 meters from the main dump. It contained only very small quantities of ore and thus this dump and the sample are not included here. Samples E to N inclusive are from the main dump. Sample O, P, and Q, are from the mill site dump. Samples R, S, and U, are from small dumps adjacent to the south and across the creek from the main dump.

The results of the analyses are given in the Appendix. The average is .71 per cent copper. This is less than 1/2 of the postulations made by Fletcher et al. and Carouso.

The lowest value of the samples was .35% of copper and the highest 1.08%. During sampling it was noted that at many locations almost all of the dump material was covered with a very thin film of malachite. This copper bloom may have given the investigators the false impression that the dumps contained appreciable amounts of copper, as it influenced the author during field sampling in assigning higher values by visual observation to the dump material.

The percentage of copper in the dump material of 0.71 translates to a total of reserve of copper approximately 2,030,000 pounds. The present price of copper is approximately $0.60 U.S. per pound. The value of the copper in the dump is a little over 1.2 million dollars. Assuming a recovery of 80%, the total moneys realized would be $975,000.00 U.S. At 80% recovery, this comes to $6.82 per ton. If the cost of recovery would be $5.00 per ton, only a small profit of $1.81 per ton would be realized. It is seen that because of the relatively small volume of the dump material, and also of the low grade, the processing of the mine waste under the best of circumstances would be only marginal economically.

GEOLOGY OF THE GIBSON MINE AREA

The Gibson Mine is located in a schist which surrounds a large granite ore body, the Schultze Granite. A number of ore bodies and mines are located on the periphery of the granite and some even on the Granite. Figure 3, after Fletcher et al. shows the general geology of the area and the location of the different deposits.

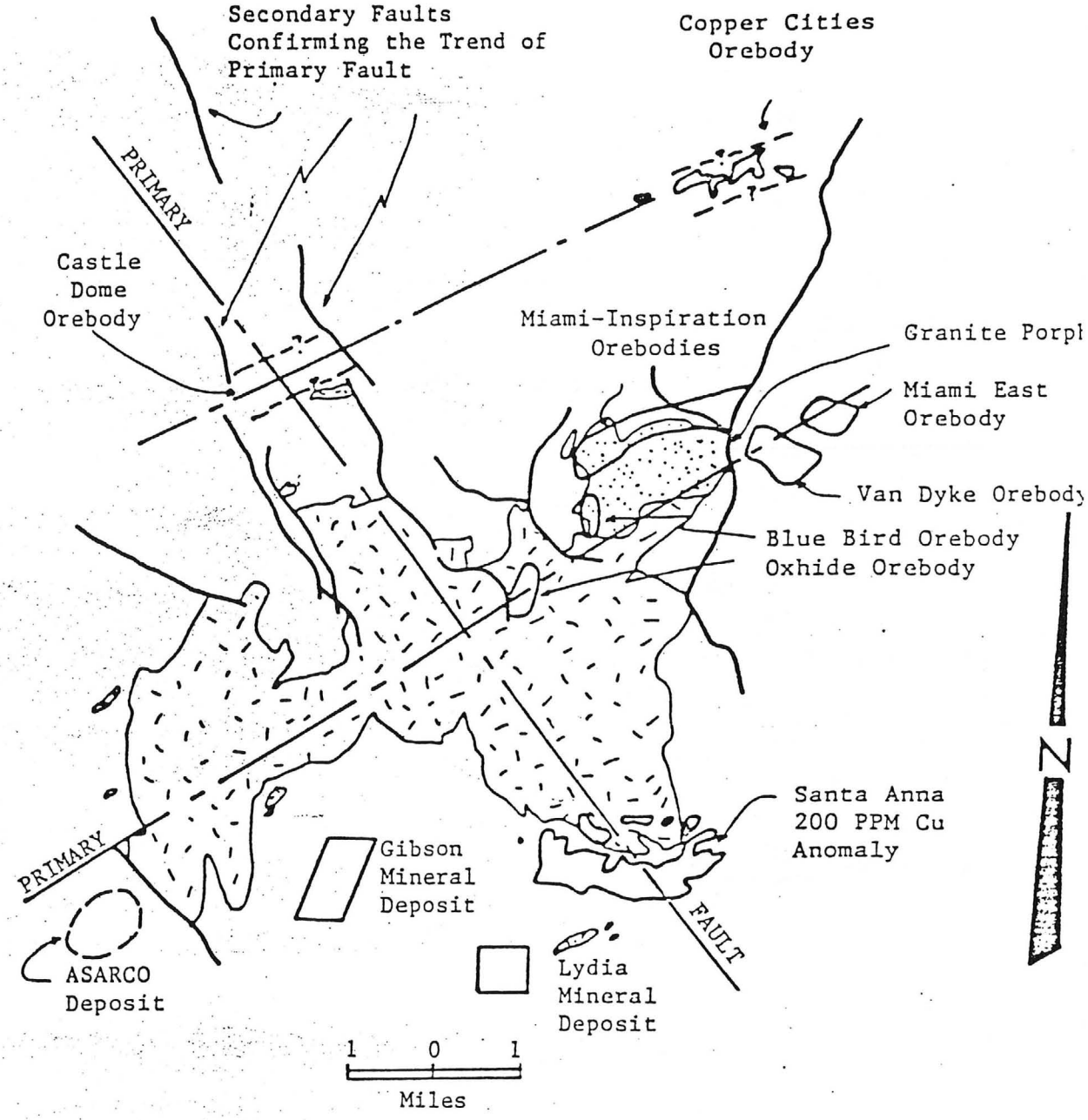

Figure 3 - District geologic map showing spatial relationships of the Gibson Mineral deposit and the Lydia mineral deposit to inferred primary faults, secondary faults Schultze granite, granite porphyry and other mineral deposits

The Gibson deposit is comprised of a series of steeply dipping epithermal veins which strike approximately north-east to south-west. Two of the veins, the Summit and the Pasquale were mined extensively up to about 1918. Some of the other veins have only occasional trenches or short tunnels. The veins vary in width from a few feet to over 20 feet and have a strike length up to and over a mile each.

The Pasquale vein had the largest development with a 600 foot shaft, 26,000 feet of drifts, and numerous stopes. Apparently, the mining was concentrated on the extraction of chalcopyrite. The grade of ore shipped from the mine was in excess of 15% copper. Any material of lesser value was used for stope filling. From 1906 to 1918 the mine produced 12 million pounds of copper. The average grade of the ore shipped was approximatley 20% copper, thus about 30,000 tons of copper ore were shipped from the mine. Since 1918 no serious mining has been carried out on the property.

The mining was concentrated in obtaining chalcopyrite. The weathering of the veins apparently goes approximately to 200 feet below the surface. In this interval of weathering malachite is the predominant mineral. According to the data available to the author, the weaterered portion of the veins were not mined.

Fletcher et al. and Carouso estimate large reserves of ore in the veins. Fletcher et al. estimate a potential of 672,000 tons of minable ore at a grade of 5% of copper. Carouso estimates that there are at least 1 million tons of copper ore of a grade of 1% of copper in the Forester #1 vein alone.

Beside the veins, Fletcher et al. estimate that there are present over 10 million tons of low grade and deseminated copper ore containing 0.70% of copper. No detailed maps substantiating the above nor any record of systematic

sampling have been made available to the author, and presumably such studies have not been conducted.

IN SITU ORE POTENTIAL

The figures for potential ore reserves and their grades as given by Fletcher et al. and Carouso are of the order required for a mining operation provided the ore could be mined cheaply and the copper extracted at relatively low cost. The oxide ore would be amenable to leaching thus, the extraction process would be of low costs. The mining could be carried out by open pit in select areas where relatively high grade copper ore is present and where all mining and tranportation costs would be so low as to make the operation economical. If only 250,000 tons of copper ore of an average grade of 5% could be obtained in the area, at a mining and transportation cost not exceeding $20.00 U.S., a profitable undertaking could be realized on the property.

A cursory examination of some surface outcrops of some of the veins on the property was conducted by the author in December 1984. It was seen that in places high grade copper ore was present near the surface. One grab sample of such ore gave a result of 20.5% copper per ton. The sample was over a width of 12 inches. The above indicates that good quality ore may be present in the area.

It is recommended to conduct a detailed survey of the copper mineralization over the Gibson mine area in order to outline the potential ore bodies and to calculate ore reserves. If the results would be favorable a feasability study would be required before mining and extracting of the copper would be initiated.

The expenditures for the gological survey and samling of the area will be rather small in comparison to the potential profits of the operation if sufficient ore reserves could be found and delineated.

IN SITU LEACHING POTENTIAL

The In Situ leaching potential is good because the stopes of the old mine workings were filled with waste material which contained a high percentage of copper and the mineralized shear zones are bound by impervious walls. Rain water infiltrates the old mine workings and a large portion of it comes out in springs north-east of the Gibson Mine and joins a stream. At present, green coloured water issues from the springs and produces a jelly-like unconsolidated malachite which can be over one foot in depth. This copper is washed away during flood stages and a new layer of malachite jelly is formed again. Apparently, somebody dumped a load of sulfuric acid down the Gibson Mine.

As has been suggested by Fletcher et al. and also by other people in the area, steps should be taken to investigate the potential of "in place" leaching. If such a process were feasible, considerable copper could be recovered. In addition, the copper pollution of the stream would be minimized. A major drawback for the in situ leaching is the scarcity of water in the area.

RECOMMENDATIONS

It is recommended that a geological mapping and sampling program be conducted in the near future in order to prove or disprove the presence of high grade, easily minable copper ore. The budget for the proposed survey and the following developmental phases are set out in the next chapter.

PROPOSED BUDGET AND WORK

PHASE I:	Geological Survey		
	1. Geological Survey		$5,000.00
	2. Trenching and Sampling		$9,200.00
	3. Transportation and Analyses of Samples		$2,000.00
	4. In Situ Leaching Investigation		$2,400.00
	5. Airfare		$1,600.00
PHASE 2:	Topographic Survey and Site Layout		$5,500.00
PHASE 3:	Feasibility Study		
	Flow Sheet, Mining Plan, Leaching, Electrowinning, Infrastructure, Regulations. Approximately		$15,000.00
PHASE 4:	Production		
	1. Leaching Pad Construction	Approximately	$50,000.00
	2. Electrowinning Plant	Approximately	$200,000.00
	3. Operating Expenses	Approximately	$100,000.00

APPENDIX

Analyses Results

MIN-EN Laboratories Ltd.
Specialists in Mineral Environments
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524 TELEX: 04-

CERTIFICATE OF ASSAY

COMPANY: IDA-MAY RESOURCES LTD.
PROJECT:
ATTENTION: BRIJ R. SHARAN

FILE: 5-21
DATE: JAN.21/85.
TYPE: ROCK ASSAY

We hereby certify that the following are assay results for samples submitt

SAMPLE NUMBER	AG G/TONNE	AG OZ/TON	CU %
	2.0	0.06	.560
	2.0	0.06	.882
	1.8	0.05	.980
	1.8	0.05	.350
	2.4	0.07	> 1.080
	2.2	0.06	>.960
	1.8	0.05	.374
	1.5	0.04	.570
	2.0	0.06	.458
	2.3	0.07	.742
	3.2	0.09	.700
	2.1	0.06	>.770
	4.2	>0.12	.398
	2.2	0.06	>.764
	2.1	0.06	>.990
	1.8	0.05	.665

Certified by

MIN-EN LABORATORIES LTD.

REFERENCES CITED

Carouso, N.H., 1973; Gibson Mine Report

Fletcher, J.B., Clary, T.A., and Ingram, F.J., 1984; Gibson Mine, Gila County, Arizona. Project Scope and Preliminary Propery Evaluation Report.

CERTIFICATE

I, L.A.Bayrock, of 1899 Queens Avenue, West Vancouver, British Columbia, certify that:

1) I am a registered member of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.

2) I graduated from the University of Alberta majoring in geology in 1953, B.Sc. and 1954, M.Sc., I graduated from the University of Wisconsin in 1960, Ph.D.

3) I have practiced my profession continuously since graduation.

4) Neither I, nor any member of my family has any interest in Ida-May Resources Ltd.

5) The information contained in this report is based on field examination and sampling of the Gibson Mine property and supplemented by the review of two reports.

Dated at West Vancouver, in the Province of British Columbia, this the 15 day of February, 1985.

L.A. Bayrock

L.A.Bayrock, Ph.D., P.Geol.

STATUS OF DORMANT MINES

MINE NAME: Gibson.

LOCATION: Gila County - Miami district

OWNER AND/OR LEASEE: owner Ross Finley - Albert Stevens Leaser J.E. Clay

ADDRESS: Globe Ariz Miami Ariz

APPROXIMATE PRODUCTION (Year of 1945):

COPPER unknown Lbs. LEAD ______ Lbs.

ZINC ______ Lbs. (OTHER) ______

CHECK THE CHIEF CAUSE OF YOUR DISCONTINUED PRODUCTION:

(A) Easily available ore worked out.
(B) Increased costs, but have quantity similar to past grade of ore.
(C) Too close a margin to develop more ore.
(D) am repairing and sinking a shaft started in May-1948 lack of funds is holding back progress.

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

Copper at 22½¢ plus 5¢ premium.............. 1,000,000 Lbs.
Copper at 22½¢ plus 10¢ premium.............. 1,500,000 Lbs.

as an estimate around 720 tons a year

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

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

Yes

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

Yes - 10¢ premium

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

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

Yes

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

Stage 1: Government engineers review project and, if a little drilling appears to be justified and a preliminary key to the situation, such drilling program to be agreed upon by owner and government engineer, paid for by the government, but let by contract.

Stage 2: If results of drilling (or without drilling) justify underground development and/or production equipment, same to be obtainable via a mortgage loan on property.

Please discuss the above: I have my own mining equipment such as compressor, hoist, Machines, cars + some track. I need funds for labor, wages and material for the job. With a loan I could open up the mine for production

SUGGESTIONS:

Please let me hear any information you have on this subject discussed above

DATE Sept 2, 1950

SIGNATURE J. E. Clark.

the none only carier copper

STATUS OF DORMANT MINES

MINE NAME: Gibson

LOCATION: about Seven miles south Miami

OWNER AND/OR LEASEE: owner Ross C. Finley & lessee Gulf Roberts

ADDRESS: Mr Finley 195 muskeet st. Globe ariz | P.O.Box 1728 Miami ariz

APPROXIMATE PRODUCTION (Year of 1945): > present in operation in 1945

COPPER _____ Lbs. LEAD _____ Lbs.

ZINC _____ Lbs. (OTHER) _____

CHECK THE CHIEF CAUSE OF YOUR DISCONTINUED PRODUCTION:

(A) Easily available ore worked out.
(B) Increased costs, but have quantity similar to past grade of ore.
(C) Too close a margin to develop more ore.
(D) _____

_____

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

Copper at 22½¢ plus 5¢ premium..... 1,000,000 Lbs.
Copper at 22½¢ plus 10¢ premium..... 1,500,000 Lbs.

_____

_____

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

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

I honest believe with a little help that I would have one of as good a mine as there is in the country

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

_____

_____

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

I dont think that it would be necessary to do any drilling

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

I would like to get a loan to buy Equipment

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

Stage 1: Government engineers review project and, if a little drilling appears to be justified and a preliminary key to the situation, such drilling program to be agreed upon by owner and government engineer, paid for by the government, but let by contract.

Stage 2: If results of drilling (or without drilling) justify underground development and/or production equipment, same to be obtainable via a mortgage loan on property.

Please discuss the above: I would like to have a Engineer to come and look the Property over there is 2 or 3 places that the vane has been dug into that would give a engineer a good chance to estimate the Vein - back in 1907 and up till 13 on the north end of the Claim it produced several hundreds thousands dollars worth of copper but was never worked more than 250 ft deep - I have the blue print of the under ground work

SUGGESTIONS: I have a shaft down more than 50 ft and only like crown 10 ft being below all the old work and all the vein south of the shaft has never been worked at more than 30 or 40 ft. I have 20 to 30 of low grade ore showing in the shaft but I can not work it fast enough to make it pay working it by hand if I could get a loan to buy a compresser with a short time I could sink another 50 ft and I could work out several tons of ore per day.

DATE (9 - 2 - 1950) SIGNATURE (Gary Roberts)

MG-50

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date June 27, 1940

1. Mine Gibson Mine
2. Mining District & County Miami Ariz.
3. Former name
4. Location Gila County
9 miles SW
5. Owner Anton Westhoff and Ross C. Finley
6. Address (Owner) Box 1586, Globe, Ariz.
7. Operator Ross C. Finley
8. Address (Operator) " " "
9. President
10. Gen. Mgr.
11. Mine Supt.
12. Mill Supt.
13. Principal Metals Copper
14. Men Employed
15. Production Rate
17. Power: Amt. & Type
18. Operations: Present Not operating

GIBSON MINE

Cu

Gila 4 - 4 T 1 S, R 14 E

19. Operations Planned Leasing and leaching

20. Number Claims, Title, etc. Eight patented claims
40 unpatented claims.

21. Description: Topography & Geography Summit Pinal Mts. Many veins in schist.

22. Mine Workings: Amt. & Condition

(over)

23. Geology & Mineralization — chist formation - ~~gasan~~ OSSAN, carbo[illegible]e ore zone and high grade sulphide zone.

24. Ore: Positive & Probable, Ore Dumps, Tailings — hundreds of thousands ore dump and tailings 250,000 tons.

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

25. Mine, Mill Equipment & Flow Sheet

26. Road Conditions, Route — Very good, 3 miles from Miami Phoenix highway.

27. Water Supply — Sufficient

28. Brief History — Great producer, several millions

29. Special Problems, Reports Filed

30. Remarks

31. If property for sale: Price, terms and address to negotiate. — For sale, price very reasonable.

32. Signed — Ross C. Finley
Box 1586
Globe, Arizona.

33. Use additional sheets if necessary.

MG-50

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date June 27. 1940

Mine Gibson Mine

District Miami Ariz

Location 7 miles S. of Miami

Former name

Owner Anson Westhoff and Ross C. Finley

Address Box #1586. Globe. Ariz

Operator Ross C. Finley ✓

Address

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Copper - ✓

Men Employed

Production Rate

Mill: Type & Cap.

Power: Amt. & Type

Operations: Present Not operating

Operations Planned Leasing & Leaching.

Number Claims, Title, etc. Eight patented claims
& Ho unpatented claims.

Description: Topog. & Geog.
Summit Pinal Mts. Many veins in schist

Mine Workings: Amt. & Condition

(over)

Geology & Mineralization Schist formation - Gossan, carbonate ore zone and high grade sulphide zone

Ore: Positive & Probable, Ore Dumps, Tailings Hundreds of thousands. Ore dumps & tailings 250000 tons -

Mine, Mill Equipment & Flow Sheet

Road Conditions, Route Very good. 3 miles from Miami Phoenix Highway -

Water Supply Sufficient -

Brief History Great producer - Several millions

Special Problems, Reports Filed

REGISTERED ASSAYER
CERTIFICATE EXPIRES
ROSS C.
FINLEY
DEC. 31; 1942
ARIZONA, U.S.A.

Remarks

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

For sale - Price very reasonable

Signed Ross C. Finley BM 1586 Globe,

Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date September 20, 1942

Mine KUNO MINES

Engineer FRED H. PERKINS

District SUMMIT MINING DISTRICT

Location 11 miles S.W.of Globe

Former name Gibson Mine

Owner (Anton J.Westhoff, Miami, Arizona
(Ross C. Finley, Globe,Arizona

Address Louis A. Kuehne

Operator Louis A. Kuehne, Box 366,Globe,Arizona

Address Box 366, Globe, Arizona

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Copper, gold and silver

Men Employed

Production Rate Not now operating

Mill: Type & Cap.

Power: Amt. & Type None

Operations: Present Seeking a Preliminary Development Loan

Operations Planned Draining, cleaning out, unwatering, timbering and making accessible the lower workings. Sampling and assaying of ores exposed.

Number Claims, Title, etc. Eight (8) patented claims: Lily, Daisy, McKinley, Hillside, Congress, Little Jim, Little Mans and Summit.

Description: Topog. & Geog. The Gibson mine is located on top of a ridge at an elevation of about 4600 ft. above sea level. The slope is gradual on the northerly side where the mine is approached by road, but the southerly side is cut by deep, steep canyons. The lower surface workings are about 1000 ft. below the collar of the shaft. Pinal schist and granite is the country rock.

Mine Workings: Amt. & Condition The main shaft is 600 ft. deep and several other shafts of lesser depth and several thousand feet of drifts, cross cuts, stopes. The old workings are in very bad shape, making an examination of them impossible at this stage.

(over)

Geology & Mineralization The country rock is Pinal schist and granite and the mineralization mostly follows the schist planes which have been forced open by a series of movements of this formation parallel to the stripe of the schistocity or bedding planes.

Ore: Positive & Probable, Ore Dumps, Tailings

Mine, Mill Equipment & Flow Sheet Hoist, compressor, steam boilers and 150 ton mill are all removed from property now.

Road Conditions, Route Seven miles of paved highway and four miles of fairly good granite road connect this mine with smelter at Miami.

Water Supply Water supply is limited. A source of good drinking water is 500 feet lower than the present Gibson Camp. However, the Pasquale tunnel would furnish milling water at only 200 ft. lift.

Brief History Gibson Mining Company. Incorporated for $1,250,000 in May, 1917 in Deleware but bought for taxes five years ago by A. J. Westhoff and R. C. Finley. Government report shows production in copper 1906 to 1918 to be $2,100,000 from 12,000,000 lbs. of copper.

Special Problems, ~~Report Blank~~ The upper mined portions of this ground is in copper carbonates and not adapted to concentration. Difficult water source; also present excessive milling costs. The lower portions of this mine's ground lacks a road for transportation purposes.

Remarks From all I can see of this ground it is only adapted to leasers and small operators activity. A large company would have difficulty in operating the mine.

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

I don't believe, at present, this property is for sale. The present Leasors believe they can operate at a profit if they can get a government loan to get started.

Signed Fred H. Perkins

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

Phoenix, Arizona.
Sept. 18. 1939.

Mr. Graham;
State Capitol
Phoenix, Ariz.

Dear Bill;

I have put in two months this summer on the property submitted herewith, and I believe it is without doubt, the best thing, yet undeveloped in the Globe-Miami District.

Mr. Castle, who will also sign this note to you, has put in quite some time on the property, and can also back my statement.

We are jointly, asking that you please give this your personal attention, should inquiry be made to your office for such property.

Thanking you in advance for any favors you may be able to render us, in financing or disposing of this property, we are.

Yours very truly

W J Bush
Signed W. J. Bush,

E O Castle
Signed E O Castle.

INCREASE PRODUCTION SURVEY — October 1st, 1942

By: FRED H. PERKINS — KUNO MINE (Old Gibson)

Owner: Anton J. Westhoff, Miami, Arizona, and
Ross C. Finley, Globe, Arizona

Lessee: Kuno Mines - Co-partnership

Metals: Copper, gold and silver.

LOCATION:

This property is located in the Summit Mining District, Gila County, Arizona, at an elevation of about 4700 feet above sea level, on top of a ridge in the Pinal Mountains. The northerly slope of this ridge is gradual, thus permitting a good grade for the road. The southerly slope is cut by steep canyons and there is about 1000 feet difference in elevation between the collar of the Old Gibson Incline Shaft and the Reynolds Tunnel, extreme high and low working on this property.

ROADS:

A good road now connects this property with the smelter at Miami, Arizona, a distance of eleven miles, seven of which is paved highway.

AREA:

There are eight (8) patented lode mining claims in this group.

GEOLOGY:

Country rock, pinal schist and granite and is cut by three large and continuous veins having a northeast and southwest strike and can be traced for the entire length of the property, a distance of about 6000 feet. Three or more other veins which are not so strong as the above three veins, and the entire system of veins are more or less parallel. The Summit and Pasquale are the largest veins being from four to seven feet wide and have a dip of 50 to 65 degrees southerly. The ore occurs in chutes and a good portion of the vein material is commercial ore.

Due to the caved condition of most of the workings my conclusions were formed from short stretches of the workings and opened veins that I could examine. The vein structure is more or less open along the strike of the vein and much oxidization has occurred, leaving the ore values in carbonates and oxide forms of copper. Where formation is tight and the original form of copper mineral still exists, it shows it to be chalcopyrite and occasionally bornite. Vein fill is mostly quartz, calcite, hemitite, gypsum and the brecciated wall material. There seems to be no freezing of ore on either wall.

HISTORY:

Very little attention was given this subject and besides the tailings, old dumps and openings of all kinds are evidence enough that this property has gone through a bonanza stage as well as the distressful stage caused by the up and down price of copper and change of ownership. At one time a 150 ton mill was owned. It was operated by steam boilers. Also large air compressors and hoists were operated by steam. All of this machinery is gone from the property now.

It is of record a 600 ft. inclined shaft with 26,000 ft. of drifts, raises and cross-cuts was made. A tunnel called Pasquale, was driven at a point that cut the shaft at 200 ft. depth. A tunnel called the Reynolds was started to intersect the vertical shaft whose depth was 500 feet. This tunnel would have been 1800 ft. long.

It is also of record this ground produced:

1906-09	$1,250,000 worth of copper, also
1916-17	1,262,275 pounds of copper,
1917-18	622,033 pounds of copper.

"Hear say" has it no ore was broken or removed from these old workings whose value was less than 15% copper

PURPOSE OF THIS EXAMINATION:

The lessors of this property are desirous of learning if there is a probable area in these holdings where new activity could be started, whose size would be large enough to be attractive to an operator who is going to depend on borrowed money to carry on such an activity.

FINDINGS:

The southwest portion of the holdings, covered by claims Little Jim and Little Man's, have advantageous tunnel sights. These tunnels were started on the veins and evidence and affidavits seem to show no ore stopped to date. These tunnels are caved at the mouth and show evidence of the need of draining and some timbering.

These veins are at the lowest point on the area controlled by the Lessors and being on veins that have been very productive elsewhere, it seems to the writer that it would be safe and profitable mining to open up Tunnels No. 3 and No. 4.

The outcrop between the portals of Tunnel No. 3 and Tunnel No.4 looks very encouraging. The block of ore is not less than 400 feet long and as high and would give a commercial block of ore, the developing of which promises virgin ground.

This project would also require the establishment of a small camp near the work and about a mile of road to it.

Water is scarce and copperous, but near the portal of the Reynolds Tunnel is plenty of good water. Formerly this water was pumped 500 ft. vertically to the Old Gibson Camp.

PROBLEMS:

Finance is the one big problem. If the Government would allow a Class "C" loan, inside 30 days the owners could have ore on its way to the smelter from this property.

February 11, 1942

Additional information of GIBSON MINE owned by Findley and Westoff.

In prospecting and examining the Tucson Globe Group quite a bit was found out about the Gibson Mine. Most of the information is hearsay, but comparing notes from many of the people working at the old mine, it should be accurate enough.

The Gibson was composed of four fissure veins - The Summit, Intermediate, Pasqual and Hydrophobia (Note Tucson-Globe map and report on that).

The ore occurred in these in rich pockets or shoots. The low-grade, under 15% copper, was left in place. Most of the ore handled at that time was so called black sulphide (Chalcocite) and Chalcopyrite. These leads were mined down to the four hundred foot level. A shaft was sunk to the six hundred, but little or no mining was done below the four hundred.

From miners employed at that time: The ground below the four hundred became very hard to hold. The grade of ore dropped to around nine per cent, but the leads widened out to quite a width. Most of the work done on this was done on the noth-east end of the property. On the southwest end no shafts were sunk. In fact there is several hundred feet of the Summit lead on the southwestern end of the property that has not been mined at all. I believe that water was the trouble. This lays in the bed of the creek.

Most of the shafts and tunnels of this property have caved. It will take quite an investment to open the old workings. But the unmined area can be opened quickly by the right people. Equipment required would be a good pump in addition to regular sinking equipment.

This portion of the property also lays off the road down in the canyon. Either a road or a tram could be built at no insurmountable cost.

This information has not been turned over to the present owners, but in view of the present national emergency, it should be filed with the government reports of the property.

(Signed) M. H. Yager
Box 65, Miami, Arizona

Additional Information of Gibson mine owned by Findley and Westoff.

In prospecting and examining the Tucson Globe group quite a bit was found out about the Gibson mine. Most of the information is hearsay but comparing notes from many of the people working at the old mine it should be accurate enough.

The Gibson was composed of four fissure veins.

Note Tucson Globe map and report on that. The Summit, Interdimate, Pasqual and Hydrophobia. The ore occured in these in rich pockets or shoots. The low grade, under 15% copper, was left in place. Most of the ore handled at that time was so called black sulphide(Chalcocite) and chalcopyrite. These leads were mined down to the four hundred foot level. A shaft was sunk to the six hundred but little or no mining was done below the four hundred. From miners employed at that time. The ground below the four hundred became very hard to hold. The grade of ore dropped to around nine percennt but the leadswidened out to quite a width. Most of the work done on this was done on the northeast end of the property. On the south west end no shafts were sunk . In fact there is several hundred feet of the Summit lead on the southwestern end of the property that has not been mined at all. I believe that water was the trouble. This lays in the bed of the creek.

Most of the shafts and tunnels of this property have caved. It will take quite an investment to open the old workings. But the unmined area can be opened quickly by the right people. Equipment required would be a good pump in additon to regular sinking equipment. This portion of the property also lays off the road down in the canyon. Either a road or a tram could be built at no insurmountable cost.

This information has not been turned over to the present owners but in view of the present national emergency it should be filed with the goverment reports of the property.

O M Hyagen

GIBSON CONSOLIDATED CO R CO.

PROPERTY: The Gibson mine, 16 claims, 8 patented, 300 acres, about 8 miles West of ~~Globe~~ Miami, Gila County, Arizona.

GEOLOGY: Country rock is Pinal schist and granite carrying 3 approximately parallel fissure veins, having a N.E.strike. The Summit and Pasquale are the principal veins, the former, of 4 to 7' width, traceable for the entire length of the property, a distance of 1¼ miles. These 2 veins are about 250' apart, and the Intermediate vein is about 75' E. of the Pasquale. Ore occurs in the Summit and Pasquale veins in well-defined shoots, pitching 50 to 65° S. their lenticular form being in some cases due to strike faulting and movements. Ore is mainly massive chalcopyrite, with a little bornite. Gangue is quartz with some calcite and small quantities of specular hematite and gypsum. Two veins show high-grade ore and some low-grade ore has been developed in 5 veins. The McKinley vein, undeveloped, shows a strong outcrop.

DEVELOPMENT: To 500' depth by main incline shaft 600' deep with 26,000' of work, from shaft and tunnels. The Pasquale tunnel, driven on the Pasquale vein, is about 200' below the collar of the incline shaft. The Reynolds tunnel is to intersect the vertical shaft at 1,800' from the portal, a depth of 500'. Six levels show that the Summit vein runs N. 21° E., dips 56° N.W., the main pay streak carrying 8 to 15" of chalcopyrite ore assaying 20 to 30% copper, throughout the various levels. The shaft has 5,915' of workings on the Summit vein, besides drifts on the Pasquale and Intermediate vein, reached by crosscuts on the 3rd and 4th levels.

The Pasquale vein differs from the Summit in that it cuts across the bedding of the schist, instead of following the bedding planes as does the Summit, having a strike of N. 20° E., with dip of 35 to 50°. Apparently the Pasquale vein is better defined, more continuous and stronger than the Summit, the fissure being of 5 to 10' width, carrying a pay-streak, from a few inches to 3' in width, of ore assaying up to 33% copper. Ore occurs in the Pasquale vein in shoots pitching to the south, similar to the ore occurrence of the Summit.

The Intermediate vein, with drifts of 225' length on the 3rd and 4th levels, has a strike of 12° E., with dip of 5° N.W., and is only about 8" wide, with firm walls and, as developed, is not of great importance, but has possibilities. The ground is heavy and treacherous, requiring timbering for practically every foot of drifting and concrete posts have been used.

ORE RESERVES. In 1919, the official estimate of ore exposed and on dumps was 550,000 tons; while the total possible ore was 1,000,000 tons of which 80% can be extracted. The average is 2.25% copper.

PRODUCTION: The gross value of ore produced by the old Gibson Copper Company, 1906-1909, has been estimated at $1,250,000. It was shipped to the Old Dominion Smelter, a distance of about 18 miles, by 10-horse teams, and required careful selection, owing to the extremely high cost of transportation, returning better than 20% copper. In 1917 production was 1,262,275 pounds copper; in 1918 662,033 pounds.

From Mines Handbook Year 1922

Submitted by Ross C. Finley 512 [illegible] Globe.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine KUNO MINE (Old Gibson)

Date October 1st, 1942

District

Engineer FRED H. PERKINS

Subject: PRODUCTION POSSIBILITY SURVEY

OWNER: Anton J. Westhoff, Miami, Arizona, and
Ross C. Finley, Globe, Arizona.

LESSEE: KUNO MINES - Co-partnership

METALS: Copper, gold and silver.

LOCATION: This property is located in the Summit Mining District, Gila County, Arizona, at an elevation of about 4700 feet above sea level, on top of a ridge in the Pinal Mountains. The northerly slope of this ridge is gradual, thus permitting a good grade for the road. The southerly slope is cut by steep canyons and there is about 1000 feet difference in elevation between the collar of the Old Gibson Incline Shaft and the Reynolds Tunnel, extreme high and low working on this property.

ROADS: A good road now connects this property with the smelter at Miami, Arizona, a distance of eleven miles, seven of which is paved highway.

AREA: There are eight (8) patented lode mining claims in this group.

GEOLOGY: Country rock, pinal schist and granite and is cut by three large and continuous veins having a northeast and southwest strike and can be traced for the entire length of the property, a distance of about 6000 feet. Three or more other veins which are not so strong as the above three veins, and the entire system of veins are more or less parallel. The Summit and Pasquale are the largest veins being from four to seven feet wide and have a dip of 50 to 65 degrees southerly. The ore occurs in chutes and a good portion of the vein material is commercial ore.

Due to the caved condition of most of the workings my conclusions were formed from short stretches of the workings and opened veins that I could examine. The vein structure is more or less open along the strike of the vein and much oxidization has occufred, leaving the ore values in carbonates and oxide forms of copper. Where formation is tight and the original form of copper mineral still exists, it shows it to be chalcopyrite and occasionally bornite. Vein fill is mostly quartz, calcite, hemitite, gypsum and the brecciated wall material. There seems to be no freezing of ore on either wall.

HISTORY: Very little attention was given this subject and besides the tailings, old dumps and openings of all kinds are evidence enough that this property has gone through a bonanza stage as well as the distressful stage caused by the up and won price of copper and change of ownership. At one time a 150 ton mill was owned. It was operated by steam boilers. Also large air compressors and hoists were operated by steam. All of this machinery is gone from the property now.

Box 366
Globe, Arizona
September 29th, 1942

Mr. Earl F. Hastings
Assistant Director & Projects Engineer
Department of Mineral Resources
413 Home Builders Building
Phoenix, Arizona

Dear Mr. Hastings:

Re: R.F.C.Preliminary Development Loan

In immediate answer to yours of the 28th instant I wish to advise it was my intention to state in my application that the proposed work to be done would be in No. 3 and No. 4 tunnels.

Mr. Perkins, the Engineer, advises me to put up a camp near the proposed work as it is quite a climb to the top of the ridge, the end of the present road.

I did not intend to build the road from the top of the ridge until it was satisfactorily proven that there was plenty of ore in the tunnels. The Enginner and I estimated that the cost would be less than $5,000.00 to open up these tunnels and that we would be taking ore out before this expenditure was made.

I hereby cancel my request for this road allowance.

Yours very truly,

lak-m

Louis A. Kuehne

LOUIS A. KUEHNE

September 28, 1942

Mr. Louis A. Kuehne
Kuno Mines Company
Box 366
Globe, Arizona

Dear Mr. Kuehne:

Subject: R.F.C. Preliminary Development Loan

Your application has been forwarded to this office for review prior to action being taken by the R.F.C. engineers. We find the application incomplete in a few details which you can easily correct.

There is every evidence from the reports, maps, and so forth that you intend to reopen tunnels No. 3 and 4, however, nowhere in the application do you specifically so state. Your list of expenditures includes items for labor, camp, supplies, equipment, and so forth, but does not give any hint as to the nature of the work to be done.

Likewise there is an item in the amount of $600 for a road on the property. We assume that this is a road leading to the block of ground between the portals of Nos. 3 and 4 tunnels and at a much higher elevation than either tunnel. We can almost definitely state that such an allowance for road work would not be approved and think that in the interest of the balance of your application this expenditure should be eliminated.

We suggest that you write to us relative to the location of the proposed work and at the same time cancel your request for road work, applying that $600 to other work inside of the mine. Immediately on receipt of this information we will return your application to the R.F.C. together with our review.

Yours very truly,

Earl F. Hastings, Assistant Director
and Projects Engineer

EFH:LP

June 9, 1941

Mr. Fred Vollmer
Volco Wire Works
Kenilworth, New Jersey

Dear Mr. Vollmer:

Anticipating a severe shortage of copper, the Department of Mineral Resources is gathering data to show where additional copper supplies can be obtained from the smaller Arizona mines. Would you kindly give us the data for the Arizona Globe and the Gibson Mines that you have been working upon. There is every possibility that there may be government assistance in getting the copper production under way on a larger scale than we have had in the past.

Thanking you, and with kindest personal regards,

I am

Yours very truly,

Chairman, Board of Governors
Arizona Department of Mineral Resources

CFW:LP

June 29, 1945

Mr. E. F. Walsh
430 East 65th Street
New York City

Dear Mr. Walsh:

In reply to your card of recent date relative to the old copper mine commonly known as the Gibson, situated in the Globe quadrangle, and which has been officially named Arizona Globe Copper, we state as follows:

On December 16, 1918 G. M. Butler, Dean and Director of the Arizona School of Mines at Tucson, made an examination of the Gibson Mine and wrote a report which seems to be practically correct and fitting to the property as of that time. As field engineer for the State Department of Mineral Resources, I have inspected this old copper mine twice during the past year and report that the property is in the same condition as when Dean Butler made his examination.

Within the past year an effort was made to sort and ship part of the old dumps and a bulldozer was employed to open up a large tonnage through the principal dump showing considerable copper, but the effort to hand grade a portion of the ores to smelter grade of 2-1/2 percent copper ore was proved not attainable.

As the property stands today it is just in the condition that Dean Butler stated in his report as requiring deeper new mine development, and that the outcome would finally be decided by milling and the metallurgy of these copper ores. We quite agree with Mr. Butler that the property has much merit, as we see it, for a development proposition.

There is now a good road up to the old shaft and former millsite but all surface equipment has been removed and most of the mine openings are caved or partially destroyed.

We do not have an extra copy of Dean Butler's report, but in the event you wish to obtain a copy this office can make it for you or you can write direct to G. M. Butler, School of Mines, Tucson, Arizona.

Mr. Ross C. Finley of Globe, Arizona, is one of the present owners, and I believe handles all business pertaining to the Gibson Mine.

Enclosed is copy of report I made on the Gibson Dumps.

If we may be of further service, please let us know.

Yours very truly,

DEPARTMENT OF MINERAL RESOURCES

Andrew Macfarlane
Field Engineer

AM:LP
Enc.

A :ONA DEPARTMENT OF INER RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: Robert Franks
   Address: Miami, AZ.
2. Mine: Gibson - Bellevue etc 3. No. of Claims - Patented —
   Unpatented —
4. Location: From old Hwy. opposite Castle Dome Rd. drive $\pm$ 3 mi to Camp.
5. Sec 21 Tp 1S Range 14E 6. Mining District Summit
7. Owner:
8. Address:
9. Operating Co.: Arizona Mining Properties, Inc
10. Address: 1006 - Main, Houston, Texas
11. President: Paul Kayser 12. Gen. Mgr.: Rob Franks
13. Principal Metals: Cu. 14. No. Employed: 6
15. Mill, Type & Capacity: Leach
16. Present Operations: (a) Down ☐ (b) Assessment work ☐ (c) Exploration ☐
    (d) Production ☒ (e) Rate 30-40 gpm solution tpd.
17. New Work Planned:
18. Miscl. Notes: Water and acid allowed to percolate downward into old workings, drill holes. Water taken from Tunnel #1 and #2 (one about 75' above the other). Solution goes to ~~Vat~~ cement storage tank and then to 6 - 8'x12 high Conduit tanks (pipes) that are asphalt lined. Tanks are in series and in successive steps. Overflow goes from tank 1 to 2 etc. Suspended in tanks are steel sheets that collects Cu. which is knocked off from time to time. Cu ppts. settle at bottom and is drawn off and goes to drying pad. Work considered a pilot operation

Date: Sept. 26, 1969

F. T. Olsson
(Signature) (Field Engineer)

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine GIBSON DUMPS Date June 25th, 1944

District Miami, Arizona. Engineer A. MacFarlane

Subject: Examination

Gibson Mine Location; Approximately 9 miles southerly from the center of the town of Miami, Arizona. The workings are on a north foot hill of the Pioneer Range at an altitude of about 3400 feet.

Road and Transportation ; From Miami and the International smelter, the main highway passing to all points westward from Miami thru Superior 66 is followed for about 6 miles; whence a bladed county road turns left off the paved highway and this is followed for about 5 miles in a southeasterly course thence a short spur road up to the Gibson Dumps of about 1 mile.

These stub roads are in good condition and the ores which may be won from the Gibson mine and dumps may be readily trucked to the smelter at a per ton cost of $1.25 to $1.50 .

Mine Dumps ; As it is now proposed to work the rather large dump accumulations, of a past long mining record for this old mine, the dumps showing copper content were topoline measured and the tonnage by screen tests and hand sorting of the course ore, approximately 1/4 of the material handled gave per assays 2.36% copper as the selected dump heads.

A recent shipment made of screened and sorted ore assayed 4.12% Cu.
and a 15.758 ton shipment made in Nov.28th, 1942 " " " 4.96% "

Estimating that the sorted and screened ores will carry more waste dilution when worked on a commercial sized scale, I would expect that the marketable product will contain from 50# to 60# copper per ton and that out of 4 tons handled about 1 ton of this grade will be obtained.

The costs attending this proposed dump sorting will be approximately the following;

Sorting, screening and tramming at per ton					$ 2.50
Trucking to smelter	"	"	"	.....	1.50
Smelting charges	"	"	"	.....	4.50
Ins. and other General costs	"	"	"	.....	.50
Total	"	"	"		9.00

It is estimated that a total of about 35,000 tons may be won from the Gibson dumps, this cannot be accurately determined now, as the contour of the ground under the dumps is not known, and only approximated in this summary of the tonnage to be handled.

The attatched assay list was obtained from 4 samples taken by this field engineer and the balance from samples taken by men working on the Gibson dumps.

Owner Of the Gibson mine Ross C. Finley of Globe, Arizona.

It is of record a 600 ft. inclined shaft with 26,000 ft. of drifts, raises and cross-cuts was made. A tunnel called Pasquale, was driven at a point that cut the shaft at 200 ft. depth. A tunnel called the Reynolds was started to intersect the vertical shaft whose depth was 500 feet. This tunnel would have been 1800 ft. long.

It is also of record this ground produced:

1906-09	$1,250,000 worth of copper, also
1916-17	1,262,275 pounds of copper,
1917-18	622,033 pounds of copper.

"Hear say" has it no ore was broken or removed from these old workings whose value was less than 15% copper.

PURPOSE OF THIS EXAMINATION: The lessors of this property are desirous of learning if there is a probable area in these holdings where new activity could be started, whose size would be large enough to be attractive to an operator who is going to depend on borrowed money to carry on such an activity.

FINDINGS: The southwest portion of the holdings, covered by claims Little Jim and Little Man's, have advantageous tunnel sights. These tunnels were started on the veins and evidence and affidavits seem to show no ore stopped to date. These tunnels are caved at the mouth and show evidence of the need of draining and some timbering.

These veins are at the lowest point on the area controlled by the Lessors and being on veins that have been very productive elsewhere, it seems to the writer that it would be safe and profitable mining to open up Tunnels No. 3 and No. 4.

The outcrop between the portals of Tunnel No. 3 and Tunnel No. 4 looks very encouraging. The block of ore is not less than 400 feet long and as high and would give a commercial block of ore, the developing of which promises virgin ground.

This project would also require the establishment of a small camp near the work and about a mile of road to it.

Water is scarce and copperous, but near the portal of the Reynolds Tunnel is plenty of good water. Formerly this water was pumped 500 ft. vertically to the Old Gibson Camp.

PROBLEMS: Finance is the one big problem. If the Government would allow a Class "C" loan, inside 30 days the owners could have ore on its way to the smelter from this property.

GIBSON MINE ASSAYS

			Cu %	
12/13	George Gordon	Screened ore	5.08	Shipment
	" "	Unscreened ore	2.82	
	" "	Heap Ore	1.69	
	" "	Summit Dump	2.49	
	" "	Summit Fines - Surface	7.05	Shipment
3/21	Louis Kuehne	#1 Shaft	4.35	
	" "	#2 Dump	1.39	
	" "	Summit Dump W. Draw	1.91	
	" "	" " "	1.81	
	" "	Summit Dump, Lower #2	2.05	
	" "	Tadish Tunnel	1.10	
	" "	Dump 15' across	1.91	
3/30/44				
	George Gordon	Screen Shipment	4.54	
	" "	Smelter	4.12	Shipment
5 & 6				
1944	Louis Kuehne	Unscreened	2.14	
	" "	Screened	2.34	
	" "	McKinley Dump	1.18	
	" "	Sunset Dump - Coarse	2.03	
	" "	" " - Fine	2.22	

15 samples .. 31.26 divided by 15

Gives an approximate average of 2.08 copper per ton