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## ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: MCMORRIS LODE

#### ALTERNATE NAMES:

INCA GROUP
LA PLATA SHAFT
RICHMOND PROPERTY
BLUE QUAIL GROUPS
LAKE CLAIMS
HELENA AND NUGGET GROUPS
JUMBO SHAFT
JUMBO LEAD
GILA MONSTER MNG. CO. CLAIMS
OLD RICHMOND

GILA COUNTY MILS NUMBER: 203

LOCATION: TOWNSHIP 2 N RANGE 15.5E SECTION 10 QUARTER C LATITUDE: N 33DEG 31MIN 20SEC LONGITUDE: W 110DEG 45MIN 25SEC TOPO MAP NAME: ROCKINSTRAW MTN - 15 MIN

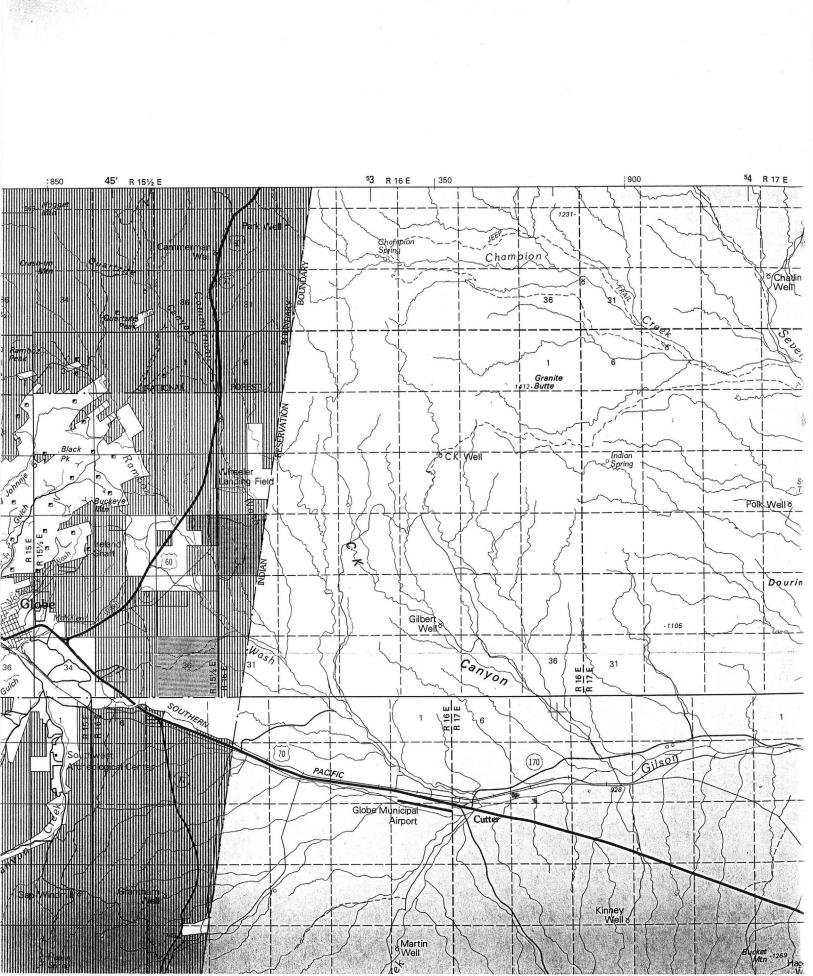
**CURRENT STATUS: PAST PRODUCER** 

### COMMODITY:

**SILVER** 

### **BIBLIOGRAPHY:**

ADMMR MCMORRIS MINE FILE
ARIZONA MINING JOURNAL NOV 1919 P 15
PETERSON N P GEOL & ORE DEPTS GLOBE-MIAMI
DIST USGS PP 342 1962 P 98
RPT OF GOVERNOR AZ 1899 P 109
ADMMR "U" FILE, Ag5
BISHOP O M GEOL & ORE DEPTS RICHMOND BASIN
AREA THESIS U OF AZ 1935
RAND L H & E B STURGIS MINES HANDBOOK 1931
P 317 SEE GILA MONSTER MINING CO



INCA MINE GILA COUNTY

Walt Schmidt, who is exploring McKussick's claims brought in cores for examination. FTJ WR 6--20--69

Mc Morris

McMORRIS MINE GILA COUNTY

Conference with Frank D. Chew of General Aluminum and Chemical Corp., 4865 So. Reams Road, P.O. Box 38, Goodyear, Arizona 85338 (938-3866)

Mr. Chew said that he had been offered an option on three groups of claims (including McMorris Mine). The operations in Richmond Basin in 1919 are in the accompanying copy of an article in Arizona Mining Journal, Nov. 1919). The owners of the McMorris Group, (Randolph, Randolph No. 2, Silver Basin, Silver Basin No. 1 to No. 4, Discovery No. 1 to No. 5) are: W. A. McBride, and R. T. McKussick, 4402 N. Black Canyon, Phoenix (266-8106). The second group consists of (Blue Jay, Silver Key, Silver Plate, Top, Gray Copper No. 2, Gray Copper No. 3, Gray Copper, Nugget Gulch, Protection). Owners involved in this group include, Gloria Mae Thompson Walls, 6549 East Palm Lane, Phoenix, R. McWilliams, Miami, Arizona, George E. Sebastian, Miami, and R. T. McKussick of Globe, Clifford Renionalso is said to have an interest.

Chew said he would hire a local geologist to inspect the claims for him. It was suggested that he contact "Red" Williams, or the Inspiration Geologists - Charlie Johnson and Olmstead - both of whom are quite familiar with the area.

LAS Memo 6-8-67

The claims owned by Bob McKussick are now called the Inca Mine, owned by Inca Corp., Shannon Dyer, President and Walter Schmidt, Gen. Mgr., 4231 E. Amelia, Phoenix.

John Roberts, P.O. Box 513, Miami, AZ 85539 reported he is opening the Helen Tunnel in the Richmond Basin District, Gila County.

# ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES VERBAL INFORMATION SUMMARY

- 1. Mine file: MCMORRIS
- 2. Mine name if different from above:
- 3. County:
- 4. Information from: John Roberds

Company:

Address: P.O. Box 513

Miami, AZ 85539

Phone: 473-2267

5. Summary of information received, comments, etc.:

Mr. Roberds currently has 21 claims in Richmond Basin comprising the Nuggett Group which is just south of the McMorris. These include the Blue Jay, Silver Key, Silver Plate, Tap, etc.

Date: November 1, 1988 Nyal J. Niemuth, Mining Engineer

# Arizona Department of Mines and Mineral Resources

# VERBAL INFORMATION SUMMARY

May be Reproduced

1.	Information from: Glen Grishkowsky of Equity Funding
	Address: Box 31441 Phoenix, Az. 85046 Phone 992-8328
2.	Mine: McMorris 3. ADMMR Mine File McMorris
4.	County: Gila 5. District Richmond Basin
5.	Township <u>2N</u> Range <u>15½ E</u> Sec(s) <u>10</u>
7.	Location:
3.	No. of Claims - Patented Unpatented
9.	Owner (if different from above)
10.	Address:
11.	Operating Company: Gold Dome Mining Coproration
12.	Pertinent People and/or Firm:
	Commodities: Silver-Gold
4.	Operational Status: Awaiting funding
5.	Summary of information received, comments, etc.: Mr. Grishkowsky reported he
	is trying to raise funding for a development-pilot production endeavor for
	Gold Dome Mining. According to him and a summary report he provided Gold
	Dome has leased a group of 18 claims apparently including the old McMorris
	Mine and the La Plata MIne and plans exploration, development and a 50
	tpd pilot mill. His orignial contact with the ADMMR was in July, 1984.
	As of November 5, 1984 no funding had been obtained and the project was
	still open for funding. The project is referred to as the Richmond Basin
	Silver Project.
	× 1 Phill-
	Date: November 5, 1984 (Signature) ADMMR
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# IRON KING ASSAY OFFICE ASSAY CERTIFICATE

BOX 56 — PHONE 632-7410 HUMBOLDT, ARIZONA 86329

ASSAY MADE FOR Atizona Dept. of Minus a Mineral Rusources Mineral Blog Forgrounds Phoenix AZ 85007



(1) 1 mar.

REF. NO.	DESCRIPTION	oz/ton Au	oz/ton Ag		% Fe	% Рь	% Zn	% Cu
12-21-7	COD StockPile	.098	6.81			12.20	2,30	1.00
- 8	Richmond # 2	Nil	167					
9	Clementine 40	Tr	Nil					
10	Clementine #2	.024	14.1					
11	Richinbar toils	Tr	Nil					
12	Moon Anchor Calcite Vein	NI	No 1			1.98		
13	Joe Smith	MY	Nil					NI
	-							
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career bull-

# DEPARTMENT OF MINERAL REJURCES STATE OF ARIZONA

#### FIELD ENGINEERS REPORT

Mine McMorris Mine

Date Jan. 28, 1965

District Richmond Basin District, Gila Co.

Engineer Axel L. Johnson

Subject: Field Engineers Report. Information from Victor S. Kilpatrick, Owner

References (1) "Geology and Ore Deposits of the Richmond Basin Area, Gila Co. Ariz."

by Ottey Manley Bishop, submitted as a thesis requirement for MS degree in 1935 at the
University of Arizona. Copies at University Library & Dept. of Mineral Resources, Phoenix

(2) Report of McMorris Mine -- Nov. 21, 1962 by Axel L. Johnson

(3) Report of Blue Quail Mining Co. -- 1963 by Lewis A. Smith.

(4) Report of Mammoth Conference under datte of Jan. 28, 1965, by A. L. Johnso

Location In Richmond Basin, about 18 miles north of Globe by road.

Number of Claims 12 unpat. claims, deeded to Mr. Kilpatrick by his mother, Mrs. Edna Lake, Rte. # 1 -- Box 119, Globe, Ariz. a short time ago.

Owner Victor S. Kilpatrick, 226 Ave. C, San Manuel, Ariz.

Principal Minerals Silver. Minerals are reported to be horn silver, ruby silver, and argentite.

Present Mining Activity Inactive.

Geology Vertical vein, from 6 to 7 ft. wide, striking E. & W, partly through quartzite and partly through andesite was reported by Mr. Kilpatrick, who also stated that one geologist had reported that the ore vein, mined from the old McMorris shaft, was cut off by a fault, about 200 ft. to the east of this shaft, and, also cut off by another fault about 500 ft. to the west of the shaft. Horizontal displacement --20 to 50 ft.

- Ore Values (1) Samples by Blue Quail Mining Co. ---- (a) one diamond drill sample ran 65 oz., (b) drifting on the vein samples averaged about 7 oz., (c) shipments to the Inspiration smelter (40 tons) ran 7 and 8 oz.
- (2) Shipments from dump and from the top of the vein by previous owner, Mrs. Lake ram to the Inspiration smelter (15 tons) ran 6 to 7 oz. silver.
- (3) Old shipments by McMorris Mining Co. (1875 -- 1893) is reported to have run very high in silver values, but the owner had no smelter reports on same.
- Old Mine Workings (1) 1 vertical shaft -- 600 to 650 ft. deep --- caved in preventing entry. This shaft was used by McMorris Mining Co. 1875-1893.
- (2) 1 vertical shaft -- 200 ft. deep, and about 1,000 ft. east of shaft (1). This shaft was last used 1916 to 1918, and is accessible to depth of 30 ft.
- (3) 1 vertical shaft -- 150 ft. deep, and about 1,000 ft. west
- of shaft (1). This was deepened from 40 ft. to 150 ft. by Blue Quail Mining Co. 2 yr. ago
  - (4) Drift 150 ft. long, with raise from same a distance of 150 ft.
- from shaft (3), this work being done by Blue Quail Mining Co.
- (5) Extensive underground workings by McMorris Mining Co. in 1875 to 1893, from shaft (1), with the possibility that most of the direct shipping ore in the vicinity of this shaft (200 ft. east to 500 ft. west) has been mined out.

# DEPARTMENT OF MINERAL RESOURCES STATE OF ARIZONA FIELD ENGINEERS REPORT

memorris

Mine Mac Morris Mine

Date Nov. 21, 1962

District Richmond Basin District

Engineer Axel L. Johnson

Subject: Field Engineers Report. Information from Earl Beckwith & V. S. Kilpatrick. No visit/

Location In Richmond Basin, 18 miles north of Globe, in the Apache Mts.

Number of Claims 6 unpatented claims

Owners Earl Beckwith, 22 - 3rd Ave., San Manuel, Ariz.
V. S. Kilpatrick, 226 Ave. C., San Manuel, Ariz.

Principal Minerals Silver. Minerals are native silver, horn silver, ruby silver, and argentite.

Present Mining Activity None at present.

Geology Owners report a 6 ft. wide vertical vein, which is traceable for 4,000 ft., and also a flat dipping vein, a few inches wide, intersecting the vertical vein at a depth of about 200 ft. below the surface.

Ore Values One sample taken on one of the mine dumps ran 2.4 oz. silver, and a second sample taken on a second dump ran 5.3 oz. silver. A third sample, taken on the main vein about 8 ft. below the surface, ran 7.8 oz. in silver.

Past History and Production

Mac Morris Mining Co. They state that it was closed down in 1893 on account of the drop in the price of silver. The past production of the mine is reported in Bulletin No. 140 "Arizona Metal Production" of the Arizona Bureau of Mines as \$ 640,000 from 1875 to 1885. (See Bull. # 140, page 92.)

Old Mine Workings

- (1) I vertical shaft -- 650 ft. deep. Shaft is all caved in and inaccessible Owners have heard reports that there is good silver ore along this shaft from the 200 ft. to the 600 ft. level, and that the vein was lost at the 600 ft. level.
- (2) 1 vertical shaft -- 200 ft. deep. This shaft was in the process of being sunk deeper in 1893, and the closing of the mine prevented any further shaft sinking. This shaft is accessible only to a depth of about 30 ft.

Proposed Plans Owners, Mr. Beckwith and Mr. Kilpatrick, plan on making application for an OME Exploration loan. They already had some information on the subject received from the Office of Mineral Exploration. Engineer gave them further information on the subject, including application blanks. They asked for an engineer of the Dept. of Mineral Resources to visit the property, and was referred to Lewis A. Smith, who takes care of the Globe area. They said that they would contact Mr. Smith, either in the Phoenix office or at the Globe ASMOA meeting.

McMorris - Nuggett Group etc. page 2 - 12-7-65

and greater depths of 1000' or more would investigate a possible source of mineralization.

- References: 1/ Hamilton, Patrick "The Resources of Arizona 1883
  - 2/ Blake, W.P. "Mining in Arizona" Report of the Governor to the Dept. of Interior, 1899
  - 3/ Geology and Ore Deposits of the Richmond Basin Area thesis by Ottey Manley Bishop, Univ. of Ariz. 1935

# DEPARTMENT OF MINERAL RESOURCES STATE OF ARIZONA FIELD ENGINEERS REPORT

Mine Old Richmond Mine

Date

1-30-63

District Richmond Basin District, 10 miles

Engineer

Lewis A. Smith

N of Miami, Gila County

Subject: Data extracted from a report by C.L. Beckwith (Feb. 18, 1915)

History: This is one of the original locations in the area, by S.W. Richmond.

Geology: The mineralization is in part on a long vein which crosses the area. At this mine rich pockets of silver ore occurred in the vein that cuts diabase that is bordered on the southeast by slate and quartzite. The mine originally was developed by a 195 foot crosscut tunnel which cut 30 feet of vein matter. According to this report the mines of the immediate area are credited with a production of 50,000 to 60,000 ounces of silver.

Mr. Johnson, geologist for Inspiration Copper Co., spent some time in the area and stated that the ore occurs in small, but sometimes rich, shoots. Native silver and stromeyerite are said to be among the main ore minerals, although locally the halogen silver minerals had been reported. He has not seen them, except rarely.

Jan. 28, 1965 Axel L. Johnson

McMorris Mine Richmond Basin District, Gila Co. Field Engineers Report

Past History and Production

- (1) McMorris Mining Co. operated the mine from 1875 to 1893, closing down the mine when silver dropped in price to the point where it became unprofitable to work it. The ore mined was shipped to the A. S. & R. smelter at Selby, Calif. Bull. # 140, "Arizona Metal Production", Arizona Bureau of Mines on page 92 reports the production from the McMorris Mine --1875 to 1885 as \$ 640,000 worth of silver. It was reported that the rich ore was found between the w 200 ft. level and the 600 ft. level, and also that they lost the ore on the 600 ft. level, or that they did not follow it kexex because the vein turned to the north.
- (2) An attempt was made to reopen the mine again in World War I (1916 1918) by another company, the work being done mostly from the x 200 ft. shaft. They were reported as unable to find direct shipping ore, and to have had a small mill which they used for concentrating the ore.
- (3) The Blue Quail Mining Co. obtained a lease with option on the property about 2 years ago, and explored and operated the property until about one year ago. This company first drilled two diamond drill holes at angles of about 60 degrees. The first one intersected the vertical vein at a distance of about 85 ft., showing some silver values; and the second one intersected the vein at a distance of 135 ft., one sample taken showing \$65 oz. of silver. They then retimbered an old shaft, located about 1,000 ft. west of the old McMorris shaft, sinking this shaft from a 40 ft. depth to 150 ft. in depth. They then drifted for 150 ft. to the west to the vicinity of the two drill holes, and then put up a raise for 150 ft. up to the surface. It is reported that this shaft sinking, drifting and raising was all in the vein (6 to 7 ft. wide), but they did not find the ore values they had in the drill holes, the ore averaging about 7 oz. 40 tons of ore is reported having been shipped to the Inspiration smelter in Sept. 1963, which averaged from 7 to 8 oz. silver per ton.

Proposed Plans

Mr. Kilpatrick stated that he plans on making application for an OME Exploration Ioan, and would like to have a Dept. of Mineral Resources engineer visit the property with him, and make recommendations on how to proceed. The writer informed him that he should contact Mr. E. G. Williams, who takes care of this area, and also told him that it might be advantageous to employ a consulting mining engineer or geologist to make a detailed study and mapping of the property prior to applying for an OME exploration loan.

# ARIZ NA DEPARTMENT OF MINTAL SOURCES Mineral Building, Fairgrounds Phoenix, Arizona

1.	Information from: Walter Schmidt
	Address: 4231 E. Amelia (Bob McKussick claims)
2.	Mine: Inca 3. No. of Claims - Patented
	Unpatented 12
4.	Location: Richmond Basin
5.	SecTp_2/Range
7.	Owner: Inca Corp.
8.	Address: 4231 E. Amelia
9.	Operating Co.: Same
10.	Address:
11.	President: Shannon Dyer 12. Gen. Mgr.: Walter Schmidt
13.	Principal Metals:14. No. Employed:
15.	Mill, Type & Capacity:
16.	Present Operations: (a) Down ☐ (b) Assessment work ☐ (c) Exploration ☒ core drilling (d) Production ☐ tpd.
17.	New Work Planned:
18.	Miscl. Notes:
	**************************************
Date	e: 6-3-69  (Signature)  F. T. Johnson  (Field Engineer)

# DEPARTMENT OF MINERAL RESOURCES STATE OF ARIZONA PIELD ENGINEERS REPORT

Mine BLUE QUAIL MINE

Date 9/27/63

District RICHMOND BASIN, GILA CO.

Engineer Lewis A. Smith

Subject: Conferences with Bert Reed, Inspiration Copper Co., and Blue Quail Truck Driver, 9/27/63. (C. Phelps was not available at the time).

PROPERTY: Reportedly 3 Claims (Mine owner report sent to Phelps)

LOCATION: From Hyw. 88 - Hwy. 60-70 Junction, north for  $7\frac{1}{2}$  miles to the Hwy. Camp, thence I mile to Hick's Ranch, thence  $8\frac{1}{2}$  miles E-NE along a sand wash. (Sand too deep for car.)

OWNERS: Blue Quail Mining Company.

AGENT: 'Cordell H. Phelps, Rt 2, Box 2419, Mesa, Arizona.

MINERAL: Silver, silica.

SHIPMENTS: 40 tons of "ore" from the new shaft to the Inspiration Smelter (9/27/63) (Assays were not yet run).

WORK & EQUIPMENT: (a) 2 shallow core-drill holes.

(b) 100 (plus or minus) foot shaft, equipped with a diesel engine-

driven hoist, skip, compressor, and mining tools, RD Cat & 20 Ton truck.

(c) 6 men are presently employed.

GEOLOGY: According to Bert Reed, Chief Geologist, for Inspiration Copper Co., who examined the mine area, the immediate region consists of a thick diabase sill that contains inclusions of strongly altered limestone (probably Mescal). The limestone blocks, or inclusions, are defined by discontinuous transverse fractures and these also cut the diabase. The ore is affiliated with the limestone inclusions and is generally pockety. Reed also stated that there was a strong structure crossing the Basin and that he wanted to give this further attention. This same structure was also reported on by Harold Johnson, of Inspiration, and by Joe Fowles, Geologist, for Miami Copper Co.

Active Oct. 1963 - 6 men

STATE MINE INSPECTOR

705 WEST WING, CAPITOL TOWER
HOENIX, ARIZONA 85007-2859

ORM 101-106 REV. 01/86

) Celly Co	)
START-UP NUMBER 6723310	
STATE NUMBER	
MSHA NUMBER	

# NOTICE TO ARIZONA STATE MINE INSPECTOR TATE MINE INSPECTOR

JUN 30 1986 In compliance with the Arizona Revised Statute Section 27-303, we are submitting this written
notice to the Arizona State Mine Inspector of our intent to start stop move (Please check one) a mining operation.
If this is a move, please show last location:  If you have not operated a mine previously in Arizona, please check here:  Education and Training Division to assist with your mine safety training, please check here:  If this operation will use Cyanide for leaching, please check here:
DMPANY NAME: KINING
VISION:
INE OR PLANT NAME: MUMORRIS MING TELEPHONE: 425-9672
HIEF OFFICER: WILLIAM D. PUSSELL
PANY ADDRESS: 1700 E. ASH ST.
ITY: GLOBE STATE: HZ ZIP CODE: 85501
INE OR PLANT LOCATION: (Include county and nearest town, as well as directions or locating property by vehicle:GILA COUNTY , APPROXAMATELY 14 MILES
ORTH WEST OF GLOBE DRIVE PINAL WASH NORTH TO FOREST SERVICE RD 210
220 to RICHMOND BASIN -
YPE OF OPERATION: ILNDERGROUND PRINCIPAL PRODUCT: SILVER
TARTING DATE: 6-26-86 CLOSING DATE: DURATION:
ERSON COMPLETING NOTICE: WILLIAM RUSSELL TITLE: MGR
E NOTICE MAILED TO STATE MINE INSPECTOR: 6-26-86

# F.Marshall Smith P.En/

210-744 West Hastings Street, Vancouver, British Columbia, Lanada, v6C 1A5
Phone: (604) 684-2361

# REPORT

on the

# RICHMOND BASIN PROJECT

GLOBE MINING DISTRICT

**GILA COUNTY** 

ARIZONA, U.S.A.

Latitude: 33°30'N 33°32′暮 00″ N

Longitude: 110°52'W 110° 45′ 32″ W

Section 2, 3, 10, 11 T2N, R151/2E

for

# RACER RESOURCES LTD.

506-595 Howe Street
Vancouver, British Columbia
Canada
V6C 2TS

by

F. MARSHALL SMITH, P.Eng. September 8, 1987

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### 1. SUMMARY

The writer was retained by Mr. Tom Gelfand, Director, Racer Resources Ltd. to examine on September 2, 1987 the Richmond Basin property, Gila County, Arizona.

The mineral claims are accessible by road from Phoenix via U.S. Highway 60 and 88 then by gravel road. The holdings lie about 100 miles east of Phoenix, at about 5500 foot ASL, north of the Porphyry copper mines at Miami and Globe. Rainfall in the area seldom exceeds 10 inches per year with hot but not oppressive summers and cool to cold winters.

The land examined consists of 43 lode mining claims located by Mr. Charles Claycomb in the Richmond Mining District, Sections 2,3,10 and 11, Township 2 North, Range 15½ East.

The earliest discovery of silver in the area appears to have been by Apache Indians who reportedly used silver for bullets from nuggets found in a creek draining the area. Once the early American explorers heard this report, there was a rush to the area, about 1873 to 1874, and the creek worked for the silver nuggets. During 1875 or 1876 one of the sources for the nuggets was located on surface at what is now called the McMorris Shaft.

The exploration of the surface located several vein outcroppings with several shafts sunk on lodes scattered over a one square mile area. There was no mill locally available in the early days and mining probably was based on "direct shipping ore" grading probably +200 ounces silver per ton, rather than the stringer vein material grading +60 ounces/ton from the 200 foot level in the McMorris mine.

Detailed sampling and preliminary mapping of old showings and/or workings by Mr. Bosley<sup>1</sup> indicate that on the 100 level of the McMorris Mine samples of the back (east-west fault) give 61.73 ounces silver/ton. A sample from the north-south vein over three feet ran 29.3 ounces silver/ton and a "sample across quartz vein in raise" ran 77.6 ounces silver/ton. At the time of his examination the workings had been pumped out to the 170 foot level.

The Richmond Basin area is underlain by the Ruin Granite, the mafic suite of intrusive or extrusive rocks, and diorite all of preCambrian age, and the unconformably overlying Scanlan conglomerate unit of unknown age. The mafic suite, the younger diorite and the overlying Scanlan formation all host mineralization on the claims.

Faulting has occurred along a series of northwest striking regional brakes in the area. These faults appear to be north side up in the region and to have generated a series of tension release breaks between the main breaks.

There appear to be two types of silver deposits in the Richmond basin area. The first type is hosted in three sets of tension release faults. The principal fault set in the McMorris area is east-west and with a steep northerly dip. The east-west set is clearly related to a north-south steeply dipping vein/fault set and in at least one locality a flat lying vein/fault set. The faults are occasionally filled with quartz, adularia, silver copper sulfides, pyrite, and barite. The quartz is banded in mineralized areas and white to grey white and massive elsewhere.

The second type occurs in the Flat Mesa area about 500 feet south of the McMorris shaft and consists of shattering of the Scanlan formation with fractures parallel and more than 10 per foot over areas larger than 100 square feet.

The lodes constitute the only previously mined mineralization on the property. The bulk of the silver known to have been mined is from the east-west vein/fault in the McMorris and LaPlata mines. The silver mineralization consists of secondary (?) native silver, argentite, acanthite, cerargyrite, and tennantite in masses and thin sheets throughout the quartz and as veinlets in host rocks. Due to the lack of calcite with the quartz/sulfide deposition, it is clear that native silver nuggets can be the residual from the weathering of the silver sulfide minerals. Underground muck samples have silver sulfide mineralization hosted in altered diorite and tight fine grained banded quartz. There is no indication of development of secondary mineralization and both fine pyrite and chalcopyrite are visible associated with the silver sulfides.

The mineralization in any of the fault sets is clearly confined to shoots of highgrade silver mineralization surrounded by (along strike) lower grade stringer type ore. The stringer mineralization remains to be developed and the grade of this would appear to be in excess of 60 ounces silver/ton.

Most epithermal districts have a central fault with "ore grade" mineralization at surface with many veins surrounding the central zone lacking significant "ore" at surface. With diligent exploration these related peripheral vein/faults often develop into substantial economic reserves of mineralization. This condition probably occurs on the Richmond Basin property as the alteration surrounding known mineralization occurs in patches throughout the holdings. There appears considerable opportunity for the location of further highgrade mineralized shoots on the related structures around the McMorris lode.

Recent expenditures by the current owner and immediate previous owner has been in excess of \$300,000 (US) and resulted in opening the McMorris to the 200 foot level. This work will greatly assist the next stage of developing a mineral reserve on the claims. Currently there is no proven, or probable ore reserves on the property.

A programme of detail geological mapping, sampling, test geophysical surveys, core and reverse circulation drilling in Phase I is recommended to commence immediately. If this first phase of work is successful in locating significant zones of mineralization in and around the old workings a second phase of work is recommended to define an economic reserve on the acquisition.

The budget for Phase I is recommended at \$310,000 (CAD) with Phase II, if warranted, budgeted at \$550,000 (CAD).

#### 2 INTRODUCTION

The writer was retained by Mr. Tom Gelfand, Director, Racer Resources Ltd. to examine the Richmond Basin property, Gila County, Arizona and report on the merits of the claims as to acquisition and if warranted a programme and related budget to develop the acquisition.

The site was examined on September 2, 1987 with Mr. Arturo A. Ona, Geologist and Mr. Charles Claycomb, owner. Most of the previously cited showings and old workings were visited but the shafts were not in fit shape to gain access to the underground workings.

The writer has used reports by Geologists and Engineers working for Mr. Claycomb to assist in the compilation of this report. There does not appear to have been any examination of the property by a Canadian Professional Engineer within the last ten years.

## 3. LOCATION AND ACCESS

The Richmond Basin Project is located in Gila County, Arizona, U.S.A., about 100 miles east of Phoenix. The claims are generally in Sections 2,3,10, and 11 of Township 2 North, Range 15½ East. This is about 33330111 latitude and 1000521W longitude.

92 miles north of Globe — strength line.

The mineral claims are accessible by road from Phoenix via U.S. Highway 60 to Claypool, a hamlet between Globe and Miami Arizona, then north miles on State Highway 88 to a crossing at Pinal Creek at a Ranch Station. The road above the crossing is gravel and subject to washouts. This road follows Horseshoe Bend Wash for 2 miles then the results is to the right up Wood Springs Rand for 9 miles and finally right on Richmond Basin road for 2 miles to the property.

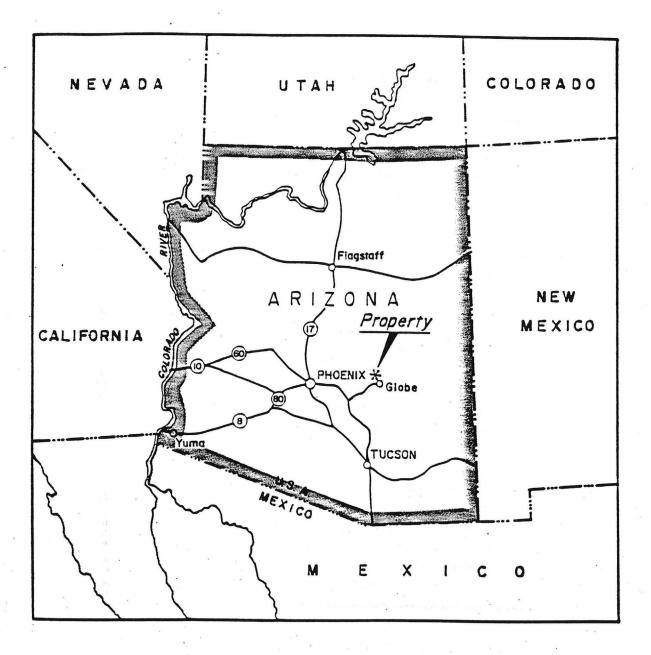
The fold distance from Globe to the property.

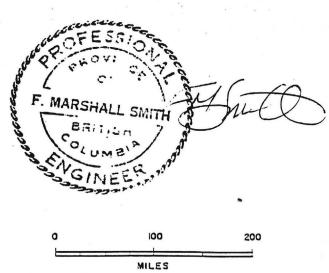
The fold distance from Globe to the property.

The fold distance from Globe to the property.

The local towns, Globe and Miami, are the natural supply and support bases for work on the land with all necessary services easily available for exploration. The towns have abundant motel, housing, water, and electrical supply for possible support for mining operations.

The large open pit copper mines owned by Inspiration Consolidated Copper Co. are very obvious landmarks to the south.





# RACER RESOURCES LTD.

# RICHMOND BASIN PROJECT

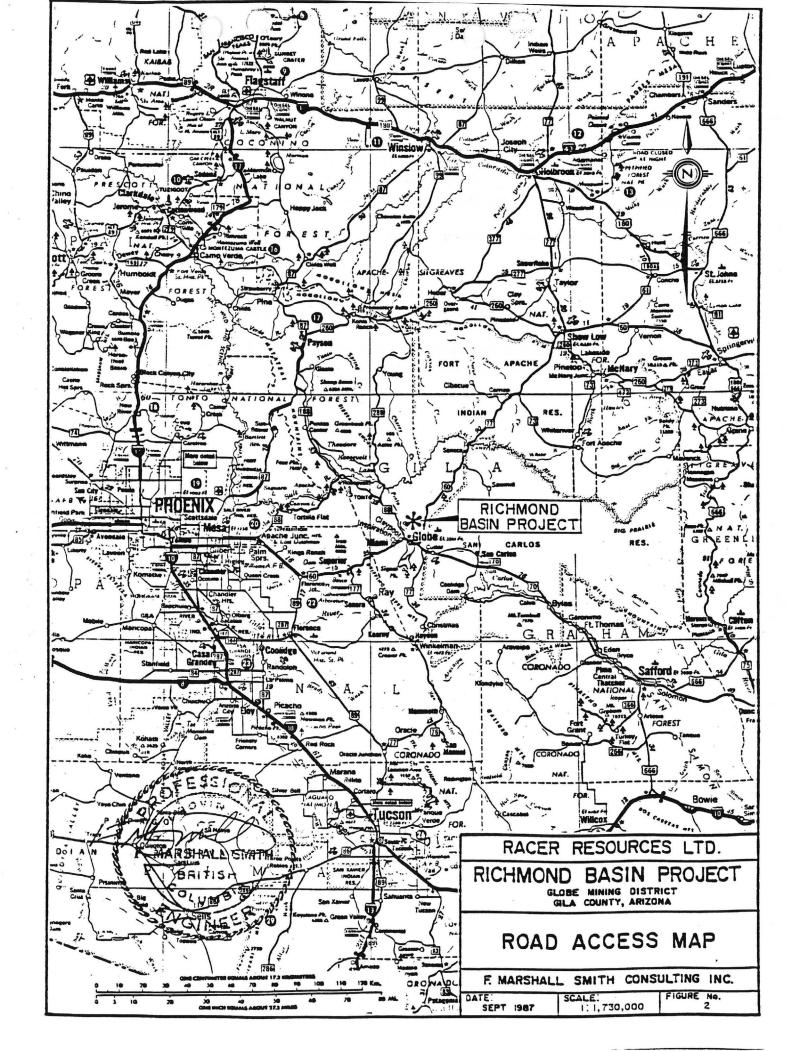
GLOBE MINING DISTRICT GLA COUNTY, ARIZONA

# LOCATION MAP

F. MARSHALL SMITH CONSULTING INC.

SEPT 1987 | SCALE:

FIGURE No.



### 4. PHYSIOGRAPHY AND VEGETATION

The mining claims covering the Richmond Basin lie within the Sierra Ancha Mountains, at about 5500 feet ASL. The local physiography consists of upland mesas and low relief on the flank of a steeper range of hills to the north and rapid drop off to the south to the valleys of tributaries to Pinal Creek.

Local washes to the southwest and south are choked with sand derived from weathered preCambrian age granites in the district.

Rainfall seldom exceeds 10 inches per year with hot but not oppressive summers and cool to cold winters. The monsoon season in August can bring cloudburst heavy rain which can make access difficult.

Vegetation consists of various cacti, upland juniper trees and bushes and sparse pines with scattered manzanita, palo verde, and grasses. The hillsides and mesas are used for grazing of cattle.

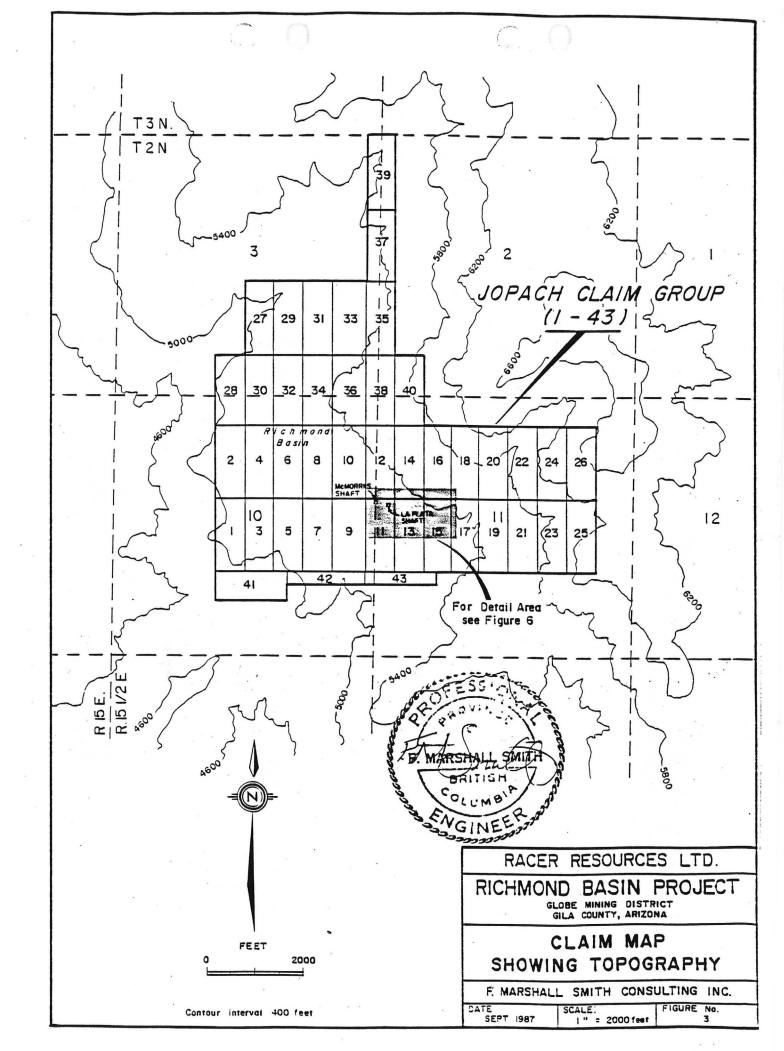
## 5. PROPERTY

The property examined consists of 43 lode mining claims located by Mr. Charles Claycomb in the Richmond Mining District, Township 2 North, Range 15½ East, Gila County, Arizona. The claims were examined, in part, and appear to be well located. The writer attended a meeting with Mr. George Hill, attorney, in Phoenix, and was advised that Mr. Hill's claim research had indicated that the Jopach 1-43 claims listed below are all in good standing with no underlying claims in good standing. The writer is very familiar with Mr. Hill's work in the field of claim title.

The following is a list of the list of the claims covered by this report. The claims were recorded on July 24, 1987 in Gila County as Document 710, and July 30 with Bureau of Land Management, Phoenix.

Claim Name	Location	County Page	BLM No.
JOPACH 1	NW4&SW4 S10	403-404	AMC272335
JOPACH 2	NW¼ S10	405-406	AMC272336
JOPACH 3	NE14&SE14 S10	407-408	AMC272337
JOPACH 4	NE¼ S10	409-410	AMC272338
JOPACH 5	NE4&SE4 S10	411-412	AMC272339
JOPACH 6	NE¼ S10	413-414	AMC272340
JOPACH 7	NE4&SE4 S10	415-416	AMC272341
JOPACH 8	NE¼ S10	417-418	AMC272342
JOPACH 9	NE4&SE4 S10	419-420	AMC272343
JOPACH 10	NE¼ S10	421-422	AMC272344
JOPACH 11	NE4&SE4 S10, NW4&SW4 S11,	423-424	AMC272345
JOPACH 12	NE¼ S10, NW¼ S11	425-426	AMC272346
JOPACH 13	NW14&SW14 S11	427-428	AMC272347
JOPACH 14	NW14 S11	429-430	AMC272348
JOPACH 15	NW1/4&SW1/4 S11	431-432	AMC272349
JOPACH 16	NW14 S11	433-434	AMC272350
JOPACH 17	NW4&SW4 S11	435-436	AMC272351
JOPACH 18	NW¼ S11	437-438	AMC272352
JOPACH 19	NW,NE,SW&SE¼ S11	439-440	AMC272353
JOPACH 20	NW4&NE4 S11	441-442	AMC272354
JOPACH 21	NE¼&SE¼ S11	443-444	AMC272355
JOPACH 22	NE¼ S11	445-446	AMC272356
JOPACH 23	NE¼&SE¼ S11	447-448	AMC272357
JOPACH 24	NE¼ S11	449-450	AMC272358
JOPACH 25	NE¼&SE¼ S11	451-452	AMC272359
JOPACH 26	NE¼ S11	453-454	AMC272360
JOPACH 27	SE14&SW14 S3	455-456	AMC272361
JOPACH 28	SW¼ S3.NW¼ S10	457-458	AMC272362
JOPACH 29	SE¼ S3	459-460	AMC272363
JOPACH 30	N½ S10, SE¼ S3	461-462	AMC272364
JOPACH 31	SE¼ S3	463-464	AMC272365
JOPACH 32	NE¼ S10. SE¼ S3	465-466	AMC272366
JOPACH 33	SE¼ S3	467-468	AMC272367
JOPACH 34	NE¼ S10, SE¼ S3	469-470	AMC272368
JOPACH 35	SE¼ S3, SW¼ S2	471-472	AMC272369
JOPACH 36	SE¼ S3, NW¼ S2	473-474	AMC272370
JOPACH 37	NE4&SE4 S3, NW4&SW4 S2	475-476	AMC272371
JOPACH 38	SE¼ S3, SW¼ S2, NE¼ S10, NW¼ S11	477-478	AMC272372
JOPACH 39	NW4 S2, NE4 S3	479-480	AMC272373
JOPACH 40	NW¼ S11, SW¼ S2	481-482	AMC272374
JOPACH 41	SW4&SE4 S10	483-484	AMC272375
JOPACH 42	SE¼ S10	485-486	AMC272376
JOPACH 43	SW4 S11, SE4 S10	487-488	AMC272377
JOINGI 43	GW /4 GII, GE/4 GIU	107-100	11110012011

Notes: S10 - Section 10; NW¼ - North West quarter section; AMC272377 - Arizona Mining Claim No.



#### 6. HISTORY

The history of the Richmond has been well researched by the owner, Mr. Charles Claycomb, and Mr. James B. Bosley<sup>1</sup>. As there is considerable controversy as to the dates and persons responsible for the discovery the early history will only be discussed briefly.

The earliest discovery of silver in the area appears to have been by Apache Indians who reportedly used silver for bullets from nuggets found in a creek draining the area. Once the early American explorers heard this report, there was a rush to the area, about 1873 to 1874, and the creek worked for the silver nuggets. During 1875 or 1876 one of the sources for the nuggets was located on surface at what is now called the McMorris Shaft.

The exploration of the surface located several vein outcroppings with several shafts sunk on lodes scattered over a one square mile area. The development probably continued until the drop in silver prices in 1880's and resumed with the rise in prices from 1890 to 1893 and again from 1900 to 1910.

The total production and grade of the material mined can only be guessed. Clearly there was no mill locally available in the early days and mining probably was based on "direct shipping ore" rather than the stringer vein material recovered recently from the 200 foot level in the McMorris shaft.

The production is stated in 1875 to have been \$700,000 (at least 600,000 ounces) to the 300 foot level on the McMorris Mine. If this value is reasonable and the width is say 8 feet by 50 feet by 300 feet for the stope, then the grade would be 61.4 ounces silver per ton. If the grade mined was actually 250 ounces silver/ton as indicated by several previous reports, then there was only 2500 tons mined for direct shipping. The possible range of grade and tonnages mined can only be used as a guide until the McMorris mine is reopened throughout the stoped area and mapped in detail.

The Blue Quail Mining Co. leased the land from 1963-64, drilled two core holes 1000 feet west of the McMorris shaft area with one hole reported<sup>2</sup> as carrying 65 ounces silver per ton. They re-entered the shaft (Chilson?) and attempted to locate the drill intersect on the main fault by clearing the old drift and raising in the area of the drill hole. The lode averaged 6 to 7 feet in width throughout their workings. The average grade of the muck from the raise was 7 ounces silver/ton.

From the work by Robert McKusick (1964-1985) and K&M Mining in 1986 on the holdings and in particular the underground rehabilitation on the McMorris and Phoenix Shafts it appears likely that the actual stoped areas were very small with considerable *stringer* vein zones left by miners from the 1800's. This points to a significantly higher grade for the previous production and substantiates the concept of *direct shipping ore* as noted previously.

Detailed sampling and preliminary mapping of old showings and/or workings by Mr. Bosley<sup>1</sup> indicate that on the 100 level of the McMorris Mine samples of the back (east-west vein) give 61.73 ounces silver/ton. A sample from the north-south structure over three feet ran 29.3 ounces silver per ton and a "sample across quartz vein in raise" ran 77.6 ounces silver/ton. At the time of his examination the workings had been pumped out to the 170 foot level.

The latest work, carried out by Mr. Ona<sup>3</sup> on the claims, consisted of supervision of limited percussion (airtrack) drilling, preliminary examination of all old workings, and sampling of prominent targets and recommending of further work. Mr. Ona advised the writer that approximately \$350,000 (US) was spent by Mr. Charles Claycomb and/or K&M Mining during 1986-87 on the property by way of opening the McMorris and Phoenix shafts and drilling a few holes in the area of the east-west structure.

There has been no recent detailed mapping, geophysical or geochemical surveys, mapping of underground workings or surveying to tie all the old workings together. Old workings must have been extensive but there are no detail maps or plots of this effort.

### 7. GEOLOGY

# 7.1 Regional Geology

The basement rocks in the Richmond Basin region consist of preCambrian age Pinal Schist of varying compositions and alteration. The unit ranges from weakly schistose muscovite schist to biotite gneiss. This unit is to some degree granitized by the preCambrian granophyric rocks (Ruin Granite) that underlie most of the area. The granite portions commonly contain 1 to 2 inch diameter microcline feldspars in a coarse groundmass of quartz, muscovite and feldspars.

The granite intrudes mafic lavas consisting of andesite to gabbroic units which may represent the Arizona equivalent of the "greenstone" belts in Archean age rocks.

Cutting both the andesite (termed diabase locally) is a grey white to white weathering biotite diorite of unknown age but probably part of the preCambrian age rocks.

Overlying unconformably on all these units is the Scanlan Conglomerate consisting of turbidite type conglomerates with clasts of Ruin Granite, arkosic sandstone, and minor mudstone. The Pioneer formation overlies the conglomerates and consists of a basal member of 265 feet of quartzite, and upper member of 375 feet of red, purple, and green shally sandstones. The upper unit in the region is the Barnes conglomerate. All these sedimentary units are provisionally dated as late preCambrian.

Late tertiary basalts cap some of the mesas in the area and occupy the floor of Pinal Creek in part. There is no clear evidence of Laramide intrusives in the district but they are known to be related to the porphyry copper deposits to the south at Globe and Miami.

Mapping of regional geology is very spotty in the district with no recent work at defining ages of the rock units.

# 7.2 Property Geology

The Richmond Basin area is underlain by the Ruin Granite, the mafic suite, diorite all of preCambrian age, and the overlying Scanlan conglomerate unit of unknown age.

The granite is uniformly pinkish brown in colour and contains megacrysts of orthoclase or microcline feldspar. The unit weathers easily to a coarse sand of light brown colour.

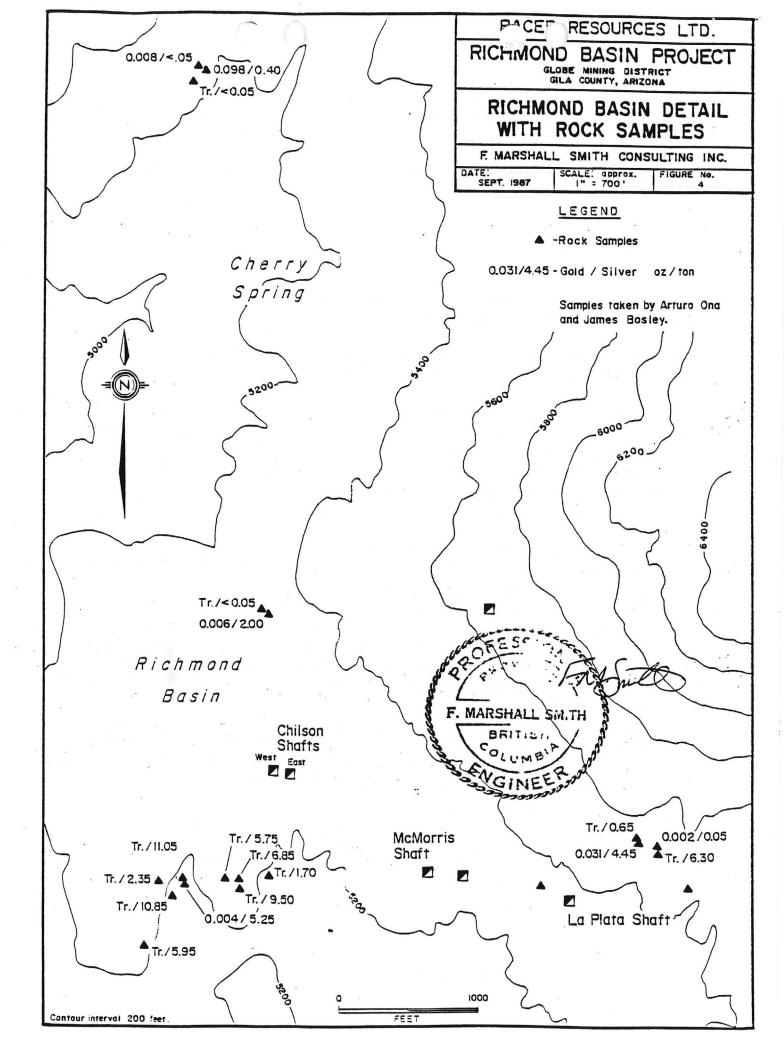
The granite appears to intrude the mafic rocks, locally called diabase, but no contacts are in outcrop except in areas of faulting. The mafic rocks have been altered by the granitic intrusion as there is variable grain size in areas of higher grade metamorphism in the mafic suite. The mafic unit consists of fine grained dark green rocks near the McMorris shaft and black medium grained away from areas of alteration associated with the mineralization. Float of gabbroic phase of this unit are scattered over the area but was not seen in place. This unit hosts some of the lode filled faulting in the region.

Bosley<sup>1</sup> describes the 'diabase' as intruding the younger Pioneer formation as sills and the diorite as intruding the 'diabase'. The writer has not seen these localities. If the 'diabase' (mafic suite) is intrusive then the diorite and mafic suite probably represent a zoned intrusion into the district. Detail geological mapping of contacts will be required to determine the relation between the various rock units. This work should assist in understanding the mineralizing event and help in the location of buried mineralization.

Cutting the granite and mafic units is a white weathering biotite diorite. This mass occupies the eastern side of the parcel and undercuts the mafic suite in the McMorris mine area. This intrusion hosts some of the mineralized structures.

The Scanlan formation consists of a basal unconformable unit on the Ruin granite. Clasts in this unit consist in part of Ruin granite and what appears to be the diorite intrusive. The Scanlan formation has graded bedding from coarse angular clasts to fine silty mudstone. Thin quartzite and calc-silicate members occur in the Flat Mesa area to the south of the McMorris shaft. This unit hosts some of the flat lodes and the shatter zone in the Flat Mesa area.

The steep bluffs to the north of the tract have outcrops of the overlying Pioneer and Barnes formations. These units are not known to host any mineralization.



Faulting has occurred along a series of northwest striking regional brakes in the area. These faults appear to be north side up in the region and to have generated a series of tension release breaks between the main breaks.

There are three sets to the tension release faults and each is mineralized in part. The principal fault set in the McMorris area is east-west and with a steep northerly dip. The east-west set is clearly related to a north-south steeply dipping fault set and in at least one locality a flat lying fault set. Jointing in the mafic suite and diorite appear to be similar to the fault sets.

The faults are occasionally filled with quartz, adularia, silver and copper sulfides, pyrite, and barite. The quartz is banded in mineralized areas and white to grey white and massive elsewhere.

Faulting in the Flat Mesa area about 500 feet south of the McMorris shaft consists of shattering of the Scanlan formation with fractures parallel and more than 10 per foot over areas larger than 100 square feet.

#### 7.3 Mineralization

There appear to be two types of mineralization in the Richmond basin area. The silver vein type as in the McMorris, LaPlata, and Chilson, (and others not examined in the area) consists of what appears to be epithermal Tertiary age lodes in tension release fractures in various hosts. These structures appear to have been the source for the famous native silver placers for the district.

The second type of deposit consists of disseminated silver mineralization in crackle or shatter zones in the Flat Mesa area.

#### 7.3.1 Lode veins

The lode veins constitute the only previously mined mineralization on the property. The bulk of the mineralization known to have been mined is from the east-west fault in the McMorris and LaPlata mines. The veins consist of banded quarts in both pods and stringers with varying silver grades.

The silver mineralization consists of secondary (?) native silver, argentite, acanthite, cerargyrite, and tennantite in masses and thin sheets throughout the quartz and as veinlets in host rocks. Due to the lack of calcite with the quartz/sulfide deposition it is clear that the native silver can be the residual from the weathering of the silver sulfide minerals. If there was any carbonate in the veins or if the wallrock was rich in carbonate the silver minerals would have been completely weathered and silver would have dissolved into water and washed away. The silver nuggets probably represent the weathered equivalent of the larger masses of silver sulfide minerals from the various outcropping mineralized lodes in the area.

Detail examination of the surface dump material from the 200 foot level on the McMorris indicates that the silver sulfide mineralization is hosted in altered diorite and tight fine grained banded quartz. There does not appear to be any indication of development of secondary mineralization and both fine pyrite and chalcopyrite are visible associated with the silver sulfides.

The lodes of the east-west type probably rotate to flat veins as indicated both in the McMorris and Persistence veins (about 1500 feet north west of the McMorris). This rotation may occur often on the property but would be hard to locate without drilling. From the outcrop of the Persistence vein there is a gap of 2 to 4 feet from the end of the flat lode to the opening of the vertical north-south set.

Mineralization on the north-south set in the McMorris area (Chilson shaft zone) does not appear to join with the mineralization on the McMorris main zone.

The large number of flat veins in outcrop in the area of the McMorris may form a large set of similar zones stacked on the south side of the McMorris and not followed to depth in the McMorris shaft zone by the previous operators. These flat structures consist of the same sort of vein filling as on the McMorris and dip very slightly south. They have been worked over long strikes but short dip in open cuts from surface. They are reported by Bosley<sup>1</sup> to have carried substantial amounts of silver as direct shipping mineralization.

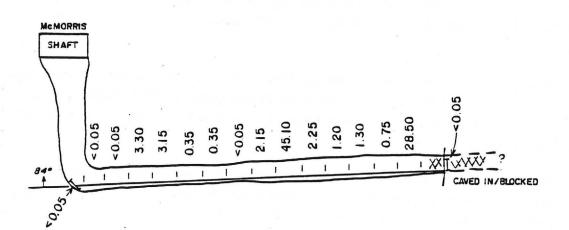
The characteristics of the flat set may explain why the Blue Quail Mining Co. failed to locate the 65 ounce silver/ton drill intersection during their tunneling on the main fault at the Chilson(?) shaft area. If the drill intersect was actually in a flat vein in the wallrock of the the east-west fault, and unrecognized as such due to drilling only two holes the zone of interest may still remain but in the fault set.

The mineralization in any of the fault sets is clearly confined to shoots of highgrade silver mineralization surrounded by (along strike) lower grade stringer type ore. It would appear from recent sampling on the 100 foot level of the McMorris by Bosley, that the highgrade 'direct shipping ore' was mined out by previous operators possibly to the 400 foot level. The stringer mineralization remains to be developed and the grade of this would appear to be in excess of 60 ounces silver per ton. Until drilling is attempted or the workings can be re-entered to the 700 foot level the possibility of locating further highgrade zones remains speculative.

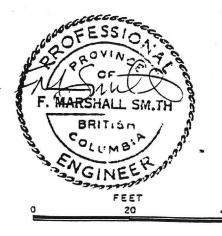
The sampling by Bosley<sup>1</sup> indicates that stringer mineralization of economic significance remains to be developed in the McMorris Mine zone. The drill intersect by Blue Quail Mining Co. of 65 ounces/ton silver indicates that diamond drilling in the area of the old workings can locate mineralization of interest.

Surrounding each of the mineralized zones of interest and all previously mined areas is a significant zone of wallrock alteration. This alteration consists of a orange-brown weathered gossan at surface which clearly marks the area of substantial silver mineralization. The alteration in the dioritic wall rock from the 200 foot level of the McMorris consists of intense bleaching, sericitization, with little silica flooding. At surface, along strike on the east-west structure, in areas of no important surface assays or underground production, the wall rocks beyond a few inches are fresh, even though there is intense bleaching and alteration for a few inches on either side of 4 to 6 foot wide quartz veins.





Samples taken by Arturo Ona.



# RACER RESOURCES LTD.

# RICHMOND BASIN PROJECT

GLOBE MINING DISTRICT GILA COUNTY, ARIZONA

McMORRIS MINE 100 FOOT LEVEL SILVER MAP (oz/ton)

F. MARSHALL SMITH CONSULTING INC.

SEPT 1987 | SCALE: | FIGURE No. 7

Similar alteration as in the McMorris and Chilson shaft zone area are clearly spotted throughout the holdings. These areas of alteration have attracted the early explorers as most have at least some open cuts on lodes in the altered areas.

### 7.3.2 Flat Mesa zone

The Flat Mesa area was first recognized by Bosley<sup>1</sup> and later evaluated and recommended by Ona<sup>3</sup> as representing a potential open pit zone for low grade but large tonnage silver deposit.

This zone has been sampled in areas of old open cuts and trenches. The average grade has not been determined but there are samples by Mr. Ona to 2.35 ounces silver per ton from surface composite grab samples.

The area is prominent as it is an open flat area with many pits and trenches each showing intensely shattered Scanlan conglomerate or related members of the Scanlan formation. The shattering is generally lineated vertical either east-west or north-south fractures with ½ to ¼ inch selvages of dark brown coloured entirely altered sediments.

The fractures are set at least 10/foot in all areas examined. The rock between the fractures is weakly altered to a light orange brown colour similar to the alteration around the main veins. Soil colours over the Flat Mesa appear to be identical to those around the better grade lode areas.

This soil colour clearly is diagnostic of the alteration which surrounds the main vein and the shatter vein type of mineralization.

# 8. CONCLUSIONS and RECOMMENDATIONS

The Richmond Basin acquisition contains several past producers of highgrade silver mineralization in epithermal veins that must have exceeded 200 ounce/ton to afford the cost of direct shipping to a smelter. This mineralization clearly has not been mined out to completion and lower grade stringer mineralization probably grading +60 ounces silver/ton over 6 to 8 feet wide along shoots at least 100 feet long remain in the old workings area and to at least 650 feet from surface (McMorris).

Most epithermal districts have a central fault with "ore grade" mineralization at surface with many lodes surrounding the central zone lacking significant "ore" at surface. With diligent exploration these related peripheral faults often develop into substantial economic reserves of mineralization. This condition appears to occur on the Richmond Basin and there appears considerable opportunity for the location of further highgrade mineralized shoots on the related structures around the McMorris vein.

Recent expenditures by the current owner and immediate previous owner has been in excess of \$300,000 (US) and resulted in opening the McMorris to the 200 foot level. This work will greatly assist the next stage of developing a mineral reserve on the property. Currently there is no proven, or probable ore reserves on the claims.

Alteration associated with the known mineralized areas appears to occur throughout the area in patches. These additional areas of alteration should be carefully examined to see if buried mineralization is located in these targets.

Mineralization occurs in east-west and north-south vertical structures and in flat lodes throughout a considerable area of the holdings. Only the immediate area of the McMorris shaft has any past production. None of the veins in the McMorris area except for 2 holes in 1965 and a few air track holes in 1987 have been drill tested in a systematic manner. It is clear from the 200 foot level dump of the McMorris vein that diamond drilling using large diameter core and probably HQ3 type bits will give sufficient recovery of mineralization to determine the grade of the veins at depth. The silver minerals are very soft and the wall rock is very altered and clayey.

Geophysical surveys should be tried to determine if detail magnetics surveys can locate the magnetic lows associated with the altered wallrock and if Resistivity surveys can locate the alteration zones to depth to assist in determining drill targets.

A programme of detail geological mapping using a topographic map from photos or local survey should be started as soon as practical. This work will result in understanding of the geological controls for the faulting and the relation of alteration to mineralization.

Following the mapping work preliminary testing of geophysical surveys should be conducted to determine the best method of locating alteration zones and hence mineralization of interest. Concurrent with this work should be a campaign of backhoe trenching in areas of interest to locate the extensions of known veins and open areas for sampling.

Diamond drilling of the faults, possibly reverse circulation drilling of the Flat Mesa area, and opening the underground of the McMorris mine should be conducted once the setting of priorities has been completed from the surface work.

If the first Phase is successful in locating mineralization of interest and indicating there is potential for the development of a mineral reserve, then the second Phase of drilling and underground development will be required to define the reserve.

F. Marshall Smith, P.Eng. September 8, 1987

# 9. BUDGET

The following is a budget for the project to carry out the programmes described in this report. All costs are in Canadian Dollars and reflect the recommendations by Mr. Ona<sup>3</sup>.

# Phase I

Geophysical Survey	\$15,000
Geology	\$17,000
Assays	\$5,000
Trenching	\$10,000
Underground rehab & sampling	\$60,000
Core Drilling 2000'@ \$47/ft	\$94,000
Reverse Drilling 2000'@ \$23/ft	\$46,000
Room and Board	
Travel	\$2,500
Salaries	
Support and Supervision	<u>\$12,000</u>
Sub Total	
Contingencies Total Phase I	<del>\$31,500</del>
Total Phase I	\$310,000

The following is the expected Phase II budget which will be carried out if the results of the first phase as detailed above results in the definition of significant mineralization on the claim holdings.

Geology	\$25,000
Assays	\$10,000
Assays Road upgrading	\$25,000
Room and Board	
Travel	\$5,000
Salaries	\$30,000
Support and Supervision	\$24,000
Underground rehab and shaft work	
Drilling 4000'@\$47/ft	\$188,000
Metallurgical & Mine engineering	
Total	
Contingencies	\$58,000
Total Phase II	
Total Phase I & II	\$860,000

F. Marshall Smith, P.Eng. September 8, 1987

### 10. CERTIFICATE OF QUALIFICATIONS

- 1. I, F. Marshall Smith, do hereby certify that:
- 2. I am a consulting geologist and geochemist with offices at 218-744 West Hastings Street, Vancouver, British Columbia.
- 3. I am a graduate at the University of Toronto with a degree of B.Sc., Honors Geology.
- 4. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
- 5. I have practiced my profession continuously since 1967.
- 6. This report is based on reports by Professional Engineers and others working for the previous owners and operators of the property and an examination of the claims in September of 1987.
- 7. I have no interest in the property or shares of Racer Resources Ltd. or in any of the companies with contiguous property to the Richmond Basin Claims.

F. Marshall Smith, P.Eng. September 8, 1987

### 11. BIBLIOGRAPHY

<sup>&</sup>lt;sup>1</sup> Bosley, J.B., 1987; Report on the McMorris Project, Gila County, Arizona, May 5, 1987

<sup>&</sup>lt;sup>2</sup> White, D.H., 1987; Engineering Study of the McMorris Mine, Richmond Basin, Gila Co., AZ, May 31, 1987.

<sup>&</sup>lt;sup>3</sup> Ona, A.A., 1987, Progress Report, McMorris Mine and Richmond Basin Areas, August 25, 1987.

# RICHMOND BASIN

SILVER PROJECT

Mc MORRIS MINE file La PLATA MINE in RAVENGROUP FILE

PROJECT OVERVIEW

THIS IS NOT AN OFFERING

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Ore Minerals

Metallurgy

Veins, Pipes and Replacement Deposits

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History of the McMorris Mine

### RICHMOND BASIN SILVER PROJECT

### PROPERTY DESCRIPTION

GOLD DOME MINING CORPORATION HAS LEASED EIGHTEEN UNPATENTED LODE MINING CLAIMS IN THE RICHMOND BASIN AREA OF EAST-CENTRAL ARIZONA. THIS SILVER PROPERTY IS LOCATED IN GILA COUNTY ON THE NORTHWESTERN SIDE OF THE APACHE MOUNTAINS APPROXIMATELY SEVENTY MILES EAST OF PHOENIX. THE PROPERTY IS SERVED BY A PAVED HIGHWAY WHICH RUNS FROM PHOENIX TO GLOBE, ARIZONA AND BEYOND. FROM HIGHWAY 60 IT IS EIGHT MILES BY DIRT ROAD WHICH PROVIDES ACCESS TO THE RICHMOND BASIN AREA.

THE RICHMOND BASIN LIES NEAR THE NORTHERN END OF A SERIES OF HIGH GRADE SILVER MINING DISTRICTS: THE SERIES EXTENDS TO THE SOUTH THROUGH THACHER, DUNCAN, ARIVALPA OF THE GRAHAM MOUNTAINS AND CONTINUES INTO THE FAMOUS SILVER DISTRICTS OF NORTHERN MEXICO. WITHIN THIS TREND THE OREBODIES LIE IN DOLOMITES AND LIMESTONES OF ORDOVICIAN TO MISSISSIPPIAN AGE AND CONSIST OF IRREGULAR MASSES ROUGHLY PARALLEL TO BEDDING AND VEIN-LIKE ZONES ALONG LARGER FRACTURE SYSTEMS. ALL OREBODIES IN THE SERIES CONTAIN SMALL AMOUNTS OF LEAD AND ZINC WITH MINOR AMOUNTS OF COPPER AND ARE CHARACTERIZED BY WEAK TO STRONG FORMATION QUARTZ SILICIFICATION. THE PORTION OF THESE DEPOSITS WHICH OCCUR WITHIN THE UNITED STATES PRODUCED OVER 35,000,000 OUNCES OF SILVER DURING THE PERIOD 1875-1910. THE DEPOSITS WITHIN THE RICHMOND BASIN PRODUCED OVER 2,000,000 OUNCES OF SILVER. HOWEVER, IN ADDITION TO THE LARGE PRODUCTIVE MINES LIKE THE MCMORRIS AND SINCE THE DEPOSITS WERE WORKED BY MINERS WHO WORKED UNDER SHORT TERM, HIGH ROYALTY LEASES AND KEPT NO RECORDS, PRODUCTION COULD WELL HAVE BEEN SUBSTANTIALLY LARGER.

THE FIRST DISCOVERIES IN THE DISTRICT WERE MADE IN 1876 (SEE HISTORY McMORRIS MINE). IN SPITE OF LONG HAULS, HIGH FREIGHT RATES, AND NUMEROUS INDIAN SCARES AND ATTACKS, PRODUCTION CONTINUED UNTIL THE McMORRIS MINE WAS CLOSED BY LEGAL PROBLEMS. DUE TO THE CLOSING OF THE LOCAL MILL, ONLY THE HIGHEST GRADE ORES COULD BE SHIPPED FROM OTHER MINES CLOSE BY. SHIPMENTS AVERAGED 260 OUNCES OF SILVER PER TON.

## SUMMARY AND CONCLUSIONS

THE RICHMOND BASIN AREA HAS BEEN THE OBJECT OF A FOUR YEAR EXPLORATION AND DEVELOPMENT PROGRAM DESIGNED TO DETERMINE ITS TOTAL MINING POTENTIAL. THE AREA PRODUCED NOT LESS THAN 2,000,000 OUNCES OF SILVER BETWEEN 1874 AND 1923, ALMOST ENTIRELY THROUGH THE EFFORTS OF FIVE OR SIX MINES LOCATED IN LESS THAN TWO SQUARE MILES OF LAND (SEE MAP). MUCH OF THIS WAS TAKEN OFF THE SURFACE OF THE GROUND WHERE THIS VERY HIGH GRADE VEIN ERODED AWAY LEAVING SILVER NUGGETS WHICH WERE PICKED BY HAND AND HAULED TO THE SMELTERS BY OX TEAM AND WAGON.

OUR GEOLOGISTS HAVE VISITED THE AREA FOLLOWING THESE OPERATIONS AND REPORTED THAT THE AREA HAS THE HIGHEST PRODUCTION POTENTIAL THEY HAVE EVER ENCOUNTERED. OLD TUNNELS, WERE REOPENED AND MAPPED, THE SURFACE GEOLOGY WAS MAPPED, GEOPHYSICAL STUDIES WERE MADE, SAMPLES WERE TAKEN AND ASSAYED FROM SURFACE AND UNDERGROUND WORKINGS. NO DIAMOND OR PERCUSSION DRILLING HAS BEEN DONE FROM THE SURFACE. HISTORY AVAILABLE ON THE OLD WORKINGS SHOWS THE MINES WERE WORKING GOOD ORE WHEN CLOSED DUE TO LITIGATION. THE METALLURGY OF THE TUNNEL ORES WAS THOROUGHLY TESTED AND STUDIED, AS WELL AS THE DUMP ORES.

THE RESULT WAS A THOROUGH UNDERSTANDING OF THE GEOLOGY AND ORE OCCURRENCES OF THE AREA, AND AN UNDERSTANDING OF ITS TRUE MINING POTENTIAL. ABOUT SIX TIMES AS MUCH ORE AS HAS BEEN MINED IN THE PAST EXISTS IN THE WELL EXPLORED PARTS OF THE DISTRICT, AND A POTENTIAL FOR MORE EXISTS IN TOTALLY UNTESTED AREAS.

MODERN MILLING TECHNIQUES CAN BE EASILY ADAPTED TO CONCENTRATE THE ALREADY HIGH GRADE ORES OF THE AREA, PRODUCING METALLIC SILVER AS A FINAL PRODUCT ON SITE. THE ORES CAN BE MINED AND MILLED AT A PROFIT AT PRICES EXCEEDING \$6 FOR SILVER, AND IT IS RECOMMENDED THAT DEVELOPMENT CONTINUE AND AN OPERATION BASED ON A PRODUCTION RATE OF 50 TONS OF ORE PER DAY BE INITIATED IMMEDIATELY. THIS SIZE OF OPERATION WILL REQUIRE THE EXPENDITURE OF AN ADDITIONAL \$750,000 USING MILLING EQUIPMENT WHICH GOLD DOME MINING CORPORATION HAS ON HAND. THE DUMP ON THE MCMORRIS MINE CONTAINS ABOUT 50,000 TONS OF 10+ OUNCE MATERIAL AND SHOULD RESULT IN DAILY NET PROFITS OF OVER \$2,000 PER DAY AT SILVER

AND REFINING, OF RECOVERED SILVER IN A 50 TON PER DAY OPERATION.

AVERAGE ORE GRADE, FIGURING PAST PRODUCTION AND INCLUDING THE OLD

MINE DUMPS WHICH WERE LEFT IN THE BASIN GIVES AN AVERAGE GRADE OF

53 OUNCES OF SILVER PER TON FOR ALL ROCK MINED IN PAST OPERATIONS,

ASSUMING THAT PAST PUBLISHED RECORDS AND ESTIMATES OF PRODUCTION ARE

CORRECT. ASSUMING A MILL FEED GRADE OF 30 OUNCES PER TON AFTER MINING

ADDS TO MILL FEED, AND A RECOVERY OF 80%, 24 OUNCES OF SILVER WOULD BE

PRODUCED FOR EACH TON OF ORE MILLED, OR 1,200 OUNCES PER DAY, AT A

COST OF \$9,000 PER DAY. NET PROFITS FROM THE OPERATION WOULD, OF

COURSE, DEPEND ON SILVER PRICES. THE FOLLOWING TABLE SHOWS PROFITS

AT VARIOUS PRICES BASED ON PRODUCTION OF 1,200 OUNCES PER DAY:

PRICE PER OUNCE	COST PER OUNCE	DAILY PROFIT
\$8 = \$ 9,000	\$6.00 = \$7,200	\$ 2,400
\$10= 12,000	u	4,800
\$12= 14,400	u	7,200
\$15= 18,000	U	10,800
\$20= 24,000	w , , ,	16,800

THESE FIGURES, AS CAN BE READILY SEEN, ARE BASED ON SILVER PRODUCTION ONLY. IN ADDITION, THE SILVER PRODUCED FROM THESE OPERATIONS WILL CONTAIN ABOUT ONE OUNCE OF GOLD FOR EACH 1,500 OUNCES OF SILVER PRODUCED, OR ABOUT 25¢ PER OUNCE OF PRODUCED SILVER AT GOLD PRICES OF \$400 PER OUNCE.

LEAD CONCENTRATES AVERAGING 60% LEAD AND 4% COPPER, WITH 40 OUNCES OF SILVER PER TON AND ZINC CONCENTRATES AVERAGING 50% ZINC WITH 6 OUNCES OF SILVER PER TON WILL BE PRODUCED AS A BY-PRODUCT. WITH THE LOW PREVAILING METAL PRICES AND HIGH CURRENT SMELTER CHARGES, THESE CONCENTRATES ARE GIVEN NO VALUE. HOWEVER, INCREASED METAL PRICES WOULD ALLOW THESE CONCENTRATES TO BE SHIPPED AT A PROFIT AT A FUTURE DATE.

BARITE, WHICH IS ANOTHER SALEABLE MINERAL, MAY BE PRODUCED AS A BY-PROD-CUT OF THE MILLING OPERATION. IT HAS NOT BEEN CONSIDERED IN THE PROFIT PICTURE OF THIS OPERATION. GOLD DOME MINING CORPORATION HAS A LEASE PURCHASE AGREEMENT ON 18
UNPATENTED CLAIMS IN THE AREA WHICH INCLUDE VEINS AND MINES IN THE
TWO MAIN NORTH VEINS: THE BREWSTER AND JUMBO, AND VEINS HELEN,
EMPIRE AND SILVER THREAD OF THE SOUTH VEIN SYSTEM (SEE ATTACHED MAPS).

VALUES OF \$10 PER OUNCE.

THIS MILLING OPERATION WILL PROVIDE SOME CASH FLOW EARLY ON WHILE THE DECLINE TUNNEL IS BEING DUG TO THE BOTTOM OF THE MCMORRIS SHAFT, A DISTANCE OF LESS THAN 2,000 FEET.

THIS EXCAVATION WILL OPEN UP THE 6 TO 8 FOOT VEIN 700 FEET DEEP, WHICH IS THE COMMON VEIN OF THE LA PLATA, MCMORRIS AND TWO OTHER SHALLOW SHAFTS, ALL IN EXCELLENT ORE.

THE OPENING OF SHALLOW SHAFTS AND TUNNELS WILL UP THE MILL FEED TO A 20 OUNCE OR MORE MILL FEED, WHICH WILL NET \$4,000 PER DAY.

THE PROPERTY WHICH GOLD DOME MINING CORPORATION HAS ACQUIRED IN THE RICHMOND BASIN HAS BEEN THE OBJECT OF A CAREFULLY MANAGED EXPLORATION AND DEVELOPMENT PROGRAM SINCE 1980. OVER \$150,000 HAS BEEN SPENT IN MAPPING, ASSAYING, TUNNELING, MILL AND METALLURGICAL TESTING, GEO-PHYSICS AND CAMPSITE DEVELOPMENT. OLD WORKINGS HAVE BEEN CHECKED FOR POSSIBLE REHABILITATION, NEW SILVER DEPOSITS HAVE BEEN UNCOVERED, METALLURGICAL TECHNIQUES HAVE BEEN TRIED AND TESTED AND A MUCH BETTER UNDERSTANDING OF THE AREA'S GEOLOGY AND MODE OF ORE DEPOSITION HAS DEVELOPED. THE REHABILITATION OF OLD WORKINGS CONTINUES WHILE NEW DEPOSITS ARE BEING DISCOVERED.

ALL OF THE LARGE COPPER MINES OF THE AREA STARTED OUT AS BASICALLY SILVER MINES ON THE SURFACE, DEVELOPING INTO COPPER DEPOSITS WITH DEPTH.

A FIELD CAMP WITH COMPLETE FACILITIES CAN BE CONSTRUCTED ON THE PROP-ERTY, CAPABLE OF HANDLING TRAILERS FOR HOUSING AND FEEDING 20 MEN.

### RECOMMENDATIONS FOR DEVELOPMENT OF THE DISTRICT

THE EXPLORATION AND DEVELOPMENT WORK DONE ON THE PROPERTY TO DATE HAS RESULTED IN THE DISCOVERY OF THE FOLLOWING IMPORTANT FACTS:

- 1. MOST OF THE OREBODIES IN THE BASIN ARE SMALL, HIGH GRADE DEPOSITS LOCALIZED BY NORTH-SOUTH FAULTS AND THEIR INTERSECTIONS, AND TEND TO OCCUR IN CLOSELY SPACED GROUPS ALONG THE STRONGER STRUCTURES.
- 2. LOW GRADE HALOS SURROUNDING THE OREBODIES SUCH AS ARE FOUND IN MANY MINING DISTRICTS DO NOT EXIST IN THE RICHMOND BASIN.
- 3. MEDIUM GRADE DEPOSITS OF SILVER IN SILICIFIED BRECCIA ZONES DO EXIST, AND MAY BE VERY LARGE.
- 4. COMMERCIAL DEPOSITS OF SILVER ARE LIKELY TO BE CONFINED TO THE FIVE MAIN VEINS: HELEN, EMPIRE & SILVER THREAD OF THE SOUTH STRUCTURE, AND THE BREWSTER AND JUMBO OF THE NORTH. AT 700 FEET WE SHOULD FIND ORE SHOOTS WHICH DO NOT SURFACE.
- 5. FIVE MAIN AREAS OF INTEREST, ALL WITH SIMILAR STRUCTURE HAVE BEEN PARTIALLY DEVELOPED, ALL OF WHICH MAY BE LARGER THAN CURRENT DISCOVERIES INDICATE.
- 6. FROM EVIDENCE GAINED TO DATE, IT APPEARS LIKELY THAT AT LEAST 16,000,000 OUNCES OF SILVER EXISTS IN THE AREAS OF INTEREST AS CURRENTLY OUTLINED, NOT INCLUDING THE DUMP.
- 7. EXISTING METHODS OF MILLING AND CYANIDE PROCESSING WILL SERVE TO OBTAIN REASONABLE RECOVERIES FROM THESE ORES.
- 8. ALL OLD MINE DUMPS IN THE AREA CAN BE MILLED AT A PROFIT, AND WILL ADD SUBSTANTIALLY TO OVERALL OPERATIONS.

IN ORDER TO ESTABLISH A HIGHER QUALITY RESERVE OF ORE TO JUSTIFY

IMMEDIATE MINING AND MILLING OPERATIONS, SEVERAL HIGH GRADE TUNNELS

AND SHALLOW SHAFTS LEFT OVER FROM THE CHLORIDE DAYS CAN BE OPENED AT

VERY SMALL COSTS. THIS HIGH GRADE ORE ADDED TO THE DUMP ORE SHOULD

## TERMS OF THE LEASE

THE TERMS OF THE LEASE ARE AS FOLLOWS:

GOLD DOME MINING CORPORATION HAS PAID A \$50,000 PREPAID ROYALTY WHICH ALLOWED THE EXPLORATION TIME TO EVALUATE THE PROPERTY. BY OCT. 1, 1984, A SECOND PAYMENT OF \$50,000 WILL START THE PURCHASE CONTRACT, AFTER WHICH A NET SMELTER RETURN OF 7% WILL BE PAID UNTIL SUCH TIME AS A TOTAL OF \$1,000,000 HAS BEEN PAID. AT THAT TIME THE PROPERTY WILL BE OWNED BY GOLD DOME MINING CORPORAITON.

GOLD DOME MINING CORPORATION WILL PLACE THE OPTIONED PROPERTY (18 CLAIMS) INTO A SEPARATE HOLDING CORPORATION, TAKING A MANAGEMENT POSITION AND 50% OF THE PROFITS ONLY. "THIS IS IN EXCHANGE FOR \$750,000 WHICH IS TO FINANCE THE ENCLOSED PROPOSED DEVELOPMENT WORK WHICH WILL REOPEN ALL OF THE PRODUCTIVE MINES IN THE AREA, BUILD A 50 TON PER DAY MILL AND REFINE TO .999 PURITY SILVER PRODUCED FROM THE OPERATION.

THE INVESTOR OR GROUP WILL RECEIVE THE SAME AMOUNT OF STOCK AS THE OPERATING COMPANY, HOWEVER, THEIR STOCK WILL BE NON-VOTING AND WILL OWN 50% OF THE ASSTES OF THE CORPORATION, WHICH WILL BE:

- 1. 18 MINING CLAIMS;
- 50 TON PER DAY MILL AND REFINERY;
- 3. BUILDINGS AND SUPPORT FACILITIES;
- 4. VEHICLES AS REQUIRED.

UPGRADE IT TO 25 TO 30 OUNCES PER TON.

IN ADDITION, THE LARGE BRECCIA ZONE ON THE McMORRIS DEPOSIT SHOULD BE OPENED TO DETERMINE WHETHER IMMEDIATE ORE CAN BE MINED FROM THIS DEPOSIT.

OUR PLANS CALL FOR IMMEDIATE CONSTRUCTION OF A COMBINED GRAVITY-FLOTA-TION-CYANIDATION MILL OF 50 TON PER DAY CAPACITY TO CONCENTRATE THE ORES, AND AN IMMEDIATE PROGRAM OF DEVELOPMENT (INCLUDING REHABILITATION OF THE BEST OF SEVERAL TUNNELS) TO ASSURE THAT HIGH GRADE ORE WOULD BE AVAILABLE WHEN THE MILL IS COMPLETED.

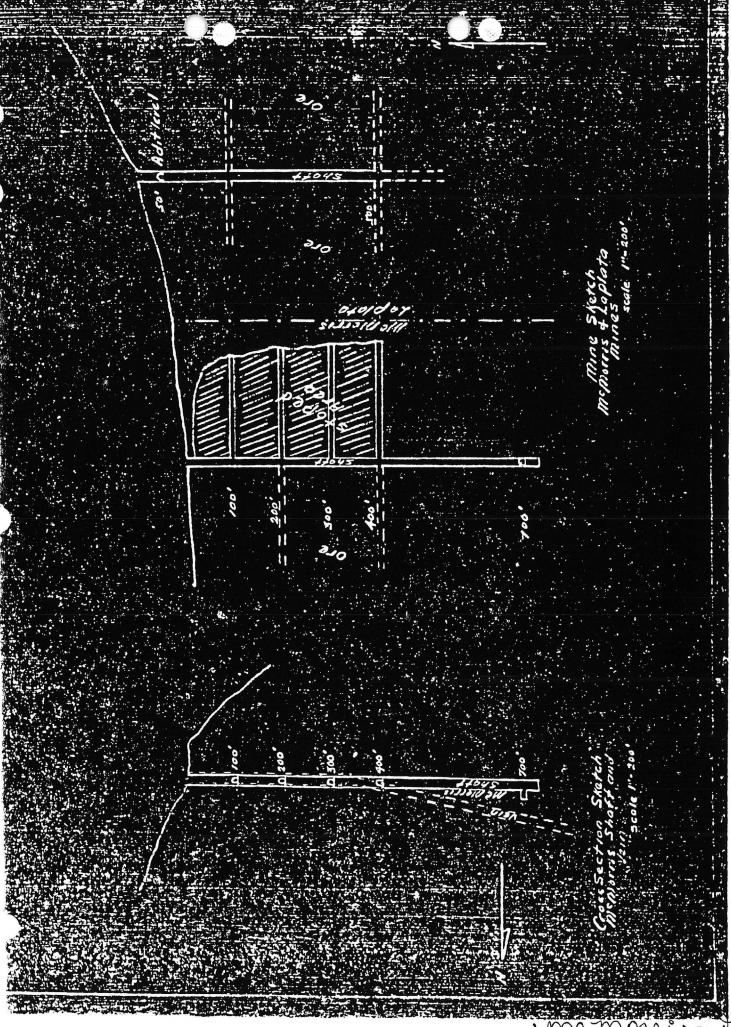
A PROGRAM OF CONTINED EXPLORATION AND DEVELOPMENT DESIGNED TO MAIN-TAIN A STEADY AND CONTINUOUS FLOW OF ORE TO THE MILL SHOULD BE MAIN-TAINED, SO DESIGNED AS TO EVENTUALLY DEVELOP THE ENTIRE POTENTIAL OF THE BASIN.

THE McMorris Mine has a 700 foot shaft and the La Plata a 500 foot shaft all in good ore. The decline tunnel would come under the McMorris shaft which would give access to several hundred feet of 6 to 8 foot wide vein structure of 20+ ounce ore in addition to the high grade ore (see history and production). The ore that was valued at \$250 then is now valued at \$2,500.

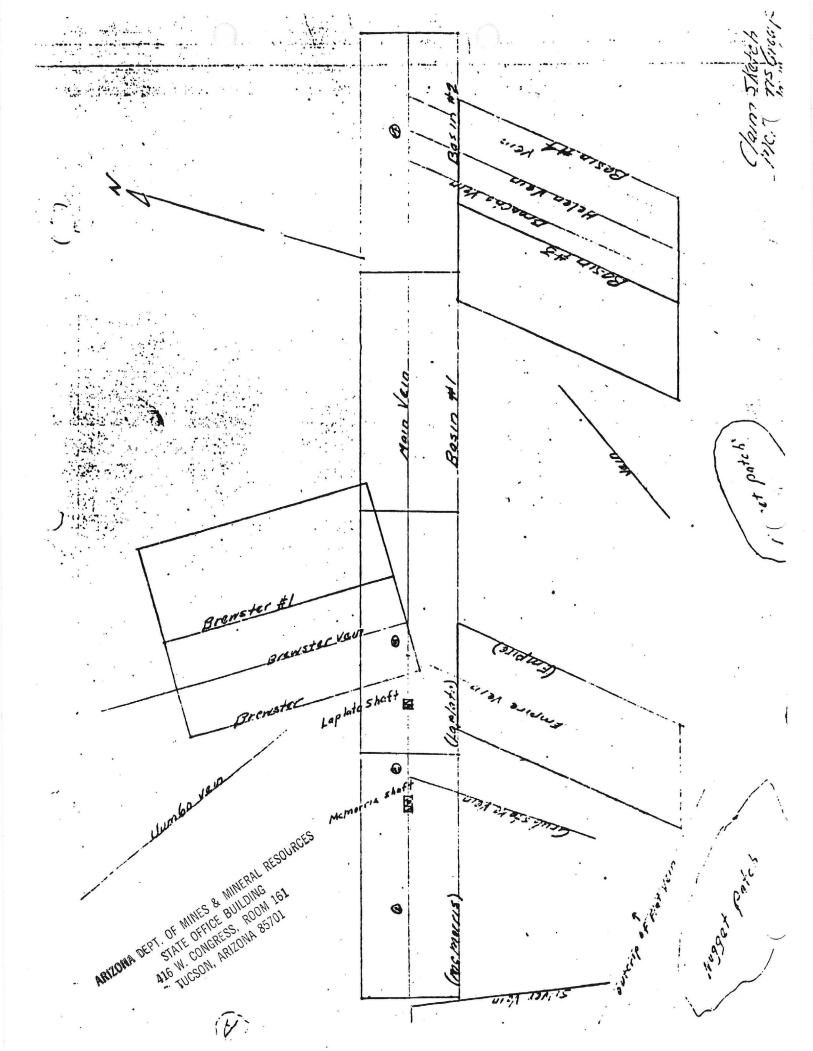
THE CONSTRUCTION COSTS OF INITIATING A SMALL UNDERGROUND OPERATION AND REFINERY WOULD BE APPROXIMATELY \$750,000. WE ARE VERY CONFIDENT THAT THE MILLING OF THE DUMP AND THE EASIER TO MINE HIGH GRADE ORES WOULD THEN GENERATE THE FUNDS NEEDED FOR THE DEVELOPMENT OF THE INCLINE TUNNEL (APPROXIMATELY \$1,000,000) AND INCREASING THE CAPACITY OF THE UNDERGROUND OPERATION AND REFINERY (APPROXIMATELY \$2,000,000). THE PROJECTED 16 TO 17 MILLION OUNCES WILL BE A REALLTY UPON THE COMPLETION OF THE INCLINE TUNNEL.

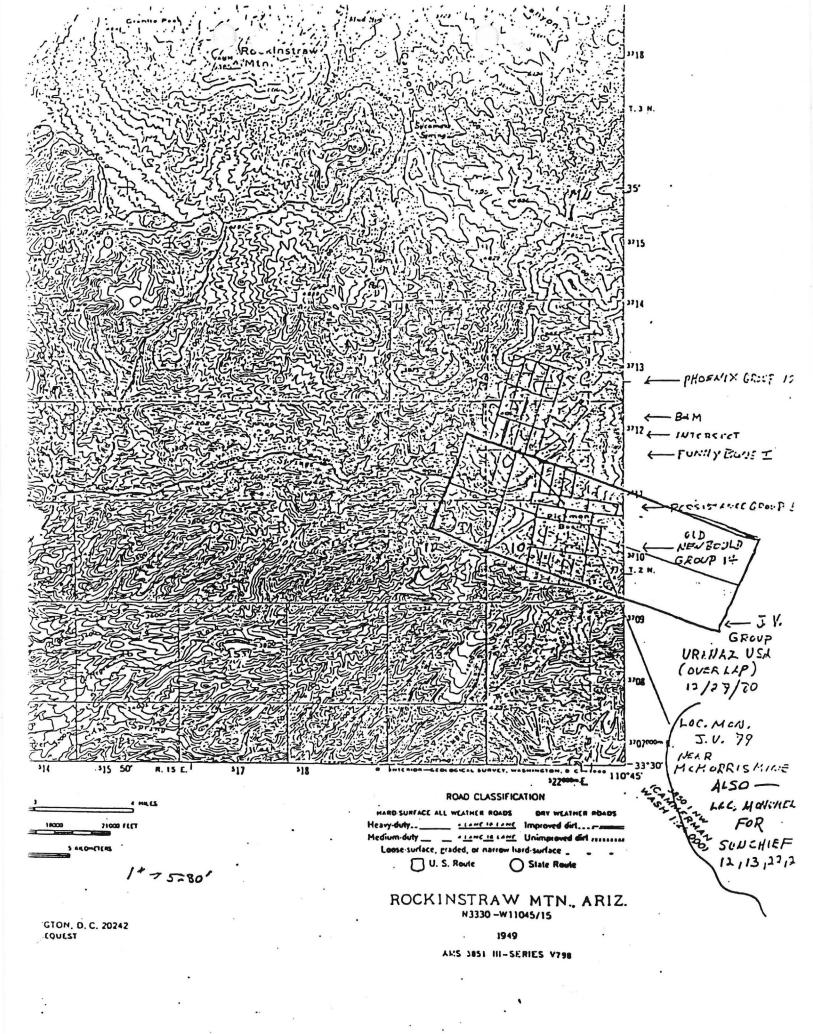
### EXPECTED INCOME FROM OPERATIONS

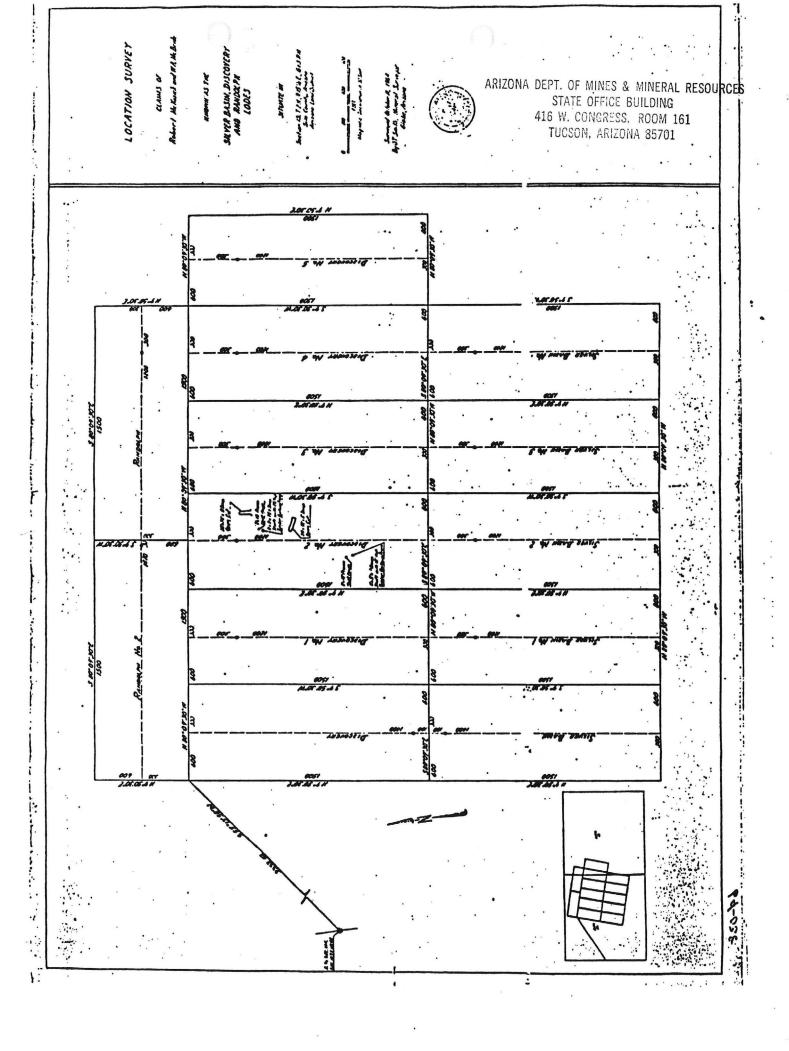
COST FIGURES BASED ON OPERATION CONDUCTED TO DATE INDICATE THAT TOTAL OPERATIONAL COSTS WOULD AMOUNT TO \$6 PER OUNCE MINING AND MILLING



memoris-Liva







MGHORRIS VEIN New CLAIMS Dew GLAIN ORIGINAL 13 CLANUS

OF PROSENT CLAIMS GROUP.

RUR SURVEYOR 15 THING THEN ALTERTHER & WILL FILE NECESONAL AMENDHENTE.

gater

## McMorris Mine Status-August 1986

To Whom It May Concern:

Subject: The McMorris Mine

In 1985, we acquired a group of claims in Richmond Basin near Globe, Arizona which included the McMorris Mine. This mine was developed in 1880, and in two years before closing produced the equivalent of several million dollars in silver based on 1986 silver prices. (Arizona Bureau of Geology and Mineral Technology-Bulletin 194). Other reports give much higher estimates of production.

There are two reports in existance which describe the mine and surrounding property. A report by John L. Alexander written in 1926 and a Geology report by O. M. Bishop in 1935.

### Re-Development

The November 1986 re-development was started by K&M Mining. The purpose was to verify these existing reports and to determine the feasibility of putting the mine into production.

#### Assays

100' Level - Very little sampling has been done at this level. However, indications of high grade silver ore was found with grab samples; assaying 323oz. per ton.

200' Level - Samples taken on this level 150' from the shaft to the east, assay up to 3846oz. per ton in a 1" stringer. The ore is spattered throughout a 3' to 4' wide vein and commonly carries 300 to 400oz. per ton ore running 4" to 6" wide, 3' crosscut channel samples run 62oz to 130oz. Grab samples 4" wide assayed 1733oz to 1843oz. We conservatively project a 3' wide 50oz minable ore body.

### Work Completed

The surface around the shaft was levelled, the collar of the shaft was rock-bolted and wire meshed to 30'. The shaft which was plugged with about 3000 tons of muck was cleared with a crane and clam shell. A wood headframe was installed and the shaft retimbered to the 170' level where old timber was encountered. 150' of drift was cleared of muck. 4"x8" ties and 18 guage rail was installed for 150'. A raine was started at 150' from the shaft where most of our sampling had been done. 4 tons of ore was removed from this raise at an average of 300oz per ton silver.

ARIZONA DEPT. OF MINES & MINERAL RESOURCES
STATE OFFICE BUILDING
3
416 W. CONGRESS, ROOM 161
TUCSON, ARIZONA 85701

The McMorris Mine - (Cont'd)

## Pre-Production Work Needed:

Mining will commence at the 200' level after completion of the following work: Install a steel headframe, install a hoist, pour a concrete collar, complete timber in the shaft, replace the timber in the drift, install muck skip and man cage, assemble crushing - milling - floatation circuits, develop flat area for building and storage. Excavate water storage and tailings pond, erect shop/office/lab building, install generator and electrical. Drill well and plumbing.

### Water

The stated water level is about 90' and makes about 25-30 gallons per minute.

## Further Development

To fully develop the property a drilling program will be started to determine the reserves. The shaft will be pumped out to the 750' level where the vein will be crosscut. New timber will be installed in the shaft. Other work levels will be developed.

### Recovery

Recovery tests were made by Research Metallurgical Engineer, J. M. Lateny. These tests include a cyanide leach, sodium thiosulfate leach, amonium nitrate leach, electrochemical and floatation. The floatation was determined as the preferred method with a recovery of 98% ag. Copper, which runs 2% of the head ore, can be recovered from the concentrate by electrowinning.

From: J.M. Lateny

To: William Russel

subject:

## Silver Recovery From The McMorris Mine Ore Introduction

To determinate the most economical way to recover the precious metals out of the ore, several series of tests have been run; leach test, Eletro chemical cell, and Flotation.

### 1º Leach Test:

## Cyanade Leach:

High consumption of cyanade, liberates almost all the copper and a few PPM of silver.

### Sodium Thiosulfate:

very slow leach, 30 PPM silver in the solution after 72 hours. Very difficult to preciritate or electrowon.

### Amonium Nitrate:

leaching with amonium nitrate and hydrogen peroxyde was very encouraging, but control of the reaction with the reagent will be expensive.

# 2º Electro Chemical Cell:

Several test were rum in a electic chemical cell, using different eletiolytes.

All the test were very successfull to liberate the copper, and one of themm was retained to be used in the future plant.

## Cont. of 2 degree.

### 3-Flottation

A series of flottation test were run to determinate the reagent for the best recovery.

The uses of O.1 Lbs/T of dowfrost M254 and O.15 Lbs/T of Aero 350 boots reagent from cyananid indicated 98% recovery.

One Kgs. of ore containg 350 oz/t was grinded to-60 mcsh and mixed with two liters of water or 38% solids. The PH was ajusted to 9.5 the reagent was then added and a five minute flottstion started.

The concentrate obtained was then floatted for 3 minutes with out any reagent addition.

Weight	OZ/T	
74.77 grs.	4298.	Concentrate
36.60 grs.	21.2	cleaner Tail
883 58 078	1 25	Rought Tail

Following my recomedation a set of floatation

cells were purchased and metallurgical calculations

computed to determinate an appropriated flowsheet

Cont. of page 2

It was decided that 15 to 20 tons of upgraded ore containing ± 350 oz/t of silver will be milled to - 60 mesh and then passed to a primary rougher of 6 cells. A set of 4 cells should be installed as as a secondary rogher in case of problems with the primary and the concentrate from the primary and the secondary directed to a set of 2 cells as a cleaner.

After the cleaner cell the concentrate could be passed throught a electrowinning cell with an addition of 5% sulfuric acid and 1% hydrogen peroxyde. The copper will be platted on the cathode.

The slurry coming out of the cell will contain 97% pure silver sulphite, that will be passed throught a vacuum filter, dried and smelted.

J.M. Lateny 7-3-86

Research Mettalurgical Engineer

morrous - July Cu.

MOMORRIS MINE
Globe, Arizona.

By

John L. Alexander

ARIZONA DEPT. OF MINES & MINERAL RESOURCES
STATE OFFICE BUILDING
416 W. CONGRESS, ROOM 161
TUCSON, ARIZONA 85701

## MOMORRIB GROUP

## Globe, Arizona,

## LOCATION:

This property is located on the south slope of the Apache Mountains in the area known as Richman Basin, approximately 8 miles N. W. of Globe, Arizona, in the McMillan Mining District of Gila County.

## ARKA:

The McMorris Group consists of nine unpatented mining claims, with a total area of approximately 180 acres. The names and locations of the claims in the Gila County records are as follows:

Name	Book.	Page No.
Basin No. 1	<b>58</b>	490
	38	491
w w 5	. 58	498
	58	495
Manhattan (McMorris		145
Cornwall (La Plate		515
Confidence (Empire)	6	168
Brewster No. 2 (Brewster	No. 2) 23	128
Browster No. 1 (Browster		236

### DISTRICT:

The McMcrris Group is located in the Globe-Mismi area of Gila County. This area contains some of the largest and best known mines of the county, whose total production records would possibly run in several hundred million dollars. Among the copper mines of this district are the Hismi, Inspiration, Old Dominion, Arizona Commercial, Iron Cap, Pinto Valley, Superior and Boston and Van Dyke, along with many others. Some of the silver mines are McMillan, McMcrris, La Plata, Silver Nugget, Helen, Jumbo, Stonewall Jackson, Champion, Buffalo, Rambo, Rifleman, Joe Brewster and many others. Several of the large copper mines including Old Dominion, Van Dyke, and Superior and Boston mines had a substantial silver content.

## TITLE:

The property at present is owned by John L. Alexander and associates of Phoenix, Arizona, and has been in the possession of his family since about 1922. The title is clear and the

property is unincumbered by any debts, liens, mortgages or obligations of any nature. This property was located by the Chilson Brothers about 1874 and has been held by various parties since that time.

## HISTORY and PRODUCTION:

The mines in the Richman Basin area were discovered in the year 1874 by a man named Chilson, who first heard of the district from stories of Indians shooting silver bullets at the soldiers in a fight there.

Approximately \$200,000 in silver nuggets and rich ore were taken from off the surface from those areas known as the nugget patch, shown on the attached maps, up to the year 1876. Several small milks were built about this time and the mines operated very successfully.

Following the year 1876 and prior to 1880, the McMorris Company took over the property and worked same until June 1882, and during this time the company is reported to have milled some 3,000 tons of ore from which they recovered about \$250.00 per ton, shipping a total of about \$750,000 in bullion. In addition there was shipped, according to information received, about an equal amount of high grade shipping ore.

The La Plata claim was taken over and development work carried on during this period by other people and the main La Plata shaft was sunk. This was reported to have encountered sufficient ore that the MoMorris Company bought the mine, paying, it is reported, \$300,000 cash for it.

During 1882 the McMorris Company carried on work on both claims, sinking the McMorris shaft to the 700' level and the La Plata to the 500 or 600' levels. They are reported to have encountered some very rich ore in the La Plata on the 480' level, according to men now living who worked there. The McMorris voin changed its dip between the 400' and 700' levels and a crossout was started to cut the cre, but had only been driven in, it is reported, some 10', when the properties were closed down. The owners became involved in litigation among themselves and pending the settling of this, all work censed. The suit resulting from the trouble lasted many years and the properties were never reopened.

Finally, it went in default for taxes and assessment mork and was located by a man Living near Globe. He eventually sold the property to a company about 1917, which due to gross mismanagement, personally known to the writer, soon encountered financial troubles and ceased operations. The mine then pessed to the Alexander family and has been held by them since.

Prior to the property being acquired by Alexander, some \$200,000 was taken by a company from a rich spur vein making off from the main vein. This ore was taken from tunnel levels and no sinking of consequence was ever done to lower levels. A small dump was milled by Alexander and associates after the property was acquired by him, but no other work of consequence was undertaken due to financial inability to attempt the needed work to reopen the main mines. The total production of the property is possibly in excess of \$2,000,000.

## TRANSPORTATION and SMELTING:

At the present time the property may be reached either through the town of Radium, some 5 miles from Globe on the Apache Trail highway and then over about 5 miles of rough mountain road or through the mining town of Copper Hill, about 5 miles from Globe, and then over about 5 miles of road that, while rough, is passable. This road through Copper Hill to the mine could be repaired for possibly \$1,000 and placed in good enough condition to enable trucks to reach the mine with supplies. Later, after the mine has been recopened, the road should be connected with the new Highway 60, a distance of about 2 miles being needed to make this connection. This would not cost over \$2,500 and would be a very good road for all weather use.

The Magma Smelter is now running and buying custom ore and a base rate on this ore could be had, I believe, that should not exceed \$2.50 per ton up to \$20.00 ore, with a slight increase not to possibly exceed \$5.00 per ton for \$60.00 to \$75.00 ore.

When the mines at Globe and Miami again begin operations the International Smelter will again, no doubt, start and this smelter would undoubtedly give a very low rate for the ore for flux purposes.

### WATER:

Sufficient water for camp, mining, and possibly for a small mill operation of about 25-50 tons per day can be had from what is known as the Brewster Water Tunnel, located some 600' distant and above all workings and camp site, giving a gravity water flow. The McMorris shaft makes considerable water and can be made to produce a very large quantity, if desired, by drifting SW on the vein where a large flow was encountered and bulkheaded off. The water stands at about the 200' level in this shaft. There should never be a shortage of water on the property, and the flow can be controlled so as to not materially interfere with any mining operations.

### TIMBERE

There is some timber in the vicinity of this property, sufficient for at least abundant firewood for the camp. Mine timber must be hauled in from either Globe, Miami or Superior, in carload lots. This should be delivered at the mine for about \$50.00 per thousand from Globe or Miami.

### CLIMATE:

The property is located in the semi-arid portion of central Arizona, at an elevation of about 4,500'. Snowfall in the winter does not exceed 8"-12" at any time and is not sufficient to interfere with any winter operations. The mine is also high enough that the summers are relatively cool for Arizona temperatures.

## TOPOGRAPHY:

The mountains surrounding the McMorris on the North and East are very rough and precipitous. To the West and South of the property the ground drops away abruptly to the mesas some 5'-400' square. The McMorris and La Plata mines lie on the North edge of the basin, which is approximately 1 mile square, and along the main vein which strikes SE and NW, almost due East and West. The basin, cut by numerous small arroyas along its floor on this property, is quite rough, taken as a whole. The slope and drainage are to the South.

# MILL SITE:

The present 50-ton cyanide mill is located on the South side of the La Plata shaft. This is an ideal mill site, having ample slope for the usual gravity mill flow sheet and being just below the collar of the shaft. Below the mill is available ample room for tailings disposal.

# POWER:

The power line from Roonevelt Dam to the mines in the Globe-Miami District passes within about 5 miles of the McMorris Mine and as the country from this line up to the mine is foothill and mesa country, a line to connect could be built for a reasonable figure. The power company gives the mines a very reasonable rate and should give this property a good rate, also.

Diesel fuel oil may be had in the Globe-Miami area for approximately 5 1/2 cents per gallon.

# GEOLOGY and DEVELOPMENT:

The main vein, which is some 0'-8' wide, occurs along

the contact of the diabase and Monzonite or eltered granite and strikes almost East and West and is vertical in its dip for about the first 400° in depth and then inclines to the North with a slight dip. The diabase lies to the North and the monsonite on the South side. A short distance farther South the unaltered granite is exposed by errosion over a large area. There are many small spur veins making off the main vein, both to the North in the diabase and to the South in the monzonite and granite. These small veins all carry high grade ore, the values in their ore shoots proper being anything from 50 to several hundred ounces silver per ton. The main vein is a porphyry dyke containing considerable quartz.

There have been in the past several hundred thousand dollars of this high grade ore taken from these small veins eccording to my information. None of these small veins either to the North or South have, to my knowledge, been prospected or developed beyond the depth possible to reach easily by tunnel levels. The values in those inspected show every indication of continuing to much greater depths. Most of these veins have been worked by typical chloriders who took only such ore as was obtainable with little labor and cost. Three of the principal South veins being the Helen, Empire, and Silver Thread. The two main North veins are the Brewster and Jumbo. The Jumbo and Silver Thread are no longer a part of this group of claims however.

There are two shafts and two tunnels on the Brewster vain, -- Three tunnels on the Jumbo, 50° shaft on the Empire and some 2 or 3 tunnels on the Helen vein. Most of these workings were driven in ore, with the available high grade having been stoped out. The main vein is developed by some 4 shafts, and a tunnel some 300° long. On the extreme West, and there are 2 shafts about 500° apart sunk on this main vein on the Richman Claim about 200° deep with some drifting from each. The vein here was low grade with the exception of a small surface of high grade. This Claim has little potential value.

The McMorris Claim adjoins the Richman on the East end, and on this claim is the famous old McMorris Mine. A 3-compartment vertical shaft was sunk on the main vein here for a total depth of 700°. This shaft followed the vein to the 400° level. At this point the vein dipped slightly to the North and as the shaft was sunk vertically, it left the vein. At the 700° level a crosscut was started to pick up the vein, but was only driven in some 10° before the mine became involved in litigation and closed down. Miners who worked there are relied on for this information and they state that from the dip of the vein that some 30° or more of crosscutting would have encountered the vein at this level.



It is reported that all stoping of this mine was to the East for some 200' and above the 400' level. Good ore was encountered to the West in development, but no ore was mined due to a larger flow of water being encountered there, then they had equipment to handle. The drifts to the West here bulkheaded off and no further work on that side of the shaft was done before the mine closed. From the surface indications as well as from reports, I believe that a larger shoot of ore lies to the West of this shaft. Immediately below this section of the claim, west of the main shaft, lies the Silver Nugget flat vein, from which many thousands of dollars has been taken by leasors and chloriders in the past, which was in my opinion formed from the same source as this western portion of the main The ore taken from this property and milled averaged \$250.00 silver per ton recovered. There had been only 3,000 tons milled at the time the mill was closed, in addition to what has been shipped as high grade smelting ore, so only a small portion of the ore shoot could have been mined. The high grade is reported as being 2' wide and with considerable ore of a lower grade along the side of this high grade.

From the size of the waste dump and knowing approximately the amount of one taken from this mine, there could not be any very large amount of stoping or lateral development work done, so it should be a comparatively simple matter to unwater the mine and retimber the shaft to the 700° level. Considering the length of time the mine has been idle, the shaft is in good condition, but of course would have to be retimbered. Modern equipment would make a small job of handling any water encountered in the West side one body.

The La Plata shaft which I am led to believe was sunk to between 5' to 600' in depth is reported to be in a fair milling grade of ore and it is reported by Mr. Kinsmon of . Globe, who worked in this mine, that lateral development work encountered a good width of excellent grade shipping ore. The main value of which was, of sourse, silver. Considerable development was done on this claim. No stoping was done, however, the mine having been bought by the McMorris Company a short time before they closed, according to early reports. All work was stopped here when the McMorris Company became involved in litigation and the property was never reopened. The shaft could be retimbered for a reasonable sum and the mine reopened. There was nover, I am led to believe, any appreciable amount of water encountered in this shaft and I imagine there is very little water in this mine at present. While the collar of the shaft has caved somewhat, this may easily be caught up preparatory to retimbering the entire shaft.

This La Plata shaft is ideally located for the main work-

ing shaft for the property. There is ample room for all shops and mine buildings back from the collar of the shaft. The present mill is located just below the top of the shaft and here should be, I think, the mill constructed to handle the ore from the mine.

Some 500° East of this shaft three of the small rich veins join the main vein and at this point are as follows:

To the North, Brevster and Jumbo, and on the South the Empire vein. The Empire vein carries a high grade streak about 4" wide which averages 250 cunces per ton. The Jumbo vein where worked some 1,000° from its junction with the main vein, carried exceptionally rich ore from 6" to 16" wide.—The values being from several hundred to several thousand cunces per ton. There was mined here a streak of about 2" in width of pure horn silver with several inches along side, this of rich native silver. The Brewster vein where opened by short tunnels and shallow shifts shows also some very rich ore.

It is my opinion that where these veins make off the main vein so close together that here in the main vein must be encountered a large, extremely rich body of ore.

Where the Grubstake vein encountered the main vein just East of the McMorris shaft, (see sketch) the only place where such a condition was investigated, a very rich body of ore was found. Also, at this point only one vein made off while at the point East of the La Plata chaft, three known veins make off, all very rich.

At the present time, shipments of high grade ore are being made from adjacent claims to the South of this property, some few hundred feet distant. The ore is reported to average better than \$1.00 per pound.



The following copied from Smelter Returns Statements represent a few of the shipments of ore made by leasors since the property has been owned by the Alexander family, the bulk of the records having been lost:

Date	Smelter	Smelter #	Oz. Au.	Per Ton Assay Value Oz. Ag.
9-27-21 4-21-28	El Paso El Paso	882 494		84.5 55.2
10-3-22	Selby	9882	.42	1021.0
10-9-22	O. D.	88	*	64.77
10-16-22	O. D.	83		147.84
10-30-22	0. D.	. 94		57 .47
1-2-23	0. D.	131		150.28
3-2-23	O. D.	27		83.64
4-5-23	O. D.	53	.025	62.54
4-6-23	0. D.	. 52		64.12
4-24-25	Selby	1886	.07	11709:65
5-3-23	O. D.	68		64.28
12-10-23	0. D.	136	*	201.58
12- 5-24	0. D.	137		166.15

The following copied from Smelter Return Statements represent a few of the shipments of ore made from the Jumbo vein, one of the side veins making off the main vein to the North. The junction of this vein with the Main Vein should be found East of the La Plata Shaft on the La Plata Claim:

Date	Smelter	Smelter #	Per Ton Assay Value	
			Oz. Au.	Oz. Ag.
3-17-17	Selby	8977		6124.29
3-17-17	n	8978		1218.89
5-12-17	•	65 <b>5</b> 4		8595.49
5-12-17	. 10	6552		1866.99-
5-12-17		6553		202.77
5-28-17	W	9511		2155.24
5-28-17		9510	•	2901.41
6- 5-17	: <b>W</b>	9583		121.80
7- 5-17	. A.S. & R.	70	•08	995.6
7-18-21	17	92		1226.5
8- 4-17	<b>#</b>	124	*	737.6
8-16-17	19	144		844.7
8-21-17	*	146		35.4
8-27-17	W	161		967.8
9-6- 17	<b>n</b> -	200		948.7
9-20-17	79	225		48.5
9-20-17	, #	232	*	415.7
10-20-17	Ħ	251	*	402.0
10-11-17	Selby	548	.133	994.96
10-26-17	m	635	.07	1353.04

## SULLURY

A company with a \$75,000.00 capital should repair the La Plata shaft, do the suggested amount of new development work, install a fifty ton mill and place the property on a paying basis. It is possible that the mine may be placed in operation for a smaller sum but the above program is more preferable.

The present road should be rebuilt, then the La Plata Shaft repaired and this mine reopened. Then, discounting all reports and old data of both high grade shipping ore and a large tonnage of milling ore already developed in the area of the La Plata Shaft, which seems well founded from all data available, being new asvelopment work to the West following the vein on the lowest level of the La Plata Shoft. This should be driven together with cross cuts and raises, a distance of about 1,000'. This work, for a considerable distance, would be in virgin ground and then would pass under the old stones of the McMorris Mine and on into that area to the West of the McMorris Shaft, where it is reported excellent ore was encountered and left unmined because of water condi-This work should show sufficient ore to justify the tions. doing of an additional 1000' of work to the East of the La Plata Shaft to develop the ore body believed to lie in this dir cotion.

This amount of work would undoubtedly disclose bodies of mill ore, together with a large amount of excellent grade shipping ore.

The McMorris Shaft, in addition, could be unwatered and retimbered as a second working shaft with an estimated expenditure of about \$12,000 additional to the sum shown under Capital Expenditure after the plant has been placed in operation.

The present old mill should then be remodeled and placed in operation, putting in whatever flow sheet the ore called for, probably flotation or tables and cyanidation. Tests to finally determine the exact flow sheet should be made by a competent firm.

At this time the new proposed road connecting the mine with Highway 60 should be built so as to provide a good permanent road making low hauling costs. It is highly possible that through the cooperation of the County that this road could be built for considerable less than the sum of \$2,500 allowed in Estimates for this work.



After the reopening of the McMorris shaft and the connecting of the two shafts from the drift previously run on the vein from the La Plata shaft at its lowest level, this area would then be ready for production and all ore handled through the one shaft and there placed into the mill with the high grade shipped direct to the smelter.

There has been such a large amount of high grade silver ore in the past taken from this property, and it has such excellent indications of having many more times as much rich ore left in unworked and even unprospected portions of the main vein, that I cm sure a properly managed mining operation would be successful.

From this information, gathered over a period of several years, the McMorris group offers an excellent opportunity for a successful, financially profitable mining operation.

Signed:

John L. Alexander.

islandes

The following article was copied from the May 15, 1926, issue of the Mining Journal and gives the discovery and history of the property up to about the year 1876:

## MINE LOCATIONS OF THE CHILSON BROS.

by Sajas Carl. W. Chilson.

The authentic history of the mining activities of the Chilson Bros., who were active in the locating and developing of Arizona's mineral resources.

Steve L. Chilson loft Banders, Texas, with his family in the year 1868, bound for California.

He had, some years previously, made an agreement with the late Hon. John G. Downey, then governor of California, to deliver 125 yoke of exen to the governor and his agents, for which he was to receive 5,000 acres of Southern California lend, which was located in and around the present thriving little city of Santa Ana, California, the exen being valued at \$100 per yoke and the land valued at \$2.50 per acre. A great deal of time was required to work out the business details, as all mail was carried on horseback and stages.

After it was definitely decided to come to California, Chilson set about to make preparations. Two years were required to build a wagon. Hardwood timber had to be selected from the woods, worked out in the rough and seasoned.

Everything ready, several hundred head of cattle rounded up for the long drive, the start was made. There were several other families with wagons, all of which made up a train, or caravan.

During the months that followed, the cattle and most of the horses were stolen by the Comanche Indians, and by the time he reached the Territory of Arizona, he had little, if anything, left with which to guard off the ravages of hunger and starvation. Every article that could be spared, including personal effects, had been traded in for provisions at the various outposts along the trail. The long, weary trip across the desert, with very little feed and days without water, had worked an extreme hardship on the stock.

It was a happy and most velcome day when Chilson and family arrived at Col. King Wolsey's ranch at Agua Caliente Springs on the Gila River. Col. Wolsey was one of the early pioneers of the territory, a man of honesty and integrity, a guide and Indian fighter, true to form, a developer of natural resources

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of Richman, which seemed to be the popular opinion. The Chilson brothers rarely named named any discovery after themselves; they most always selected or coined a name due to some incident at the time of discovery, or a name in keeping with the local conditions. I know of one exception, in which George Chilson, a relative, blazed a 200 mile trail in Idaho, which bears his name. Bob Dicky and John Allvany located a claim adjoining the Silver Spring, which they named after the basin, calling it the Richman.

It is true that McMillan and Dory Harris discovered the "Stonewell Jackson" Mine, the original locations were known as the "Stonewell Jackson", "Hannibal", "Gen. Lee" and "Little Dector". McMillan and Harris shipped about \$25,000 worth of ore and later sold to Mr. Martin of Santa Rosa, California, Mr. Martin was a minister.

All of the shipping ore from the Silver Nugget Nine was packed to the Silver King Mine, and from there it was hauled to Wilmington, California, and shipped by stowar to the Mill-rose Sampling Works at San Francisco.

The freight teams hauling supplies from California to the Silver King Mine and other Arizona points would return to California light, excepting for a small amount of ore. The Silver Nugget ore was very rich and tennage was small. The teamsters were glad to have the return freight. The first shipment from the mine amounted to about firteen hundred pounds of ore, which was hauled by Gib, himself, after his brother had arrived at the mine. That fifteen hundred pounds we worth over \$10,000. The following shipments averaged about \$400.00 per ton.

The winter of 1874-75, R. W. Chilson, better known Chloride Dick, arrived at the Silver Mugget Mine, makingur brothers at the property. By this time the mine was rung full blast, making regular shipments to San Francisco. ore was broken down by hand and closely assorted, saked double canvas sacks, which weighed about 50 pounds each closely tamped.

After about \$200,000 worth of high grade ore had shipped, the property was organized and incorporated uphe laws of New York and known as the "Silver Nugget Miningany". A fine stamp mill was creeted to mill the old dumps. Forth of mention, that the Silver Nugget was a small, high-golanket vein, lying on the bedrock and confined to Richman bashe deepest overburden was only 17 feet deep at the lower f the basin, the vein came to the surface at the upper edge basin.

During the early development of the property, there hurriedly built a rock cabin, equipped with portholes barrels and provisions. This cabin was used as an ore house, as a

of the land, as far as his finances would permit him to develop, honored and esteemed by all who knew him, a real man of the first magnitude.

Chilson leased the Wolsey ranch for a period of three years, planted a crop, harvested and continued on to California with several members of his family, leaving his three eldest sons, D. G., known as "Gip", Emr E., known as Eme, and William H., known as Bill, to plant and harvest the second crop.

Rue and Bill then left for California with about 1,600 head of cattle, which belonged to Mr. Tanksley, leaving Gip with Col. Wolsey, to plant and harvest the third crop.

During the time the Chilson brothers were associated with Col. Wolsey they scouted the country far and wide, having many scirmishes and narrow escapes with the Apaches.

The colonel had told them many stories about the Indians and mining. Host of the colonel's mining experience, having been in the Bradshaw mountains and around Prescott, which was the capital. Indian attacks were daily expectations and nightly fireside discussions.

During one of Col. Wolsey's trips in the upper Salt River country and over in the Apache Peak country; he had a fight with a small bank of Apaches during which he last several men and horses. It was discovered that the Indians were shooting hammered silver bullets. This was in the vicinity of what was later Globe.

Such stories told by the colonel, together with personal experiences and the wild excitement over the discovery of the "Vulture" mine in the Vulture Mountains gave the brothers mining fever.

During the fall of 1871, Gip came to California on horse-back. Remaining in California until 1872, in which year he returned to Arizona and located the "William Penn" group of claims at Castle Dome. He worked this property for about one year. The ore was hauled to the Petote landing on the Colorado River. The landing and two steam barges were owned by Captain Paul Ames and Captain Ellis. The ore was shipped-down the river to the Gulf of California, reloaded into coast steamers and shipped to the Melrose Sampling Works, San Francisco.

He returned to California in the fall of 1873, and remained until the spring, 1874, at which time he returned to Yuma. Upon his arrival in Yuma, he learned about the discovery of the Silver King Mine in Pinel county. A great deal of excitement was on over the strike and a rush was on for the new silver

district. While at Yuma he met Joe Kelly, who joined him on a trip to the "Silver King". Joe Kelly remained at the Silver King but Gip continued on to the Globe country, which had been discovered by Coplin, Billy Long and Riggin. There was another man in the party, whose name I do not recall, who was killed by the Indians at Bloody Tanks, as the boys were making their way to Florence.

Gip, recognizing the country, namely, the Apache Peaks, which were described by Col. Wolsey as being the country in which the colonel and his men had found the silver bullets, shot by the Indians as before mentioned, immediately set out to find the mine from which the silver came. While at Globe, which was beginning to look like a camp, he met a Dutchman, by the name of Henry Wagner, who knew little, if anything, about prospecting or mining. Although Wagner did not have any money or outfit, Gip, having taken a liking to Wagner, explained to him what he had in mind, asking Wagner to join him on his hunt for the silver mine.

They started for the Apache Peaks, about twelve miles distance from Globe. It will be remembered that the town of Globe had not been laid out or a district organized. The mine had been discovered and named "Globe" on account of the immense size of the property, and, as the locators said, "She's as big as the globe." By nightfall, Chilson and Wagner made camp in a small basin close to the Apache Peaks, and finding a fine spring of water, the outlook was favorable.

The next morning. Gip found native and horn silver nuggets from the size of small flakes up to ten and twelve pounds. He located a claim which he named the "Silver Nugget", in which he located Vagner for a one-half interest. During the day they saw a great deal of fresh Indian signs and at early evening saw several head of Indian ponies in the distance. Shortly after dusk they saw a small camp fire spring up in a canyon about onehalf mile away. Gip, knowing the customs, habits and methods of Indians, felt sure that a small band of Indian scouts were working the country and had made comp for the night. However, to make sure as to whether they were prospectors or Indians, he decided to investigate more closely. He carefully made his way up to the ridges to a point opposite the fire and he saw, as they passed back and forth around the fire, that they were Indians. Returning to inform Wagner they broke camp and went to the "Globe" mine that night. The following day or two Gip proposed to Wagner that they return to their rich discovery. Wagner was frightened to a frenzy, stating that he would not go back in there for all the mines in the country. Gip tried to convince him that they had a bonanza and that the Indians were probably scouts and were on the move. Wagner could not be convinced and said he would sell his interest for anything. Gip told him to had very little money. Ragner said, "I will take your pack, male and waht money, you have". Gip gave kagner his mule, pack and \$30.00 in cash, which was all the money he had.

The location notice for the "Silver Nugget" having not been recorded, as the nearest recorder's office was at Florence, it was therefore not necessary to draw up any agreement of transfer. A new location notice was posted which gave Gip the full ownership of the mine. He also located two additional claims, which he named "The Rifteman" and "The Hoodoo". He then returned to Florence.

At Florence he made the acquaintance of Mr. Stiles and Mr. McMorris, who was stopping with Stiles. them some silver nuggets and agreed to locate for them a claim, if they would furnish him a pack mule, provisions and a small sum of money with which to buy another bill of provisions when needed. Stiles and McMorris supplied the muchneeded necessities and Gip returned to the "Silver Nugget." He located the north end extension of the "Silver Nugget" for Stiles and Madforris, naming the claim the Silver Spring; there was a fine spring of water on the property to say the least of an exceptionally fine silver showing. It is obvious that Chilson's intentions toward those who had helped him in his hour of need were of the very hast, incomuch as he located for them one of the first and best showing he had discovered. Stiles was very busy on his ranch and could not devote his time to the claim, so gave Mr. Cook one-half of his interest in the property to represent him. Shortly after the transaction, Cook sold his one-fourth interest to Mr. Baldwin for \$10,000 cash. Later Stiles sold his one-fourth interest to Mr. Baldwin for \$10,000; then about one year later McMorris sold his one-half interest to Baldwin for \$50,000. Baldwin built a mill at the Wheat Fields, about 10 miles distant from the mine to mill the Silver Spring ore. This is the property which was known as the "Mollorris Mine."

When Gip arroyed at Florence, in search of pack animals and provisions, he wrote to his brothers, Eme and Bill, who were in California, to come to him at once, which they did several weeks were required to make the trip as the Indians were on a rampage throughout the country.

In the meantime, Gip had returned to the Silver Nugget and was gathering up all the nuggets he could find on the surface and burying them under his campfire until his brothers arrived. During the time Gip ran pretty low on provisions. One evening about sundown Bob Dicy rode up to find Gip scratching around among some ironwood chips. Gip asked Dicky to stop over with him, stating that they would have comething to eat as soon as he could find some old bacon rinds he had thrown among the chips, as he needed them to senson the beams; Dicky told about the incident later, stating that little did he realize that Gip had over \$10,000 in silver nuggets buried under the old black bean pot on that campfire.

The small besin in which the Silver Nugget Mine was located was so rich that Gip Chilson then and there named it "Richman" basin. This basin was not named after anyone by the name