CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

The following file is part of the Doug K. Martin 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.

FROM:

MARION E. PRICE
GEOLOGICAL ENGINEER
R. P. E. - NEVADA - NO. 974
1505 BENNETT ROAD
MOUNT VERNON, WASH. 98273
206 424-7735

January 15, 1979

Summary Report of the Owens Mine (aka "Mean Annie Group"), Indians' Secret Mining District, Mohave County, Arizona:

Description of the Area: The specific area under consideration is, in effect, the N/2 NW/4 of Section 1, T 28 N, R 19 W, G&SR B&M. It is technically described, however, as Government Lots Nos. 3 and 4 of Section 1. While these two lots are within the Public Domain, they are bordered to the east and to the south by railroad grant lands. When conveyance was made to the AT&SF RR under the Land Grant Act, these two Government Lots were withheld under a Federal Mineral Withdrawal and the railroad received 80-acres of 'lieu land' elsewhere. The reason for the Withdrawal was that there were broad showings of copper mineralization within the limits of GL's Nos. 3 and 4, and it is possible that there were valid unpatented lode mining claims in existence at the time also. The general area is shown on Figure 1 and more specific details are given on Figures 2 and 3. The road distance from Kingman is 61.5-miles.

Also unusual with respect to adjacent lands is the conjunctive relationship of the State of Arizona Mineral Trust Lands in Section 2 of T 28 N, R 19 W, and also in Section 36, T 29 N, R 19 W. This relationship is shown on Figures 2 and 3, and the vertical relationship of Sections 1 and 36 is shown on Figure 4. The visible extent of the mineralization dips to the North toward Section 36 and it strikes to the West toward Section 2. The projections into each of these Sections is covered with alluvium, however.

District Name: Though the area is generally referred to as "Gold Basin", the proper name is the "Indian's (or Indians') Secret Mining District", and it comprises the northern extremity of the White Hills. This area is unquestionably the source of the auriferous gravels in the Gold Basin Mining District which lies mostly north and northeast a varying distance of one to five miles

from the Owens Mine. This writer has been working in both Districts and arbitrarily divides them according to the blue line (and long dashes) as shown on Figure 2. Also shown on Figure 2 is the Owens Mine (in red), State of Arizona Mineral Trust Lands in Sections 2 and 36 (shaded darkly), the roads into and through the area (highlighted in green), and the areas of this writer's activities in Gold Basin (highlighted in orange).

Property Name: For many years this property has been known as the "Owens Mine" and this name is not to be confused with the Owens Mining District which is located in southern Mohave County. During the current work in Gold Basin, this writer has talked to "old timers" who remember the Owens family and speak kindly of them. Owens did ship some high grade copper and gold, and possibly owners before them shipped also. Most of the work was done on mineralized structures, and the volume of the underground workings far exceeds the volume of the existing dumps.

The name "Mean Annie" was given to the property by the present locator and owner, Mr. Dick Hart of Kingman. This name has been perpetuated in the present conveyance

thus two names are in common use and appear in the Mohave County records. For purposes of this reporting, this writer prefers the name of "Owens" and it will be used selectively hereinafter.

Claims: The Mean Annie Group as now located comprises seven (7) lode mining claims, though it is not certain as of this writing just how these are located. It is believed that the present locator was not aware of the precise boundaries of Government Lots 3 and 4, thus he simply overlapped them onto Railroad ground and possibly onto State Mineral Trust lands also. Normally it would require four (4) full-size lode mining claims of 20.661-acres each to cover an 80-acre parcel. However the lesser configuration of 1500' x 600' is not concordant to the larger dimensions of 2640' x 1320' (approximately), thus some special set of dimensions must be adapted to remain within the areal limits of GL's 3 and 4 and yet conform to the maximum dimensions allowable for a lode mining claim.

Amended Locations: In order to remove any ambiguity and/or overlap onto surrounding lands which are not open for mineral entry, these claims must ultimately be amended. For practical purposes and for conformance to the existing regulations regarding the recording of unpatented lode mining claims with the Bureau of Land Management, it must be done before October 21, 1979. Though there are several ways in which this could be done, the arrangement shown in Figure 3 is the one especially recommended for the following reasons:

(1) It conforms to the apical concept under the mining laws of 1872;

(2) It precludes overlap onto adjoining State and/or railroad grant lands if surveyed according to the distances shown on the survey plat of T 19 N, R 28 W; and,

(3) It provides for the minimum number of locations which conform to the apical concept as in (1) above.

As shown in Figure 3, there are four (4) lode mining claims of approximately 1320-feet (plus) long by 600-feet wide and two fractional lode mining claims of the same length but approximately 120-feet wide. The task of locating and/or amending a lode mining claim is much simplified under the new Arizona regulations which became effective on September 3, 1978.
have already made a preliminary survey of the area and have located the pertinent GLO survey monuments which are extant, the matter of making the amended survey is a fairly simple task.

Filing: On or before October 21, 1979, there must be a filing of all unpatented claims and fractions (whether lode or placer) with the Bureau of Land Management, and the pertinent details are given hereinafter on pages 24-S through 27-S. The cost of this filing will be $5.00 per claim or fractional claim, or a total of $30.00 for the Mean Annie Group as shown on Figure 3. There is no charge for filing the survey plat.

Recent History: The narrative of the recent history of the Group has been obtained partly from the owner and partly from others in the Kingman area who, for one reason or another, have some background information regarding the situation. This writer has not made

a search of the records, however, and the background information is therefore presented at face value.

This writer first examined the Owens area on August 13, 1978, in company with George McDevitt and the owner, Dick Hart. Since that time he has made numerous trips to the vicinity, both to the Gold Basin and the Indians' Secret Districts. An especial effort has been made to relate the some of the auriferous gravels to the Owens as a source.

The Owens deposit has been the subject of more than casual interest to others, for rather recently (in 1975) the El Paso Natural Gas Company optioned the property and began a surface study which, judging from the surface-grid staking that was done, was intended to be extensive. This work continued into 1976 but was terminated prematurely when an adverse locator surfaced as claimant of the ground, for then El Paso aborted the project and disclaimed back to Mr. Hart. He then sued to quiet his title and won a default judgement which restored his possessory title to the claims to a status of good standing. El Paso provided him with copies of their works and these have been made available to this writer to be included as a Supplement to this report, and these appear hereinafter on pages 1-S through 14-S. The tenor of this work is optimistic and it does show that there are anomalous zones of copper, gold, and silver occurrences over a broad area of exposed outcrops. Two magnetometer traverses were made and three self-potential lines were run also over the area to the northeast of the exposed outcrop. Both methods displayed anomalies showing that the mineralized zone does project to the northeast and under the overlying gravels.

<u>Supplement to El Paso Natural Gas Company's Work</u>: Despite the subdued relief of the Owens area, the mineralized zone does outcrop prominently along the southern boundary of Government Lots 3 and 4, and, in fact, to a very minor extent within the limits of railroad grant lands to the south. This relationship is shown in Figure 4. Figure 4 also represents this writer's concept in idealized form of his interpretation of the Owens ore body. From what can be observed

on the ground, the mineralization occurs in a tabular zone which is generally conformable to the pseudo-stratification which is to be seen very clearly in the biotite gneiss along the White Elephant Wash. Nowhere is the upper limit of the mineralization visible, however, for along its entire exposure it disappears under surface sand and gravels which are, in part at least, auriferous. Some placering of ore has followed the drainage up to the Owens outcrop and stopped there.

The tabular or sill-like occurrence as idealized in Figure 4 is conjectural as far as the upper limit of the mineralization is concerned, though the lower limit is rather well established. It is this writer's concept that the deposit dips toward the north and that it may well project into Section 36. Inasmuch as it is apparently tabular with an elongate east-west dimension, it can strike into Section 1. As shown on Figures 2 and 3, both of these sections are State Mineral Trust lands and can be acquired for exploration under a prospecting permit or for operational purposes under a State Mineral Lease.

Reference to El Paso Natural Gas Company's magnetometer profile shown on Page 4-S and to the three self-potential profiles on Page 5-S indicate anomalous zones which extend well beyond the visible limits of the surface outcrops. This writer feels that in projecting far to the northeast they were run off-structure, however, for it appears to project more to the north. While the double-peaked magnetometer anomaly could be attributable to several different subsurface situations, the self-potential anomalies are more specifically attributable to the presence of metallic sulphides which are undergoing decomposition. In this case the sulphide would be chalcopyrite, and the importance of such mineralization at depth cannot be overstated.

Of further especial importance in this connection is the profusion of pitcher plants which prevails in the vicinity of the northwest corner of Section 1 and projecting westward into Section 2 and northward into Section 36. This writer has long used this plant as

an indicator for available soil sulphur and repeatedly has found it growing in and below the outcrops of sulphide veins. However the plant is partial to areas containing gypsum also, thus care must be exercised when determining the reason(s) for the plant's presence. The fact that big plants are growing in profusion over a substantial area is considered a favorable indicator, however.

Another interesting and perhaps important anomaly is observed in the suddenly-subdued topography which occurs immediately above the footwall contact of the mineralized zone. Here there is visible evidence of selective erosion which may be due to (1) the mechanical shattering of the host during the invasion of the dikes and sills and (2) a softening of the invaded rock by the chemical alteration incident to mineralization. Both influences tend to reduce the resistance of the hard granite gneiss country rock and thus make it more susceptible to erosion, and the apparent effect perpetuates down-dip and along strike to the west as well. It is not apparent to the east, however, where hard unaltered rocks are very much in evidence.

Recommendations: From everything that can be seen or reasonably inferred at the Owens, it is predicted that gold, silver, and copper mineralization prevails (1) in down-dip projections to the North and (2) along strike projections to the West. As shown in the idealized sketch in Figure 4, it is believed to have a flat dip which augurs well for open cut mining. In that light the following recommendations are made regarding the Owens property:

(1) Property acquisitions: Sections 2 and 36 are available under a Prospecting Permit for $2.00/acre/year for a period of 5-years and by Mineral Lease thereafter for 20-years (renewable) for the ground which is mineralized;

(2) Geophysical Surveying: The lay of the surface and the projected flat dip make for an ideal situation to use an induced polarization (commonly referred to as "IP") survey. Nothing has been noted in the country rock surrounding the Owens which would give a false anomaly and the indicated shallow depth would promote good definition of the ore body using a close dipole spacing. An electromagnetic survey could also be considered; and

(3) Development Drilling: As in (2), the lay of the land and a projected shallow target make an ideal situation for vertical exploratory and development drilling. Such drilling would probably consist of (a) churn drilling and casing through the sand and gravel overburden (and checking for placer gold values in the process) and (b) downhole hammer in the mineralized formation with coring optional to check against recovered cuttings. It is believed that a careful site selection for the first hole could produce a much-needed water well also.

In light of what can be seen, what has been done, and what can be projected reasonably, it is considered that the Owens is a very unusual prospect and worth much further exploration and development. If further indirect methods are used, an induced polarization survey is recommended. It is believed, however, that surface and indirect methods have been carried far enough to warrant a direct approach by drilling. It is emphasized here that the targets and mineral values under consideration are for an open cut operation, and the Owens gives early indication for satisfying both requirements.

Respectfully submitted:

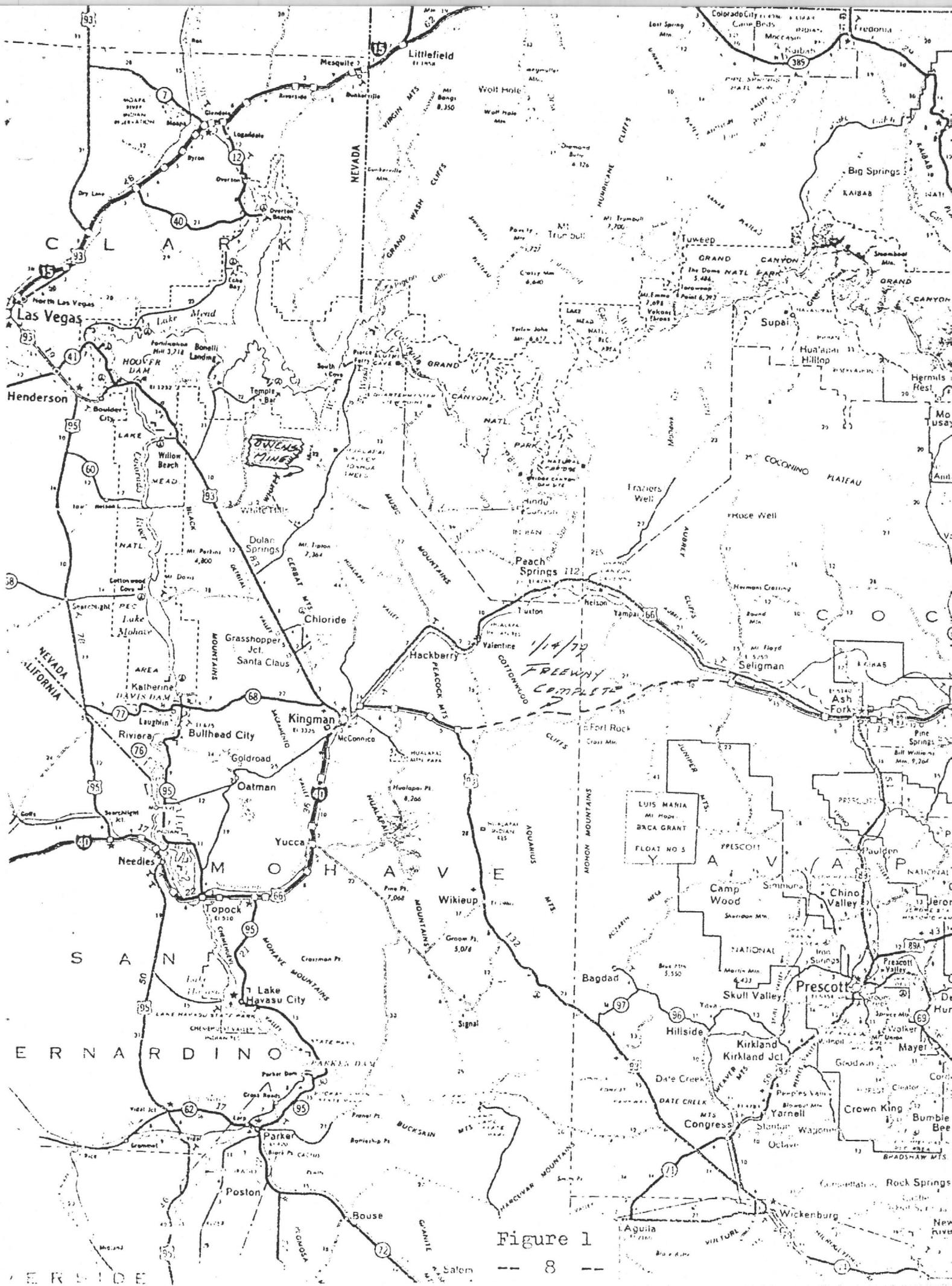
Marion E. Price, P.E.
Geological Engineer

MEP:p

- -

Index to Supplement

Geologic Report by El Paso Natural Gas Co.		Page:	1-S & 2-S
Geologic Sketch	ditto		3-S
Magnetometer Survey	ditto		4-S
Self Potential Survey	ditto		5-S
Assay sheet missing	ditto		6-S
Conversion Table			6-S
Geochemical Assays El Paso Natural Gas Co.			7-S & 8-S
Copper anomaly map	ditto		9-S
Gold " "	ditto		10-S
Silver " "	ditto		11-S
Geochemistry maps: Copper, gold, silver (unknown source)			12-S -14-S
Random assays, various sources			15-S -23-S
Filing Regulations, U.S.B.L.M.			24-S -27-S


Littlefield
Mesquite
Moapa
Glendale
Logandale
Bunkerville
Riverside
Overton
Overton Beach
Dry Lake
Echo Bay
Las Vegas
North Las Vegas
Lake Mead
Henderson
Boulder City
HOOVER DAM
Willow Beach
Temple Bar
Bonelli Landing
Pierce Ferry
South Cove
Dolan Springs
Chloride
Grasshopper Jct.
Santa Claus
Katherine
DAVIS DAM
Laughlin
Bullhead City
Riviera
Kingman
McConnico
Hackberry
Valentine
Peach Springs
Truxton
Yampai
Seligman
Ash Fork
Goldroad
Oatman
Yucca
Needles
Topock
Lake Havasu City
Parker
Poston
Bouse
Wickenburg
Aguila
Salem
Wikieup
Signal
Bagdad
Hillside
Kirkland
Kirkland Jct.
Date Creek
Congress
Yarnell
Skull Valley
Prescott
Prescott Valley
Camp Wood
Chino Valley
Paulden
Mayer
Crown King
Rock Springs
Supai
Hualapai Hilltop
Tuweep
Big Springs
Fredonia
Colorado City
Moccasin
Kaibab
Wolf Hole
Fraziers Well
Rose Well
Hermits Rest
Grand Canyon
Grand Canyon Nat'l Park
Lake Mohave
Cottonwood Cove
Searchlight
Searchlight Jct.
Golf's
Owens Mine
1/4/72 Freeway Complete
NEVADA
CALIFORNIA
CLARK
SAN BERNARDINO
MOHAVE
YAVAPAI
COCONINO
PLATEAU
KAIBAB
PRESCOTT
LUIS MARIA BACA GRANT FLOAT NO 5
Hualapai Mts.
Hualapai Valley
Cerbat Mts.
Black Mts.
Music Mts.
Peacock Mts.
Cottonwood Cliffs
Aquarius Mts.
Mohon Mountains
Mohave Mountains
Bucksain Mts.
Hardyville Mountains
Granite Mts.
Vulture Mts.
Bradshaw Mts.
Date Creek Mts.
Juniper Mts.
Hurricane Cliffs
Virgin Mts.
Grand Wash Cliffs
Mt. Trumbull
Mt. Emma
Vekol Knobs
Fortification Hill
Mt. Perkins
Mt. Dobbs
Mt. Tipton
Mt. Floyd
Hualapai Peak
Pine Pt.
Groom Pt.
Crossman Pt.
Parker Dam
Cross Roads
Vidal Jct.
Grommet
Midland
Ripley
Blythe
Ehrenberg
Bouse
Wickenburg
Prescott
Chino Valley
Camp Wood
Skull Valley
Hillside
Kirkland
Congress
Yarnell
Crown King
Mayer
Paulden
Rock Springs
Poston
Parker
Lake Havasu City
Needles
Topock
Kingman
Seligman
Ash Fork
Peach Springs
Hackberry
Chloride
Oatman
Goldroad
Yucca
Wikieup
Signal
Bagdad
Wickenburg
Aguila
Salem
Bouse
Poston
Parker
Lake Havasu City
Needles
Topock
Kingman
Seligman
Ash Fork
Peach Springs
Hackberry
Chloride
Oatman
Goldroad
Yucca
Wikieup
Signal
Bagdad
Hillside
Kirkland
Congress
Yarnell
Skull Valley
Prescott
Prescott Valley
Chino Valley
Camp Wood
Paulden
Mayer
Crown King
Rock Springs

C L A R K
Vegas
NEVADA
Littlefield
Supai
Dolan Springs
Chloride
Grasshopper Jct.
Santa Claus
Hackberry
Peach Springs
Seligman
Kingman
Bullhead City
Goldroad
Oatman
Yucca
Needles
M O H A V E
Topock
Wikieup
Lake Havasu City
S A N
R N A R D I N O
Bagdad
Skull Valley
Prescott
Hillside
Kirkland
Kirkland Jct.
Congress
Camp Wood
Chino Valley
Y A V A P
Parker
Poston
Bouse
Wickenburg
Aguila
Rock Springs
Crown King
Yarnell
Date Creek
Big Springs
Hermits Rest
Ash Fork
Williams
Tusayan
Tuba City
Hopi
Hualapai Hilltop
Grand Canyon
Lake Mead
Lake Mohave
Lake Havasu
Hoover Dam
Willow Beach
Temple Bar
Cataract Canyon
Havasu Canyon
Cottonwood Cliffs
Peacock Mts
Hualapai Mts
Aquarius Mts
Mohave Mts
BucksKin Mts
Harquahala Mts
Hassayampa Mts
Cocoonino Plateau
Fredonia
Kaibab
Tusayan
Tonto
Valentine
Fort Rock
Cliffs
Hurricane Cliffs
Virgin Mts
Grand Wash Cliffs
Black Mts
Cerbat Mts
Hualapai Mts
Peacock Mts
Mohave Mts
Aquarius Mts
Hassayampa Mts
Harquahala Mts
Buckskin Mts
Bill Williams Mts
Kaibab Plateau
Cocoonino Plateau
Fredonia

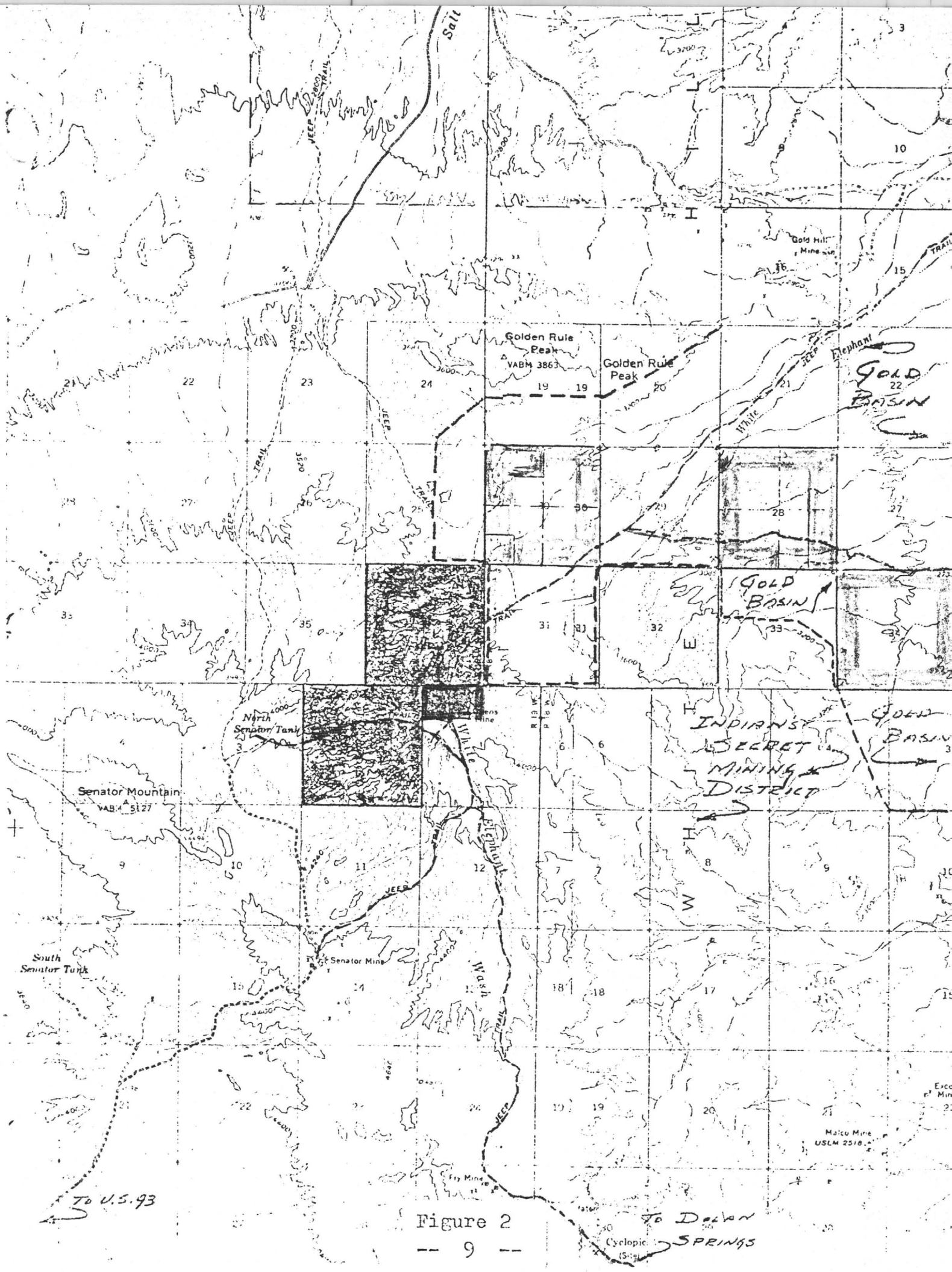

Salt
JEEP TRAIL
Golden Rule Peak
VABM 3863
Golden Rule Peak
Gold Hill Mine
Elephant
GOLD BASIN
White
GOLD BASIN
INDIAN'S SECRET MINING DISTRICT
GOLD BASIN
North Senator Tank
Senator Mountain
VABM 5127
White
Elephant
Wash
Senator Mine
South Senator Tank
Malco Mine
USLM 2518
Fry Mine
Cyclopic
TO U.S. 93
TO DOLAN SPRINGS

Figure 2

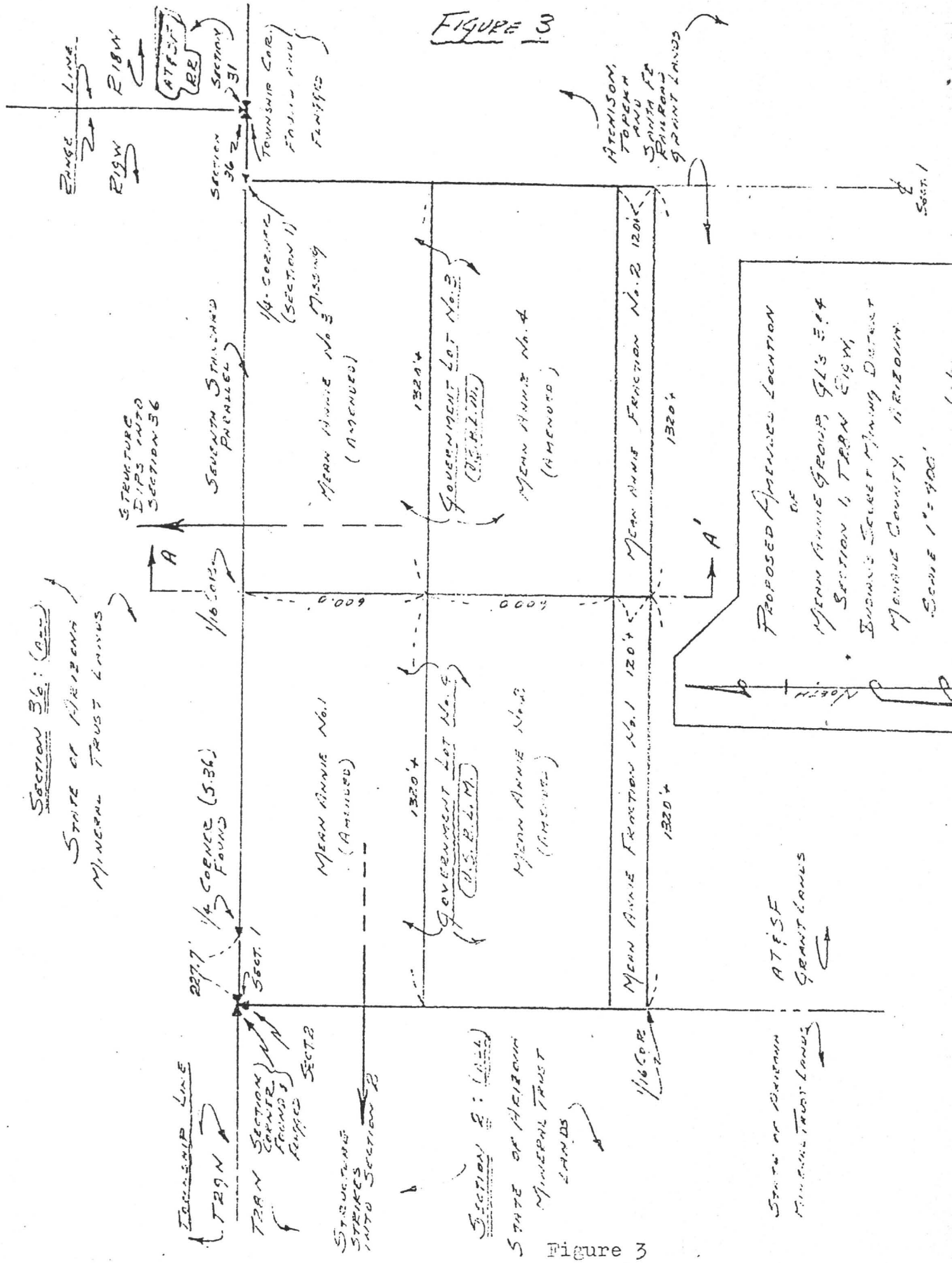
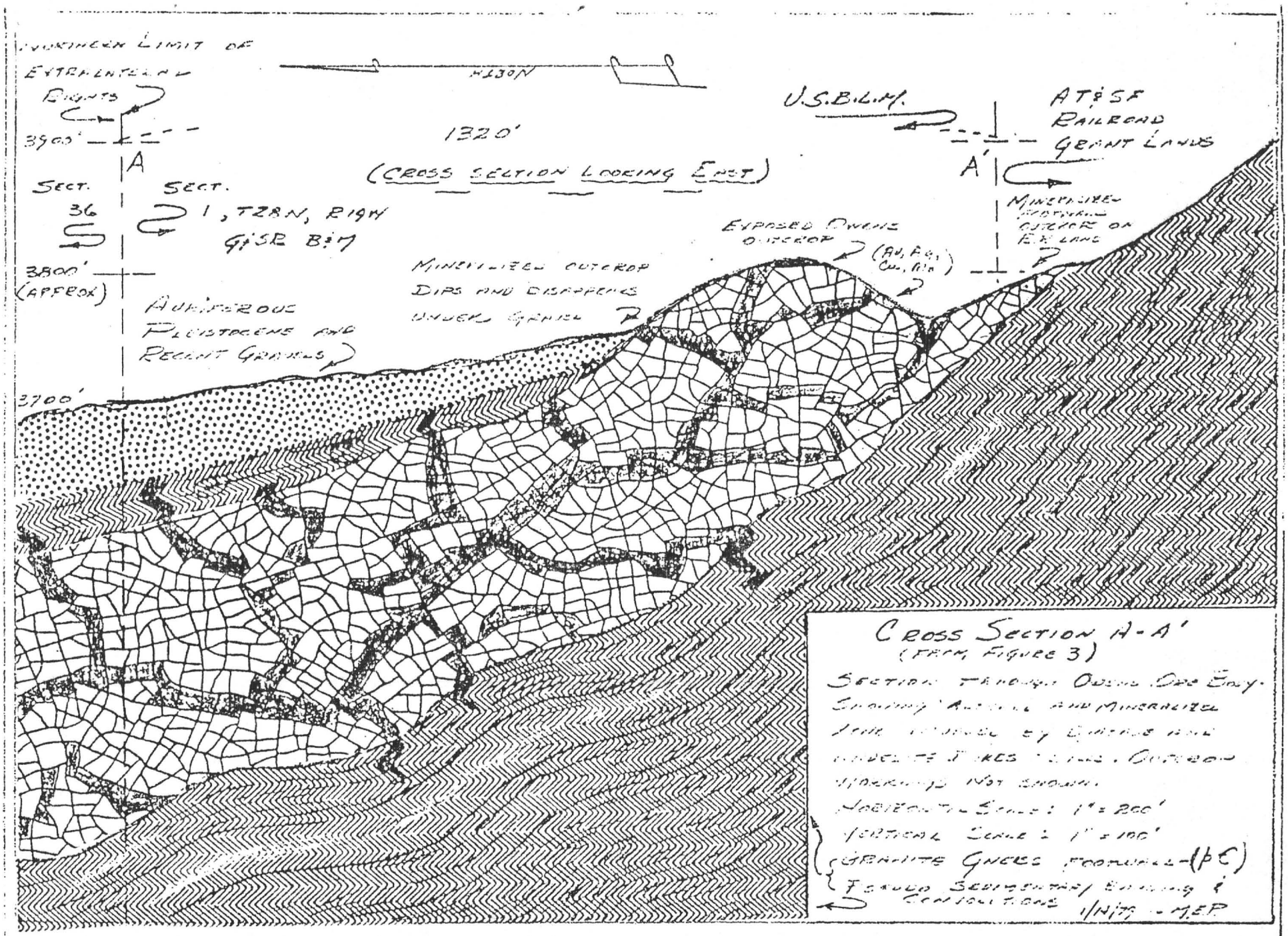


FIGURE 3
RANGE LINE
R18W
R19W
SECTION 31
SECTION 36
TOWNSHIP COR. FOUND AND FLAGGED
ATCHISON, TOPEKA AND SANTA FE RAILROAD GRANT LANDS
SECT. 1
1/4 CORNER (SECTION 1)
SEVENTH STANDARD PARALLEL
STRUCTURE DIPS INTO SECTION 36
MEAN ANNIE No. 3 MISSING (AMENDED)
GOVERNMENT LOT No. 3
MEAN ANNIE No. 4 (AMENDED)
MEAN ANNIE FRACTION No. 2
1320'+
120'+
A
A'
1/16 COR.
600.0
600.0
SECTION 36: (ALL)
STATE OF ARIZONA MINERAL TRUST LANDS
MEAN ANNIE No. 1 (AMENDED)
GOVERNMENT LOT No. 4
MEAN ANNIE No. 2 (AMENDED)
MEAN ANNIE FRACTION No. 1
1/4 CORNER (S.36) FOUND
227.7'
SECT. 1
TOWNSHIP LINE
T29N
T28N SECTION CORNER FOUND & FLAGGED
SECT. 2
STRUCTURE STRIKES INTO SECTION 2
SECTION 2: (ALL)
STATE OF ARIZONA MINERAL TRUST LANDS
1/16 COR.
AT&SF GRANT LANDS
STATE OF ARIZONA MINERAL TRUST LANDS
PROPOSED AMENDED LOCATION OF MEAN ANNIE GROUP, GL'S 3 & 4 SECTION 1, T28N R19W, INDIAN'S SECRET MINING DISTRICT MOHAVE COUNTY, ARIZONA
SCALE 1" = 400'
NORTH

Figure 3



STRUCTURAL NOTE: STRUCTURE DIPS NORTH TOWARD S.36, T29N, R19W AND STRIKES WEST INTO S.2, T28N, R19W, BOTH OF WHICH ARE STATE MINERAL TRUST LANDS.

Figure 4

SUPPLEMENT SECTION

Writer's Note: The materials appearing hereinafter have been provided by for the full and free use by the writer in the preparation of this report. These, in prior turn, were provided by Mr. Dick Hart of Kingman, Arizona, to McDevitt & Associates. It is to be noted that they are copies of reduced copies, probably of an original scale of 1" = 100'. In the reduction and recopying some detail has been lost, though it is still sufficiently clear that the major details have been identified on the ground by this writer. Not mentioned in the 2-page report under "Geophysics" is that a Self-Potential Survey was run also (in addition to the Magnetometer Survey), and the results of three (3) profiles are plotted on Page 5-S. These indicate the chemical decomposition of sulphide mineralization underlying the surface gravels, and it is believed that this mineralization is chalcopyrite ($CuFeS_2$). The magnetometer anomaly probably indicates a diabase plug with which the copper mineralization is associated.

The writer did not have access to these early data when his first field work was done, however they are completely concordant with conclusions which were based on field work alone. Had El Paso Natural Gas Company proceeded with their proposed program, it is considered inevitable that they would have drilled the Owens structure long before this. Collecting and presenting the date hereinafter represents a substantial investment of both time and money on the part of El Paso Natural Gas Company, and there can be no gainsaying that McDevitt and Associates are indeed fortunate to be the beneficiaries of these constructive endeavors.

OWENS PROSPECT

Mohave County, Arizona (T28N R19W Sec 1)

The Owens prospect is located approximately 47 miles north-northwest of Kingman in Mohave County, Arizona. The claimed area is within the White Elephant Wash drainage of the White Hills. The elevation of the property averages 3750 feet above sea level with less than 100 feet of relief.

The property consists of 7 claims (Mean Annie Group) in the northwest quarter of Section 1 of Township 28 North, Range 19 West. The claims are held by Mr. K. N. Hart of Kingman.

Development on the property consists of five shafts, one tunnel, and numerous pits and open cuts; the work having been accomplished prior to 1942. The deepest shaft was sunk to a depth of 125 feet on an east-west striking vein that dips 58° north. The tunnel is approximately 90 feet in length.

Records of Arizona Department of Mineral Resources in Phoenix indicate that 31 tons of ore were shipped prior to 1942 and returned a net of $35.62 per ton on material averaging 10% copper with the balance of the value being in gold. The year of the production is unknown.

GEOLOGY

The country rock of the area is Precambrian granite gneiss which has been intruded by diabase and andesite. Locally the granite gneiss contains a considerable amount of mafic minerals and for mapping purposes the term "gneissic diabase" was used. (See geologic

map with this report). The other mappable units are unaltered dia[illegible] and andesite [illegible]) several pits exposed massive quartz fracture fillings. The relative ages of the andesite and diabase are uncertain.

Faults, fractures and foliation are plotted on the geologic map included with this report. The predominant directions of faulting are northwest and east-west. The predominant directions of fracturing are northwest and northeast. The mineralization observed consisted of hematite, chrysocolla, malachite and azurite with minor chalcopyrite observed at one pit. The mineralization, although fracture controlled, does not appear to follow any preferred direction of fracturing.

GEOCHEMISTRY

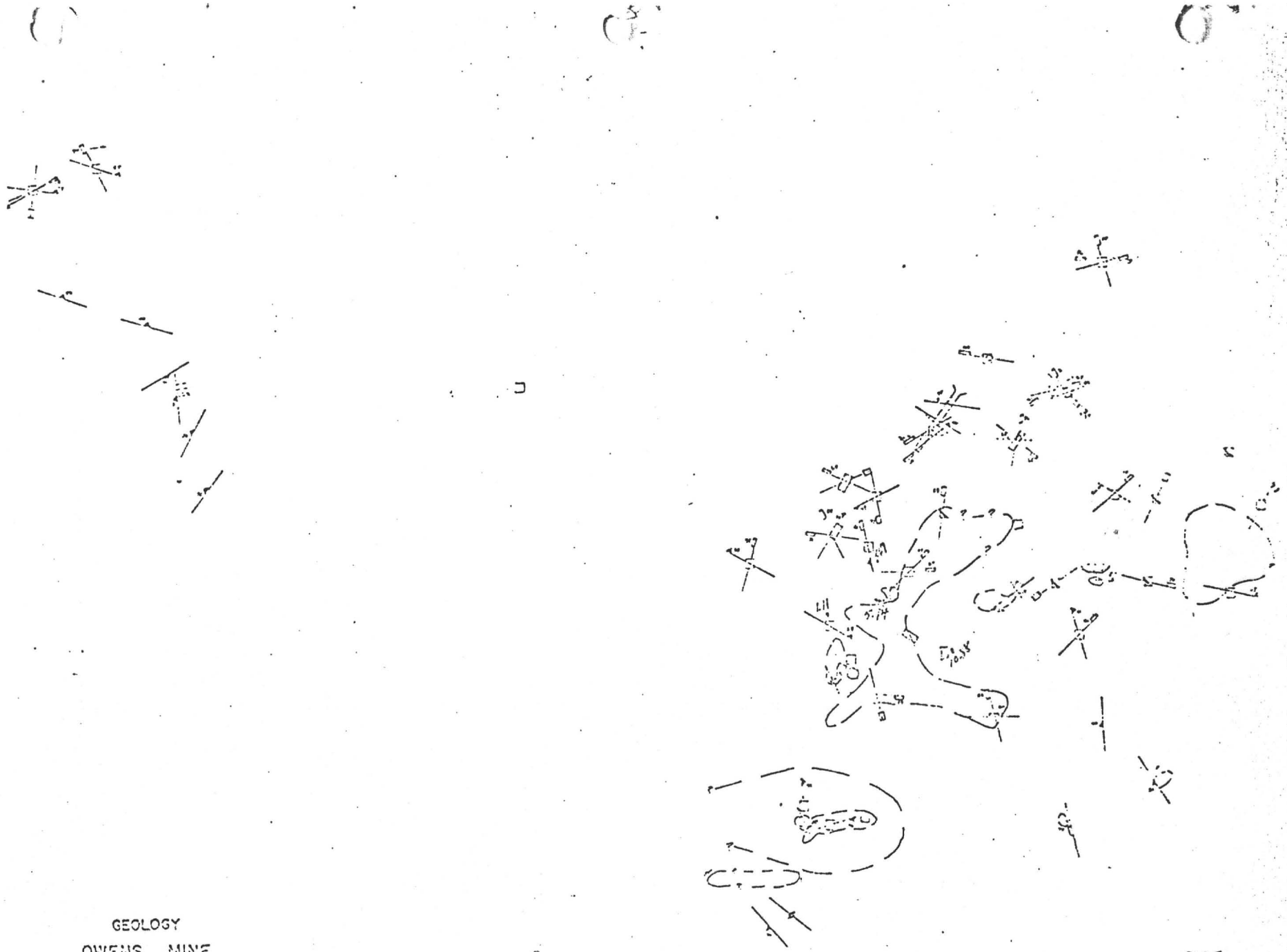
Sixty soil and 29 rock chip samples were collected. The three geochemical overlay maps show sample locations and values in parts per million for copper, silver and gold. The most interesting result of the soil sampling survey is the development of a N30W trending anomaly in copper and gold.

GEOPHYSICS

Two fluxgate magnetometer traverses were run across the property using soil sample lines for control. A double-peaked anomaly with values of 1177 and 862 gammas was recorded at the northeast end of traverse no. 2.

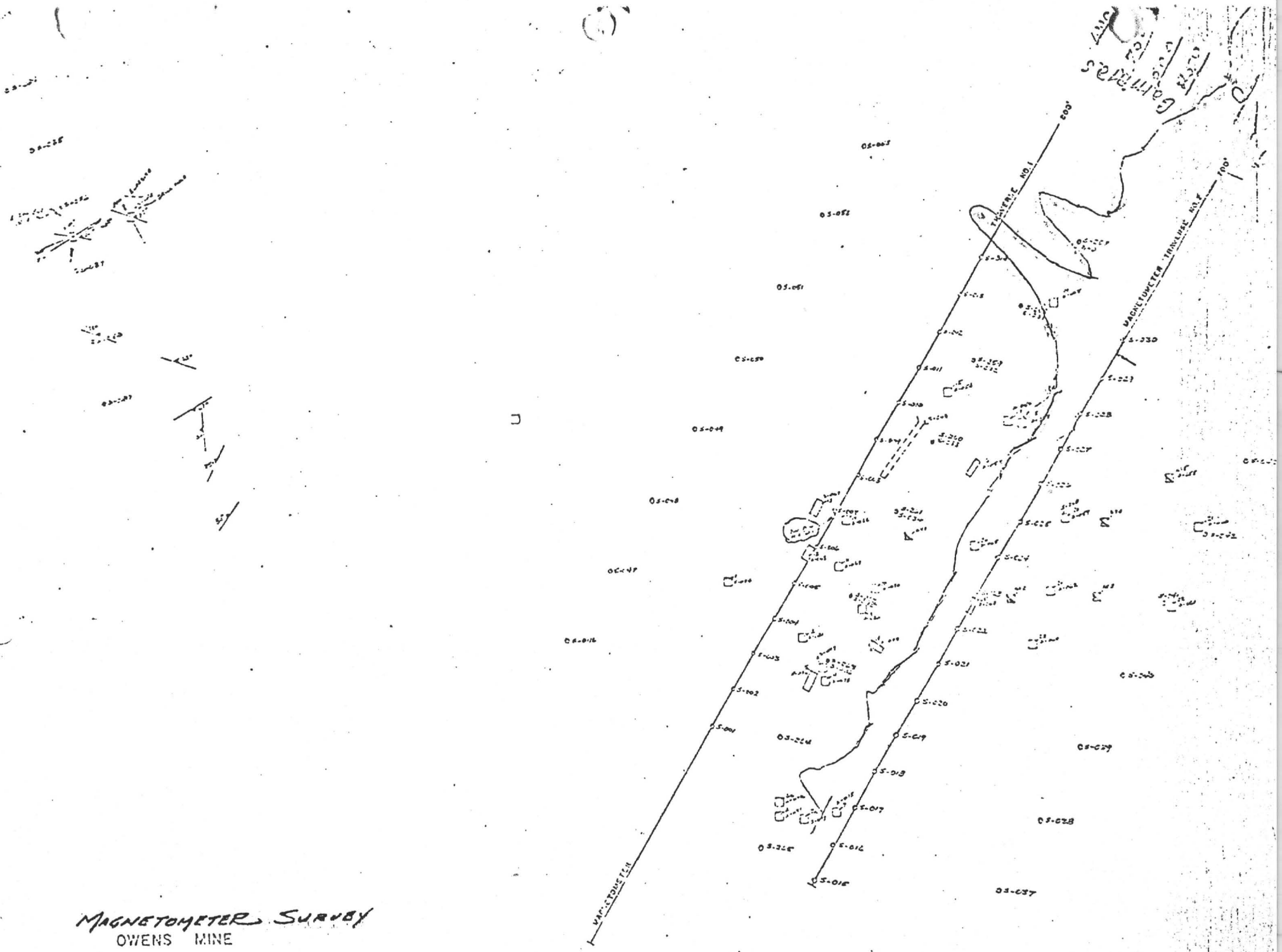
RECOMMENDATIONS

The geochemical anomaly is somewhat encouraging. Additional sampling across the western half of the copper-gold geochemical anomaly is advised. A northeast extension of the easternmost sample line to give soil sample coverage of the magnetic anomaly is also recommended.



GEOLOGY
OWENS MINE
MOHAVE COUNTY, ARIZONA
T 20 N R 19 W SEC. 1

SCALE: 1"=150'



MAGNETOMETER SURVEY
OWENS MINE
MOHAVE COUNTY, ARIZONA
T 28 N R 19 W SEC. 1

MEP NOTE: THIS SELF-POTENTIAL SURVEY IS NOT MENTIONED IN THE TEXT OF THE REPORT. IT BEGINS (LEFT TO RIGHT) AT THE NE END OF THE MAGNETOMETER SURVEY LINES AT STATIONS Nos. S-014 AND S-030 (ABOVE-MARKED S-14 AND S-30)

EASE FOT LINE # 2

(SELF-POTENTIAL SURVEY)
RECON S.P. SURVEY
DICK HAST COPPER CLAIMS
BY B.K. POWNER MARCH-1975
SCALE: 1"=50'

Writer's Note: (1) Sheet No. 1 of the Assay Data from which the anomalies in the following pages are plotted is missing, and an effort is ongoing at the time of this writing to replace it.

(2) The following table of conversions and equivalents is provided in order to interpret more easily the relationship between the averdupois, troy, and decimal assay presentations:

Percent:	Parts per Million:	Short Ton:	Troy Ounces:
100.00	1,000,000.	2000-lbs.	29,166.67
10.00	100,000.	200 "	2,916.67
1.00	10,000.	20 " **	291.67
0.10	1,000.	2 "	29.167
0.01	100.	0.2 "	2.917
0.001	10.	0.02 "	0.292
0.0001	1.	0.002 "	0.029

**: 1-percent is referred to as a "Unit" and 20-pounds is used in commerce as a "Short Ton Unit" and abbreviated "STU". A "Long Ton Unit" (LTU) is 22.4-pounds.

(2) 1-part per million is approximately 0.03-troy ounces per ton which, at a price of $200.00 per ounce for gold, would be approximately $6.00. Conversely,

(3) 1-troy ounce is equal to 34.2-parts per million.

(4) It is noted in line 1 of the table above that a short ton (of 32,000-averdupois ounces) is equivalent to 29,166.67-troy ounces. By dividing, 1-troy ounce is equivalent to 1.097-averdupois ounces. By multiplying, 1-pound averdupois is equivalent to 14.585+ troy ounces.

Laboratory Analysis Report
Report No. 733322
El Paso Natural Gas
Page 2

Sample No.	PPM Copper	BG .2 PPM Molybdenum	BG 0.1 PPM Silver	BG .02 PPM Gold
S-036	210	<1	1.6	1.09
S-037	50	<1	1.2	0.58
S-038	29	1	1.3	0.52
S-039	26	<1	1.6	0.50
S-040	31	<1	1.3	0.35
S-041	198	<1	1.7	0.45
S-042	144	<1	1.6	0.45
S-043	98	<1	1.4	0.50
S-044	+1000	<1	1.9	0.87
S-045	145	<1	1.8	0.47
S-046	43	1	1.3	0.47
S-047	46	<1	1.7	0.47
S-048	56	<1	<1.0	0.50
S-049	+1000	6	1.2	7.70
S-050	110	<1	1.4	0.33
S-051	65	1	1.3	0.35
S-052	46	7	1.6	0.35
S-053	44	3	1.4	0.35
S-054	+1000	3	2.0	0.62
S-055	+1000	1	1.2	0.75
S-056 Rock chip	259	4	1.6	0.45
S-057	512	7	1.3	0.77
S-058	886	7	1.4	1.11
S-059	+1000	4	1.0	0.53
S-060	+1000	1	1.5	1.76
S-061	230	4	1.6	0.47
S-062	74	6	1.2	1.26
S-063	+1000	4	1.9	3.29
S-064	+1000	7	<1.0	2.65
S-065	+1000	7	1.7	0.45
S-066	+1000	6	1.3	0.45
S-067	70	4	1.1	0.10
S-068	+1000	3	<1.0	0.16
S-069	+1000	4	1.6	0.53
S-070	680	<1	2.0	<0.10
S-071	54	7	<1.0	<0.10
S-072	17	4	1.3	<0.10
S-073	55	10	1.2	0.15
S-074	+1000	4	1.4	0.18
S-075	176	4	1.1	0.10
S-076	+1000	1	1.9	0.90
S-077	+1000	4	1.8	0.79
S-078	36	4	1.3	<0.10
S-079	+1000	4	2.6	10.88
S-080 Rock chip	132	1	1.8	0.35
S-081	+1000	1	2.0	5.14
S-082	+1000	7	1.5	0.45
S-083	45	1	1.0	0.10
S-084	60	4	1.0	0.10

Laboratory Analysis Report
Report No. 733322
El Paso Natural Gas
Page 3

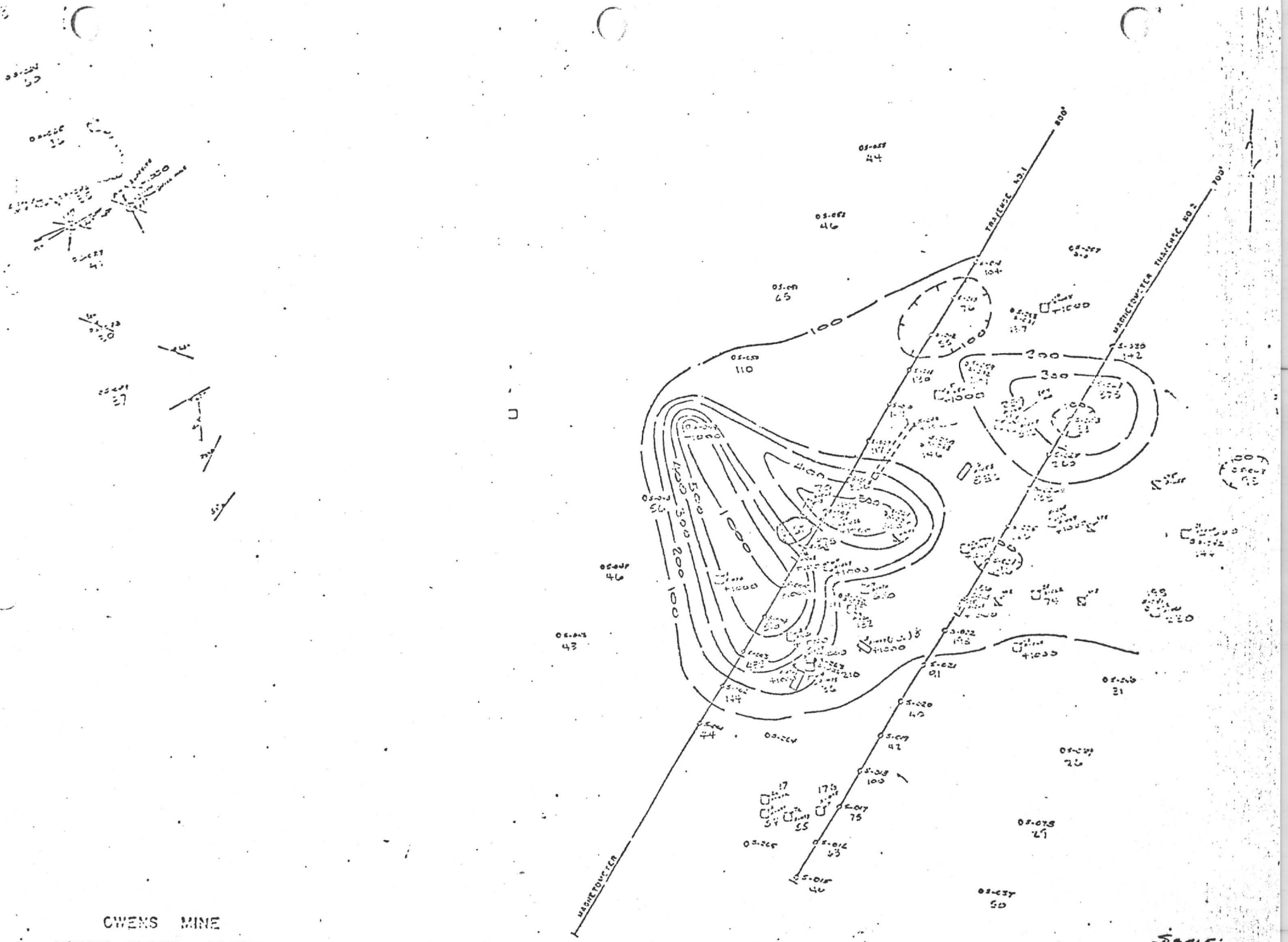
Sample No.	PPM Copper	PPM Molybdenum	PPM Silver	PPM Gold
S-085	36	1	1.4	<0.10
S-086	35	4	<1.0	0.18
S-087	41	1	1.0	0.10
S-088	30	<1	<1.0	<0.1[illegible]
S-089	37	<1	1.1	0.10

GEOCHEMICAL ASSAY

Sample NO.	% Copper
S-005	0.52
S-044	0.23
S-049	0.15
S-054	0.30
S-055	0.11
S-059	0.50
S-060	0.78
S-063	0.43
S-064	0.67
S-065	0.24
S-066	0.37
S-068	0.14
S-069	0.79
S-074	0.17
S-076	0.13
S-077	0.69
S-079	0.59
S-081	0.93
S-082	0.38

[illegible]
[illegible]

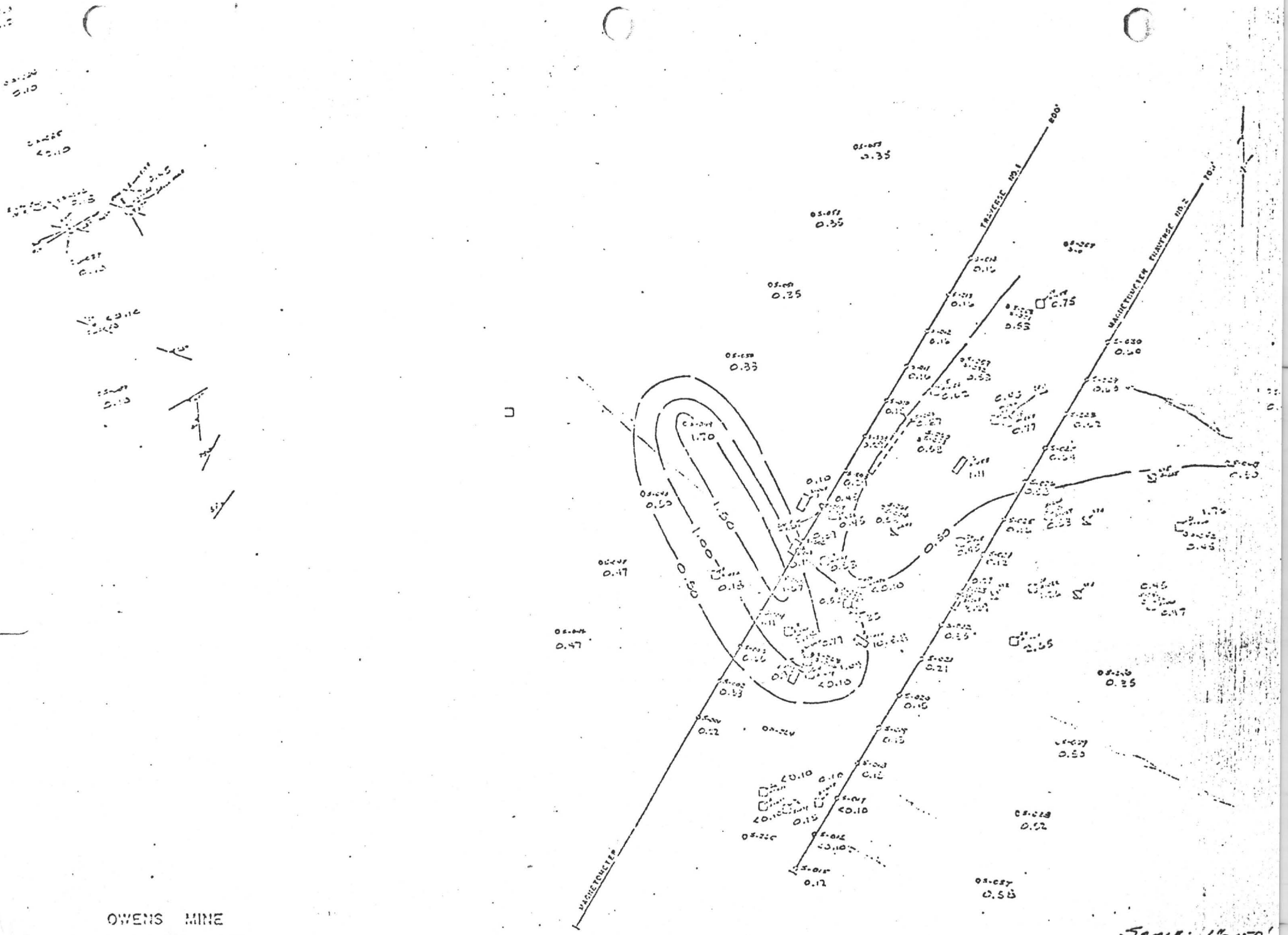
[illegible]
Signed



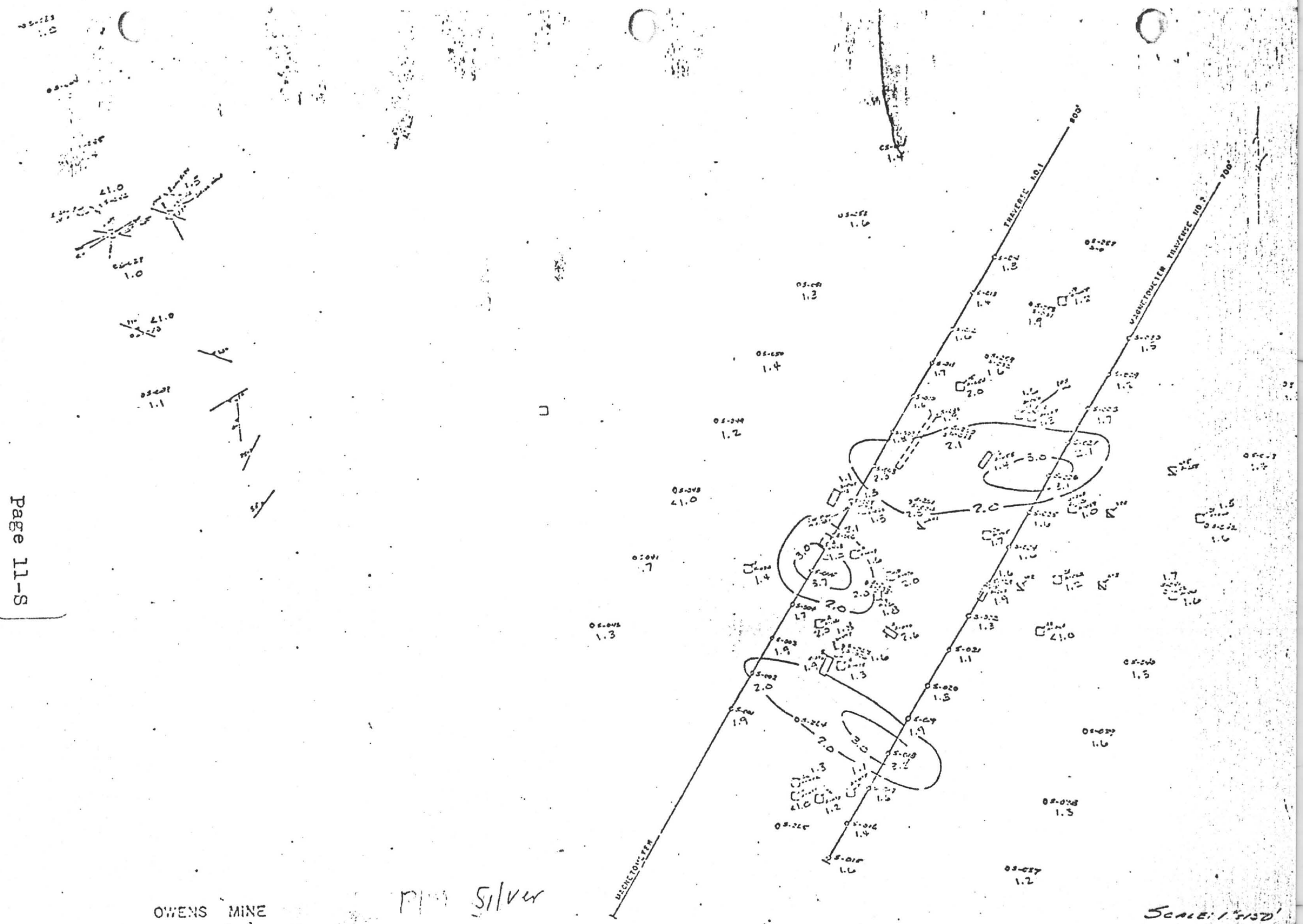
OWENS MINE

MOHAVE COUNTY, ARIZONA

T 23 N. R 19 W SEC. 1



OWENS MINE
MOHAVE COUNTY, ARIZONA
T 23 N R 19 W SEC. 1



OWENS MINE
MOHAVE COUNTY, ARIZONA
T 23 N R 19 W SEC. 1

Silver

DUVAL CORPORATION

COPPER DIVISION — MINERAL PARK PROPERTY

KINGMAN, ARIZONA

CERTIFICATE OF ASSAY

April 7,1980

Rock Chips - Drill Hole Samples

NUMBER	MARKS, ETC.	SAMPLE GMS.	Cu %	Ag oz/ton	Au oz/ton			
	24 JH 101-60'-66'		2.68	7.89	1.08			
	25 JH 102-66'-72'		3.23	4.24	1.24			

FORM 311 O.B.

Dec. 22, 1975

Ref no.	SAMPLE DESCRIPTION	Gold oz/ton	Silver oz/ton	Lead %	Zinc %	Copp %
12-17-1	#101 Pit	.006	0.42			0.0
12-17-2	#102	.004	0.44			0.4
12-17-3	#103	.004	0.40			0.4
12-17-4	#104	.004	0.44			0.1
12-17-5	#105	.006	0.50			0.0
12-17-6	#106	.080	0.63			1.0
12-17-7	#107	.068	0.13			0.
12-17-8	#108	.004	0.20			0.0
12-17-9	#109	.244	0.10			1.4
12-17-10	#110	.006	0.22			0.0
12-17-11	#111	.004	0.24			0.0
12-17-12	#112	.064	0.24			0.4
12-17-13	#113	.004	Tr			0.1
12-17-14	#114	Tr	0.54			0.0
12-17-15	#115	.004	0.50			0.0
12-17-16	#116	Tr	0.41			0.1
12-17-17	#117	.006	0.20			0.0
12-17-18	#118	.038	0.17			0.0
12-17-19	#119	.020	0.28			0.0
12-17-20	#120	.088	0.48			0.7
12-17-21	#121	Tr	0.14			0.0
12-17-22	#122	Tr	0.30			0.16
12-17-23	#123	.004	0.50			0.2
12-17-24	#124	.010	0.47			0.2

DUVAL CORPORATION
COPPER DIVISION — MINERAL PARK PROPERTY
KINGMAN, ARIZONA

CERTIFICATE OF ASSAY

December 24, 1974

BEAKER NOS.	MARKS, ETC.	SAMPLE GMS.	Cu %	Mo %	Zn %	Pb %	Ag Oz/ton	Au Oz/ton
	Rock Chip G - 152 Dick Hut		7.27	.001	—	—	.05	.442
	[redacted]							

Page 17-S

FORM 311 O.S.

E. H. Goodwin

DUVAL CORPORATION
C[illegible]PER DIVISION — MINERAL PARK PROP[illegible]TY
KINGMAN, ARIZONA

CERTIFICATE OF ASSAY

January 23, 1975

[illegible]AKER [illegible]OS.	MARKS, ETC.	SAMPLE GMS.	Cu %	Mo %	Pb %	Zn %	Ag Oz/ton	Au Oz/ton
	Rock Chip G 160		3.18	.0005	.0025	.0020	.02	.180

FORM 311 O.S.

DUVAL CORPORATION
COPPER DIVISION — MINERAL PARK PROPERTY
KINGMAN, ARIZONA

CERTIFICATE OF ASSAY

30 January 1973

[illegible]EAKER NOS.	MARKS, ETC.	SAMPLE GMS.	Cu %	Mo %	Au oz/ton	Ag oz/ton		
	Dick Hart = Drift		3.64	.002	.067	.19		

FORM 311 O.S.

Subject: 34 Mining Claims located in Weaver Mining Dist. of Blk. Mtns. Ariz. Owned by Ruth White, Chloride, Az. and Robert Pearson Kingman, Az. Referred to as 'Great West - Blk. Mtn. Group'. Consists of (4) Smaller Groups: Great West - 7 Claims, Hilltop - 8 claims, Wildcat - 4 claims and Glory B - 15 Claims all of which are contiguous and tend to follow area of most mineralization. (Also See Attached Maps, Assays, etc)

Geology of Area:

Primary rock in N. & NE is schist grading to Gr. Sch. and Gr. to South - Grading to Gr. Gn. to W. & S.W. Minerals and enrichments are in some cases wide ranging and in some cases intrusive probably caused by two or more periods of enrichment. Most Qtz Veins and lens in N. Part of Group tend N.W. To S.E. & Dip to N. from 65° to vert. Veins and Mineralized Dikes in cent. and S. tend N.E. To S.W. There is more surface min. Show here but N. Area more high Grade Ore.

Geography of Area:

Access to Group is from U.S. #93 mile marker 33 South; Claims are approx 5 Miles from Hwy on old roads that come in from E. & N.E. Area is used for hunting of Quail, etc. and most of it is accessable by 2 W.Dr. Vehicles except for higher and poorer roads in S. cent of H.T. Group where 4 W. Dr. should be used. Whole Group is About 2 Miles in length beginning at South end about a mile north of Peak of Mt. Perkins and going in a North Direction. Group is Split on 2 Topo. maps - Mt. Perkins, White Hills (15 min Topos).

Approx. Total Size of Group - 700 Acres

Topography of Group:

Alt. at N. end coming into Gh. West #2 Claim is approx. 3,800' — Max. Alt. at S. end of Glory B. Claims approx 4,800' Most mining activity has been from 3,800' to 4,400' with exception of long tunnel in S. part at 4,700'.

History of Group (as known):

North part of Area (in center of Gh. West Group) was old Spanish Town of Sierra Vaquista (sp?). Probably produce ores in late 17th and into 1800s. Has been reworked several times since as evidenced by numerous Tunnels, Shafts, Drifts, and prospect pits but never with any modern equipment. Old Stamp mill was located on claims GW #1 and GW #2. Shaft here was last worked by husband of R. White and partner in 1930s and ore worth $140.00 per ton at the time was shipped in limited quan. from here. One assay sample from Dump pile by shaft assayed 2.5 Au and 1.7 Ag so info. on shipping of ores and their values presumed to be factual. Shaft is thought to be in excess of 100' deep with several drifts xcts. but has water in now within 25' of top and is used for pumping and watering cattle (with mine owners' permission). An Old Spanish Arrastra, parts of which are still in evidence, is on Claim # HT-5 and minerals from HT-6 and HT-7 Tunnels and also one on G.B-6 though to have been worked here as old mule trails have been found. Water available on or near the surface most of the year at the site of the arrastra is the reason for placement at that point.

3/ History Cont'd.

Many drifts, thought to have been made by early Spanish, are in evidence on claims GW #1 thru GW #4 some of which have large caverns inside where ores of higher value were probably found and removed.

Mining Possibilities and Values at this time:

1/ Because of hand methods of mining employed even up to last attempts it is obvious only a small fraction of total minerals have been removed.

2/ It is thought that a large portion of mineralized area located in N. end of Group can be open pit as a roughly 'X' shaped enrichment Apex is actually one large rounded raised hill on GW 2, 3 & 4. This part also contains approx 1000(+) yds of dumps etc. Some of which have shown profitable assays.

Another good open pit possibility is in center of Hilltop Group at higher Altitude - Have found ore in 7(+) veins dipping near same contour as surface So not too much Clearing of Gangue to be done to expose and work ores if profitable.

3/ Millsite could be put on or adjacent to property if desired or else ores Could be hauled out by roads that are in use at this time if Some repairs are made.

Prepared By: → Robert E. Pearson Box 262
Submitted By: - So-Hi Estates Kingman Az 86401
(Co-owners) - Ruth H. White P.O. Box 67
Chloride, Az 86431

4

Price of Described Claims on pg 6 #1,2,3 and attached Scedules:

We wish to realize a total price (Net) of $250,000.00 and will Quit-Claim for this Amt. To be divided equally Between - Ruth H. White P.O. Box 67 Chloride, Az 86431

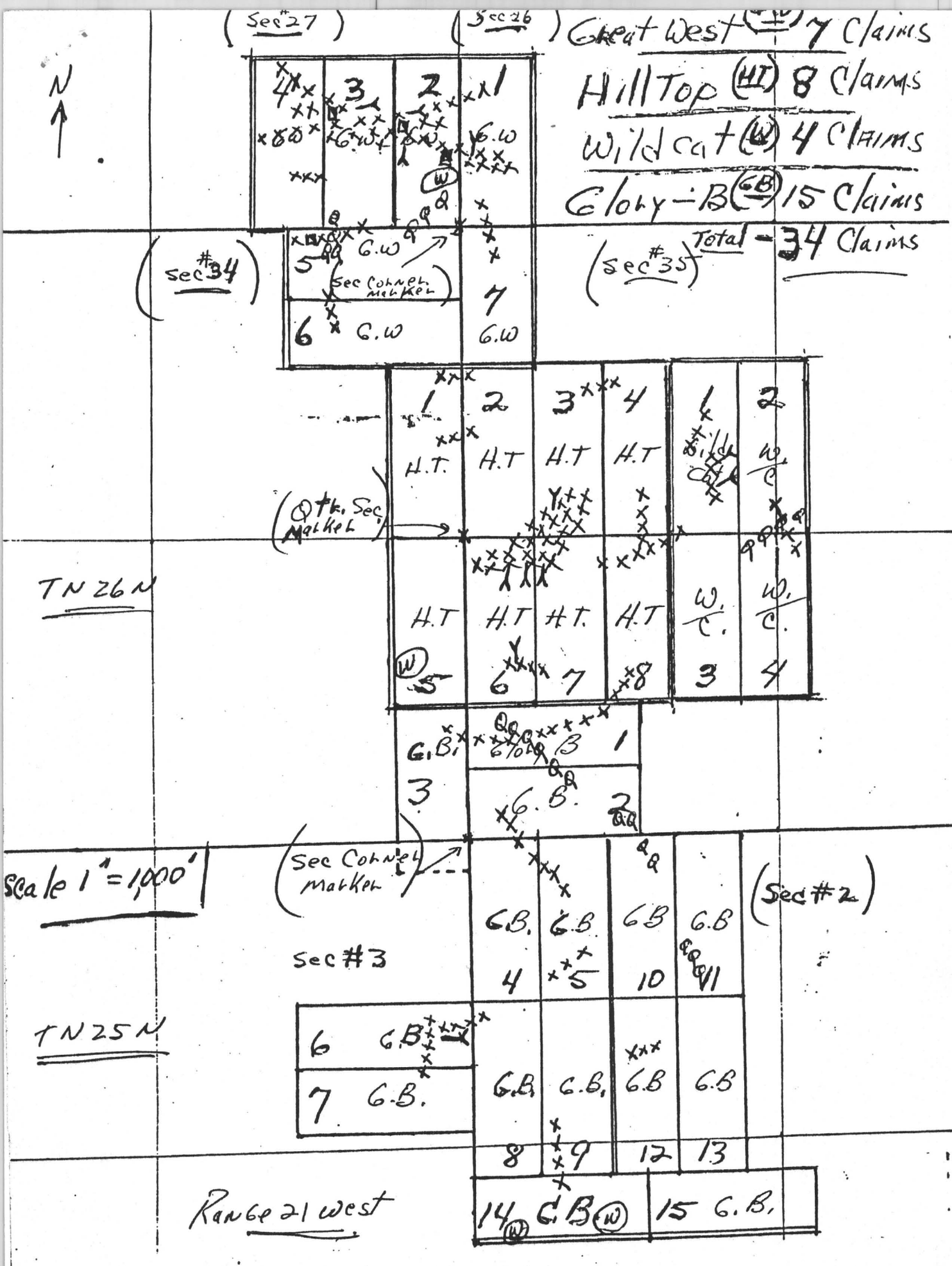
(and)

Robert E. Pearson Box 262 So-Hi Estates Kingman, Az 86401

Terms — To be discussed at time of Sale - Some down with Mo. Payments To both Parties on land contract O.K. — May entertain Some form of Stock Options but do not really prefer this alternative.

Copies of Assays from Ariz. Test Labs – Ruth & Bob Claims –

DATE	Lab #	Assay Sample #	Sample Location Type of Sample Type of Ore – Country Rock	Au	Ag	Other
11/12/80	8731	Glory B	Quartz Vein 100' S.W. of Post Marking Claims Hilltop 5 & 6 So. line – Some pyrite (G.B. #1)	.05	1.7	
"	"	S.T. 700	Quartz Dike 700' South of Tunnel on Hilltop #7 – Dike from #7 & 8 Strike S.W. (on G.B. #1)	.03	.25	
"	"	G.W.W.	Dump Sample Taken of Pile by Well on Great West #1 Claim Red Qtz Ore typical of other Dumps	2.50	1.7	
"	"	GRW 150	Vein Sample from pit on Ore Body 150 feet East of Well – Dark Quartz – Some Spec Hem. (GW #1)	.31	.50	
11/23	7865	Wildcat S.P.	Sample of pile on Ground from Wildcat #1 Claim – hand piled from Tunnel – Copper Trace in Schist.	.01	.10	
"	"	Wildcat G.P.	Pile on Ground 50' South of Above Some More Qtz – Copper Trace – 30+ Tons in Above	.04	.05	(Spec) 6.0% Cu



Q - Quartz Lenz
X - Intrusive Min. Dikes, Veins
W - Water