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PRINTED: 06/24/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: SAVOY

ALTERNATE NAMES:

APACHE PANTHER  
HILDA

YAVAPAI COUNTY MILS NUMBER: 822D

LOCATION: TOWNSHIP 10 N RANGE 1 W SECTION 26 QUARTER SW  
LATITUDE: N 34DEG 10MIN 44SEC LONGITUDE: W 112DEG 20MIN 19SEC  
TOPO MAP NAME: CROWN KING - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

SILVER  
GOLD

BIBLIOGRAPHY:

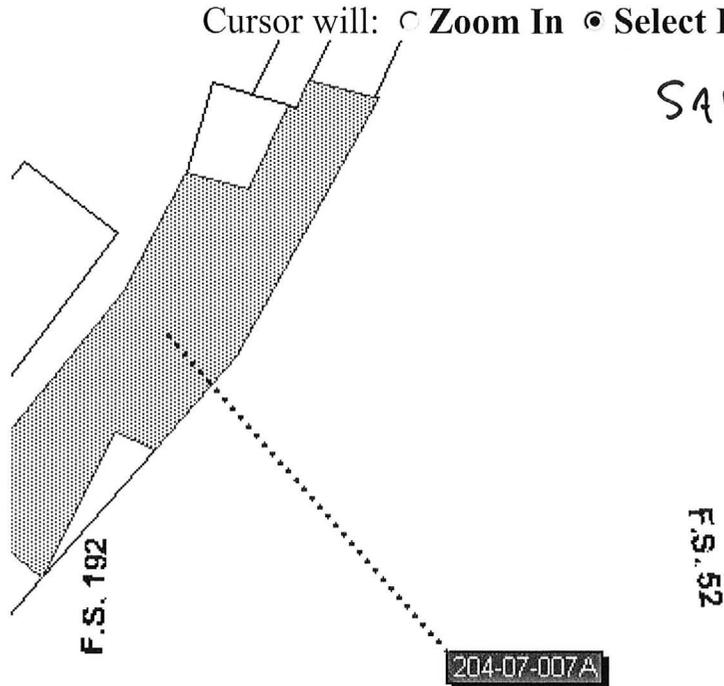
USGS CROWN KING QUAD  
ADMMR SAVOY MINE FILE  
LINDGREN, W. ORE DEPTS OF JEROME & BRADSHAW  
MTN QUADS USGS BULL 782 1926 P 175

**Locate  
Property  
Information  
Tool**

[GIS Home](#) | [Online Mapping Applications](#) | [Products](#) | [FAQ's](#)

Cursor will:  Zoom In  Select Property

SAVOY (F) YAVAPAI CO.



◀ ▶ ◀ ▶ **Zoom In** **Zoom Out** **Full Extent** **Map Size**

PARCEL NUMBER:	204-07-007A
PARCEL ID:	1320407007010
OWNER:	SAVOY MINING CORP ETAL
SECONDARY OWNER:	N/A
MAILING ADDRESS:	230 PARK AVE #616
CITY:	NEW YORK
STATE:	NY
ZIP:	10169
SUBDIVISION:	N/A
ACRES:	33.1
2001 FULL CASH VALUE:	\$85,266
2001 LIMITED VALUE:	\$85,266
LEGAL CLASS:	02.R
ASSESSMENT RATIO:	16
2000 TAXES BILLED:	N/A
2001 NET ASSESSED FULL CASH VALUE:	\$13,643
2001 NET ASSESSED LIMITED VALUE:	\$13,643
LAST TRANSFER DOCUMENT DOCKET:	3129
LAST TRANSFER DOCUMENT PAGE:	521
RECORDED DATE:	1995-12-21 00:00:00
INSTRUMENT TYPE:	6
INCORPORATED AREA:	N/A
SCHOOL DISTRICT:	CROWN KING SD #41
FIRE DISTRICT:	N/A

**SALE DATA**

DATE OF MOST RECENT SALE:	N/A
SALE AMOUNT:	N/A
DEED TYPE:	N/A

Savoy (P) YAVAPAI CO.

10 a

# DEEP ENOUGH

H. MASON COGGIN'S NEWSLETTER ABOUT MINING AND EXPLORATION

PUBLISHED WHEN AND IF HE HAS ANY THING TO SAY

April 15, 1993

Volume 3 Number 1

## SAVOY MINE AVAILABLE

**GENERAL** The Savoy Mine represents one of those rare opportunities where a small reserve of high grade gold and silver can be expanded quickly and cheaply with a little drilling. The property, consisting of two patented claims is owned in fee by a group of investors. It is being offered for sale on a cash basis. A detailed 20 page report is available for \$10.00 to cover postage and handling. Contact:

H. Mason Coggin, PE & LS  
317 East Griswold  
Phoenix, Arizona 85020

**LOCATION** The mine is seven miles south of Crown King, Arizona in the south end of the Bradshaw Mountains.

In 1979 and 1980 over \$925,000 was spent in exploring the property. This is an excellent project for anyone wanting to return to small scale underground mining on patented property to avoid the maze of permitting requirements and regulations. Present owners have been holding the property since the late 1970's. They are a group of senior investors and they desire to sell the property for cash for little more than the real estate value.

**TONNAGE ESTIMATE** Previous estimates including materials, that may be available on the vein, but, off the property are as follows:

<u>Reserves Tons</u>	
Above the adit	82,000
Needs expl. & dev.	95,000
Savoy at depth	142,000
Savoy unexplored	250,000
<u>Adjoining area</u>	<u>1,600,000</u>
<b>Total</b>	<b>2,169,000</b>

See Savoy on Page 2

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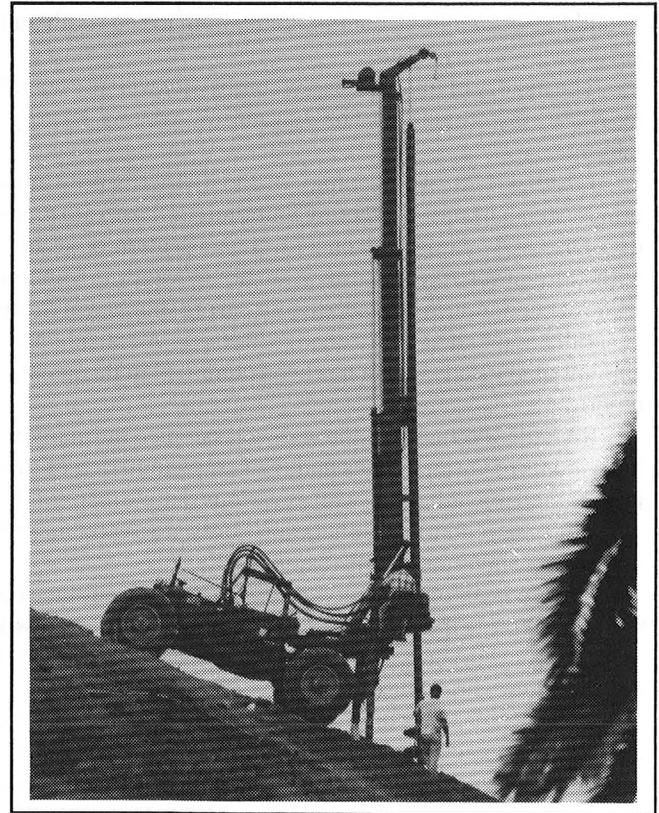
## BUCKET AUGER DRILLING PROVES PLACER DEPOSITS

My experience with DRILCO of Laguna Beach, California, started about a decade ago when we were feverishly looking for a good way to drill a placer deposit in Southern California. When we met and talked with the owner of this company and saw his equipment, we were impressed. Not only was his equipment excellent but his attitude was positive and we left feeling confident that he would do the job and do it well.

Over a period of 30 days his crew and equipment had drilled over 100 holes to an average depth of 35 feet. All of the material cut from the 18 inch diameter holes was carefully and accurately captured in 55 gallon drums and transported to the wash plant.

The three foot sample interval was carefully controlled by sounding with a cloth tape. Each hole number and each

## See Bucket Auger Page 3



BIG RED a bucket auger drill built on a very large fork lift frame. This drill can go almost anywhere.

**SAVOY CONT. FROM PAGE 1.**

Previous mill heads averaged 0.25 ounces per ton in gold and 4 oz in silver.

**HISTORY** Early information on the property places the surface discovery in the 1870's." However, no significant production was achieved before 1908. At that time ore was mined from the 318' level and milled at the nearby Tiger Mine.

The Tiger was one of the larger gold/silver producers in the area and gave the district its name. It was closed down in 1917 after a long and profitable production.

The Oro Belle is another important producer in the area. It operated from 1903 to 1912 and has a recorded production of 82,115 tons of ore, producing 28,839.72 troy ounces of gold and silver bullion. For the first six months of 1905 records show the Oro Belle ore assayed an average of 0.5 oz. gold and 4.0 oz. of silver per ton.

The principal ore shoot at the Savoy Mine was discovered by early surface work about 1875. Some time prior to 1908 it was developed by 2000 ft. of tunnels and raises. The last adit was driven in the 1950's by J. R. Wilkerson who established an ore chute for 250 ft. in length with an average thickness of 10 feet. This ore chute was well defined both above and below the Wilkerson tunnel. This adit was reopened and extended in 1980 by the present owners.

The Gray Eagle vein on which the Oro Belle, Tiger and Savoy are located has been identified for more than 15,000 ft. and has been mined commercially both to the south and north of the Savoy Mine.

The history of this area was recently very well presented by Robert L. Spude in The Journal of Arizona History, Summer 1992.

**GEOLOGY** The geology of the district is pre-Cambrian (Archean) schist and pre-Cambrian (Proterozoic) granite. The Gray Eagle vein cuts through a section of granite with Northeast strike and dips 70 to 80° Westerly. Mineral value of economic importance occurs in ore shoots which are generally associated with a change in strike. A considerable amount of geological data has been compiled in the general report..

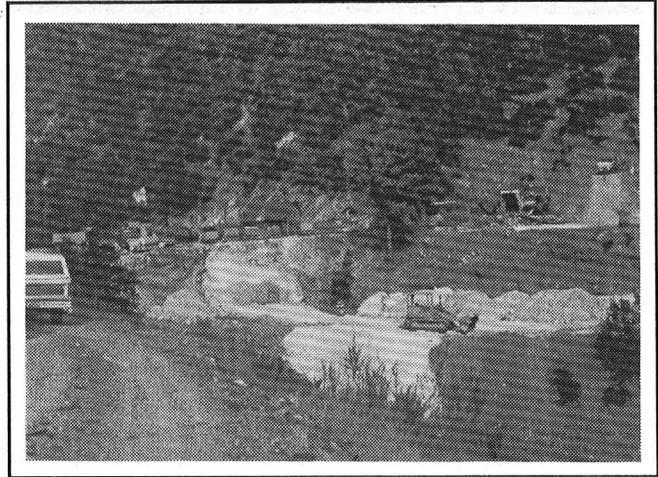
**SAMPLING** The mine was well sampled by qualified individuals at various times and the complete listing of this information is available as well as various sample maps of the workings. Several old production records are available and may be considered as a bulk sampling.

There is an opportunity to drill and block out the ore chute just below the primary stope on present adit level sill by driving a short cross cut (200') into the hanging wall and drilling a few short holes.

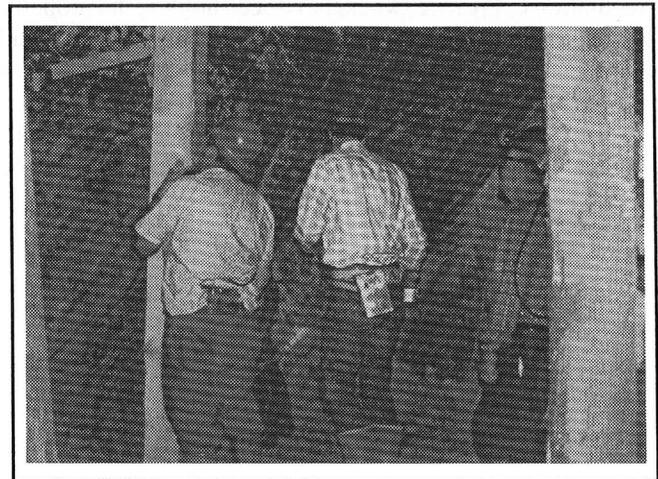
**DEVELOPMENT STATUS** The entire adit was opened, retracked and extended in 1979 and 80. The timber supporting the portal of this adit has fallen down and a few days of work will be required to reaccess the adit. This half mile of adit was driven in sound rock in the footwall of the vein. Occasional crosscuts and other openings access the

vein. At one point near the Savoy ore chute the cross cut bypasses the vein altogether for a distance of the 300 feet. Most of the adit was driven raw and is presumed to be open. The mine has been closed off for several years and may need to be vented before it can be inspected.

Report available for \$10.00 P&H.



**SAVOY SURFACE WORKS** showing the portal and the surface facilities from 1980. All of the equipment has been removed and the portal has sluffed in.



**H. MASON COGGIN AND FRANK MONTONATI** inspect timber at the face of the 1981 development work at the Savoy mine. The face shown is probably in the ore chute.

**CALABASH** a tropical tree of the bagonia family. It produces a round fruit or gourd that can be as much as 36 inches in diameter.

**QUESTION :** What do you call a room full of unemployed exploration geologists?

**ANSWER :** A Spanish Class.

## Bucket Auger from page 1

interval was recorded on a form and the lid of a 20 dram plastic bottle. The capped bottle was placed on top of the drum and the drums were loaded into the back of a flat bed truck with a Bob Cat. The haul to the wash plant was about 5 miles.

After the drilling was completed the volume of some of the holes was checked by pouring a measured volume of loose dry sand into the holes and measuring the volume filled. It was discovered that the drilling had been very accurate. The holes had very little over drilling as the volumes checked.

The advantages of bucket auger drilling over other drilling methods are the speed of drilling, the size of the sample, the cost of the program and accessibility that the cuttings provided to the bedrock.

The drill rig provided by DRILCO on this project was mounted on a large fork lift. Originally designed to drill cassons for housing on the west coast, the drill is mounted on a moveable deck so that the hole can be accurately located. There is about 3 feet of swing in any direction which allows placing the drum next to the hole and then dumping the sample into the drum by sliding the auger bucket over the hole.

The bucket auger is arranged so that the material is augered into the bucket and then lifted from the bottom of the hole. This orange peel arrangement of the auger opening can be supplemented with a gate to prevent material from leaking back into the hole.

When boulders too large to enter the auger are encountered they are either broken by the bit or twisted into the side of the hole. In the few cases where the boulders could not be handled a new hole was drilled after a small offset.

The pressure on the bit is the weight of the bucket and the tools supporting it. It is retrieved from the bottom of the hole by a hoisting rope connected to the final drive tool. Hoisting the bucket from the hole is accomplished by the hydraulic capabilities of the fork lift. Dumping the bucket is facilitated by swinging the digging face of the bucket away and allowing the cuttings to drop into the drum.

Drill speed is a function of the material being drilled and several other factors, but the drill was capable of drilling a 30 foot hole in less than an hour on this California property.

The classical method of churn or cable drilling a placer deposit is simply too slow for modern exploration programs. The small hole diameter and small sample size obtained by the cable tool drill requires the application of a fudge factor based on experience to achieve a value estimate. Examples of churn drilling in programs from the 1930's shows the variance in the amount of gold reported from exploration vs gold recovered by mining running as high as 300% to as low as 30%. These large ranges were reported after the original exploration values were adjusted downward by applying the Radford factor. Some of these projects were not profitable

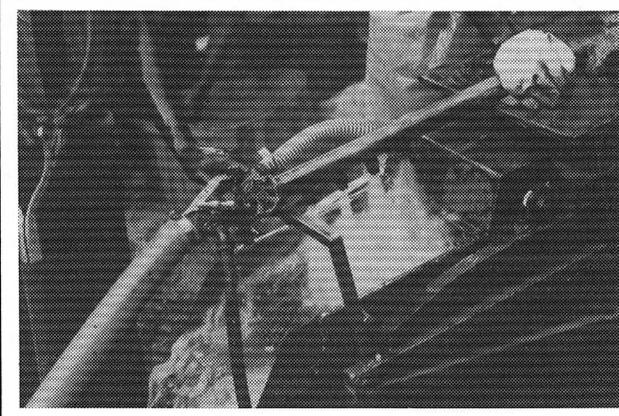
See Bucket Auger Page 4



BUCKET AUGER DRILL IN AFRICA (1991)



LOADER BUCKET TRAP was built and installed on site to allow the drums to be handled effectively.



NATIVES WASHING DRILL SAMPLES THROUGH GOLDFIELD PROSPECTOR II in Guinea, West Africa. The material being washed was very heavy in clay. The tails were taken and rewashed twice before the carpet was pulled. Even in these very sticky conditions eight samples per dat could be washed in each machine.

**Bucket Auger (from page 3)**

and never should have been financed.

The wash plant was located five miles from the drilling because of land status and the availability of water. At the washplant the drums were unloaded from the truck, weighed and handled by a backhoe that had been slightly remodeled. The hoe bucket was turned into a short crane and a trap was installed in the loader bucket to handle the drums. The crane was used to lift drums from the truck and place them on a platform scale for weighing. A special sling facilitated this work. The trap in the loader bucket allowed the drums to be locked in so that the samples could be slowly fed to the wash plant.

The wash plant consisted of a Goldfield Prospector II followed by carefully double panning the concentrates. The Prospector is a well designed and ruggedly built machine from Goldfield Engineering and Machine Works of Provo, Utah. It consists of a vibrating screen deck with a series of high pressure water strays. Vibration is provided by a water driven pelton wheel. The screen is removable and can be changed through several sizes of opening ranging from 1/32 to 5/8 ths of an inch. For most materials a 1/4 or 3/8 th inch works best. The recovery system consists of a well designed sluice about one foot wide and three feet long.

The sluice is provided with a removable riffle and a series of well designed and well spaced riffles. An astro turf carpet underlies the riffle. The slope of the sluice is adjustable by chain hooks and wing nuts on the hooks which support the sluice.

When properly working the Prospector produces less than a gallon of concentrate which can be panned quickly. The concentrate can be recovered by pulling the pins that hold in the riffle and the carpet and washing them into a tub or bucket. Concentrates are washed from the carpet and it is returned to the sluice. This entire clean up operation takes less than one minute.

The sluice arrangement has the following advantages over other equipment: It has a reasonable recovery, it is simple to operate and takes little training, it works well in relatively dirty water and the clean up is quick and sure. Efficiency of the sluice can be checked by panning the tails or rerunning them in another recovery device.

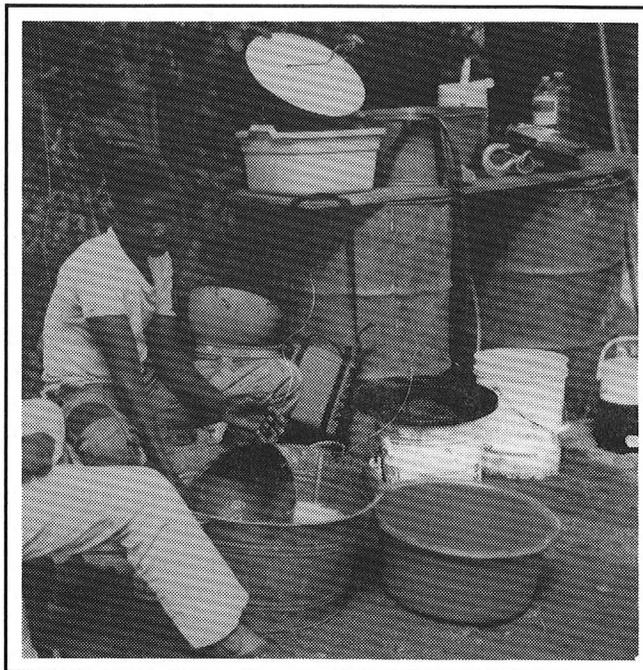
The 20 dram bottle with the sample identification is placed into the bucket with the concentrates from the sluice. When the material is panned down, the concentrates are poured into the bottle. The sample is thus identified throughout the process by one tag.

Panning is done by professionals and the tails are checked. If gold shows up in the panning tails, the tails are repanned until all of the gold is gone.

The concentrates from panning are closely examined and anything that is estimated at \$1.00 per cubic yard is amalgamated with mercury in a stainless steel pan and the amalgam is parted with nitric acid in a porcelain cup. After parting, the gold is washed, dried and weighed. Weighing is done on a gem stone balance where it is estimated to the nearest 2 milligrams. The gold is finally placed in a glass

vile, tagged and numbered with the weight reported as crude gold in milligrams in the field book.

Since the original program in Southern California, DRILCO has explored three additional deposits. The last deposit, located near the village of Siramana in Eastern Guinea has developed over 5 metric tons of placer gold. Additional drilling and a feasibility study will determine if the property can be mined at a profit.



**NATIVE PANNER USES CALABASH** to pan concentrates from the Prospector. The native panners are experienced using the hemisphere from one of the local goards. These goards are dried and cured before they are carefully split along the center.



**UNDERGROUND** is still the best place to be in the Phoenix area during the summer. I don't remember which mine this was but it was cool.

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## ENVIRONMENTAL ASSOCIATION BUSINESS PLAN OUTLINED

There is room for another environmental organization. Studies by the Leading University Consulting Firm indicate that the market will support at least five more environmental clubs. There is a psychological need for people to donate large sums of money to groups claiming protection of planet Earth. This need satisfies the guilt feeling of many people who drive expensive, fuel guzzling cars and live in expansive house that are built in areas once occupied by fuzzy little animals and covered by native habitat. They seem to have this uncontrollable urge to drive or fly thousands of miles to view the destruction of a single acre of pristine habitat while their associates develop thousands of acres of prime real estate along coastal areas and river front acreage in wooded highlands and lowlands.

**MEMBERSHIP FEES** will be a lifetime membership of \$2,000. This will be payable over a ten year period at \$200 per year with 10% interest. Memberships would be sold on a multilevel marketing plan so that each member would get a percentage of the fees from each membership that he recruited. This would carry through 6 levels of membership so that a member could make an obscene profit by selling memberships to their friends and family.

**PROMOTIONAL MATERIALS** Would be supplied for each member salesperson. These materials would include shocking, full color, glossy, photos of big men beating baby fur seals to death with a spiked baseball bat, inhumane treatment of experimental animals, the brutal slaughter of thousands of chickens, sheep and beef cattle, dozer clearing of rain forest, mining at the foot of Mount Rushmore and the urban sprawl chasing animals from their natural habitat. Text describing these atrocities would also explain the organization's mission to explore and discover new areas of environmental degradation and how we would preserve and protect these areas by influencing legislation, through protest, spontaneous demonstrations, pricey seminars in plush resorts, media advertising and distribution of literature.

**PURCHASE OF PRESERVE PROPERTIES** will be a primary function of the organization. Once we have made an area completely worthless through our long and carefully planned media blitz we would be able to buy the property so that we can adequately protect it. Of course we will raise revenue by eventually developing the less environmentally sensitive portions of the property, selling jeep tours through the preserve, establishing preserve retreats to Club Med standards and providing guided hunting and fishing tours to members at special discounted rates.

**PROMOTIONAL HYPE** with a new twist will be developed. Most of the photographs, promotional hype and text necessary for the advertisement of this organization has already been developed by other organizations already operating in the area. All we need to do is buy their rejects or use the uncopyrighted materials.

**EQUIPMENT** will be purchased from the funds raised by selling memberships and tax free donations to a non profit organization. Some of the equipment needed in such an organization will be a Lear Jet so we can respond quickly to exploit environmental emergencies throughout the world. A four masted sail boat with an all girl crew is needed to carry out our world wide search for environmentally disturbed areas. Members of course would be offered opportunities to join and help on these cruises for a nominal fee.

**HEADQUARTERS** for the organization should be housed in plush executive suites in all of the larger cities. This level of affluence is necessary for recognition among that class of people who can afford to join, make substantial contributions and participate in organizations profit areas.

**NON-PROFIT** objectives for the new organization should be easy to reach. The officers and directors will simply divide any projected profits among themselves as salary, commissions and bonuses. Sufficient funding levels will be maintained to pay salaries first, outstanding bills second and loans advanced by the members last. Taxes will be avoided where possible.

**OFFICERS & DIRECTORS** are gentlemen. None of the present officers or directors are currently in jail however, a few are under investigation for the destruction of possible St George Snail habitat in Utah and Arizona and one of the officers was held and released in the alleged murder of a scorpion in his bedroom last month. The case was dismissed when the alleged victim stung the investigating officer.

Some of the officers do own and occasionally fire weapons including BB guns, sling shots and 22 rifles.

**GREEN FLEECE** is the name of the proposed organization. Several other names have been suggested including Sahara Club, Mean Green, Radical Conservatory, Cactus Catchers and Tree Huggers A-lot-of-us. We are entertaining other suggestions and will consider all submittals.



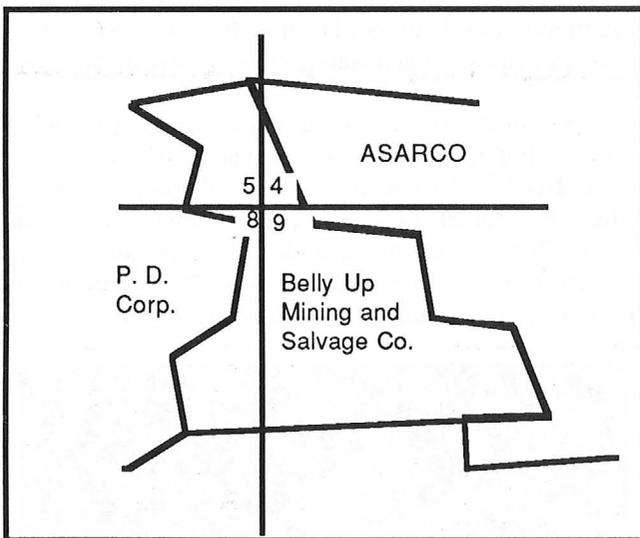
**GOOD BYE OLD FRIEND.** We lost Dail Seaman last Christmas. Dail and I met on a trip to Africa and we had been good friends ever since. Dail was never down and always made the absolute best out of every thing. He will be missed by all who knew him.

## LAND STATUS

For over 25 years I and several associates have been involved in land status determinations and currently have a working knowledge of most of the Arizona mining districts as well as the other western states. This work started back in the dark ages before FLPMA when some claims were filed with the only description being "12 miles north of Safford, Arizona. Although FLPMA made things a great deal easier there is still a lot of very small tricks that make a great deal of difference. The BLM is not always on top of the status of the public lands and there are a lot of claims out there that are not quite valid.

A good example is a claim that has its discovery monument located on ground that was not vacant at the time the claim was staked. Together with several associates we are familiar with most of the small tricks. Our land status determinations are supported by work of a qualified property abstractor who has been certified by the US Justice Department to work for the BLM.

With all of the claims that are currently being dropped now is the time to explore in the USA. I have special knowledge of several Southwestern mining districts where a land status determination could expose explorable areas that have been previously unavailable. Some of these cracks lie between the holding patterns of major mining companies.



**LAND STATUS MAP** depicting a large block of ground between two majors that may become available soon.

### DIETZ AND ASSOCIATES

4706 N. 31st Drive Phoenix, Arizona 85017-3427

U.S. Dept of Justice Approved Abstractors - Arizona  
Land Status Patent Application Abstracts  
Title Research PC Applications - Mineral Data Bases  
Drafting (CAD) AZMILS - Arizona  
Literature Search MASNC - CA, HI, ID, MT, NV, OR, WA  
Assessment Filings MAPINDX - Digital Data Bases of USGS Quads  
Claim Staking (Maps, Paper & Disk Copies of Data Bases  
Distributor - Computers, Peripherals and Supplies  
Distributor - Major Software Titles

Phone; (602) 973-5514 Fax: (602) 973-5578

## MINING HISTORY

During 1991 several authors participated in the Second Symposium of The History of Mining in Arizona. The eight hour symposium was held in conjunction with but not a part of the AIME annual meeting in Phoenix, Arizona. The papers with some excellent photographs were published by the Mining Club of the Southwest as History of Mining in Arizona Volume II.

At an annual AIME meeting several years ago the idea of what could be done to make the general public become aware of the mining industry was passed around for discussion. One of the ideas presented was to organize symposiums on the history of the mining in the various states where the AIME held its annual meetings. These symposiums would be open to the general public. The proceedings of these meetings would be published and presented in a manner similar to the proceedings of the AIME meeting itself. The chore of organizing and editing the work in Arizona fell on the capable shoulders of Misters Mike Canty and Mike Greeley. Their zeal and connections have resulted in two excellent volumes. Their choice of writers has been exceptional and they have been able to include professional historians as well as some authors who were responsible for some of the history they describe.

The following is a list of the Authors and Chapters for both Volumes:

### History of Mining in Arizona Volume 1

John C. Lacy, Early History of Mining in Arizona; Acquisition of Mineral Rights, 1539-1866

Michael N. Greeley, The Early Influence of Mining in Arizona

Richard W. Graeme, Bisbee, Arizona's Dowager Queen of Mining Camps: A look at her first 50 Years

Richard F. Pape, Big Bug Lead-Zinc District

William C. Conger, History of the Clifton-Morenci District

David D. Rabb and Clement K Chase, History of Mineral Processing in Arizona

Karin Goudy, Life in a Boom Town - Oatman, Arizona

H. Mason Coggin, A History of Placer Mining in Arizona

Forrest R. Rickard, History of Smelting in Arizona

Hollis Cook, Too Little - Too Much; Water and the Tombstone Story

G. W. (Jerry) Irvin, A Sequential History of Arizona Railroad and Mining Development 1864 - 1920

### History of Mining in Arizona Volume II

James E. Officer, Mining in Hispanic Arizona: Myth and Reality  
Wilber A. Haak, Arizona's Silver Belt

Jane Eppinga, Ethnic Diversity in Arizona's Early Mining Camps  
Carolyn A. O'Brian, Jerome, A Mining Legacy in the Black Hills of Central Arizona

H. Mason Coggin, Frank M. Murphy - Arizona Gold Miner

Hal Birt, Jr., Arizona Mining Camp Tokens

Kim K. Howell, A History of the Mines as Tiger

Anna Domitrovic, A Woman's Place

Gladys Walker and T. G. Chilton, The History of Mining at Superior

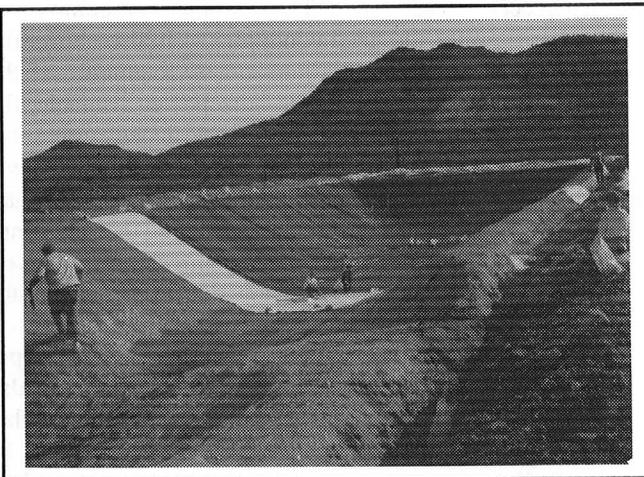
John C. Lacy, Pursuing Segments of the Glass Snake; The Battle for the Big Jim

## PERMITTING

Thirty years ago the U.S. was a free country. We could do just about anything so long as it didn't infringe on the rights of another. Suddenly we had to start asking permission and soon we have will be told what we must do. I have heard several bureaucrats use the phrase "benevolent dictatorship" but I think these are mutually exclusive terms.

Recently I have worked with several engineers and scientists in preparing applications for different kinds of permits. These include 404 permits from the Army Corps of Engineers, aquifer protection permits from the Arizona Department of Environmental Quality, county Air Quality permits and even discharge permits. We have been successful in avoiding permitting requirements where we can and in obtaining the permits in other cases.

Wrestling with bureaucrats is not my favorite work but it pays the bills. If I can help you with permitting or show you how to avoid permitting please, give me a call. If I can't help you, I can probably send you to someone who can.



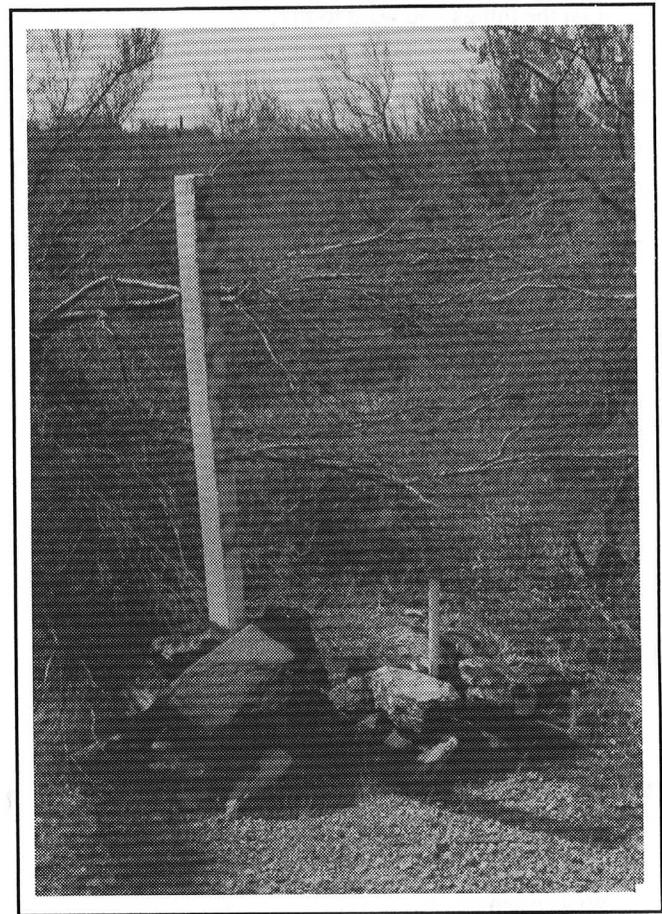
**POND LINING** is one of the areas where we have been fortunate in avoiding permits.

## SURVEYING AND CLAIM STAKING

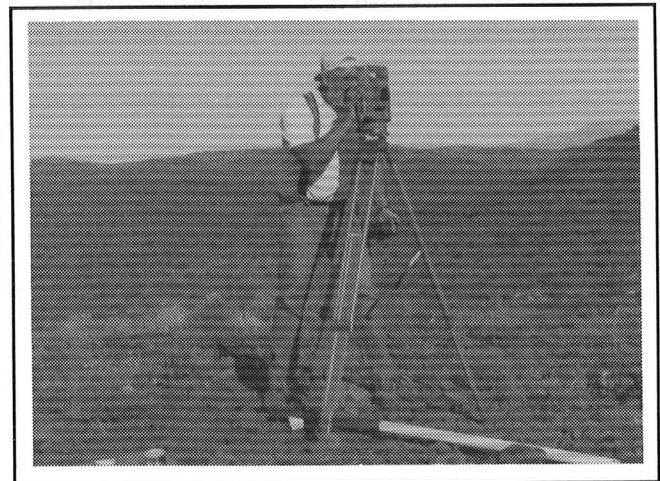
If I had my choices, I'd rather be surveying. I enjoy the out of doors and badly need the exercise. I am getting much better with all that fancy new equipment that is coming on the market. In the last couple of years I have had some very interesting surveying assignments. One survey, for example, involved establishing a highly accurate control for a large project. This was followed by laying out panels for aerial photography and finally surveying the patented claims and locating the drill holes and their elevations.

I also enjoy staking mining claims. Capturing ground as quickly and cheaply as possible with as much accuracy as the job requires is a challenge. Currently there are about one fourth as many claims as there were last September 1. Some of these dropped claims have high mineral potential and

should be restaked even with the rental fees and the problems with mining in general.



**CLAIM STAKING** is one area that I very much enjoy. I have staked over 3,000 claims in the western U.S. and am familiar with most of the staking laws in these states.



**THE TOTAL STATION** is one of the great surveying advancement of the 20th century. The latest models have on board note keepers which record the information on magnetic media for direct input to the computer. I am also considering some of the new GPS systems.

# THE CHEAT SHEET

## WRITING BUSINESS LETTERS

1. Start from the end.  
List the things you want to say.  
Cross out things that don't support the main theme.  
The best letters have a strong sense of purpose
2. Get to the point in the first sentence and make the entire statement in the first paragraph.
3. Write for a specific reader  
Be friendly, personal and positive.
4. Say it plainly  
"Here is" instead of "enclosed herewith"  
Use short sentences. One idea to the sentence.
5. Clear the dead wood  
Chop until the fluff is gone, then cut it by half.  
Always leave them wanting more.
6. Use active verbs  
ie. "We have" vs "our inventory contains"  
Be courageous and answer questions directly.
7. Be human  
Use the reader's name in the text "if appropriate"  
Use personal pronouns like I, We, You and Us.  
**Be Positive**
8. Never write in anger.  
Read it before you send it.  
Handle problems in an upbeat manner.
9. End it with an action step.  
Request action, make a promise, require an answer.
10. Be professional  
Use a clean logical format. Do not crowd the page.
11. Develop a regimen.  
Write often  
Respond quickly
12. Maintain the Contact with follow up  
If you make a promise keep it.  
If you ask for an action check to see that it is done.  
Acknowledge and complement appropriate responses.

## PUMP HORSEPOWER

Here is an easy formula for pumping water. If you use it for other fluids or pulps, adjust the head for specific gravity.

$$HP = \frac{\text{HEAD (IN FEET)} * Q \text{ (GPM)}}{3960 * \text{EFFECIENCY}}$$

EXAMPLE:

HEAD	=	200 FEET
QUANTITY	=	1200 GPM
EFFECIENCY	=	60%

$$HP = \frac{200 * 1200}{3960 * 0.60} = 100 \text{ HORSEPOWER}$$

Don't stop now, you still have to check the manufacturers pump curve for overloading at flows below your design flow. (When the pipe line is filling for example.) To do this you may want to construct a system curve using time as the horizontal axis and head as the vertical. This curve starts with an empty pipe line and calculates the static and friction head until the system reaches a steady state. The manufacturers pump curve gives the flow for the head conditions. It also shows the horsepower needed exceeds the horsepower available, the motor will be in trouble. In a properly designed system this condition will kick out the circuit breakers. If this happens it may be necessary to start the pump against a closed valve and control the head against the pump by cracking the valve until the line has filled. There are several pump control valves on the market that are designed to handle this problem hydraulically.

If the pump line has a velocity higher than about 5 second or if the pump line is very long, water hammering is a problem. Calculating water hammer is somewhat complicated but, if it becomes a problem it also can be controlled by using a pump control valve. Basicly these valves are effective by opening and closing slowly.

H. Mason Coggin, PE & LS  
Mining Engineer and Land Surveyor  
317 East Griswold Phoenix, AZ 85020  
Voice (602) 944-3763 Fax (602) 944-2972

Nyal Niemuth  
Min. Eng.  
ADMMR  
1502 W. Washington  
PHOENIX AZ 85007

# Gold Camp, Inc.

SAVOY (F) 9400 PM  
MINE AND COMPANY #362249  
Dane

10/31/89

POB 191  
Trinidad, Co. 81082  
(719) 846-7058

POB 264  
Hayes, Az. 86333  
(602) 632-7313

ARIZONA STATE MINE INSPECTOR  
1616 W. ADAMS SUITE 411  
PHOENIX, AZ 85007

RECEIVED  
OCT 31 1989

ATTN: DAVID HAMM.

DEAR SIR,

PERSUANT TO MY PHONE CONVERSATION WITH  
MR. JIM MOFF ON 10/12/89, THIS IS TO INFORM YOU  
THAT WE ESTIMATE THE DATE FOR START UP  
OF OUR TEST ~~PLANT~~ PLANT ON THE SAVOY MINE PROPERTY,  
R1W OF THE GILA! SALT RIVER MERIDIAN, T10N, SEC 26,  
TO BE AROUND THE 1ST OF NOVEMBER, 1989.

Sincerely,

C.R. K...  
Vice-President





A

GEOLOGIC and ENGINEERING

REPORT

of the

SAVOY MINE & NORTH TIGER MINE

Tiger Mining District

Yavapai County, Arizona

by

Richard E. Mieritz

Mining Consultant

Phoenix, Arizona

March 29, 1960

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## INTRODUCTION

A two-day field examination of the property known as the Savoy Mine and the North Tiger Mine, Tiger Mining District, Yavapai County, Arizona, was completed on March 24th and 25th, 1960. This examination was completed at the request of Mr. E. W. Mercer, 932 W. Hazelwood, Phoenix, Arizona.

The examination was made by the writer to evaluate the possible potential of the property as a fore-runner and guide to the client to enable him and his associates to make the proper decision as to the purchase of the lease on the Savoy Mine and the purchase of the North Tiger property as a single package.

Field work was limited to a brief review of the surface geologic conditions and a more extensive observation of the accessible workings on the Savoy Mine property, this being the present producing mine and as such, becomes the primary basis on which future potential must be determined to guide the client in the right decision. A brief review of the surface geologic conditions was also made of the North Tiger property. Inaccessible workings did not permit underground examination.

It is upon the results and data obtained from the field examination, the writers personal knowledge of mineralization of this and other nearby districts and past historical statistics that the following report has been prepared and written.

## CONCLUSIONS

The following conclusions, specifically applying to the Savoy Mine property, must however, reflect the conditions for both properties as a unit.

- (1)-The gold, silver, copper and lead mineralization exhibited in the Savoy Mine (North Tiger mine workings not accessible) is typical of the common wide-spread mineralization encountered in the Bradshaw mountains, the zone of which extends from Wittmann through Crown King and Humbolt to Jerome, Arizona.
- (2)-Dollar-wise, upwards of a half million dollars in gold, silver, copper and lead values is represented by the \$30.00 ore indicated and inferred in the Savoy Mine.
- (3)-Controlled mine development should indicate additional ore of equal value or better, which could double the present indicated worth.
- (4)-Use of improved and selective mill methods should provide products more readily acceptable by the smelters.

- (5)-A profit of approximately \$5.00 per ton of crude ore is indicated after all costs including production, milling, smelting, royalty and return of property purchase price as well as return of capital for equipment purchases.
- (6)-An initial investment of \$150,000.00 will be required to finance a property purchase and proceed with a planned program of development, production and expansion.
- (7)-Rehabilitation work will be necessary on the North Tiger property in order to evaluate same.
- (8)-The entire district holds promising potential which if considered and unified could easily support a 200 to 300 ton capacity mill. Similarity of ores in the district present no milling difficulties.

#### THE PROPERTY

Two separate properties are considered herewith as a single package "deal". The Savoy Mine (two patented claims) are under lease from the Savoy Mining Co. of St Petersburg, Florida to Mr. J. L. Wilkerson of Phoenix, Arizona. The North Tiger Mine, approximately one mile west of the Savoy, consists of five unpatented claims which adjoin the Tiger mine on the north.

The two claims of the Savoy Mine are the Apache Panther, Lot #49 and the Hilda Claim. Patent of the Apache Panther was in 1881 and is 100 feet short of being a standard 600 by 1500 foot claim. The Hilda claim is also short, being 1453 feet long instead of 1500 feet. This claim is in conflict with the Apache Panther, the Lida Claim, the Eclipse and the Cougar, all patented claims. It is also in conflict with the Daisy claim, an unpatented claim.

The North Tiger group consists of five unpatented claims which in most instances cover fractions left by the patenting of nearby claims. The group comprises the North Tiger No. 1, Union, Northwest Tiger Wedge, Triangle and the West California. In all, probably a total of 70 acres.

See both claim maps for conflicts mentioned.

#### LOCATION

Both groups of claims lie in Sections 22, 26 and 27 of T. 10 N., R. 1 W., Gila and Salt River Base and Meridian, Yavapai County, Arizona. They are also located in the Prescott National Forest.

Travel to the property is north over paved State Highway 69

80 80

to what is known as the Bumble Bee road. A left turn on this County maintained gravel road through Bumble Bee, Cleator and Crown King for a distance of 26 miles. The gravel road continues south to the Mine for a distance of six miles. This route from Phoenix covers approximately 90 miles. There is no entry to this area from the south. Refer to index map.

#### FACILITIES

Three phase, 440 Volt (100 HP Transformers) electric power is available on the Savoy Mine property. Mill water is available from the mine in limited quantities. Domestic water and additional mill water could be obtained from a small spring on the property as well as another larger spring south of the claims.

No natural gas is available on or near the property.

The present access road from Crown King to the property is passable but improvements should be made.

#### REGIONAL GEOLOGY

Geology of the Tiger Mining district-(see Geologic Map) is simple and stright forward, consisting of Pre-Cambrian Schist and the Pre-Cambrian Granite.

All mines of important production in the district are confined to ore bodies in the schist. At times the ore zones are near the contact between the two rock types, other times quite a distance away.

#### MINERALIZATION

Mineralization in the Tiger Mining District is considered as the pyritic replacement type as defined by Lindgren in U. S. G. S. Bulletin #782. Development of these ore deposits followed the intrusion of the granite into the schist, occuring primarily as short strike-length, narrow shoots, the dip lengths of which are exceedingly long. (see Underground Map). The value carrying minerals are pyrite, chalcopryite, galena and sphalerite, all of which usually carry minute quantities of gold and silver.

Minerals encountered in the Savoy mine are pyrite, chalcopryite and galena. Percentage content of the latter two minerals is minutely small as noted by samples 4 through 6 and the bulk of the ore value is derived from the gold and silver content.

#### DEVELOPMENT

The Savoy Mine, in the early days, had been developed from what is known as the Main adit level to a depth of 300 feet and to a height of 60 to 70 feet above the adit level. These work-

ings are now inaccessible but old maps (1908) indicate the outline of the stopes as well as assays of samples, at least the gold and silver values. For simplicity, the writer has averaged the sample values for particular areas and indicated such averages on the Underground Map.

Development by the present operator consists of what the writer has called the Wilkerson Level--approximately 100 feet below the lowest old working. The portal of this adit level is near the south end line of the Apache Panther Claim and is approximately 1700 feet in length. This level has intersected the ore shoot of the upper workings. Three raises have followed the fault fissure to the level above but have been bulk-headed such that entry is not possible. The miners advised the middle raise was in ore all the way. This raise is not completely lagged and the writer was able to examine same. Stope preparations are now in progress as shown on the Underground Map.

The two ore shoots in the upper workings have different rakes to their dip and has caused them to join and become one ore shoot on the Wilkerson level. The length of the ore shoot on this level is approximately 100 feet and the width at the level is indicated to be approximately 20 feet plus, from foot to hanging walls of the fault fissure. Mineralization over this width is somewhat spotty.

#### ORE RESERVE

The writer believes two classes of ore, indicated and inferred, exist between the Wilkerson level and the Main Adit (old) level, the total of which will approximate 20,000 tons of ore which will have a mineral content of approximately 0.06 ozs gold, 25 ozs silver and about 0.3% copper with about the same amount of lead. Such ore would have a value of \$28.00.

Indicated ore approximates 5000 tons in a block between the Wilkerson level and the 300 level (old workings) and a distance of 100 feet on both levels. The average width was taken as six feet. Inferred ore approximates 15,000 tons in the two ore shoot blocks from the 300 level to the Main Adit level, a distance of 100 feet on the levels and an average width of 6 feet.

Samples 1, 4, 5 and 6 indicate that the silver values have dropped considerably from the 300 level to the 400 level. Apparent also is the fact that the gold values have remained about the same and samples 4, 5 and 6 indicate that copper values may increase with depth below the 400 level, however, it is thought the increase in copper values will not off-set the loss in silver values, thus, for all practical purposes economic ore cannot be anticipated below the 400 level.

Additional potential may possible exist in an area some 250 to 300 feet closer to the portal of the Wilkerson level as indicated by the appearance of moderate quartz, pyrite and some chalcopyrite mineralization.

The following samples were taken in the stope and raise of the exposed ore shoot above the Wilkerson level.

Samp. #	Width	Ozs Gold	Ozs. Silver	% Copper	% Lead	
4	6.5'	0.13	0.10	0.75	0.50	Normal to dip of ore shoot close to footwall, 25' up dip from 400 level in raise above sub-drift.
5	6.0	0.04	3.00	0.35		Normal to dip of ore shoot, near footwall 62' up dip from 400 level in raise.
6	5.0	0.18	Tr.	0.60		Normal to dip of ore shoot across back of small stope near north end of ore shoot.

These three samples average out to 0.12 oz gold, 1.0 oz silver and 0.57% copper, not a very attractive ore. A smaller width sample could improve the situation, thus, a smaller or narrower mining width is indicated.

#### MINING

The 55° dip of the ore zones makes for a nice stoping method however, because of the nature of the ground, more than the average amount of support will be required. It may therefore be advisable to go to a cut and fill method of stoping.

Stope preparation for the ore block between the Wilkerson level and the 300 level is currently in the process. Several chutes have been installed and two manways completed.

#### MILLING

Ore from the Savoy mine is currently milled by a simple gravity process, namely, primary and secondary crushing, classification and tabling. A pyritic concentrate is obtained. Some base metal as copper is also concentrated, however, the tabling is not the most efficient type of concentration for this type ore, as can be seen by the results of the following samples.

Sample #	Type	Ozs Gold	Ozs Silver	% Copper	% Lead	
1	Heads	0.03	0.40	0.39	0.30	Grab from feeder after pri. crush.
2	Conc.	1.44	3.80	1.45		Average grab, several days run.
3	Tails	0.05	0.90	0.34	0.50	Avg. grab from tailing pond of material milled previous day.

Heads to the mill apparently vary considerably because the concentrate assay does not correlate with the head assay, similarly the tail assay.

The mill operator advised that the mill usually collects about a 1000 pounds of concentrate in an eight hour day from 6 to 7 tons of crude ore, thus a concentration ratio of 12 to 14 to one. The pyrite content is therefor approximately 8 to 9% of the total weight, allowing some as going with the tails.

Comparing the head assay with that of the tails, it appears that no concentration has been made as to the values except that the pyrite has been removed.

The writer believes that a metallurgical test on this type ore would suggest the use of flotation which would produce three concentrate products, a pyrite, a copper concentrate and a lead concentrate. The Iron King Mine, north of Mayer, or some 30 miles north of the Savoy Mine has a similar type ore which is also complicated by the presence of sphalerite. Here a copper concentrate, a lead concentrate and a zinc concentrate is made. The pyrite accompanies the copper concentrate.

Present capacity of the mill is approximately 25 tons. The limiting factor of its capacity is the secondary crushing unit as well as the single table. The primary crusher would handle 50 tons a day.

#### PRODUCT VALUE

Five ton shipments to the Miami Plant of International Smelting and Refining Co. usually contain 1.75% copper, 35 ozs silver and 2 to 3 ozs of gold. Copper is paid for at 29.375¢ for the full value or content less 10 pounds; silver at 91.375¢ for the full content less 5 ounces and gold for the full content at \$32.20 per ounce.

Smelter and excess metal deductions average approximately \$20.00 per ton of concentrate.

Royalty payments to the Savoy Mining Company are 15% of the Smelter net. With a 13 to one ratio, the royalty per ton of crude ore would be approximately a 7% rate.

The below par mine production rate of tons per man shift, the limited capacity of the mill and the limited operation of the mill total to the fact that the present operation is not a profit maker.

Improvements along these lines can be made but the necessary financing must be available. Great improvements can be made in the mill operation and efficiency.

A suggested mill capacity is 50 tons per day on a three shift basis.

## ESTIMATED OUTCOME

The writer states under "Ore Reserves" that the grade for the indicated and inferred blocks of ore will approximately \$28.00 per ton. The 20,000 tons therefor represents a \$560,000 in place Value.

The following estimated outcome is based on the fact that 50 tons of crude ore will be mined and milled each 25 days per month; that mill will be operated 24 hours a day; that the mine will operate one shift, not more than two per day and that a total of ten men, not more than twelve men, will produce the required daily tonnage.

Direct and indirect costs have been used to determine the possible profit from the operation. The profit thus indicated is before taxes.

### Direct Costs

Mining (labor, supplies, etc)	\$	8.00	
Milling (labor, chemicals etc)	\$	2.00	
Smelting and Freight	\$	1.50	
Stope preparation & Development	\$	1.00	
Royalty (Savoy Mining Co.)	\$	2.00	
			\$ 14.50

### Indirect Costs

Property Purchase \$150,000	\$	7.50	
Equipment Purchase \$25,000	\$	1.25	
			\$ 8.75

Total costs before including taxes	\$	23.25
Value of ore in place	\$	28.00
		\$ 4.75

Life of the operation based on the reserve of 20,000 will be 16 months. A \$95,000 profit is estimated for this period.

## CAPITAL INVESTMENT

A capital investment of \$150,000 will be required to acquire the property, purchase necessary equipment, accomplish some development and to expand the operation to a 50 ton per production.

The following indicates the suggested distribution of the

\$150,000 required.

Property purchase (down payment )	\$ 50,000.00
(reserve for payments)	\$ 30,000.00
Equipment purchase (mill and some mine)	\$ 25,000.00
Stope preparation and Development	\$ 20,000.00
Operating Capital	\$ 25,000.00

Total \$ 150,000.00

EQUIPMENT on PROPERTY

Mine equipment consists of the usual drilling equipment, machines, hoses, air lines, etc. There are two antique compressors which are in good operating condition, one an Ingersol Rand, the other a Chicago Pneumatic, a 50 Hp electric motor drives either one. Installed at the portal is a large electric driven blower for ventilation with 12 inch pipe to the working faces. The Wilkerson Adit is well lighted from Portal to stopes. Ore transportation to the mill is with two one ton mine cars. Miscellaneous shovels, picks, timber saws etc are in ample supply.

Equipment in the mill consists of the coarse 8" by 14" jaw type crusher driven by a 20 HP, 52 Amp induction type motor, a 5' by 5' ball mill using a 30HP, 43.4 amp electric motor, a home made 12" by 10' spiral classifier electrically driven and a 5' by 12' Dyster table driven by a 5 HP electric motor.

Transformers on the 3 phase power supply are rated at 100HP.

Structures include the mill building which houses a 20 ton coarse ore bin, a five ton fine ore bin and the concentrating section. A combination Compressor-change house is located near the portal. A one room cabin with two screened porches is currently being used as a bunk house. All structures are of wood frame and galvanized sheeting for walls and roof.

A replacement value would probably approach \$50,000.00, however, a used equipment sale price would not bring very much.

DISTRICT POSSIBILITIES

Sporadic leasor operations have continued in the Tiger Mining District for the past 35 years. Such operations usually provided days wages for the operators. Because of the low tenor of the ore and distance away from most smelters, the district has been forgotten. The writer believes a moderate sized operation can be realized were a single operator able to obtain leases on several of the mines in the district, unitize same and operate under one management.

Such mines as the Oro Belle, Pacific, Mascot, Old Tiger, Gazelle and the like should be checked into. Ores from the various mines in the district vary little consequently there would be no great milling problem. A choice mill location

could well serve all mines to great advantage.

### RECOMMENDATIONS

Purchase of the Savoy Mine lease and North Tiger property proper is recommended providing more favorable and lenient terms of purchase can be obtained over a longer period of time and providing also that the indicated profit would satisfy the personal requirements of the interested party.

Assuming purchase has been completed, revamping and equipping of the mill should be accomplished as indicated by the suggested flow sheet, to produce a copper concentrate, a lead concentrate, and possibly a pyrite concentrate if test work indicates that such should be made.

Stope preparation must move ahead to permit the production of 50 tons a day.

Some rehabilitation must proceed in the upper levels to prepare this block of ore for stoping.

Exploratory work must be done on the area 250 feet nearer the portal of the Wilerson adit at the indicated mineralization at this point.

More thorough geologic studies must be made to attempt to locate more ore shoots within the property.

Consider a milling operation which will serve the entire district.

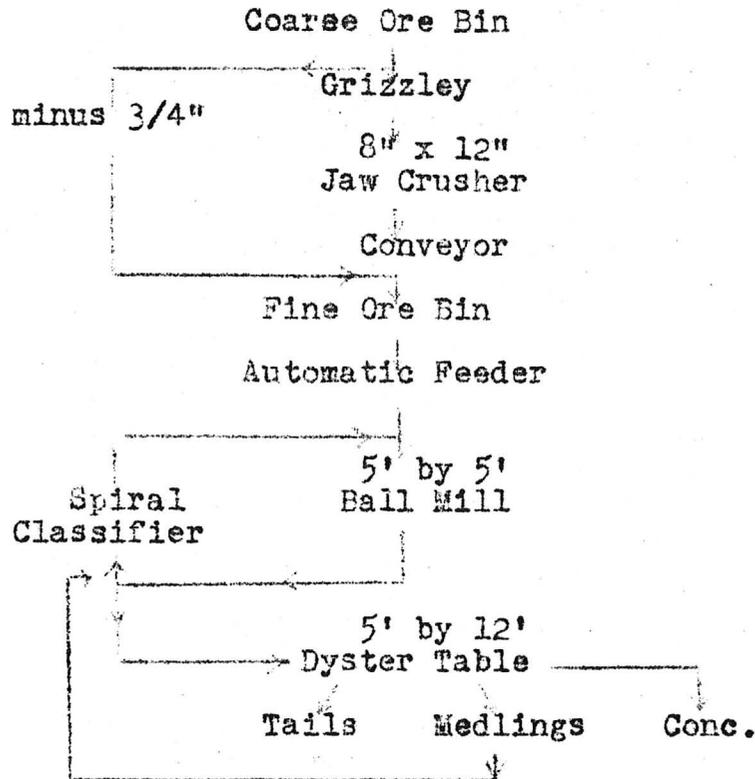
Obtain the necessary professional guidance which is a definite requirement to successful operation of ores in this class.

Respectfully submitted,

Richard E. Mieritz, P. E.  
Mining Consultant  
Phoenix, Arizona

March, 29, 1960

Present Mill Flow Sheet



Suggested Mill Flow Sheet

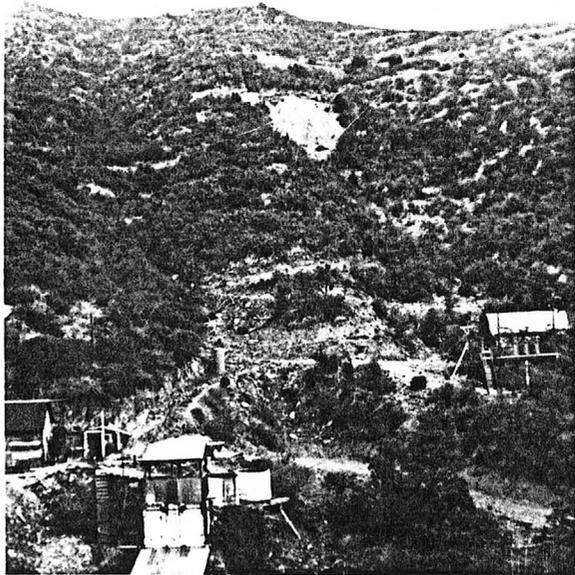
The flow sheet from the Coarse Ore bin through the automatic feeder below the Fine ore bin will properly handle 50 tons of material. It is from this point however that the flow of material must be changed--to wit-- as follows:

Two 5' by 5'  
Ball Mills  
Classification

Three banks of 4 cell  
Flotation Units

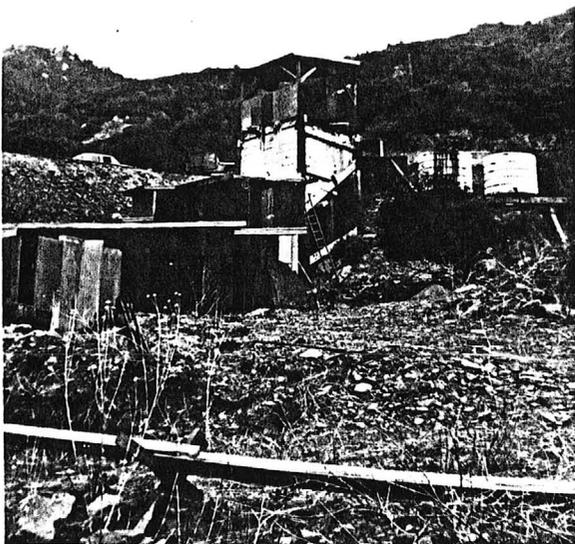
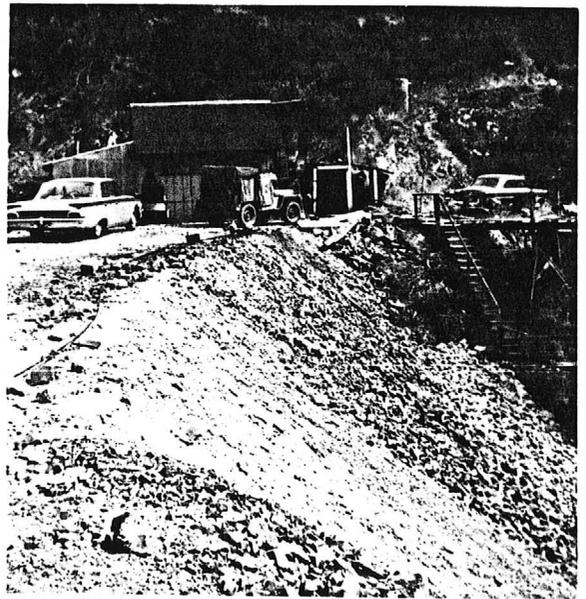
- First bank - - - Copper concentrate
- Second Bank - - Lead Concentrate
- Third Bank - - Pyrite (?) Concentrate

Filters to follow Flotation Units

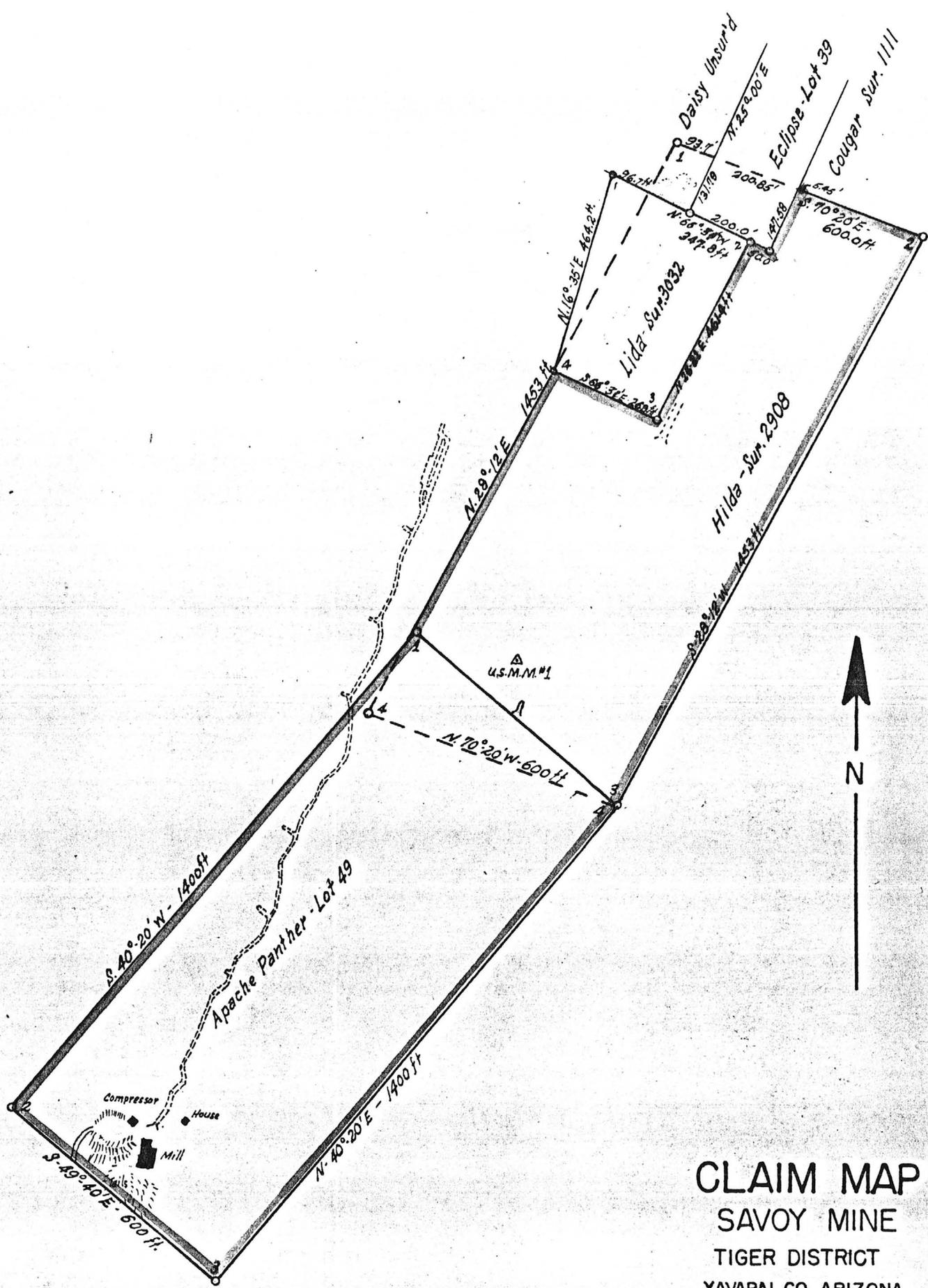


Left: General view looking north along strike of vein. Shows Wilkerson portal, dump of main adit level (old) and other dumps above.

Right: Portal of Wilkerson Adit and Compressor-Change room house.



Left: Looking West toward Mill (lower floor has picture window) showing crude ore bin, primary crushing floor and tabling floor. Upper right shows water storage tanks.

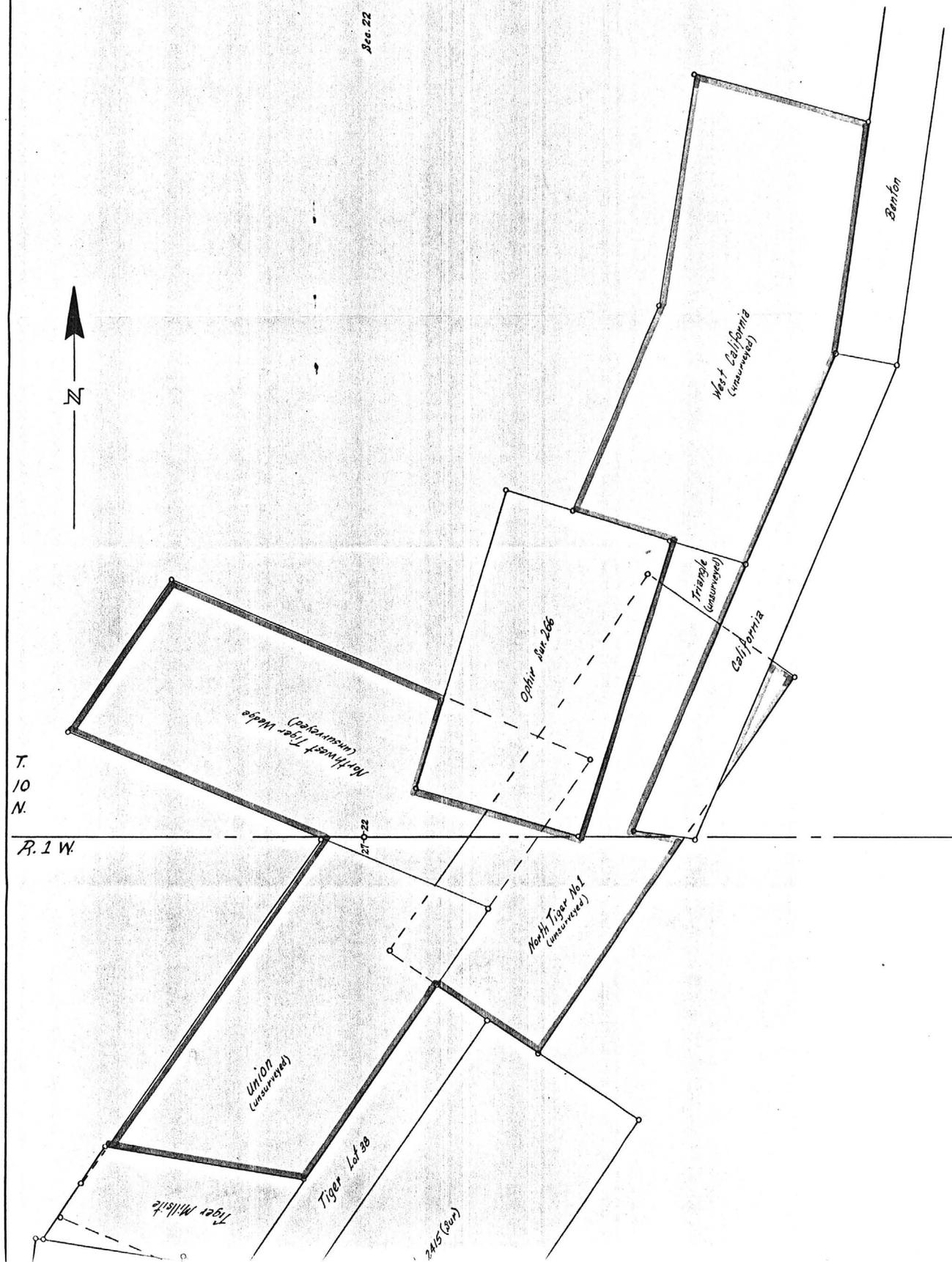


**CLAIM MAP**  
**SAVOY MINE**  
 TIGER DISTRICT  
 YAVAPAI CO., ARIZONA  
 SCALE: 1" = 300'

CLAIM MAP  
NORTH TIGER MINE  
TIGER DISTRICT  
YAVAPAI CO., ARIZONA  
SCALE: 1" = 300'

March, 1960

F.E.M.



T.  
10  
N.

R. 1 W.

Sec. 22

Northwest Tiger Wedge  
(unsurveyed)

Union  
(unsurveyed)

North Tiger No. 1  
(unsurveyed)

West California  
(unsurveyed)

Triangle  
(unsurveyed)

California

Dahir Aug. 266

Tiger Lot 98

Tiger Millrite

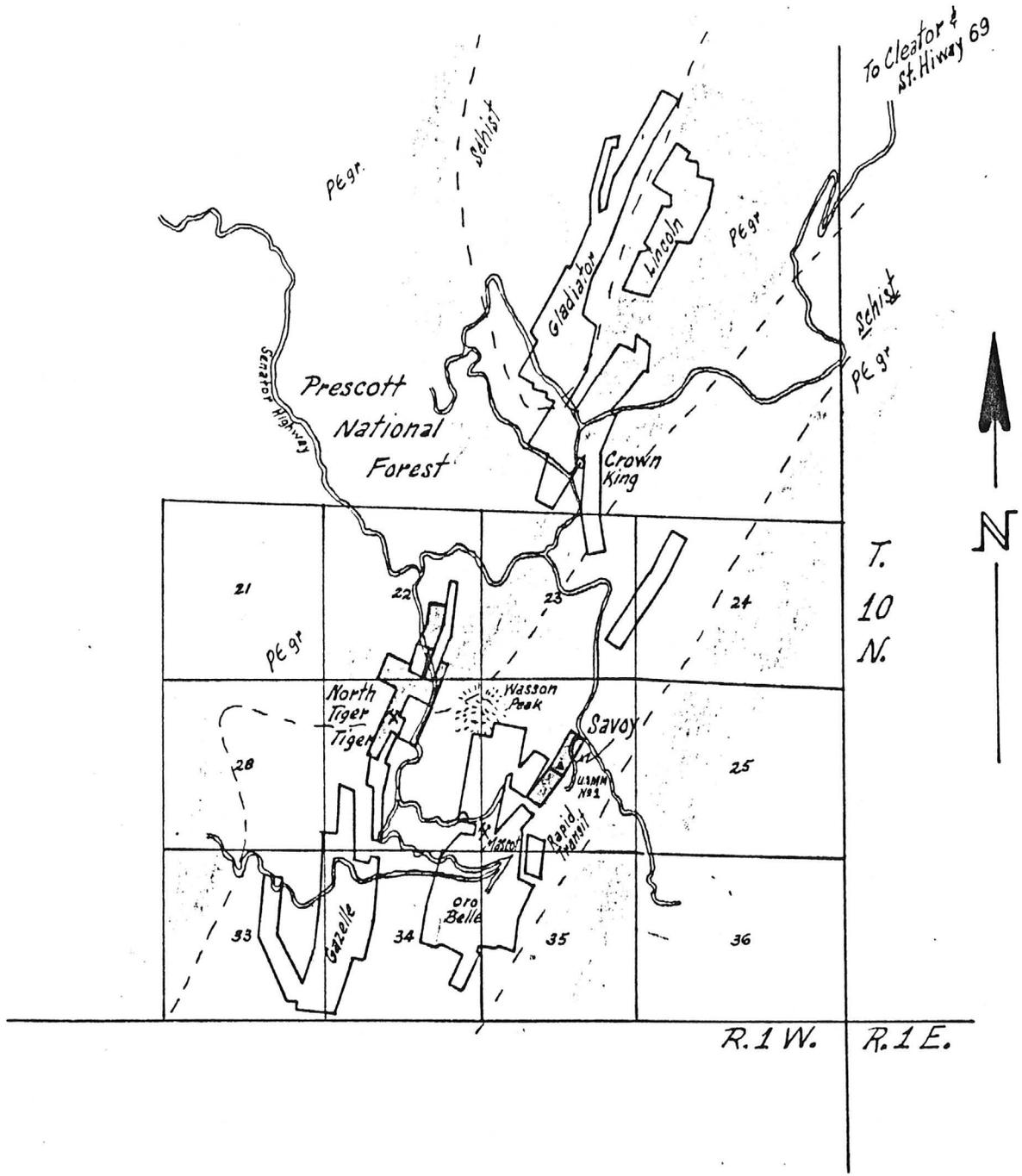
2415 (900)

Benton





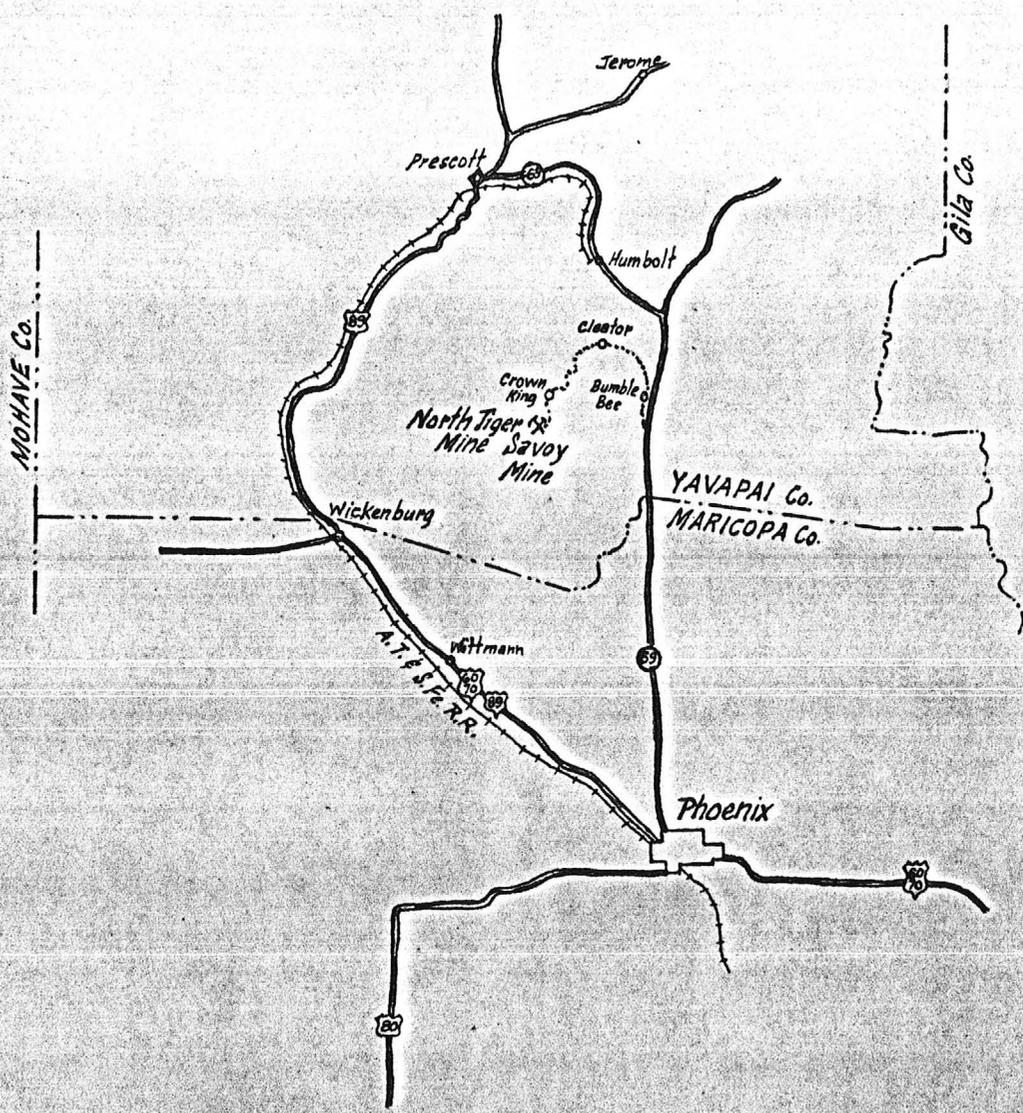




**GEOLOGIC MAP**  
 TIGER MINING DISTRICT  
 YAVAPAI CO., ARIZONA  
 SCALE: 1" = 1 MILE

March, 1960

R.E.M.



# INDEX MAP

CENTRAL ARIZONA

SCALE: 1" = 21 MILES

March, 1960

R.E.M.

August 7, 1975

Mine Management Corporation  
P. O. Box 7277  
Phoenix, Arizona 85011

Att: Mr. Dennis K. Pickens:

Re: Savoy Mine  
Tiger Mining District  
Yavapai County, Arizona

At your request and authorization, I have reviewed and studied all the information Mine Management Corporation has gathered and assembled into its Summary Report - Evaluation Savoy Mine, as revised of July 15, 1975.

The presentation of historical facts and figures, as well as the presentation of M.M.C.'s recent work and analysis of a potential project, has been extremely well prepared.

As you well know, (a copy of my March 1960 Report being included in the above mentioned Report), the writer examined the Savoy Mine on March 24 & 25, 1960, for a client with a view to determine and advise the client whether the property should be purchased. Considerable detail and study of the available factual data was warranted and necessary to economically appraise the writer's 20,000 ton indicated and inferred ore reserve of an estimated 0.06 oz/ton gold, 25 oz/ton silver and 0.3% copper content (about \$28.00/ton value at the 1960 metal prices). The end result was the writer's advice to purchase the property for \$150,000.- since the writer determined a small profit could be realized at the then operating costs.

On February 25, 1975, the Savoy Mine was again visited by the writer, in your company, to inspect or examine the recent work by M.M.C. and to check on the advance completed, after the writer's first visit in 1960, by the then lessee Wilkerson. Unfortunately, Wilkerson's operation has rendered some ore reserve as "lost" to any immediate operation (might be recovered after area depleted of the existing ore reserve). Time permitted but a brief examination of the added work completed by Wilkerson, over and above that observed by the writer in March 1960, as well as a brief examination of the recent sampling work by M.M.C. and the operation work by Childs. Based on the writer's review of authenticated factual data of these programs, the writer can agree - after physical calculations - that the ore reserves and grade, as presented in M.M.C.'s revised Report, are adequately and geologically justified and calculated correctly. Where the writer used a strike length of 100 feet in March 1960, the sampling and operation by Childs now indicates a longer strike length - and the 250 foot length used by

M.M.C. can be considered reasonable and justified - and not objected to by the writer, particularly since this figure is used in the "probable" ore classification.

As you are aware, projection of ore reserves - and/or mineralization beyond the last known observable point is a supposition based on visible geologic evidence at that point. Important also are the depths reached by other mines of similar mineralization and geologic conditions which thus provide a "criteria" that can be utilized as a guide for one's own property, the depth of which may be considered shallow as compared to other mines in the district. The Blue Bell Mine could be a good example with its 1500 foot depth, however, the Oro Belle Mine, one mile south-southwest of the Savoy, not only in the same Mining District, but on the same geologic structure as the Savoy, was developed to a depth of 1200 to 1300 feet below its highest surface outcropping. M.M.C.'s projection of probable ore below the Wilkerson Adit - or 400 level - is quite reasonable and geologically justified. The writer finds no objection to such calculations as part of M.M.C.'s "Ore Reserve" and grade. With proper development depth-wise, the writer believes that a greater depth of mineralization than what is shown on your Map I (Savoy Mine Plan & Profile) is very possible.

In year 1960, a water source for the Wilkerson mill was a problem. At this writing, it still is a problem, consequently treatment of the Savoy ore at/on the property is the limiting factor as to tons/day mined. Mill improvements, as recommended by the writer in year 1960, were apparently completed because the concentrate shipments made by Wilkerson after the writer's examination, as well as the shipments by Childs, showed very good contents of gold, silver and copper, all at an apparent good recovery.

This thus demonstrates that the Savoy ore is very much amenable to flotation at a good recovery rate. Your revised report indicates the Savoy ore is amenable to the cyanide process at about the same recovery rate. The property being in the National Forest - and recreational area, it is feared there would be much "static" from this agency through the ecology route. We are aware what it has cost the mining and smelting companies in the past - thus - were the cyanide method used, your capital investment here could be an additional \$150,000.-.

Your plan to treat the Savoy ore at the Blue Bell mill (with slight equipment additions) is basically sound and feasible and should eliminate "static" from the Forest agency - the Blue Bell Mine being in the National Forest but "out of way" for the normal recreationists. A "static" free operation in this situation is well worth the transportation cost to truck the ore from Savoy to Blue Bell. Moreover, you have demonstrated an ample water source and supply at the Blue Bell Mine which eliminates a critical problem.

The writer firmly believes that M.M.C.'s knowledge, experience and technology know-how as regards milling techniques could certainly increase the Savoy ore milling recovery from the indicated 85% to at least 92% or better - particularly by utilizing the necessary, useful mill equipment from both mines to establish an efficient mill operation to handle the

Savoy ore. Your Schedule III, page 15 of the Revised report - appears to have included the necessary expenses for such revamping of the present Blue Bell mill.

A review of "Summary of Economics" schedule, as well as Schedules II and III indicate that the figures used are within reason and justified, particularly in this day of extreme fluctuations and variance.

Respectfully submitted,

---

R. E. Mieritz  
Mining Consultant  
Phoenix, Arizona

REM/cra

SAVOY MINE

YAVAPAI

WR GW 7-28-77 - Mr. Harry Playford, Scottsdale, owner of the Savoy Gold mine near Crown King, came in with a brochure from Caithness Corp. who has recently contacted him re: a deal for his property. They are operating the "71 Operation" at Tombstone, therefore, Jerry was called who said some of their checks had bounced recently. Therefore, Mr. Playford, who has no knowledge of mining, was cautioned not to become too involved.

---

KAP WR 9/29/80: It is reported that operators at the Savoy Mine, Tiger District, Yavapai County, have cut a vein which contains good values in gold and silver in sulfide of lead, zinc and iron (galena, sphalerite, and pyrite) and possibly tetrahedrite).

---

WR GW 8/22/77: Mr. Harry Playford, Scottsdale (card) who owns the Savoy is interested in selling it.

---

WR GW 8/23/81: Spent 5½ hours trying to analyse the best procedure to mine the high-grade ore shoot in the Savoy Mine.

---

NJN WR 3/26/82: A report was received that Mine Magement has a crew of three or four people working underground at the Savoy Mine, Yavapai County. *Rehabilitated mine workings and extended drift. Some ore mined and stockpiled.*

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NJN WR 12/23/83: Tem Callahan with Sunrise Gold (c) visited and reported that his current address is 695 1675 Road, Delta, Colorado 81416. Mr. Callahan reported some Denver underwriters have inventoried but placed on hold his public offering idea for Sunrise Gold. He would like to get something going soon because his lease from Mr. Pickens (c) on the Savoy Mine, Yavapai County, will expire soon. If something develops his solution to the bad ground problem on the current level would be to drive a new lower drift for a length of about 1500' from the canyon down by the Oro Belle to intersect the vein and then mine using the cut and fill technique.

---

KAP WR 3/11/88: Russ Karry reported that someone has brought equipment onto the Savoy Mine (file) Yavapai County to process tailings (dumps? small stockpile?) at the property.

---

## SAVOY MINE

Mr. Playford, Scottsdale, came in with two reports on his Savoy Au property near Crown King. These reports were written 6 months apart in 1975 by Mr. Pickens, President of Mine Management Corp., Phoenix, who has a lease on the property and who has done considerable exploration work the past 1½ years. Although the mine has been in the Playford family since 1900, Mr. Playford is a retired (75 years old) banker and has a very limited knowledge of mining. Therefore, he asked for an interpretation of these reports, with regard to the mines value, saying he wished to sell the property rather than lease it on a royalty basis. GW WR 7/14/75

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Discussed the Savoy Au property with Mel Jones of Wickenburg who has an assignment to examine it for the new lessee, A Mr. Roberts. GW WR 9/2/75

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Dexter Broyles, Mayer, called regarding leaching Au at the Savoy mine from 3 or 4 weathered zreas in the schist. GW WR 10/27/75

---

SAVOY MINE

YAVAPAI

Walt Statler said a Canadian company was taking over the Savoy mine at Crown King;  
he thought the company was called Seaforth. GW WR 3/11/75

---

Harry Playford, Box 1985, Scottsdale, called to get information on the Savoy mine 3 miles south of the Crown King. He is the owner but had operated it on leases. Our file was copied and sent to him and a suggestion was made that he should get a consulting engineer to advise him on the procedure for reopening the mine; it once had a 25 T/day mill that made a gravity concentrate which was sold to Inspiration.  
GW WR 4/10/73

---

Mr. Playford whose family own the Savoy mine near Crown King. Mr. Dennis Pickens of Mineral Management wants to make a deal and Playford did not know what to ask for. I made suggestion regarding royalty and to see an attorney.  
FTJ WR 9-28-73

---

While in Walt Statler's office at the Iron King Mr. Andy Zinkl came in and said he was consulting on the Belcher and Wizard gold mines of a Mr. Magaro of LA. He also said he was trying to drive a lateral drift around a 260 foot long cave in in the Savoy Au mine SE of Crown King. GW WR 2 8-74.

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Mine Management, Corp., Mr. Pickens, manager of Scottsdale, is driving a lateral drift around the cave in in the Savoy Au mine at Crown King. They GW WR 5-2-74

---

Mr. Playford, owner of the Savoy Au mine SE of Crown King, called to discuss the possibility of getting a different contractor to finish the lateral drift.  
GW WR 9/6/74

---

Dexter Broyles came in to discuss mining methods at the Savoy Au property 2 miles SW of Crown King. He said there is an ore shoot in excess of 250 feet in length and 2-12 feet wide in which an old stope 60 feet high has caved for 200 feet along the old drift. It was suggested that raises could be driven near the extremities of the old stope to above the cave at which point a sublevel could connect the 2 raises and stoping commenced. Dexter said Dennis Pickens has the lease on the Savoy and the Blue bell mines. GW WR 11/18/74

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Mine Management, Inc., Denis Pickens, president, has temporarily closed both the Blue Bell and the Savoy mines. GW WR 1/23/75

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**PAY DIRT for January 27, 1975**

Up in Yavapai County, Mines Management, Inc. is reported to have temporarily closed both the Bluebird and Savoy mines.

**PAY DIRT for February 24, 1975**

Intermittent mining and milling operations are continuing at the Savoy mine in the Tiger district near Crown King, Arizona. This is a silver-lead property opened by a 1750 foot adit with a 100 foot raise at 1,400 feet opening into old caved workings. The mill, consisting of a jaw crusher, ball mill and concentrating table, has a capacity of about 1 ton per hour. Operations are directed by J. L. Wilkerson, 517 S. 4th St., Phoenix. Mining World January 1960 p 67

---

2 to 3 men developing, mining, & milling. TPL 1-30-60

---

This property active Sept. 1960  
" " " Feb. 1961

Visited the Savoy Mine. Grant Van Tilburg and a crew of three men are installing a flotation section in their small mill. Most of the past year has been spent developing and preparing an area for stoping in the end of the main adit. TPL WR 7-15-61

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Active Oct. 1961

Active Mine List Feb. 1962 - J. L. Wilkerson, 517 S. 4th St., Phoenix, operator - 4 men

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Visited by T.P. Lane - Active - The mill operates at intermittent intervals according to ore supply and water supply. Concentrates are shipped to International smelter at Miami. Values are silver and gold with low copper. Ore is being stoped at various places above the long adit level. At the time of visit the crew was timbering. 4 men were working including Grant Van Tilburg in charge. 5-23-62

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George Rosemeare states United Beryllium Co. are operating. Small mill operating. Henry S. Childs, Gen. Mgr., 4129 N. 56th Ave., Phoenix. 11-10-64

---

At Crown King interviewed Ed Daily, mill man at the Savoy. Learned the Savoy has 6 men in the mine and 4 in the mill working 2 shifts, 2 men on a shift and 1 mechanic. Could not find out tonnage being milled or where concentrates were being shipped. The Company is the H.S.C. Corp., Henry S. Childs, 4129 N. 56th Ave., Phoenix, President. A. J. Henry, Supt. EGW WR 1-22-65

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Learned that the Savoy Mine was closed due to bad weather. EGW WR 3-19-65

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Learned that the road work to the Savoy and Swastika properties had ceased without completing the road. FTJ WR 5-21-65

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Mr. A. J. Henry, Mgr. for Savoy Mine, Crown King, stirring to reorganize company. FTJ WR 9-24-65

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Mr. Frank Kranz, at Crown King, said H. S. Childs, 4129 N. 56th Ave., Phoenix, is considering some exploration at the Savoy. FTJ WR 3-18-66

---



Savoy MME @ YAVERPAI CO  
United States Department of the Interior

IN REPLY REFER TO:

OFFICE OF HEARINGS AND APPEALS  
INTERIOR BOARD OF LAND APPEALS  
4015 WILSON BOULEVARD  
ARLINGTON, VIRGINIA 22203

MINE MANAGEMENT CORP.

IBLA 84-245

Decided September 18, 1985

Appeal from a decision of the Arizona State Office, Bureau of Land Management, declaring certain lode mining claims abandoned and void. A MC 113869 through A MC 113886

Affirmed.

1. Federal Land Policy and Management Act of 1976: Recor-  
dation of Affidavit of Assessment Work or Notice of  
Intention to Hold Mining Claim

BLM may properly declare unpatented mining claims abandoned and void pursuant to 43 U.S.C. § 1744 (1982), when the claimant fails to file prior to Dec. 31 of any calendar year either evidence of annual assessment work or a notice of intent to hold.

2. Federal Land Policy and Management Act of 1976: Assess-  
ment Work

When a claimant fails to timely file an affidavit of assessment work or notice of intent to hold, the Board lacks authority to excuse lack of compliance, extend the time for compliance, or afford any relief from the statutory consequences.

APPEARANCES: Dennis K. Pickens, President, Mine Management Corporation.

OPINION BY ADMINISTRATIVE JUDGE BURSKI

Mine Management Corporation (MMC) has appealed from a letter decision of the Arizona State Office, Bureau of Land Management (BLM), dated November 21, 1983. The decision rejected an affidavit of assessment work filed by MMC on October 17, 1983, on behalf of its Savoy Lode Claims 1 through 18 (A MC 113869 through A MC 113886) because no affidavit had been filed in calendar year 1982, and it allowed MMC 30 days to produce evidence that the missing affidavit had been filed, after which the claims would be removed from the public records as abandoned and void by operation of law. MMC then requested and was granted an extension of time to January 20, 1984,

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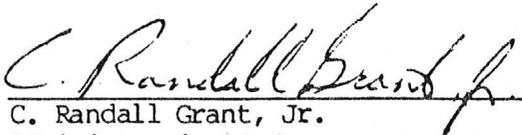
43 CFR 4.21(c)  
43 CFR 4.22(f)

been holding such proof, 1/ it is reminded that for such extraordinary circumstances, a motion for reconsideration may be filed with this Board. See 43 CFR 4.21(c). Appellant may also wish to consult with BLM as to the possibility of relocating its claims.

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed.

  
\_\_\_\_\_  
James L. Burski  
Administrative Judge

We concur:

  
\_\_\_\_\_  
C. Randall Grant, Jr.  
Administrative Judge

  
\_\_\_\_\_  
Wm. Philip Horton  
Chief Administrative Judge

1/ As stated by BLM in its letter, such proof would consist of a letter or other acknowledgement of receipt by BLM, a copy of the affidavit showing a BLM date and time stamp, or other evidence tending to establish that an affidavit of assessment work or notice of intent to hold was received by BLM prior to Dec. 31, 1982.

# MINE MANAGEMENT CORPORATION

P. O. BOX 7277  
INDIAN SCHOOL STATION  
PHOENIX, ARIZONA 85011

*file*  
**CONFIDENTIAL**

Western Office:

1505 FINANCIAL CENTER BLDG.  
PHOENIX, ARIZONA 85012  
602 - 274-8049

June 18, 1975

## BRIEF SUMMARY SAVOY MINE & PROPOSED FINANCING

- 1) LOCATION  
About 4 miles from Crown King, Arizona, Tiger Mining District, adjacent to Oro Belle, largest producer gold-silver 1880 to 1913.
- 2) HISTORY  
Some high grade mining intermittently 1888 to 1912 with some 2000' drifts and raises. New tunnel driven in 1957 to main ore shoot - produced for 5 years on small scale but established grade and ore body.
- 3) OWNERSHIP AND LEASE  
Owned by Playford Family (Savoy Mining Company) since 1900. Main claim patented. Leased to Mine Management Corporation (MMC) October 16, 1973. Lease in good standing and under very fair terms and conditions.
- 4) EXPLORATION PROGRAM 1974  
MMC on behalf of itself and a few others did \$54,375 of exploration including reopening tunnel and re-sampling accessible portion of mine. (See Maps 1 & 2 attached) Determined reserves and grade from own work and historical data.
- 5) ORE RESERVES  
Two independent mining consulting engineers have confirmed MMC's calculations of 55,000 tons of \$113.00 ore with gold at \$150 ounce and silver at \$4.50 ounce in 1975 dollars. Probable additional reserves 79,000 tons and possible reserves could run to another 80,000 tons.  
  
At \$113.00 ton the ore reserve is worth \$6,215,000 gross in place. If the probable reserves are confirmed at same value project could run to \$15,000,00 gross.
- 6) PROBABLE ECONOMIC CONSEQUENCE OF RAISING \$300,000 AND PUTTING MINE INTO PRODUCTION  
See attached:  
  
Schedule I - Summary  
Schedule II - Direct Costs  
Schedule III - Capital Costs
- 7) MMC FINANCING PROPOSAL TO COMMERCIALIZE MINE  
a) Register offering to sell \$300,000 of Limited Partnership or

carved out mineral interest participation

- b) Offer new money 50% of net profits and all non-cash benefits including estimated 50% tax shelter (could be higher) by labeling much of work as exploration under IRS sections 617 to 617h, 1969 amendment.
- c) Present participants 25% and MMC 25%
- d) MMC will manage at maximum GA&O charge of \$24,000 per year.

- 8) QUESTION  
Who will undertake financing for maximum 12% fee upon proper registration?

A handwritten signature or set of initials, possibly "RKH", written in dark ink. The signature is stylized and appears to be written over a horizontal line.

SCHEDULE I

SUMMARY OF ECONOMICS

SAVOY MINE

(to nearest \$1000)

1.0	<u>SALES - ANNUAL</u>		
1.1	Gross Value Ore - 9600 tons x \$113.25 @ 85% recovery-240 working days @ 40 TPD		\$924,000
1.2	Less Air freight & insurance marketing bullion		<u>5,000</u>
1.3	Net Value Annual Production F.O.B. Mine		\$919,000
2.0	<u>COSTS</u>		
2.1	Direct - 9600 tons @ \$48.00	\$461,000	
2.2	Royalties to owner	70,000 (1)	
2.3	General Administrative & Overhead @ \$2,000 month incl. tel & tel, insurance, local taxes, travel & management	<u>24,000</u>	
2.4	Total Costs		<u>\$555,000</u>
3.0	<u>NET ANNUAL CASH PROFIT BEFORE DEPRECIATION, DEPLETION &amp; INCOME TAXES</u>		\$364,000
4.0	<u>LESS NON-CASH ITEMS</u>		
4.1	Depreciation (average 10 years) per year	\$ 25,000	
4.2	Depletion @ 15%	<u>135,000</u>	
4.3	Total Non-Cash		<u>\$160,000</u>
5.0	<u>TAXABLE INCOME</u>		\$204,000
6.0	<u>FEDERAL &amp; STATE INCOME TAXES</u> (Assume average investor in 30% bracket)		<u>61,000</u>
7.0	<u>NET PROFIT AFTER TAX</u>		\$143,000
8.0	<u>ADD BACK NON-CASH ITEM 4.3</u>	<u>\$160,000</u>	\$303,000
9.0	<u>NEW INVESTOR'S AFTER TAX CASH RETURN</u> 50% Interest		<u>\$151,000 (2)</u>
10.0	<u>ROI ON NEW \$300,000 FINANCING - AFTER TAX - ANNUAL</u>		<u>50.33%</u>

NOTES:

- (1) Owner's est. royalty if ore shipped to smelter as per lease - subject adj.  
(2) Present high risk investment of \$70,000 spent in 1974 for reopening mine as exploration tax shelter represents other 50% interest.

SCHEDULE II

DIRECT COSTS MINING & EXTRACTION - SAVOY MINE

(40 TPD - 2 shifts - 20 working days)

1.0 MINING & CONTINUING DEVELOPMENT OF RESERVES

	<u>Per</u> <u>Working Day</u>	<u>Per Ton</u>
<u>1.1 Labor &amp; Supervision</u>		
1.11 10 men @ \$6.00 hr. 40 hr. week (average)	\$480.00	
1.12 Burden incl. comp. insurance @ 32% of above	155.00	
1.13 Total Burden & Supervision	<u>\$535.00</u>	<u>\$21.40</u>
<u>2.1 Supplies</u>		
2.11 Timber (rough cut on forest permits)	\$100.00	\$ 4.00
2.12 Bits, steel & explosives	25.00	1.00
2.13 Fuel, lubricants & water (600 cfm compressor 10 KW diesel generator)	25.00	1.00
2.14 Ventilation pipe & misc. repairs	25.00	1.00
2.15 Total Supplies	<u>\$175.00</u>	<u>\$ 7.00</u>
<u>3.1 Equipment-Rental Purchase</u>		
3.11 350 cfm compressor @ \$500 mo.	\$ 50.00	\$ 1.00
3.12 25 KW standby compressor generator \$200 mo.	10.00	.40
3.12 Total Equipment Rental	<u>\$ 60.00</u>	<u>\$ 1.40</u>
<u>4.1 Pickup Truck &amp; Misc. Camp Expenses</u>	<u>\$ 50.00</u>	<u>\$ 2.00</u>
<u>5.1 Total Direct Cash Costs - Mining</u>	<u>\$820.00</u>	<u>\$32.80</u>

2.0 CRUSHING, GRINDING, CYANIDING

<u>2.1 Labor &amp; Supervision</u>		
2.11 4 men @ \$5.00 hr. - 40 hr. wk.	\$160.00	
2.12 Burden incl. comp. insurance 32%	50.00	
2.13 Total Labor	<u>\$210.00</u>	<u>\$ 8.45</u>
<u>2.2 Supplies &amp; Utilities</u>		
2.21 Reagents	\$ 20.00	
2.22 Fuel & Gasoline	50.00	
2.23 Electricity	25.00	
2.24 Misc. Repairs	25.00	
2.25 Total Supplies & Utilities	<u>\$120.00</u>	<u>\$ 4.80</u>
<u>2.3 Rental-Purchase Equipment</u> (See Schedule III, Items 6.5 & 7.3)	<u>\$ 50.00</u>	<u>\$ 2.00</u>
<u>2.4 Total Cost Milling &amp; Cyaniding</u>	<u>\$380.00</u>	<u>\$15.25</u>

3.0 TOTAL ALL DIRECT COSTS

	<u>\$1,200.00</u>	<u>\$48.00</u>
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BUDGET & CAPITAL - SAVOY MINE

TO BRING PRODUCTION TO 40 TPD & INSTALL GRINDING PLANT

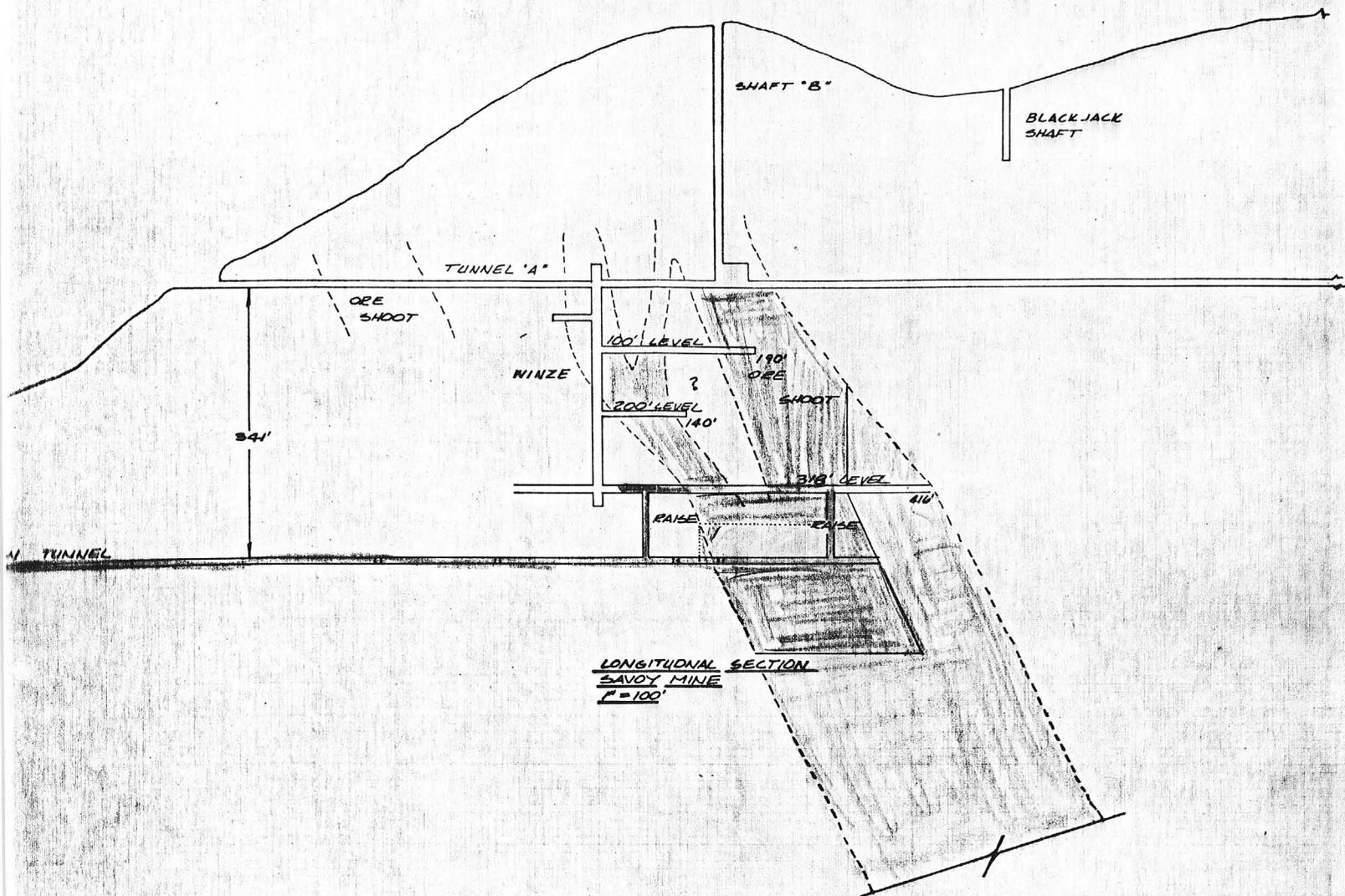
1.0	<u>ACCESS ROAD REPAIR &amp; IMPROVEMENT</u>	
1.1	Blasting, bulldozing, cut & fill - contract	\$ 4,000
1.2	Motor Patrol - grader 10 days @ \$12.50 hr. - contract	1,000
1.3	Total	<u>\$ 5,000</u>
2.0	<u>HAULAGE SYSTEM</u>	
2.1	New rails & ties (385' installed)	\$ 7,500
2.2	Rehabilitation 1400' old rail, including additional ties & ballast	2,700
2.3	Total	<u>\$10,200</u>
3.0	<u>VENTILATION &amp; AIR</u>	
3.1	385' new 10" vent pipe & extension of 8" system now in existence for 1275'	\$ 1,000
3.2	New 1800 air line for 360 cfm compressor installed (pipe \$4,320)	6,300
3.3	Total	<u>\$ 7,300</u>
4.0	<u>EQUIPMENT &amp; SUPPLY PURCHASES (1)</u>	
4.1	Air driven locomotive (located)	\$ 4,500
4.2	Air driven slusher (used & in 70% condition (located)	2,500
4.3	4 - 1 ton mine cars @ \$400 (used & reconditioned) (located)	1,600
4.4	Misc. tools, safety devices, spare parts, bits, drill steel, etc.	5,000
4.5	Starting timber inventory	5,000
4.6	Total	<u>\$18,600</u>
5.0	<u>MAKE READY &amp; DEVELOPMENT WORK (See Map #1)</u>	
5.1	Retimber through balance ore shoot	\$ 5,000
5.2	Rehabilitate Wilkerson raise & expand to 3 compartments	12,750
5.3	Total	<u>\$17,750 (2)</u>
6.0	<u>ESTABLISH CRUSHING, GRINDING &amp; CYANIDING SYSTEM</u>	
6.1	Repair existing mill building and living quarters	\$ 7,500
6.2	Acquire and install 14' x 28' jaw crusher & 2' Symms low head crusher	12,500
6.3	Rehabilitate 5 x 4 ball mill now in place, including new motor & drives	4,500
6.4	Repair & rehabilitate existing float cells	5,000
6.5	Move from Blue Bell Mine and install 4 x 4 regrind mill, classifier, 3 additional float cells, pumps, etc.	15,000
6.6	Install 8 - 5' x 24' cyaniding columns complete with pumps and air agitation	20,000
6.7	Erect strong block house & install precipitation, electrowining & bullion furnace complete with lab	25,000
6.8	Total	<u>\$89,500</u>

(cont'd. next page)

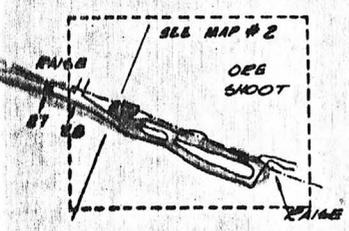
7.0	<u>OTHER CAPITAL REQUIREMENTS</u>	
7.1	Deposit to APS for electricity, replacing 3 poles	\$ 5,000
7.2	Erect 250' cyclone fence - 9' barbed wire - with electronic security - installed	5,000
7.3	Move steam boiler from Blue Bell and install for camp & mill heat including radiators & heat units	5,000
7.4	Fuel tanks, water tanks & pumps - plastic hose-installed	17,500
7.5	First 2 months rental-purchase equipment	3,500
7.6	Starting inventories balls, powder, fuel, bits & small tools	2,500
7.7	Prepaid Workmen's Comp. & other insurance - 1st qtr.	2,000
7.8	Legal, auditing & professional engineering fees - 1st 3 months	2,500
7.9	Management & supervision during installation & start up - 4 months @ \$3,000	12,500
7.10	Total	<u>\$55,500</u>
8.0	<u>WORKING CAPITAL CONTINGENCIES &amp; OVERSIGHTS</u>	<u>46,150</u>
	<u>TOTAL DIRECT CAPITAL REQUIRED FOR MINE</u>	<u>\$250,000</u>
9.0	<u>ESTIMATED COSTS PREPARATION REGISTRATION OF LIMITED PARTNERSHIP OFFERING &amp; SALE</u>	
9.1	Preparation of Prospectus including professional engineering fees as experts, legal accounting, printing, etc.	\$ 14,000
9.2	Expected Financing Cost to raise \$300,000 @ 12%	36,000
9.3	Total	<u>\$ 50,000</u>
10.0	<u>TOTAL CAPITAL TO BE RAISED</u>	<u>\$300,000</u>

NOTES:

- 1) All items located and priced
- 2) Contract price



LONGITUDINAL SECTION  
SAVOY MINE  
D=100'



-  ORE
-  PROBABLE ORE
-  WILKINSON WORKINGS
-  ACCESSABLE
-  MAKE-READY WORK - 1978

REVISED 1-7-78

<b>MINE MANAGEMENT CO.</b>		
SCALE: 1"=100'	<b>MAP 1</b>	DRAWN: DAVE
DATE: 7-11-74		CHECKED: M.M.
<b>SAVOY MINE PLAN &amp; PROFILE</b>		
COE & VAN LOO Consulting Engineers Inc. PHOENIX	ARIZONA	Sheet 1 of 2

419-04-02

SCHEDULE I

SUMMARY OF ECONOMICS

SAVOY MINE

<u>1.0 SALES</u>	<u>Annual</u>
1.1 Gross Value Ore - 12,000 tons X \$113.25 ton @ 85% recovery	\$1,115,150
1.2 Less Haulage Freight & Smelter Charges	
1.21 Trucking @ \$5.00 ton to Blue Bell Mill	\$60,000
1.22 Trucking 800 tons concentrates to rail @ \$4.00 ton	4,000
1.23 Freight to smelter, Miami, Az. @ \$4.13 ton concentrates	3,300
1.24 Smelter charges per average ton concentrates @ \$89.50 x 800 tons	<u>71,600</u>
1.25 Total Deductions	<u>\$ 138,900</u>
1.3 <u>Net Value After Truck, Freight &amp; Smelter Charges</u>	<u>\$ 976,250</u>
2.0 <u>COSTS</u>	
2.1 Direct - 12,000 tons @ \$24.70 (See Schedule II following less \$5.00 ton trucking Item 1.21 above	\$296,400
2.2 Concentrating at Blue Bell Mill @ \$10.00 ton	120,000
2.3 Royalties to owner-10% of 1.3 above	97,615
2.4 General Administration & Overhead @ \$5,000 month including tel & tel, insurance, local taxes, travel & management	60,000
2.5 Amortization of capital costs (Schedule III) over 4 years	<u>39,000</u>
2.6 Total Costs	<u>\$ 613,015 (1)</u>
3.0 <u>NET ANNUAL CASH PROFIT BEFORE INCOME TAXES, DEPLETION</u>	<u>\$ 363,235 (2)</u>

NOTES:

- (1) Does not include exploration costs already expended or provide cost basis for acquisition of all or part of lease. This is to be negotiated with interested parties.
- (2) Project could last ten years if all probable ore developed.

SCHEDULE II

DIRECT COSTS MINING & TRUCKING ONLY - SAVOY MINE

(Raise stoping - 50 tons ore per day - 2 shifts - 20 working days)

	<u>Per</u> <u>Working Day</u>	<u>Per Ton</u>
<u>1.0 LABOR &amp; SUPERVISION</u>		
1.1 10 men @ \$6.00 hr.-40 hr. week(average)	\$600.00	
1.2 Burden incl. comp. insurance @ 35% of above	<u>210.00</u>	
1.3 Total Burden & Supervision	\$810.00	\$16.20
<u>2.0 SUPPLIES</u>		
1.1 Timber (rough cut on forest permits)	\$100.00	\$ 2.00
2.2 Bits, steel & explosives	50.00	1.00
2.3 Fuel, lubricants & water (360 cfm compressor-25 KW diesel generator)	75.00	1.50
2.4 Ventilation pipe & misc. repairs	<u>50.00</u>	<u>1.00</u>
2.5 Total Supplies	\$275.00	\$5.50
<u>3.0 EQUIPMENT RENTAL PURCHASE</u>		
3.1 360 cfm compressor @ \$500 mo.	\$ 25.00	\$0.50
3.2 25 KW diesel generator - \$350 mo.	17.50	0.35
3.3 5 KW standby compressor generator-\$150 mo.	<u>7.50</u>	<u>0.15</u>
3.4 Total Equipment Rental	\$ 50.00	\$1.00
<u>4.0 CONTRACT HAULAGE TO BLUE BELL MILL</u>	\$250.00	\$5.00
<u>5.0 PICKUP TRUCK &amp; MISC. EXPENSES</u>	<u>\$100.00</u>	<u>\$2.00</u>
<u>6.0 TOTAL DIRECT CASH COSTS</u>	<u>\$1,485.00</u>	<u>\$29.70</u>

SCHEDULE III

CAPITAL REQUIRED TO BRING SAVOY MINE TO 50 TPD PRODUCTION

1.0 HAULAGE SYSTEM

1.1 New rails & ties (385' installed)	\$ 7,500
1.2 Rehabilitation 1400' old rail, including additional ties & ballast	<u>2,700</u>
Total	\$10,200

2.0 VENTILATION & AIR

2.1 385' new 10" vent pipe & extension of 8" system now in existence for 1275'	\$ 1,000
2.2 New 1800 air line for 160 psi compressor installed (pipe \$4,320)	<u>6,300</u>
Total	\$ 7,300

3.0 EQUIPMENT PURCHASES (1)

3.1 Battery driven locomotive - Eimco or equivalent for 18" track - used with new battery & charger	\$ 8,500
3.2 Air driven slushers (2) (used & in 70% condition)	7,000
3.3 6 - 1 ton mine cars @ \$400 (used & reconditioned)	2,400
3.4 Air driven incline mucker - $\frac{1}{4}$ yd. - Eimco - double track - used - 80% new condition	5,000
3.5 1 Eimco or equivalent air driven mucker	5,000
3.6 Misc. tools, safety devices, spare parts, bits drill steel, etc.	<u>5,000</u>
Total	\$32,900

4.0 DEVELOPMENT WORK

4.1 Below Wilkerson Tunnel

4.11 100' tunnel in foot wall @ \$150 foot	\$15,000
4.12 150' incline tunnel in foot wall to ore @ \$150 foot	<u>22,500</u>
Total to open Block B	\$37,500

4.2 Above Wilkerson Tunnel

4.21 Raise in footwall 60' @ \$150 foot	\$ 9,000
4.22 Cross cut to ore 25' @ \$100 foot	<u>2,500</u>
Total	\$11,500

4.3 Other miscellaneous work

\$ 5,000

4.4 Total Development Cost

\$54,000 (2)

5.0 CONTINGENCY OR POSSIBLE OVERSIGHTS

\$52,000 (3)

6.0 TOTAL CAPITAL CASH REQUIRED

\$156,000 (4)

SCHEDULE III

CAPITAL REQUIRED TO BEING SAVOY MINE TO 50 TPD PRODUCTION

NOTES:

- (1) All major items located and priced delivered Savoy.
- (2) Assumes contract price at going rates with rail and ventilating system installed. Could be less if not contracted.
- (3) High contingency of 50% of Items 1.0 through 4.0 considered safe and prudent, but used in view of uncertain conditions, increase possible in costs, etc.
- (4) Capital required includes production of first concentrates on which settlement is quickly available if shipped direct by truck to Inspiration smelter at Miami.

SUMMARY REPORT

EVALUATION SAVOY MINE

Tiger Mining District  
Yavapai County, Arizona

Prepared By

MINE MANAGEMENT CORPORATION

P. O. Box 7277  
Phoenix, Arizona 85011  
(602-274-8049)

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References - in separate Expanding Folder

- Exhibit I - Crawford Report Oro Belle Property, 1968
- Exhibit II - Assays Childs' Channel Samples 1964
- Exhibit III - Mieritz Report 1960
- Exhibit IV - W. H. Wiley Report 1908
- Map 1 - Savoy Mining Profile
- Map 2 - Childs' Assay Map

PART I

INTRODUCTION & SUMMARY

This Summary Report is made after nearly a year of work by Mine Management Corporation, its staff and consultants at a cost of nearly \$60,000, largely financed as a mining exploration project by a small group of participants. The work included a by-pass tunnel allowing access to sampling, and evaluation of part of the ore body, study of the condition of old workings, development of a plan for mining, and the location of historical data. Because the mine had operated as late as 1964 it was also possible to gather important intelligence on the areas not accessible and to evaluate same.

From this data, MMC has concluded that the mine can be put into operation at a cost of \$156,000 including allowances for inflation and a substantial contingency figure.

Assuming that the price of gold averages in January 1975 constant dollars \$150.00 per ounce and silver \$4.50 per ounce, the Savoy Mine should return, before taxes, depletion in excess of \$360,000 per year for a minimum of 4.2 years and a maximum of 10 years at the rate of 50 tons per day of ore. (See Part IV - Schedule I)

MMC holds a lease in good standing from Savoy Mining Company, Scottsdale, Arizona, H. R. Playford, President. The property has been in the Playford family since 1900. The lease is for 10 years or until exhaustion of the ore with minimum royalties of \$500 per month commencing July 1, 1975.

At this point, after the more risky exploration and evaluation costs, the risk factor to an investor(s) is lessened but should still be considered as a businessman's risk with high expected return after tax.

MMC desires either to sell a 25% direct participation in the lease (whether by working interest or Limited Partnership) to finance production, or to sell the entire interest (including present participants' interest) under terms and conditions to be negotiated. MMC staff is available for management.

PART II

ORE RESERVES & GRADE

1.0 General Description of Principal Ore Body

The Gray Eagle vein has been identified for more than 15,000 ft. and has been mined commercially both to the south and the north of the Savoy Mine. The geology of the district is pre-Cambrian schist and pre-Cambrian granite. The Gray Eagle vein has no mineral value of economic importance except where there are ore shoots which are generally associated with a change in the degree of the strike. This has been well established by the rather extensive workings contiguous to the Savoy (see Engineering Report Oro Belle Claims prepared by Wm. P. Crawford, September 1968 attached and referred to as Exhibit I).

In general, the principal ore shoot at the Savoy Mine was discovered by early surface work, probably about 1888, and developed in the early 1900's by over 2000 ft. of tunnels and raises. The last tunnel put in in the 1950's by J. R. Wilkerson definitely established the ore shoot for 250 ft. in width with an average thickness of 10 ft. This last work definitely has established that the ore shoot is well defined both above and below the Wilkerson tunnel.

2.0 GRADE OF ORE

2.1 Work of H. S. Childs 1964-1965

Mr. H. S. Childs, a geologist, took over the property after J. R. Wilkerson discontinued operations. Mr. Childs is a resident of Arizona, presently engaged in managing a fairly substantial gold mining operation in Honduras, and has made available his records of assays and shipments as well as the mining plan for the exploitation of the ore reserves. Mr. Childs was engaged by MMC as a consultant, and in a half day interview held December 31, attended by MMC personnel, made available the following factual data (See Exhibit II and Map #2).

CHILDS 1964 CHANNEL ASSAY DATA: VALUES COMPARED 1974 PRICE

<u>Assay #</u>	<u>Width</u>	<u>Length</u>	<u>AG oz.</u>	<u>AU oz.</u>	<u>CU %</u>	<u>1964 Value \$ Per Ton (1)</u>	<u>1974 Present Value Per Ton (2)</u>
C201	9.5	88	2.56	.417	.92	24.52	
C202	15.0	14	3.6	.48	.05	21.80	
C203	17.5	22	3.0	.22	.70	16.61	
C204	4.5	10	8.4	1.60	1.20	75.48	
C205	12.0	20	27.6	1.24	1.65	90.88	
C206	5.5	12	46.2	1.44	1.20	118.64	
C207	19.5	26	17.4	.20	.50	33.04	
C208	4.5	40	2.33	.35	1.00	22.45	
<u>WEIGHTED AVERAGE</u>			<u>9.45</u>	<u>0.448</u>	<u>0.81</u>	<u>33.70</u>	<u>\$119.10</u>

AVERAGE WIDTH 10.88'

TOTAL LENGTH 232'

NOTES

- (1) 1964 Gold settlement at smelter \$32.20 oz.  
Silver " " " 0.91375 oz.  
Copper " " " 26.60 pound
- (2) 1974 Gold @ \$150.00 oz.  
Silver @ \$4.50 oz.  
Copper @ 58¢ pound

These channel samples definitely establish a very strong ore zone with average mineable reserves both above and below carrying this grade or higher. Mr. Childs bases all his calculations on grade from this work and from earlier data, some of which is discussed later, as well as an analysis of all of the files that he then had access to as to the nature and width and values in the rather extensive Oro Belle, Gray Eagle vein shoot contiguous to the Savoy.

2.2 Childs' Shipments 1964-65

J. R. Wilkerson had established a simple grinding mill and flotation plant in late 1962 (see Paragraph 2.4 following). Mr. Wilkerson gave up his lease and Mr. Childs, who had examined the mine off and on from 1957 through 1962, together with a group of private investors obtained a new lease from H. R. Playford and commenced to develop the mine, taking out ore as development work was encountered including some low grade material drawn from the old Wilkerson workings.

The group expected that the price of silver would raise rapidly and based their chances of the mine being made economic on this assumption. Many people believed that after the last Treasury sale silver would rise greatly in price, but this event did not take place during 1964-65 and silver made no appreciable rise until after 1966. Nevertheless, the information on shipments and concentrates following is important to establish both grade and quantity of ore.

CHILD'S CONCENTRATE SHIPMENTS - 1964-65

Lot #	Date	Dry/lbs.	Oz. Gold	Oz. Silver	% Copper	Present Gross Value Au \$150, Ag \$4.50, Cu 58¢
4782	10/21/64	12,271	2.280	45.96	2.30	
4932	12/3/64	29,356	2.725	16.75	6.10	
5075	1/12/65	33,547	2.235	35.29	2.64	
5141	1/28/65	39,467	1.385	24.51	2.40	
5291	3/11/65	<u>34,536</u>	<u>1.90</u>	<u>67.65</u>	<u>3.30</u>	
		149,177	10.525	190.16	16.74	
Average			2.105	38.03	3.34	524.97

2.3 J. R. Wilkerson Channel Sample 1957

J. R. Wilkerson owned a successful crane and rigging business in Phoenix, Arizona and maintained a lively interest in mining. With a small crew of men and little professional help or advice, Mr. Wilkerson started a tunnel 100' below the early work as an exploration project (see Map #1).

The first 300' of the tunnel drifted into the Gray Eagle vein from the surface outcropping of what appeared to be, and may still prove to be, a small ore shoot. No records can be located of the shipments of hand selected ore in this first 300 ft. of the tunnel which is now caved and cannot be re-sampled.

Wilkerson had available to him maps, assays and tracings of earlier work and was confident that he would intersect the main ore shoot of the Savoy Mine providing he drove the tunnel a sufficient distance. The remainder of the tunnel was placed into the foot wall (no timbering required) and driven a total distance of 1755 ft. From time to time, small cross-cuts were made into the mineralized area and some "long holing" was done to keep track of the ore zone, but no appreciable values were encountered until the main ore shoot was reached. Wilkerson then continued to drive the tunnel through the ore zone and started to mine. In 1957 the following bulk sample was shipped to the smelter.

BULK SAMPLE 1-31-57

<u>Lot #</u>	<u>Date</u>	<u>Dry/lbs.</u>	<u>Oz. Gold</u>	<u>Oz. Silver</u>	<u>% Copper</u>	<u>Present Average Gross Value-Au \$150, Ag \$4.50</u>
1891	1/31/57	85,420	.50	5.42	.35	\$99.00

There was one other bulk shipment of similar size and grade, but no records can be found of it, although Mr. Childs' files summarize the second bulk sample (or the first, it is not known which) as being of similar grade.

This bulk sample is important because it led Mr. Wilkerson to recognize that at prices then prevailing bulk shipments of ore could not be made to the smelter, a distance of about 200 miles by truck, 40 miles of which is very precipitous. The results were, however, sufficiently encouraging to Mr. Wilkerson to establish a crude mill.

2.4 Wilkerson Mill and Shipments 1959 to 1962

The first mill installed by Mr. Wilkerson after 1957 consisted of a small crushing, grinding and tabling plant which was very inefficient (see Mieritz report- Exhibit III) and records that are available are of the following concentrate shipments.

WILKERSON CONCENTRATE SHIPMENTS

<u>Lot #</u>	<u>Date</u>	<u>Dry/lbs.</u>	<u>Oz. Gold</u>	<u>Oz. Silver</u>	<u>% Copper</u>	<u>Present Average Gross Value -Au \$150, Ag \$4.50</u>
3786	2/3/59	7,339	3.10	18.13	.85	
3925	3/11/59	10,503	2.58	15.71	.95	
4080	4/29/59	13,332	3.76	17.12	.90	
4547	10/30/59	11,300	3.54	90.00	2.02	
4554	10/30/59	10,686	2.70	37.40	1.79	
4678	12/16/59	9,399	5.23	25.98	1.65	
(8 shipments records cannot be located)						
1174	6/14/61	7,352	3.675	108.45	2.10	
1927	4/24/62	6,478	1.985	142.47	4.03	
2076	6/27/62	11,100	2.968	73.91	4.20	
2329	9/2/62	<u>10,886</u>	<u>3.520</u>	<u>83.12</u>	<u>4.32</u>	
<b>Total</b>		98,375	33.058	612.29	22.81	
<b>Average</b>		9,837	3.305	61.229	2.281	<u>796.80</u>

Mr. Childs and Mr. H. R. Playford both confirm that a total of 18 shipments were made so that the above list is missing confirmation of 8 shipments. However, these shipments are important in that they represent additional proof that the grade of ore available in the Savoy Mine can be held, at 1974 average prices of \$150 per oz. for gold and \$4.50 oz. for silver, at a value in excess of \$100.

Unfortunately, no accurate material balance can be made because the tailings from the mill have been all but washed away, and although some sampling has been done, it is believed that rains, snows, wind, etc. have made the sampling of values found in the tailing samples which remain as valueless. (See Part III - 6.0 Recovery)

2.5 W. H. Wiley Channel Samples - 1908

The earliest authentic record, the original of which is in Mr. H. R. Playford's hands, is a report by Mining Engineer W. H. Wiley, dated September 24, 1908. It is attached herewith and made Exhibit IV. Reference is particularly made to the last page of this exhibit which shows the old workings and results of his channel sampling. The extent of these old workings indicate that development had been going on for several years and that those engaged in it had properly identified from the surface an ore shoot similar to those that had been experienced and were under commercial production at the Oro Belle (Exhibit I). The results of these channel samples may be summarized as follows (see Map No. 1 to identify levels).

318' Level

<u>Sample No.</u>	<u>Width/ft.</u>	<u>oz. Gold</u>	<u>Oz. Silver</u>	<u>Value @ \$150 oz. gold \$4.50 oz. silver - per ton</u>
5	4.7	.43	19.8	
6	3.5	.58	17.1	
7	1.0	.06	62.8	
8	<u>1.2</u>	<u>.02</u>	<u>57.3</u>	
Total	10.4	1.09	157.0	
Average	2.6	.27	39.25	217.12

100' Level

1	6.0	.25	37.5	
2	5.5	.12	18.0	
3	6.0	.05	7.5	
4	<u>1.0</u>	<u>.12</u>	<u>18.0</u>	
Total	18.5	.54	81.0	
Average	4.62	.135	20.25	111.37

"A" Tunnel

9	2.0	.05	29.0	
10	2.0	.02	20.6	
11	4.0	.06	3.1	
12	5.0	.03	2.3	
13	2.5	.02	5.5	
14	3.5	Tr	14.2	
15	3.5	.02	27.5	
16	3.0	.03	14.7	
17	<u>1.0</u>	<u>.02</u>	<u>2.3</u>	
Total	26.5	.25	119.2	
Average	2.94	.278 ?	13.24	63.75

In addition, Mr. W. H. Wiley reports on shipments during August and the first part of September which average .21 oz. of gold and 20.42 oz. of silver per ton. The report also accurately predicts better values at depth and judges the average value of ore to have then been \$13.20 per ton. Gold-silver bullion (unrefined) settlement in Arizona in 1908 was \$15.07 per oz. of gold and 54.17¢ per oz. of silver. Gold is now 10 times higher and silver approximately 8 times higher.

## 2.6 MMC Calculation of Grade

During 1974 access was gained to the area of H. S. Childs' workings, more closely identified as the area in both directions from his channel sample C-201 (see Map 2). The average grade of MMC samples was as follows:

.374 oz. gold @ \$150 oz.	\$56.10
9.59 oz. silver @ \$4.50 oz.	43.15
20# copper (est)	14.00
Total Gross Value per Ton	<u>\$113.25</u>

It should be noted that the area beyond channel sample 204 is caved and MMC has not been able to confirm values in other areas.

However, the weight of the historical and relatively current data, including the statements of 3 persons now living and who worked in positions of responsibility at the Savoy in the 50's and 60's, causes us to conclude that the average gross value of ore in the area both above and below the Wilkerson tunnel will be in excess of \$113.25 per ton (\$150 gold-\$4.50 silver) for a minimum distance of 250 ft. into the ore shoot with an average width of 10 ft.

This conclusion ties very well into the statement of Mr. Grant Vantilberg, Superintendent of the mine under Mr. Wilkerson, given to MMC before his death in November 1974, to the effect that he was able to hold his "heads" to \$30 per ton at then existing prices. This is further confirmed by Mr. Dexter Broyles, who was employed both by Mr. Wilkerson and by Mr. Childs and who is now an employee of MMC and had charge of the reopening work done on the mine in 1974. It is further confirmed by the results obtained by Mr. Childs who has stated that the average grade of Wilkerson ore was \$27.50 per ton with gold at \$32.50 per oz., smelter settlement, and silver at 91.37¢ per oz.

### 3.0 ORE RESERVES

#### 3.1 Basis for Calculation of Ore and Probable Ore

The history of the mining and attempted mining of the Gray Eagle vein in the Tiger District, especially as recorded in Exhibit I and other data available in Arizona State records, is that the ore shoots, when encountered, are in fact, as described by H. S. Childs, shaped like an elongated almond. If one imagines the Wilkerson tunnel as cutting this elongated almond shaped ore shoot approximately in half, the average developed distance through the ore shoot is 250 ft. with an average width of ore of 10 ft., but may extend an additional 100 ft., noted (extreme right) on Map 2. Samples taken by Dexter Broyles in 1959 showed a strong high grade ore body of 5 ft. in width indicating that the distance through the ore shoot had widened. This probable additional width is therefore calculated as probable ore.

By the same token, the ore shoot becomes smaller and the average mineralized zone narrower and grade of ore lower, above the old 100' level according to H. S. Childs and to some degree borne out by Wiley.

Width, length and average grade of ore to a depth of 125 ft. below the Wilkerson tunnel is expected and calculated as ore, although there are indications of a secondary silver enrichment carrying about the same amount of gold which could increase the average value of ore. In calculating this block, the total distance through the ore shoot is held at 250 ft. with an additional 100 ft. indicated as probable.

From a geological standpoint and considering the experience of the Oro Belle, it is expected that the ore shoot would remain strong although finally pinching out 500 to 600 ft. below the Wilkerson tunnel. Therefore, in calculating probable ore, a narrowing of the mineralized zone is taken into account. Also taken into account are allowances for old workings and possible barren areas above the 318 ft. level.

#### 3.2 Calculation of Tonnage Ore

Block A - Wilkerson tunnel to 318' level

$$\frac{250' \times 100' \times 10'}{12} = 20,833 \text{ tons}$$

Less area considered unsafe -  
Wilkerson old workings & shipments 9,000

Remaining & mineable 11,833

Block B - 125' below Wilkerson tunnel

$$\frac{250' \times 125' \times 10'}{12} = 26,040$$

Block C - 318' to 100' level

$$\frac{250' \times 218' \times 7'}{12} = 31,791$$

Less allowance for old workings  
& reasonable possibility of  
barren area (est.) 15,000

Remaining & mineable 16,791

Total Calculation of Ore 54,664

3.3 Calculation of Probable Ore

Block D - Probable Extension Ore Shoot  
125' beyond Wilkerson to 318'  
level - narrowing

$$\frac{100' \times 225' \times 7'}{12} = 13,125$$

Block E - Probable Ore 300' Continuation  
of Ore Shoot - Narrowing at depth

$$\frac{300' \times 300' \times 7'}{12} = 65,625$$

Total Probable Ore 78,750

3.4 Summary Rounded to Nearest 1000 Tons

Ore from 3.2 55,000  
Probable Ore from 3.3 79,000

Total Ore & Probable Ore 134,000

## PART III

### MINING & MILLING

#### 1.0 PREVIOUS MINING METHODS

Prior to World War I the custom in the district was to gain access to the ore by following the vein. If sufficient timber was used this was not particularly difficult, but because the Gray Eagle vein is not composed of sound rock this method of mining was done under difficult conditions, frequently requiring timbering on all sides or "square setting" as it is known. When a working place became too dangerous to the eye of an experienced miner, it was simply abandoned. Moreover, the general system was to high grade ore which was easily visible and identifiable by experienced people. All of this resulted in considerable waste and large amounts of good ore left behind in old workings.

In the Oro Belle group, contiguous to the Savoy, shafts were sunk, completely supported by timbers, levels driven off on ore and crude overhead stoping methods used. Since it was very expensive to bring out low grade rock, the mining was selective and large reasonably well developed areas were abandoned from time to time if the ground got too dangerous. Unfortunately, there is no accurate information on the amount of available ore that has been lost or unaccounted for during this period.

#### 2.0 WILKERSON OPERATION

Mr. J. R. Wilkerson apparently started out to mine the ore body at the Savoy with the idea of properly raise stoping, i.e., raise a two compartment wooden structure up through the ore body at the same time that mining was taking place, relying on the expansion of waste rock after the removal of ore as a platform from which to work the next cut above. Unfortunately, Mr. Wilkerson decided to attempt "pillar" stoping in heavy disseminated mineralized ground which has been described by at least one professional as "gopher holing" under suicidal conditions. Wilkerson's idea apparently was to avoid the cost of timbering and he was not properly equipped to undertake raise stoping in a satisfactory manner.

In spite of the fact that he was working in \$27.50 ore in 1959-1962 values and should have been able to make a profit of about \$4.75 per ton (see Mieritz report, Exhibit III, page 7) the expediency of using this type of mining at the prices then existing gave insufficient volume of ore to enjoy a profit. This was further complicated by the fact that manpower was used to push ore cars out of the mine. The worst result of the Wilkerson operation was that in the extraction of some 2000 tons of ore he rendered unsafe to mine an additional estimated 7000 tons of ore which with other caved old workings accounts for a deduction of calculated tonnage remaining and mineable in Block A (see Section II, 3.2).

### 3.0 CHILDS' MINING PLAN

Mr. H. S. Childs, as reported in an earlier section, is a trained professional in mining and he was the first to propose a mining system which kept all entries to the ore zone in the sound rock of the footwall. This system has the disadvantage of requiring underground development work, but properly set up permits access to the ore from workings requiring little or no timbering and sets up the conditions for the extraction of the ore with a maximum of safety.

Of the many plans studied by MMC, its staff and consultants, the basic concept of Mr. Childs has been used as a basis for a mining plan and for the estimates of capital required to bring the Savoy Mine to 50 TPD production (See Section IV, Schedule III) which involves an estimated \$54,000 of development work driving 100 ft. away from the ore body into the footwall and dropping on an incline tunnel in the ore approximately 150 ft. The plan also provides for raising in the footwall some 60 ft., cross-cutting to the ore zone and permitting access to the ore above the abandoned Wilkerson workings.

### 4.0 MILLING AND CONCENTRATING

4.1 Mine Management Corporation of Arizona owns and controls, together with certain participants, a crushing, screening, grinding and flotation facility, which with some minor changes, is capable of treating 3 to 4 tons per hour of Savoy ore and recovering a minimum of 85% of the gold-silver values, as well as a high percentage of copper or lead which may be in the ore.

The Blue Bell mill can be reached from the Savoy over 5 miles of very difficult road and 20 miles of solid unpaved road. Several trucking concerns have stated that at 50 tons per day, using heavy duty dump trucks, they will deliver ore from the Savoy to the Blue Bell for \$5.00 or less per ton in January 1975 prices.

#### 4.2 Reasons for Concentrating at Blue Bell Instead of on Site

There is the remnants of an old mill at the Savoy Mine, but there are a number of reasons why it is not economically sound at this time to consider the installation or re-installation of a small mill. These reasons include, but are not limited to, the following:

4.21 The capital cost of putting in a mill to treat 50 tons per day of ore would exceed \$100,000 (the Blue Bell mill has been installed at a cost in excess of \$250,000) and is not justified against the size of the ore body as presently defined.

4.22 There is no power to the property and reinstallation of power from Arizona Public Service (if it could be gotten) would involve considerable expense.

- 4.23 There is presently insufficient water developed to operate a mill.
- 4.24 There is no proper area for waste disposal and under present environmental laws the Forest Service and others would enforce an expensive impoundment of tailings.
- 4.25 Operating a small mill on 24 hour basis is not economic for such a small tonnage.
- 4.26 Labor and supervision would run the cost of milling far beyond the cost of trucking the ore and contracting its concentration to the existing Blue Bell mill.

#### 5.0 MILLING AND CONCENTRATING COSTS BY CONTRACT

Since the Blue Bell mill has excess capacity and can be operated with 3 men per shift, it is proposed to charge \$4,000 per month basic time rental, plus operating costs expected not to exceed \$6.00 per ton or a total of \$10,000 per month on a 1000 ton per month basis. The only other mill available, or known to be available for custom work, is located near Payson and currently charges \$25 per ton of ore milled and concentrated.

#### 6.0 RECOVERY

The experience of the Savoy mill, once flotation was installed, indicates that with proper flotation techniques 85% recovery of values are readily obtainable. Many precious metal mills recover gold and silver values as high as 95% recovery.

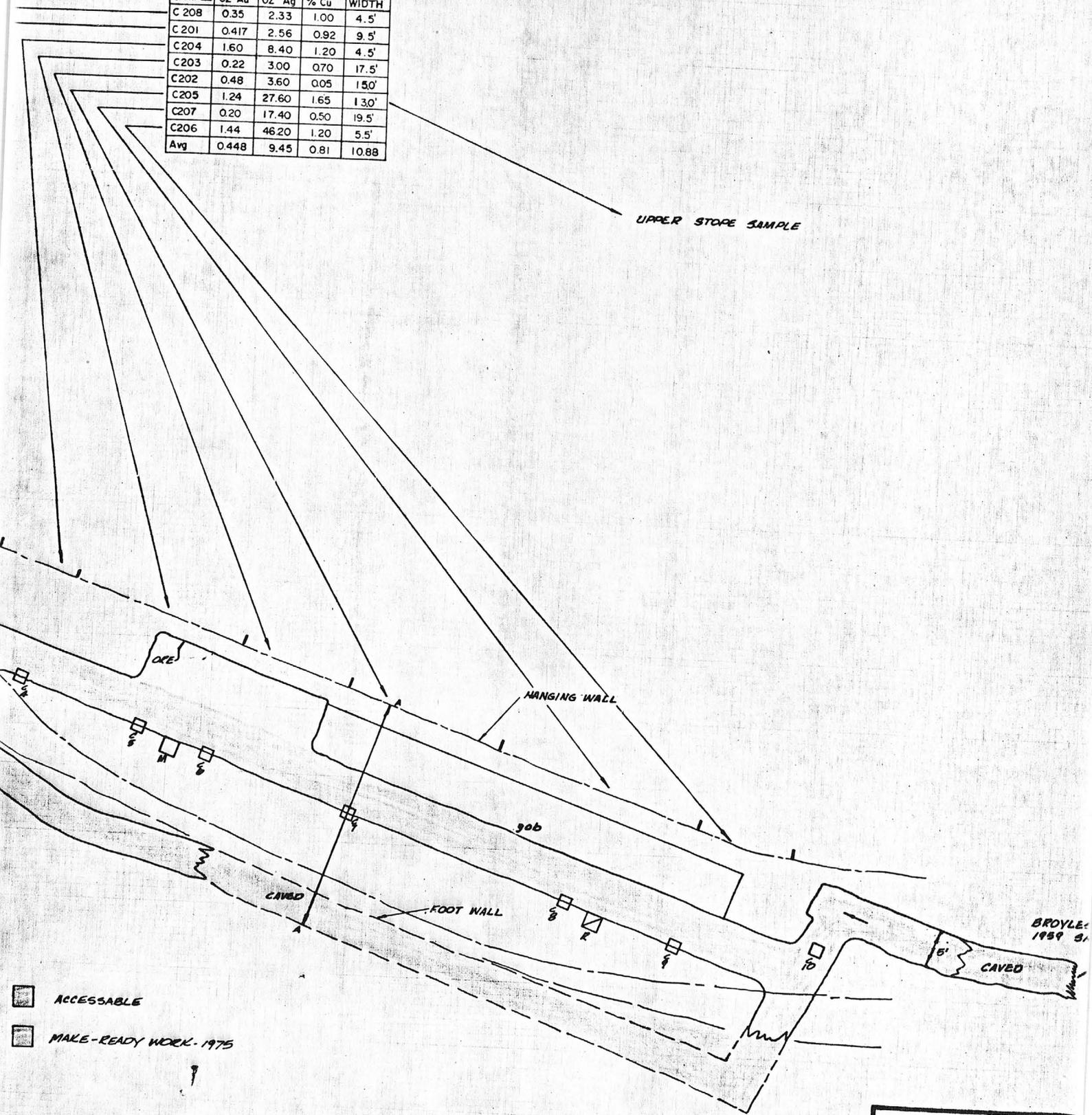
#### 7.0 CONCENTRATION RATIO

According to H. S. Childs and Mr. Dexter Broyles, the ore when crushed and ground in a conventional ball mill, classified and floated by established conventional techniques will produce on the average one ton of concentrate to 14 tons of ore.

This is also borne out by Mieritz' report (See Exhibit III).

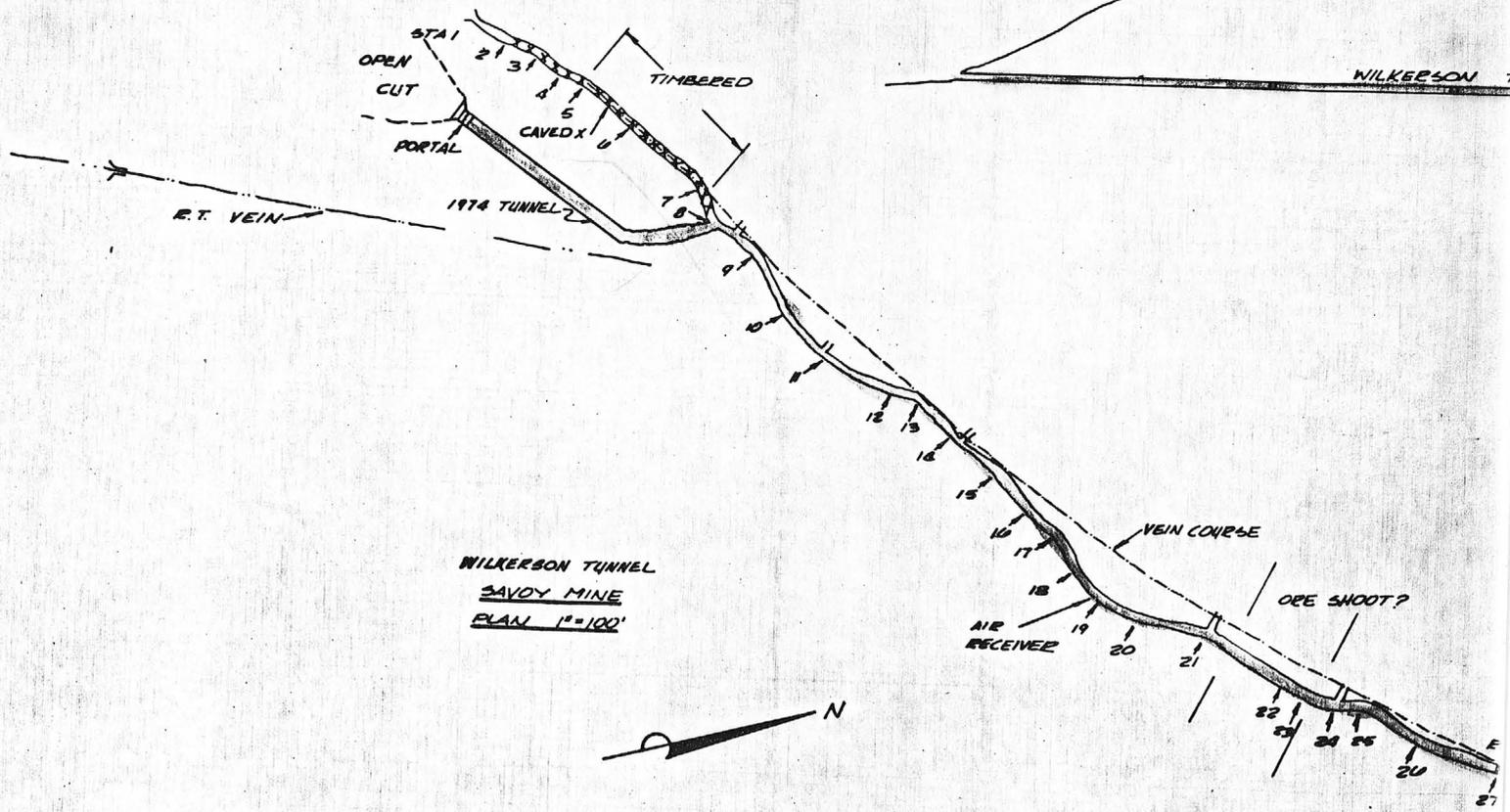
CHANNEL		SAMPLES		
SAMPLE	OZ Au	OZ Ag	% Cu	WIDTH
C 208	0.35	2.33	1.00	4.5'
C 201	0.417	2.56	0.92	9.5'
C 204	1.60	8.40	1.20	4.5'
C 203	0.22	3.00	0.70	17.5'
C 202	0.48	3.60	0.05	15.0'
C 205	1.24	27.60	1.65	13.0'
C 207	0.20	17.40	0.50	19.5'
C 206	1.44	46.20	1.20	5.5'
Avg	0.448	9.45	0.81	10.88

UPPER STORE SAMPLE



- ACCESSABLE
- MAKE-READY WORK - 1975

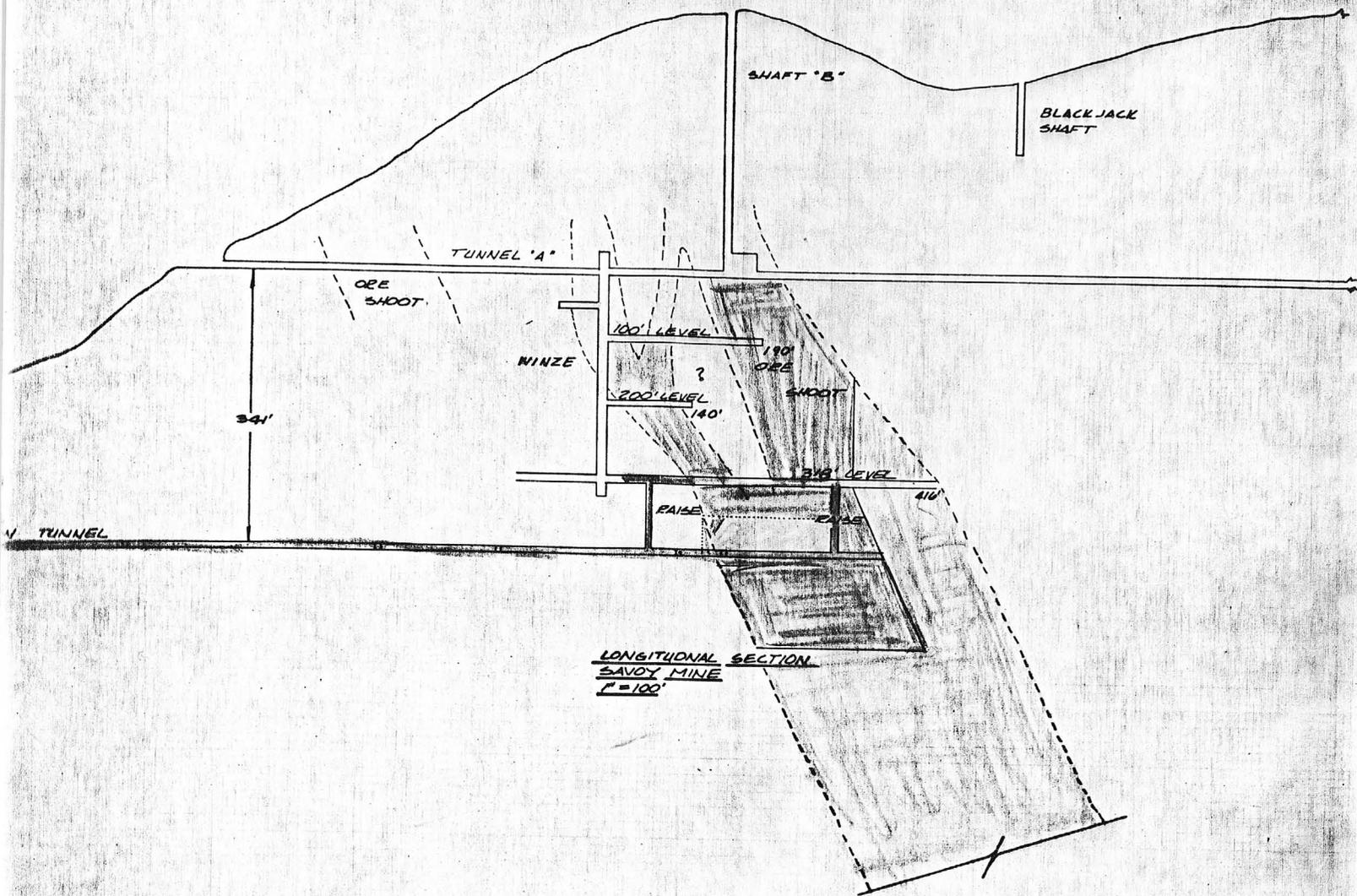
**MINE MANAGE**  
 SCALE: 1" = 8'  
 DATE: 1-7-74 **MAP 2**  
 TRACING FROM  
 SAVOY MINE ASSAY MAP  
 H.S. CHILDS CONFIRMED  
 COE & VAN LOO Consulting Engineer  
 PHOENIX



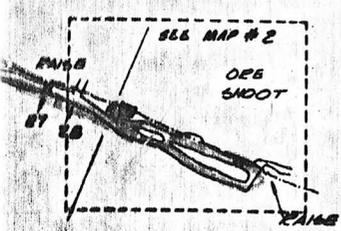
WILKERSON TUNNEL  
 SAVOY MINE  
 PLAN 1"=100'



WILKERSON 7



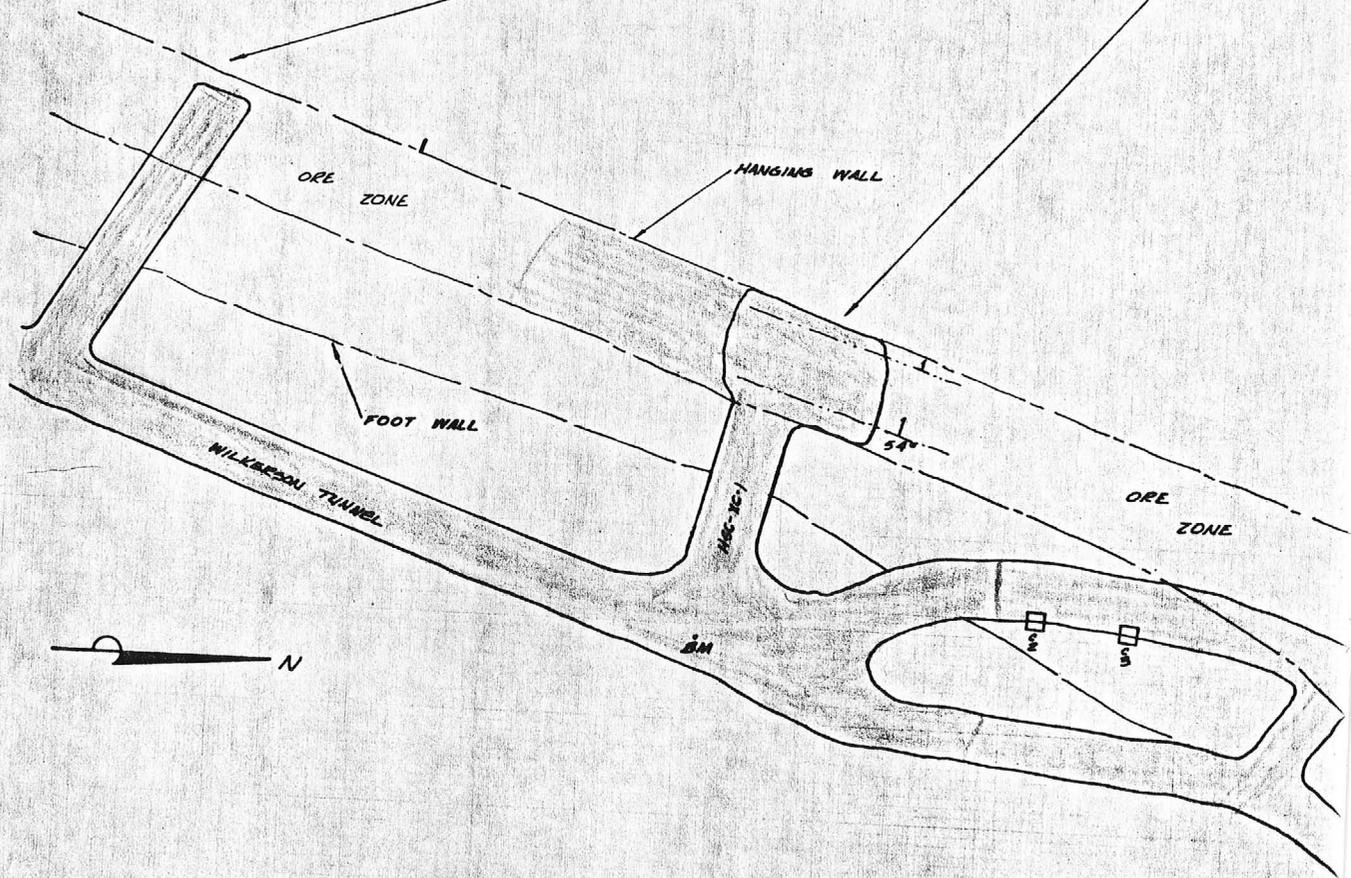
LONGITUDINAL SECTION  
 SAVOY MINE  
 1"=100'



-  ORE
-  PROBABLE ORE
-  WILKERSON WORKINGS
-  ACCESSABLE
-  MAKE-READY WORK - 1975

REVISED 1-7-75

<b>MINE MANAGEMENT CO.</b>		
SCALE: 1"=100'	<b>MAP 1</b>	DRAWN: DAVE
DATE: 7-11-75		CHECKED: HMC
<b>SAVOY MINE PLAN &amp; PROFILE</b>		
COE & VAN LOO Consulting Engineers Inc.		Sheet 1
PHOENIX ARIZONA		of 2



# MINE MANAGEMENT CORPORATION

P. O. BOX 7277  
INDIAN SCHOOL STATION  
PHOENIX, ARIZONA 85011

Western Office:

1505 FINANCIAL CENTER BLDG.  
PHOENIX, ARIZONA 85012  
602 - 274-8049

September 19, 1973

Savoy Mining Company  
P. O. Box 1985  
Scottsdale, Arizona 85252

Attention: Mr. H. L. Playford

Dear Mr. Playford:

Pursuant to our several conversations, this company is interested in the possibilities offered by your Savoy Mine - Hilda and Apache Panther - patented claims, Tiger District, Yavapai County, Arizona. We are prepared to engage in an exploration program which will involve cleaning out the caved in tunnel and reaching an area said to be mineralized to determine whether sufficient ore exists to undertake a mining operation. We are prepared to start this undertaking on or about October 15, but it is difficult to know how long it will take to re-open the tunnel. This could be relatively easy or it could also be very time consuming and expensive.

In return for this exploration program, we would propose that you grant us an option to lease your property for 10% of net smelter returns, all to apply against a total price of \$100,000. In addition to our exploration program, should it prove successful, we would agree to start operations within three months of the signing of the lease or to pay a minimum of \$500 per month if operations have not commenced within three months of the signing of the lease.

We would suggest that the option or exploration period be until January 15, 1974. At that time, if we have not been able to gain access to the ore body but are still continuing to drive in on the tunnel, you would agree to an extension of an additional three months for exploration.

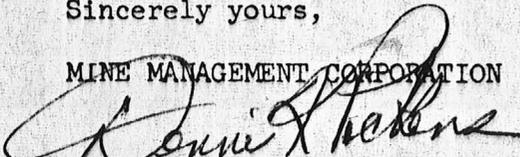
It is understood between us that the lease agreement, when and if it is made, would contain the usual and almost standard clauses as are customary in the mining industry in Arizona.

If this letter meets your approval, we would suggest that you sign the copy in the space provided below and return to us, following this with a corporate resolution (if Savoy Mining Company is a corporation) within a reasonable time.

If for any reason the proposal is not acceptable and you have alternative terms in mind, please let us know.

Sincerely yours,

MINE MANAGEMENT CORPORATION

  
Dennis K. Pickens  
President

ACCEPTED:  
SAVOY MINING COMPANY

By: \_\_\_\_\_

Date: \_\_\_\_\_

SAVOY MINE

YAVAPAI COUNTY  
TIGER DIST.

3 men working, mining and running mill - 1 shift, 15 t/shift.

2-2-59 TPL - WR

Visited Savoy mine 6 miles south from Crown King. J.L. Wilkerson, 777 W. Coolidge St., Phoenix is operating under lease from the Savoy Mining Co. He began developing in 1952 and has operated continuously except for occasional seasonal shut-downs. The mine is opened by a 1750' adit with a 100' raise at 1400' opening into old caved workings. Three men are employed including Grant Van Tilburg the Supt. A mill was completed in November 1958 and it has operated 5 to 6 hours per day most of the time since then. The capacity milling rate is about one ton per hour. The mill consists essentially of an 8" x 12" jaw crusher, 4' x 4' ball mill and a concentrating table. Electric power is obtained from a utility transmission line. The valuable metals in this narrow vein are principally silver with some gold. Pyrite is abundant and is the principal constituent of the concentrates. No figures were available re ore values, recoveries or concentrating ratio.

6-2-59 TPL - WR

Visited the Crown King Ranger Station and discussed mining activity in the region with the District Ranger (Earl Bland). He reported that the Savoy mine is operating its small mill intermittently, with 3 men employed.

10-3-59 TPL - WR

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Savoy Mine

Date July 3, 1952

District Tiger - 3m. south of Crown King-Yavapai Co. Engineer Mark Gemmill

Subject: Present Activities

OWNERSHIP

The property consisting of two patented mining claims belongs to Savoy Mining Co. St. Petersburg, Florida. Present Lessee - J. L. Wilkerson, 777 W. Coolidge, Phoenix. Operator - A. W. Robart, 4700 No. 11th. Ave. Phoenix.

HISTORY

According to available reports the mine was first worked about 1900. Development continued until about 1907 when work was discontinued. The property has been idle since that time until the present Lessee recently started work. All of the old workings are now inaccessible but records indicate that the original development consisted of about 3000 ft. of tunnel and drift work and a 300 ft. winze. Several ore shoots are reported having values in gold, silver, Lead and zinc. Some ore was mined and milled in a local mill but recovery was reported to be so poor that the operation was unprofitable and the property was closed down.

PRESENT OPERATIONS

Present operators have built a new piece of road connecting with the Ora Belle road to Crown King. The distance over the road from Crown King to the Mine is about 6 miles. The road is fairly good although a bit steep in places. An electric driven Compressor has been installed. Power is being brought in from a nearby line of the Northern Arzi. Light and Power Co. Surface improvements consist of a Compressor Hous and Shop, an Ore Bin and living quarters for a few people.

A drift tunnel has been started which will connect with the bottom of the old workings or about 300 ft. below the level of the original main tunnel. Some very good ore has been encontered alrady in this new work which the operators plan to ship. Values up to 3 oz. gold in a narrow vein are reported by the operators. Plans are to push the tunnel work as rapidly as possible.

COMMENTS

The above information came from old records and conversation with Mr. Wilkerson and Mr. Robart. The property is well equipped for the present work and the operators state that they are financially able to carry through the plans for development.

During past years many people have tried to get lease this property but without success. If the old records are anyway reliable I believe it has a good chance of making a profitable mine if it can be opened up properly.

June 16th, 1949

Mr. Jonathon Gordon  
Tombstone, Arizona

Dear Mr. Gordon:

We are operating several mines at Crown King and have recently purchased the Cougar and Eclipse-Lida Mines. The latter adjoin the property owned by the Savoy Mining Company on the Gray-Eagle Vein. Mr. Louis Schrade advises us that you once worked in the Savoy Mine. We have been endeavoring to check reports of the Savoy for some time but have to date been unable to locate anyone who had ever seen the mine underground. I wonder whether your memory would permit you to answer the following questions re the Savoy. It would be of great help to us if you could see fit to help us out by trying to recall as closely as possible the answers

- C  
O  
P  
Y
1. How long is the Main Savoy tunnel? Ans. More than 1000 ft
  2. At what point in the length is the raise to the surface? Ans. 500'
  3. At what point is the winze put down? How far from portal? Ans. 500'
  4. How deep is the winze? Ans. 320', 20' sump, slope 66°, Crood work
  5. Are there any drifts off from the winze? How many? Ans. 3 How long are they? 50' N on 100, 500' S on 300, badly caved in 1908; 500' N was in good repair 1908. Small stope at 400. \$1000.00 ore 3" to 12"
  6. What grade of ore was encountered in the main level? How much of the length of the main level is in such ore? Ans. The ore did not show in main level except as small streak 3" to 30"
  7. What values did they have in the winze? Ans. \$10 & \$12. How wide was the vein or ore shoot? How long was the ore shoot in the winze? Ans. No ore in winze only indications. Seem 3"
  8. Would you think the winze would be open or caved now? Ans. Might be caved by the sliding of the footwall part of the vein dike.
  9. The main level is caved at the portal. Would you think that any of its length would now remain open? Ans. Much of the level was in solid ground but lack of ventilation caused timber to decay very rapidly. I had dry stulls develop fungus and buckle in 48 hrs.
  10. ANY FURTHER INFORMATION THAT YOU CAN THINK OF WOULD BE MOST WELCOME.

We will be most grateful to you if you will take the trouble to answer such questions as you can on the enclosed copy of this letter. If you do not remember the answers please do not guess. Thanks a lot.

Very truly yours,

Silas P. Silverman

P. S. Did the ore shoot bottom at lowest point in winze? Ans. There was some quartzose material in bottom of winze but as I could not get it out I did not sample it. You might get some record of Assays at Oro Bells. H. H. Atkins, assayer

5/27/49

SILAS P. SILVERMAN

Winze had been sunk some time before I was at Savoy. Probably two years before.

The mine had no ventilation and Cunniff would not OK a raise to surface. Later I learned that he extended the winze to the surface. This is not guess but information imparted by one of the miners (at that time some of the miners were "hombres de rason"); however, it was then to late as no circulating air in mine. In five minutes or less after the blower stopped the candles would die out. The above to explain the why of decomposition of the timbers.

A stope on the 100' N (in winze) had 15 feet of shipping ore. Which however, was milled. (I was merely foreman) This ore reached to within 2-3' of winze. The limit of the ore on the North end was not reached. Ground open in stope was about 25 - 30' in length and any raise at that point was about 25' above track. 9' on footwall 1/2 oz gold, 60 to 70oz silver and 12% lead and resting there on 3' to 3 1/2' of 1 1/2 oz. gold, 95 oz. silver, 50% lead, 10% zn.; above that against hanging wall 5' of 3/4 oz. gold, 50 oz. silver, 50% lead. A workman later informed me that the raise had born continues to main level ore all the way and that it caved. That is the ore in the back caved showing about 5' thickness. Greatest thickness of ore 17'.

Stope on main level at 700' was highly quartzose had 4" .15 to .20 oz au., 12 oz. silver. A small stope in 300 N (in winze) had 3" to 18" of 60% lead (galena) of 40oz. gold, 400 oz. silver. Only room for one man (air) that ore was worth 1,050.00 per ton. Gold at \$19.50; silver at 50¢. As it was dumped into ore bin. Not much of it but good. Ground was very bad, swelling rotten diorite.

*Jonathan Gordon*

C  
O  
P  
Y

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Savoy

Date March 30, 1957

District Tiger - Yavapai County

Engineer Mark Gemmill

Subject: Present Activity

The Lessee, J. L. Wilkerson, 777 W. Coolidge, Phoenix, has carried on work continuously since starting in 1952. (see report of July 3, 1952) The tunnel mentioned is now in about 1500 feet and the old workings have been tapped by a drill hole. At present the old workings are been opened from the surface.

Some shipments of ore have been made from several short shoots found in the new tunnel. It is reported however that most of the ore found is too low grade to stand shipment. It is expected that when the old workings are opened considerable shipping ore will be found as is indicated by old assay maps.

Work continues with a small crew.

FRANCIS J. RYLEY  
GEORGE READ CARLOCK  
JOSEPH P. RALSTON  
SAM P. APPLEWHITE III  
JOHN C. ELLINWOOD  
FRANK C. BROPHY, JR.  
WILLIAM F. WILDER  
N. WARNER LEE  
W. JOHN LISCHER  
RAYMOND M. HUNTER  
JAMES D. O'NEIL  
CHARLES L. CHESTER  
EDWIN A. HINER  
JOHN W. WALL  
JAMES E. BROPHY III  
A. DANIEL SHEFFIELD, JR.

LAW OFFICES  
**RYLEY, CARLOCK & RALSTON**  
114 WEST ADAMS STREET  
PHOENIX, ARIZONA 85003

AREA CODE 602  
TELEPHONE 258-7701

SUN CITY OFFICE  
10451 PALMERAS DRIVE  
BELL PLAZA PROFESSIONAL BLDG.  
SUN CITY, ARIZONA 85351  
933-5972

September 8, 1975

Mr. Melvin H. Jones  
Mining Geologist  
Box 406  
Wickenburg, Arizona 85358

Dear Mr. Jones:

Enclosed are various papers on the Mine  
Management Corporation proposal to Dick Roberts on  
the Savoy Mine.

Very truly yours,

  
Francis J. Ryley

Enclosures

FJR:pg

FRANCIS J. RYLEY  
GEORGE READ CARLOCK  
JOSEPH B. RALSTON  
SAM R. APPLEWHITE III  
JOHN C. ELLINWOOD  
FRANK C. BROPHY, JR.  
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BELL PLAZA PROFESSIONAL BLDG.  
SUN CITY, ARIZONA 85351  
933-5972

September 8, 1975

Mr. Richard H. Roberts  
P.O. Box 1230  
Santa Barbara, California 93102

Re: Proposal by Mine Management Corporation

Dear Dick:

A study of the papers brings up a number of questions which are not covered in the proposal:

1. Use of the \$150,000 to be contributed by you and the other persons:
  - (a) Is there a definite program and budget for the spending of the money in the mine?
  - (b) Since part of the ore body is known, is there additional work to be considered as exploration work?
  - (c) Is the money to be paid as work progresses?
2. The determination of the economic interests of each of the persons contributing the \$150,000:
  - (a) In MMC's letter to you dated August 28, it is stated that your "participation (of \$100,000) represents a 26.67% direct economic interest in the lease".

(b) In MMC's letter dated 8-28-75 to you, Pickens writes that you are "also entitled if you so wish to receive your share of any profits in cash or in the gold-silver contained in the concentrates"; however, the Summary of Economics dated 8-26-75 indicates MMC is contemplating giving you a percentage of net profits. This requires clarification as to the intention.

3. Representation of tax consequences by MMC.

(a) MMC states a portion of your investment will qualify as a direct expense to you for purposes of your 1975 income tax calculations. What portion? Has MMC had its tax accountant work out a program?

(b) MMC refers to your contribution as an investment. This brings up the question, does MMC intend to apply your money to the prosecution of certain work or to spend it as MMC sees fit?

4. The lease.

(a) The lease has eight more years to run from October, 1975. There is no option in it to purchase the claims or to extend or renew the lease as long as ore is mined.

(b) The lease can be terminated by the lessor for breach of any covenant, including one for good faith in the prosecution work and another to mine in a miner-like manner.

(c) Under the lease, the lessee has to notify the lessor before April 30, 1974, that exploration work resulted

in discovery of sufficient ore to justify production. The advance minimum royalty begins April 30, 1974. Has the lessor committed itself to an extension of time for commencement of production?

5. Evidence of economic ownership.
  - (a) A written agreement and assignment evidencing the ownership of the interest is necessary.
  - (b) Pickens in his letter to you of 8-28-75 describes your interest as "an individual direct economic interest in 1975 Savoy gold-silver project . . ."; what does he mean by adding to that phrase the words "including income and costs"?
6. Summary of economic proposal prepared by MMC.
  - (a) Sales in the Summary are projected for a ten-year period, but the lease has only eight years to run and production is perhaps a year or more away.
  - (b) There is no item in the Summary for payment of sales taxes, which run at 2%, nor for the ad valorem tax. If the mine is valued at \$500,000 and the tax rate is \$8.00, the tax will be \$40,000 a year with a declining amount each year unless more ore is found.
  - (c) Your engineer should review the projected milling and other costs in the Summary.
7. The condition and the title to the mine.

- (a) MMC's letter of September 2 shows that the Hilda claim is an unpatented mining claim; two other claims extend over a part of it. Are these claims patented or abandoned?
- (b) As to the Hilda claim, the end lines are not parallel, and if extended would converge. The end lines of the Apache Panther patented claim are parallel, but are not at right angles to the side lines.

8. The vein.

- (a) In a code mining claim the vein must apex on the claim; the owner may follow the vein on its dip between the end lines of the claim. The maps submitted by MMC do not show where the strike is or the direction of the dip.

9. Examination of the mine.

- (a) You should have your own engineer examine the mine and make a report to you as to its economic possibility.

10. Covenants of MMC.

- (a) MMC has not said what its obligations are.
- (b) MMC should covenant to perform the lease. Has MMC secured a leasehold title policy from a title company on the claims? If not, will MMC warrant the title?
- (c) As to production, how many man shifts does MMC agree to furnish and pay?

- (d) If the work of preparing the mine for production exceeds \$150,000, will MMC spend whatever additional sum is necessary?
  - (e) Who determines whether to proceed with production?
  - (f) If MMC renews the lease, will it agree to continue your interest?
11. Net worth of MMC.
- (a) Covenants will be of no value if MMC is judgment proof.
12. The Blue Bell concentration mill.
- (a) Is it now in operation? MMC states it owns the mill. If the mill is not in operation, how much will it cost to put it in such condition? Will any part of your money go into this restoration?
13. The percentage interest of MMC.
- (a) The percentage interest of MMC comes to 60%.
  - (b) Under MMC's Summary of Economics, it appears that MMC may be contemplating taking 100% of the percentage depletion in its tax returns.
  - (c) You, McClure and Deprima are referred to as investors. In what sense is MMC using the term "investors"?
14. Is the \$150,000 capital gain?
- (a) How does the tax accountant for MMC intend to treat the \$150,000 received from you and the others -- as capital gain, income, or a direct obligation

and payment for exploration and development work? What part is spent for each item?

15. Records as to concentrates.

- (a) Is MMC going to operate other mines in the area? If so, does MMC propose to keep the ore and concentrates from the Savoy mine separate and apart from other ores and concentrates? Does it contemplate custom milling at the Blue Bell mill?

16. Independent evaluations of Savoy Mine by MMC employed engineers.

- (a) These evaluations differ as to ore resources.
- (b) Water problems and ecology problems in the national forest are mentioned.
- (c) One of the reports refers to capital investments being paid from the contributions by you and the others. Is this so?

17. MMC subsidiary corporation.

- (a) MMC's letter to you of August 28 states that it may set up a subsidiary to operate the Savoy mine and transfer your interest to the subsidiary by giving you written notice. I do not understand what MMC means by transferring your interest to the subsidiary. If MMC has the expertise which it claims, it should make an agreement it will not sell, merge, assign, subcontract, or sublet without your written consent first having been obtained.

18. Conclusion.

- (a) The services of the engineer will cost \$200 a day plus expenses. He can probably do the work in two or three days.

Mr. Richard H. Roberts  
September 8, 1975  
Page 7

- (b) Working out any income tax advantages will depend on facts.
- (c) I have only raised questions. If you wish to proceed further, this may require extensive legal work; hence I raise the questions first.
- (d) You may wish to have your engineer look over the property before you decide to take further action.

Very truly yours,



Francis J. Ryley

FJR:pg

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and payment for exploration and development work? What part is spent for each item?

15. Records as to concentrates.

- (a) Is MMC going to operate other mines in the area? If so, does MMC propose to keep the ore and concentrates from the Savoy mine separate and apart from other ores and concentrates? Does it contemplate custom milling at the Blue Bell mill?

16. Independent evaluations of Savoy Mine by MMC employed engineers.

- (a) These evaluations differ as to ore resources.
- (b) Water problems and ecology problems in the national forest are mentioned.
- (c) One of the reports refers to capital investments being paid from the contributions by you and the others. Is this so?

17. MMC subsidiary corporation.

- (a) MMC's letter to you of August 28 states that it may set up a subsidiary to operate the Savoy mine and transfer your interest to the subsidiary by giving you written notice. I do not understand what MMC means by transferring your interest to the subsidiary. If MMC has the expertise which it claims, it should make an agreement it will not sell, merge, assign, subcontract, or sublet without your written consent first having been obtained.

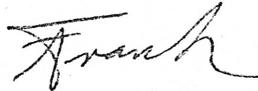
18. Conclusion.

- (a) The services of the engineer will cost \$200 a day plus expenses. He can probably do the work in two or three days.

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- (b) Working out any income tax advantages will depend on facts.
- (c) I have only raised questions. If you wish to proceed further, this may require extensive legal work; hence I raise the questions first.
- (d) You may wish to have your engineer look over the property before you decide to take further action.

Very truly yours,



Francis J. Ryley

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