



CONTACT INFORMATION

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PRINTED: 08/16/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: SUNRISE RELIEF

ALTERNATE NAMES:

SUNRISE PAT. CLAIM #4038
PICK ME UP PAT. CLAIM #4038
RELIEF PAT. CLAIM #1614
BANDEN PAT. CLAIM #2597
VENUS PAT. CLAIM #1614
GLENDALE MINING & MILLING

MARICOPA COUNTY MILS NUMBER: 79

LOCATION: TOWNSHIP 4 N RANGE 1 E SECTION 4 QUARTER SE
LATITUDE: N 33DEG 42MIN 42SEC LONGITUDE: W 112DEG 15MIN 16SEC
TOPO MAP NAME: CALDERWOOD BUTTE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD LODE
GOLD PLACER
IRON HEMATITE

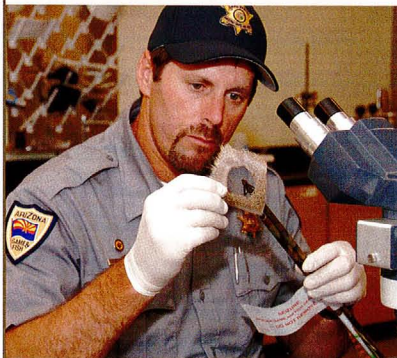
BIBLIOGRAPHY:

USGS CALDERWOOD BUTTE, HEDGEPEETH HILLS QUADS
BLM MINING DISTRICT SHEET #1
BLM MINERAL SURVEY MS 4038, 2597, 1614
JOHNSON M USGS BULL 1355 P 25
ADMMR SUNRISE RELIEF FILE
ELSING M & HEINEMAN R AZBM BULL 140 P 94
KEITH S ET.AL AZBGMT BULL 194 P 13 & 45

He's got bright eyes, a friendly face and a way of melting your heart as he nuzzles your pockets for carrots. He's Apache Kid, and he's the last of his kind. Visit his corral on Page 8.

Kudos to the Wildlife Manager of the Year

The winner of the 2008 Cliff Sorrels Officer of the Year Award is Ken Dinquel, a 20-year department employee who now manages the Operation Game Thief program. Dinquel is known for aggressively identifying and pursuing poachers and making large, complex cases that lead to successful prosecutions. His encyclopedic knowledge of wildlife laws and their application make him a go-to resource for wildlife managers statewide.



GEORGE ANDREIKO

First Bat Cupola in City Limits



GEORGE ANDREIKO

GEORGE ANDREIKO

In a cooperative effort led by the Arizona Game and Fish Department and the U.S. Bureau of Land Management, the abandoned Sunrise Relief Mine in Peoria has been secured to protect the public and remove the fence eyesore for local residents, all while protecting threatened California leaf-nosed bats.

A special bat-friendly gate or cupola was built to close the mine entrance located on BLM-managed land at 91st Avenue and Happy Valley Road. The cupola will preclude people from entering the mine while allowing the bats living in the extensive mine to enter and exit.

Experts believe that preserving winter roost sites is particularly important for leaf-nosed bats. The species does not migrate or hibernate in the winter and requires geothermally warmed mine sites, making appropriate winter roosts limited for these mammals. Biologists estimate that 100-400 bats use the

Sunrise Relief Mine during the winter.

The cupola is one of the first examples in the United States of a bat cupola being constructed within city limits to close a mine while protecting bats. The Game and Fish Department plans to study the site after the cupola is installed to evaluate the closure's effectiveness and effects on the bat population. Other factors, including future residential and road development, also will be monitored.

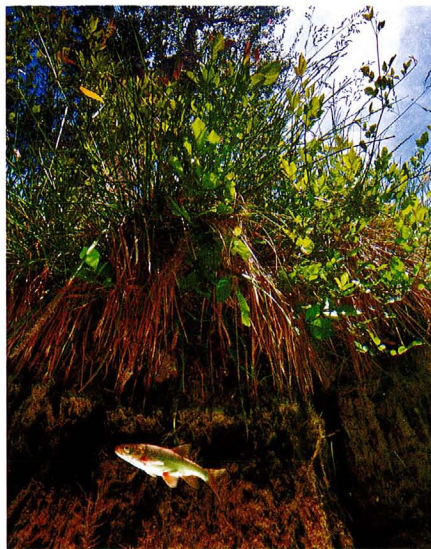
Partners on the project include the Game and Fish Department, Bureau of Land Management, Arizona State Mine Inspector, City of Peoria and MK Company, a housing development company working in the Peoria area.

Recreationalists who come across a shaft or mining site that is exposed are encouraged to obtain the GPS coordinates and notify the State Mine Inspector.

—Lynda Lambert

Online videos from the Arizona Game and Fish Department just exceeded the one-million-viewer mark, with the top video, a segment about hunting dogs, attracting more than 127,261 views on YouTube so far.

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or call 1-800-777-0015.**



Arizona Game and Fish Department Mission

To conserve, enhance, and restore Arizona's diverse wildlife resources and habitats through aggressive protection and management programs, and to provide wildlife resources and safe watercraft and off-highway vehicle recreation for the enjoyment, appreciation, and use by present and future generations.

Arizona Department of Mines and Mineral Resources

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

MARICOPA

SUNRISE RELIEF MINE

Township 4 North

Range 1 east,

Section 4, SE 1/4

MM K702 Gold, native in granite

MM K703 Gold, native in granite

MILS # 79

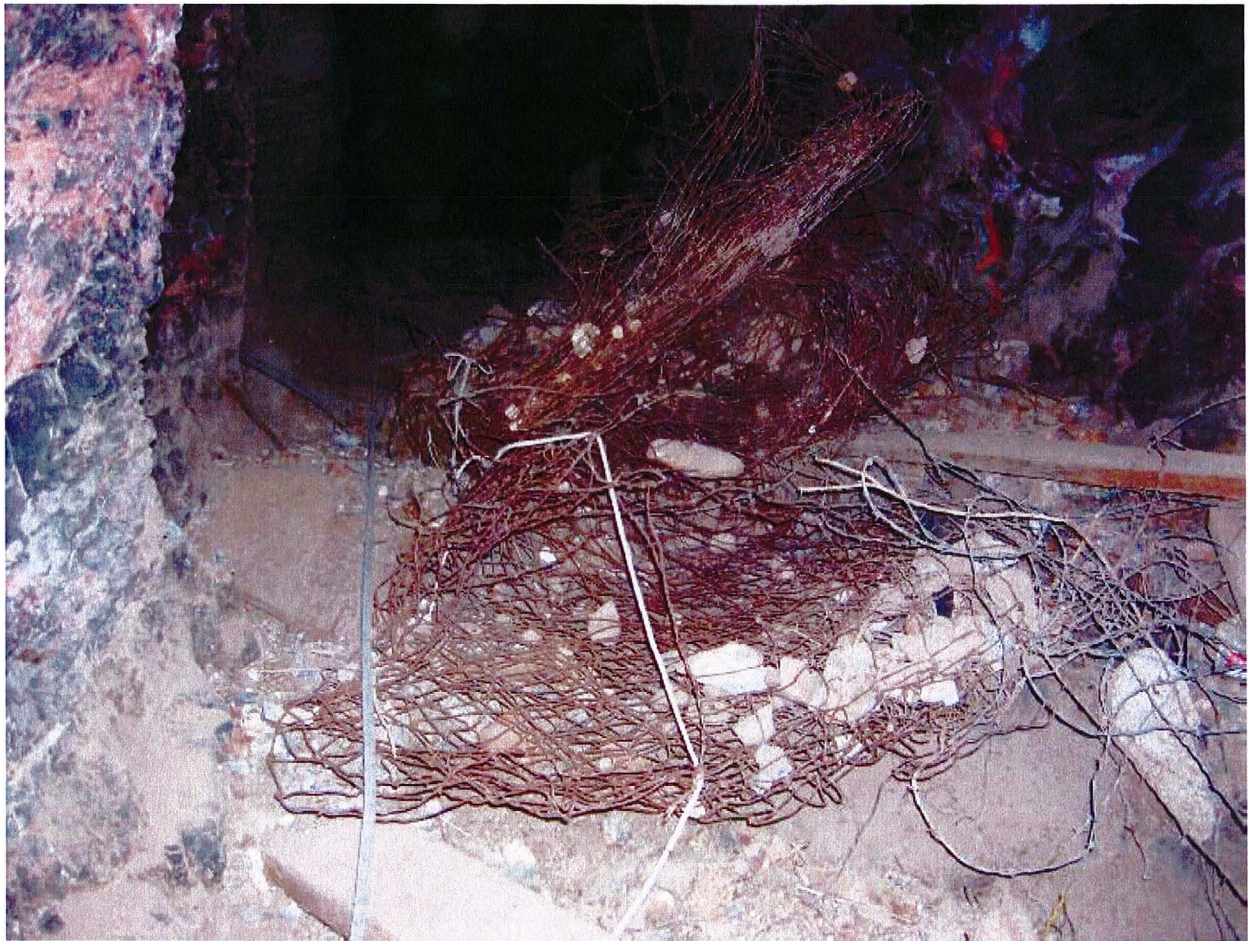
6-AKA's

Sunrise Relief (file)

Bermuda 87 77 th Edinburg 01 46 St Jerusalem 72 75 0 11/11/09

1 AZ REP 8/21/09

**Sunrise Relief Mine
25 October 2008
Data Collection Photos (refer to mine map for data reference points)**



**Photo 01
Entrance tunnel slope, debris pile (looking up slope).
Point A03**

Photos by Paul R. Jorgenson



Photo 09
Black vein in granite and guano stains.
Between Point A14 and A15

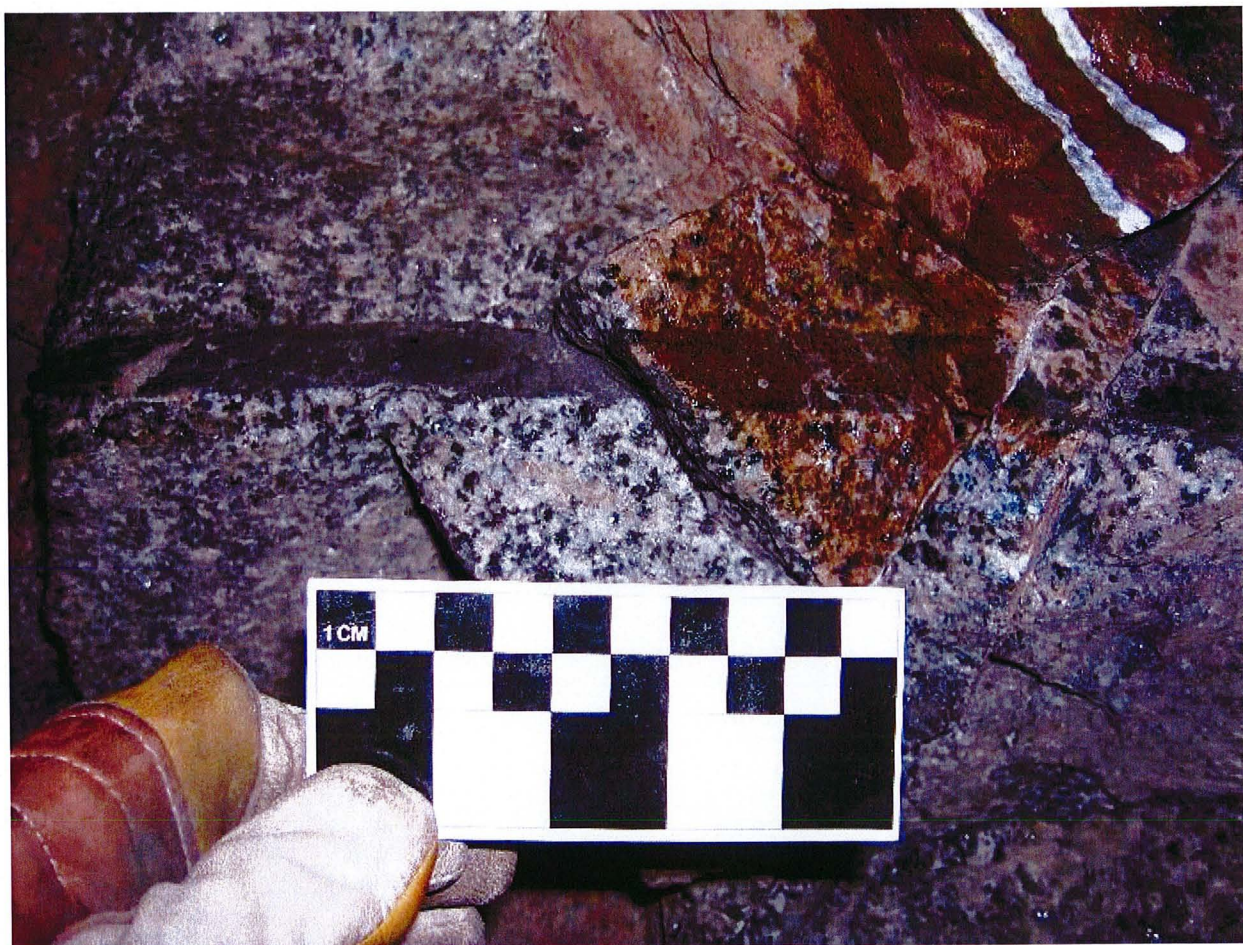


Photo 08
Black vein in granite and guano stains.
Between Point A14 and A15

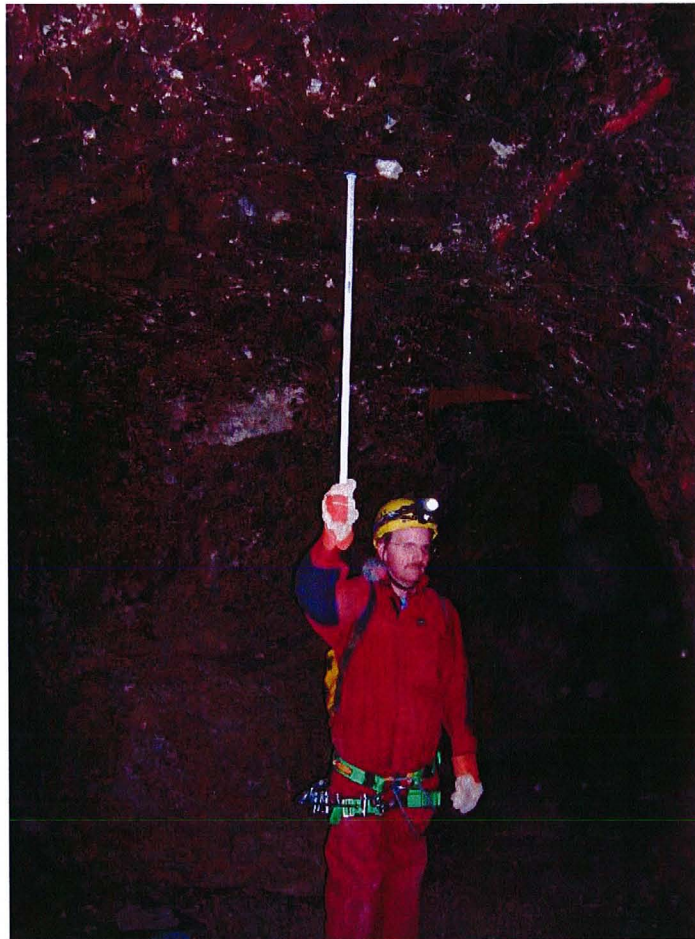
**Sunrise Relief Mine
25 October 2008
Data Collection Photos (refer to mine map for data reference points)**



**Photo 07
Black vein in granite and guano stains.
Between Point A14 and A15**

Photos by Paul R. Jorgenson

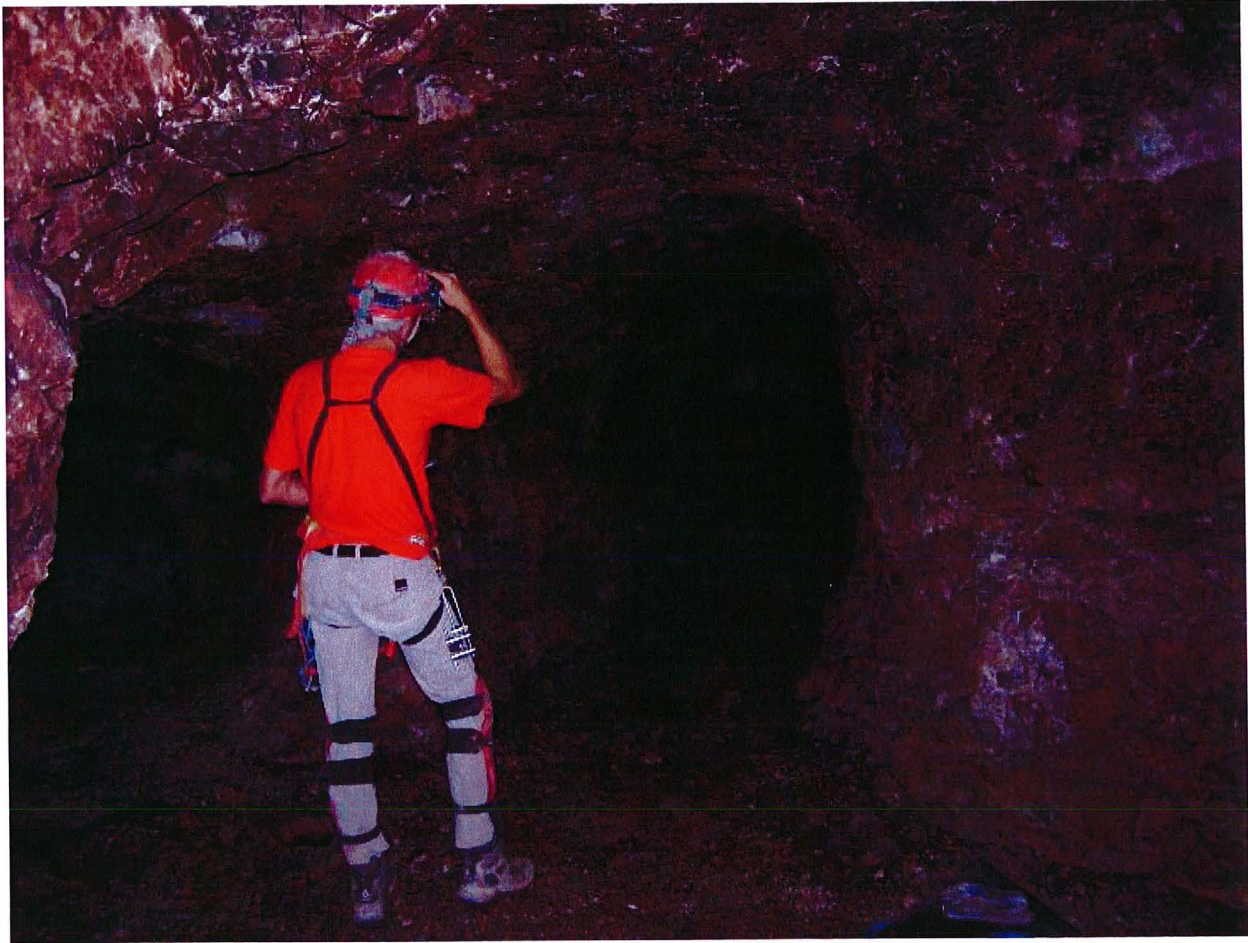
**Sunrise Relief Mine
25 October 2008
Data Collection Photos (refer to mine map for data reference points)**



**Photo 06
Person for scale with 3 foot pipe.
Between Point A08 and A11**

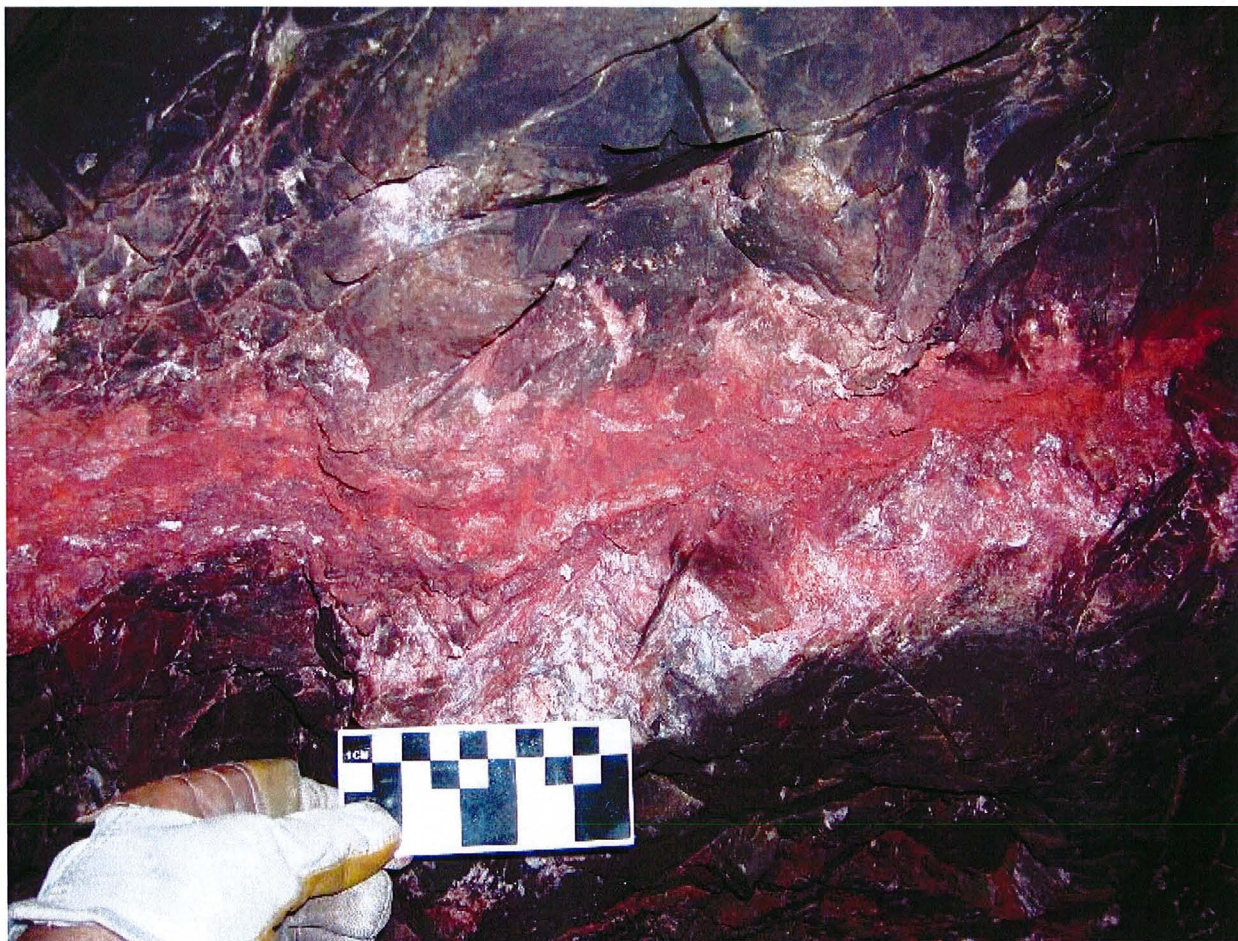
Photos by Paul R. Jorgenson

**Sunrise Relief Mine
25 October 2008
Data Collection Photos (refer to mine map for data reference points)**



**Photo 05
Junction - person for scale (looking east).
Point A08**

**Sunrise Relief Mine
25 October 2008
Data Collection Photos (refer to mine map for data reference points)**



**Photo 04
Red vein.
Between Point A04 and A07**

Photos by Paul R. Jorgenson

**Sunrise Relief Mine
25 October 2008
Data Collection Photos (refer to mine map for data reference points)**



**Photo 03
Bottom of entrance slope.
Point A04**

**Sunrise Relief Mine
25 October 2008
Data Collection Photos (refer to mine map for data reference points)**



**Photo 02
Debris pile.
Point A04**

Photos by Paul R. Jorgenson

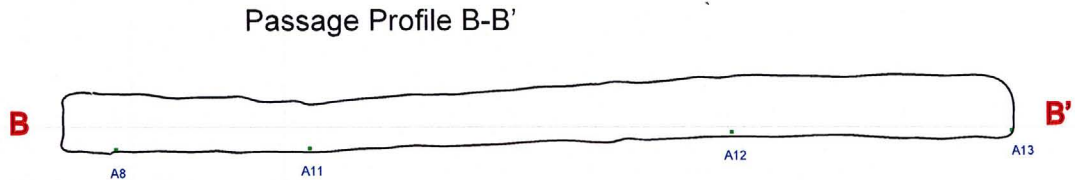
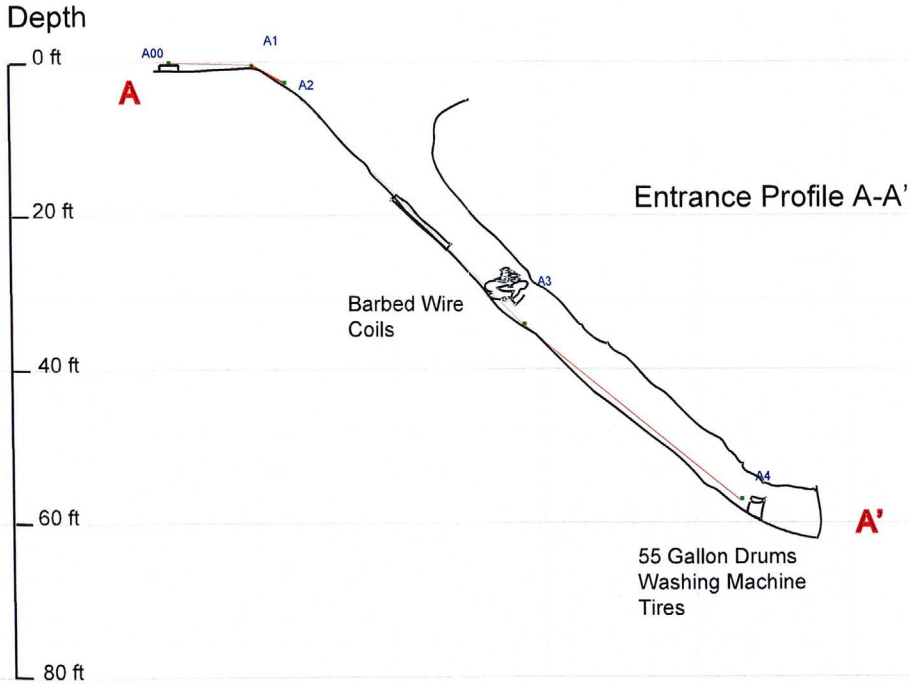
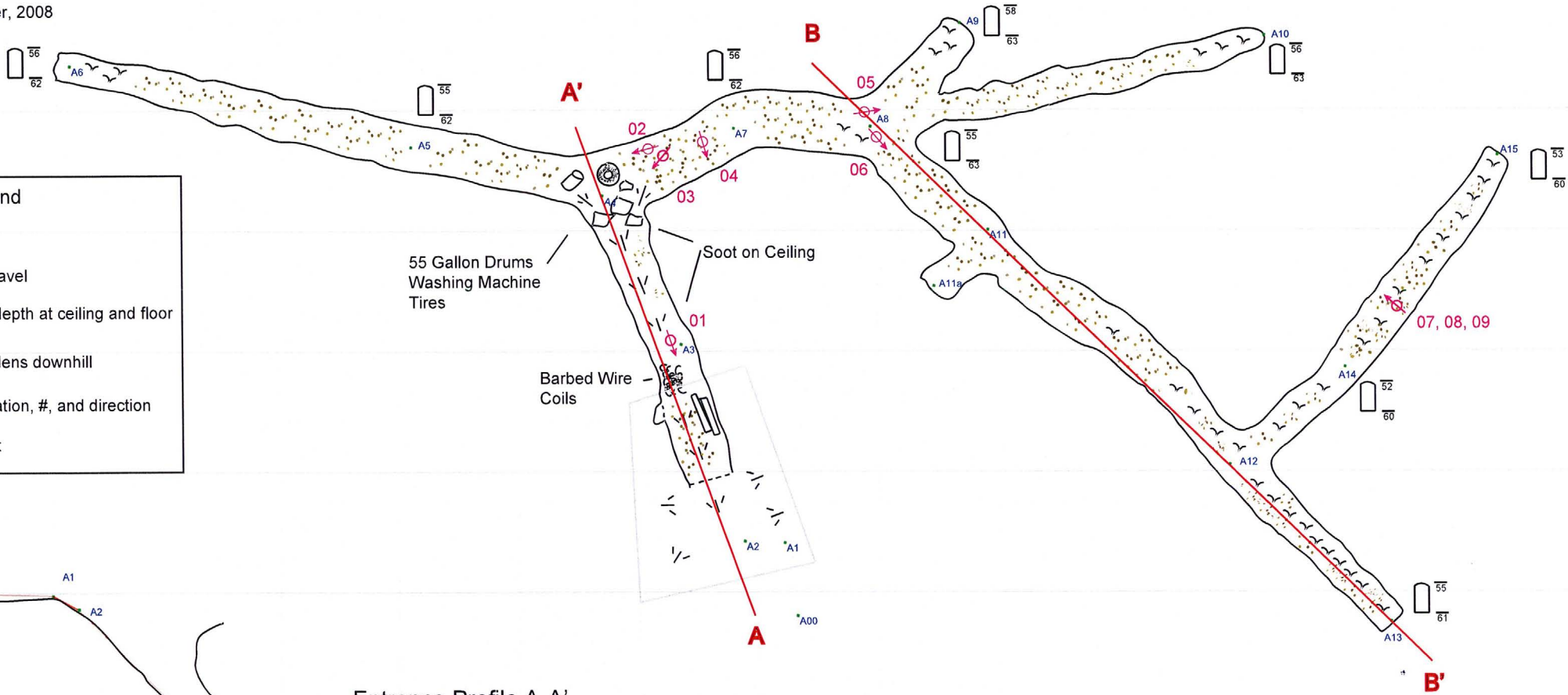
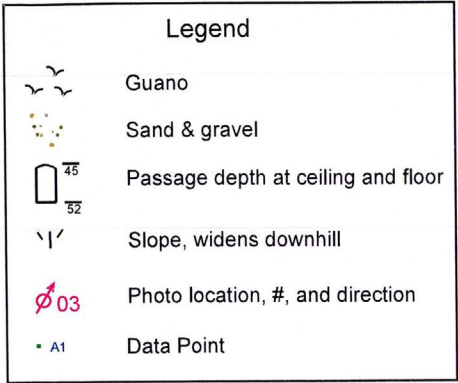
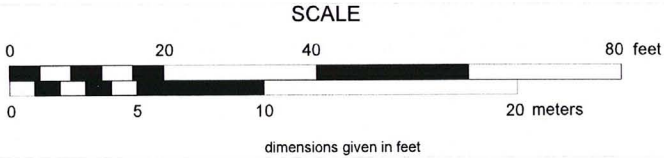
Sunrise Relief Mine

Maricopa County, AZ

Team: R. Bohman, A. Hicks, P. Jorgenson, R. Sliwinski

Cartography: R. Bohman

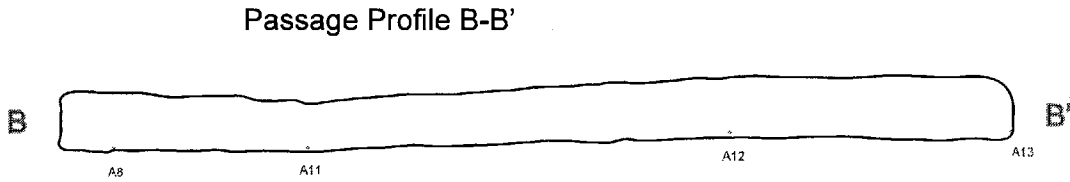
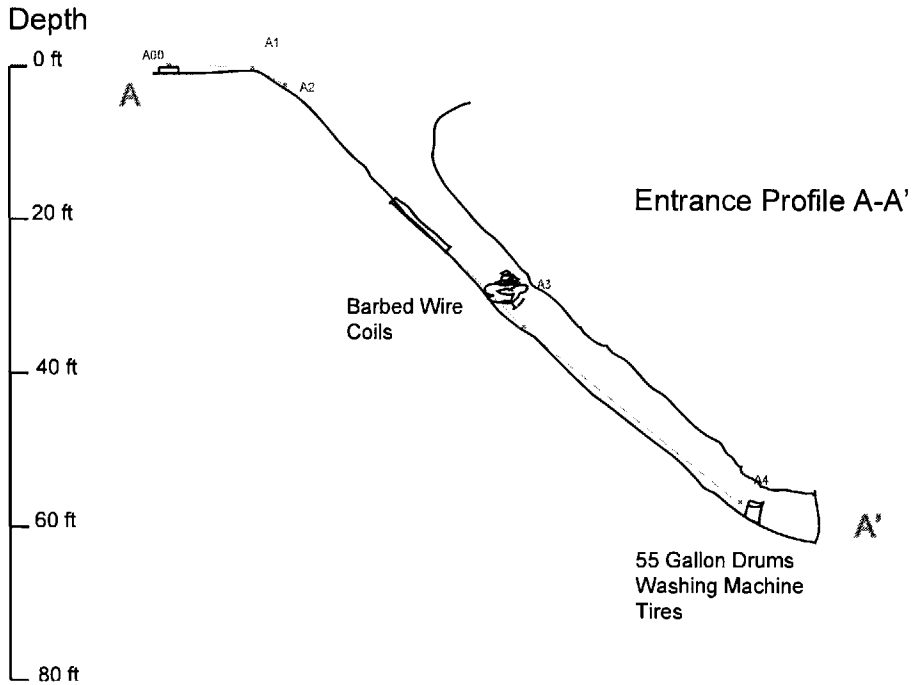
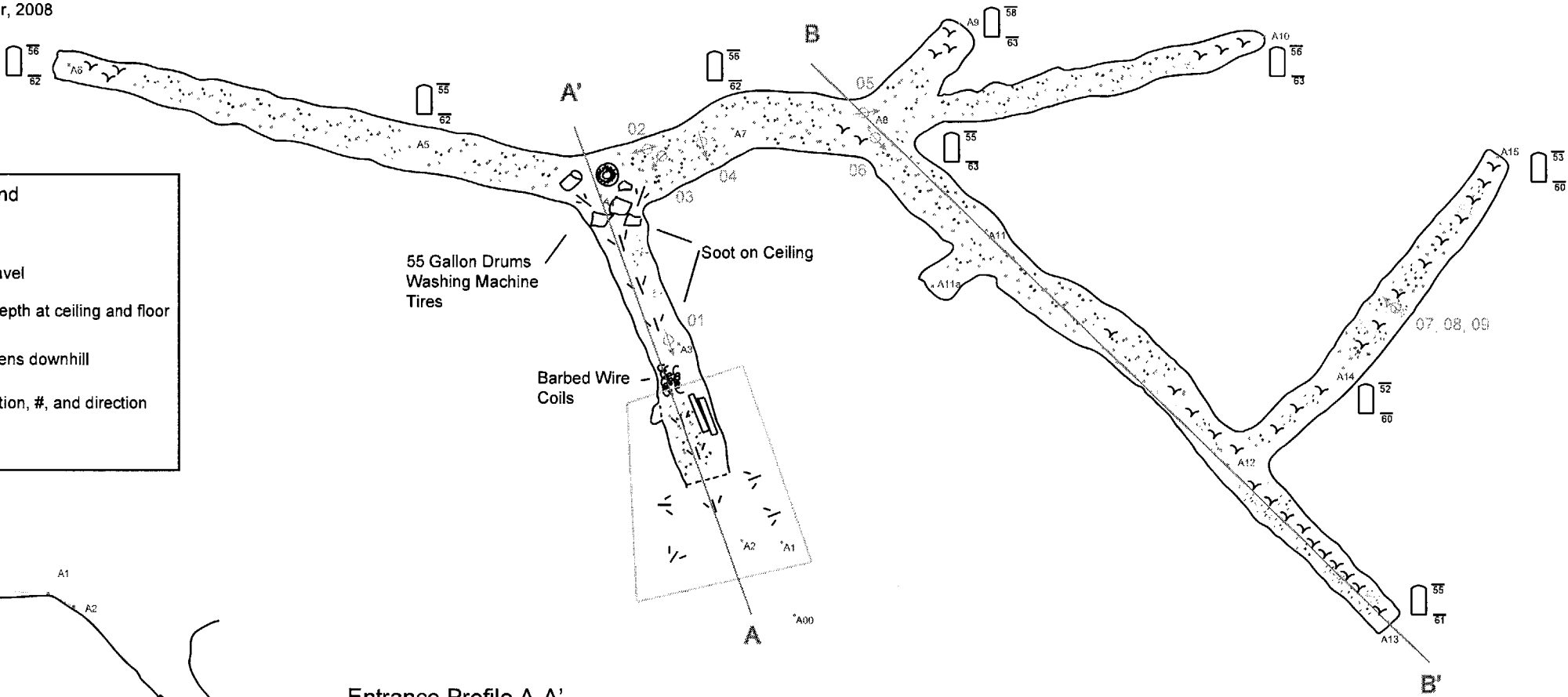
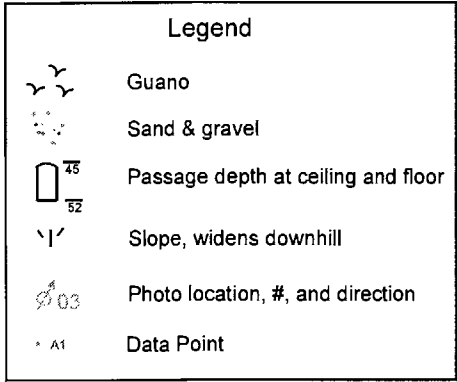
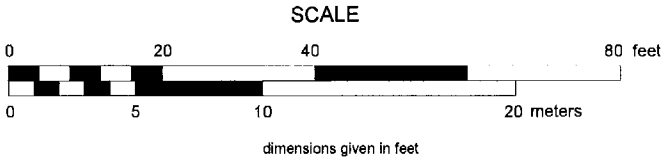
Data collected 25 October, 2008



Sunrise Relief Mine

Maricopa County, AZ

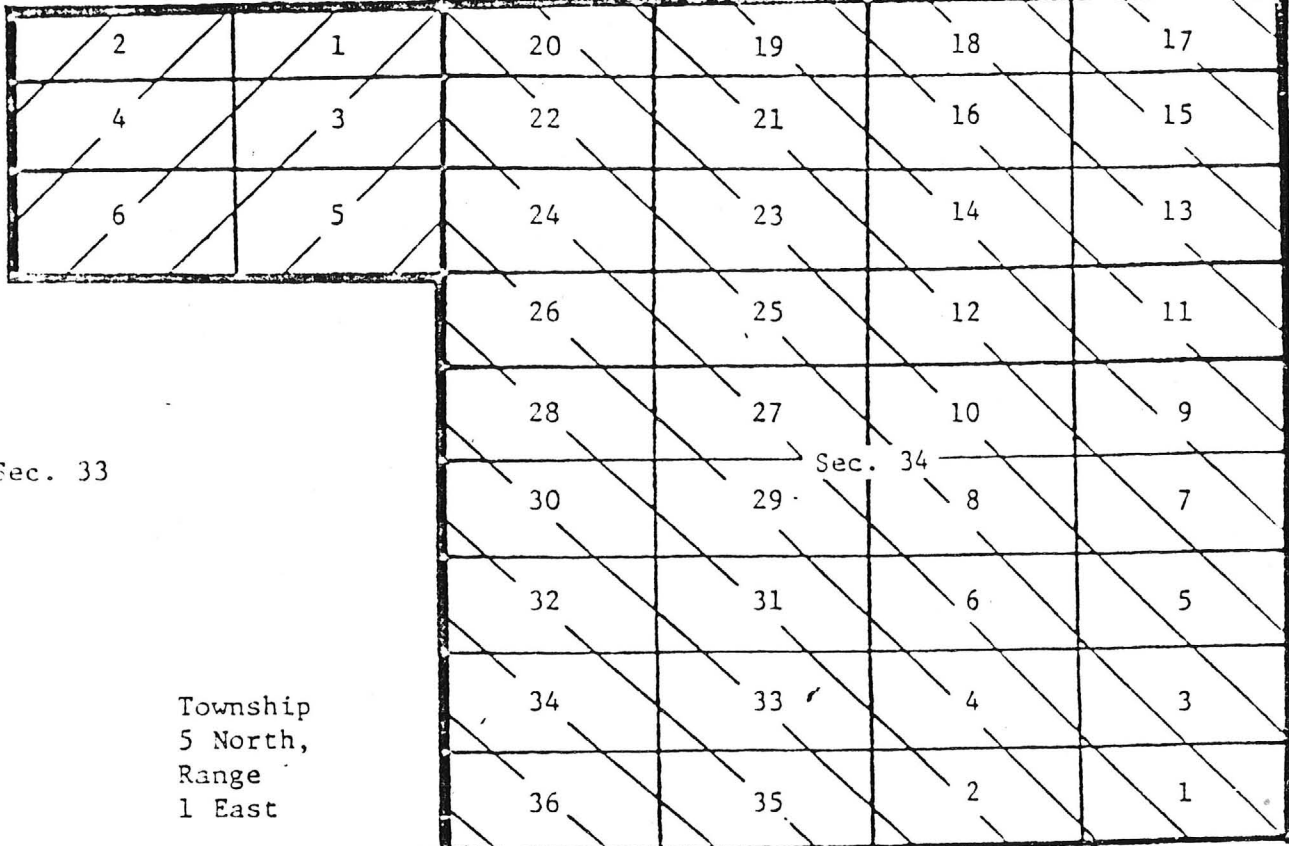
Team: R. Bohman, A. Hicks, P. Jorgenson, R. Sliwinski
Cartography: R. Bohman
Data collected 25 October, 2008



Sec. 28

Sec. 27

Sec.



Sec. 33

Sec. 34

Sec.

Township
4 North,
Range
1 East

Sec. 4

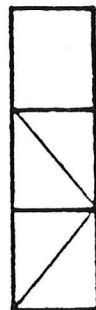
Sec. 3

Sec.

Gold Rush Claims 1-29

Gold Rush Extension
Claims 1-36

Gold Rush Annex
Claims 1-6



Patented Claims:

Sunrise 1-6,8,
Pick Me Up, BLM
#4038, Deeds, 228/124.
Venus Relief, Relief No. 1&2,
BLM #1614, Deeds, 65/487.

1

2

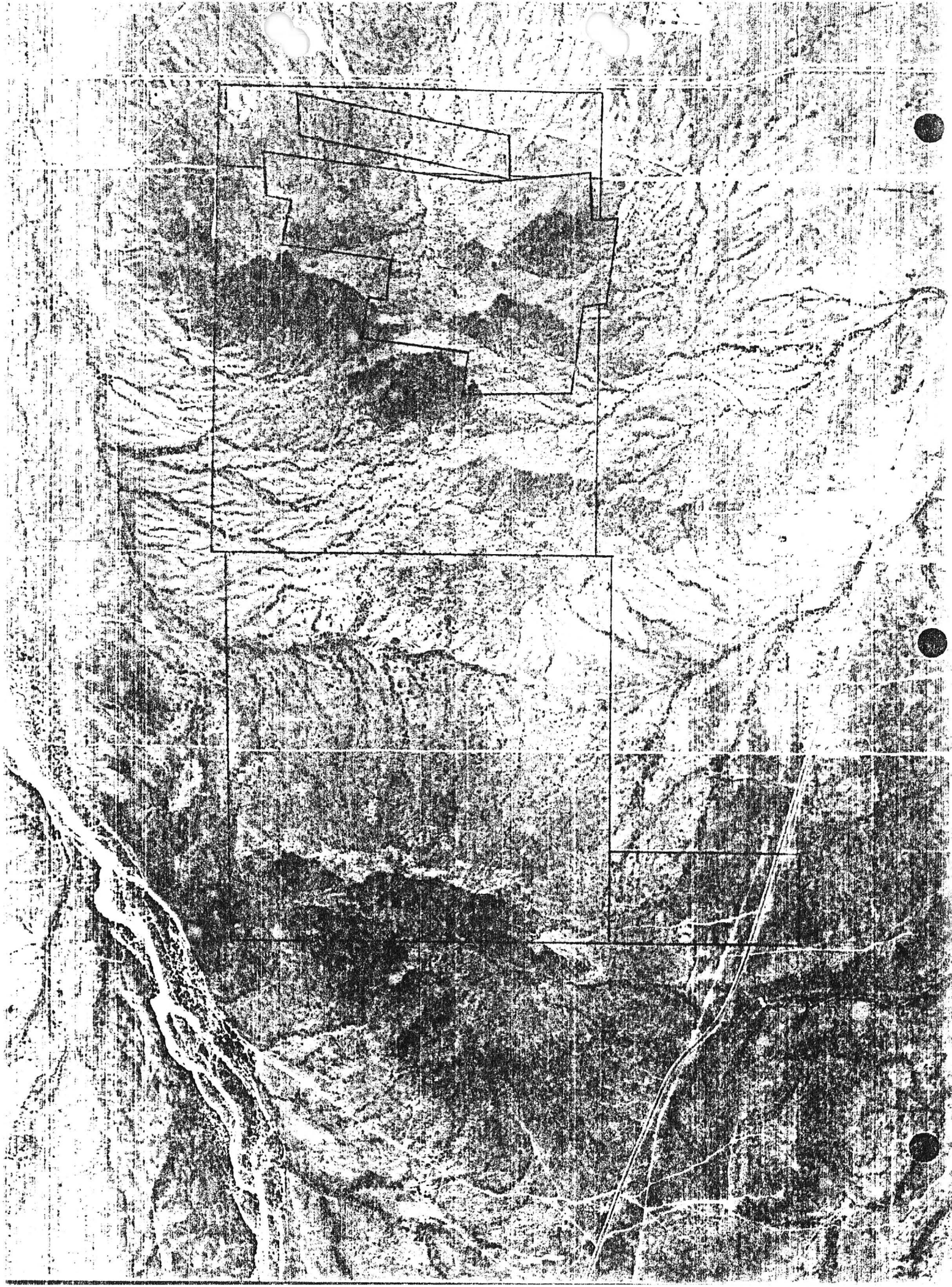
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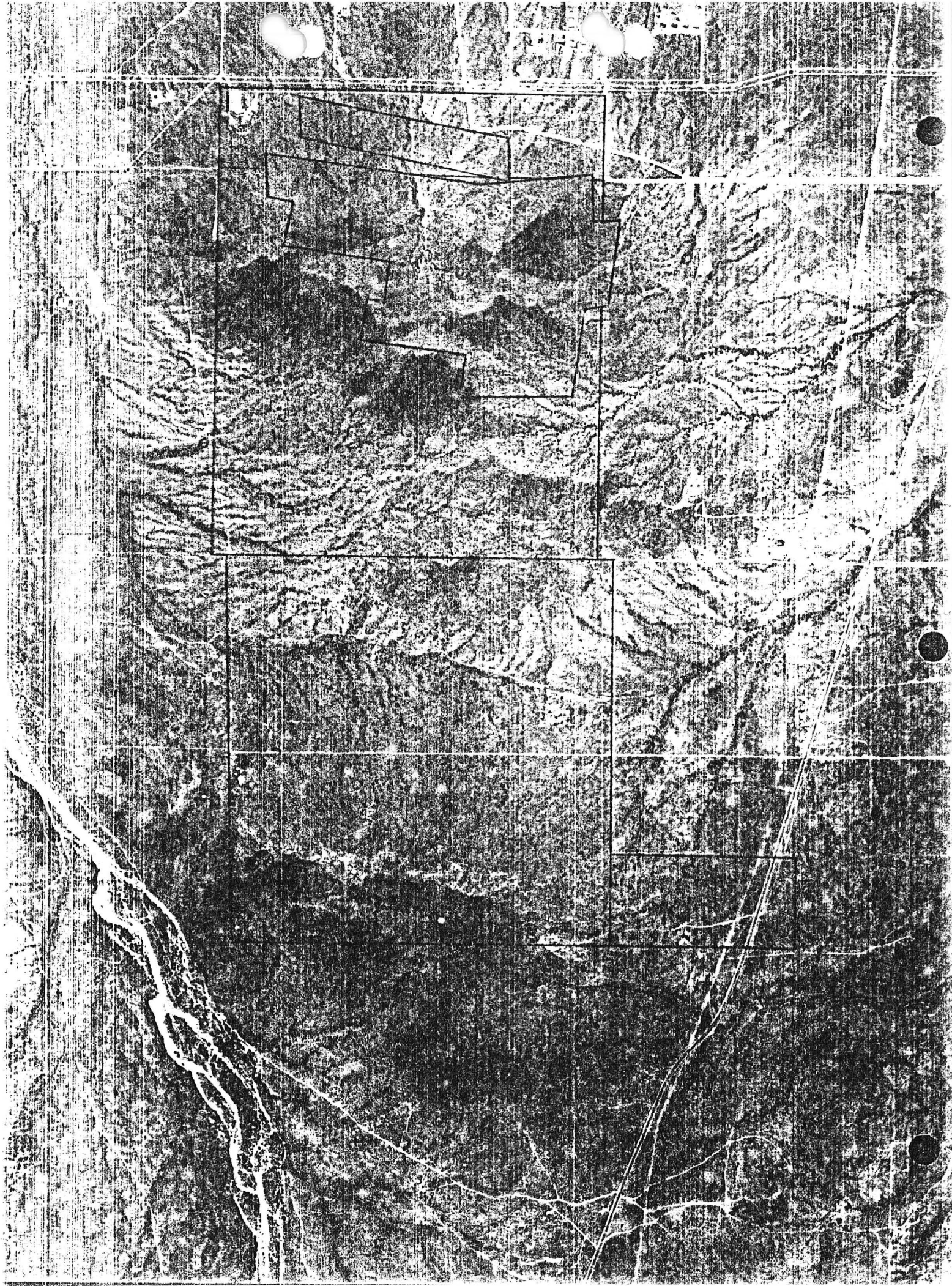
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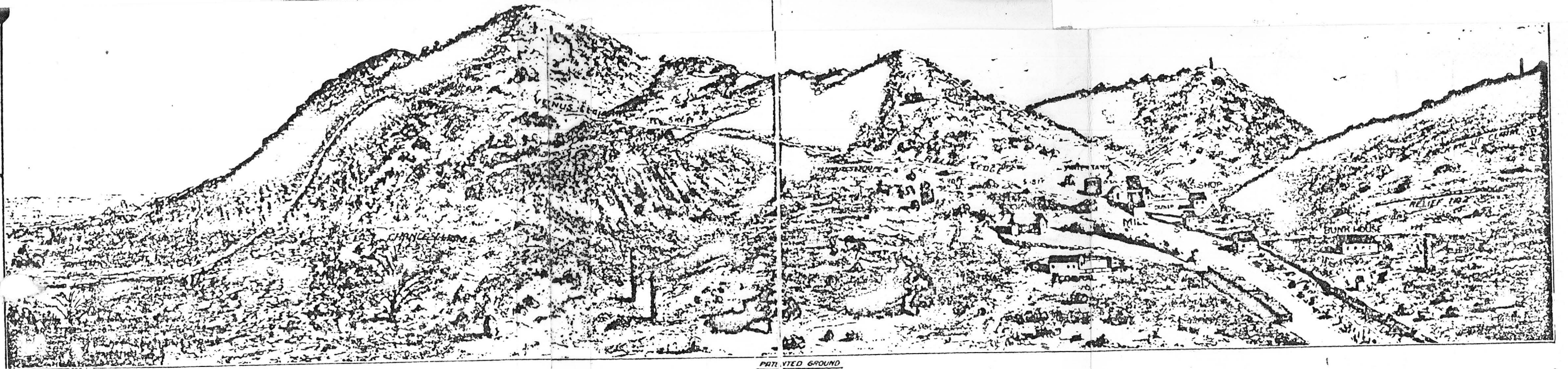
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12









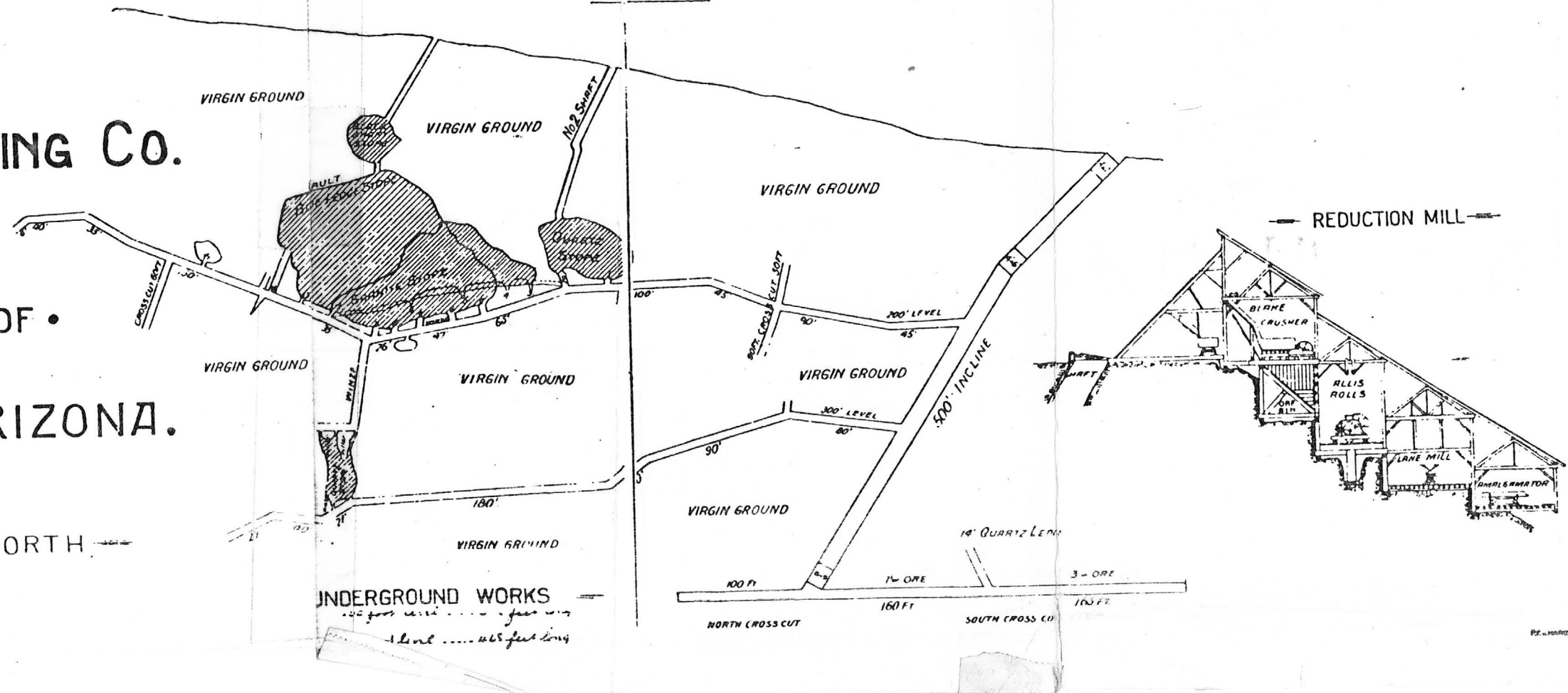
RELIEF GOLD MINING CO.

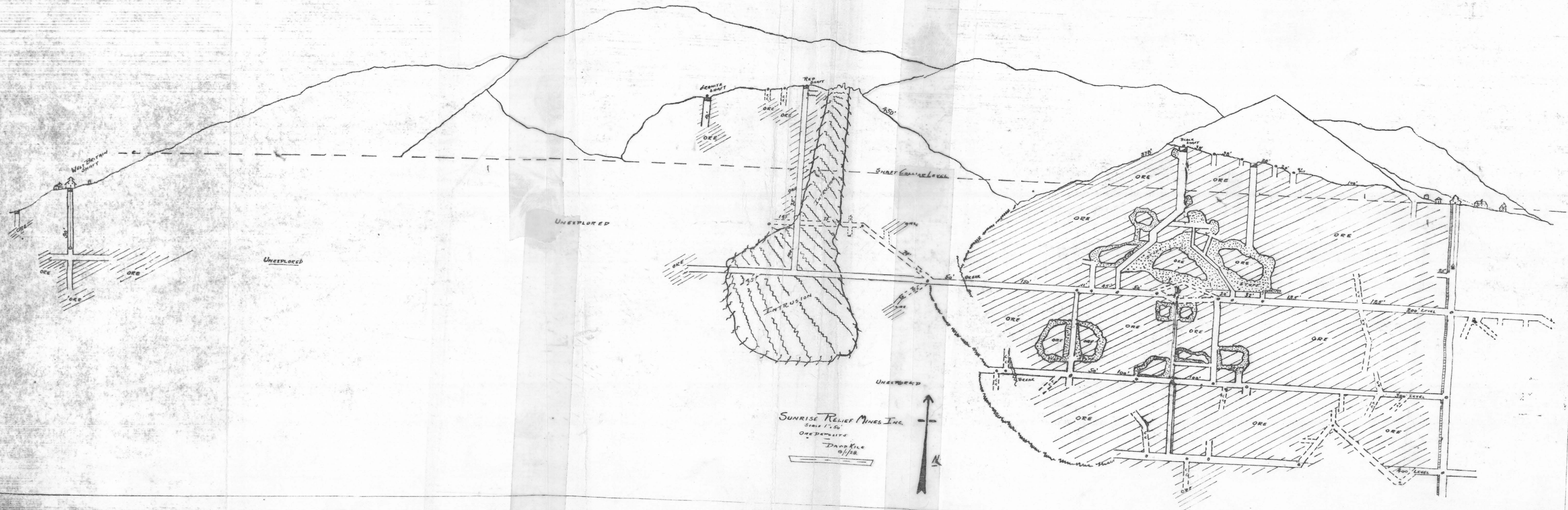
— 23 MILES —

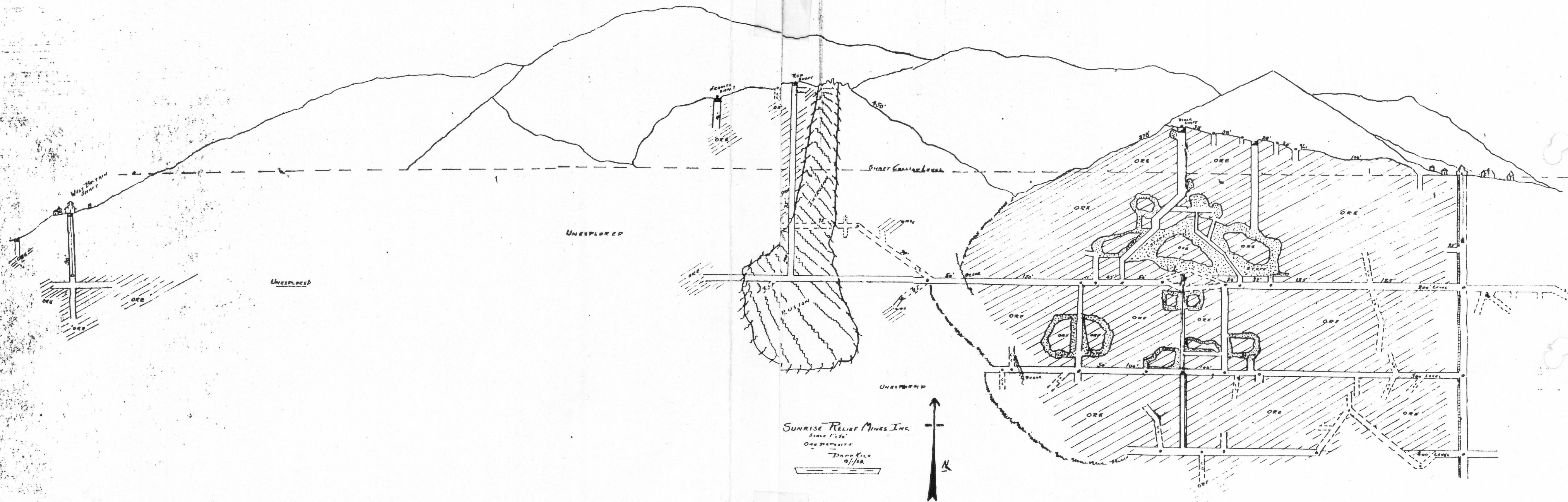
• NORTH WEST OF •

PHOENIX, ARIZONA.

— VIEW LOOKING NORTH —







JANET NAPOLITANO
GOVERNOR



BETSEY BAYLESS
DIRECTOR

ARIZONA DEPARTMENT OF ADMINISTRATION

RISK MANAGEMENT SECTION

Loss Prevention Unit
100 N. 15th AVENUE, SUITE 301
PHOENIX, ARIZONA 85007
PHONE (602) 542-1419 FAX (602) 542-2021

May 23, 2003

Mr. Ken Phillips
Chief Engineer
Department of Mines and Mineral Resources
1502 W. Washington
Phoenix, AZ 85007-3210

Subject: Sunrise Relief Mine Site Tour

Dear Ken:

Thank you again for your consultation services that you provided to State Risk Management and the State Land Department in regards to this site. Your explanation of the former operations at this mine site was extremely helpful in determining the potential risk and liabilities for the State.

The Department of Mines and Mineral Resources is an indispensable resource in Risk Management efforts to identify and reduce potential liabilities for the State. Thank you again for your assistance.

I have enclosed a CD containing photos of the mining site for your use.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom F. Zuppan", written over a horizontal line.

Tom F. Zuppan
Environmental and Loss Prevention Supervisor

cc: Bill Dowdle, State Land Department
ACE File

SUNRISE RELIEF MINE

MARICOPA COUNTY

KAP WR 11/30/84: In the company of Nyal Niemuth a visit was made to the Sunrise Relief Mine (f) Maricopa County. Recent sampling, renovation of main shaft collar and preparation of heap leach test site were noted. A separate report has been prepared for the files.

KAP WR 10/25/85: The Bureau of Land Management is reportedly contesting the validity of the unpatented claims adjoining the Sunrise Relief Mine (file) Maricopa County.

KAP WR 4/18/86: The current address of Micheal Tanner is 7216 W. Villa Theresa Drive, Peoria, Arizona 85345. He is reported to be the owner of the Sunrise Relief Mine (file), Maricopa County. The "core" of the property is patented, but some surrounding unpatented claims have been the subject of recent validity evaluations by the BLM.

KAP WR 10/23/81: Sunrise Relief Mine, Agua Fria District, Maricopa County. A very small portion of the property was visited. At the west end of the property an inclined shaft was sunk on an east-west strike mineralized iron stained shear structure in granitic rock. The vein is one foot, plus or minus, wide at the collar. Numerous prospect pits and cuts both east and west of the shaft are evidence of efforts to find surface extensions of the vein. The vein is not visible in the pits and cuts. The property is fenced. It also has tailings piles.

NJN WR 3/9/84: Laksir Napier (c) geologist with Tellurian Resources (c) visited and reported he was active at the Sunrise-Relief (f) Maricopa County a year ago. Several structures containing free milling gold were mined and then concentrated at Stutenroth's gravity mill (c) outside of Casa Grande. Mr. Napier reported that the Tanner Comapny now owns the property.

Handwritten note: Should be the Tanner Co. now owned by the American

KAP WR 3/16/84: K. C. Baum (c) reported he is a consulting geologist and is working at Sunrise-Relief Mine, Maricopa County. He explained he is mapping surface geology and then plans to map the geology underground. He reported free gold in a surface cut near the Black Shaft and in quartz stringers underground. He said the owner, Michael Tanner, plans to put the mine into operation. Mr. Tanner reportedly will start by processing dumps and tailings to get some cash flow.

KAP WR 6/1/84: Karen Hutmacher of International Gunnery Range Services, 8501 N. 75th Avenue, Peoria, Arizona 85345, phone 979-4900 reported the firm is interested in acquiring mining properties. She requested information on the Banden and the Banden Mine No. 2 (M.S. 2597) Sec 10, T4N R1E. These two patented claims are located along the south of the Sunrise Relief Mine (file) property. It is not known whether they were originally part of the Sunrise Relief mine operation. They now appear to be separate in terms of ownership.

KAP WR 6/7/84: Rick Renn, GEologist, Goldsil Resources Ltd. reported his firm is evaluating the Sunrise-Relief Mine, Maricopa County. He feels the property has potential to supply feed to a mill-cyanide plant being considered for the Mystic Mine.

SUNRISE-RELIEF MINE

MARICOPA COUNTY

Visited the Sunrise-Relief Mine; no activity noted.

FTJ WR 6/21/68

Reference: USGS Bull. 1355, p. 25

Sheet 1 of 2

COMMODITIES GoldMILS ID No. Maricopa #79Date 11/30/84ENGINEER Nyal Niemuth & Ken PhillipsINFORMATION FROM: SamePROPERTY SUMMARY

- I. MINE NAME Sunrise Relief (f) OTHER POSSIBLE NAMES
INCLUDING ANY CLAIM NAMES NOTED _____
- II. LOCATION: T 4 N R 1 E SEC(S) 4 SE $\frac{1}{4}$ MINE DISTRICT _____
ELEV. _____ COUNTY Maricopa TOPO QUAD. Hedgepeth Hills &
Calderwood Butte
DIRECTIONS _____

MAP ATTACHED _____
- III. OWNERSHIP: NAME Unknown PHONE _____
ADDRESS: _____
COMPANY NAME IF ANY: _____
PERTINENT PEOPLE _____
- IV. PROPERTY AND HOLDINGS: Patented claims
- V. PAST PRODUCTION - NOTED, KNOWN, PROBABLE, UNKNOWN, NONE Noted
- VI. CURRENT STATUS: Recent sampling and underground rehabilitation
- VII. WORKINGS: Main decline has new steel frame over shaft opening with a new steel ladder. Surface water tank supplies waterline in decline. The other inclined shafts (to west) are open although they do not have collars or ladders.
- VIII. GEOLOGY AND MINERALOGY: DEPOSIT TYPE: Vein
LENGTH: +2000' WIDTH: 2-10' VEIN STRIKE N75W to West DIP app. 40°N
HOST ROCK: Biotite granite
ECONOMIC MINERALS: Gold occasional free gold visible
COMMENTS: Vein is dominantly quartz hematite with minor chrysocolla seen.
(see back for description of dumps and tailings)
- IX. EQUIPMENT ON SIGHT: _____



JUN 1 1984

Office of State Mine Inspector

705 West Wing, Capitol Building
Phoenix, Arizona 85007
602-255-5971

NOTICE TO ARIZONA STATE MINE INSPECTOR

In compliance with Arizona Revised Statute Section 27-303*, we are submitting this written notice to the Arizona State Mine Inspector (705 West Wing, Capitol Building, Phoenix, Arizona 85007) of our intent to start/stop (please circle one) a mining operation.

COMPANY NAME Sunrise Mine
CHIEF OFFICER Michael Tanner
COMPANY ADDRESS 2109 W Campbell St Phx Az
COMPANY TELEPHONE NUMBER 279-3613
MINE OR PLANT NAME Sunrise
MINE OR PLANT LOCATION (including county and nearest town, as well as directions for locating by vehicle)
Maricopa County
Appx 3 miles N. of Sun City at
extreme end of N. 85th Ave and incl. to West.
TYPE OF OPERATION mining PRINCIPAL PRODUCT AU - AG
STARTING DATE 5-20-84 CLOSING DATE _____
DURATION OF OPERATION probably 2 years
PERSON SENDING THIS NOTICE Don C Laderoute
TITLE OF PERSON SENDING THIS NOTICE mine & mill Supt.
DATE NOTICE SENT TO STATE MINE INSPECTOR 5-31-84

*A.R.S. Section 27-303 NOTIFICATION TO INSPECTOR OF BEGINNING OR SUSPENDING OPERATIONS: When mining operations are commenced in any mine or when operations therein are permanently suspended, the operator shall give written notice to the inspector at his office prior to commencement or suspension of operations.

See also Relief file

Glendale Mining *and* Milling Company *of* ARIZONA



A DESCRIPTIVE STATEMENT
With References and Photographs

Schuyler S. Moore

Authorized Fiscal Agent

Phone, Broad 4499

68 Broad Street

NEW YORK, N. Y.

*See file
H.M.M.C.*

References:

Hundreds of Phoenix, Arizona, people, first and last, have visited the *Relief mine*. The accompanying photographs show some of them. They include professional men, mining men, business men, miners and mechanics. Many of them are stockholders in the company and all of them have expressed their confidence in the mine. They believe in greater development and larger equipment of the mine. We refer you to a few of the most prominent, useful and reliable men of Phoenix and Glendale, Arizona. They know the "Relief mine" and we take pleasure in referring to them, viz.:

Geo. Hamlin, Superintendent of the Relief Company, 1139 East Monroe Street, Phoenix, Arizona.

Charles H. Akers, Gazette Publishing Co., Phoenix, Arizona.

Lloyd B. Christy, Banker, Phoenix, Arizona.

Ezra W. Thayer, Merchant and Mine Operator, Phoenix, Arizona.

Geo. H. Diehl, Assayer & Chemist, Phoenix, Arizona.

Clinton S. Scott, Arizona Magazine, Phoenix, Arizona.

David Kile, Miner, c/o Commercial Hotel, Phoenix, Arizona.

Alex Spear, Miner, P. O. General Delivery, Phoenix, Arizona.

Goldberg Bros. Co., Merchants and Mine Owners, Phoenix, Arizona.

Edward Eisele, Wholesale & Retail Bakery, Phoenix, Arizona.

Henry W. Ryder, Lumber Dealer, Phoenix, Arizona.

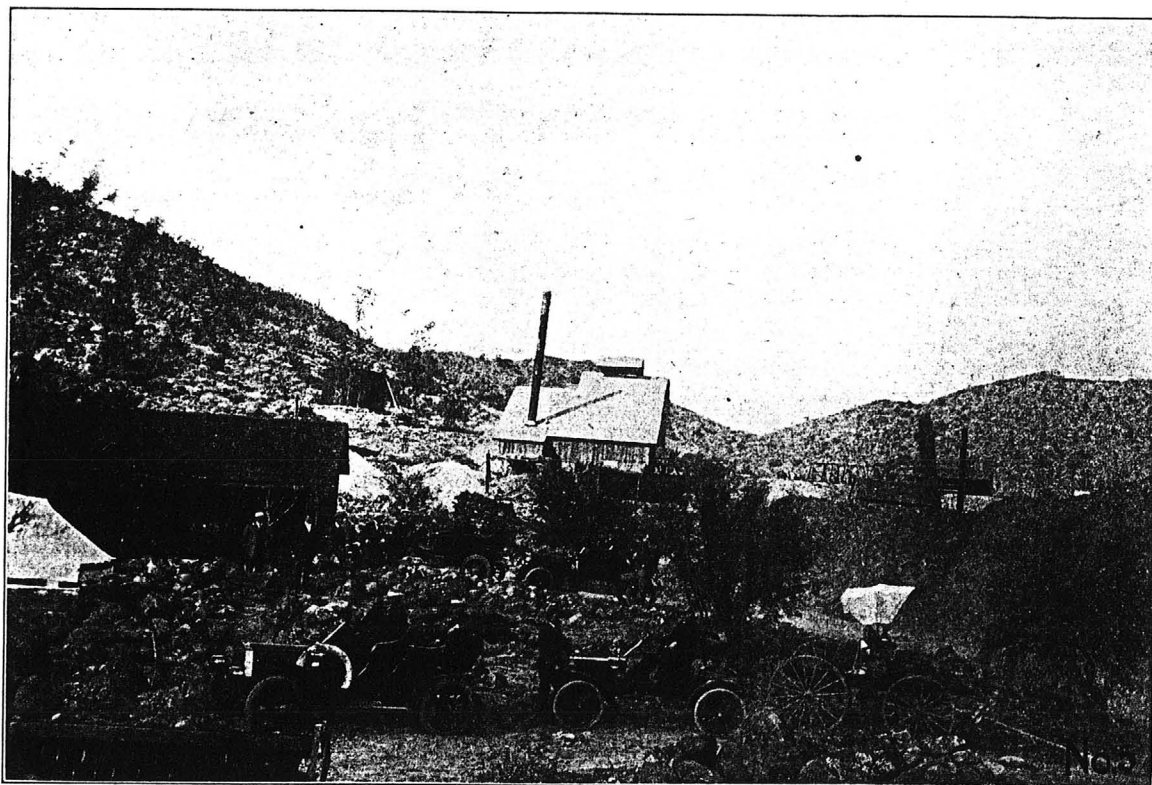
Geo. H. N. Luhrs, Proprietor of Commercial Hotel, Phoenix, Arizona.

R. M. Luckey, Merchant, Glendale, Arizona.

Geo. W. Walters, Ranch, near the Mine, Glendale, Arizona.

Ray F. Stauffer, Merchant, Glendale, Arizona.

RELIEF MINE.



Automobile Party. Pile of Tailings to the right.

The Glendale Mining and Milling Company issues this prospectus of its properties and plans for the purpose of interesting you in an opportunity to make a safe and profitable investment. The company is the sole owner of a rich mine, the Relief, and is about to absorb the Advance Company's property of as yet unestimated wealth. These properties and franchises will be combined by the Glendale Company with the Relief Mine and will be operated as one great enterprise under intelligent and economic management. *Development has made the Relief mine one of the most promising gold properties in Arizona*, and development, we believe, will make the other properties equally valuable, possibly more so.

The Relief mine is a gold mine. The Advance Mining Company's property consists not only in gold claims, but also copper claims, and water and irrigation rights all in Arizona, a state where both copper, gold and water have created enormous wealth. The facts which this prospectus will bring out and make clear to you about these properties are based on actual conditions which can be seen and felt and computed.

The "Tom Reed Gold Mine" is producing from \$125,000 to \$150,000 in gold bullion monthly. A few years ago their stock had no market value and the company was forced to reorganize to get money to develop the property, *now* no stockholder cares to sell his stock at any price.

The Magma Copper Company's stock advanced from \$17.00 to \$52.00 a share in four days and is now worth about \$58.00 a share. The par value is \$5.

Ex-Senator Clark is supposed to own ninety per cent., more or less, of United Verde stock. It was valued at about seventy-five cents a share when he first bought it and is now probably worth \$300.00 or more a share. These are Arizona mines.

Remember the *speculative possibilities* of mining stock.

There is no promotion stock or bonds in this organization. Every drop of water has been squeezed out. Valuing the stock at the price it is now being offered for subscription, the amount of stock and bonds allowed for the Relief properties is substantially the same as the amount of cash actually expended for development, equipment and operation purposes; while the amount of stock to be allowed for the Advance properties—on the same basis—is considerably less than the amount of money actually expended for development and improvement of their properties.

The directors of the company have agreed that no salaries

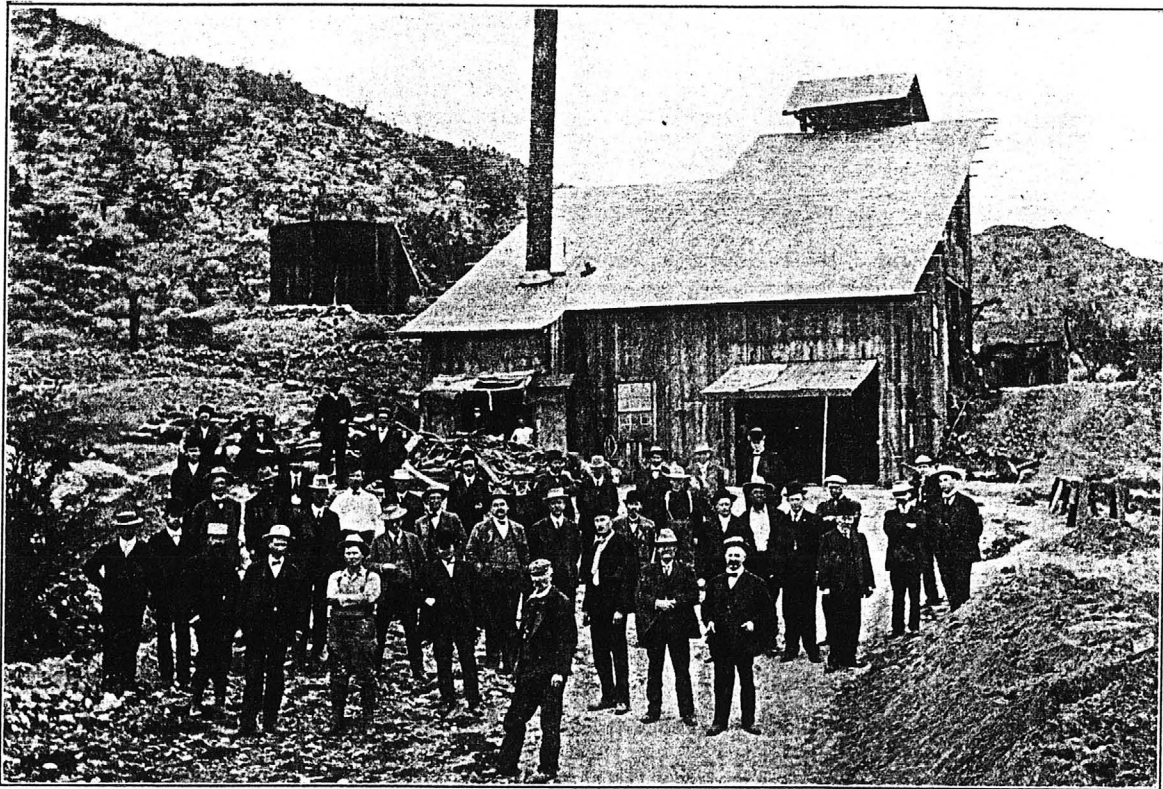
shall be paid, and have arranged that expenditures, including caretaker at the Relief Mine, office expenses, etc., shall be limited to \$100.00 per month, until there is enough money in the treasury to justify going ahead with liberal and intelligent development and equipment of the Relief Mine.

The directors propose to exploit the ore bodies at greater depth, get under the ore shoots in the 400 foot level; create a large ore reserve, and increase the water supply as greater depth in the mine is acquired, harness the electric power and increase the milling and cyanide capacity. *The mine is worthy of it!*

Gold mining is to-day a business. Reckless waste, haphazard management and greedy haste have given place to economy, efficiency and clean sweep. This is due partly to the applying of scientific processes, such as amalgamating and cyaniding. These produce the maximum of gold at the minimum of cost and have saved and earned millions of dollars for modern mine owners that the early gold kings let go to waste. The scientific mining methods of 1916 have lessened enormously the cost of mining business. They, however, do not represent all the causes that have increased the investor's profits and reduced his risks from the mining of gold. One very important source of economy is the location of the mine. If you own a factory on the main line of a great railway system, your shipping costs are at once lowered and your dividends are proportionately greater—so with a mine. Many promising properties are unprofitable only because they are hidden in high mountains or deep canyons and are far from railroad lines. The Relief mine overlooks the Santa Fe Railroad, and one of the most perfect automobile roads in Arizona runs to its main shaft. Another safeguard is the integrity and character of the management. This is of as great importance in the success of a mining investment as the richness and purity of the ore, which is of vital value to the share holders. We ask you to bear this particularly in mind.

Arizona is a rich state even as the wealth of this country is estimated to-day in hundreds of billions of dollars. A great volume of this wealth is mineral and its extent no man knows. You have only to think of the enormous wealth which the unfailing resources of the United Verde Mine has given to one man to understand why Arizona is the richest copper producing state in the world. The wealth of the United Verde mine was for many years at the disposal of the public, but one man alone had the wisdom to take advantage of it and Senator Clark to-day is probably one of the richest men in the world. The Copper Queen is another mine that pictures untold wealth.

RELIEF MINE.



Members of Phoenix, Arizona, Board of Trade. Showing the Mill and Steel Water Tank in background. Cyanide Plant, installed since this picture was made, is on the grade about where this group stood.

Both these famous mines are in Arizona and in 1914 the state produced one-third of all the copper mined in the United States. In the United States Geological Survey figures, Arizona delivered to the world 393,017,400 pounds of pure copper. When we think of gold we picture California, yet in 1914 Arizona produced 202,166.62 "fine" ounces of pure gold, valued at \$4,179,155. In 1880 the Arizona gold output was 10,000 ounces. In thirty odd years the output has increased over 2000% and modern economic gold mining methods are just beginning to be used in the state.

The location of the Relief Mine is extraordinary. It is practically at the very door of the City of Phoenix, and the Advance properties are well situated for economical mining and development.

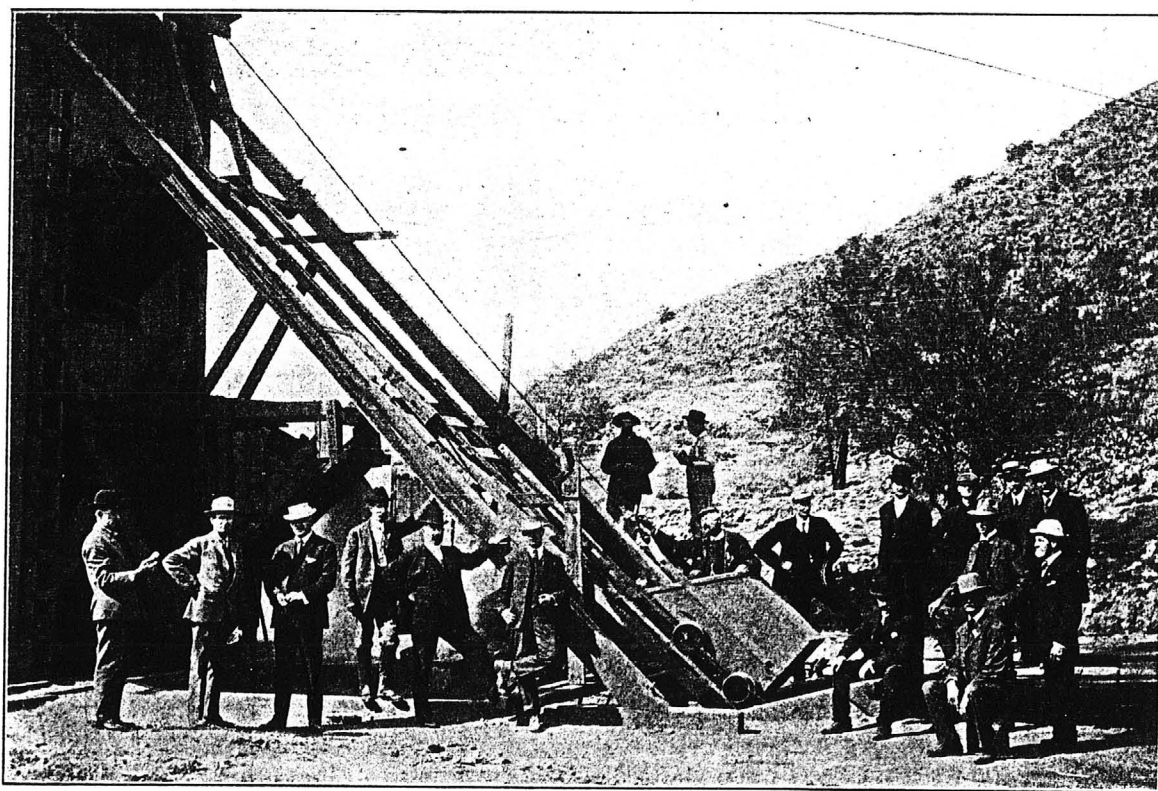
The Relief Mine is situated in the foothills of the Bradshaw Mountains, in the Agua Fria (Cold Water) district, Maricopa County, Arizona. It is about twenty-two miles northwest of Phoenix, the capital city of Arizona, thirteen miles from Glendale and seven miles from Marinette. Altitude 1400 feet—about 300 feet higher than Phoenix, and 200 feet higher than Marinette. The latter is the nearest railroad station.

The Prescott and Phoenix division of the Santa Fe Railroad system passes through both Glendale and Marinette. A fine wagon and automobile road runs through Glendale from Phoenix to the mine. The road across the desert from Marinette—seven miles—is an easy grade, no hills to climb, bridges to build, or fords to cross. It can be quickly and inexpensively made a first-class freight road when needed.

The accessibility to railroad facilities, markets for mine, mill and domestic supplies; located in a climate that knows no snow, frost but seldom, where the water pipes lie on top of the ground without danger of freezing, makes the Relief mine an exceptional mine for *economical mining and reduction of ore, especially for cyanide treatment*. The plant need not be housed except for protection from the sun, as there is no danger of bursting pipes or freezing tanks.

So much for the location as to shipping facilities, market supplies and economics of this important kind. Another essential feature, power for operating, remains to be thought of. It is here that nature was most completely in league with good fortune. As has been pointed out, the cost of doing business in mining is as serious a problem (in a well conducted mining enterprise) as in any other honestly managed business; and a vital factor is the power for running the machinery of the mine.

RELIEF MINE.



View of the Mill, showing Skip coming out of the working shaft.

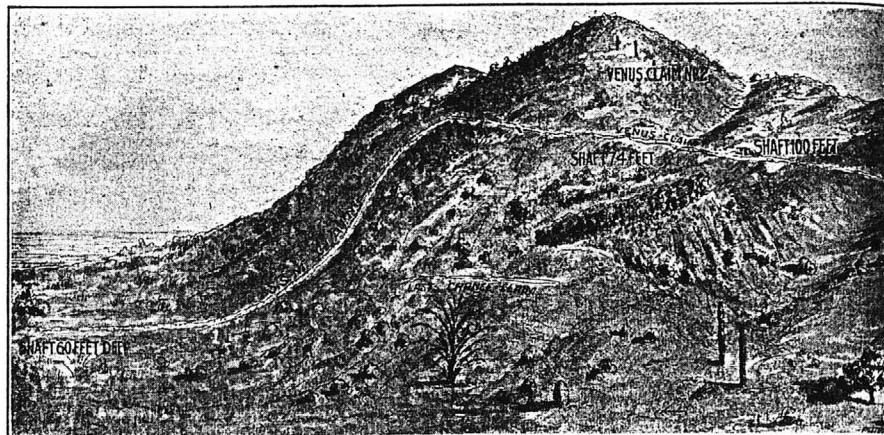
The ghost of this cost haunts the office of many a mining manager in these days of rising coal prices, and the mine owners whose machinery is harnessed to water power are among the fortunate ones of earth.

Both the Relief mine and the Advance properties are unusually well provided in this respect. The latter have the means to generate their own water power and enough left over to sell at a profit as we shall show you a little further on; while the Relief mine may be operated by the inexhaustible power stored up by the Grand Roosevelt Dam. You know already the story of that wonder working water storage system that has increased the wealth of Arizona by millions of dollars in irrigation and power and especially of that particular section. The electric transmission cables from that huge lofty artificial lake deliver unfailingly summer and winter a minimum of 125 horse power at the astonishingly low price of $1\frac{1}{2}$ cent, perhaps less, a kilowatt, and furnishes the cheapest and most serviceable means of operating that mining management can ask. The transmission cables now deliver power to Marinette only seven miles away.

The Relief mine consists of nine claims, eight of which are full size, 1500x600 feet, and one claim 1500x163 feet—about 160 acres. Three claims, the Relief, Venus and Relief No. 2, where mining has been done, are patented; the remaining six claims are owned by right of discovery and are held in accordance with the United States mining laws, by doing the discovery work and the annual work on the claims.

The Relief mine has a story, like many of the great producing mines, that shines bright with the faith and endurance of men who saw its limitless possibilities and endured hardships and want in the strength of their belief. The name of George Hamlin of Phoenix is well known among mining men, and he has stuck by the Relief mine and seen his confidence bear the fruit of success. Working with one assistant, Hamlin sank an incline shaft 200 feet deep with nothing but a home-made bucket and windless to hoist out the muck, *because he knew the wealth was there to be dug out*. Such faith bears its reward, and Hamlin will reap where he sowed just as Senator Clark became one of the world's finance kings, *because he had faith in a mine that others did not have the vision to appreciate*, and the United Verde is the monument to his foresightedness and wisdom.

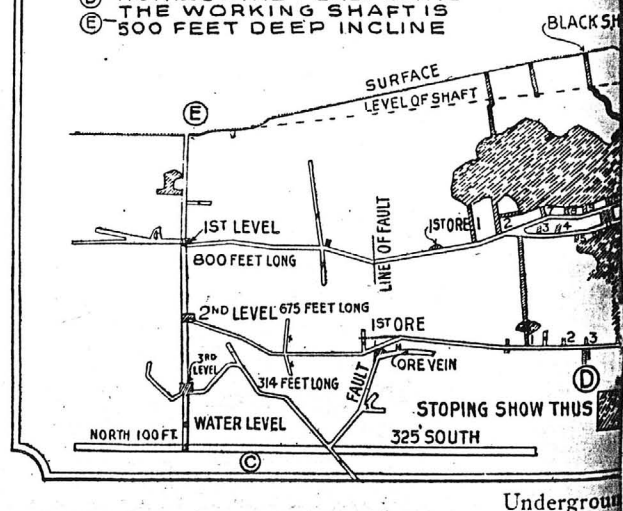
The Relief mine is there on the low Arizona foothills, rich, full of golden promise. It has already produced wealth. About four thousand five hundred feet of development work has been done. The work consists of shafts, drifts, upraises, air levels,



UNDERGROUND WORKINGS

THIS SURVEY IS OF
THE LEVELS ONLY

- (A) 100 FT. DEEP ALL ORE GOING THROUGH MILL
 (B) SHAFT, 74 FEET DEEP ALL ORE GOING THROUGH MILL
 (C) CROSS CUT IN 500 FOOT LEVEL
 (D) HORIZONTAL PERSPECTIVE THE WORKING SHAFT IS
 (E) 500 FEET DEEP INCLINE



cross cuts and winzes, including an incline working shaft five hundred feet deep, the latter being the greatest depth attained on the property. The drifts in the 200, 300 and 400-foot levels are 800, 675 and 314 feet long respectively, running west from the working shaft; but little drifting has been done east of the shaft.

Most of the work in the 400 foot level was done in exploiting a fault,—the last sixty feet is in ore. By running this drift forty feet further it will be under the ore shoot where ore has been taken out in the upper levels.

Cross cutting only has been done at the bottom of the shaft, in the 500 foot level; the cut to the north is 100 feet long, and to the south 325 feet long. This work was done to create a reservoir for the storage of water. In the south cut a fourteen foot ledge of quartz ore was cut through, but because of the difficulty in handling the flow of water it was not drifted on and developed. Assays have shown the character and average gold value of this ore to be about the same as in the upper levels.

The strike or direction of the vein is nearly east and west, with an average dip of about forty-five degrees north into the hill. The ledge has been traced about a mile on the surface, and the ore taken from various shafts, crosscuts and other surface openings is of the same general character and average value. The width of the vein varies, in some places it is fully twenty feet wide.

In the stopes above the 300 foot level, where some twelve thousand tons of ore have been knocked down, taken out and milled, the pay ore was from four feet to nine feet wide, the ore all going through the mill, the average width of the stopes where the ore was taken out is approximately five feet, a large average width for the depth so far attained in the mine.

A shaft now sixty feet deep, located some two thousand feet west of working shaft, has five and a half feet of ore in the bottom; the last assay of a large sample taken across the vein showed values of \$6.25 per ton. Various assays from this shaft, as sinking progressed, showed average gold values of from \$6.00 to \$10.00 per ton.

The vein has been pronounced by geologists and professional mining men to be a fissure vein,—indicating great depth. The formation is granite with enclosures of syenite, or mica schists as it is sometimes classified.

The vein matter consists of quartzose gangue or filling and portions of the wall rock. FREE GOLD OCCURS IN THE QUARTZ GRANITE AND SYENITE ROCK.

The syenite forms with some irregularity the foot-wall and portions of it compose a considerable portion of the vein. The quartz hugs this footwall and the adjacent portions are broken with the quartz when taking out ore, and furnish some rich ore and handsome specimens.

The granite ore lies above and parallel with the quartz ledge. It shows slight alterations in texture and is *full of minute cracks on the face of which gold appears in little flakes*. Gold is also found disseminated throughout the rock itself, often forming specimens of rare beauty.

The ore shoots are large, the one where the most stoping—taking out ore—has been done being two hundred feet long. *The size of the shoots or ore chimneys is promising for the future of the mine.* The gold is absolutely free, most of it fine, but some coarse is found in the granite ore. There are no indications of sulphides in the mine, and except for a low percentage of iron oxides, a negligible appearance of silver, and 1/10 of one per cent. of copper carbonates, there is only gold in the mine. The bullion is of rare purity, and the ore is an ideal ore for cyanide treatment. The deposit has been classified as an *unusually strong vein*, mineralized by hot solution of magmatic waters. The type is not uncommon and is considered *one of the most promising for producing large and continuous amounts of diffused ore.*

Approximately twelve thousand tons of ore have been stoped or mined out in the two and three hundred foot levels, and treated on the property.

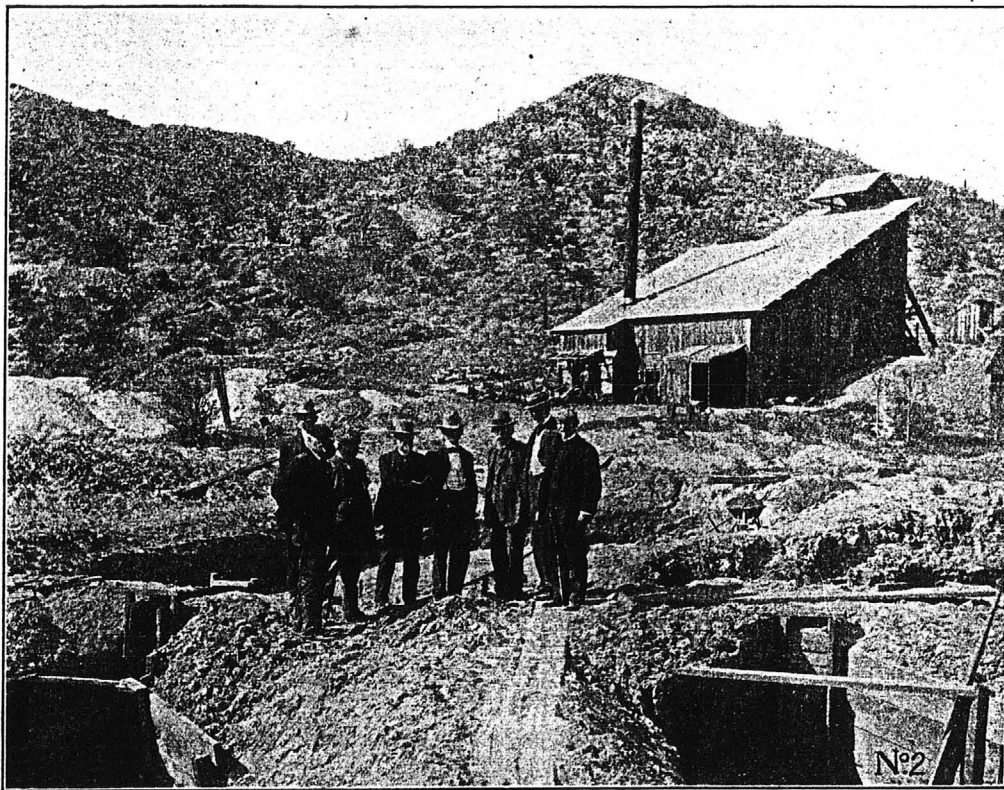
The granite and syenite ore is often very rich, sometimes running as high as \$100.00 or more a ton. The average value, however, of the twelve thousand tons treated was \$6.60 per ton, and the recovery in bullion was \$72,000, about 90% of the total average value. The last one hundred tons of granite and syenite ore run through the mill averaged \$12.00 per ton in gold.

*AEM Bull. 140
\$20,000 in Au
1907-8
Lumina-Relief*

About three-quarters of the ore mined and treated was by simple amalgamation, cyaniding the tailings, and the remainder by straight cyanidation.

The experience gained through straight cyaniding this ore clearly demonstrates that with the mine properly developed, equipped with a crushing mill and cyanide plant of one hundred, or more, tons daily capacity, with electricity for power, etc., \$4.00 ore would keep the ore reserve developed ahead and yield the company handsome profits. Compare the average of \$6.60 per ton with ore of the great Homestake mine of South Dakota and the famous Treadwell mine of Alaska, whose average is \$3.60 and \$2.80 respectively.

RELIEF MINE.



Phoenix people inspecting Tailing Pit below the Mill.

The great producing mines in Arizona are *deep mines*. It is there that the ore usually lies in its maximum of richness and volume. So far the Relief mine has been put down to a depth of 500 feet on the incline.

The ore now open and partially open in the mine is estimated at from forty to fifty thousand tons of \$6.00 ore above the four hundred foot level. This estimate is conservative. To open this tonnage it is necessary to continue the drift in the four hundred foot level further under the ore and complete some drifting and dead work in the upper levels.

The reservoir developed at the bottom of the working shaft when completely open has a storing capacity of about 100,000 gallons. The daily flow of water is approximately seven thousand gallons. This water is excellent for milling, cyaniding and domestic purposes, and an abundance can be developed as sinking to open the ore bodies at greater depth progresses.

Surface improvements:

Consist of dining-room, cook house, bunk house, company office, store-house, etc. A small expenditure of money will enlarge and improve these buildings so as to make them commodious and comfortable for a large force of employees.

Equipment:

The equipment consists of One station pump—One sinking pump (both of 40 gallons per minute capacity)—One 12 h.p. Fairbanks and Morris hoist and house—One $\frac{1}{4}$ inch iron water tank of 25,000 gallons capacity, with pipes carrying water to mill—cyanide plant and all the buildings—Blacksmith and machine shop with tools—Assay office with outfit, including smelting furnace, etc.—Crushing building and machinery, including fifty h.p. boiler, thirty h.p. engine, 8x10 inch Blake rock breaker, set Allis 14x26 inch rolls, set Joplin 14x24 inch rolls, conveyers, elevators, revolving screens, belting, shafting, pulleys, etc.

Substituting a fifty h.p. engine for the one now installed, together with minor alterations and mill improvements, this plant will have a dry crushing capacity of fifty tons every nine hours. A good first unit crushing capacity, and calls for the outlay of but little money.

Cyanide Plant:

This plant is new and up to date, of fifty tons daily capacity. It consists of four iron tanks 5x18 feet—two iron tanks 4x22 feet—one iron standardizing tank 8x10 feet—one iron

distributing tank 3x9 feet—two iron sump tanks 6x8 feet—twenty iron zinc barrels 18x24 inches complete with centrifugal pump, gasoline engine, piping, tank bottoms, etc.

This completes the description of the physical and operative condition of the Relief mine which is already advanced in operation, and needs only the wise expenditure of comparatively little money to increase its output and in far greater proportion, its wealth-production. We now want you to become as well acquainted with the outlook that the *Advance Mining properties* offer. These are part and parcel of the Glendale Company's holdings, and ownership in the Relief mine embraces equal ownership in the 26 claims of the Advance Company's charter.

The Advance Mining Company's properties, about to be absorbed by the Glendale Mining & Milling Company, are located in the Clark and Black Rock districts, Graham County, Arizona. They consist of eighteen gold claims in the former, eight copper claims and reservoir and irrigation canal franchises in the latter district. *The claims in both districts are promising, and the power and water franchises are of great possible value.*

Camp Aura:

Is in the Clark District, twenty-seven miles southwest of Fort Thomas, a station on the Gila Valley, Globe and Northern R. R. and fifty miles Northwest of Willcox on the S. P. R. R.

Property:

The Advance Company holds eighteen promising claims in this district by virtue of discovery work, etc. With one exception they are full size 1500x600 feet—about 370 acres of land.

Formation:

The prevailing rock is felspathic granite, cut at intervals by a series of altered porphyry dikes. Numerous quartz veins cross the formation, the croppings in many places being easily followed.

Veins:

The walls are felspathic and are well defined. The veins are from three to ten feet wide. The gangue filling matter is quartz and porphyry. The quartz lode varies from 2½ to 5 feet wide. The ore is generally friable and easily crushed.

Development:

Upwards of 1500 feet of work has been done on these claims distributed in shafts, tunnels and cross cuts, including one shaft 200 feet deep and one tunnel 300 feet long.

Values:

Many assays have been made from the different workings on this property, including one shipment of 1,593 pounds of ore to a smelter for treatment. The ore shipped averaged \$25.96 per ton.

Leaving out the high assays as follows: \$43.57, \$48.00, \$50.30, \$64.00 and \$100.00, which do not show the average values, and taking those which were made from five pounds or more, ore taken systematically across the veins, we find the values run from \$5.00 to \$25.00, giving a general average value of \$12.32 per ton. We believe the ore on these claims will average from \$10.00 to \$12.00 per ton in gold and silver as it is mined, besides the copper which is prominent in some of the claims.

Experiments show that through amalgamation and concentration from 85 to 90 per cent. of the values can be saved, concentrating the sulphides and recovering the free gold and silver on the plates.

Water:

There is an abundance of artesian water in this district, which can be pumped into storage tanks at small expense.

Power:

Wood from \$3.00 to \$4.00 a cord will be obtainable for several years, and eventually electricity from the Black Rock district should be obtainable at a low figure.

The distance from one camp to the other is twenty-two miles by wagon road, and eighteen miles by trail.

Advance Camp—Black Rock District:

This camp is sixteen miles southwest of Fort Thomas.

The Company holds eight copper mining claims, 1500x600 feet each in this district, by right of discovery, etc., about one hundred and sixty acres of land, and through reservoir and irrigation canal franchises controls the water rights of from 30,000 to 40,000 acres of rich and fertile farming land.

Formation:

A series of eruption drifts crossed by mountain ranges occur in this district. The substratum is granite, intermediate slate, clay composition, capped by conglomerate rocks, porphyritic in character. The conglomerate formation covering these claims is completely impregnated with small veins and feeders of high grade copper carbonates carrying good values

in gold and silver, while in some instances large bunches of high grade copper glance have been encountered which show high values in gold, silver and copper.

Property:

The property consists of eight claims held by virtue of discovery work, etc. They are adjacent, most of them contiguous. It is believed they cover a copper zone.

Development work on this group indicates that there is a *large deposit* of low grade copper ore lying on the contact between the slate and conglomerate formation, indicating that when the water level and granite contact have been reached, a large body of sulphides will be found.

Values:

The feeders, stringers and bunches of copper glance show high values, anywhere from \$10 to \$200 per ton, in gold, silver and copper. With depth we believe a copper mine will be found.

These briefly are the mineral and mining rights of the Advance property. Promising as they are, their wealth possibilities are but a fraction of the actual value of the development as a whole. In addition to them are the water rights and these are inestimable. *The storage basin is waiting to be flooded. The site is ready made by nature* for a dam that should cost not *more than \$100,000*. Engineers have estimated the cost at \$60,000, and below our rights extend thousands of acres to be irrigated into one of the richest agricultural sections of the New Southwest. So important is this feature of our possessions, that Deputy United States Surveyor Philip Contzen spent several weeks in surveying and analyzing this project. We quote the following from his report:

"The reclamation of the land by the waters from the Black Rock Power and Irrigation Reservoir will create wealth and many homes for settlers.

"The water power which can be transmitted by electricity some distance will be a great benefaction to the mining industry of Graham County. Taking both water power and reclamation from 30,000 to 40,000 acres of land by the construction of a 190 foot dam, pipe line, and some lower reservoirs, which are to receive the waters from the main reservoir; it is readily seen that it is a good legitimate proposition, and undoubtedly will be profitable to the investors of this enterprise."

Summing up the report we have made you on these two great properties, the Relief and the Advance, the problem is a very simple one:

The Relief Mine is already a proven mine of tested richness. The Advance offers a wide and varied opportunity, with water rights whose development at very limited cost will pay a high profit on the investment.

Deeper development, increased and new milling facilities, the addition of electrical power at low cost, represent the immediate needs of these properties. As in all businesses, money must be spent to bring money back. The history of this country's wealth proves that no more profitable means can be found to increase and insure an income than to enlist money in a *mining opportunity that combines the safety of a conservative investment—The Relief Mine—with the enormous profit chances of a high grade speculative proposition—the Advance properties.*

Schuyler S. Moore is transfer and fiscal agent of the Glendale Company. Mr. Moore is a substantial stockholder and has been in personal touch with both the Relief and Advance properties since those companies were organized. He knows the properties better than any one else, and is competent to answer all inquiries in detail.

GLENDALÉ MINING & MILLING COMPANY,

Signed, WM. G. LELAND, President.

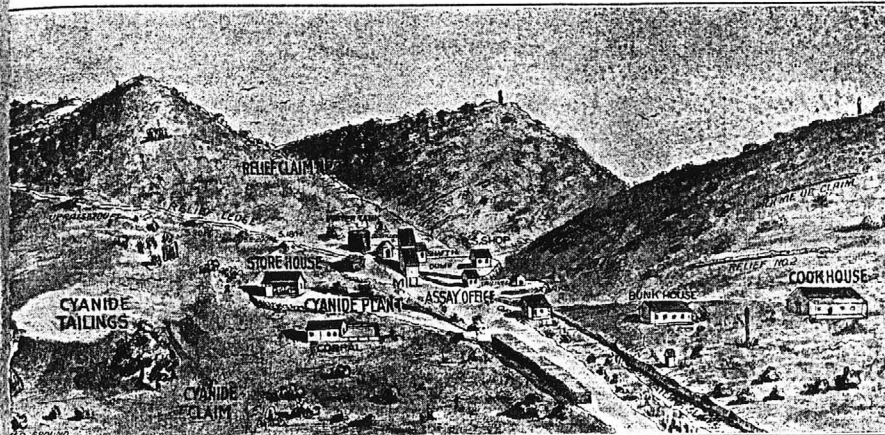
Address all communications to

SCHUYLER S. MOORE, Fiscal Agent,

68 Broad Street, New York, N. Y.

Telephone, Broad—4499.

New York, December 1, 1916.



MINE.



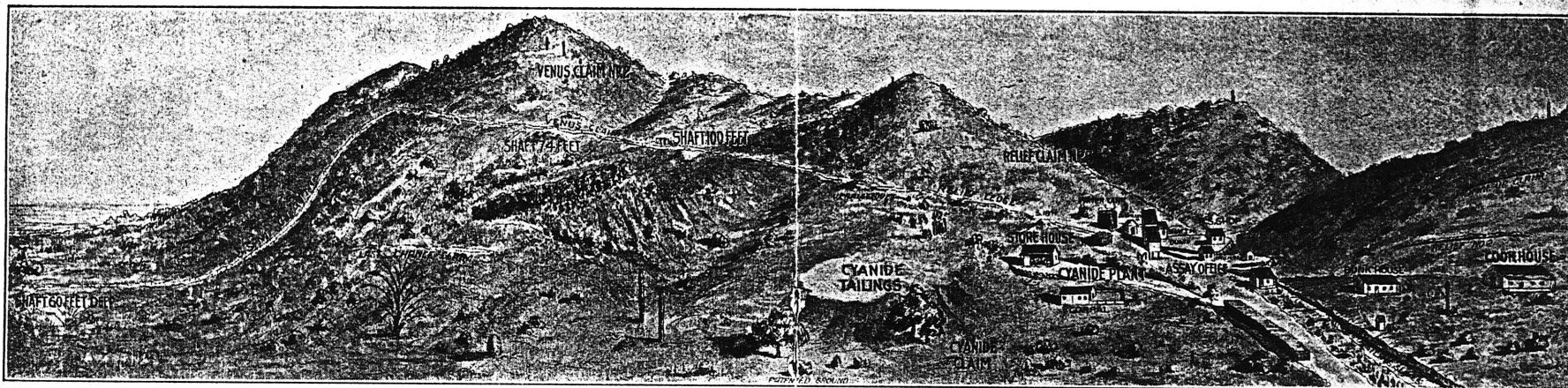
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about 1" = 200'

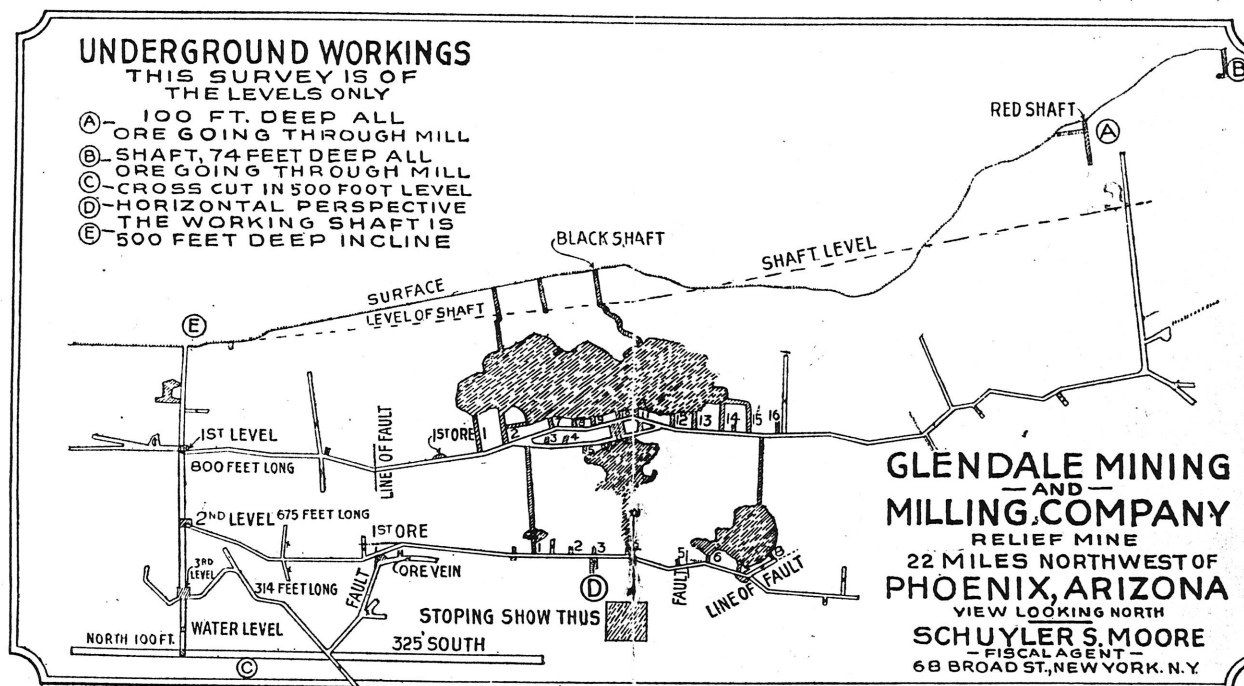
From 1916 prospectus

Sunrise Relief 9 M. N.E. Marne Ariz. Au.

No. 1	6'6"	300 level	No. 8 Shut	.37
" 2	2'9"	" "	" " " H.W.	.05
" 3	5'	" "	Near No. 7 Shut	.31
" 4	4'	" "	" " 6 "	.18
" 5	3'6"	" "	5' W. " 4 "	.02
" 6	3'4"	" "	5' E. " " "	.38
" 7	6'	" "	Hanging Wall	.02
" 8	3'4"	" "	Down Winz 10'	.47
" 9	4'	" "	5'E No. 3 Shute	.04
" 10	4'3"	" "	15'E " " "	.25
" 11	2'4"	" "	5' W " 2 "	.51
" 12	3'7"	" "	5' E " " "	.05
" 13	3'6"	" "	15 E " " "	.01
" 14	4'	" "	W " 1 "	.01
" 15	4'3"	" "	Bet. " 0&1 "	.02
" 16	5'	" "	Up " 0 "	.01
" 17	4'8"	" "	10E " 0 "	.02
" 18	3'6"	E Winz 40	Below 300	.01
" 19	3'4"	" " 30	" "	.01
" 20	2'6"	" " 20	" "	.02
" 21	7'10"	E End Stope	Above No. 0 Shut	.01
" 22	4'8"	Back	" " " " "	.01
" 23	6'	" "	" " 1 "	.01
" 24	4'6"	" "	" " " "	.29
" 25	4'4"	200 Level	7 Ft. W. Spad No.215	.01
" 26	4'	" "	East of " " "	.01
" 27	4'5"	" "	W. Stop Above No. 15 Shut	.01
" 28	4'	" "	E. " " " "	.02
" 29	3'7"	" "	Hanging Wall " 4	.01
" 30	Broken ore	Jacks Raiz		.01



RELIEF MINE.



Underground Workings.

10

11

From 1916 prospectus

Glendale Mining
and
Milling Company
of ARIZONA



A DESCRIPTIVE STATEMENT
With References and Photographs

Schuyler S. Moore

Authorized Fiscal Agent

Phone, Broad 4499

68 Broad Street,

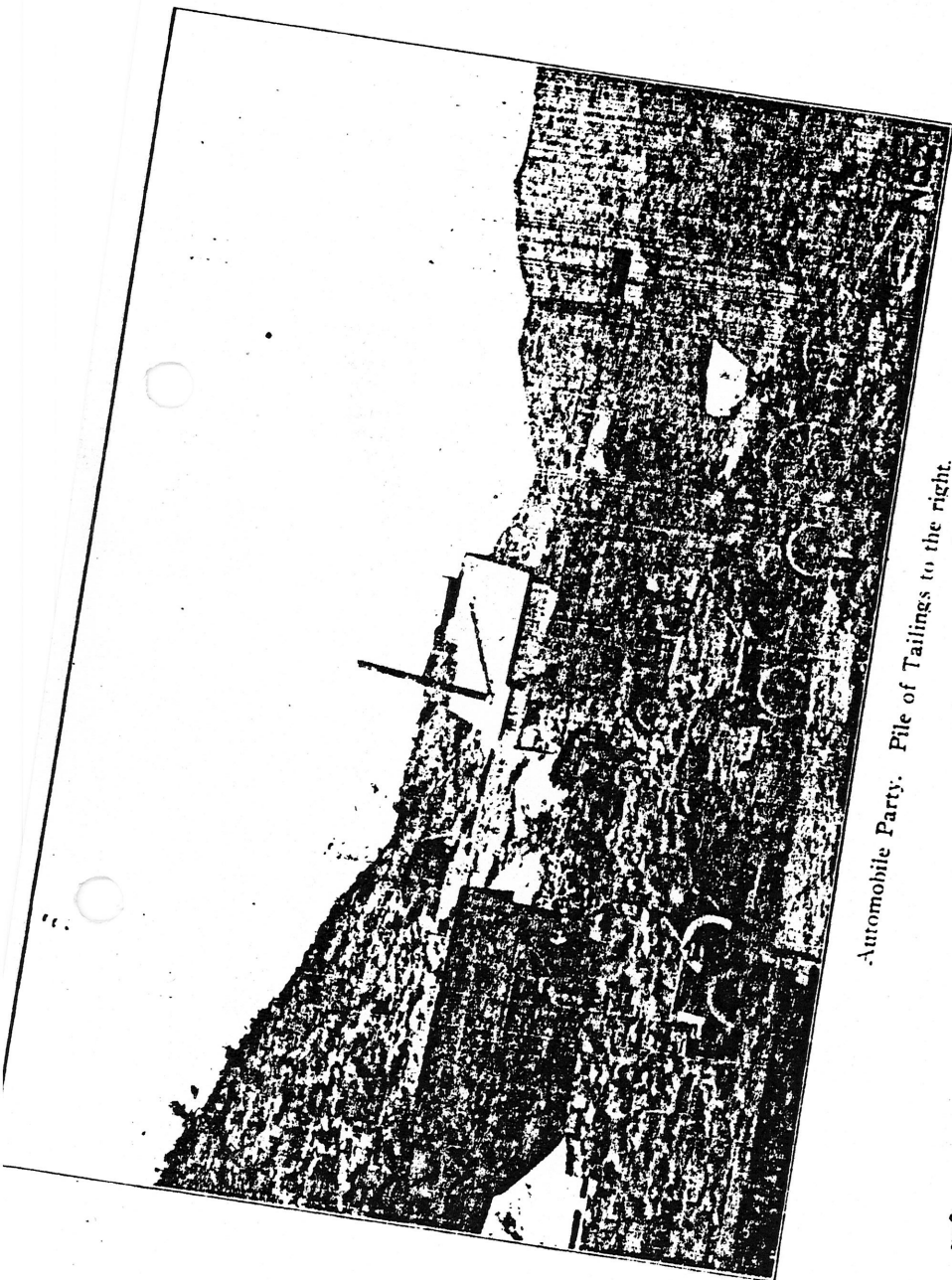
NEW YORK, N. Y.

See 7

References:

Hundreds of Phoenix, Arizona, people, first and last, have visited the *Relief mine*. The accompanying photographs show some of them. They include professional men, mining men, business men, miners and mechanics. Many of them are stockholders in the company and all of them have expressed their confidence in the mine. They believe in greater development and larger equipment of the mine. We refer you to a few of the most prominent, useful and reliable men of Phoenix and Glendale, Arizona. They know the "Relief mine" and we take pleasure in referring to them, viz.:

- Geo. Hamlin, Superintendent of the Relief Company, 1139 East Monroe Street, Phoenix, Arizona.
Charles H. Akers, Gazette Publishing Co., Phoenix, Arizona.
Lloyd B. Christy, Banker, Phoenix, Arizona.
Ezra W. Thayer, Merchant and Mine Operator, Phoenix, Arizona.
Geo. H. Diehl, Assayer & Chemist, Phoenix, Arizona.
Clinton S. Scott, Arizona Magazine, Phoenix, Arizona.
David Kile, Miner, c/o Commercial Hotel, Phoenix, Arizona.
Alex Spear, Miner, P. O. General Delivery, Phoenix, Arizona.
Gollberg Bros. Co., Merchants and Mine Owners, Phoenix, Arizona.
Edward Fische, Wholesale & Retail Bakery, Phoenix, Arizona.
Henry W. Ryder, Lumber Dealer, Phoenix, Arizona.
Geo. H. N. Lohrs, Proprietor of Commercial Hotel, Phoenix, Arizona.
R. M. Luckey, Merchant, Glendale, Arizona.
Geo. W. Walters, Ranch, near the Mine, Glendale, Arizona.
Ray F. Stauffer, Merchant, Glendale, Arizona.



Automobile Party. Pile of Tailings to the right.

PROSPECTUS of the GLENDALE MINING AND MILLING COMPANY OF ARIZONA

DIRECTORS

WILLIAM G. LELAND, c/o Hotel Imperial, New York, N. Y.
GEORGE E. FLINT, Meriden, Conn. JAMES H. FROST, Troy, N. Y.
RICHARD KNIGHT, Middletown, N. Y.
CHARLES N. FOSTER, Meriden, Conn. PETER K. CLARK, Trenton, N. J.
C. THURMAN LELAND, Schroon Lake, N. Y.

OFFICIALS

WILLIAM C. LELAND, President. JAMES H. FROST, Vice-President.
SCHUYLER S. MOORE, Secretary, 68 Broad Street, New York, N. Y.
RICHARD KNIGHT, Treasurer.
CHARLES S. DALEY, Attorney, 45 Broadway, New York, N. Y.
Fiscal Agent, SCHUYLER S. MOORE, 68 Broad Street, New York, N. Y.
Room 130. Telephone, 4499-Broad.

CAPITALIZATION.

1,000,000 Shares of \$1.00 each, par value.....	\$1,000,000
Full Paid and Non-Assessable.	
Authorized Bond Issue.....	250,000
These are first mortgage bonds maturing June 15th, 1936, with 6% Cumulative interest payable from the net earnings of the Company.	
Stock allowed for the Relief Mine, approxi- mately	280,000 Shares
Bonds issued for the Relief Mine, approxi- mately	\$86,000
Stock reserved for the purchase of the Ad- vance Company's property.....	150,000 Shares
Stock in the Treasury for a working capital, approximately	570,000 Shares
Bonds in the Treasury unissued, approxi- mately	\$164,000

The original purchasers of treasury stock have the privilege of exchanging their stock certificates for first mortgage bonds carrying 6% interest, payable out of the earnings of the company, for amount of money invested, any time within eighteen months from date of purchase of certificates.

This method of financing the Company safeguards the investment and gives the investor all the stock speculative possibilities

The Glendale Mining and Milling Company issues this prospectus of its properties and plans for the purpose of interesting you in an opportunity to make a safe and profitable investment. The company is the sole owner of a rich mine, the Relief, and is about to absorb the Advance Company's property of as yet unestimated wealth. These properties and franchises will be combined by the Glendale Company with the Relief Mine and will be operated as one great enterprise under intelligent and economic management. *Development has made the Relief mine one of the most promising gold properties in Arizona*, and development, we believe, will make the other properties equally valuable, possibly more so.

The Relief mine is a gold mine. The Advance Mining Company's property consists not only in gold claims, but also copper claims, and water and irrigation rights all in Arizona, a place where both copper, gold and water have created enormous wealth. The facts which this prospectus will bring out and make clear to you about these properties are based on actual conditions which can be seen and felt and computed.

The "Tom Reed Gold Mine" is producing from \$125,000 to \$150,000 in gold bullion monthly. A few years ago their stock had no market value and the company was forced to reorganize to get money to develop the property, now no stockholder cares to sell his stock at any price.

The Magma Copper Company's stock advanced from \$17.00 to \$52.00 a share in four days and is now worth about \$58.00 a share. The par value is \$5.

Ex-Senator Clark is supposed to own ninety per cent., more or less, of United Verde stock. It was valued at about seventy-five cents a share when he first bought it and is now probably worth \$300.00 or more a share. These are Arizona mines.

Remember the speculative possibilities of mining stock.

There is no promotion stock or bonds in this organization. Every drop of water has been squeezed out. Valuing the stock at the price it is now being offered for subscription, the amount of stock and bonds allowed for the Relief properties is substantially the same as the amount of cash actually expended for development, equipment and operation purposes; while the amount of stock to be allowed for the Advance properties—on the same basis—is considerably less than the amount of money actually expended for development and improvement of their properties.

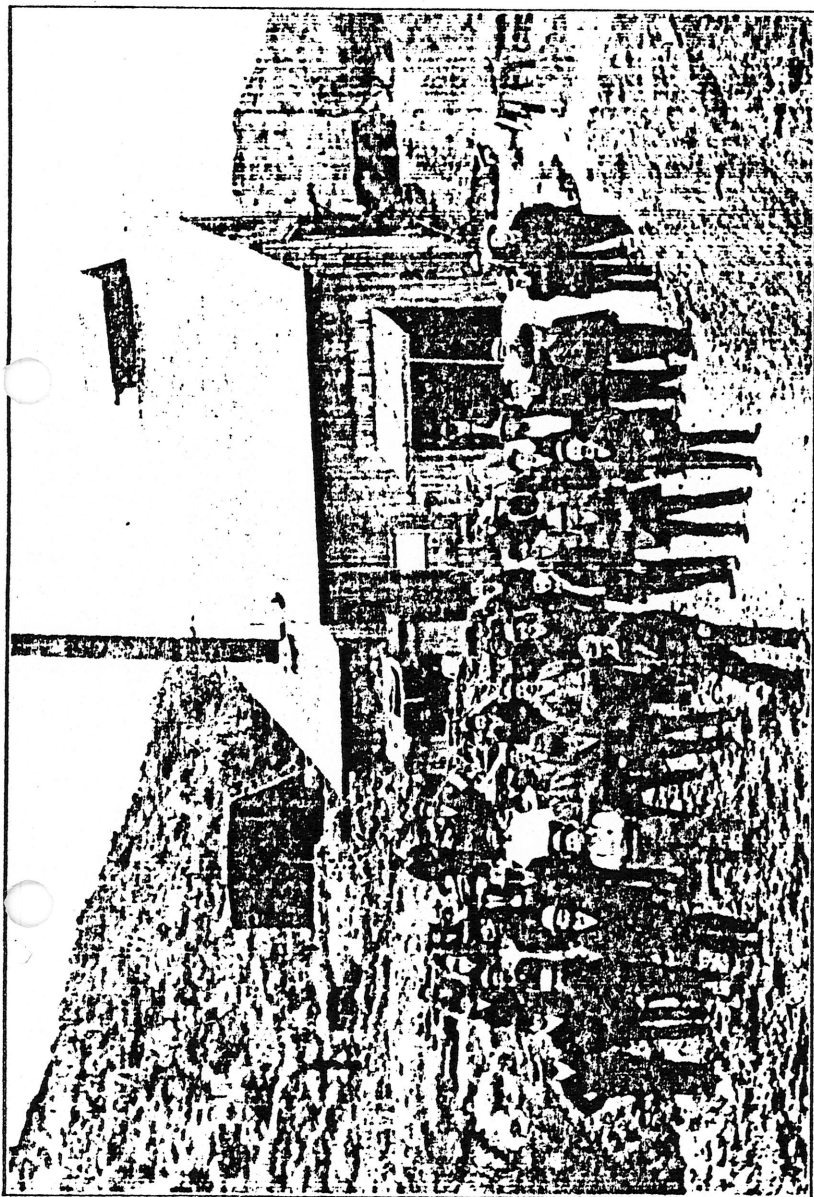
The directors of the company have agreed that no salaries

shall be paid, and have arranged that expenditures, including caretaker at the Relief Mine, office expenses, etc., shall be limited to \$100.00 per month, until there is enough money in the treasury to justify going ahead with liberal and intelligent development and equipment of the Relief Mine.

The directors propose to exploit the ore bodies at greater depth, get under the ore shoots in the 400 foot level; create a large ore reserve, and increase the water supply as greater depth in the mine is acquired, harness the electric power and increase the milling and cyanide capacity. *The mine is worthy of it!*

Gold mining is to-day a business. Reckless waste, haphazard management and greedy haste have given place to economy, efficiency and clean sweep. This is due partly to the applying of scientific processes, such as amalgamating and cyaniding. These produce the maximum of gold at the minimum of cost and have saved and earned millions of dollars for modern mine owners that the early gold kings let go to waste. The scientific mining methods of 1916 have lessened enormously the cost of mining business. They, however, do not represent all the causes that have increased the investor's profits and reduced his risks from the mining of gold. One very important source of economy is the location of the mine. If you own a factory on the main line of a great railway system, your shipping costs are at once lowered and your dividends are proportionately greater—so with a mine. Many promising properties are unprofitable only because they are hidden in high mountains or deep canyons and are far from railroad lines. The Relief mine overlooks the Santa Fe Railroad, and one of the most perfect automobile roads in Arizona runs to its main shaft. Another safeguard is the integrity and character of the management. This is of as great importance in the success of a mining investment as the richness and purity of the ore, which is of vital value to the share holders. We ask you to bear this particularly in mind.

Arizona is a rich state even as the wealth of this country is estimated to-day in hundreds of billions of dollars. A great volume of this wealth is mineral and its extent no man knows. You have only to think of the enormous wealth which the un-failing resources of the United Verde Mine has given to one man to understand why Arizona is the richest copper producing state in the world. The wealth of the United Verde mine was for many years at the disposal of the public, but one man alone had the wisdom to take advantage of it and Senator Clark to-day is probably one of the richest men in the world. The Copper Company is not a trust, that picture painted by the



Members of Phoenix, Arizona, Board of Trade. Showing the Mill and Steel Water Tank in background. Cyanide Plant, installed since this picture was made, is on the grade about where this group stood.

Both these famous mines are in Arizona and in 1914 the state produced one-third of all the copper mined in the United States. In the United States Geological Survey figures, Arizona delivered to the world 393,017,400 pounds of pure copper. When we think of gold we picture California, yet in 1914 Arizona produced 202,166.62 "fine" ounces of pure gold, valued at \$4,179,155. In 1880 the Arizona gold output was 10,000 ounces. In thirty odd years the output has increased over 2000% and modern economic gold mining methods are just beginning to be used in the state.

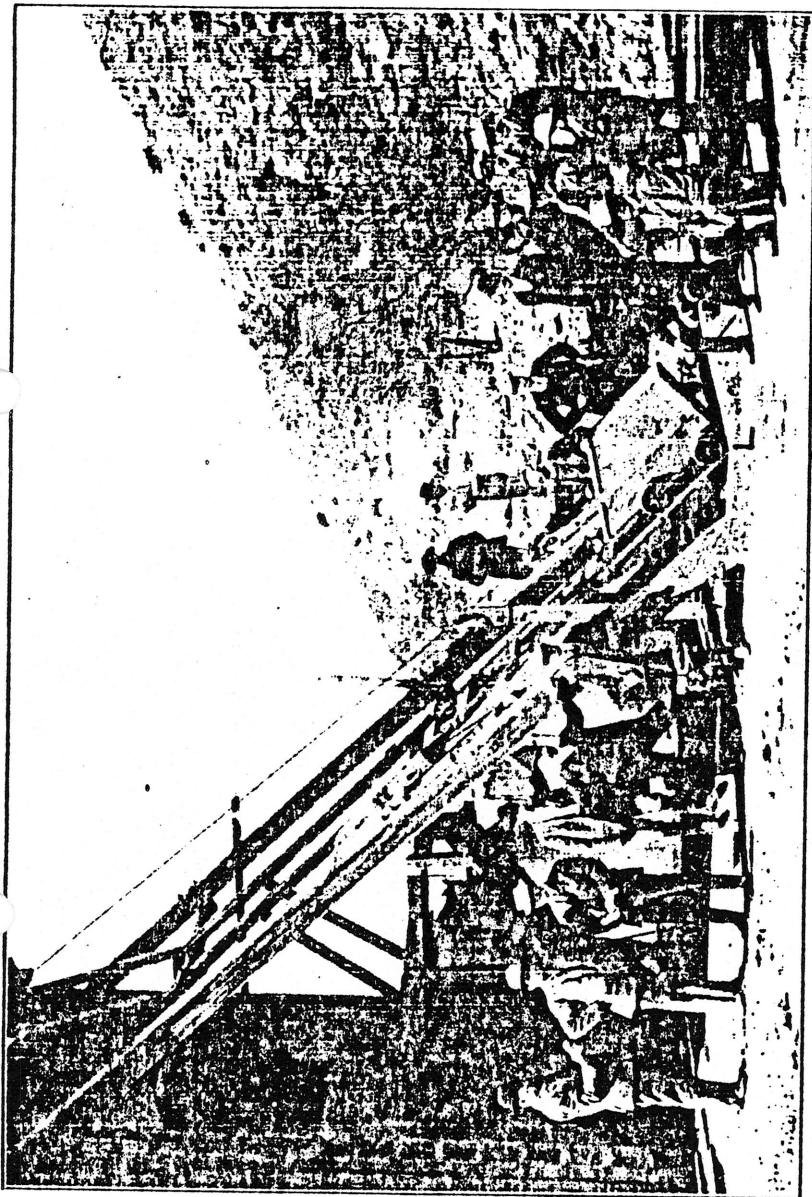
The location of the Relief Mine is extraordinary. It is practically at the very door of the City of Phoenix, and the Advance properties are well situated for economical mining and development.

The Relief Mine is situated in the foothills of the Bradshaw Mountains, in the Agua Fria (Cold Water) district, Maricopa County, Arizona. It is about twenty-two miles northwest of Phoenix, the capital city of Arizona, thirteen miles from Glendale and seven miles from Marinette. Altitude 1400 feet—about 300 feet higher than Phoenix, and 200 feet higher than Marinette. The latter is the nearest railroad station.

The Prescott and Phoenix division of the Santa Fe Railroad system passes through both Glendale and Marinette. A fine wagon and automobile road runs through Glendale from Phoenix to the mine. The road across the desert from Marinette—seven miles—is an easy grade, no hills to climb, bridges to build, or fords to cross. It can be quickly and inexpensively made a first-class freight road when needed.

The accessibility to railroad facilities, markets for mine, mill and domestic supplies; located in a climate that knows no snow, frost but seldom, where the water pipes lie on top of the ground without danger of freezing, makes the Relief mine an exceptional mine for *economical mining and reduction of ore, especially for cyanide treatment*. The plant need not be housed except for protection from the sun, as there is no danger of bursting pipes or freezing tanks.

So much for the location as to shipping facilities, market supplies and economics of this important kind. Another essential feature, power for operating, remains to be thought of. It is here that nature was most completely in league with good fortune. As has been pointed out, the cost of doing business in mining is as serious a problem (in a well conducted mining enterprise) as in any other honestly managed business; and a vital factor is the power for running the machinery of the mine.



View of the Mill, showing Skip coming out of the working shaft.

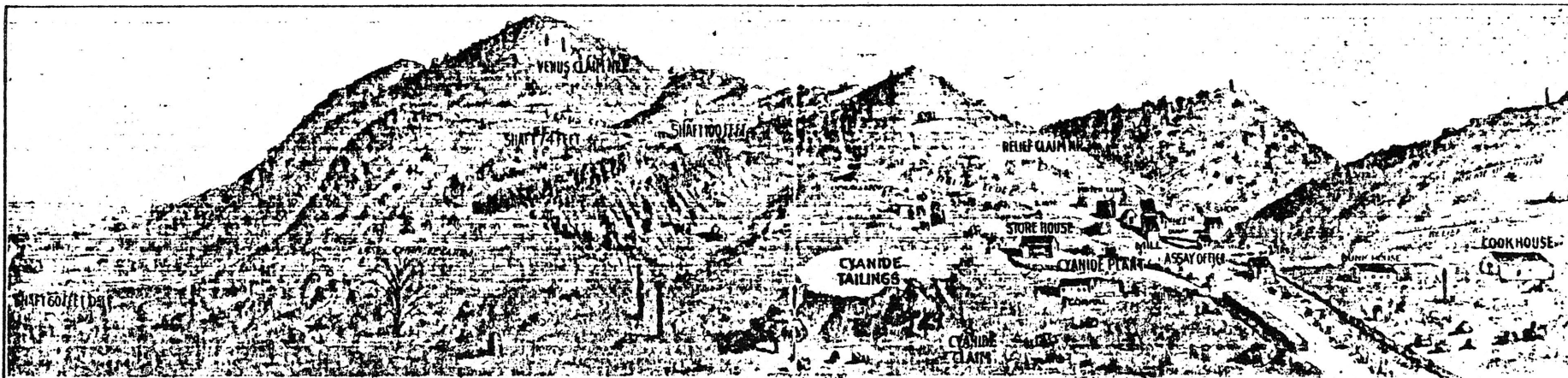
The ghost of this cost haunts the office of many a mining manager in these days of rising coal prices, and the mine owners whose machinery is harnessed to water power are among the fortunate ones of earth.

Both the Relief mine and the Advance properties are unusually well provided in this respect. The latter have the means to generate their own water power and enough left over to sell at a profit as we shall show you a little further on; while the Relief mine may be operated by the inexhaustible power stored up by the Grand Roosevelt Dam. You know already the story of that wonder working water storage system that has increased the wealth of Arizona by millions of dollars in irrigation and power and especially of that particular section. The electric transmission cables from that huge lofty artificial lake deliver unfailingly summer and winter a minimum of 125 horse power at the astonishingly low price of $1\frac{1}{2}$ cent, perhaps less, a kilowatt, and furnishes the cheapest and most serviceable means of operating that mining management can ask. The transmission cables now deliver power to Marinette only seven miles away.

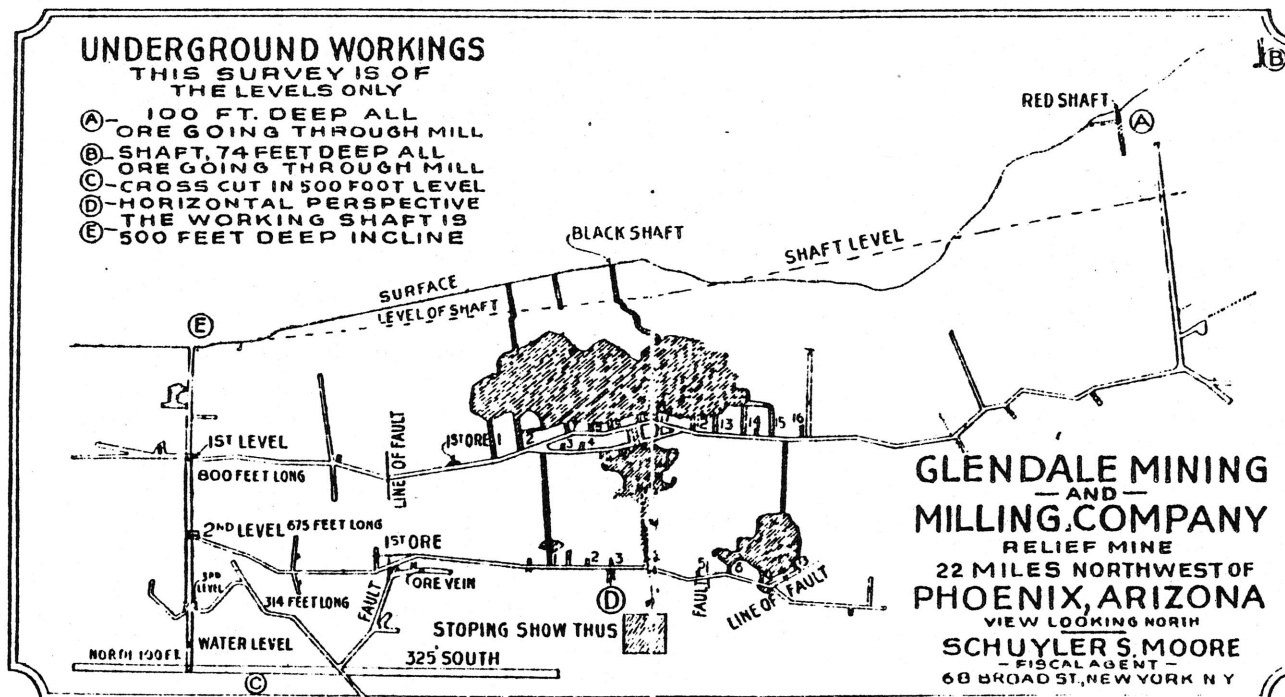
The Relief mine consists of nine claims, eight of which are full size, 1500x600 feet, and one claim 1500x163 feet—about 160 acres. Three claims, the Relief, Venus and Relief No. 2, where mining has been done, are patented; the remaining six claims are owned by right of discovery and are held in accordance with the United States mining laws, by doing the discovery work and the annual work on the claims.

The Relief mine has a story, like many of the great producing mines, that shines bright with the faith and endurance of men who saw its limitless possibilities and endured hardships and want in the strength of their belief. The name of George Hamlin of Phoenix is well known among mining men, and he has stuck by the Relief mine and seen his confidence bear the fruit of success. Working with one assistant, Hamlin sank an incline shaft 200 feet deep with nothing but a home-made bucket and windless to hoist out the muck, *because he knew the wealth was there to be dug out*. Such faith bears its reward, and Hamlin will reap where he sowed just as Senator Clark became one of the world's finance kings, *because he had faith in a mine that others did not have the vision to appreciate*, and the United Verde is the monument to his foresightedness and wisdom.

The Relief mine is there on the low Arizona foothills, rich, full of golden promise. It has already produced wealth. About four thousand five hundred feet of development work has been done. The work consists of shafts, drifts, upraises, air levels,



RELIEF MINE.



Underground Workings.

cross cuts and winzes, including an incline working shaft five hundred feet deep, the latter being the greatest depth attained on the property. The drifts in the 200, 300 and 400-foot levels are 800, 675 and 314 feet long respectively, running west from the working shaft; but little drifting has been done east of the shaft.

Most of the work in the 400 foot level was done in exploiting a fault,—the last sixty feet is in ore. By running this drift forty feet further it will be under the ore shoot where ore has been taken out in the upper levels.

Cross cutting only has been done at the bottom of the shaft, in the 500 foot level; the cut to the north is 100 feet long, and to the south 325 feet long. This work was done to create a reservoir for the storage of water. In the south cut fourteen foot ledge of quartz ore was cut through, but because of the difficulty in handling the flow of water it was not drifted on and developed. Assays have shown the character and average gold value of this ore to be about the same as in the upper levels.

The strike or direction of the vein is nearly east and west, with an average dip of about forty-five degrees north into the hill. The ledge has been traced about a mile on the surface, and the ore taken from various shafts, crosscuts and other surface openings is of the same general character and average value. The width of the vein varies, in some places it is fully twenty feet wide.

In the stopes above the 300 foot level, where some twelve thousand tons of ore have been knocked down, taken out and milled, the pay ore was from four feet to nine feet wide, the ore all going through the mill, the average width of the stopes where the ore was taken out is approximately five feet, a large average width for the depth so far attained in the mine.

A shaft now sixty feet deep, located some two thousand feet west of working shaft, has five and a half feet of ore in the bottom; the last assay of a large sample taken across the vein showed values of \$6.25 per ton. Various assays from this shaft, as sinking progressed, showed average gold values of from \$6.00 to \$10.00 per ton.

The vein has been pronounced by geologists and professional mining men to be a fissure vein,—indicating great depth. The formation is granite with enclosures of syenite, or mica schists as it is sometimes classified.

The vein matter consists of quartzose gangue or filling and portions of the wall rock. **FREE GOLD OCCURS IN THE QUARTZ GRANITE AND SYENITE ROCK.**

The syenite forms with some irregularity the foot-wall and portions of it compose a considerable portion of the vein. The quartz hugs this footwall and the adjacent portions are broken with the quartz when taking out ore, and furnish some rich ore and handsome specimens.

The granite ore lies above and parallel with the quartz ledge. It shows slight alterations in texture and is *full of minute cracks on the face of which gold appears in little flakes.* Gold is also found disseminated throughout the rock itself, often forming specimens of rare beauty.

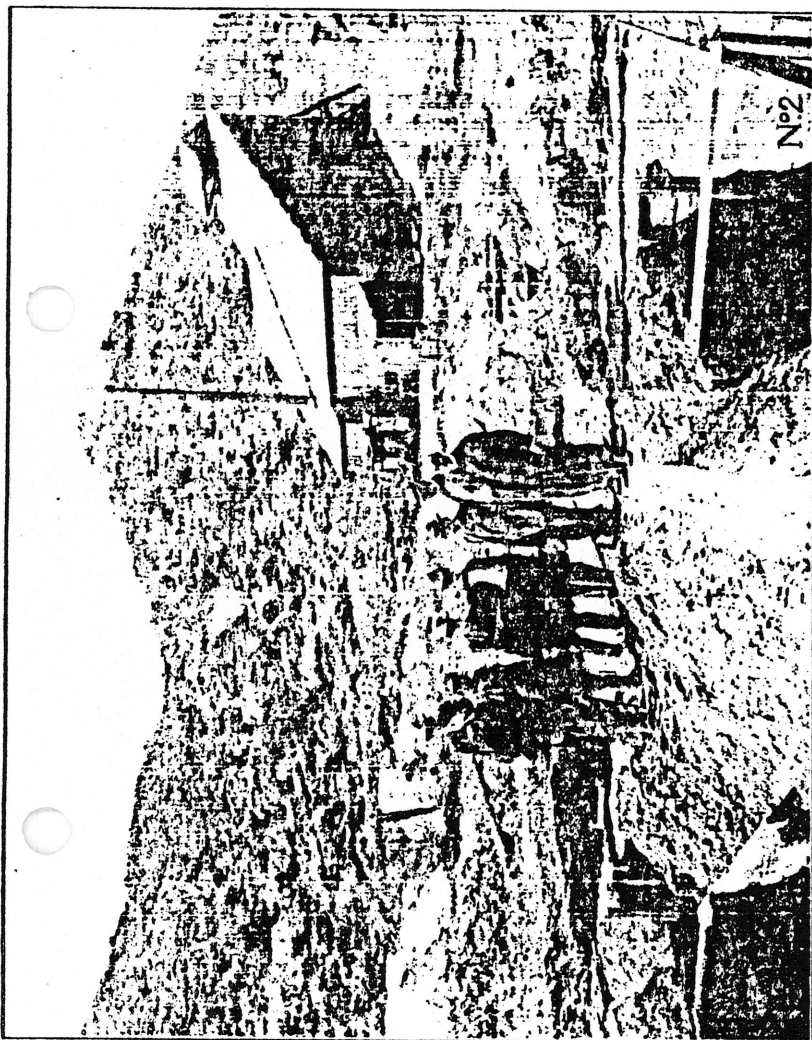
The ore shoots are large, the one where the most stopping—taking out ore—has been done being two hundred feet long. *The size of the shoots or ore chimneys is promising for the future of the mine.* The gold is absolutely free, most of it fine, but some coarse is found in the granite ore. There are no indications of sulphides in the mine, and except for a low percentage of iron oxides, a negligible appearance of silver, and 1/10 of one per cent. of copper carbonates, there is only gold in the mine. The bullion is of rare purity, and the ore is an ideal ore for cyanide treatment. The deposit has been classified as an *unusually strong vein*, mineralized by hot solution of magmatic waters. The type is not uncommon and is considered *one of the most promising for producing large and continuous amounts of diffused ore.*

Approximately twelve thousand tons of ore have been stopped or mined out in the two and three hundred foot levels, and treated on the property.

The granite and syenite ore is often very rich, sometimes running as high as \$100.00 or more a ton. The average value, however, of the twelve thousand tons treated was \$6.60 per ton, and the recovery in bullion was \$72,000, about 90% of the total average value. The last one hundred tons of granite and syenite ore run through the mill averaged \$12.00 per ton in gold.

About three-quarters of the ore mined and treated was by simple amalgamation, cyaniding the tailings, and the remainder by straight cyanidation.

The experience gained through straight cyaniding this ore clearly demonstrates that with the mine properly developed, equipped with a crushing mill and cyanide plant of one hundred, or more, tons daily capacity, with electricity for power, etc., \$4.00 ore would keep the ore reserve developed ahead and yield the company handsome profits. Compare the average of \$6.60 per ton with ore of the great Homestake mine of South Dakota and the famous Treadwell mine of Alaska, whose average is \$3.60 and \$2.80 respectively.



Phoenix people inspecting Tailing Pit below the Mill.

The great producing mines in Arizona are *deep mines*. It is there that the ore usually lies in its maximum of richness and volume. So far the Relief mine has been put down to a depth of 500 feet on the incline.

The ore now open and partially open in the mine is estimated at from forty to fifty thousand tons of \$6.00 ore above the four hundred foot level. This estimate is conservative. To open this tonnage it is necessary to continue the drift in the four hundred foot level further under the ore and complete some drifting and dead work in the upper levels.

The reservoir developed at the bottom of the working shaft when completely open has a storing capacity of about 100,000 gallons. The daily flow of water is approximately seven thousand gallons. This water is excellent for milling, cyaniding and domestic purposes, and an abundance can be developed as sinking to open the ore bodies at greater depth progresses.

Surface improvements:

Consist of dining-room, cook house, bunk house, company office, store-house, etc. A small expenditure of money will enlarge and improve these buildings so as to make them commodious and comfortable for a large force of employees.

Equipment:

The equipment consists of One station pump—One sinking pump (both of 40 gallons per minute capacity)—One 12 h.p. Fairbanks and Morris hoist and house—One $\frac{1}{4}$ inch iron water tank of 25,000 gallons capacity, with pipes carrying water to mill—cyanide plant and all the buildings—Blacksmith and machine shop with tools—Assay office with outfit, including smelting furnace, etc.—Crushing building and machinery, including fifty h.p. boiler, thirty h.p. engine, 8x10 inch Blake rock breaker, set Allis 14x26 inch rolls, set Joplin 14x24 inch rolls, conveyers, elevators, revolving screens, belting, shafting, pulleys, etc.

Substituting a fifty h.p. engine for the one now installed, together with minor alterations and mill improvements, this plant will have a dry crushing capacity of fifty tons every nine hours. A good first unit crushing capacity, and calls for the outlay of but little money.

Cyanide Plant:

This plant is new and up to date, of fifty tons daily capacity. It consists of four iron tanks 5x18 feet—two iron tanks 4x22 feet—one iron standardizing tank 8x10 feet—one iron

distributing tank 3x9 feet—two iron sump tanks 6x8 feet—twenty iron zinc barrels 18x24 inches complete with centrifugal pump, gasoline engine, piping, tank bottoms, etc.

This completes the description of the physical and operative condition of the Relief mine which is already advanced in operation, and needs only the wise expenditure of comparatively little money to increase its output and in far greater proportion, its wealth-production. We now want you to become as well acquainted with the outlook that the *Advance Mining properties* offer. These are part and parcel of the Glendale Company's holdings, and ownership in the Relief mine embraces equal ownership in the 26 claims of the Advance Company's charter.

The Advance Mining Company's properties, about to be sorbed by the Glendale Mining & Milling Company, are located in the Clark and Black Rock districts, Graham County, Arizona. They consist of eighteen gold claims in the former, eight copper claims and reservoir and irrigation canal franchises in the latter district. *The claims in both districts are promising, and the power and water franchises are of great possible value.*

Camp Aura:

Is in the Clark District, twenty-seven miles southwest of Fort Thomas, a station on the Gila Valley, Globe and Northern R. R. and fifty miles Northwest of Willcox on the S. P. R. R.

Property:

The Advance Company holds eighteen promising claims in this district by virtue of discovery work, etc. With one exception they are full size 1500x600 feet—about 370 acres of land.

Formation:

The prevailing rock is felspathic granite, cut at intervals by a series of altered porphyry dikes. Numerous quartz veins cross the formation, the croppings in many places being easily followed.

Veins:

The walls are felspathic and are well defined. The veins are from three to ten feet wide. The gangue filling matter is quartz and porphyry. The quartz lode varies from 2½ to 5 feet wide. The ore is generally friable and easily crushed.

Development:

Upwards of 1500 feet of work has been done on these claims distributed in shafts, tunnels and cross cuts, including one shaft 200 feet deep and one tunnel 300 feet long.

Values:

Many assays have been made from the different workings on this property, including one shipment of 1,593 pounds of ore to a smelter for treatment. The ore shipped averaged \$25.96 per ton.

Leaving out the high assays as follows: \$43.57, \$48.00, \$50.30, \$64.00 and \$100.00, which do not show the average values, and taking those which were made from five pounds or more, ore taken systematically across the veins, we find the values run from \$5.00 to \$25.00, giving a general average value of \$12.32 per ton. We believe the ore on these claims will average from \$10.00 to \$12.00 per ton in gold and silver as it is mined, besides the copper which is prominent in some of the claims.

Experiments show that through amalgamation and concentration from 85 to 90 per cent. of the values can be saved, concentrating the sulphides and recovering the free gold and silver on the plates.

Water:

There is an abundance of artesian water in this district, which can be pumped into storage tanks at small expense.

Power:

Wood from \$3.00 to \$4.00 a cord will be obtainable for several years; and eventually electricity from the Black Rock district should be obtainable at a low figure.

The distance from one camp to the other is twenty-two miles by wagon road, and eighteen miles by trail.

Advance Camp—Black Rock District:

This camp is sixteen miles southwest of Fort Thomas.

The Company holds eight copper mining claims, 1500x600 feet each in this district, by right of discovery, etc., about one hundred and sixty acres of land, and through reservoir and irrigation canal franchises controls the water rights of from 30,000 to 40,000 acres of rich and fertile farming land.

Formation:

A series of eruption drifts crossed by mountain ranges occur in this district. The substratum is granite, intermediate slate, clay composition, capped by conglomerate rocks, porphyritic in character. The conglomerate formation covering these claims is completely impregnated with small veins and feeders of high grade copper carbonates carrying good values.

in gold and silver, while in some instances large bunches of high grade copper glance have been encountered which show high values in gold, silver and copper.

Property:

The property consists of eight claims held by virtue of discovery work, etc. They are adjacent, most of them contiguous. It is believed they cover a copper zone.

Development work on this group indicates that there is a *large deposit* of low grade copper ore lying on the contact between the slate and conglomerate formation, indicating that when the water level and granite contact have been reached, a large body of sulphides will be found.

Values:

The feeders, stringers and bunches of copper glance show high values, anywhere from \$10 to \$200 per ton, in gold, silver and copper. With depth we believe a copper mine will be found.

These briefly are the mineral and mining rights of the Advance property. Promising as they are, their wealth possibilities are but a fraction of the actual value of the development as a whole. In addition to them are the water rights and these are inestimable. *The storage basin is waiting to be flooded. The site is ready made by nature for a dam that should cost not more than \$100,000.* Engineers have estimated the cost at \$60,000, and below our rights extend thousands of acres to be irrigated into one of the richest agricultural sections of the New Southwest. So important is this feature of our possessions, that Deputy United States Surveyor Philip Contzen spent several weeks in surveying and analyzing this project. We quote the following from his report:

"The reclamation of the land by the waters from the Black Rock Power and Irrigation Reservoir will create wealth and many homes for settlers.

"The water power which can be transmitted by electricity some distance will be a great benefaction to the mining industry of Graham County. Taking both water power and reclamation from 30,000 to 40,000 acres of land by the construction of a 190 foot dam, pipe line, and some lower reservoirs, which are to receive the waters from the main reservoir, it is readily seen that it is a good legitimate proposition, and undoubtedly will be profitable to the investors of this enterprise."

Summing up the report we have made you on these two great properties, the Relief and the Advance, the problem is a very simple one:

The Relief Mine is already a proven mine of tested richness. The Advance offers a wide and varied opportunity, with water rights whose development at very limited cost will pay a high profit on the investment.

Deeper development, increased and new milling facilities, the addition of electrical power at low cost, represent the immediate needs of these properties. As in all businesses, money must be spent to bring money back. The history of this country's wealth proves that no more profitable means can be found to increase and insure an income than to enlist money in a *mining opportunity that combines the safety of a conservative investment—The Relief Mine—with the enormous profit chances of a high grade speculative proposition—the Advance properties.*

Schuyler S. Moore is transfer and fiscal agent of the Glendale Company. Mr. Moore is a substantial stockholder and has been in personal touch with both the Relief and Advance properties since those companies were organized. He knows the properties better than any one else, and is competent to answer all inquiries in detail.

GLENDALE MINING & MILLING COMPANY.

Signed, WM. G. LELAND, President.

Address all communications to

SCHUYLER S. MOORE, Fiscal Agent,

68 Broad Street, New York, N. Y.

Telephone, Broad—4499.

New York, December 1, 1916.

20. CAVE CREEK DISTRICT

Location: East flank of the New River Mountains, north of Paradise Valley, Tps. 6 and 7 N., R. 4 E., Lower Cave Creek, south of Cactus, T. 3 N., R. 3 E.

Topographic maps: All 7½-minute quadrangles—Cave Creek, New River Mesa, Sunnyslope.

Geologic map: Wilson, Moore, and Peirce, 1957, Geologic map of Maricopa County, scale 1:375,000.

Access: From Phoenix, 42 miles northeast on light-duty road to the town of Cave Creek.

Extent: Very little information other than production records has been found relating to the placers in the Cave Creek district. Cave Creek heads near Cramm Mountain in the New River Mountains (T. 7 N., R. 4 E., unsurveyed) and flows southwest to Deer Valley, north of Phoenix. The placers are probably located along Cave Creek in the vicinity of the Maricopa and Phoenix gold mines (secs. 8 and 9, T. 6 N., R. 4 E., New River Mesa quadrangle). The only description of the placers I have found is that written by McConnell (1911), who describes a new placer discovery made in 1910. The ground, which was not located except for the district, contains gold-bearing gravels underlying soil and cemented gravels. The placers are found from 1 to 16 feet deep between the cement layer and bedrock; tests indicate that the ground values average 85 cents to \$5.10 per cubic yard.

Other placers are apparently found in the Winifred district on Cave Creek about 12 miles south of the Cave Creek district. U.S. Bureau of Land Management survey plats locate placer claims in sec. 22, T. 3 N., R. 3 E. (Sunnyslope quadrangle).

Production history: The earliest record of placer production from the Cave Creek district is for 1888; placers may have been worked before that time. Small amounts of placer gold were recovered by transitory miners between 1908 and 1915, and 1934 and 1941. From 1939 to 1941, the small production of the Cave Creek district was combined with production from the Camp Creek district in the record.

The Winifred district produced a small amount of placer gold in 1932 (amount was not given).

Source: The paucity of information about the Cave Creek district precludes definite conclusions regarding the origin of the placer gold. The Maricopa and Phoenix gold mines, the largest lode-gold mines in the area, are in quartz veins in altered Precambrian schist. These deposits, and possibly other small gold veins, could have been the source of the placers in the Cave Creek district.

The small production of placer gold from the Winifred district

may have been derived from the veins found at the Avelina, Divi&e, Corona, and La Fe lode claims.

Literature:

McConnell, 1911: Placer ground discovered; thickness and depth of placer gravels; average gold value per cubic yard.

Trippel, 1889: Production statistics for 1888.

Wilson, Cunningham, and Butler, 1934: Describes lode mines and general geology.

OTHER DISTRICTS

21. AQUA FRIA DISTRICT

Placer gold was recovered from Moores Gulch (T. 8 N., Rs. 2 and 3 E.), a tributary to the Aqua Fria River, north of Lake Pleasant. Placer gold was recovered from other areas along the river, but no descriptions of any deposits have been found.

22. DADS CREEK

Placer gold was recovered in 1935 and reported to the U.S. Bureau of Mines. The location of this creek is unknown.

Literature:

U.S. Bureau of Mines, 1935: Gives placer production.

23. EAGLE TAIL MOUNTAINS

In 1912 a small amount of placer gold was recovered from deposits in the Santa Rosa group of claims during assessment work. The Eagle Tail Mountains are in western Maricopa County and extend westward into Yuma County (Tps. 1 and 2 N., Rs. 10 and 11 W.). I have not found the location of the Santa Rosa group.

Literature:

U.S. Geological Survey, 1912: Reports placer production.

24. NEW RIVER DISTRICT

Placer gold was recovered from this district in 1933. The district is on the south slope of the New River Mountains (Tps. 6 and 7 N., Rs. 2 and 3 E.) but probably also includes minor deposits located in the low hills south of the New River Mountains and north of Deer Valley. The Relief mine (secs. 3 and 4, T. 4 N., R. 1 E.), north of Peoria and west of the New River, was known as a placer before 1917, but only the lode-gold production record was found. The location of the placer deposit worked in 1933 is unknown.

Literature:

Elsing and Heineman, 1936: Gives lode-gold production.

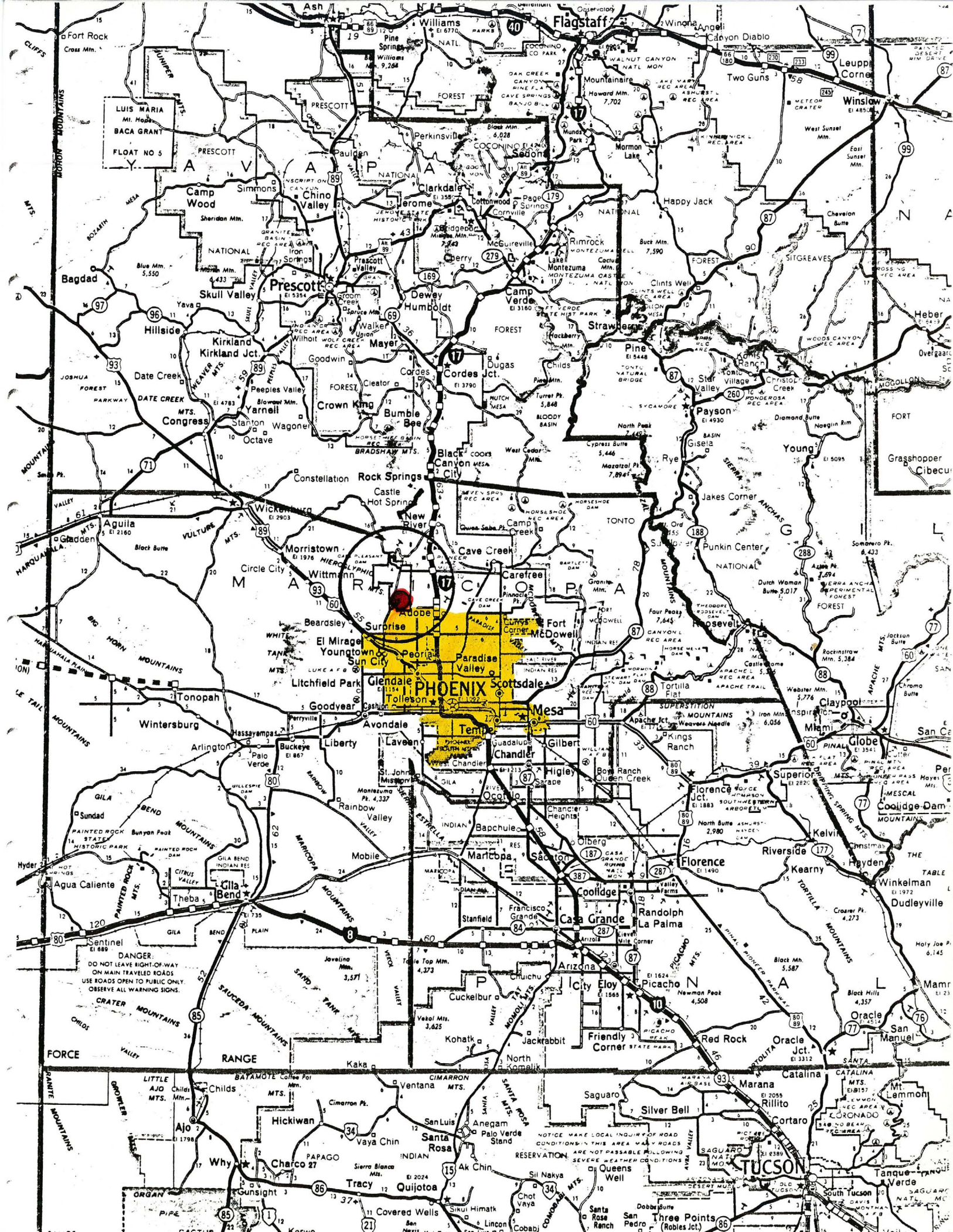
Schrader, Stone, and Sanford, 1917: Notes placer occurrence at Relief mine.

Sun

Surprise Relief Mine
Maricopa County, Az

THE
SUNRISE RELIEF
GOLD MINE
PROPERTY

MINERAL STUDIES SUPPLEMENT



The Sunrise Relief Gold Mine Property, Maricopa County, Arizona, is approximately 45 minutes by car from downtown Phoenix. The property has been operated on several occasions beginning in the late 1800s with two major efforts yielding the bulk of the gold recovered.

The first of those two major operations, the "Relief Gold Mining Company" began around the year 1900 and ended in about 1912. The second, "Sunrise Relief Mines, Inc." began in 1929 and ceased in about 1933 when the ore became unmarketable at the then-current price of gold at \$22 per ounce. The property has not been in operation since that time.

Purchased in 1970 as a real estate investment, the present owners, prompted by the recent upsurge in gold prices, have only in the past year begun to consider the mineral potential , hence this compilation of data.



New River Cutoff--3 mi
Lake Pleasant--3 mi

Lake Pleasant Rd.

Goldmar-White
Planned Community

Deer Valley Airport

Sperry Rand

George Boutel

Glenarm

Singer

Singer

Designmaster

Secluded Acres

Avco

Bell Air

Wood Bros.

Knoell

DBJ Dev.

Turf Paradise

SUN CITY

Honeywell

Glendale C.C.

Metro Center

U.S. MINT SERVICE, FORM NO. 42 A.

MEMORANDUM OF GOLD DEPOSITED AT THE U. S. MINT

W E I G H T		Finess	Gold Value	Silver Value	Charges	Net Value
Before Melting	After Melting					
Ounces	Ounces					
25.24	23.10	.755	361.00	1.23	1.96	360.27
44.70	44.67	.991 ²	832.45	1.69	2.87	831.27
62.74	62.30	.911	1173.23	1.14	3.60	1170.77
42.92	42.85	.889	787.46	.39	2.79	785.06
35.80	35.71	.871 ²	643.33	.06	2.49	640.90
77.60	77.45	.931	1490.55		4.25	1486.30
94.75	94.71	.969 ²	1898.10	.04	4.98	1893.16
31.53	31.50	.949 ²	618.27	.07	2.32	616.02
56.78	56.75	.989	1160.20		3.38	1156.82
64.14	64.08	.967	1280.93		3.69	1277.24
42.00	41.97	.985	854.57		2.76	851.81
68.55	68.52	.985	1396.60		3.88	1392.72
35.23	35.70	.992 ¹	732.26		1.07	731.19
50.10	50.07	.994 ¹	1029.34		1.11	1028.23
50.80	50.75	.989	1037.54		3.13	1034.41
73.13	73.10	.993	1500.52		1.15	1499.37
63.92	63.89	.994 ³	1313.79		1.13	1312.66
38.38	38.35	.995 ²	789.19		1.08	788.11
47.22	47.19	.996	971.59		1.10	970.49
40.34	40.31	.992 ¹	826.81		1.08	825.73
43.97	43.94	.978 ¹	888.78		2.85	885.93
46.35	46.32	.988	946.03		2.94	943.09
51.83	51.80	.985 ²	1055.27		3.17	1052.10
22.72	22.67	.912	427.39		1.95	425.44
29.00	28.97	.951 ²	569.80		2.22	567.58
43.57	43.54	.960	864.04		2.82	861.22
31.10	31.07	.976	626.85		2.30	624.55
28.74	28.73	.985	584.99		1.20	583.79
34.17	34.15	.979 ¹	691.47		1.24	690.23
26.44	26.42	.985 ¹	538.23		1.18	537.05
32.13	32.11	.920	610.67	.10	2.34	608.43
51.27	51.24	.976 ¹	1034.33		1.36	1032.97
45.66	45.64	.986 ¹	930.96		1.32	929.64
35.74	35.71	.902 ¹	666.21	1.70	2.50	665.41
46.98	46.96	.982 ¹	953.76		1.32	952.44
56.32	56.28	.989 ¹	1151.19		1.39	1149.80
48.22	48.20	.988 ¹	984.92		1.34	983.58
41.80	41.79	.985	850.92		1.29	849.63
62.64	62.61	.959 ¹	1254.79		1.43	1253.36
54.21	54.17	.983	1100.76		1.38	1099.38
36.51	36.48	.985 ¹	728.07	.16	2.53	725.70
36.52	36.49	.966	728.65	.17	2.53	726.29
34.63	34.60	.971	694.49	.33	2.45	692.37
30.86	30.83	.968 ¹	617.23	.32	2.30	615.23
76.00	75.97	.978 ¹	1536.67	.66	4.21	1533.12
49.32	49.29	.983	1001.58	.31	3.08	998.81
40.63	40.60	.970	814.10	.09	2.70	811.49
50.23	50.20	.980	1016.97	.32	3.12	1014.17
37.91	37.85	.910	712.00	.31	2.59	709.72
52.88	52.85	.983 ¹	1074.47	.24	3.23	1071.42
54.13	54.10	.970 ¹	1085.34	.43	3.28	1082.49
50.33	50.30	.943	980.52	.57	3.12	977.97
74.15	74.12	.924 ¹	1416.50	.52	4.11	1412.91
94.51	94.42	.864	1686.38	.77	4.96	1682.19
70.33	70.30	.973	1413.99		1.49	1412.50
70.40	70.38	.985	1433.06		1.49	1431.57
61.14	61.11	.993	1254.41		1.28	1253.13

2795.18 oz.

\$55499.3
at old pr
of gold.

The Sunrise Relief Gold Mine Property consists of 220 acres of patented claims with 71 adjacent unpatented claims on Federal land totaling approximately 1150 acres.

In addition, an irregular parcel of State land adjacent to the South, totaling about 113 acres, is covered by a mineral prospecting permit now in process.

The following map is the official map of the property as recorded in 1980 with Maricopa County and the Bureau of Land Management.

Sec. 28

Sec. 27

Sec. 26

2	1	20	19	18	17
4	3	22	21	16	15
6	5	24	23	14	13

Sec. 33

Sec. 34

Sec. 35

26	25	12	11
28	27	10	9
30	29	8	7
32	31	6	5
34	33	4	3
36	35	2	1

Township
5 North,
Range
1 East

Township
4 North,
Range
1 East

Sec. 4

Sec. 3

Sec. 2

10	11	16	17
9	12	18	19
8	13	20	21
7	14	22	23
6	15	24	25
5	26	27	
	28	29	
		4	
		3	

Patented Claims:

Sunrise 1-6,8,
Pick Me Up, BLM
#4038, Deeds, 228/124.
Venus Relief, Relief No. 1&2,
BLM #1614, Deeds, 65/487.

Gold Rush Claims 1-29

Gold Rush Extension
Claims 1-36

Gold Rush Annex
Claims 1-6



1

2

3

The enclosed material covers all available data on the past operations as well as recent sampling efforts:

- I. Recent Studies: underground sampling - 1973;
preliminary tailings/dump sampling - 1980.
- II. Relief Gold Mining Company prospectus and survey report of 1908. Production estimated at approximately 2,500 ounces.
- III. Sunrise Relief Mines, Inc. workings and sampling, survey, and engineering reports, 1927 to 1929.
Production estimated at approximately 3,000 ounces.

Engineer Richard Mieritz has estimated, subject to a thorough sampling program as outlined in his enclosed letter of July 15, 1980, that the present ore body ranges from 50,000 to 100,000 tons, with gold averaging from .2 to .3 ounces per ton.