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

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Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED: 09/06/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: VULTURE

ALTERNATE NAMES:
- TALMAGE
- JANE ELMORE
- SHERIDAN
- ELMORE
- VAN BUREN
- ASTOR
- CONKLING
- HAMILTON
- CUSTER
- SHERMAN
- PIT GOLD
- VULTURE EXTENSION
- EAST VULTURE
- BLACK HAWK
- TEXHOMA
- COOK

MARICOPA COUNTY MILS NUMBER: 273

LOCATION: TOWNSHIP 6 N RANGE 6 W SECTION 36 QUARTER C
LATITUDE: N 33DEG 49MIN 14SEC LONGITUDE: W 112DEG 50MIN 20SEC
TOPO MAP NAME: VULTURE MOUNTAINS - 15 MIN

CURRENT STATUS: PAST PRODUCER

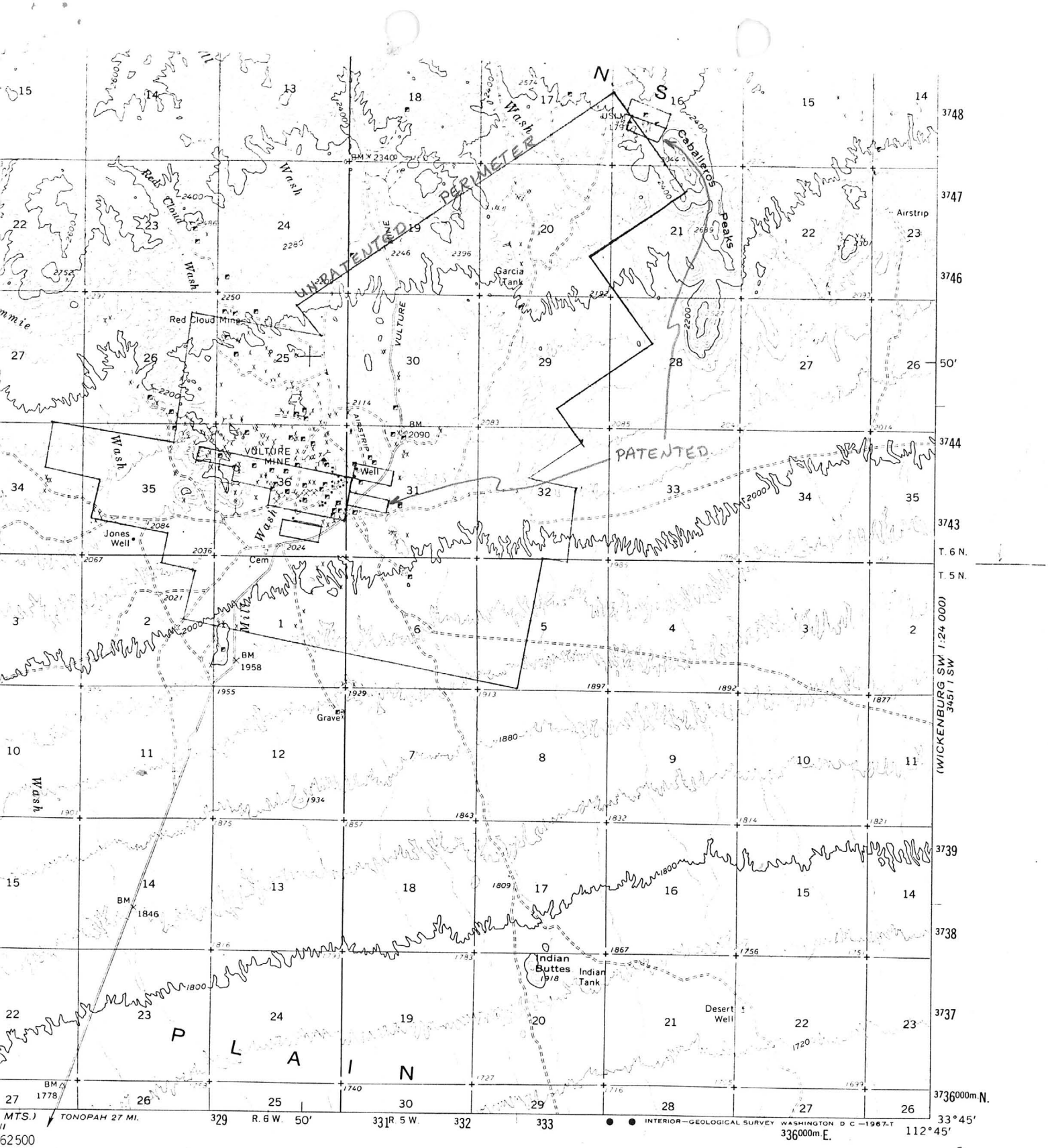
COMMODITY:
- GOLD LODE
- GOLD
- SILVER OXIDE
- LEAD SULFIDE
- IRON HEMA-MAGNE
- TUNGSTEN
- IRON SULFIDE
- COPPER SULFIDE
- ZINC SULFIDE
- LITHIUM

CONTINUED ON NEXT PAGE

CONTINUATION OF VULTURE

BIBLIOGRAPHY:

USGS VULTURE MTNS QUAD
ADMMR VULTURE MINE FILE
METZGER O H USB IC 6991 P 47
ADMMR INDUSTRIAL MINERALS PEPORT P 38
BLM MINING DISTRICT SHEET
TENNEY J HISTORY OF MINING IN ARIZONA
ELSING M & HEINEMAN R AZBM BULL 140 P 94
ADMMR "U" FILE
WILSON E, CUNNINGHAM J & BUTLER G AZBM BULL 137 P 157-162
HINTON R J 1000 OLD MINES P 78-79
USAEC FILE 172-484 P 410
GLAFF A L VANADIUM REPORT BOOK V PM1SC #4
MOORE R & ROSEVEARE G AZBM BULL 180 P 260
KOSCHMANN A & BERGENDAHL M USGS PP 610 P 40
ADD WORKING IN SEC 25,26,36 -T6N-R6W
ADDITIONAL WORKINGS SEC 30 & 31-T6N-R5W
ADMMR VULTURE MINE COLVO FILE



RVAL 40 FEET
NT 20-FOOT CONTOURS
N SEA LEVEL

L MAP ACCURACY STANDARDS
COLORADO 80225 OR WASHINGTON, D. C. 20242
ND SYMBOLS IS AVAILABLE ON REQUEST

VULTURE MOUNTAINS, ARIZ.

N3345—W11245/15

1961

AMS 3451 IV—SERIES V798

VULTURE MINE

RICOPA COUNTY

Maricopa MILS Index #273

USGS 15' Vulture Mtns Map

T6N R6W Sec. 36

REFERENCES

ABM Bull. 137, p. 157 Ironwood Mining Co. (4.6)
ABM Bull 160. p. 58
IC 6991, p. 9, 47-58, 63.

MIN. & SCI. PRESS, vol. 94, p. 308, 4½ clms. (NA) Not available in this office.

MINING STATISTICS WEST OF THE ROCKY MOUNTAINS, by R. W. Raymond, 1874, p. 394. (C. F. Willis library).

USGS PP 610, p. 40.
USGS Bull. 1355 p. 20, 21
Arizona Mining Journal Nov 1920 p. 41
April 1, 1921 p. 23

Outdoor Arizona, April, 1974, p. 23

Arizona Highways, June, 1974, p. 28

See confidential material in Engineers' confidential file

See: Smith Millsite (Mine File) Maricopa Co.

MAPS - Upstairs in Drawer 7 of the flat file - map of property - no underground

AZBM - Bull. #140, p. 94

ADMR - "U" files

AZBM - 180, p. 260

(Note: Phoenix office has a Vulture-North Extension Group - file - and a Vulture Tailings Plant - file)

B34

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA, ~~Yavapai~~ Maricopa Co
Vulture mine
Lard Bucket Claim

MM N 779 Azurite
N 780 Chrysolla
N 781 "

MLS # 273
16-A R4 2
Vulture Mine file

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

1. Mine file: VULTURE
2. Mine name if different from above:
3. County: Maricopa
4. Information from: Carol O'Brien

   Company: A.F. Budge (Mining) Ltd.

   Address: P.O. Box 20878

   Wickenburg, AZ 85358

   Phone: 376-9894

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

Ms. O'Brien reported that the tailings agglomeration heap leach operation at the Vulture has begun and the first dore poured. The operation will have a 1,000 TPD capacity with recovery via the Merrill Crowe process. Dale H. Allen is the production manager of the mining operation which employs 6 people.

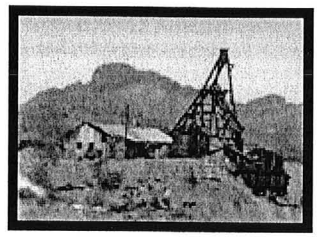
Date: October 18, 1988

Nyal J. Niemuth, Mining Engineer

A38

Vulture Gold Mine

VULTURE(f) MAR. Co.



The Vulture Mine is For Sale

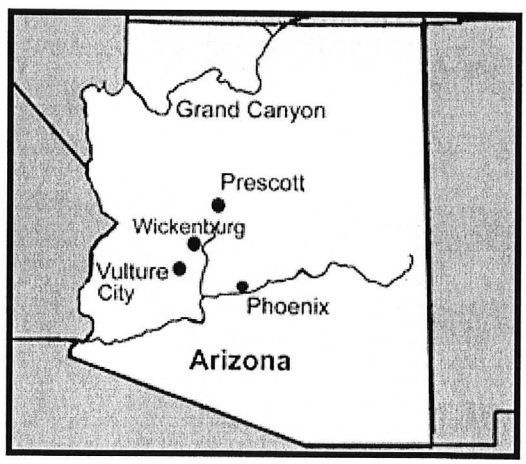
Sale Details

The Vulture Gold Mine is open for self guided tours.

Fall and Winter
Thursday, Friday, Saturday, Sunday and Monday
8 am to 4 pm

Spring and Summer
Friday, Saturday, Sunday (Other days by appointment)
8 am to 4 pm

The Vulture Mine is located 12 miles southwest of Wickenburg, AZ.



For more specific directions from Wickenburg, see the Detail Map

Contact:

John & Marge Osborne
36610 North 355 Ave
Wickenburg, Arizona 85390

(602) 859-2743

About the Vulture Mine Purchase Video Vulture Mine Tour Video
Other Arizona Ghost Towns

Web Site Created by JPC Training and Consulting

VULTURE GOLD MINE CO.

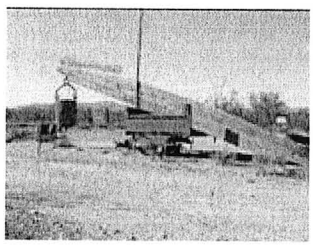
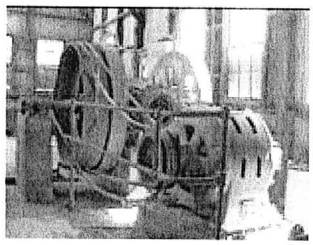
UNIQUE OPPORTUNITY

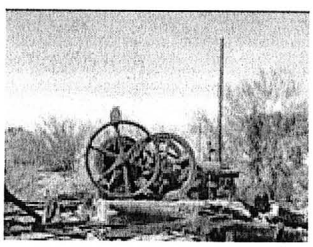
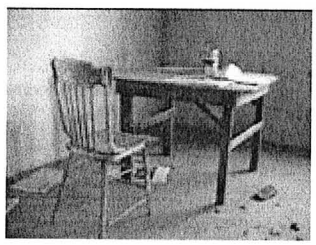
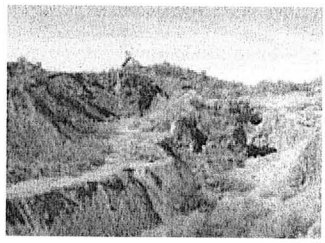
The Vulture Gold Mine -Wickenburg, Arizona

A historic 1863 Ghost Town

Private property preserve surrounded by over 140,000 acres of Federal land

The town consists of various historic buildings, homes and mining structures Refer to Ariz. Highways Magazine of June '95 and Nov. '99 or any mining history book.

Established in 1863 by Henry Wickenburg and operated continually until 1942.

Largest producing gold mine in Arizona's history.

Several mining companies have leased for exploration and all reached the same conclusion There is "lots of gold left, perhaps more than was removed in all the past operations, but costly to remove Nearly 40% of the rich ore is still in place as support columns in the many miles of tunnels, The main shaft (3,000 feet deep) connects the vest network of underground tunnels and rooms. The mine is flooded below the 600 ft. level.

We hold fee simple title to the twelve patented claims offered in this opportunity Approximately 240 acres (plus or minus) are offered and several thousand adjacent acres are available for claims (non-patented).

Approximately 240,000 tons of tailings are on site About one half has been leached (reprocessed). Reportedly 3.2 million in gold was removed in 1991 by lessee. The pad site still exists.

On-site registered well produces plenty of good water. Water level is 400 feet and has not been pumped dry

Situated in rolling foothills 12 miles south of Wickenburg on the Vulture Mine Road Newly paved all the way from Wickenburg to the front gate and all the way south to interstate 10.

Tourists tours now consist of self guided tours of the buildings and mine sites of interest.

Price - $5 million cash (Price is good until early 2000)

Contact

Fax your request for info to INTL PROPERTIES LTD (623) 939 2089

Guided tours available to qualified buyers

Video available on request - Send $25 to:

P.O. Box 1734 Glendale, AZ 85331

fax any proposal to (623) 939-2089

or contact attorney, Dean Formanek,

Warner Angle Roper & Hallan (602) 264-7101

About the Vulture Mine Purchase Video Vulture Mine Tour Video

Web Site Created by JPC Training and Consulting

VULTURE (H)

K MB Ch

COMPLETE AND MAIL TO:

STATE MINE INSPECTOR
1624 WEST ADAMS, ROOM 208
PHOENIX, ARIZONA 85007-2606

STATE MINE INSPECTOR
JUL 05 1988

FOR OFFICE USE ONLY
START-UP NUMBER 8443-0152
STATE NUMBER 10183500
MSHA NUMBER ______

Ann Durney

Approved

NOTICE TO ARIZONA STATE MINE INSPECTOR

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

If this is a move, please show last location: ______

If you have not operated a mine previously in Arizona, please check here: ✓ If you want the Education and Training Division to assist with your mine safety training, please check here: ___

If this operation will use Cyanide for leaching, please check here: ___

COMPANY NAME: MAYA CONSTRUCTION CO.

DIVISION: ______

MINE OR PLANT NAME: VULTURE MINE **TELEPHONE:** ______

CHIEF OFFICER: ROBERTO RUIZ

COMPANY ADDRESS: 860 E. 19th STREET

CITY: TUCSON **STATE:** ARIZ **ZIP CODE:** 85719

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

VULTURE MINE 12 MILES S.W. OF WICKENBURG ON VULTURE MINE ROAD MARICOPA COUNTY, ARIZONA

TYPE OF OPERATION: SITEWORK PREPARATION **PRINCIPAL PRODUCT:** ______

STARTING DATE: 5/2/88 **CLOSING DATE:** 7/8/88 **DURATION:** ______

PERSON COMPLETING NOTICE: F.C. WILLETT **TITLE:** PROJ. SUPT.

DATE NOTICE MAILED TO STATE MINE INSPECTOR: 6-29-88

FORM 101-106 REV. 08/86

A37

COMPLETE AND MAIL

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

VULTURE (A)
STATE MINE INSPECTOR
JUL 01 1988

K 16 CL

FOR OFFICE USE ONLY
START-UP NUMBER
STATE NUMBER 10183600
MSHA NUMBER

Under New

NOTICE TO ARIZONA STATE MINE INSPECTOR

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

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

COMPANY NAME: Field Lining Services, Inc.

DIVISION:

MINE OR PLANT NAME: Vulture Mine/A.F. Budge Mining Ltd. **TELEPHONE:** 263-1468

CHIEF OFFICER: Floyd Willet

COMPANY ADDRESS: 7340 E. Shoeman Ln. Suite 111-B

CITY: Scottsdale **STATE:** Arizona **ZIP CODE:** 85251

MINE OR PLANT LOCATION: (Include county and nearest town, as well as directions for locating property by vehicle: Southwest of Wickenburg, AZ on Vulture Mine Rd.
Yavapai County

Subcontract work done prior to start of mine operation

TYPE OF OPERATION: Heap Leaching **PRINCIPAL PRODUCT:** Gold

STARTING DATE: 6-2-88 **CLOSING DATE:** 7-5-88 **DURATION:** 1 month

PERSON COMPLETING NOTICE: Linda Bigus **TITLE:** Fookkeeper

DATE NOTICE MAILED TO STATE MINE INSPECTOR: June 30, 1988

FORM 101-106 REV. 01/88

A36

Vulture Mine (Title)
Maricopa County

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

EVAN MECHAM, GOVERNOR
GERALD H. TELETZKE, PH.D., DIRECTOR

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

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

Public Notice No. 13-88AZGW
Vulture Mine
A.F. Budge Mining Ltd.
7340 E. Shoeman Lane, Suite 111 B-E
Scottsdale, Arizona 85251-3335
Groundwater Quality Protection Permit No. G-0090-07

On or about
February 29, 1988

The permittee shall be authorized to operate a nondischarge hydrometallurgical precious metal recovery facility utilizing the cyanide heap leaching method. The facility is located approximately 12 miles southwest of Wickenburg, Arizona (T6N, R6W, Sec 36 SE 1/4) at the existing Vulture Mine site. The Groundwater Quality Protection Permit shall regulate the containment of the cyanide leach solution to be used in the operation of the heap leach facility. The heap pad and ponds (pregnant, barren and overflow) shall be constructed with a flexible membrane liner system over a prepared subgrade to form an impermeable barrier between leach solution and the land surface. The liner system for the heap pad, pregnant and barren ponds, shall have a leak detection/collection system to be monitored for the presence of liner leakage. The facility shall be required to monitor the leach solution daily in the form of a water balance record and monitor the leak detection/collection system weekly for the presence of liner leakage. The facility shall be protected from runoff associated with a 100-year, 24-hour stormwater event and shall fence the processing site to provide only restricted access. Depth to groundwater at the site is in excess of 400 feet from the land surface.

The permit and related material are available for public review Monday through Friday, 8:00 a.m to 5:00 p.m. at Arizona Department of Environmental Quality, Water Permits Unit, 2005 North Central Avenue, Phoenix, Arizona 85004.

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

Sergent, Hawkins, Beckwith

THE VULTURE MINING DISTRICT
AN EXPLORATION POTENTIAL
PRELIMINARY REPORT

FOR

KING SOLOMON'S MINES

BY

H. MASON COGGIN, P.E. & L.S.

4550 NORTH 12TH STREET
PHOENIX, ARIZONA 85014

DECEMBER 5, 1979

A47-E01E

INTRODUCTION

The Vulture Mine, one of Arizona's oldest and most notorious gold mines, presents an exploration potential under current gold prices of $400/ounce.

The mine produced an estimated 20[(1)] to 400[(2)] million dollars from 1864 to 1942 when it was closed by the general gold mine closing order at the start of World War II.

A complex geology, in which post mineral faulting and post mineral volcanics may have covered and/or displaced strike and dip extensions of the Vulture vein as well as other veins in the immediate area, may provide viable exploration targets in the surrounding district.

HISTORY

The Vulture deposit was discovered in the early 1860's[(3)] by a group of California miners prospecting the area at a time when the Arizona territory was being explored.

Lack of water and nearly every other commodity necessary to support and protect a mining community prevented development in a logical and technically appropriate manner. The main ore shoot was consequently depleted in 1872. It was not until new management, funding, and applied technology after 1900 that new ore shoots were found, the mine re-opened and worked almost continuously until 1942 by mining new reserves and reworking old tailings and waste dumps.

LOCATION

The Vulture Mine is located in Section 36, Township 6 North, Range 6 West, Gila and Salt River Base and Meridian, about 14 miles Southwest of Wickenburg, Arizona.

A47-D&E

GEOLOGY

Regional geology is a series of pre-Cambrian schists with dikes and irregular masses of granite locally overlain by post mineralization volcanics and later aluviam.

The Vulture vein is a singular identifiable structure which strikes east and west and dips to the north generally at 42 degrees. Mineable widths in the vein vary from a few inches to over 50 feet. Vein mineralization is primarily quartz with blocks of both hanging and foot wall materials included. Alteration of these included blocks and portions of the wall rock include chloritization, quartz, calcite and sericite.

Ore forming minerals include free gold, silver, galena blende and chalcopyrite.

Post mineral faulting has offset the vein and ore sheets with devastating effects.

ORE GRADES

The Vulture Mine is particularly well-known for its high grade ores. Pockets and small lenses of this high grade material may have run well over 100 to 200 ounces per ton. No doubt much of this picture rock was highgraded from the mine or stolen by the miners.

On an average, the Vulture ores ran over one ounce per ton initially and finally graded down to less than 3/4 of an ounce per ton.

This unusually high grade was the result of two unusual conditions. One was the high cost of mining in this remote location which necessitated the taking of only the higher grade ores. The second reason was the clean cutoff between the ore shoots and the barren vein materials.

A47-C&E

A geologically recent covering of volcanics and valley fill covers the pre-Cambrian surface in the surrounding area. This cover prevents examination or surface exploration for continuation of the vein along strike or similar veins along the chloritic schist to sericitic schist contact.

PROPOSED EXPLORATION

Little of the information on the district has been compiled and reviewed for application of modern mineral exploration techniques. What is required at this time is an extensive information gathering program. This program should include:

Literature search
Land search and acquisition
Surveying
Aerial mapping
Geological mapping and modeling
Geophysical exploration
Sampling and assaying
Engineering and interpretation

If viable targets can be identified, the above would be followed by extensive drilling, analysis, property acquisition.

This work has been started. The literature search has identified the articles and publications listed in the references.

King Solomon's Mines has acquired properties in the surrounding area as shown on the attached map.

A47-B&E

(1) Hutchinson, W. Spencer, "The Vulture Mine," Engineering & Mining Journal, VIII, No. 7, pp. 298-302.

(2) Hirsch, Bob, "In the Shadow of the Vulture," Outdoor Arizona, April 1974, p. 23 - popular literature.

(3) Smith, Duane A., "The Vulture Mine: Arizona's Golden Mirage," Arizona and the West, Autumn 1972, pp. 231-252.

(4) Schleff, Dr. Eric, Vulture Bonanza, a report dated May 27, 1960.

(5) Geologic Map of Maricopa County, Arizona Bureau of Mines, University of Arizona, Tucson.

(6) Kirwan, Gerald L., Report on the Vulture, May 20, 1976.

(7) Koschmann, A.H. and M.H. Bergendahl, Principal Gold-Producing Districts of the United States, U.S. Geological Survey Professional Paper 610, 1968, p. 40.

(8) Vulture Mine File, Arizona Department of Mineral Resources, Phoenix, Arizona.

A47-A of E

WICKENBURG, HENRY

Arizona STAR, 11/17/08, 6-2 & 3.

Vulture Mine Is Once More Big Producer.--.....

The Vulture Mine has a record of gold production of $18,000,0 It was discovered in 1863 by Henry Wickenburg, who is generally considered to have been a son of the founder of the famous Krupp gun factory in Germany. Its history is one of successive law-suits, shut-downs, and theft of its golden treasures. One of its superintendents was killed while conveying a large amount of bullion from the mine overland to Tucson. The bullion was taken by the murderers, who escaped capture.

The fame of the richness of the Vulture ore spread all over the west soon after its discovery, attracting hundreds of hardy prospectors, miners and fortune hunters to the district. A claim jumper disputed Wickenburg's right to a citizen (sic) of the United States. Wickenburg won the law suits that followed

After its purchase by the Vulture Mining Company it was extensively opened. No timbers were used in the mine, the ground being held by pillars left in the great deposito. Lessees of the property, many years afterwards, removed the pillars and the ground kept caving in until now it is an abyss two acres in extent on the surface and 200 feet deep.

B1

VULTURE (F)

A. F. Budge (Mining) Limited
7340 E. Shoeman Lane, Suite 111 "B" (E)
Scottsdale, AZ 85251-3335
(Business Office)
Telephone: (602) 945-4630
Telex: 751739

June 9, 1988

Mr. Jim Matt
State of Arizona
Office of Mine Inspector
705 West Wing, Capitol Building
Phoenix, AZ 85007

Dear Jim:

Last month, in the rush to provide you with information in regards to your investigation of the Pannos affair, I neglected to send you this letter advising your department of our impending operation of a heap leach/gold extraction facility at the Vulture Mine site.

At the present time, Maya Construction of Tucson is preparing ponds and a pad to specifications which were engineered by Sergent, Hauskins and Beckwith of Phoenix. Maya's superintendent for this project is Mr. Floyde Willett.

Our facility will be under the supervision of Mr. Dale H. Allen, Production Manager for A.F. Budge (Mining) Limited.

Gary Day at MSHA has been advised by similar letter.

Would you kindly provide us with a copy of regulations that would pertain to our operation, start up procedures, training requirements, etc.

Thank you.

Sincerely,

Carole A. O'Brien

Carole A. O'Brien
Geologist & Mining Coordinator

c: D. Allen
R. Short

A35

422544

WATER SUPPLY · HYDROLOGY · IRRIGATION · CIVIL ENGINEERING

WM. A. RAMSEY

ARIZONA · NEW MEXICO · NEVADA · UTAH

PROFESSIONAL ENGINEER
1138 EAST HIGHLAND AVENUE
PHOENIX, ARIZONA 85014
(602) 274-6017

NOTICE (M)

18 November 1980

Rabbi Abraham Novitsky
c/o United States Perlite, Ltd.
166 Montague Street
Brooklyn, New York 11201

RE: Vulture Gold Nugget Mine #1 through 31 (Lode Claims)
Vulture Gold Dust Mine #1 through 4 (Lode Claims)
King Solomon's Mine #144 & 145 (Lode Claims)

Dear Rabbi Abraham:

I am very happy to have assisted you, along with other members of my staff, in the location, staking, and other functions required by the varied County, State and Federal governmental agencies in the acquisition of the above referenced gold mining claims in the Vulture Mining District of Maricopa County, Arizona.

As you know, the Vulture Mining District has been one of the major gold producing districts of the State of Arizona since the mid-nineteenth century, having produced many millions of dollars at the old price of $20.00 per ounce. It would appear that, with the present price of gold, these claims could produce countless millions of dollars more.

Inasmuch as this staking of these claims was for a number of worthy charities, it has been my pleasure to assist you.

However, when you are ready to commence other phases of the work on these claims, such as your proposed mining operation, milling, etc., the press of business will make certain charges imperative, as it will take large quantities of not only my time, but the time of members of my staff, which must be reimbursed.

Very truly yours

[Seal: Registered Professional Engineer (Civil) Certificate No. 6312 Wm. A. Ramsey, Date Signed 11-18-80, Arizona, U.S.A.]

Wm. A. Ramsey (signature)

Wm. A. Ramsey, P.E.

STATE OF ARIZONA }
County of Maricopa } ss

I hereby certify that the within instrument was filed and recorded at request of O Novitsky

DEC 23 1980 -11 30

in Docket 14912

on Page 911

Witness my hand and official seal the day and year aforesaid.

Bill Henry
County Recorder

By (signature)
Deputy Recorder

RECEIVED
DEC ?? 1980
DEPT. MINERAL RESOURCES
PHOENIX, ARIZONA

COPY

A28

Colorado School of Mines Research Institute

PO BOX 112 • GOLDEN, COLORADO 80401
PHONE (303) 279-2581 CSMRI

August 20, 1975

CSMRI Project B50449

Mr. Alan C. Stoneman, President
Stoneman Enterprises, Inc.
Griffith Building/Suite 202
3471 Via Lido
Newport Beach, California 92660

Dear Mr. Stoneman:

The purpose of this letter is to present the results from processing three gold tailing samples. We have processed Vulture Stamp tailing (CSMRI Sample 1), Vulture Cyanide tailing (CSMRI Sample 2, and King of Arizona tailing (CSMRI Sample 3). This work was authorized by a research agreement dated June 16, 1975, and signed by you.

All three samples were processed in the same manner. Each sample was blended and, after removing a head sample, split into two parts: one part was retained and the other became feed to rocker box processing.

The procedure for the rocker box was as follows: The sample was slurried with water containing a small amount of wetting agent (American Cyanamid OT), scrubbed lightly in a horizontal scrubber, and processed across a 4-foot-long by 16-inch-wide rocker box. The concentrate from this operation became feed to a small, 18 inches long by 9 inches wide, rocker box. The concentrate from the small rocker box was hand panned to produce a final gravity concentrate; this then was assayed for gold and silver.

All silver and gold analyses were made by the fire method. Because some analyses, especially those of the head samples, were different from what had been expected, additional samples were sent to other laboratories.

The attached tabulation presents the results of gravity concentration and compares the assays from the different laboratories.

A27

The data show that very little gold or silver was recovered by gravity techniques. Most probably, with current capital and operating costs, a recovery of 0.002 oz Au/ton would not be a profitable venture.

We can offer no explanation for the difference in assay results. Because of the low value of the material, the cost of reconciling these inconsistencies, if in fact they could ever be reconciled, would far outweigh any value in doing such work. In the future, all assaying related to your project will be monitored with assays from different laboratories.

Petrographic Analysis

An x-ray diffractometer scan was performed on a portion of the heavy sands from the Vulture Stamp tailing (CSMRI Sample 1). The hand panned gravity concentrate from this sample contained a gray to white, clear, crystalline mineral. By x-ray diffraction this mineral was identified as wulfenite ($PbMoO_4$). Wulfenite is a secondary molybdenum mineral with possible commercial value. The amount of wulfenite was not determined, however.

We have begun work on the two UV Industries' samples which we received last week. When results are available, we shall telephone you.

Sincerely,

D. Erik Spiller

D. Erik Spiller
Project Engineer
Metallurgical Division

ebm
enclosure
cc: Mr. H. C. Bullock w/enclosure

A26

Results of Gravity Concentrat[illegible] for Three Mine Tailing Samples

CSMRI Sample No.	Sample Description[2]	Fire Assay Au, oz/ton CSMRI	Skyline	Union	USBM	Fire Assay Ag, oz/ton CSMRI	Skyline	Union	USBM	Values Recovered by Gravity Concentration[1] Au oz/ton	Ag oz/ton
1	Vulture Stamp Tailing										
	Feed:										
	+200 mesh	Nil				0.005					
	-200 mesh	0.002	0.034	0.020	0.029	0.338	<0.01	0.2	0.160		
	Gravity Concentrate:									0.002	0.001
	+150 mesh	1.167				0.35					
	-150 mesh	6.740	6.888	7.350	NA	2.40	2.34	2.4	NA		
2	Vulture Cyanide Tailing										
	Feed:										
	+200 mesh	Nil				0.003					
	-200 mesh	0.002	<0.005	0.020	0.011	0.358	<0.01	0.1	0.120		
	Gravity Concentrate:									0.001	0.001
	+150 mesh	0.233				0.10					
	-150 mesh	2.464	2.60	2.745	NA	2.55	2.42	3.6	NA		
3	King of Arizona Tailing										
	Feed:										
	+200 mesh	Nil				Nil					
	-200 mesh	0.002	0.026	0.020	0.020	0.438	0.3	10.4	0.380		
	Gravity Concentrate:									0.001	0. 1
	+150 mesh	1.812				0.92					
	-150 mesh	0.764	0.72	NA	NA	1.14	0.84	NA	NA		

1/ Based on CSMRI assay of total gravity concentrates.

2/ After pulverizing the samples for assay, some +200 or +150 mesh material was still contained in the pulverized product. Since the presence of metallics could have been responsible for this coarseness, the samples were screened at 200 or 150 mesh and the total amount of +200 or +150 mesh used for the analyses. There was, however, enough of the -200 or +150 mesh to have additional assays performed.

1-4-74

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine VULTURE Date December 21, 1973

District Vulture (Maricopa County) Engineer R. E. LEHNER

Subject: Mine visit

Location: Sec. 36 T6N R6W (about 14 miles southwest of Wickenburg)

Situation: A trip to the Vulture mine revealed that since it has ceased operations, it has been turned into a tourist attraction, where, for a fee, they will provide you with a tour of the mine.

While talking to the caretaker of the property I learned that Mr. Homer Brown (Wickenburg) has acquired 20 sections of placer claims south of the Vulture.

The caretaker griped about the two prices for gold; one price for processed gold (fixed); and one price for free gold.

A24

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX 7, ARIZONA

August 20, 1962

D. A. Davidson
2200 Poinsettia Ave.
Manhattan Beach, Calif.

COPY

Dear Sir:

With reference to your inquiry of August 16th about Vulture Mine Tailings:

In 1866 a 40-stamp amalgamation mill was built "near the present site of Wickenburg." According to Raymond, R.W., Statistics of Mines and Mining in the States and Territories West of The Rocky Mountains, p. 260, Washington, 1872, more than 6,000 tons of concentrates and 80,000 tons of tailings that averaged $5 per ton were stored. In 1883, shipments of the old concentrates and tailings of the original mill yielded probably $500,000. - Arizona Bureau of Mines Bulletin #137, p. 157. This is $100,000. more than Raymond estimated they contained. The portion of these tailings considered by a later operator to be amenable were treated with cyanide a couple decades ago, and a few years ago another plant was built by the Tailings and Dump Concentrating Company to re-run them with a new type of separator, but the inventor-manager died while the mill was being tested and not much has been done since. The Concentrating Company was reportedly backed by Dallas, Texas interests.

These tailings are located at the Hassayampa River on the north edge of Wickenburg at the site of the second Vulture mill. We cannot tell you the grade of the tailings or the size of the dump, some of which has washed away.

We have a 1958 listing of an Harry R. Palmer, 1452 W. 48th St., Los Angeles 62, Calif. and a notation, "Old Time Arizona Mine Operator".

We are not in a position to pass opinion regarding properties. However,

A23

we trust that you will be thorough in your investigation and will adequately sample the tailings before investing in their processing. If you are not a mining man, you need the advice of a competent, independent mining engineer, and we are enclosing a list of those registered in Arizona just in case you do. Mr. D. S. O'Leary is the only one residing in Wickenburg. He is competent, reliable, and would save you travel expense.

Yours very truly,

FRANK P. KNIGHT,
Director

FPK/mm
Encl.

CC: Charles F. Willis

A22

August 16, 1962

State of Arizona
Department of Mineral Resources
Phoenix, Arizona

Dear Sir;

At present I am in negotation with a Mr. H.R. Palmer
812 Rosecrans Ave.
Manhattan Beach, Calif.

who repudatedly has a lease on mine tailings in your state. The tailings are from the Vulture Mine near Wickenburg, Arizona. The tailings have assayed at $5.00- $32.00 a ton according to Mr. Palmer. Mr. Palmer has offered $10,000 return on $2,000 which I may loan him if my investigation is favorable. The loan would be for six months in which case if he did'nt pay I would get the lease on the land. What do you think of the deal?

The location of the tailings is as follows:
Legally known as West half of the Northwest Quarter of Section 1, Township 7 North, Range 5 West of Gila and Salt River Base Merdian, containing approximately 9 acres on the North edge of Wickenburg, Arizona.

I would like information on the following:

1. The location of the tailings.
2. Assay information you might have on the value of said tailings.
3. Information on the old Vulture Mine, approximate size and value of the tailing dump.
4. Information on Mr. Palmer.
5. Is there water available on the land?
6. Information on "Tailings and Dump Concentration Co." (Nevada Corp. with permit to do business in Arizona).

If you could supply this information or any part of it I would greatly appreciate it. Thank you very much.

Sincerely,

D. A. Davidson

D. A. Davidson

My Address: D. A. Davidson
2200 Poinsettia Ave.
Manhattan Beach, Calif.

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX 7, ARIZONA

March 19, 1962

RESUME' OF VULTURE MINE

The famous Vulture Mine was one of the early day bonanza gold producers of the West. It was discovered in late 1863 and produced substantially during the periods 1866-1888 and 1908-1917. Some desultory leaser output was made between those periods and then to 1927 in which year production was resumed at a fairly substantial rate until Government Regulation L-208 (issued in 1942) forced the closing of gold mines as a war measure. Total value of production has been estimated at around $15,000,000. Although there has been continuing interest in the possibilities of the property since the closing in 1942 no serious work has been done.

The last operator was the East Vulture Mining Co., ownership of which rests in the estates of Ernest Dickie and John C. Lincoln. The company address is Bagdad, Arizona c/o Geo. Colville. The property is now leased to an Arizona group with option to purchase.

The veins of the Vulture mine occur in a broad fault zone in a country rock which is principally a complex of granite and schist cut by numerous dikes. Intricate pre-mineral and post-mineral faulting has presented frequent development problems and the ore was "lost" and found a number of times. It is believed in some quarters that geologic study followed by interpretive exploration offers a good change for finding more ore bodies as in the past.

The mine contains some 25,000 ft. of workings reaching to a maximum slope depth of 1550 ft. although most of the past production came from above the 1050 ft. level.

The property comprises 11 patented and a large number of unpatented claims (some of which are said to be in process of patenting). Beside its mining possibilities the colorful old camp with many early-day structures still intact seems to offer attractive real estate possibilities as a "dude" ranch or for desert homesites, etc.

The mine is described in some detail in Arizona Bureau of Mines Bulletin No. 137, Arizona Lode Gold Mines & Mining (1934). Unfortunately this publication is out of print, but a copy may be consulted in most large libraries in the west.

Travis P. Lane, Field Engineer

A 20

MEMO

October 12, 1960

VULTURE MINE

Travis P. Lane

Visited the Vulture Mine. This property was taken over last year by R. B. Johnson, 4008 N. 48 Pl., Phx., and Jack Turnbull of Coolidge on a lease and purchase contract from the Hillside Mining Co. Involved in the deal were 12 patented claims and 14 unpatented claims. It is said that a substantial initial cash payment was placed in escrow and that release of the escrowed funds and action on the property is held up pending final settlement of the Lincoln and Dickie estates. Neither of the partners was present at time of the visit. "Dick" Williams, General Delivery, Wickenburg, is the caretaker and is living at the property.

A49

VULTURE BONANZA

P. O. Box 1446
Glendale, California

Arizona is one of the most mineralized territories, where not only gold, silver, copper, and uranium are distributed throughout the state, but gas and oil, also helium can be found and discovered throughout the State of Arizona.

Except for certain areas of Paleozoic sedimentary beds, formation in the northern portion of Arizona, the mountains are made up mostly of metamorphic and igneous rocks.

The oldest formation consists of metamorphosed sedimentary and igneous rocks of pre-Cambrium age which have been crumpled, overturned and cut by various intrusives and subjected to complex faulting.

The main, or principal intrusives which cut through the Paleozoic sedimentary beds, consist of dikes and stocks of Diorite-Batholith or batholithic masses of granite with pegmatities, stocks of Granodiorite and Monzonite, Porphyr and dikes of Rhyolite-Porphyr.

The entire southern territory of Arizona was subjected to terrific volcanic eruption, where gases and gas fumaroles erupted in numerous places and coming in contact with the lava flow, as mentioned above, formed some kind of a mineralization zone where gold, silver, and other minerals were deposited through some kind of chemical reaction.

VULTURE MINE

The Vulture Mine lies at the southern end of the Vulture Mountain, about 9 miles west of the Hassayampa River and 14 miles southwest of Wickenburg. A German with the name of Wickenburg discovered the first gold some years ago on top of a small hill, and following it up and starting to dig into the walls, found that gold was in many places, and during the next few years, treated the rich portion of the outcrop ore in an arrastra at the river.

Later, the Vulture Consolidated Company of New York acquired the property, established a stamp mill at the mine and built a stamp-amalgamat on, and concentration mill near the town of Wickenburg.

The high southeastern portion of the Vulture Mountain is made up of andesitic and rhyolitic lavas which lie upon a basement of shist and granite in places, granite and ryolite porphyry dikes are abundant.

Complex faulting, partly pre-mineral and partly post mineral, has affected these formations.

The Vulture veins occur within a fault zone that, at the surface, strikes slightly north to west and dips 45 north, nearly parallel to the lamination of the shist.

The hanging wall is partly a granite porphyry dike, partly shist. Near the vein, the rocks contain abundant serixite and calcite and pyrite crystals.

Eighty-five feet in width of the vein matter lies between well defined walls, the ore body which has produced the millions of dollars of gold was already a sensation at that time.

These croppings at the surface show gold everywhere - at the 240 foot level, the thickness of the vein was between 45 and 52 feet and the richest ore was lying nearest to the footwall.

B16

Even in the deep workings, where the ore was not oxidized, the ore body was made up of characteristic Quartz with associated sulphydes, and coarse gold was always present and, in some places, the free gold was so rich that it could be taken out with a knife.

This gold has a fineness of 760 to 780 - equal to some of the rich mines in California, Cripple Creek, etc.

The area of the Vulture Mine extends about 3,000 feet in length and 600 feet in width, covering all the area of the north and south isolated hill, covering mostly the south Vulture #2 and partly the south Vulture #1, both connected without break - gold mining claims - where an enormous amount of gold, mostly free gold, and acc. to statistic - more than 68 million dollars were mined from two different glory holes.

This area of the Vulture Mine is only a small part of the entire area where the gold has been mined, and having surveyed, geologized and gone over with the "Radiometer- Derco", I found that bigger ore bodies will be encountered - ore bodies with greater potential than those of the Vulture Mine, and I also found that inside of a territory of 4 miles square - joining the Vulture to the north, west, and east, the potential of opening up an entirely new gold field of tremendous wealth will bring new hope and wealth and happiness to many of th poor miners who are still thinking of gold and the future that it will bring them.

CONCLUSION:

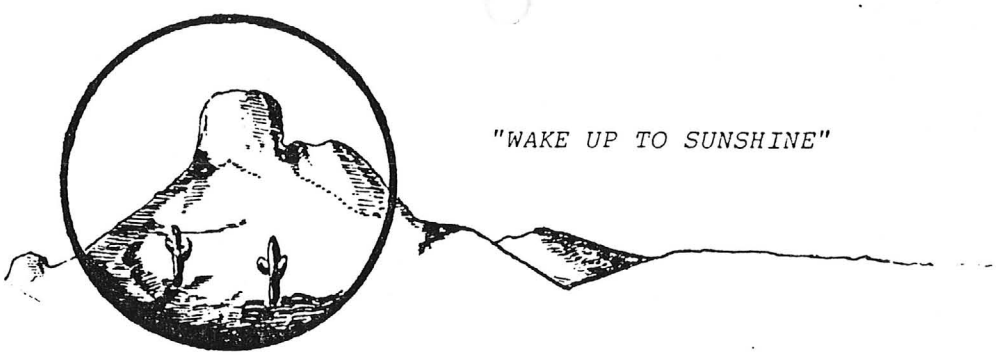
After having made several tests with the "Radiometer Instrument", regarding the possibili ties and potential of gold bearing rocks below the surface, I have come to the firm and absolute conclusion that the Vulture mining district is not only one of, but the richest gold mining territory throughout Arizona.

The rich gold found in the 2 glory holes of the Vulture mine over which I walked with my instruments showed strongly the potential of the ore body below - and making distance determination, I found that on the adjoining land which belongs to Mrs. Ray Siedletz, with 10 claims in her name, are not only as good as the Vulture mining claims, but according to "Radiometer" tests made, found that the adjoining claims are rich in gold, and shallow at that.

I have no doubt that with the opening of one of these claims, we will find the gold throughout the entire vein matter - 60 to 100 feet wide - and with the opening of this and other mine: a new era will follow the new discovery, which will bring work wealth, and happiness to al: the people in and around Wickenburg and Phoenix.

DR. ERIC SCHLEFF
Geologist and Engineer
May 27, 1960

B15



"WAKE UP TO SUNSHINE"

VULTURE PEAK

November 21, 1978

Mr. John H. Jett
7750 N. 40th Drive
Phoenix, AZ 85021

Dear Mr. Jett;

The Office of Tourism forwarded your letter concerning the Vulture Mine and asked that we respond.

The measurment of wealth taken from the Vulture is a source of constant discussion and debate. It seems about any figure one chooses to use can be justified in one way or another.

In the early years of the Mine old Henry Wickenburg allowed anyone to come on the property and work the vein paying him a percentage of find. No records were kept and undoubtedly he was ripped off but good. Henry was quite a man but apparently far to kindly for his business success.

Then as the mine went through various owners records were lost and again there was undoubtedly highgrading from employees and owners alike. We know highgrading was one of the serious problems of the mine, 7 miners are still buried who hacked away a support piller of rich ore bringing down the roof on themselves.

I know from personal reading that the U. S. Government purchased about 9 million worth of Gold from the Vulture up to the late 20s. The mine operated until the 40s so quite a bit more must have been sold. Now the reason for the huge figures is that that 9 million was based on a price of gold of $7.00 per ounce! So changing to equivilant value of over $200 per ounce gives a huge range to tag the mine with. Most writers choose to use an equivilant figure to try to make understandable the vast scope of the Vulture.

As to what remains at the Vulture you can again choose your own figure. The main vein was lost in a fault in the 30s, However there was enough value to keep on going. It seems to me if there really was 200 million in the ground someone would be kicking up a lot of dust digging out there. However, a visit with the Manager, John Osborn at the mine might clarify. Hope this helps, we have a lotof written material on the mine which you are welcome to dig through.

Sincerely;

Dana Burden

CHAMBER OF COMMERCE P. O. DRAWER CC WICKENBURG, ARIZONA 85358 (602) 684-5479

B 18

July 1904

No. 400

REPORT OF

COL. WM. A. FARISH

ON THE PROPERTIES OF THE

Vulture Development Company,

25 Broad Street, New York City.

TO THE PRESIDENT AND DIRECTORS OF THE

VULTURE DEVELOPMENT COMPANY,

25 BROAD STREET, NEW YORK:--

In obedience to your instructions I have examined your mining properties in the Vulture Mining District, Maricopa County, Arizona.

Annexed you will find my report, accompanied by ground plan maps of the several groups, together with the vertical and cross sections of the Vulture group, all of which form a part of my report and to which I refer you.

Properties.

The property consists of five separate and distinct groups, namely, viz:

The Vulture group contains 26 claims 600 feet by 1500 feet each, one 300 feet by 1500 feet, and five placer claims, 4 of 20 acres each and one of 8 acres. (See ground plan maps.)

The Angel and Bess group of mines, 22 claims, 600 feet by 1500 feet each. (See ground plan maps.)

Lucky Boy group, two claims 600 feet by 1500 feet each, and two claims 300 feet by 1500 feet each. (See ground plan maps.)

The St. Charles group consists of 7 claims 600 feet by 1500 feet each. (See ground plan maps.) They are all located within a radius of five miles of each other. Their exact location

A17

From Arizona Geological Society
AGS Spring Field Trip 4-20-85

VULTURE MINE (File)

A Summary Prepared by Don White, C.P.G.S.

April, 1985

SYNOPSIS

The historic Vulture Mine is located in the desert about 15 miles SW of Wickenburg, Arizona. It is now comprised of 13 (?) patents and over 400 surrounding unpatented claims. Production was always poorly documented but was probably about 1 million tons of ore containing about 350,000 ounces of gold; 250,000 ounces of silver; 300,000 pounds of copper and 1,800,000 pounds of lead. Grades thus averaged 0.35 oz. Au, 0.25 oz. Ag, 0.015% Cu and 0.09% Pb with no allowance for recoveries or dilution. Most of this production was from 1870 to 1930 with a combination of stamp mill amalgamation and cyanide leaching of tailings.

The mine was developed by two inclined shafts, along the dip of the bedding and mineralization, about 35° North. The west incline extends to the 600-level and the east incline, through winzes, to the 1550-level. About 1800 feet of strike length have been drifted and stoped on two main NE plunging ore shoots.

Mineralization is free gold in quartz veins within and emanating from a quartz monzonite porphyry intrusive (qpi). The qpi is a semi-conformable sill-like apophysis from a stock to the west. Its intrusion led to wall rock silicification and pyritization. Gold also occurs with sulfides (pyrite and galena) within and adjacent to the qpi, or within its alteration halo.

Post-mineral faulting offsets the lode and accounts for its loss beyond the 1550-level. No one has tried to find the faulted extension since 1931.

Recent exploration has focused on open pit, heap leachable reserves and tailings with some consideration of placer potential.

HISTORY

The Vulture Mine is one of the most famous, rich and notorious gold mines in Arizona. Its high grade gold earned it the name, "The Comstock of Arizona."

The Vulture discovery is attributed to Henry Wickenburg in 1863. The next eighty years of classic boom and bust at the Vulture camp are outlined:

Mid 1860's:	Burro packing of high grade, near surface ores to arrastras on the Hassayampa River.
1870's:	Ups and downs; overall grade diminishing. Closed years at a time.
1880:	Water piped to the mine and an 80-stamp mill constructed.
1880's:	Orebody lost and rediscovered across several faults. Frenetic activiy alterated with complete closures.

1888 (?): Main orebody lost at the Talmage fault on the 600-level.

1911: Lode rediscovered by drifting on the 750-level. Much activity for four years.

1915: Lost the lode on the Astor (Schoolhouse) fault on the 1050-level. Exploration to the 1550-level failed to relocate mineralization.

1888-1917: Various operators and owners; 20 of the 80 stamps repaired, amalgamation used on the mortars with 70-80% recovery. Tails subject to cyanidation.

1917-1927: Dormant.

1927-1942(?): Lessee recovery of ore pillars, open pit mining to about 120-foot depth; flotation used with cyanidation of new and old tailings. Last hardrock mining in 1935.

1942(?) - Present: Dormant nearly 50 years except for some recent exploration.

GEOLOGY

The country rock is a series of early Precambrian metasediments and/or metavolcanics (opinions with evidence are invited). They are dominated by various schistose combinations of quartz, sericite, and chlorite, some amphibolite, and some apparent epicalistics or reworked volcanics.

A stock of Laramide (?) quartz monzonite porphyry (qpi) is centered about one half mile west of the mine area. Apophyses of qpi cut semi-conformally into the mine area, altering the wall rock. Silicificaton is pervasive, sometime accompanied by pyrite plus or minus gold, especially in the hanging wall of the intrusive.

Tertiary volcanics (basalt flows and andesitic tuffs) blanket the Precambrian on the northeast portion of the property. Quaternary alluvium blankets much of the mine area.

The rock types are summarized by the accompanying stratigraphic section.

Gold occurs in the native state, as was characteristic of the old high grade quartz veins within and emanating from the qpi. Gold also occurs in solid solution with sulfides, mainly pyrite, but also in unusual association with galena. Underground mining followed the silicified, pyritized hanging wall and footwall zones of the qpi where the quartz veins and high grade gold are most commonly found. Rich pods ran in excess of one hundred ounces per ton. Open pit mining captured some remaining high grade pillars and most of the intervening qpi. The qpi graded 0.05 ounce to several ounces where mined.

All the Precambrian units and the comformable qpi and mineralized zones strike east-west in the main pit area, and dip about 35 degrees to the north. Folding is minimal, mostly distortion by the qpi intrusion and drag on faults. Faulting has much influenced the operating history of the Vulture. A series of northwest striking, northeast dipping reverse and normal faults, all post-mineral, offset the qpi and mineralization. Offsets of several feet to about 200 feet were successfully figured out and bridged. The lode was lost in 1915, however, on a normal fault with at least 500 feet of dip slip component.

EXPLORATION ACTIVITY

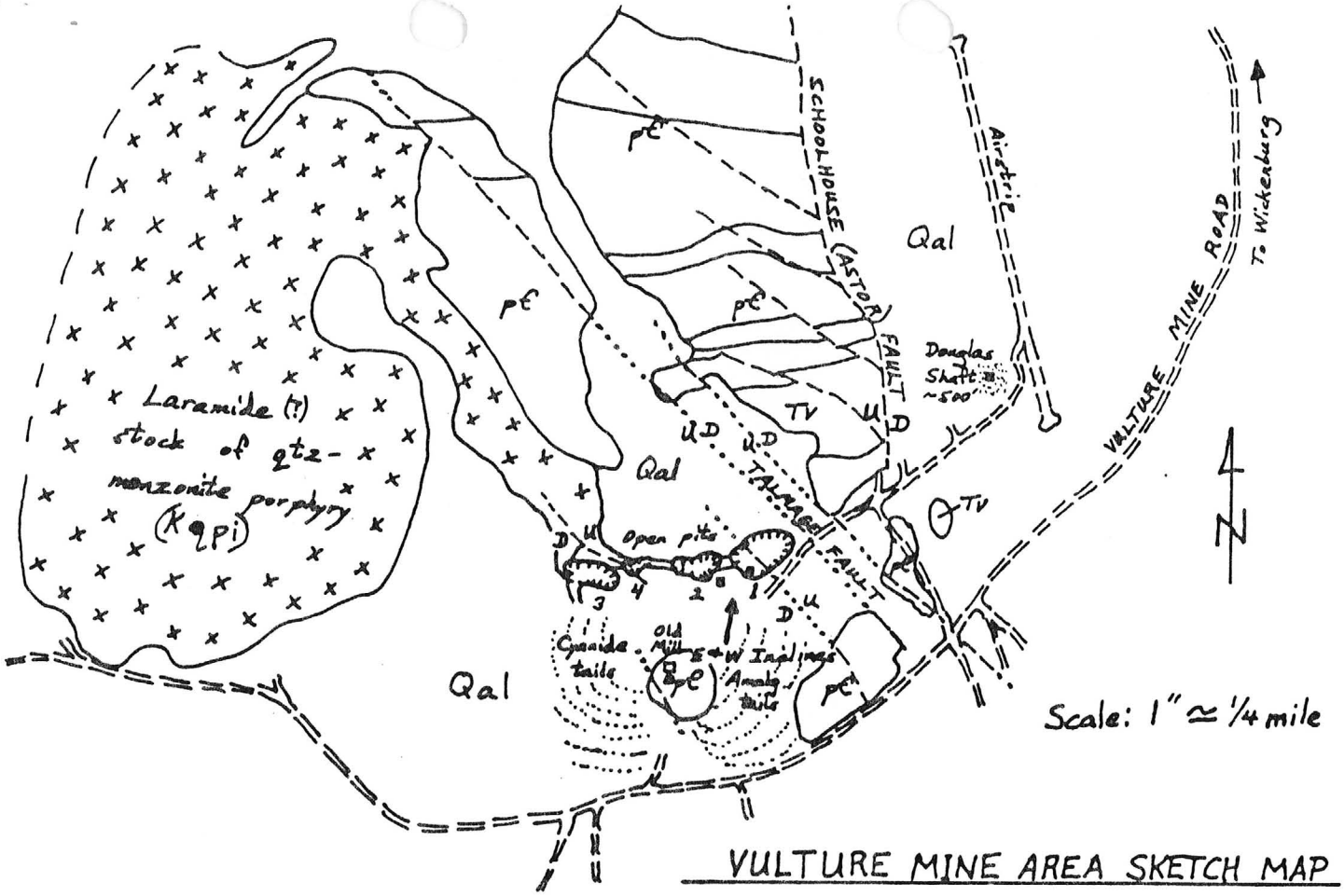
The faulted lode was the target of 1930-1931 exploration by the United Verde Extension Mining Company. Their 500-foot shaft and over 1000 feet of drifting east of the Astor fault failed to locate any major minerization. They were likely too shallow.

In 1970 Noranda took bulk samples from the pit areas, conducted an I.P. survey, and mapped the pit geology. Not much happened again until the Zortman/Landusky Mining Companies (Pegasus) leased the Vulture in 1982-1983. They extended the claim block, surveyed, did underground sampling (down to water which floods the 650-level) surface sampling and rotary drilling, a mercury-in-rock survey, and a pilot heap leach of some tailings. The latter did not work, principally because the vertical permeability of the unagglomerated tailing is nearly nil. Their drilling focused on down-dip extensions of the open pits. Quintana followed Pegasus' departure with some short evaluation of unknown substance.

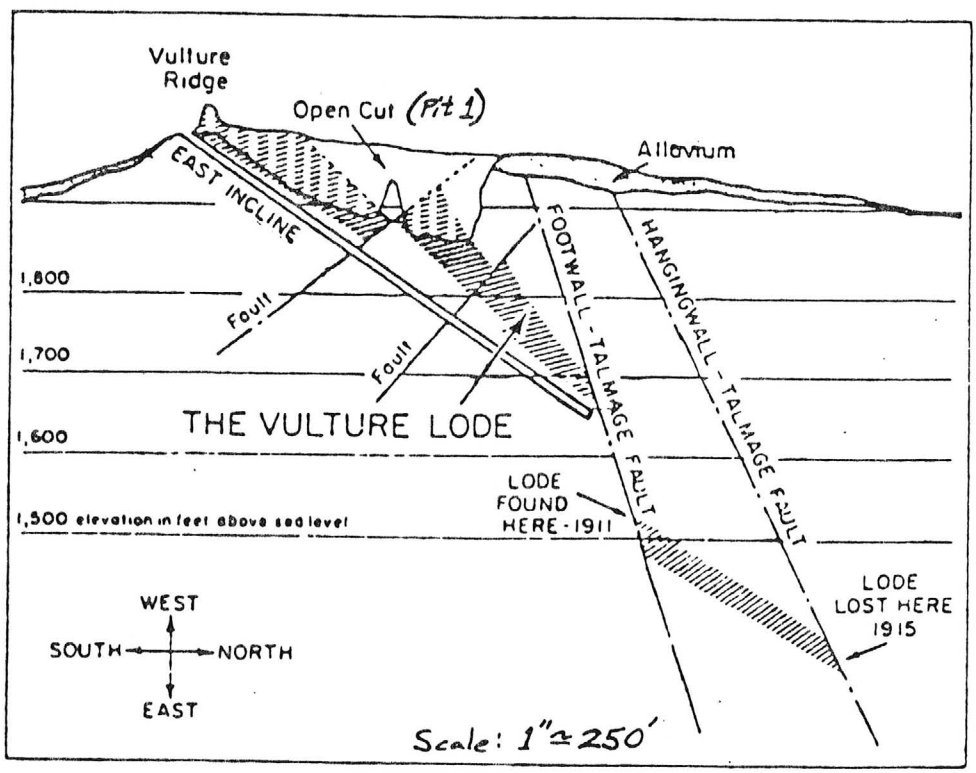
Since early 1984 the Vulture has been under lease to an indivdual represented by Ben F. Dickerson, III of DMEA, Ltd. in Scottsdale. Several aspects of the property have been further evaluated. Continued reverse circulation drilling north of (down dip from) each pit and between pits has indicated further reserves in place. Shallow drill sampling of the tailings has allowed estimation of the tailings reserves. Placer gold has been located by deep trenching and washing of vertical channel samples in a pilot plant. The deep underground potential is all that has not been tested of late.

Remaining gold potential at the Vulture is summarized as follows:

Occurence	Tonnage	Grade range	Remarks
Underground, high-grade fault extension	0.5 million or more tons (?)	0.3 ounce Au to several ounces	Requires core drillir in excess of 1200-foot holes.
Open pit extensions	0.1 to 0.4 million tons	0.04 to 3. ounces $\bar{x} \simeq 0.05$ oz.	Leachability unknown probably require fine ($\leq \frac{1}{2}$ inch) crushing
Tailings	0.2 million tons	0.04 oz/t	Require agglomentation
Placers	Yardage not yet estimable from existing trenching	Very erratic	Quarternary channels not mapped. Stripping ratios high.



VULTURE MINE AREA SKETCH MAP

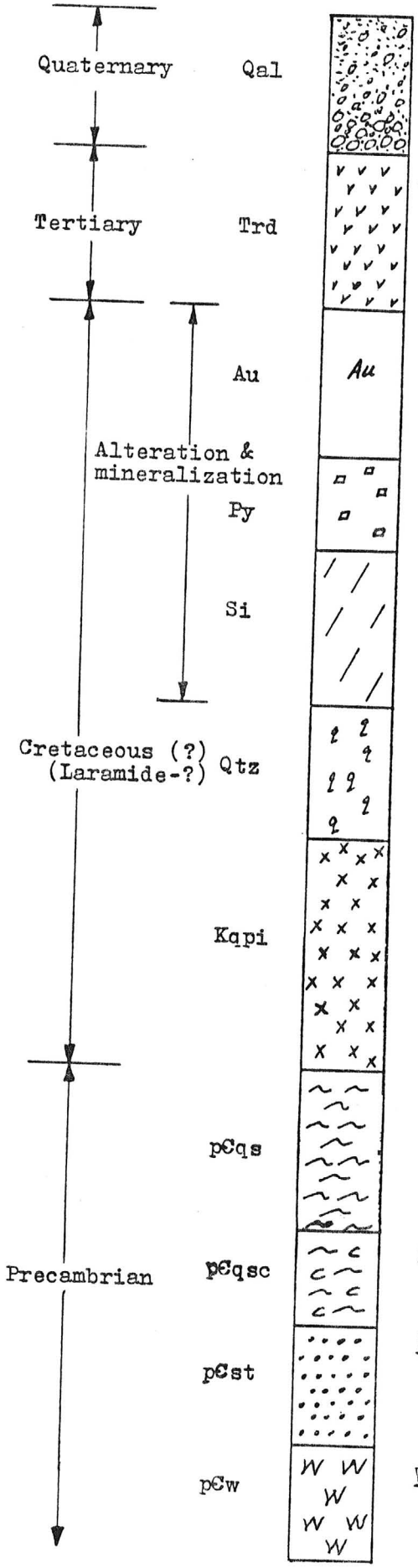


Schematic cross section, from The Mining Journal 11-30-1930

VULTURE MINE

PHIC DRILL LOG LEGEND

Compiled from rotary-reverse circulation chips



ALLUVIUM, colluvium; derived from the same rocks as in this sequence except for granodiorite from ≥2 miles NW. Varied but generally low degree of rounding, sorting, and stratification.

RHYOLITE DIKE; white, aphanitic, cross-cutting unit up to 15 feet in drill intercept thickness. Commonly contains black Mn dendrites on joint surfaces. Only known to occur in W portion of property near pits 3 and 4.

GOLD; noted in graphic log where significant assays are reported. Thought to be cogenetic with other Laramide (?) events like qtz-pphy intrusion and associated pyritization, silicification, and quartz veining (see below).

PYRITE; generally tiny (≤0.5mm) disseminated cubes. Often in qtz or intensely silicified rocks.

SILICIOUS ROCK; thought to be introduced silica related to the qtz-pphy intrusive. Often obscures foliation and sometimes prevents identity of the original rock type. Intense silicification yields an amorphous quartzite.

QUARTZ; only used to designate vein or bull quartz and discrete, visible qtz as in qtz-rich siltite and qtz-pphy intrusive. May harbor sulfides (py, gal) and native gold.

QUARTZ-PORPHYRY INTRUSIVE; med to coarse-grained, altered (sericitized, pyritized, silicified) granite to qtz-monzonite with qtz porphyroblasts (often up to 4mm dia). Quartz is typically a soft, pastel green (chloritic-?) or pale gray to milky. Emanates as an apophysis from stock to the W of pit 3. Generally semi-conformable, sill-like.

QUARTZ-SERICITE SCHIST; brown, gray, tan, or almost white, thin laminated, fine to med grained quartzite and sericite. Often iron stained. Gradational to siltite or wacke (see below) and prone to silicification.

QUARTZ-SERICITE-CHLORITE SCHIST; same as above with the addition of a chlorite component (usually < 20%).

SILTITE; brown or tan to light gray, poorly foliated, very fine grained, meta-silt. Often a quartzite. Grades finer to quartz-sericite schist or coarser to wacke.

WACKE; brown, tan, or med to dark gray, poorly foliated, med grained, meta-wacke. Grades to siltite and qtz-ser schist. Prone to silicification.

Don White - Dec. 1984

VULTURE MARICOPA COUNTY

NJN WR 7/8/88: Corol O'Brien (card) reported that she has hired a mine manager for the Vulture (file) Maricopa County. He is Dave Allen. The equipment required to reprocess the tailings by agglomeration heap leaching is on site. They are currently setting it up and hope to begin operations shortly at the rate of 1000 tons per day.

MG WR 7/15/88: Ms. Carole O'Brien (c) of DMEA Ltd. reports that operations at the Vulture mine, Maricopa County are planned to begin within 2-3 weeks. The tailings will be agglomerated and placed on a cyanide-leach pad at the rate of about 1,000 tons per day.

A57

VULTURE MARICOPA COUNTY

NJN WR 3/27/87: Carole O'Brien of DMEA Ltd reprots that if the Vulture (file) Maricopa County produces by heap leach, construction may start as early as May 1, 1987. If, however, they go to an agitation leach, construction will start later.

MG WR 8/21/87: Mr. Jack Brantl, Regional Manager, Watersaver Co (Tempe) reports that DMEA Ltd. finished drilling a couple of weeks ago at the Vulture mine (file) Maricopa County. I was not aware they had been drilling there during the past couple of months.

Don White (card) reported that the Vulture Mine (file) Maricopa County is contained within a quartz monzonite sill that has been dated at 85 My. The mineralization consits of the zone of argillic alteration in the hanging wall. The mineralization itself consists of quartz veins semiconformable to the sill. Additionally, the gold is associated with lead. The sill and mineralization have been cut by Tertiary Basin and Range faults, therefore providing limits for the age of the mineralization. Mr. White gave a talk entitled "Geology of the Vulture Mine, Arizona" at the SME Annual Meeting held in Phoenix January 24-28. I will obtain the SME preprint for the Department files.

NJN WR 4/22/88: Don White (card) reported that activity is underway to reprocess the tailings by heap leach agglomeration at the Vulture Mine (file) Maricopa County. The open pit resources which were drilled will not be mined. Metallurgical tests showed only a 60% gold recovery at -200 mesh on this material and a -320 mesh grind allows an 80 - 90% recovery. Thus the material is not amenable to heap leaching and too small in size (est. 250,000 tons) to capitalize a mill.

KAP WR 5/27/88: Construction of the leach pads and plant at the Vulture Mine (file) Maricopa County was noted. Maya Construction is the "dirt" contractor currently building the pads and associated facilities designed by Sergent Houskins & Beckwith of Tucson. The pads are being constructed immediately to the south of the remains of the old cyanide plant. Initital production will be from agglomerated tailings.

KAP WR 6/10/88: Provided technical assistance to the Securities Division of the Arizona Corporation Commission and B & K Productions during their filming of an anti-phone solicitation movie at historic sites at the Vulture Mine (file) Maricopa County. Portions of the tumbled down flotation mill and long idle hoist were filmed as background for vivid dramatization of the untrue statements the solicitor is making concerning current production from a large operating gold mine.

VULTURE MINE MARICOPA COUNTY

NJN WR 3/21/86: Don White (c) with DMEA Ltd. (c) reported that they will be going back and continuing exploration at the Vulture Mine (f) this spring. Targets will include both the deep potential as well as reviewing the geology for targets on 9 sections of land surrounding the mine.

MG WR 10/10/86: Met Mr. A. J. "Joe" Fernandez, Mining Engineer, of A. F. Budge (Mining) LImited, 7340 E. Shoeman Lane, Suite 111 "B" (E), Scottsdale, AZ 85251, phone 945-4630. (This address is the same as the address for DMEA Ltd.). Mr. A. F. Budge, through his company, is financing much of the exploration at the Vulture mine, Maricopa Co., and the United Verde Extension mine, Yavapai Co.

A55

VULTURE MINE MARICOPA COUNTY

MG WR 4/26/85: Have learned that the lease on the Vulture Mine (Maricopa County) has apparently been renewed by the client of DMEA Ltd. (Ben Dickerson)

NJN WR 4/26/85: Don White (c) of DMEA Ltd. (c) reported that their client has renegotiated the lease on the Vulture Mine (f) with more favorable terms for the next year. They are looking for a group or company interested in the property's underground potential to drill a deep hole to test for an extension of the faulted "vein" segment. The test holes would likely to be 1200' deep.

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NJN WR 10/10/86: Don White (c) reports that DMEA (c) is currently drilling a series of 6" diameter core holes at the Vulture Mine (f) Maricopa County. The core samples will be used for metallurgical testing and of coarse he is interested in logging them first. The holes are being drilled in the small open pit reserves that previous work had identified.

NJN WR 12/12/86: Don White, (c) reported that preliminary metallurgical testing done on the drill core recently obtained from the Vulture (file) Maricopa County looks promising for being cyanide heap leachable.

NJN WR 1/16/87: Don White (c) reported during a program given to the Maricopa Section, AIME, that the actual leasor of the Vulture Mine (file) Maricopa County is A. J. Budge (Mining) Limited, 7340 E. Shoeman Lane, Suite 111 "B" (E), Scottsdale, Arizona 85251, 945-4630.

NJN WR 3/13/87: Don White (card) reports that by assessing their recent drilling at the Vulture (file) Maricopa County, the numbers he published in the Arizona Geological Society's Field Guide book should be revised. Tonnage for the Vulture open pit should be 250,000 tons of .05 oz/ton Au and the Vulture tailings should be 250,000 of .04 oz/ton Au.

A54

VULTURE MINE MARICOPA COUNTY

KAP WR 2/3/84: A Mr. Jake Thamm of Minerals International Company, (c) reported his group is being asked to consider a joint venture in the Vulture Mine, Maricopa County. The property has been the subject of exploration by first Pegasus Explorations Ltd. (c) and then later by Quintana Minerals Corp (c) during the 1982 - 1983 period. According to Mr. Thamm the efforts by those two firms have shown a reserve of 450,000 tons of old stamp mill tailings at 0.083 tr. oz. gold/ton and 1,525,000 tons of open pitable ore at 0.083 tr. zo. gold/ton. A Milt Hood and a Terry Downey are also involved. Mr. George Hennesy of Wickenburg is reportedly the lease holder of the property.

NJN WR 6/29/84: It was reported that over 10,000 oz recoverable Au have been identified by drilling at the Vulture Mine, Maricopa County. The ore would be in separated segments mineable by open pit methods.

CJH WR 9/28/84: William Karis, Consulting Geologist, (c) visited. Mr. Karis has been retained by Ben Dickerson (c) to research the famous Vulture Mine, Maricopa Co. He studied the mine and Colvocoresses files in the Tucson Office. Has spent two weeks mapping surface geology in the vicinity of the Vulture.

KAP WR 11/16/84: Stopped by the Vulture Mine, Maricopa Co. The caretaker reported that some drilling had just been completed Monday, November 12, 1984. Further, that Ben Dickerson and Don White had been working on the property as of the previous few days. The caretaker said the drill rig was going to the Prescott area for additional work for Ben Dickerson.

MG WR 3/8/85: Mr. Ben Dickerson reports that DMEA Ltd. (c) has done an extensive geologic evaluation, including mapping and drilling, of the Vulture mine, Maricopa Co., for an unnamed client. A gold reserve has been confirmed.

MG WR 4/26/85: Have learned that the lease on the Vulture mine (Maricopa Co.) has apparently been renewed by the client of DMEA Ltd. (Ben Dickerson).

NJN WR 4/26/85: Don White (c) of DMEA Ltd. (c) reported that their client has renegotiated the lease on the Vulture Mine (f) with more favorable terms for the next year. They are looking for a group or company interested in the property's underground potential to drill a deep hole to test for an extension of the faulted "vein" segment. The test holes would likely to be 1200' deep.

VULTURE MINE

MARICOPA COUNTY

KAP WR 12/17/82: Pegasus Resources is planning to establish a pilot plant at the Vulture Mine, Maricopa County. The plan to test the old cyanide mill tailings is projected for early 1983.

KAP WR 1/14/83: In the company of Nyal Niemuth, a field interview was held with the caretaker of the Vulture Mine, Mr. Osborn. He reported that Pegasus Resources has drilled and sampled the old cyanide mill tailings and has also done some underground drilling on the property. He went on to say that ownership has been transfered from L. Wayne Beal to his son who holds the property under VMP Inc., (Vulture Mine Property). Osborn said he has helped sample the walls, etc. underground.

(Vulture Mining Properties?)

MG WR 3/26/82: Dr. John Gilbert, professor of geology at the University of Arizona, called to discuss the Vulture Mine in Maricopa County. He wants to sponsor a geologic thesis for an investigation of the Pinal Schist in the area of the Vulture mine and also around the Lake Pleasant area.

Mr Wayne Beal is apparently still the owner of the Vulture mine property. Please record his new address: 12539 Paintbrush Dr.W., Sun City West, AZ; phone 584-9072.

It has been reported that Pegasus Explorations Ltd., 1015, 837 W. Hastings st., Vancouver, B.C. V6C 1C4, Canada; phone (604) 669-7614 (President: H. Tenneff), has an option to explore the Vulture Mine in Maricopa County. Drilling of the property is to begin in 1982 under the direction of Mr. George Hennessy, c/o Vulture Mining Property, P.O. Box 1904, Wickenburg, AZ 85358; phone 684-7586.

RRB WR 5/7/82: Russ Walker of Zorba Landusky reports that they are evaluating the Vulture Mine.

NJN WR 9/10/82: Jack Pierce reported that Pegasus has been core drilling at the Vulture mine, Maricopa County. Russ Walker is the project manager for Pegasus. His number in Wickenburg is 684-2757.

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(Vulture Mining Properties)

VULTURE MINE MARICOPA

Went to the Vulture Mine where there was no placer activity due to negotiations on on the concentrating equipment. It was reported the testing, although incomplete, has indicated $3.50 per Cu yd. GW WR 2/24/76

Stopped at the Vulture where there has been no placering activity since the last visit; however, the watchman, John Osborn, said he understood the Beals will buy their own equipment and continue the work soon. GW WR 3/25/76

There is no placer activity at the Vulture; the machinery has been removed. GW WR 5/12/76

Stopped at the Vulture where it was reported Gary Smith was in the hospital with a bad ulcer of the stomach. GW WR 8/6/76

George Bienfang, Carefree, called to report he had been to the Vulture Mine and had been requested to contact me for a visit as they have another placer project in operation, of sorts. GW, WR 3-28-77

J's Memo, May 31, 1979 - An interview with Mr. Huthmacher in Wickenburg d to a request that the Mine Inspector investigate the Vulture mine for safety. e has had several visitors complain to him about the lack of safety. 6/27/79 a.p.

NJN WR 11/6/81: It was reported that someone was operating a ball mill and amalgamator at the Vulture MIne. Apparently this was being done on an experimental basis with material backhoes from the edge of the glory hole.

AP WR 3/26/82: Dan Jacobs reported he has read of a Pegasus Gold Ltd. in an investment newsletter. According to the letter, Pegasus has acquired a gold property 50 miles N.W. of Phoenix. It is proported the property is a past producer of over $20 million in gold at $35 and/or $20.67 per ounce gold over the period of 1866 to 1942. Further, the property consists of 14 patented claims, 39 older unpatented claims and a group of 329 lode claims. Some very simple geology was also mentioned. It appears that the property may be the Vulture.

A51

VULTURE MINE **MARICOPA COUNTY**

It was learned that Dr. Mangun was no longer connected with the Vulture

LP 2/10/64

2/14/64 - Visited the Vulture Mine where P. H. Bennett is sampling and mapping for two men who are supposed to have taken over the mine. No names revealed.

EGW WR 2/27/64

8-10-67 Mine reportedly sold for taxes

Mr. Chester Millar of C.F. Millar Limited, 1758 West 8th Avenue, Vancouver 9, B.C., was in to look at the Vulture Mine file (Vulture District). He has hopes of contacting Mr. Beal and arranging an agreement to drill the property. KAP Report dated 8/13/73

Went to the Ironwood Mining Co. placer operation 19 miles south of Wickenburg where sampling of material from the Vulture mine was in progress. Four or five suggestions were made which, if followed, could improve the Au recovery. A young man from the Vulture claims they have averaged a recovery of 2 oz. per truckload and states there is enough of this material to sustain an operation of 500 tons per day for 9 years. GW WR 11/4/75

Gary Smith (Ironwood Mining Co.) revealed that Larry Beals' father, Scottsdale millionaire, owns the old Vulture Au property. Larry is the young man who was supervising the sampling of his material through the Smith plant yesterday. GW WR 11/5/75

Went to the Vulture where the placer testing plant wasn't in operation due to the loader being broken down. The plant consists of a feeder to a 30' - 18" inclined oonveyor to a 3½' diam. trommel with 1' & ½" screens on it, the -½" material is fed to 3-36" Ainlay bowls, the tails from the bowls flows to 2 more Ainlay bowls, the cons. from all the bowls are amalgamated in a small concrete mixer. This machinery is operated by electric motors totaling 65 HP. There is a 714' water well on which is a 60 gpm pump to an 80,000 gallon tank from which the water flows to the plant that uses 150 to 200 gpm when operating at 10 Cu. Yds., which is about 1/8 of its capacity. Neither of the Beals were at the mine, therefore, a not of certain suggested changes was left. GW WR 1/26/76

Went to the Vulture where Larry Beal was preparing for a run of 80 Cu. Yds. through the placer testing plant. He explained that the cons. from this run would be submitted to Walt Statler for assay and determination of the best method of recovering the gold or disposal of the black sand concentrate. He also said MM Sundt's people had examined the area being tested and had agreed to excavate the area for aggregate if they received the contract to build a flood control dam near Wickenburg. They would screen the muck & leave the -½" material for the extraction of the Au. GW WR 1/28/76

A50

TAKEN FROM REPORT OF THE GOVERNOR OF ARIZONA 1893 pp 28-29

Among the notably successful mines of the main belt may be named the Mammoth, of Pinal County, which has been returning large dividends to its English stockholders; the recently worked Mammoth of the Superstition Mountains, in Maricopa County, one of the most promising properties yet discovered;a large number of rich and easily worked deposits in the northern counties of Mohave, Yavapai, and Coconino; the Congress, Crowned King, Gladiator, Model, Roach, and other mines yielding rich sulphides which can be very profitably concentrated. In Maricopa County the Vulture, Union, Yarnell, and Phoenix mines are representative of a class of valuable gold-producers with a pyritous product. Cochise County has a number of mines which yield notable quantities of gold in ores which have heretofore been marketed for their silver contents.

VULTURE 1896

This is one of the oldest gold mines worked in the Territory and has been comparatively idle for some years, but efforts are being made to work the large piles of tailings by the cyanide process.

The vein, though so large and promising, has not been worked to any great depth. A successio of faults, slips, or throws, but of small extent, has at different times given rise to reports that the mine had been worked out, and has tended to discourage deeper work. This should not be. The downward prolongation of the vein will probably be found some distance to the north of the present lower level, and upon discovery of its position it should be opened by a new shaft from the surface north of the old workings.

The year of 1863 was marked by the discovery of the great quartz vein, since known as the Vulture, by Henry Wickenburg, which was worked for a decade, but under great disadvantages, owing to the constant presence of the murderous Apaches. For a time the miners were paid off, not in coin, nor in promises, but in chunks of gold chopped off with a hatchet from the ingots and weighed out to them according to the figures on the pay roll. The stamped bars of gold from this mine were current all over central and northern Arizona, and it was the only mine in the Territory for a long time that kept up the reputation of the country and sent out regular shipments of bullion.

VULTURE Mine

This well-known gold mine is one of the oldest in the Territory. Its fame in early days was based upon its great production of the yellow metal and the difficulties under which the gold was obtained. Some or the greatest of these obstacles were the absence of water and the presence of the savage Apaches and the distance from civilization and supplies. Sold originally by Weaver for an old pipe, it repaid the purchasers by millions of dollars worth of precious metal. Without banks upon which to issue checks to pay the men and without means of transporting coin to meet the pay rolls, the ingots of gold were chopped up with hatchets and chisels and distributed to the men in liquidation of their wages. Yet the property has seen dark days, and has at intervals stood idle, while not one of the shafts had been sunk much more than 300 feet. A victim of extravagant valuations and promises based upon its past record and of stock jobbing exploitations, the proper working and development of the property have been neglected.

The vein at the surface was divided up into parallel layers, which were more or less broken over and dislocated. These trifling displacements were sufficient to frighten some of the week-kneed grass-root miners, and gave rise to the fallacious saying in California that the "veins in Arizona had no roots." But these little breaks have been passed and only serve to show the great breadth of the lode and to indicate the best position for more extensive and deeper work. Instead of some 400 feet in depth, as now, a shaft should be put doen 1,200 feet or more, with proper drifts and connections with another shaft farther west. The property changed hands early in the year 1898, and it is hoped will now be worked upon its merits. It is understood that the cyanide plant erected upon the banks of tailings yielded a profit of $75,000. This mine produced in its early history upwards of four millions of dollars, and it is believed that under modern methods of development and working it will be a

A47

ABSTRACTED FROM ADMMR ACTIVE MINES DIRECTORY, 1989 Maricopa County

A. F. BUDGE (MINING) LTD.

UVX T16N R2E Sec. 23

P.O. Box 938, Jerome 86331 - Phone 634-9034 - Employees 16 - Located at Jerome - Underground mine producing gold and silver bearing flux for copper smelter.

General Manager ..... Ronald R. Short
Mine Superintendent ..... Pete Flores
Mine Geologist ..... John McKenny

Vulture T6N R6W Sec. 36

P.O. Box 20878, Wickenburg 85358 - Phone 376-9894 - Employees 5 - Located 12 miles south of Wickenburg - Processing of gold tailings by agglomeration, cyanide heap leaching - Merrill Crowe recovery.

Production Manager ..... Dale H. Allen

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P.O. Box 20878, Wickenburg 85358 - Phone 376-9894 - Employees 6 - Located 12 miles south of Wickenburg - Processing of gold tailings by agglomeration, cyanide heap leaching - Merrill Crowe recovery - 1000 TPD recovery.

Production Manager ..... Dale H. Allen

Pioneer Nuclear, Inc.
Plaza One/Amarillo National Bank Building, Post Office Box 151, Amarillo, Texas 79189, Tel. 806/353-7486

Paul I. Eimon
Vice President-Exploration

PIONEER

February 10, 1984

Mr. E. Grover Heinrichs
E. Grover Heinrichs & Associates
Suite 110-4 1802 W. Grant Road
Tucson, Arizona 85745

Dear Grover:

This will acknowledge your data on the Vulture Mine which you mailed to me on January 28, 1984. It is indeed an interesting property and Pioneer would be extremely interested in looking over the property with the possibility of a joint venture. Our interest in the property would be based on favorable cash flow analysis taking into consideration all the terms of the deal and the resultant rate of return to Pioneer. We would have some difficulty with the principals having total control of the project while Pioneer would furnish all the capital. There does appear to be conflict of interest in such an arrangement.

I look forward to hearing from you about the availability of the project.

Very truly yours,

Paul I. Eimon/ns

Paul I. Eimon

PIE:ns

Arizona Department of Mines and Mineral Resources

VERBAL INFORMATION SUMMARY

May be Reproduced

1. **Information from:** Plant monitor at A.F.Budge operation
   Address:
2. **Mine:** Vulture — 3. **ADMMR Mine File**
4. **County:** Maricopa — 5. **District**
6. **Township** **Range** **Sec(s)**
7. **Location:**
8. **No. of Claims - Patended** **Unpatented**
9. **Owner (if different from above)**
10. **Address:**
11. **Operating Company:**
12. **Pertinent People and/or Firm:**
13. **Commodities:**
14. **Operational Status:**
15. **Summary of information received, comments, etc.:**

Plant technician reported agglemerating and leaping has stopped. Cyanide no longer being added to solution is still being circulated. Gold recovery is winding down. Solution application at 85 gpm, recovery at 75 gpm.

Others have mentioned that A. F. Budge has considered custom leaching of other ore. Technician confirmed that so far only Vulture tailing have been processed.

Date: Feb. 2, 1990 Ken A. Phillips
Signature ADMMR

MEMO

October 12, 1960

VULTURE MINE

Travis P. Lane

Visited the Vulture Mine. This property was taken over last year by R.B. Johnson, 4008 N. 48 Pl., Phx., and Jack Turnbull of Coolidge, on a lease and purchase contract from the Hillside Mining Co. Involved in the deal were 12 patented claims and 14 unpatented claims. It is said that a substantial initial cash payment was placed in escrow and that release of the escrowed funds and action on the property is held up pending final settlement of the Lincoln and Dickie estates. Neither of the partners was present at time of the visit. "Dick" Williams, General Delivery, Wickenburg, is the caretaker and is living at the property.

See: SOUTH VULTURE MINE (file)

VULTURE MINE MARICOPA COUNTY

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LP 2/10/64

2/14/64 - Visited the Vulture Mine where P. H. Bennett is sampling and mapping for two men who are supposed to have taken over the mine. No names revealed.

EGW WR 2/27/64

8-10-67 Mine reopened for shipping

VULTURE MINE

Do Not Reproduce

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DEPARTMENT OF MINERAL RES[illegible]

News Items

Date 9/25/39

Mine Vulture

Location 15mi West of Wkbg

Owner

Address

Operating Co. East Vulture

Address Mining Co Inc

Wickenburg

Pres. [illegible]

Genl. Mgr. N.R. Dickie

Mine Supt.

Mill Supt.

Principal [illegible]

Me[illegible]

DEPARTMENT OF MINERAL RESOURCES

News Items

Date 1/16/40

Mine Vulture

Location Wickenburg

Owner

Address

Operating Co. East Vulture Mng Co

Address Same

Pres.

Genl. Mgr. E.R. Dickie

Mine Supt.

Mill Supt. Installing a

Principal Metals new Kennedy

Men Employed Van Sawn Crusher

Production Rate #25

Mill, Type & Capacity to increase

Capacity - now expect

Power, Amt. & Type 200 Tons

mixed ore & tailings

Signed Barth

From the desk of

FRANK P. KNIGHT

On Jan. 10, 1938 the following patented lands were owned by Vulture Mining & Milling Co., c/o Ernest R. Dickie, Baghdad:

Vulture Extension
Talmage
Jane Elmore
Sheridan Elmore
Van Buren
Astor
Conkling
Hamilton
Custer
Sherman
Pot Gold

Sec. 31 - 6N - 5W

" 36 - 6N - 6W

MARICOPA COUNTY

IS DESCRIBED IN BUREAU OF MINES

I. C. 6991 - FEBRUARY, 1938

ALSO

ARIZONA BUREAU OF MINES BULLETIN NO. 137

P 157

[redacted]

Maricopa 7 - 3 S 27, 34, T 6 N, R 6 W

East Vulture Mng. Co., Wickenburg

VULTURE MINE & MILL MARICOPA COUNTY

Visited Vulture Mine & Mill in company of Art Flagg. Discussed mining activity in the region with Jim Dickie and Claude Craker. Mr. Dickie is caretaker at the Vulture. He told of a recent sale of 5 leach tanks. Also, he advised that the property and remaining equipment is up for sale, with a Mr. Johnson showing keen interest and holding a short term option.

Phone calls from H. L. Wasson of A. D. McLain Realty Co. of Phoenix re Vulture mine production. They have been given an exclusive lising of the property.

5-11-59

T. P. LANE
WR

Interviewed Jim Dickie at Wickenburg and learned that the Vulture Mine has been optioned by the Lincoln estate to R. B. Johnston and Jack Turnbill. These people made a substantial payment and are said to be planning to turn the property to a large mining concern.

TRAVIS P. LANE
7-25-59 - WR

E. GROVER HEINRICHS & ASSOCIATES

SUITE 110-4 1802 W. GRANT ROAD
TUCSON, ARIZONA, 85745 U.S.A.
(602) 624-7421

January 24, 1984

Terry L. Downing
c/o Quintana Minerals Corporation
7951 E. Maplewood Avenue
Suite 114
Englewood, Colorado 80111

Re: Vulture Mine
Maricopa County, Arizona

Dear Terry:

Per our phone conversation today, I herewith submit for your review some of the tentative and basic conditions which our investors would want to include in a finalized agreement between themselves and the principals (Hennessey, Downing, and Hood):

1. The net profit before taxes would be split 65% to the investor and 35% to principals. The investors insist that our portion come out of the principals' portion, and the investors are aware of the proposed arrangement. Therefore, we suggest that our portion (Dan Lewis and E. Grover Heinrichs portion), jointly, be 1/4 of the 35%, which is 1/8 each of the 35%.

2. The investors would recover out of profits their initial capital investment first, and prior to the principals receiving their portion of the profits.

3. The investors would have complete control of the project, and they reserve the right to hire and fire as they see fit any and all personnel working on the project.

4. The investors insist on the option of hiring consultants or a consulting firm of their choice, at their expense, to evaluate the economic viability of the property. The investors would be willing to allow the principals access to the developing information and procedures for their assurance that the work is being properly done. The investors feel that if the principals compile and evaluate the developing data, it would constitute a conflict of interest. The investors do not intend to suspect your

honesty; they are merely following good business practice.

Please send to the letterhead address complete resumes of the principals, including addresses and phone numbers.

Also, we will need a written release from Quintana stating that the principals have Quintana's permission to deal in their own interest on the subject property during the period that Quintana has an option on the said property. In addition, we will need, for legal review, copies of all various agreements, i.e. 1. Owner Agreement with Hennessey; 2. Hennessey Agreement with Quintana; 3. Other?

5. We would like to examine the data you have used to determine the reserves, and any other data that you think is pertinent, during this period while the principals are shopping for investors or partners.

If the foregoing is of general interest to you and your group, then I suggest you sign and date in the space provided, and return the executed second copy to the letterhead address immediately. Failure for us to receive an executed copy by return mail of either this letter proposal or a counter proposal, indicates a rejection of our proposal as presented.

By signing, you understand that you commit yourselves (Hennessey, Downing, and Hood) to sharing the minority interest with Heinrichs and Lewis, as herein specified in Item No. 1, on the subject property and project, provided that Heinrichs and Lewis, through their knowledge and contacts, can deliver an investor or investors under terms that are mutually agreeable to all parties.

We, individually, and in behalf of our investors, look forward to hearing further from you.

Sincerely,

E. Grover Heinrichs

EGH:vh

ACCEPTED BY:_____ DATE:_____
George Hennessey

ACCEPTED BY:_____ DATE:_____
Terry L. Downing

ACCEPTED BY:_____ DATE:_____
Milton W. Hood

Property: Vulture Mine

Location: Subject property is located 14 miles southwest of Wickenburg in Maricopa County, AZ. It is accessable by a well maintained all weather county road.

History & Description: Gold was discovered at the Vulture in 1863 and mining commenced in 1866. Production from 1866 through 1917 was estimated at $6.8 million. This would amount to 329,000 ounces @ $20.67/oz. Some mining from open pits and underground along with cyanide treatment of old tails was done in the 1930's.

The property consists of 14 patented claims, 451 unpatented lode claims and 50 unpatented placer claims. An advance royalty of $10,000/mo is payable to the owner and is deductable from production royalties. Production royalties are NSR and fluctuate with the price of gold according to the following schedule:

Price of Gold/oz.	Royalty (% NSR)
Less than $400	5%
$400-600	6%
$601-800	7%
$801-1000	8%
$1001-1200	9%
$1201-1400	10%
$1401-2000	11%
$2001 & Up	12%

Reserves: There are approximately 1.9 million tons of ore in the proven category at the Vulture Mine. These consist of the following:

1. Stamp mill tails 450,000 tons @ 0.045 o.p.t. Au.
2. Open pit ore @ 3.0:1.0 SR 1,525,000 tons @ 0.083 o.p.t. Au.

In addition to these reserves, there appears to be excellent potential for development of more ore of the following types.

Placer material
Additional open pit ore
Underground high grade ore

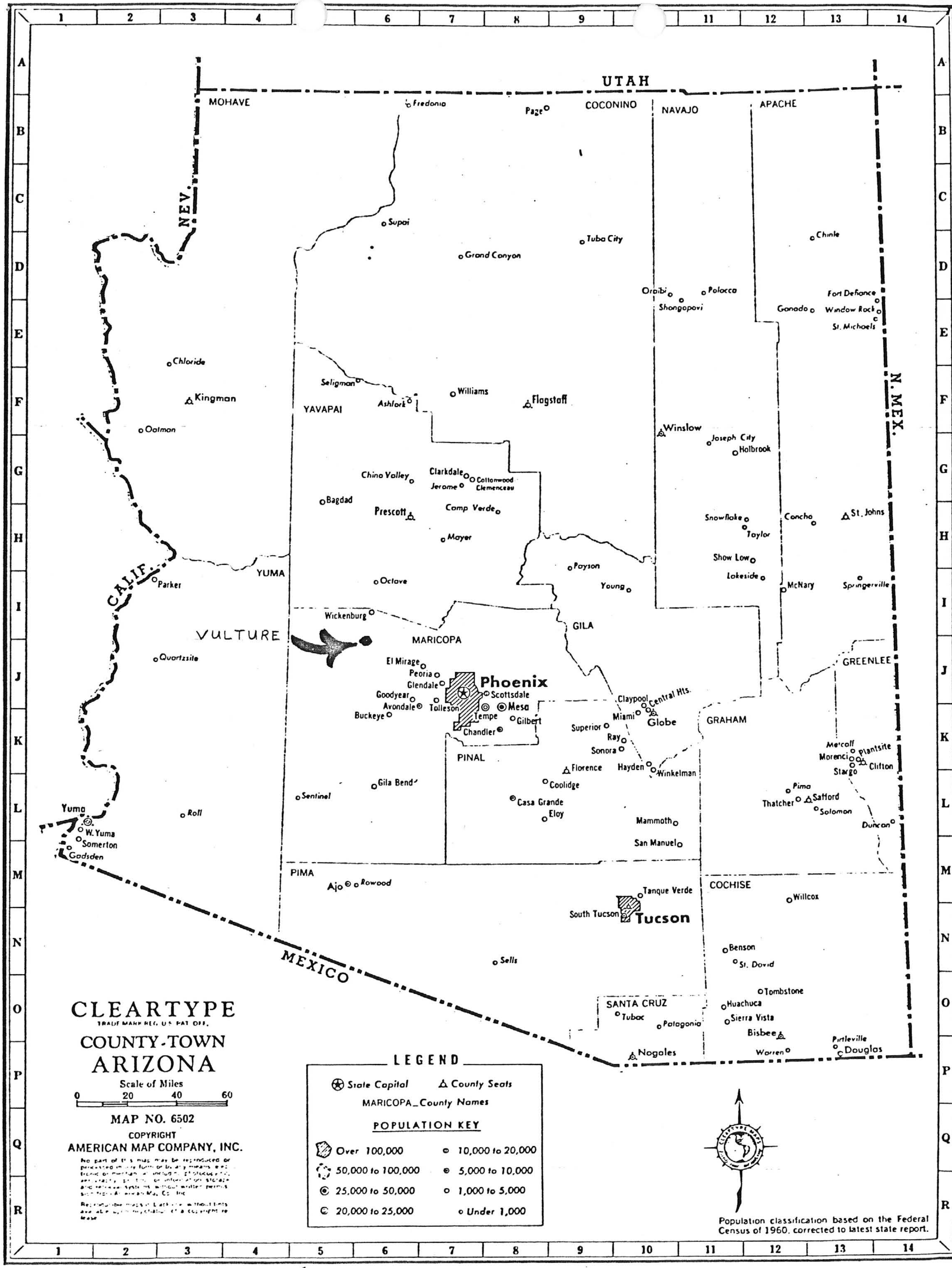
Metallurgy: Metallurgical test work by Dawson Metallurgical Labs, CSMRI, and Kappes, Cassiday & Associates indicate that both the tails and open pit ore are treatable by cyanide leaching with an expected recovery of about 70% of the contained gold. Further testing will be carried out during the option period.

Acquisition & Development: The property would be optioned for a 90-day period at a cost of $30,000. During the option period a sampling program would be carried out to verify tonnage, grade and metallurgy of the tailings. This sampling and metallurgical testing, along with flowsheet design, equipment sizing and selection is estimated to cost about $60,000 and could be at the go/no go decision point within 60 days of signing the option.

First phase development would consist of processing the stamp mill tailings. This would be carried out at an average rate of 50,000 tons per month. It is estimated that the first production could be realized 6 months from execution of the option agreement if no complications arise.

As soon as production starts from the tails, development work on the open pit ore would commence. This would consist mainly of pad preparation and mining and placing the ore on the pads. Very little additional equipment would be required if pad preparation and mining is done by a contractor.

The first pad would be built in two stages. The first 50,000 tons would be placed on the pad and leaching started and the second stage would follow. This procedure would minimize the funds required to move the project through startup.



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Scale of Miles
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AMERICAN MAP COMPANY, INC.
LEGEND
State Capitol
County Seats
MARICOPA_County Names
POPULATION KEY
Over 100,000
50,000 to 100,000
25,000 to 50,000
20,000 to 25,000
10,000 to 20,000
5,000 to 10,000
1,000 to 5,000
Under 1,000
Population classification based on the Federal Census of 1960, corrected to latest state report.
UTAH
NEV.
CALIF.
N. MEX.
MEXICO
VULTURE
MOHAVE
COCONINO
NAVAJO
APACHE
YAVAPAI
YUMA
MARICOPA
GILA
GREENLEE
GRAHAM
PINAL
PIMA
COCHISE
SANTA CRUZ
Fredonia
Page
Supai
Grand Canyon
Tuba City
Chinle
Oraibi
Polacca
Shongopovi
Ganado
Fort Defiance
Window Rock
St. Michaels
Chloride
Kingman
Oatman
Seligman
Ashfork
Williams
Flagstaff
Winslow
Joseph City
Holbrook
Chino Valley
Clarkdale
Cottonwood
Clemenceau
Jerome
Bagdad
Prescott
Camp Verde
Mayer
Snowflake
Taylor
Concho
St. Johns
Show Low
Lakeside
McNary
Springerville
Parker
Octave
Payson
Young
Wickenburg
Quartzsite
El Mirage
Peoria
Glendale
Phoenix
Scottsdale
Goodyear
Avondale
Tolleson
Mesa
Tempe
Gilbert
Buckeye
Chandler
Claypool
Central Hts.
Miami
Globe
Superior
Ray
Sonora
Hayden
Winkelman
Florence
Coolidge
Casa Grande
Eloy
Morenci
Plantsite
Metcalf
Stargo
Clifton
Pima
Thatcher
Safford
Solomon
Duncan
Gila Bend
Sentinel
Yuma
W. Yuma
Somerton
Gadsden
Roll
Mammoth
San Manuel
Ajo
Rowood
Tanque Verde
South Tucson
Tucson
Willcox
Benson
St. David
Sells
Tombstone
Huachuca
Sierra Vista
Bisbee
Pirtleville
Warren
Douglas
Tubac
Patagonia
Nogales

CONDENSED RESUMES

OF

MILTON W. HOOD

Milton W. Hood is a 1953 Graduate of the University of Arizona with a B.S. in Geological Engineering and a M.B.A. which he received in 1972. Work experience consists of positions as Pit Engineer, Mine Foreman, Chief Mining Engineer and Mine Superintendant of the 55,000 TPD open pit copper mine, Cyprus Pima Mining Company in Arizona; Manager of Mining Engineering, corporate level, with Utah International in San Francisco, California; Vice President of operations for Quintana Minerals Corporation, Houston, Texas. Primary skills include management of new projects and open pit mining.

TERRY L. DOWNING

Terry L. Downing is a 1970 graduate of the South Dakota School of Mines and Technology in Metallurgical Engineering. Work experience consists of positions as Assistant Mill Metallurgist at White Pine Copper Company in Michigan; Concentrator Metallugist, Assistant Superintendant, and Superintendant of the 22,500 TPD Inspiration Consolidated Copper Company Concentrator in Arizona; Staff Metallurgist at Homestake Mining Company in South Dakota; Vice President and Manager of Operations at Gold Resources, Inc., in Colorado; and Senior Metallurgist at Quintana Minerals Corporation in Colorado. Primary skills include management of operations in recovery of copper, gold and silver.

PROPOSAL FOR JOINT VENTURE

Mr. George Hennessey, Lessee of the Vulture Mine Property near Wickenburg in Maricopa County, AZ, has agreed to cooperate with Mr. Terry Downing and Milton Hood in the development and operation of the Vulture Mine. As their contribution to this undertaking, Mr. Downing and Mr. Hood will obtain project financing and contribute necessary technical and management expertise to develop and operate the mine(s).

It is proposed that the property be developed as a joint venture between the incoming financial backer and Messers Hennessey, Downing and Hood. The basis of a deal would be:

1. Incoming partner to furnish funds for option period of 90 days ($30,000) and cost of sampling and metallurgical testing program during option period to verify tonnage, grade and treatment flowsheet for stamp mill tails. This program is estimated to cost approximately $60,000.

2. If the sampling program confirms the viability of the project, and a decision is made to proceed with development, the incoming partner will provide funds necessary for project development through completion and commercial production.

3. Operating revenue, defined as sales less operating costs and royalties, would be divided as follows:
    a. Seventy-five percent (75%) to incoming partners and twenty-five percent (25%) to operating partners (Hennessey, Downing & Hood) until initial investment is repaid.

    b. After repayment of the initial investment, operating profits will be divided on an equal basis between the incoming partners (Hennessey, Downing & Hood).

    c. The incoming partner will receive credit for all allowable depreciation and investment tax credits.

An operating agreement between the joint venture partners would be executed. This would set forth the manner in which the property would be developed and operated. It would include duties and obligations of all partners including composition of a management committee.

and relative position to the Vulture group will hereinafter be stated.

The Vulture Group.

LOCATION.

The Vulture group is located 14 miles directly south of Wickenburg, the nearest station on the Santa Fe, Prescott & Phoenix R. R., from which it is reached by a good wagon road, a distance of 16 miles, and about 55 miles from Phoenix, the capital of the Territory. Elevation about 2300 feet above the sea level.

The apex of the principal mine of this group occurs in the Wickenburg and Vulture Claims. This mine is made up of several veins coming from an easterly direction, which unite about the centre of the Wickenburg claim, forming one great fissure or vein, from 30 feet to 60 feet in width, which continues unbroken in a westerly direction to near the end line of the Vulture claim, where they again divide or separate, going in a westerly direction.

This ore body occurs in a contact between a porphyry dyke, from 50 to 100 feet in width, forming its footwall and shale its hanging wall, and dips northerly at an angle of about 35° from horizontal, as shown on cross vertical section map.

History.

The history of the Vulture mine forms an important chapter in the history of the Territory of Arizona, and one is not complete without the other.

The discovery of the Vulture mine, following as it did, the discovery of placer gold at La Plaz (on the Colorado river 7 miles north of the town of Ehrenberg), and at Webber Canyon (10 miles northwest of Wickenburg), caused a great excitement in the mining world, which, owing to the great size of the vein and the extraordinary richness of its ores, attracted to the country adventurous spirits from all points.

For the following condensed history of the Vulture mine I am indebted to Henry Wickenburg and Ed. B. Wiggins, consulting and mining engineer, whose address is Phoenix, Arizona. This

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latter gentleman was first employed at the property in 1866 and continued with it during the whole or greater part of the time it was actively operated, or until 1889. He is well known as a man of honesty, veracity, and a Mining Engineer of marked ability.

The mine was discovered in October, 1863, by Henry Wickenburg, who was accompanied on a prospecting trip by two men, named Von Bibber and "Verde" Green. After discovering the mine, the party returned to the present site of Wickenburg and a short time thereafter Von Bibber and Green left the country and never returned.

In May, 1864, Mr. Wickenburg commenced active operations by building arrastras on the Hassayampa river and reducing the ores, which yielded from $80 to upwards of $100 per ton.

The country soon filled up with prospectors, and in a short time over 150 arrastras, located at different points on the Hassayampa River, were in full operation.

In the winter of 1864-65 a five stamp mill was erected by Mr. Wickenburg in the town of Wickenburg, which he operated for about a year and a half, when he sold to a company, who erected a 20 stamp mill in the town of Wickenburg.

In 1867 a first-class 40 stamp mill was built about one mile above the present town of Wickenburg, which was operated continuously for four years, when the mines came into the possession of Dr. J. Wilson Jones and P. W. Smith, who built a 20 stamp mill at a point on the Hassayampa river known as Smith's mills (10 miles from the mine). This mill was operated steadily until the year 1879, when they sold out to a New York Company, who erected a 20 stamp mill at a point called Seymour, on the Hassayampa river 8 miles from the mine. This mill they operated for one year, during which time they erected an 80 stamp mill at the mine, which was operated continuously through several administrations, for about nine years, the water being pumped from the Hassayampa river; at the end of which time the mill, as a whole, was worn out. Since then leasers and others have run from 10 to 20 stamps at irregular intervals. This they were enabled to do by

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taking parts from one portion of the mill to keep the other portions in running order, until the whole was worn out.

Up to the year 1872 the country was overrun by hostile Apache Indians, making it necessary to send guards with the ore trains. The cost of hauling ore from the mine to the Wickenburg mills was at the start $16 per ton, which was gradually reduced to $9 per ton.

No ores of less value than from $30 to $40 per ton was treated during that time. Ore of a less value was treated by Jones and Smith.

Mr. Wiggins estimates that the total tonnage of ore extracted and reduced since the discovery of the mine is approximately 1,100,000 tons, which yielded approximately $16,000,000, that being the amount recovered by the various individuals and companies who operated the property at different times. In addition to this amount, he gives as his opinion, which is also corroborated by miners whom I have interviewed, who worked in the mine during its early history, that several millions of dollars of gold were stolen, in the shape of specimens (by dishonest miners and employees) which were pounded up in hand mortars. This was made easy by the fact that all bills and other indebtedness of the company for the first six or seven years was paid in bullion, thus making Vulture gold a currency in the country.

Mr. Wickenburg and others inform me that the vein stood up from 30 to 60 feet above the ground, and that the flats on all sides of it were covered and strewn with boulders, which had broken from it. These were picked over and milled, yielding $80 per ton. The soil immediately around the vein and the ravines flowing by, afforded dry placer mining for years, from which a great many thousand dollars were taken.

Developments.

The mine was developed and worked through two incline shafts (see vertical cross section map) 420 feet apart; the west incline being sunk to a depth of 570 feet and the east incline to a depth of 400 feet. The works in the east incline are inaccessible

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owing to caved ground. The workings from the west incline above the 350 foot level are about three-quarters worked out and badly caved. There is a low grade body of ore standing between the east and west shafts. At a depth of 450 feet on the west incline, a drift 200 feet long has been run in a westerly direction. On the 500 foot level one has been run in the same direction 150 feet.

There have been no cross cuts run from either level to determine the width of the vein or value of the ore, although in each level some good ore was encountered and partly extracted.

There are a great many thousand tons of ore in the old works that will pay handsomely.

Character of the Ore.

As stated, the vein is a contact lying between a porphyry dyke, which forms its footwall, and shale, which forms its hanging wall, and dips in a northerly direction at an angle of about 35° from horizontal. While the ore was continuous throughout the entire length of the ore chute and to the depth of the present workings, yet there were enormously rich bodies of less or greater size found throughout.

The presence of the prophyry dyke gives evidence of great strength and permanency to the vein in depth, which in breaking through the shale sent up to the surface numerous veins and dykes, many of which give every evidence of making valuable mines under the economical conditions which can now be obtained, and all of which act as feeders to the underlying vein and add additional strength and value at points of juncture. The porphyry dyke itself, wherever disturbed, or broken enough to permit the mineral solutions to penetrate it, is pay ore.

It is my opinion that this dyke is the principal source of values, as it generated and brought up hot water carrying mineral in solution, which was precipitated in the vein as the rocks cooled.

The valuable or high-grade ores in this vein will be found in large bonanzas, following one another in depth. The spaces between the occurrence of the bonanzas will be low grade, but the

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mine taken as a whole will yield very large profits, if properly managed and opened so it can be operated on a large scale.

The first bonanza, from which the great output was made, gave out at about a depth of 400 feet from the surface, on the incline. The development below that point, or upon the 500 foot level, west incline, and also in the winze from the east incline, are beginning to show an improved value in the ore. I am creditably informed by individuals familiar with the property, from its early history, that the mine was opened to the depth of 350 feet on the west incline and to the depth on the east incline as shown on the vertical map, by parties who operated the mine prior to the year 1872.

In the stoping, numerous pillars had to be left to support the walls of the mine, and no effort whatever was made by their successors to develop in depth, the consequence being that after the solid blocks of ore were worked out each successive management encroached on or extracted more and more of the pillars, which finally caused the two great caves shown on the ground plan and vertical cross section maps. The sinking of the west incline from the 350 foot level to its present depth was done by leasers to obtain water to run a limited number of stamps, and as the supply of water thus obtained only enabled them to run 10 stamps on half time, no practical development work was done.

The facts are that at no time in the history of the property was it operated intelligently or as a legitimate mining enterprise.

Prospective Value.

I know of no way to form an opinion in regard to the probable future of a mine correctly or with any degree of accuracy, except by analogy. That is, by comparing the geological and other known facts of the mine under consideration, to establish facts and results obtained in mines of similar character occurring in practically the same formation, which have been very extensively exploited.

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After a most careful consideration of all the facts, I find that the conditions surrounding the Vulture mine very closely correspond to those surrounding the great mines on the Mother Lode of California.

The Mother Lode of California is applied to a belt of black slate or shale which traverses the State in a northerly and southerly direction for over 100 miles, through which at different points igneous dykes break up through to the surface. It is on one side or the other of these dykes that the quartz veins are found, or in other words, the dyke is either the foot or hanging wall of the vein, and sometimes the dyke is broken or fractured, at such points values penetrating it, often making it valuable enough to work.

Many mines are now operated on the Mother Lode at vertical depths of from 1500 feet to nearly 3000 feet, the deepest being the Kennedy mine in Amador County.

Every mine on this Mother Lode that has been worked to great depth has shown a good body of ore on the surface, which became poorer if not absolutely worthless at some point as depth was attained, or rather in gaining depth the vein entered a low grade ore or an absolutely barren zone, which continued in depth from a few hundred feet to six or seven hundred feet, when it again enters the good ore or a bonanza, which as a rule is more continuous and in all cases is larger and consequently more valuable than the surface bonanza.

We find that the Vulture mine has an igneous dyke (porphyry) for a footwall and shale for a hanging wall, being practically the same geological conditions as found on the Mother Lode, therefore practically the same results should follow development.

The great size and strength of the porphyry dyke on which the Vulture vein rests, together with the numerous veins which it sends to the surface, as shown in vertical cross section map, gives perfect assurance of continuity of the vein and values with the occurrence of frequent rich bonanzas as depth is attained.

All

Recommendations.

I would recommend the sinking of a large three compartment shaft at the point shown on the cross section map. The collar of the shaft will be on a hill, giving sufficient fall for reduction works; besides it goes down in the vicinity of several veins, some of which give every indication of being valuable and of making mines, which can be developed from this shaft. The presence of these veins, which as stated, are feeders to the main vein, leads to the opinion that the shaft will cut the Vulture vein where it should be and in my opinion will be exceedingly rich.

The amount of ore that will be developed above and between the point at which the shaft will cut the vein and the bottom of the present mine will be sufficient to run very large reduction works for a great many years.

This shaft may develop sufficient water to operate reduction works, in which event it will not be necessary to erect pumping works on the Hassayampa river. In view, however, of the great probable value of this property, as a matter of business prudence water rights on the Hassayampa river should be obtained at an early date.

To facilitate the opening of the mine I would recommend the sinking of the west incline to intercept the proposed vertical shaft.

Reserves.

The reserves in the mine consist of a great many thousand tons of low grade ore that will yield a profit if worked on a large scale.

The tailings from ore already worked and in the tailings pit, variously estimated at from 150,000 to 200,000 tons of an average value of $2.50 per ton, are amenable to treatment by the cyanide process by which an extraction of 90% can be obtained at a cost not to exceed $1.00 per ton, if reduced on a large scale, leaving a profit of from $1.00 to $1.25 a ton.

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Remarks.

The proximity of the railroad to the mine since it was actively worked will greatly reduce the operating expenses, as fuel and all material can be delivered at a fraction of former costs.

The erection of reduction works should be deferred until the mine is fully developed and the character of the ore below the water level is established.

Probable Cost of Operations.

In making an estimate of the probable cost of operating the mine per ton of ore extracted and reduced, it depends largely upon the size of the ore chute and the character of the ore.

My examination of the Vulture ore chute leads me to the opinion, that when it is fully developed it should, and in my opinion will, maintain its past average size, if not become larger, owing to the numerous feeders which join it in depth.

Just what the character of the ore will be below the water level cannot be known until developments are made. It may prove to be free milling and concentration or it may prove to be strictly a cyaniding proposition. In either event the cost accompanying the reduction of the ores including transportation and sale of the concentrates will approximate about the same. The larger the tonnage extracted and treated the less will be the cost per ton, for all fixed charges such as superintendents, engineers, foremen, bosses, assayers, etc., will remain practically the same, whether 100 or 1,000 tons are treated per day; therefore the amount of ore that can be treated will depend upon the amount the mine can produce.

Should the Vulture ore chute remain the same size and the large vertical veins near the proposed working shaft develop into mines as I believe they should, the property can produce without any difficulty from 700 to 1,000 tons of ore per day.

The question of power also cuts a very important factor and should at the proper time be worked out in detail, that is,

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for the purpose of obtaining the cheapest power, which I have not done.

I find, however, that coal can be delivered at any point on the railroad, on the Hassayampa river, for $5.00 per ton. I am also informed that oil for power purposes is cheaper than coal.

By having a central power plant located on the railroad on the Hassayampa river, all power necessary to operate the mines and reduction works can be generated at that point and conveyed by electricity to the mines.

If in developing the mine sufficient water is found to run the reduction works and for other purposes, it will obviate the necessity of putting in a pipe line to the mine from the pumping plant on the Hassayampa river. The cost of pumping water from the mine, however, would probably cost double what it would from the river.

After carefully considering all the conditions and probable difficulties to be overcome, I am of the opinion that after the mine is thoroughly opened, with reduction works of 700 to 1,000 tons capacity per day, the cost in any event should not exceed $2.50 per ton of ore treated.

Your property being so far from any town of any size, I consider it of very great importance that the Company maintain its ownership of the townsite; building and operating its own boarding houses; erecting cottages to be rented to employees, and a matter of equal if not of greater importance, which I most strongly urge, is the establishing by the Company of a general merchandise store. Not only will they find customers among their own employees, but they will also receive a very large patronage from smaller mines, individual prospectors, ranchers and others.

The subject of Company stores is fully appreciated and adopted by some of the most extensive mine operators in the southwest, notably, Phelps-Dodge & Co., who have large stores at all of their most important mining and reduction points.

A large proportion of the Company's employees will be Mexicans, or of Mexican extraction, who are much in favor of working for a Company that has a stock of general merchandise.

The profits being derived from boarding houses, tenements, sale of water and from the store should make a further decided reduction in the cost of operating.

CONCLUSIONS.

From what I have already stated it is hardly necessary for me to say that I have great faith in the future of this property.

I will, however, emphasize that faith by stating that after a most thorough examination of the property and careful consideration of all geological features and facts relative to it, I am firmly of the opinion that the mine is in its infancy and that the amount of gold it has already yielded is a mere "bagatelle" as compared to the amount it will yield when fully opened as recommended, operated and managed as a legitimate business enterprise.

Weckenburg, Arizona. Wm A. Farish
July 1st 1904.

A correct copy of original.

VULTURE DEVELOPMENT CO.

By [signature] President.

A7

BESS GROUP OF MINES.

The Bess group of mines, consisting of eight full claims, is located on a series of quartz veins, running in a general easterly and westerly direction and parallel to each other, varying in size from 2 to 10 feet in width. They are situated a few hundred feet south of the Angel group and about four miles north of the Vulture mine.

The formation is metamorphic or changed granite.

The work done upon them consists of a few short drifts and superficial shafts, the deepest of which is 80 feet, sunk upon the Boer claim which shows a vein 3½ feet wide in the bottom.

The veins carry a small amount of gold in the different works referred to but not in sufficient quantity to pay.

My judgment is if they have any value at all it will be found in depth.

As you already now have them, I would recommend that the annual assessment work for the group be done in one shaft, with the view to sinking to water level. The character of the ore may become better in gold at that depth and it is not improbable that it will carry an appreciable amount of copper.

ANGEL, LUCKY BOY, AND ST. CHARLES GROUPS.

The Angel group, located 4 miles north of the Vulture mine, consists of 14 claims, and the Lucky Boy group, located one mile northeasterly of the Angel group, and the St. Charles group, located about 3 miles southwesterly of the Angel group and 4 miles west of the Vulture mine, are all located upon a copper bearing belt which traverses the country from Vulture peak in a southwesterly direction.

The formation is a metamorphic or changed granite. The belt is accompanied by trachyte dykes.

A6

On each of these groups of mines good copper ore is found on the surface and continues good for a general average in depth, where prospected to 50 feet, at which point the copper contents begin to leach out by percolating surface waters and the ore becomes worthless. This condition and character of material will continue to water level, when valuable ore should again make its appearance and thereafter continue good in depth.

At what point the water level will be reached on the different groups I cannot determine. However, I consider them all good prospects and would recommend that shaft be sunk to water level on each group, when, as already stated, it is my opinion that valuable ore should be found and consequently good mines will be developed. The Angel group is equipped with a good 12-horse power gasoline hoist ample to sink the shaft 500 or 600 feet deep, with sufficient camp appliances and tools.

Wickenburg Arizona
July 1st 1904

W. A. Farish

A correct copy of original.

VULTURE DEVELOPMENT CO.

By [illegible] President.

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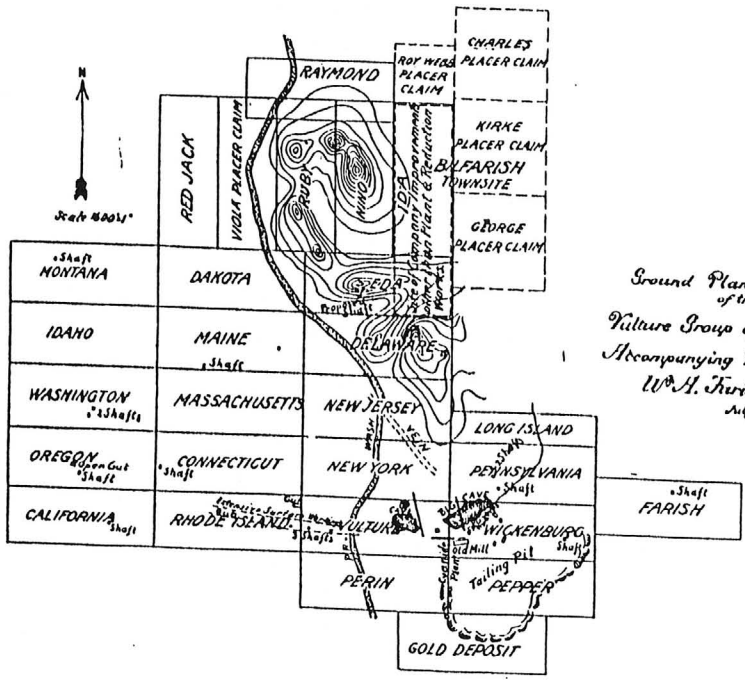
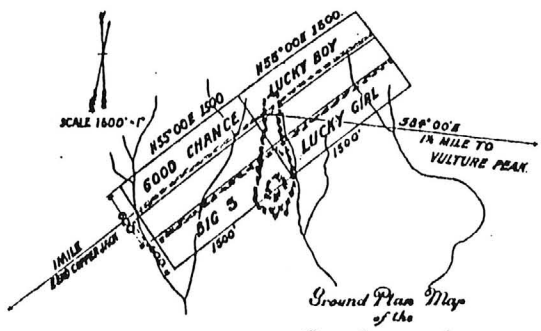


Ground Plan Map of the Vulture Group of Mines Accompanying Report of Wm A. Farish July 1 1904



Ground Plan Map of the Lucky Boy Group of Mines Accompanying Report of Wm A. Farish July 1 1904

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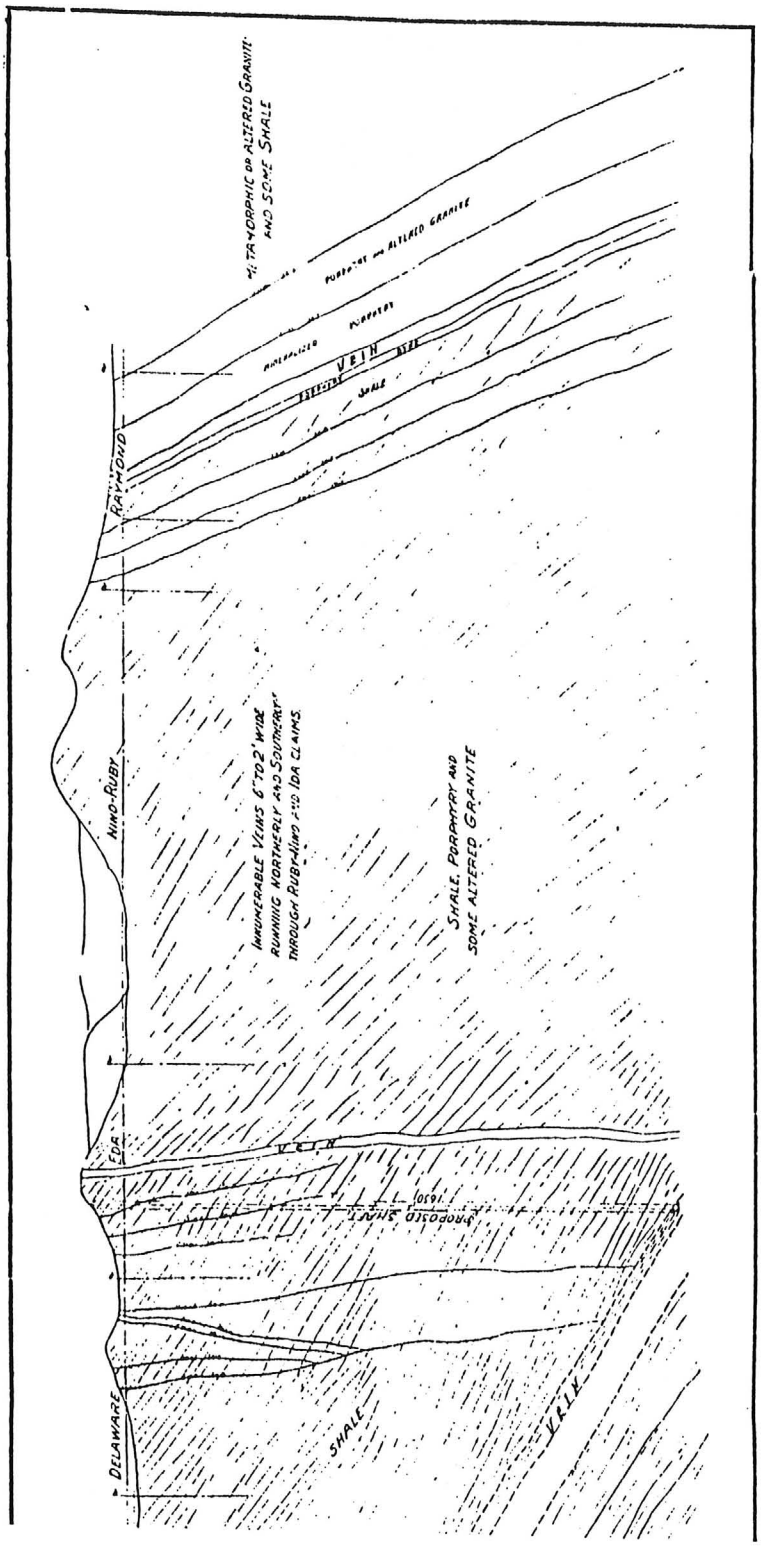
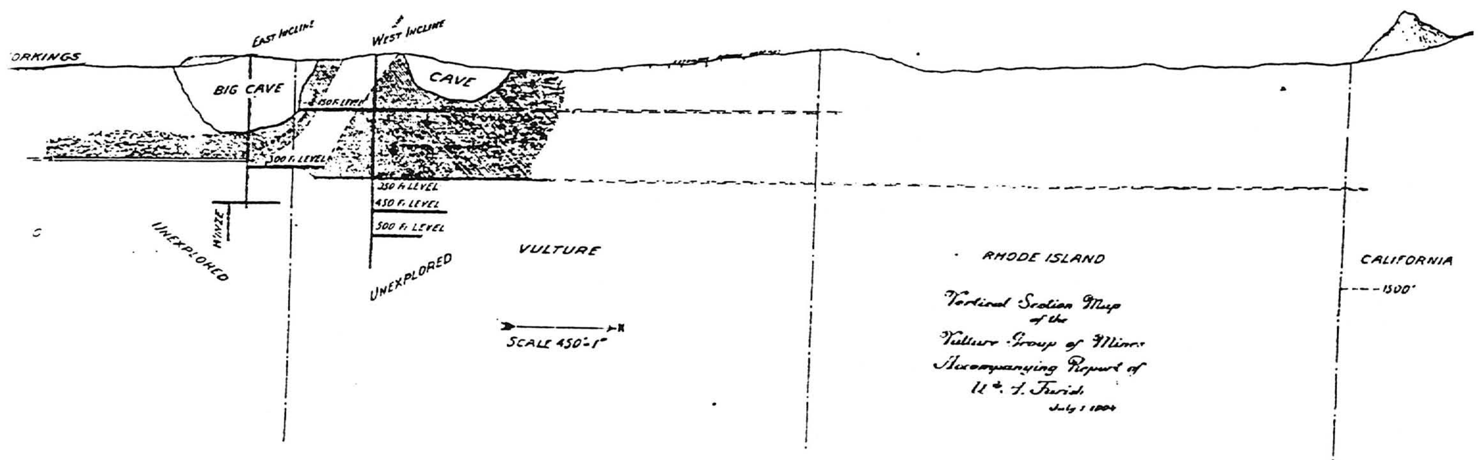
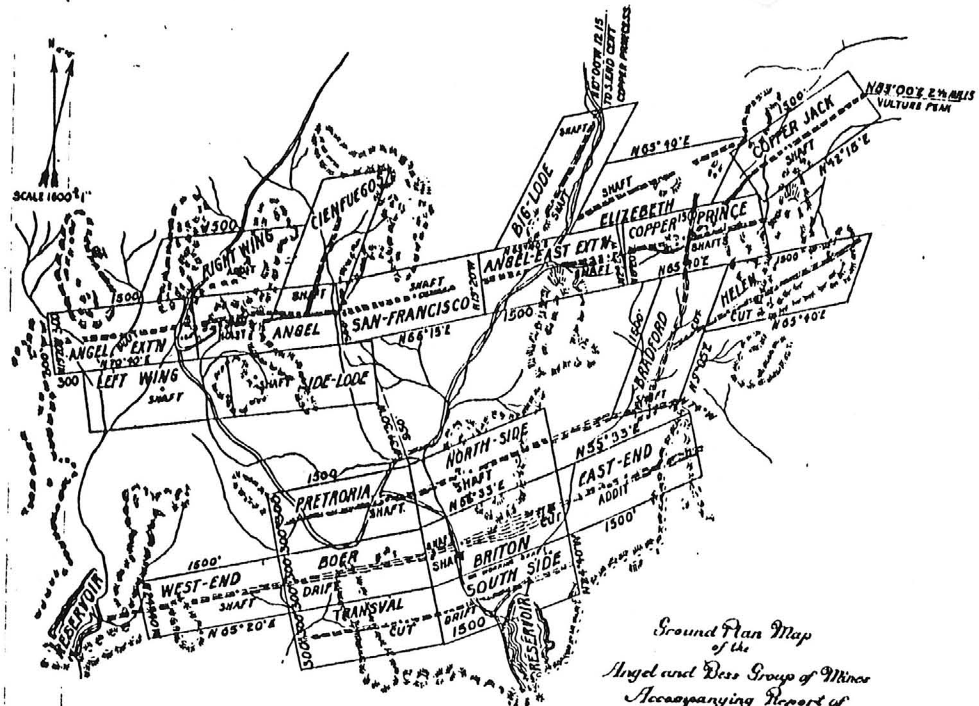

METAMORPHIC OR ALTERED GRANITE AND SOME SHALE
PORPHYRY OR ALTERED GRANITE
MINERALIZED
PORPHYRY
VEIN
SHALE
RAYMOND
NINO-RUBY
IMMUMERABLE VEINS 6" TO 2' WIDE RUNNING NORTHERLY AND SOUTHERLY THROUGH RUBYLAND AND IDA CLAIMS
SHALE, PORPHYRY AND SOME ALTERED GRANITE
IDA
VEIN
PROPOSED SHAFT
1630'
DELAWARE
SHALE
VEIN

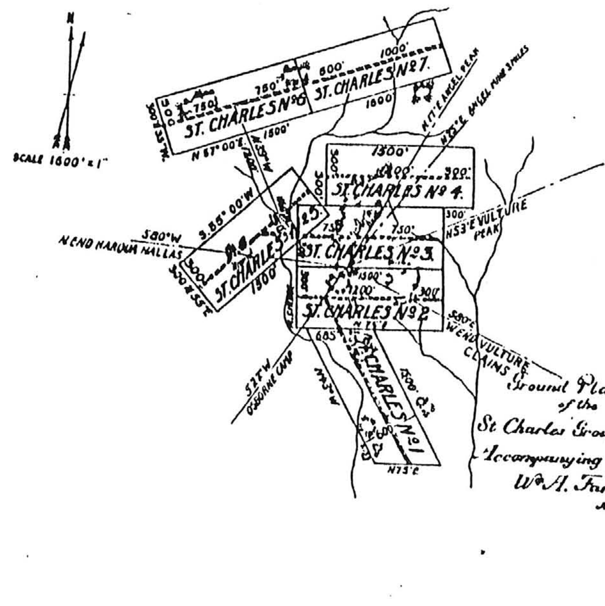
A 3


ORKINGS
East Incline
West Incline
BIG CAVE
CAVE
500 Ft. LEVEL
250 Ft. LEVEL
450 Ft. LEVEL
500 Ft. LEVEL
WINZE
UNEXPLORED
UNEXPLORED
VULTURE
SCALE 450'=1"
RHODE ISLAND
CALIFORNIA
1500'
Vertical Section Map
of the
Vulture Group of Mines
Accompanying Report of

A2



Ground Plan Map of the Angel and Bess Group of Mines Accompanying Report of Wm A. Farish July 1 1904



Ground Plan Map of the St Charles Group of Mines Accompanying Report of Wm A. Farish July 1 1904

A1

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX 7, ARIZONA

May 29, 1961

Mr. Tyson Ashlock, Sec'y.-Treas.
Cactus Realty, Inc.
Albuquerque, New Mexico

COPY

Dear Mr. Ashlock:

This will acknowledge your letter of May 19, 1961 requesting information concerning the Vulture Mine near Wickenburg.

The famous Vulture Mine was one of the early day bonanza gold producers of the West. It was discovered in late 1863 and produced substantially during the periods 1866-1888 and 1908-1917. Some desultory leaser output was made between those periods and then to 1927 in which year production was resumed at a fairly substantial rate until Government Regulation L-208 (issued in 1942) forced the closing of gold mines as a war measure. Total value of production has been estimated at around $15,000,000. Although there has been continuing interest in the possibilities of the property since the closing in 1942 no serious work has been done.

The last operator was the East Vulture Mining Co., ownership of which rests in the estates of Ernest Dickie and John C. Lincoln. The company address is Bagdad, Arizona c/o Geo. Colville. According to our last information a lease with option to purchase was granted in 1960 to a partnership composed of R.B. Johnson, 4008 N. 48 Place, Phoenix and Jack Turnbull of Coolidge.

The veins of the Vulture mine occur in a broad fault zone in a country rock which is principally a complex of granite and schist cut by numerous dikes. Intricate pre-mineral and post-mineral faulting has presented frequent development problems and the ore was "lost" and found a number of times. It is believed in some quarters that geologic study followed by interpretive exploration offers a good chance for finding more ore bodies as in the past.

The mine contains some 25,000 ft. of workings reaching to a maximum slope depth of 1550 ft. although most of the past production came from above the 1050 level.

Mr. Tyson Ashlock, Sec'y.-Treas.
Cactus Realty, Inc.

The property comprises 11 patented and a large number of unpatented claims (some of which are said to be in process of patenting). Beside its mining possibilities the colorful old camp with many early-day structures still intact seems to offer attractive real estate possibilities as a "dude" ranch or for desert homesites, etc.

The mine is described in some detail in Arizona Bureau of Mines Bulletin No. 137, Arizona Lode Gold Mines & Mining (1934). Unfortunately this publication is out of print, but a copy may be consulted in most large libraries in the west.

We hope the above information will be of assistance to you.

Yours very truly,

TRAVIS P. LANE
Field Engineer

TPL/H

CACTUS REALTY, INC.

MEMBER OF MULTIPLE LISTING SERVICE

2631-A Texas N. E. Telephone AXtel 9-7678

Albuquerque, New Mexico

May 19, 1961

Arizona Bureau of Mineral Resources
State Fairgrounds
Phoenix, Arizona

Gentlemen:

I will appreciate it very much if you will send me any information which you may have pertaining to the Vulture mine near Wickenburg. I would like to have information on the history of the mine, past production, future potential, etc.

Yours truly,

Tyson Ashlock

Tyson Ashlock, Sec'y.-Treas.
CACTUS REALTY, INC.

TA:c

January 25, 1945

Mr. Stanley A. Day
Sheriff's Office
Prescott, Arizona

Dear Stan:

I believe that Mr. Ernest Dickie, now manager of the Bagdad Mine, is the owner or at least actively in charge of the Vulture.

The best way would be to have your party contact Mr. Dickie at Bagdad. He probably better phone and make sure he is there first.

May come up soon.

Yours sincerely,

Chas. H. Dunning
Director

CHD:LP

BEAL, L. WAYNE, owner
Be -Borgens Inc.
Finch Avenue for Men
7103 Stetson Drive
Scottsdale 949-5331

See: Vulture Mine (file) Maricopa

9/2-1/62

@ Bill Coleman called re Vulture Mining Co. – not East Vulture – & is interested in stock transfer.

VULTURE MINE

$400

ESTIMATE OF OPERATING CASH GENERATED

A

MONTH	1	2	3	4	5	6	7	8	9	10	11
Land Payment	30,000			30,000			30,000				
Eval & Eng	10,000	10,000	10,000	10,000	10,000	10,000					
Tons Mined-Tails							50,000	50,000	50,000	50,000	50,000
Tons Mines-Ore											
Leach Pad Const						75,000		75,000		75,000	
Other Capital						270,500				13,000	
Royalty 5%											
Mining							50,000	50,000	50,000	50,000	50,000
Preparation							87,500	87,500	87,500	87,500	87,500
Leaching								75,000	75,000	75,000	75,000
Stripping								25,000	25,000	25,000	25,000
Office & G&A								37,500	37,500	37,500	37,500
Lab								12,500	12,500	12,500	12,500
Explor											25,000
Total Cost-Tails	40,000	10,000	10,000	40,000	10,000	355,500	167,500	362,500	287,500	375,500	312,500
Total Cost-Open Pit											
OZ Recovered								1,575	1,575	1,575	1,575
Revenue at 400/oz									630,000	630,000	630,000
OP Cash Gen-Tails	-40,000	-10,000	-10,000	-40,000	-10,000	-355,500	-167,500	-362,500	+342,500	+254,500	+317,500
Cum Cash Gen-Tails	-40,000	-50,000	-60,000	-100,000	-110,000	-465,500	-633,000	-995,500	-653,000	-398,500	- 81,000
OP Cash Gen-Ore											
Cum Cash Gen-Ore											

VULTURE MINE

$350 OFT Au

ESTIMATE OF OPERATING CASH GENERATED

MONTH	1	2	3	4	5	6	7	8	9	10	11	12
Land Payment	30,000			30,000			30,000					
Eval & Eng	10,000	10,000	10,000	10,000	10,000	10,000						
Tons Mined-Tails							50,000	50,000	50,000	50,000	50,000	50,00
Tons Mined-Ore												
Leach Pad Const						75,000		75,000		75,000		117,50
Other Capital						270,500				13,000		
Royalty 5%												20,24
Mining							50,000	50,000	50,000	50,000	50,000	50,00
Preparation							87,500	87,500	87,500	87,500	87,500	87,50
Leaching								75,000	75,000	75,000	75,000	75,00
Stripping								25,000	25,000	25,000	25,000	25,00
Office & G&A								37,500	37,500	37,500	37,500	37,50
Lab								12,500	12,500	12,500	12,500	12,50
Exploration											25,000	25,00
Total Cost-Tails	40,000	10,000	10,000	40,000	10,000	355,500	167,500	362,500	287,500	375,500	313,500	450,24
Total Cost-Open Pit												
OZ Recovered								1,575	1,575	1,575	1,575	1,57
Revenue @ $350/oz									551,250	551,250	551,250	551,2
OP Cash Gen-Tails	-40,000	-10,000	-10,000	-40,000	-10,000	-355,500	-167,500	-362,500	+263,750	+175,750	+238,750	+101,0
Cum Cash Gen-Tails	-40,000	-50,000	-60,000	-100,000	-110,000	-465,500	-633,000	-995,500	-731,750	-556,000	-317,250	-216,2
Op Cash Gen-Ore												
Cum Cash Gen-Ore												

A'

TLD/1/17/84

12	13	14	15	16	17	18	19-51	52	53
50,000	50,000	50,000	50,000						
				44,000	44,000	44,000	1,368,000		
117,500						37,500	513,000		
					50,000		100,000		
20,248	27,562	27,562	27,562	27,562	27,562	43,663	1,357,405	43,663	43,663
50,000	50,000	50,000	50,000	264,000	264,000	264,000	8,208,000	---	---
87,500	87,500	87,500	87,500	88,000	88,000	88,000	2,736,000	---	---
75,000	75,000	75,000	75,000	75,000	66,000	66,000	2,052,000	66,000	
25,000	25,000	25,000	25,000	25,000	22,000	22,000	684,000	22,000	
37,500	37,500	37,500	37,500	37,500	33,000	33,000	1,026,000	33,000	33,000
12,500	12,500	12,500	12,500	12,500	11,000	11,000	342,000	11,000	
25,000	25,000	25,000	25,000	25,000	--	--		---	
450,248	340,062	340,062	340,062	202,562	27,562				
				352,000	534,000	565,163	17,018,405	175,663	76,663
1,575	1,575	1,575	1,575	1,575	2,495	2,495	77,566	2,495	
630,000	630,000	630,000	630,000	630,000	630,000	998,000	31,026,400	998,000	998,000
+179,752	+289,938	+289,938	+289,938	+427,438	+602,438				
- 98,752	+397,690	+687,628	+977,566	+1,405,004	+2,007,442				
				-352,000	-534,000	+432,837	+14,007,995	+882,337	+921,337
				+1,053,004	+519,004	+951,841	+14,959,836	+15,842,173	+16,763,510

TLD/1/17/84

13	14	15	16	17	18	19-51	52	53
50,000	50,000	50,000						
			44,000	44,000	44,000	1,368,000		
					37,500	513,000		
				50,000		100,000		
27,562	27,562	27,562	27,562	27,562	43,663	1,357,405	43,663	43,663
50,000	50,000	50,000	264,000	264,000	264,000	8,208,000	---	---
87,500	87,500	87,500	88,000	88,000	88,000	2,736,000	---	---
75,000	75,000	75,000	75,000	66,000	66,000	2,052,000	66,000	
25,000	25,000	25,000	25,000	22,000	22,000	684,000	22,000	
37,500	37,500	37,500	37,500	33,000	33,000	1,026,000	33,000	33,000
12,500	12,500	12,500	12,500	11,000	11,000	342,000	11,000	
25,000	25,000	25,000	25,000	---	---	----	---	---
		340,062						
340,062	340,062		202,562	27,562				
			352,000	534,000	565,163	17,018,405	175,663	76,663
1,575	1,575	1,575	1,575	2,495	2,495	77,566	2,495	
551,250	551,250	551,250	551,250	523,688	873,250	27,148,100	873,250	873,250
+211,188	+211,188	+211,188	+348,688	+551,250				
- 5,060	+206,128	+417,316	+766,004	+1,289,692				
			-352,000	-534,000	+308,087	+10,129,695	+697,587	+796,587
			+414,004	+403,692	+711,779	+10,841,474	+11,539,061	+12,335,648

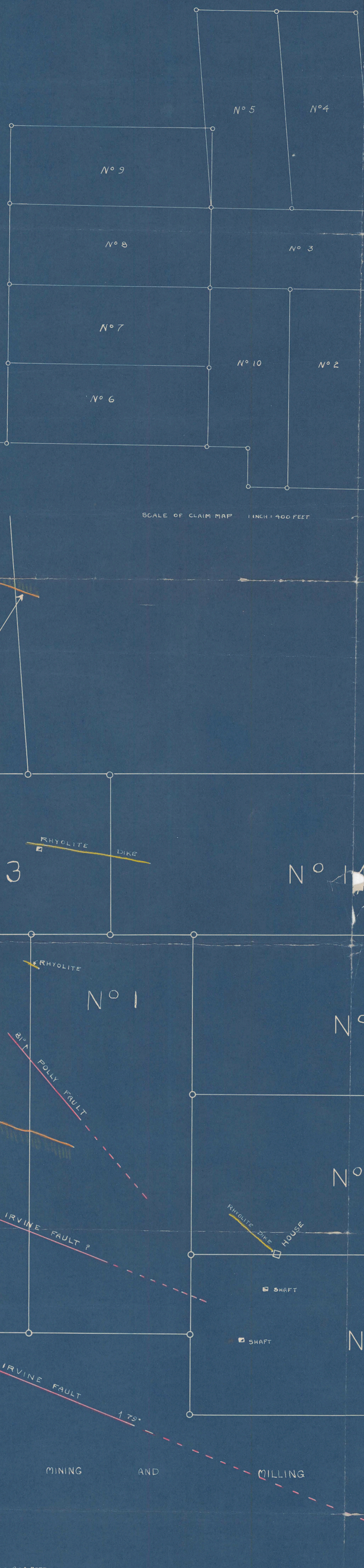
VULTURE

NORTH EXTENTION

GROUP

VULTURE DISTRICT MARICOPA COUNTY

ARIZONA



SCALE OF CLAIM MAP 1 INCH = 400 FEET

SCALE GEOLOGICAL MAP 1 INCH = 200 FEET

VULTURE MINING AND MILLING COMPANY

1931


MAGNETIC
VULTURE NORTH EXTENTION No 1
POLLY FRACTION
DISCOVERY 0" CUT VULTURE N.1 EX. No 1
DISCOVERY POLLY FRAC.
LOCATION MONUMENT POLLY FRACTION
N.E. CORNER
S.E. CORNER
SOUTH END LINE
NORTH END LINE V.N.EX. No 1
EAST SIDE LINE
N 17° 15' W
VULTURE NORTH EXTENTION No 1
S 61° 07' W 70.60'
S 64° 12' W 24.30
ALL BEARINGS ARE MAGNETIC, AND ARE REFERRED TO THE COMPASS READING AT STATION 1, FEBRUARY 26, 1931, AT 11:05 A.M. WITH TELESCOPE DIRECTED TO THE ROD HELD ON STATION 16.
STATE OF ARIZONA } SS
County of Maricopa }
A.L.Flagg, being duly sworn, deposes and says he is by occupation a consulting engineer and that this map was prepared by him from the notes of an actual survey made by him February 26th,1931, and that, to the best of his knowledge and belief, it correctly represents the location of the points shown hereon.
A.L. Flagg.
Subscribed and sworn to before me this 2nd of March 1931.
Ruth Anne Moore
Notary Public.
My com. expires April 20 1933
SCALE: 1 inch = 60 feet.