



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

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

PRINTED: 08/29/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: HOLY MOSES

ALTERNATE NAMES:

M CLAIMS
LOOKOUT

MOHAVE COUNTY MILS NUMBER: 567A

LOCATION: TOWNSHIP 20 N RANGE 17 W SECTION 11 QUARTER SW
LATITUDE: N 35DEG 07MIN 16SEC LONGITUDE: W 114DEG 03MIN 04SEC
TOPO MAP NAME: KINGMAN SE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD LODE
SILVER

BIBLIOGRAPHY:

ADMMR MOHAVE CUSTOM MILL PROJECT
ADMMR MOHAVE CARD FILE
AZ. STATE MINE INSP. ACTIVE MINE FILE, 1975
ADDITIONAL WORKINGS SEC. 10, 14, & 15,
T20N-R17W
ADMMR HOLY MOSES FILE

08/18/88

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: HOLY MOSES

ALTERNATE NAMES:

M CLAIMS
LOOKOUT

MOHAVE COUNTY MILS NUMBER: 567A

LOCATION: TOWNSHIP 20 N RANGE 17 W SECTION 11 QUARTER SW
LATITUDE: N 35DEG 07MIN 16SEC LONGITUDE: W 114DEG 03MIN 04SEC
TOPO MAP NAME: KINGMAN SE - 7.5 MIN

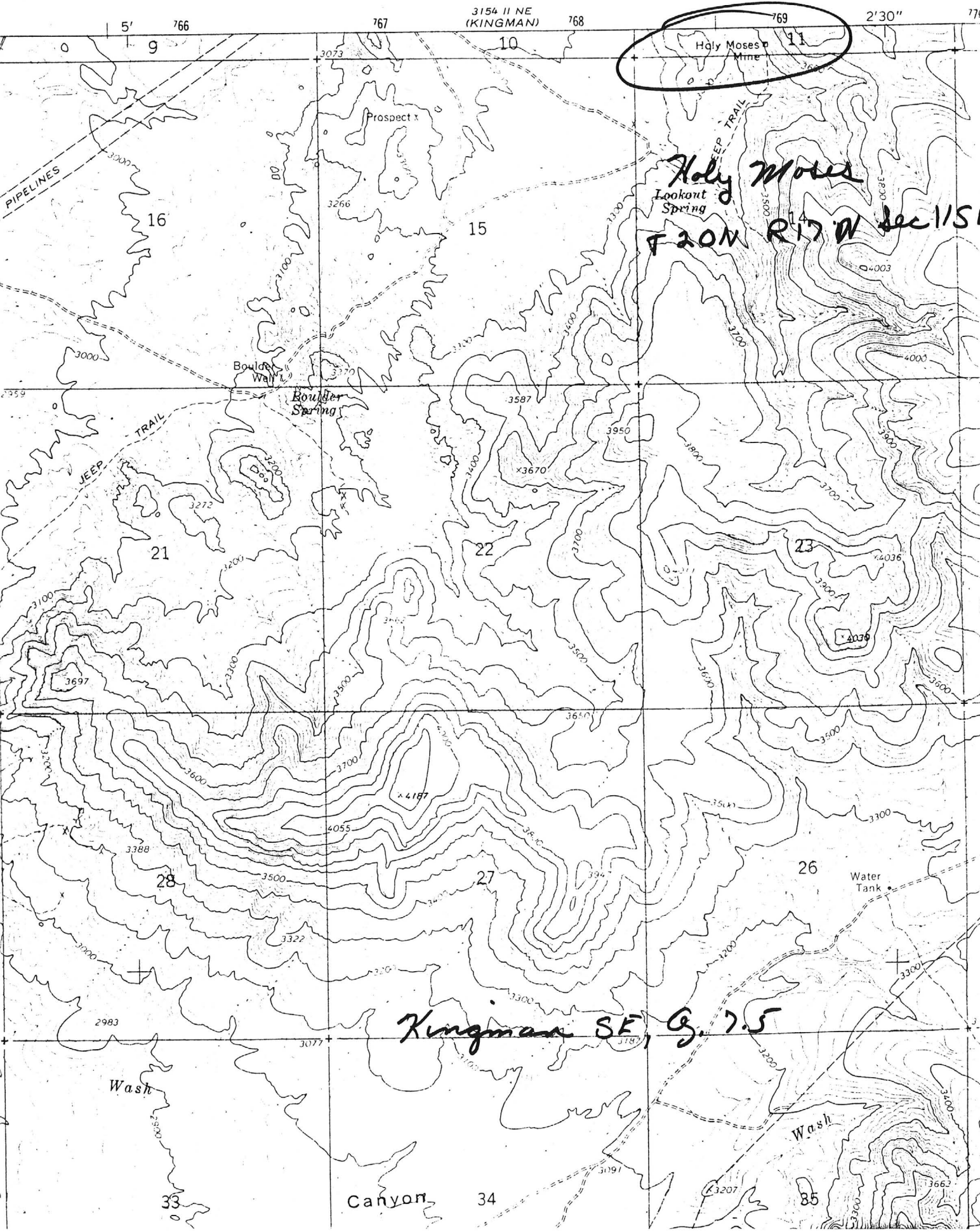
CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD LODE
SILVER

BIBLIOGRAPHY:

ADMMR MOHAVE CUSTOM MILL PROJECT
ADMMR MOHAVE CARD FILE
AZ. STATE MINE INSP. ACTIVE MINE FILE, 1975
ADDITIONAL WORKINGS SEC. 10, 14, & 15,
T20N-R17W
ADMMR HOLY MOSES FILE



3154 11 NE
(KINGMAN)

Holy Moses Mine

Holy Moses
Lookout Spring

T20N R17W Sec 11SW

Kingman SE, Q. 7.5

Canyon

Name of Mine or Prospect:	Township	Range	Section
Holy Moses Mine	20N	1	11 cdd C
Principal Minerals:	1:250,000 Quad	7.5' - 15' Quad	
	Kingman	Kingman SE	
Associated Minerals:	District	Principal Product	
	Maynard		
Type of Operation:	County	State	Type of Deposit
Underground	Mohave	Ar.	

Ownership or Controlling Interest:
Consult current USBLM mining claim records

Access: From Kingman, Ar., proceed south on U.S. 66 for 5 miles. Turn left on unimproved road and continue 3.25 miles. Turn left on jeep trail .5 miles to mine. Shaft is shown on topographic quadrangle.

Structural Control or Geological Association:

"Older Precambrian Age, Granite Gneiss."2

Age of Mineralization:

Production History

Geochemical Analyses

References

- 1) CETA map file Rack #10, ungerground and claim maps.
- 2) Wilson & Moore (1958) Geologic map.

Mike Price
Revised ~ Drawn 9-11-75 ~ 9-16-75 ~ 10-9-75
Brunton Survey

Δ 0+150 S

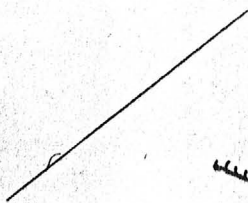
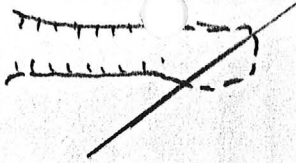
TP-0+194 S
7720

M-2 OPEN CUTS

Surface.
~ slope 15°-18° ~

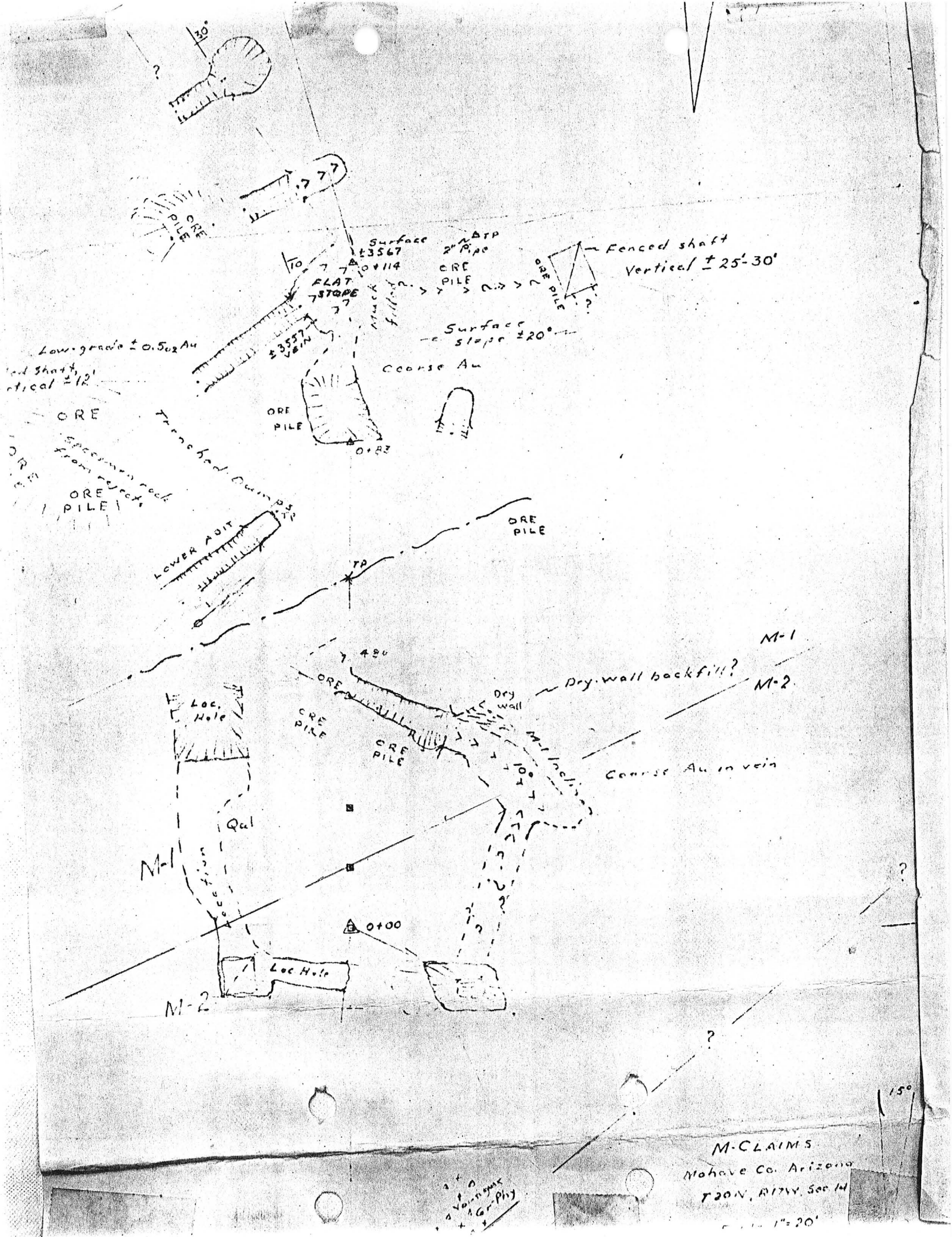
830

1
Younger
intrusive
edge
Gr. Porph



New cut

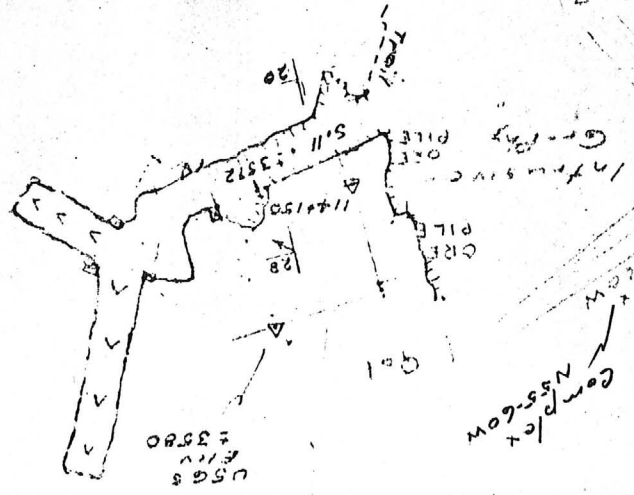




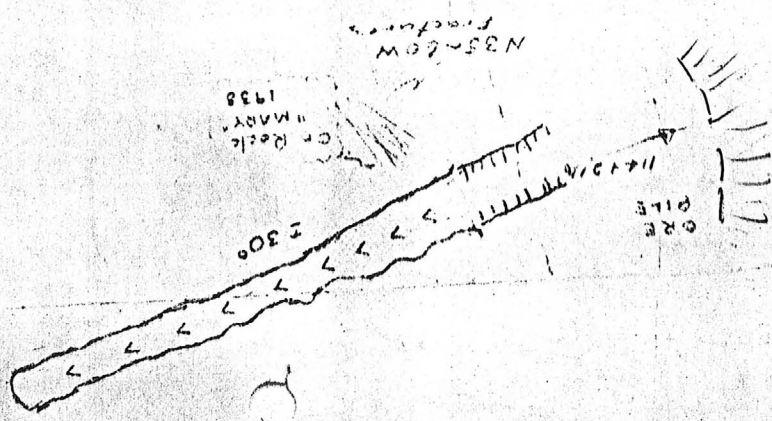
Old Hand work to S

M.P. Hatched

Along trail



* N.T.
Rock in Hanging-Wall
is different from rock
in Foot-Wall at all workings
mapped



Working Adit

ORE
PILE



Adits??

Vernon Dale:

I'll make a better copy
This survey is just a start
as this thing is at least, or
over, & claim long. (i.e. the
low-angle structure, etc)

TP 114 + 300

12" Quartz

1975 Cuts

Photo of f.w.

East side of road

JK

Late-older pE gr

US
10

US
11

US
12

Private
? Mineral?

Boulder Well B
W.D. Collins Feb 19, 1974
W.D. Collins Feb 19, 1974
W.D. Collins Feb 19, 1974

US
21

US
22

US
23

US
24

Li

Approx. contact
pE-gr complex

Fault

Low-angle vein

Holy Moses Vein

Frank R. Ewing Jr.
Transamerica Title Ins. Co.
637 Walnut Lane
Haverford, Pa. 19041

13 (Formerly)
R.R.

640 Acres
Sec 13, T20N, R17W
Private
? Mineral?

400 foot Spring
piece of a
flexure(?) of spring

Early
older pE
gneiss
complex

Low-angle vein

Low-angle vein

RECORDED

- A Location monument, post, or stake
- Post, stake, or monument
- SM Location hole
- St Strike and dip (veins, structures)
- Shaft
- Line #/— Flagged, end-line traverses
- 1906 Elevation (feet)
- q Vertical dip

Claim No.	Located
• M-1-2-3-4	~ 4-20-74
• M-5	~ 5-5-74
• M-6	~ 5-6-74
• M-7	~ 5-9-74
• M-8	~ 5-30-74
• M-9	~ 9-27-74
• M-10	~ 9-20-74
• M-11	~ 9-22-74
• M-12	~ 9-25-74
• M-16-M-17	~ 11-2-75

Generalized Map
M-CLAIMS
T20N, R17W, Sec 14
McConnico Mngl. District
Mohave Co. Ariz.

Scale 1"=2000' approx.

M-22-M-23 ~ 11-4-75
M-26 ~ 11-26-75

Base from U.S.G.S 749d
Mineral SF Ariz. 1967

M-1-7-74, 9-1-74 ~ 9-1-74 ~ 9-30-74 ~ 10-1-74

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Aug. 23, 1939

Mine Lookout Group

District Maynard, Mohave Co.

Former name

Owner Buena A. Berg

Operator

President

Mine Supt.

Principal Metals Gold

Production Rate

Power: Amt. & Type

Operations: Present Prospecting development

Operations Planned

Number Claims, Title, etc. Five claims - location title

Description: Topog. & Geog. Quartz vein - pink spar and quartz vein

Mine Workings: Amt. & Condition General open cuts - 30 ft. tunnel - 80 ft. shaft - all working

(over)

Geology & Mineralization

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Aug. 27, 1933

Ore: Positive & Probable, Ore Dumps, Tailings

Location Six miles south of Kingman
to McConica; thence 1 1/2 miles
east on good road

Mine, Mill Equipment & Flow Sheet

Address 90 W. Culver St., Phoenix,
Arizona
Gen. Mgr.

Road Conditions, Route Paved road to McConica - 6 miles south of Kingman; thence 2 1/2 miles
east on good road

Water Supply Spring with ample water

Brief History Adjacent to Ray Johnson property, in course of development, high grade gold

Special Problems, Reports Filed

Remarks Competent, conservative engineers have expressed the opinion that the
property will develop a large tonnage of gold ore.

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

Property for sale
Price \$25,000 - suitable terms

Signed Buena A. Berg

90 W. Culver

Use additional sheets if necessary. Phoenix, Arizona

October 18, 1976

Ric:

This will about sum up my present position----- several years ago I located 18 lode (gold,etc) claims about 7 miles from Kingman. Originally I located this ground for a large exploration target, all of my work has been by hand; I dug the location holes, built roads, cleaned back some of the sloughed in portals, etc: by the time I finished the price of some metals was dropping so I decided to scavenge around and make a shipment of gold ore to a smelter, when I had about 50 tons to ship I found out that the smelters were not taking any custom ore: the gold bearing stringer is not the primary target on the claims, however I thought the ore I got out of the various reject piles and dumps would set me up so that I could do some drilling, etc. As long as the smelters continue to smelt copper concentrates they will require silicious smelter-flux type rock; recently AS&R at Hayden has accepted this type of ore from custom shippers providing they crushed it to a minus 2 inch: to me this is ridiculous but that's the way it sets, I haven't checked anymore into this the last few months. One of the claims covers the Lookout Spring (this was a BLM spring when I located the ground, a cattleman has some minor improvements like a tank, etc., at the spring), the water disappears quite suddenly into the ground a short distance from the small tank, I have a claim below this. As I have another place where I can develop water (away from the spring channel) I never checked to see if the water has been filed on; a drill hole below the spring would get water; also the other place would be considered as percolating water and there is no requirement for filing on percolating water.

After I found out that the smelters would not accept custom ore I had a thought about setting up a sort of a tourist type thing along I40 as there is ground there that could be located for a mill site (5 acres): I approached several locals but did not get much encouragement from them. The 5 acres could easily be patented. The thought I had is that very few people had ever seen a stamp mill type of a concentrating operation (this is a free milling type of ore and the crushed rock throws down a good string of free gold); also I have on

hand about 200 pounds of rock that shows free gold that could be sold for specimens and/or study rock; more could be obtained from some of the old workings with no need for hoisting as the low-angle structure already has adits started into it; the ore I have stockpiled is at least one generation rejects (that is the richer fines were screened out and panned for the gold) I feel that I have enough ore in the dumps, etc., to run a small type concentrating outfit for at least 1 year, thus there would be little need to set up a mining operation; the gold from concentrating either could be sold as souvenirs or to a suitable market.

A rock shop (local minerals, etc) and other things could be in conjunction with the setup. I have on hand between (or can get easily from other storage places) 3/4-1 tons of minerals-ore-etc. that also could be sold, etc., etc. In a way this could be a different type of a setup in some respects, and a first in Mohave County, and maybe a first in the State. However all this would take capital. I believe I have enough contacts who could bring in other types of rock material, fossils, polishing rocks, etc., and being right on the main interstate would be different from being in an obscure part of Kingman like some of these rock places are.

The land I have in Kingman consists of about 4/10 acre at the junction of Erickson Drive-Evelyn Drive-Hall Lane; this is right against the land that Paul Long has, however he has no improvements like sewer, etc., on his ground (unless he has done something like this the last year or so. I have been too busy at Wikieup and near Kingman to actually know what is going on). I am the sole owner, no backers or partners, everything is clear; the sewer payment I payed off a long time ago (about \$3000, the sewer ends at my ground) The 14' x 18' rock shack on this ground is an oldie; I started fixing it up when I came back to this area, but never finished the project. As I eat out I don't have cooking facilities except that a hotplate or stove could be installed; the shack is wired for 110V and 220V; I use a 220V heater; have a shower and toilet hooked up, and enough to keep me going when I am in town.

At Wikieup (about 2 miles eastward from Bettys' Cafe) I have another 18 claims which I located for industrial minerals in 1962; this was several years before the Gov't. withdrew this type of land from location. This ground also has potential water; I am within a few hundred yards of the old Neal Ranch that Cyprus bought, and against the property that Paul Hett sold to Cyprus. Besides the industrial minerals (ion exchange material, etc.) I have all kinds of building rock, that varies in size from about 1-2 inch slabs of sandstone, lava etc., to lava slabs that vary from about 6" to 16". My guess is that at least 100,000 yards of the thicker lava slabs can be loaded out from the surface, these slab would make ideal wall building rock, rip-rap, etc. When I first located this ground I had some of the lakebeds checked for a variety of things, one series of lakebeds has a potential of being used in decolorizing oil etc.; lightweight aggregate could be produced from other material, etc., etc. I heard a rumor that Cyprus may build a retirement community with a lake, etc.,; at the Big Sandy crossing the water flows all year, and my claims take in the easterly portion of this water reservoir (several years ago a water study was made by the State, and I have their report about the Big Sandy area). The Cyprus company acknowledged the validity of my claims and this last April I gave them a right-of-way through 4 claims, along the Bur. of Recl. power line; this is on the easterly side of my claims; the westerly side of the claims takes in a part of the County road, and this road is maintained by the County. I figure that some of the claims are on an ancient estuary that was related to this saline lake, and in one area there is at least 80 acres that could be cultivated. In the first 2 years after locating the ground I found out that I could not do anything by myself with the industrial minerals so I shelved the project however I have kept up the annual assessment work. I have the 1976 work finished on the claims near Kingman; in May, June, July, and part of August I did considerable work at Wikieup but I intend to do more as time permits so that I will have way more than the required amount, so all this sets me up in good shape until September 1, 1978. I was going to drill some wells at Wikieup, and a well at Kingman; although I

did not have to, I did get two well permits (domestic consumption which has the first priority) for Wikieup, and a well permit for the land at Kingman. The claims at Wikieup may also have geothermal possibilities (Cofar Hot Springs are near the south boundry of my claims, and there are some peculiar geological features related to the lake beds, like the granitic (aplite) lava layer interbedded in the upper portion of these Pliocene lakebeds, etc). Although the Cyprus Co., may have their pipeline completed by now to Bagdad I have a feeling that because of the recent water rulings they may have to buy out practically all of the land holders in the Wikieup Basin. Through the years I've had a variety of thoughts about the ion exchange material on the claims, like some of the zeolite could be used to decrease odors in feed pens (the Japanese have been doing this for years) and a multitude of other uses from kitty-litter to carving moulds for jewelery castings, etc., etc. Both groups of claims have a variety of potential targets that's why I've held on to the ground; this is a sort of a fragmentary description but will give you an idea of what I have.

Mike Price

Gen. Del.

Kingman, AZ

Also there is rock at Wikieup that can be cut with a saw; years ago the Neals & others on the Big Sandy used this for building fireplaces; the rock has a greenish cast. Two fireplaces are still standing at the old Neal house that burned years ago

October 21, 1976

To: Vernon Dale, Arizona Dept., of Mineral Resources

From: Mike Price

Re: M-Claims, McConnico (Maynard) Mng. District; misc. assays, etc.

These are some of the assay results taken by me and other individuals; The variations in the results demonstrate what I predicted in one of my first summaries, that the coarse gold present in the ore would make it more difficult to accurately sample this type of a deposit.

"Bull" quartz vein--- 0.371_{oz}Au/T,
" " " --- 0.01_{oz}Au/T ; 0.15_{oz}Ag/T All
" " " --- 0.09_{oz}Au/T , Tr,Ag From same area

Rejects from mortared, panned, rock; from outcrops, float, stockpiles, between 430-530 pannings; recovered 1.5gms. gold from about 100# of rock, about 1/2gm fine gold left in the concentrates which were not assayed this was flour and/or fine gold (the 1.5gms. were picked up with tweezers) the rejects were approx. minus 5 mesh and plus 10 mesh and typical fines rejected during panning. Rejects assay 0.350_{oz}Au/T & Tr Ag

Balance of dump at main stockpile, minus 1½" mesh, 0.33_{oz}Au/T & Tr Ag

"Dirty" looking rock types with occasional specks of free gold, 3.26_{oz}Au/T & 0.54_{oz}Ag/T

"Jasper Wash" (M-16), 0.20_{oz}Au/T & Tr Ag
" " " , concentrates 20.00_{oz}Au/T & 2.90_{oz}Ag

M-17 (Holy Moses dump, lower layers), 0.69_{oz}Au/T & 0.10_{oz}Ag
" " " " top fines 0.15 Au & Tr Ag

Main stockpile -a) near top of pile, coarse with minimum of fines, 0.44_{oz}Au & 0.10_{oz}Ag

b) random coarse above toe, 0.17_{oz}Au, & Tr Ag

c) medium size with some fines, 1.11_{oz}Au & 13.30_{oz}Ag

Mike Price

MINE AND PROSPECT FIELD VISIT DATA SUMMARY

Sheet 1 of 2

COMMODITIES GoldMILS ID No. 567A Date 4-15-85ENGINEER Nyal J. NiemuthINFORMATION FROM: same

PROPERTY SUMMARY

I. MINE NAME Holy Moses OTHER POSSIBLE NAMES M-Claims (f)
INCLUDING ANY CLAIM NAMES NOTEDII. LOCATION: T 20N R 17W SEC(S) 11 SW $\frac{1}{4}$ MINE DISTRICT
ELEV. 3500' COUNTY Mohave TOPO QUAD. Kingman SE 7 $\frac{1}{2}$ '
DIRECTIONS As on mapMAP ATTACHED YesIII. OWNERSHIP: NAME Mike Price PHONE
ADDRESS: General Delivery, Kingman, AZ 86401
COMPANY NAME IF ANY:
PERTINENT PEOPLEIV. PROPERTY AND HOLDINGS: Unpatented mining claims - M 1-12, 16, 17, 22-24, 27V. PAST PRODUCTION - NOTED, KNOWN, PROBABLE, UNKNOWN, NONE UnknownVI. CURRENT STATUS: InactiveVII. WORKINGS: 1 shaft - open with wooden collar and ladder 180' deepVIII. GEOLOGY AND MINERALOGY: DEPOSIT TYPE: Vein - episyenite
LENGTH: ? WIDTH: up to 8 inches VEIN STRIKE north DIP vertical
HOST ROCK: chlorite gneiss
ECONOMIC MINERALS: gold?COMMENTS: narrow EPI syenite veinlets with minor carbonate (ankerite?), epidote,
quartz, and limoniteIX. EQUIPMENT ON SIGHT: None

X. SAMPLING: NOTE TYPE IF ANY, DRILLING? Four trenches of about 200 lbs. of material
taken from dumps.were seen.

XI. REFERENCES AND REMARKS

*M. Glenn Miller
Information on
Inert gas*

Zeolite

Mike Price
Gen. Del.
Phoenix, AZ 86401

*High
claim*

March 6, 1979

Mr. Glenn Miller
Department of Mineral Resources
Mineral Building, Fairgrounds
Phoenix, Arizona 85007

RECEIVED
MAR 8 1979
DEPT. MINERAL RESOURCES
PHOENIX, ARIZONA

*my estimate
about 300,000 tons
at surface*

Dear Mr. Miller:

The enclosed pictures will give a partial idea of the amount of slabs at or near the surface; the residual "statue" is about midway between Sheppard's type section of the Big Sandy formation and the section(s) corner. At the present time I do not believe that a big truck would be able to drive the approximately $\frac{1}{2}$ mile to the slabs from the county road: one of the adjoining claims takes in the county road access; this is in T16N, R13W, the claims are in sections 23, 24, 25, 26. Because of adverse weather conditions I have not been to the claims since late 1978; even then I was using the county road off highway 93 (the entry is just south of the Big Sandy bridge; this road goes through my claims and was used by the big rigs when Cypress built the pipeline to Bagdad in 1976).

Several years ago I attempted to contact some of the feedpen operators about using the zeolite (analcite) and/or the zeolitized tuff in the pens to decrease odors, etc., similar to uses developed by the Japanese. However I did not accomplish anything as I was not in a position to take a truck-load of the material to Phoenix for checking; I offered the material for free just to find out what it would do. My estimate is that this deposit has about 500,000 tons of high-grade analcite (approx. 95% analcite); about 10,000 tons can be obtained easily from the surface. Although only about 2 miles eastward from Wikieup, this deposit is in an isolated locality and cannot be seen from the highway.

Below the analcite is a mudstone-like formation which was identified by the Marathon Oil Company as illite; the outcrop is about 10 feet thick and the footwall of the illite has not been determined. I have not done any

drilling on the property, which consists of 18 claims. *Front*

Holy Moses claim
Near Kingman, in 1974, I located 18 claims on a low-angle structure that extends through a length of four claims. My claims cover the old Holy Moses mine and Lookout Spring. The Holy Moses is in the pre-Cambrian complex, and the low-angle structure is eastward, and at a higher elevation, from the old Holy Moses (now M-17). Since locating these claims I have stockpiled about 50 tons of gold ore, and I believe that the balance of the dumps will produce another 100 tons of ore by screening and/or sorting. The low-angle structure contains a small quartz vein that contains specimen rock. I obtained most of my ore from one of the dumps of the shallow workings in this structure. Good specimen rock was given to the local museum, and also some rock was sold to them. Perhaps some place like Rawhide may be interested in rock of this type for their gold panning. As in most gold bearing veins a variety of assays can be obtained, even from the same place; assays from one stockpile (about 30 tons) varied from $0.17_{oz} Au/T$ to $3.29_{oz} Ag/T$; the coarse gold present in the ore makes it difficult to accurately sample this type of material; other samples assayed $0.44_{oz} Au/T$ & $0.10_{oz} Ag/T$ -- $1.11_{oz} Au/T$ & $13.30_{oz} Ag/T$; samples from the same spot in a remnant of a "bull" quartz vein assayed $0.09_{oz} Au/T$ & Tr Ag and $0.371_{oz} Au/T$; minus $1\frac{1}{2}$ " material from balance of one dump assayed $0.33_{oz} Au/T$ & Tr Ag. In the 1930s about 85 tons of ore were shipped ^{from the Holy Moses} to the Tom Reed mill; the mill assay was about $0.26_{oz} Au/T$. Other small shipments from nearby claims went $1.92_{oz} Au/T$ and $4.36_{oz} Au/T$. My estimate is that several thousand tons of gold bearing rock can be obtained from the outcrops, before any underground work is undertaken. There is also a minor amount of placer and/or float in this locality. At one time the old Holy Moses had a 3-stamp mill in operation, and the Lookout/Windy Point property had a 1-stamp mill. I hand mortared two batches of rock, first removing the pieces with visible gold before mortaring, and removing the coarse gold from the concentrates. The concentrates from 200 pounds of rock assayed $7.656_{oz} Au/T$ & $0.876_{oz} Ag/T$; the concentrates from 100 pounds of rock assayed

20.00_{oz}Au/T & 2.90_{oz}Au/T, the rock was mortared to minus 5-10 mesh; the rejects assayed 0.35_{oz}Au/T

At least 700 feet of hand built road is not finished to the main stockpile; no dozing has been done to the old hand workings. There are indications of a reddish, gold bearing granitic intrusive which I have not been able to find by hand digging. No dozing has been done in the ancient channel to check the placer potential. To the south the low-angle structure is covered by volcanics (near the south end of M-7); near the north end-line of M-7, a quartz vein 3-4½ feet wide cuts the complex (about N30W) and dips southward.

To date the dumps from the low-angle workings have produced the best specimen rock; the structure is broken by a number of faults, and the higher grade ore occurs with pyrite, limonite after pyrite, etc., along the ragged edges within the structure associated with "bull" quartz, etc. At least 90% of the free gold is released when mortared to about 40 mesh; the balance of the fine gold is tied up in the limonite after pyrite concentrates: these are estimates from my mortaring and panning. The mortared rock releases a good string of gold and perhaps a place like Rahide may be in the market for this type of material. My best specimen rock is only 6mm-7mm showings of free gold, the balance varies from speck to 1mm-3mm; I have found a few distorted isometric crystals and at times the limonite after pyrite has plates of gold over the limonite crystals; right now I only have about 7 or 8 flats on hand; part of my 1978 annual work has been cutting across an ancient channel by hand, where
1979 the gold bearing material occurs as channels within the channel. I would like to get back to Wikieup to add to the 1978 work and would make a reasonable
1979 offer on the claims near Kingman. The M-claims are in the McCannico district in T20N, R17W, Secs. 10, 11, 14, 23, near Holy (Lookout) Peak, which is a Earamide rhyolitic intrusive. In the stockpiles some of the better grade ore is a "dirty" looking type of vein matter. Thank you to John Jett for the bulletins.

Mike Price

M-CLAIMS
McCormick (Maynard) Mining District
T20N, R17W, Sections 11, 14, 24
Mohave County, Arizona
SUMMARY "A"

The M group, of lode mining claims, is situated at Lookout Spring near the northwest margin of the Hualapai Mountains where the early pre-Cambrian complex is in contact with the later pre-Cambrian granite. The complex consists of granite, gneiss, and schist, intruded by granite porphyry dikes, basic dikes, and irregular dike-like masses of pegmatite. Away from the foothills belt the older rocks are covered by Quaternary basalt. Just east of claim M-7 a mass of Tertiary rhyolite is surrounded by basalt, and the basalt cover separates the rhyolite from a Laramide intrusive; to date neither the shape or the composition of the intrusive has been determined.

A low-angle structure that does not conform to the regional strike or dip of the old complex cuts across the complex and contains a well defined quartz vein, and/or silicified breccia, which contains free gold, a minor amount of sulfides, and oxidation products of formerly existing sulfides. The free gold occurs as specks, small flakes, and/or irregular crystals in the vein matter. At times the visible gold varies in size from specks to 6 mm concentrations. The low-angle structure is not conspicuous, and it has been broken by faulting; however the same structure, and vein, crop out along the strike length of four claims.

In general the complex strikes N50-65E and dips into the pre-Cambrian granite. The Holy Moses shaft was sunk on a vein in the complex and produced gold ore in which the gangue consisted of a quartz-basic dike-feldspar(?) type rock. This ore is different from the rock in the vein of the low-angle structure. The low-angle vein is to the east, and at a higher elevation from the Holy Moses workings.

There are other veins in the complex and they seem to conform to the strike and the dip of the older rocks. A zone of alteration extends from M-5 to M-16 through a width of five claims, and indications are present that show the alteration to extend southward a length of four claims. Other veins cut across the complex, as on claim M-4 where a quartz vein strikes N30W and dips 75-82° SW, this outcrop is evident about 140 feet along the strike and it varies in width from several inches at the "tail-ends" to 4½ feet, an average of about 3 feet; the zone of alteration at the south "tail" is at least 10 feet wide. A quartz vein about 1 foot wide strikes northwesterly on claim M-1, it is below the low-angle vein and dips westward about 85°. Claims M-3, M-5, M-6 M-8, M-16, and M-24 have quartz veins that cut across the complex. On claim M-16 a northerly trending vein and structure dips 30° eastward and appears to be related to the low-angle gold vein on the west side of the ridge, and to the low-angle vein east of the Holy Moses workings.

From the foothills area to the eastward dipping low-angle gold vein the recent surface material does not contain much apparent evidence of mineralization, however checks of the recent alluvium show that there is considerable gold bearing float in the alluvium which is comparable to the vein material in the workings and/or the outcrops. There are no indications in the area that any dozing has been done to check for residual material.

About 50 tons of ore is stockpiled at the various workings and additional tonnage can be obtained from the alluvium that is below the outcrops. There is no road to the stockpiles; when a road is built it would also expose additional float and a better idea could be formed as to the amount of vein material that could be recovered. Assuming that the low-angle vein extends at least 20 feet down the dip, at least 5000 tons to 9000 tons of gold bearing, highly silicious rock can be obtained from the outcrops. On claim M-7 the structural conditions appear to be different from the conditions to the north, this portion of the vein may be a down-dropped segment. The erosion has removed a part of the hanging wall waste and portions of the vein are exposed on the hillside above the wash. The faulted low-angle vein may have an overlapping "shingle-like structure and it is possible for other gold bearing zones to be present under the alluvium or in other portions of the low-angle structure.

Only a minor amount of geology has been done on this prospect and the relationship of the various veins, and of the dikes in the complex which have been shattered and appear to be "beheaded", has not been determined.

Mike Price
1-30-75

e/p 565 Berk
K. H. H. Ariz 86401

M-CLAIMS
McComb, 49 (Maynard) Mining Distr.
T20N, R17W, Sections 11, 14, 24
Mohave County, Arizona

SUMMARY "B"

A number of structural features are present on the M-Claims, that cut across the pre-Cambrian complex instead of conforming to the regional trends of the older rocks. A number of northwesterly, and occasionally a northeasterly, fractures or faults are filled with quartz; these quartz veins vary in width, from several inches to 4 1/2 feet. Some of the northwesterly trends could be related to the general trend of the Walker Line in this locality, or to the Laramide intrusive east of the claims.

A broken, but traceable, low-angle structure is present along the length of four claims. This structure has been tilted southward and on M-7 it is in part covered by recent volcanics. The thickness of the low-angle structure varies, and only an estimate can be made as to its' average thickness as recent alluvium covers much of the area; my estimate is that this zone is from four feet to at least ten feet thick. At or near the footwall of this structure is a gold bearing quartz vein, and/or silicified breccia, which frequently shows free gold. A minor amount of pyrite (less than 1/2%), about the same amount of galena and its' oxidation products, and a trace of chalcopyrite are present in the rock; some specular hematite, soft limonite, limonite after pyrite, and a light colored sphalerite(?) occur in the vein. Occasionally minor amounts of vanadinite have been noted in the rock. Most of the vein matter is highly silicious, and some of the gold is fine but it can be seen after mortaring and panning the rock. The free gold occurs in the "bull" quartz and/or the silicified breccia, in a quartz-feldspar type rock, in granite porphyry, and in most any type of rock in which some quartz is present. A common occurrence of visible gold is with rock that contains limonite after pyrite, the gold occurs as platings, specks, and/or small masses on limonite crystals. At times the free gold is within the limonite crystals, or in a vuggy, "dirty" looking type of ore.

Below the low-angle structure the pre-Cambrian complex has numerous northwesterly trending joints and/or fractures, also low-angle fracturing and/or jointing comparable to the eastward dipping gold vein. A possibility exists that portions of the underlying contact could be gold bearing and that veins similar to the Holy Moses could be present in the pre-Cambrian complex. Pieces of granite porphyry and of a reddish pre-Cambrian granite are present, as float, and in the silicified breccia of the gold vein that show free gold, in the country rock, and associated with limonite crystals. From the Holy Moses shaft area to the workings on claim M-7 the low-angle structure appears to be broken by five easterly trending faults, the faults trend northeasterly at the north and change to a southeasterly trend at the south end.

The M-Claims are, in part, a relocation of previously existing workings that in 1914 were known as the Windy Point, or perhaps the Lookout Mountain property. Over 30, shallow workings are on the claims, most of this work was done by hand, and at the present time about 800 feet of new road is needed to connect an unfinished, hand built, road with the M-1 workings.

The coarse gold present in the ore would make it more difficult to accurately sample this type of a deposit, however by mortaring and panning the rock, and correlating the pannings with standard assays there should be no problem in ore control. Partial production records from this locality show that the shipped ore (to the Tom Reed mill) contained from 0.252 ozAu/ton to 4.36 ozAu/ton. The stockpiled ore on the M-Claims contains 0.50 ozAu/ton to 1.5 ozAu/ton of free milling gold. In general about a 40 mesh grind will release at least 95% of the free gold, and will produce a very small amount of concentrate; an estimate of the ratio of concentration is that this type of rock will concentrate at least 50 (and more) to 1.

On claim M-7 some of the best ore is in a quartz-feldspar type rock, the gold is fine and may require a finer grind to release all of the gold. Also this area has the potential of producing several hundred tons of easy to get ore as much of the hanging wall waste has been removed by erosion. The possibility of a pediment type placer in this area has not been explored.

Mike Price
2-1-75

M-CLAIMS
McConnic (Maynard) Mining District
T20N, R17W, Sections 11, 14, 23
Mohave County, Arizona
SUMMARY "C"

While posting the claims and digging the location holes a minor amount of geology was mapped. This initial geology work does not present all of the complex structural features, the alteration, or all of the various intrusives in or related to this locality.

The mineralization of this area is related to structural features, and to some of the granitic intrusives. The faulting, the intrusives, and the mineralization are cumulative, and occurred through different periods of time. The ground on which the claims are located, and parts of the general area, show structure-sheeting, cleavage and/or jointing, which seems to mask an older sheeting. The westward dipping system of jointing is another structural condition, quartz veins and quartz stringers in these joints also dip westward. The quartz vein on M-4 could be related to the westward dipping structures, and to a possible N30W trending fault which cuts across the northeasterly striking complex. Only an estimate can be made as to the thickness of the structure-sheeting, it appears to start at the low-angle structure, which contains the workings on the gold vein, at about the 3580 foot elevation, and extends downward to, and below, Lookout Spring which is near the 3340 foot elevation.

Near Lookout Spring a segment of a northwesterly trending fault could be related to the mineralized faults in the Holy Moses workings area. In the area between the spring and the Holy Moses shaft there are a number of shallow, previously existing, workings, which were made to explore for the mineralized fault related to the Holy Moses workings. The Holy Moses shaft was sunk to 200 feet in 1909 (Mohave Miner, Aug., 21, 1909), the workings are on a piece of a mineralized fault which is in the northeasterly trending complex. The vein matter is a mixture of fault gouge, basic dike fragments, calcite, and feldspar (?microcline?). This gold ore is different in character when compared to the highly silicious ore occurring in the low-angle structure. Light colored, contact metamorphic silicates, which at times are difficult to recognize, are present in this area; thulite has been reported as occurring with, or near, the ore in the Holy Moses workings.

From the NW corner of claim M-6 to M-22 and M-7, an area of at least 3000 feet wide and 7500 feet long, there are indications of alteration, sheeting, cleavage and/or jointing, and quartz veins and quartz stringers. The vein matter in the low-angle gold vein consists of quartz and/or silicified rubble. The rock fragments in the breccia originated from the older rocks, and their composition varies from granite-porphyry dike rock, several types of granite (different from the coarse grained granite near the north end of M-6), to a silicified rock that could be a phyllite(?). The free gold occurs in, or is associated with, any of these rocks when there is some silicification or quartz. Also the visible gold is associated with limonite after pyrite, and most any type of rock which contains previously existing sulfides will either pan free gold or have visible gold in it. At times a solid, white quartz is the principal vein filling occurring at the footwall of the low-angle structure, limonite after pyrite may or may not be present in the quartz, and the free, visible, gold occurs as fine specks, concentrations, or particles that vary from 1mm to 6mm in size. Frequently the fine gold exhibits a marked tendency to float if exposed briefly to air while panning; also some of the rough, coarse, gold has a tendency to concentrate with the middlings.

The structural conditions of the M claims indicate that the contacts and the related faults have been mineralized. Commercial grade ore has been produced from some of the shallow workings; except for some of the work at the Holy Moses, and two shallow inclines on claim M-1, it appears that most of the existing work was done by hand. Whenever a low-grade or a seemingly barren area was encountered the work was stopped. The rock in the dumps and in the rejects piles indicates that at the time some of this work was done any vein matter that contained only .25ozAu/T-1.0ozAu/T was discarded. On M-1 claim specimen rock is being obtained from a dump which has a layer of the original rock at the bottom of the dump. The waste rock above the good ore is estimated to contain .25ozAu/T-.40oz/T.

Other ore:

DUMPS rejects: M-1&M-2 area, 25T x .25ozAu- .40ozAu/T
" " : M-7 " , 35T x .35ozAu/T
" " : Holy Moses, not trenched, no estimate of available tons

Mike Price
4-8-75

Other Dumps-- to date not determined

Grade of rock can be increased by sorting, and/or screening