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Arizona Department of Mines and Mineral Resources Mining Collection

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06/26/86

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: TROY CLAIMS

ALTERNATE NAMES:
GOLD NUGGET PROPERTY
ROUND TOP PROPERTY

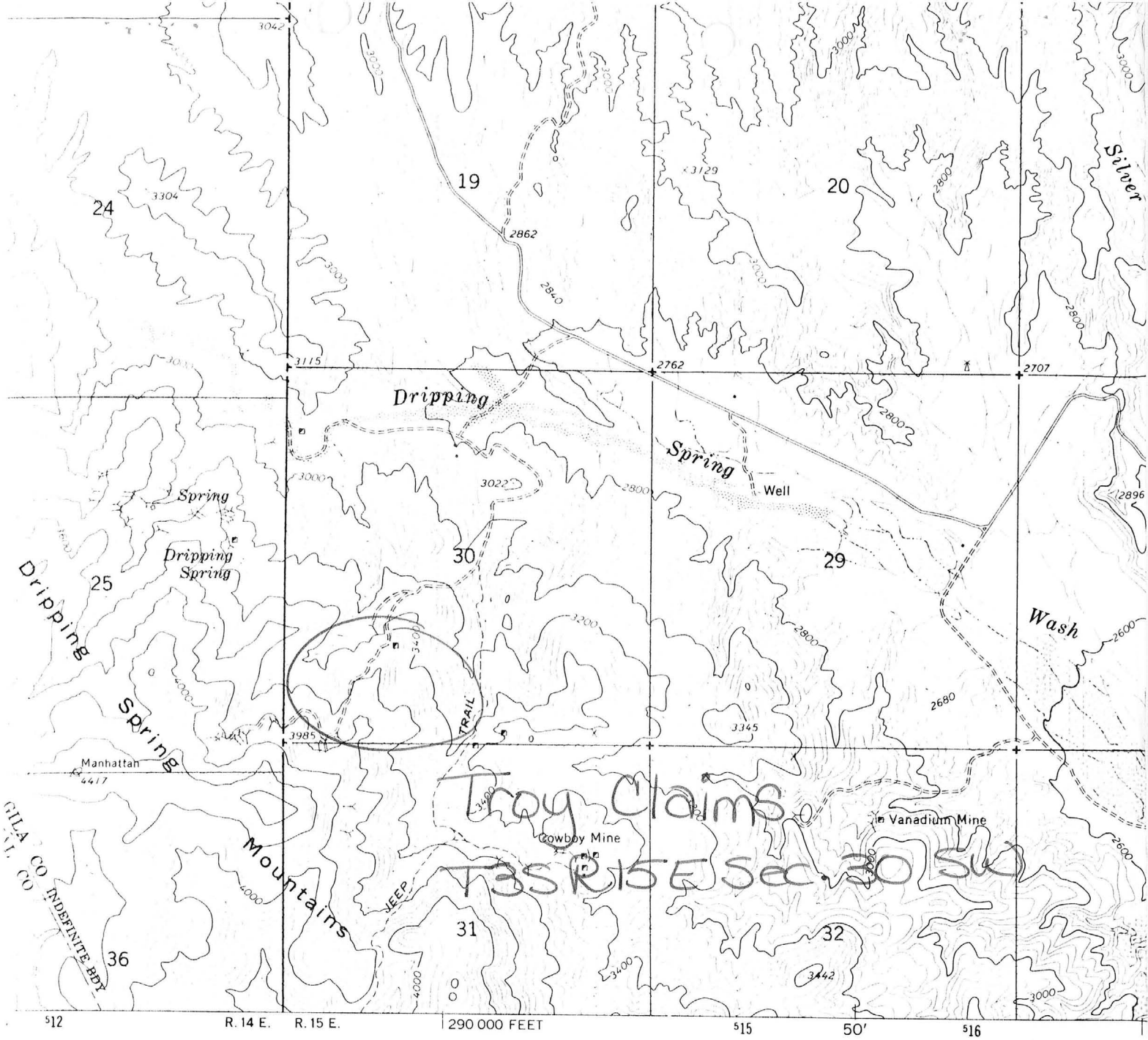
GILA COUNTY MILS NUMBER: 23A

LOCATION: TOWNSHIP 3 S RANGE 15 E SECTION 30 QUARTER SW
LATITUDE: N 33DEG 08MIN 22SEC LONGITUDE: W 110DEG 51MIN 20SEC
TOPO MAP NAME: EL CAPITAN MTN - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
COPPER
GOLD
SILVER

BIBLIOGRAPHY:
ADMMR TROY CLAIMS FILE
BLM AZ MINING CLAIMS FILE 55960, 55972 ET AL
ADMMR "U" FILE, AU 5



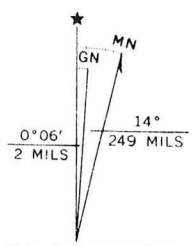

ed, edited, and published by the Geological Survey

l by USGS and USC&GS

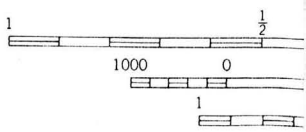
raphy by photogrammetric methods from aerial graphs taken 1962. Field checked 1964

nic projection. 1927 North American datum
0-foot grid based on Arizona coordinate system, east zone
meter Universal Transverse Mercator grid ticks, 2, shown in blue

omitted, land lines have not been established




UTM GRID AND 1964 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET




THIS MAP
FOR SALE BY U. S. GEOLO
A FOLDER DESCRIBIN

El Capitan Mtn. 7.5'

# PRELIMINARY GEOLOGIC REPORT ON MINERAL SURVEYS 1533,1737 and 2447, PINAL AND GILA COUNTIES, ARIZONA IN TOWNSHIP 3S, RANGE 14E

BY John Rothermel, President, Silver Nickel Mining Co.
June 16, 2005

Mineral Survey No 2447 consists of eight (8) patented mining claims comprising approximately 150 acres located about 26 miles southwest of Globe, Arizona in Pinal and Gila counties. The property lies in the rugged Dripping Spring Mountain Range, which is a product of complex faulting. Rock units include the middle Cambrian Troy Quartzite, Devonian Martin formation, Cretaceous-Tertiary diabase, Mescal Limestone, Dripping Spring Quartzite, Abrigo Formation, and Escabrosa Limestone.

The south half of Section 23 is cut by numerous dikes of rhyolite-dacite porphyry and hornblende andesite porphyry. There are also two small rhyolite-dacite porphyry plugs. One of the plugs covers the area of the water tank. The mineralization is structurally connected with the extensive faulting and fracturing. This area of investigation is an example of a fault mosaic, the faults trend in both NW-SE and NE-SW direction, thus forming an intricate network.

The faults appear normal in nature. Extent of displacement, relative ages and causes of the faulting were not determined. The faulting and dikes with porphyritic textures are probably related to the underlying intrusions.

Two vertical joint patterns were noticed in the field, one striking NW-SE and one NE-SW. Elevations of Section 23 range from a high of approximately 3500 feet to a low of approximately 3,380 feet.

The terrain consists of two high hills, connected by a saddle. The topography slopes downward to the north at a fairly steep angle. Examination of the area suggests that the broken, irregular topography is the product of intricate and unsystematic faulting. Differential erosion of the different rock types is also responsible for slopes, bluffs and rugged outcrops.

Vegetation consists of scattered junipers, saguaro cacti, prickly pears, some oak trees, and scattered range grasses. Several cuts and an open shaft were noted in the area of the saddle. The mineralogical character seems to be quite simple. The ores from the saddle area range from magnetite, hematite to admixed magnetite-hematite to limonite forming incrustations on the former two with copper carbonate staining. The field evidence indicates that the iron and uranium were derived from the diabase. The iron ore occurs as a large massive body within the Martin formation near the saddle close to the diabase.

I observed field criteria by which both magmatic segregation and contact metasomatism (replacement) were recognized.

Review of the map of Metallic Mineral Districts of Arizona by Stanley B. Keith, Don E. Guest and Ed DeWitt reveals that the Dripping Springs Laramide intrusive (late Cretaceous to early Tertiary covers this area of investigation. These Laramide igneous intrusions are the host rocks for most of Arizona's copper porphyry deposits. The Copper Depot, Copper Depot 2, Atlas No. Three, Antelope and New Century were originally located for rich copper mineralization. The rhyolite-dacite porphyry and hornblende andesite porphyry rocks being the host rock for the copper mineralization. These dikes traverse the south half of the section in an east to west and northeast to southwest direction. These porphyry dikes are feeders from the Laramide intrusive which under lie the area between this property and the old town of Troy. Field evidence for this are the numerous dikes with porphyritic textures, breccia zones with angular or locally rounded fragments and epidote and chlorite alteration and secondary biotite alteration. Copper ore has been mined from these porphyry dikes. Silver Nickel Mining Co's property consists of eight (8) patented mining lode claims located in Section 23, Township 3 South, Range 14 E (south half).

Phelps Dodge Exploration Corporation has located unpatented mining lode claims in Sections 21,22,23,25,26,27,34,35 called the Troy claims.

General topography of the investigated property lends itself to open pit operations. Average slope of the deposit is 30%. There is an access road into these patented claims which traverses the claims to the saddle on the Hoosier Boy. There is no road access to the southern portion of the section. Access is by foot. The Troy Ranch Road continues in a southwesterly direction to the Troy Ranch.

Geological mapping of these sections is attached to the report. Most of the early production from these claims is unrecorded although I did find a MILS-Data sheet showing that uranium was mined underground from these claims.

Mineral Survey No. 1533 lies approximately 2 miles east of Mineral Creek on the northwest slope of Scott Mountain approximately ¾ mile south of the Monitor Mine in Section 6. This is another area that displays characteristics of a copper porphyry system. The Monitor Mine is presently under exploration by General Minerals Corporation with an option agreement with Teck Cominco American Inc. Asarco also holds mining claims and property in this area and vicinity. The Ray open pit copper mine lies just west of Scott Mountain. General Minerals Corporation has previously conducted geological, geochemical and geophysical studies on the Monitor Mine property and vicinity.

Silver Nickel Mining Co's property on Scott Mountain consists of four (4) patented mining claims. Silver Nickel Mining Co. has acquired the Reksom Lode MS 1737, which is located just west of the Gladstone Mine (Ray Mine) on Haley Mountain, in Section 7. Asarco owns mining claims and real property in this section. The Reksom Lode is only 2 miles east of the old site of Ray. These 250 acres of patented mining

claims represent a large block of deeded land situated in copper porphyry exploration targets in the Copper Basin country of southern Arizona. The Copper Basin country is a prime exploration target area for copper porphyry deposits as Laramide intrusives are clustered in this area.

In 2003 Arizona accounted for 67 percent of the US copper production.

Section 23 is unique in that uranium mineralization has been mined from the Devonian Martin dolomite. The iron and uranium probably are derived from the diabase dikes and sills. These massive structures are 30 to 40 feet wide. There is over 150,000 tons of this material exposed on the surface. This metasomatic environment should be examined for uranium.

Diabase alteration may have been a significant component of the supply of copper to the Laramide districts of this area. The central part of southeastern Arizona contains an unusual abundance of diabase. Diabase is abundant on the property and is probably a source of the copper in the Dripping Springs Mountains.

John Rothermel
President, Silver Nickel Mining Co.
e-mail silvernickelco @aol.com

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John Rothermel
President, Silver Nickel Mining Co.
e-mail silvernickelco @aol.com

# REPORT

# ON

# COMPLEX RESISTIVITY

# MEASUREMENTS

Troy Area, Arizona

For Mr. Frank Fritz,

AMAX Exploration

ZONGE ENGINEERING
5712 East Seneca
TUCSON, ARIZONA 85712

Report on Complex Resistivity Measurements

Troy Area, Arizona

For Mr. Frank Fritz, AMAX Exploration

## Introduction

A detailed complex resistivity survey was performed for AMAX in the Troy area during Jan. 25 through Feb. 1, 1973. Also during this time, one line was run at a single frequency over an area of interest to obtain resistivity data. This report summarizes the field proceedures used and explains the results of the measurements.

## Field Proceedure

CR measurements were made using electrodes previously placed in two existing drill holes at depths of 180' and 480' for hole number one, and 250' and 475' for hole number two. All depths are measured from the drill hole collar.

At each receiving station a series of three readings were recorded by: (1) transmitting on the upper electrodes in DH 1 and DH 2; (2) transmitting on the lower electrodes in DH 1 and DH 2; (3) transmitting on the two electrodes in the drill hole intersected by the survey line (i.e. DH 1 for the west line, and DH 2 for the east line). The spectral response to 0.1, 1.0, and 10 Hz square waves was recorded at all stations for all transmitting configurations, with an occasional check at 0.01 Hz for clays.

Receiving electrode spacing (a-spacing) was 500 feet and receiver moveout was accomplished in 500 foot increments. Electrode moveout and orientation was dictated by the terrain, but an effort was made to

initially pick a path which would permit lines as straight as possible.

The resistivity survey was performed at a frequency of 1.0 Hz using a standard dipole-dipole array with a = 500 ft. and n varying from 1 to 5.

Data Reduction and Analysis

A major assumption for the calibration and deconvolution process is that the current entering the cable at the drill hole collar is the same as the current leaving the electrode in the hole. That is, we had to assume no leakage (capacitive or resistive) in the cable in the hole since there was no way to calibrate downhole. Considering past measurements of this nature, this is a fairly valid assumption.

Secondly, the reduced data as presented in this report is not corrected for terrain effects, or the anisotropic effect of layering. These effects should be considered in the final data interpretation.

All data was contaminated with both negative and positive EM coupling, but has been effectively removed. Perhaps it should be mentioned that this is the first time coupling has been removed for a complete survey. The individual results look very reasonable and the overall result is encouraging for removal of more severely coupled data.

Some comments on the data interpretation:

1. All measurements except the vertical dipole responses to the south of DH 2 indicate a slight "clay" response.
2. Assuming no shielding effect due to the electrode configuration, the total sulfide values should be fairly close but on the conservative side as a volumetric average.
3. All copper sulfide values should be very conservative on a volumetric average.

4. The weak responses to the north of both holes while using the vertical transmitting electrodes could be mostly due to the geometry of the electrode configurations. As one progresses down hill toward the north a zero response condition is encountered when the spatial orientation of the receiving dipole is horizontal and at the mid point between the vertical transmitting electrodes.
5. If one can believe laboratory results and theory, the curvature of spectral measurements to the SW of DH 2 indicate a more massive (veined) mineral environment than the area around DH 1. Assuming this is true, the total sulfide and copper sulfide estimates are probably very conservative especially for the two southern-most stations using the vertical transmitting dipole in DH 2.
6. For the resistivity survey on line 60E-Skew, the effect of the steel post fence is evident especially in the PFE's (phase angles). The values to the NE appear to be influenced more than those to the SW. This is probably due to the low conductivities to the NE focusing the current closer to the surface. The only values which appear to be seriously effected are Sta. 2,3 - 5,6 which is about three times too high and Sta. 2,3 - 7,8 which is about three times too low. Some of the surrounding values are effected as well, but not nearly to that extent.

Figure 1 is the location map for the CR survey and Fig. 2 shows the data plotting method. For the vertical transmitter dipole configuration, the points are plotted similar to a pole-dipole array, while the data are plotted at the mid points between the transmitting

and receiving dipoles for the horizontal transmitting array.

Figures 3, 4 and 5 present percent total sulfides by volume, percent copper sulfides by volume, and PFE's respectively. The single values are for the vertical transmitting dipole configuration, while the top value represents results from the upper transmitting dipole and the bottom value the results from the lower transmitting dipole for the double valued points. Remember that this is just one method for plotting this data in a manner to indicate trends and these values should not be thought of as representing a single point on the map.

Rigid interpretation of these CR results is left as an exercise to the reader since down-hole data is difficult at its best to analyze. However, rough analysis tends to indicate increasing sulfides to the SW between the two survey lines with an apparent dip to the SE? This is assuming that the vertical transmitting dipole will penetrate deeper than the horizontal arrays. In any case, it appears that both drill holes were placed near the edges of the major portion of the mineralization detected.

Figures 6 and 7 give the location and results of the resistivity survey. The results do not show horizontal stratification which might be expected in the case of a slide block. However, the data should be analyzed in more detail before drawing any definite conclusions regarding the presence or absence of a root structure for the area of interest.

General Comments

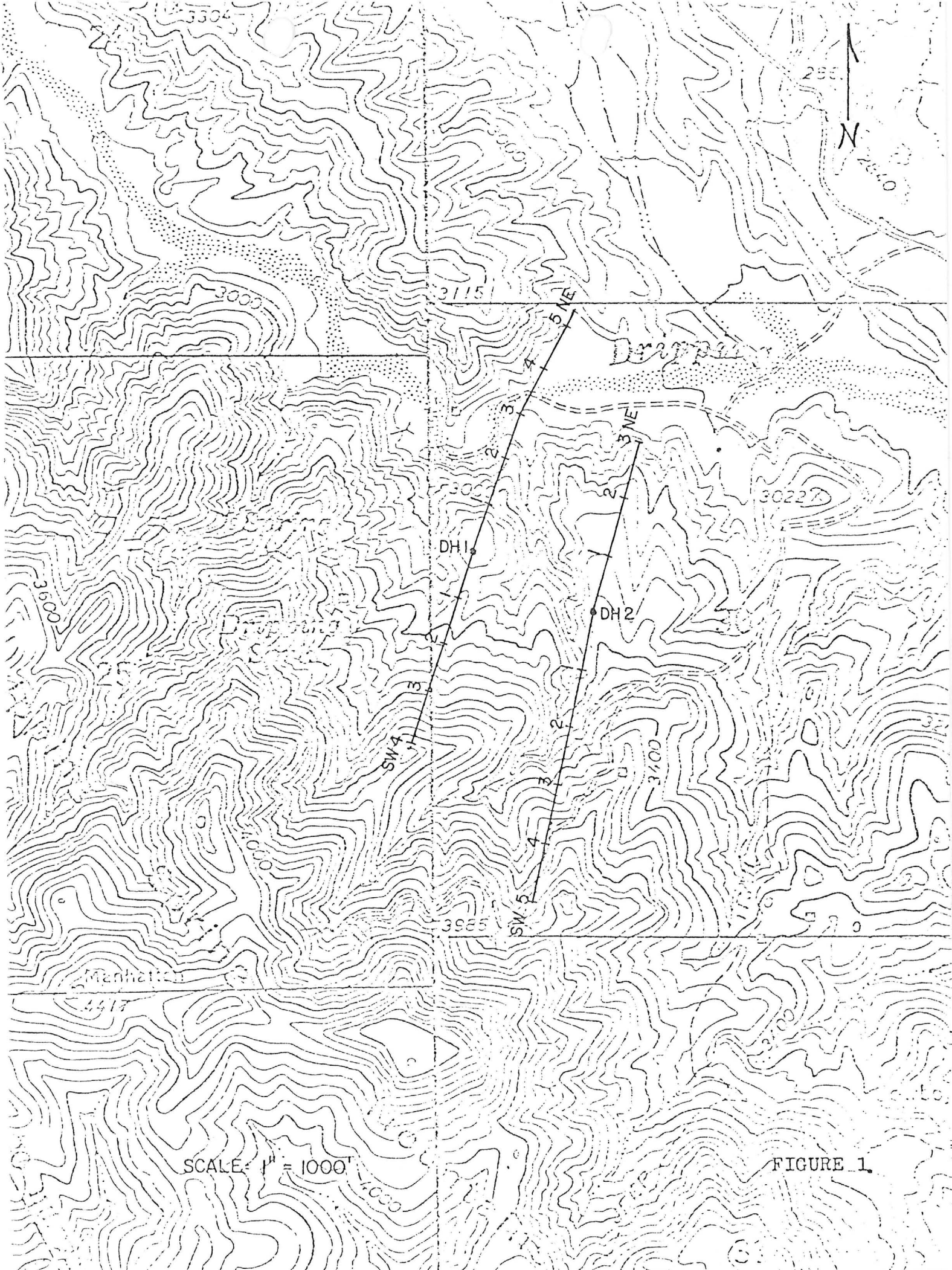
Data gathered on this project appear to be quite reliable in spite of the fact that at some stations there was more than 40 times as much noise as signal. The low signal level was due in part to: (1) moderately low resistivities, (2) minimum coupling arrays used,

and (3) the necessity of keeping the input current at one ampere or below to maintain stable electrodes.

In general copper sulfide mineralization appears to increase to the SW of the two existing drill holes with the sulfide mineralization to the south of DH 2 appearing to be more massive (veined) than that around DH 1.

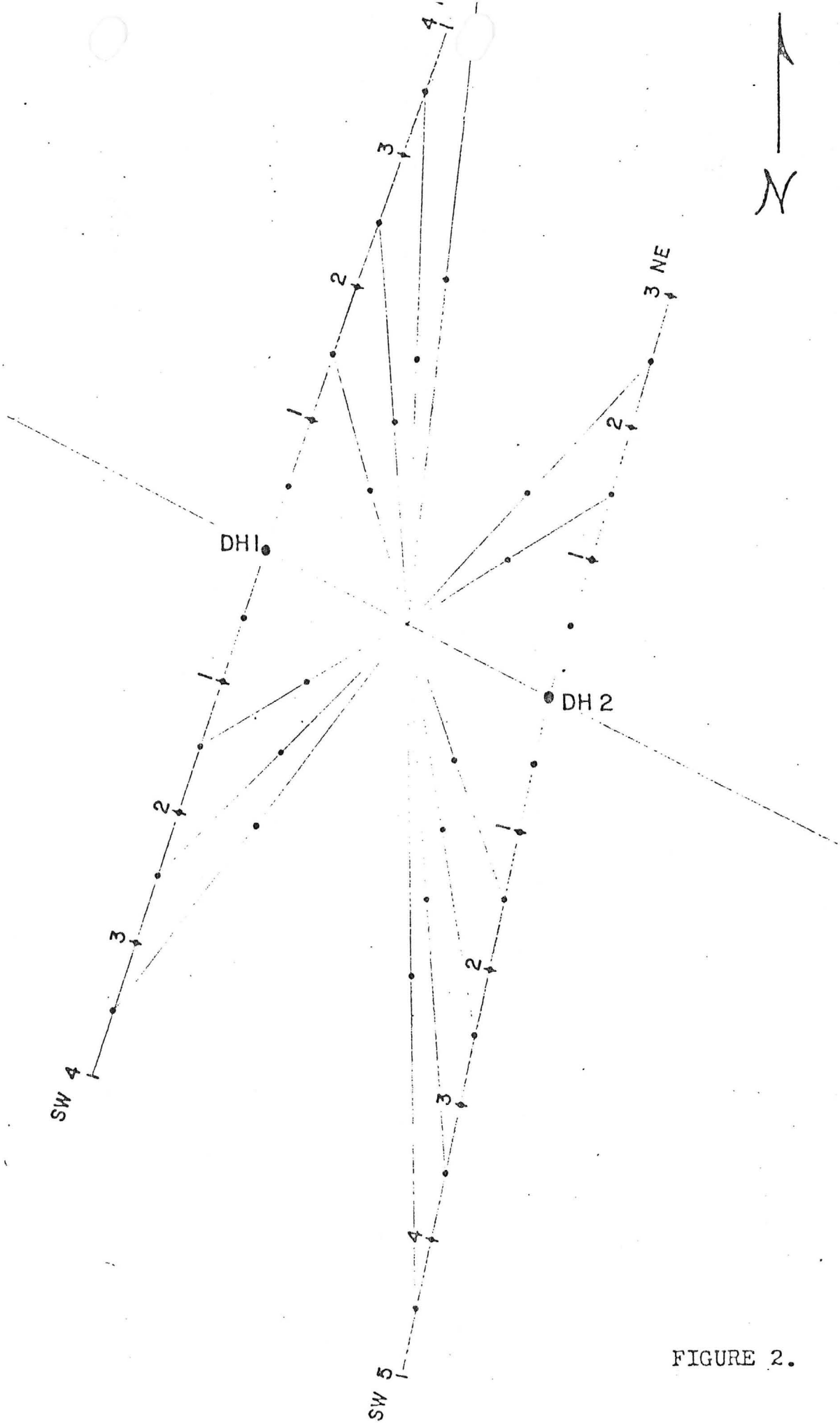
All data were severely to moderately contaminated with EM coupling, but it is felt that this unwanted response has been effectively removed. This decoupling proceedure should provide for a conservative copper sulfide estimate.

K. L. Zonge
Feb. 18, 1973



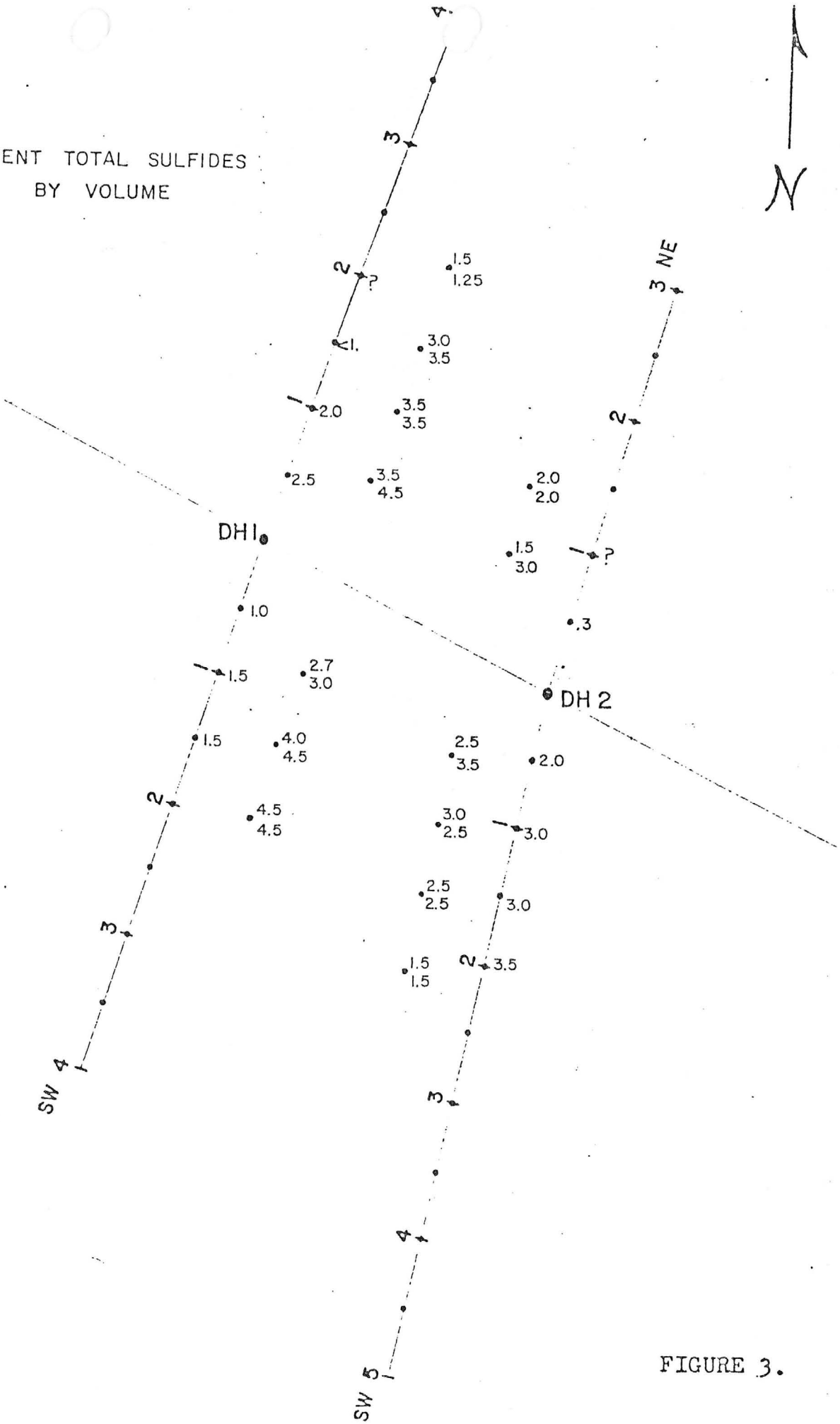

SCALE: 1" = 1000'

FIGURE 1



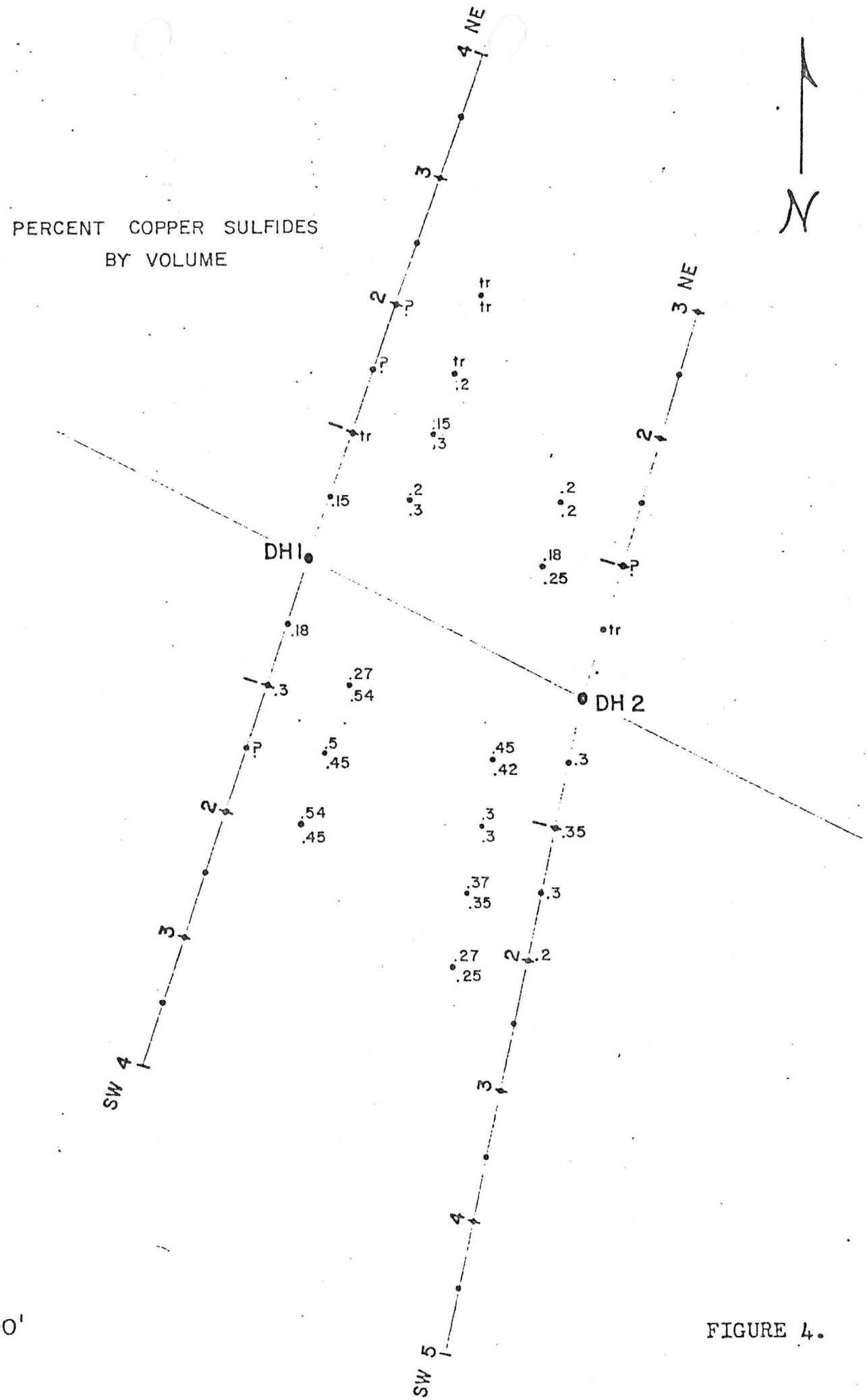

1" = 500'

FIGURE 2.




1" = 500'

FIGURE 3.




1" = 500'

FIGURE 4.

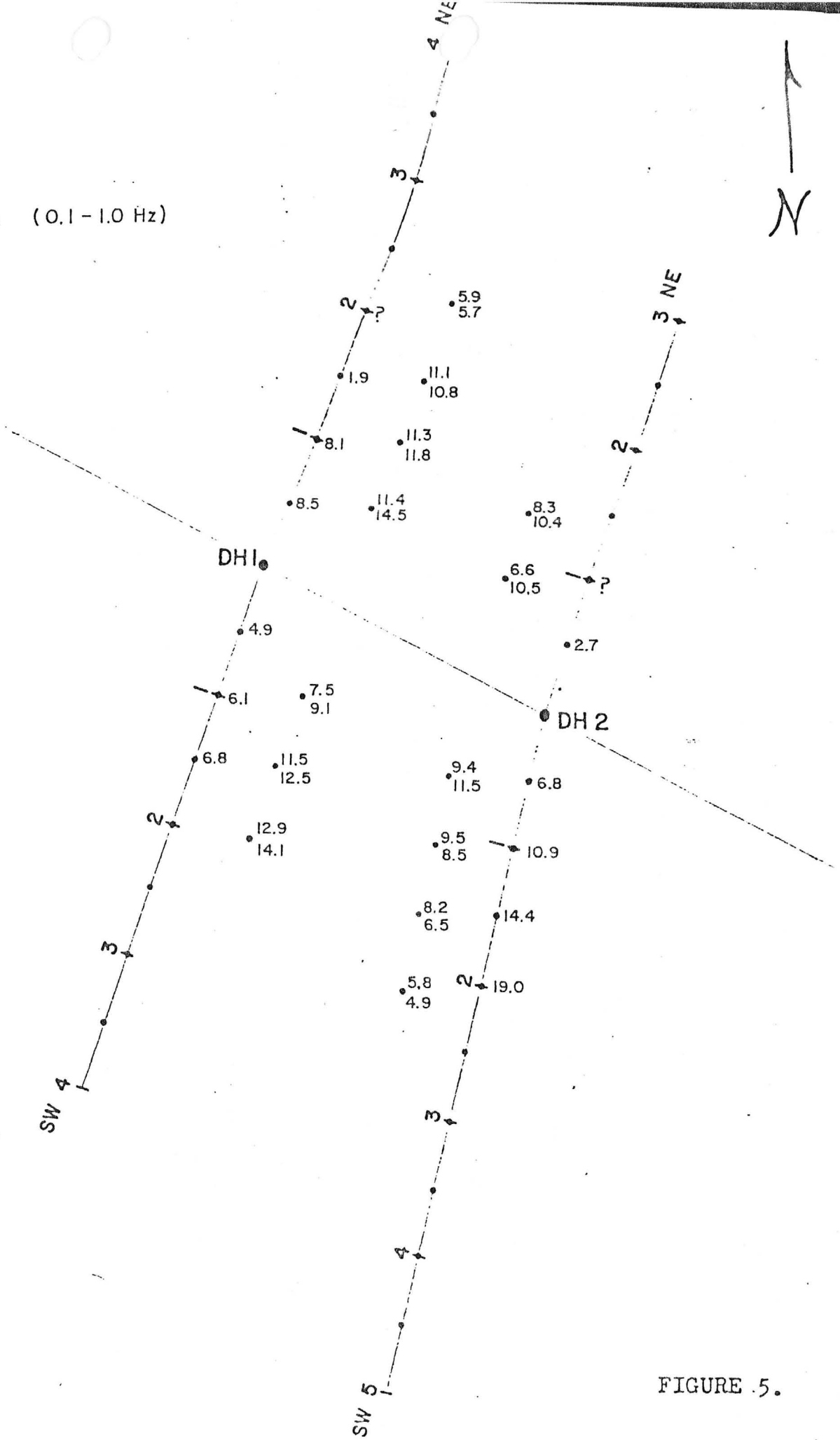

PFE's (0.1 - 1.0 Hz)
N
4 NE
3
2
?
5.9
5.7
1.9
11.1
10.8
8.1
11.3
11.8
8.5
11.4
14.5
3 NE
2
8.3
10.4
DH1
6.6
10.5
?
4.9
2.7
6.1
7.5
9.1
DH 2
6.8
11.5
12.5
9.4
11.5
6.8
2
12.9
14.1
9.5
8.5
10.9
8.2
6.5
14.4
3
5.8
4.9
2
19.0
4
3
SW 4
SW 5
1" = 500'

FIGURE 5.

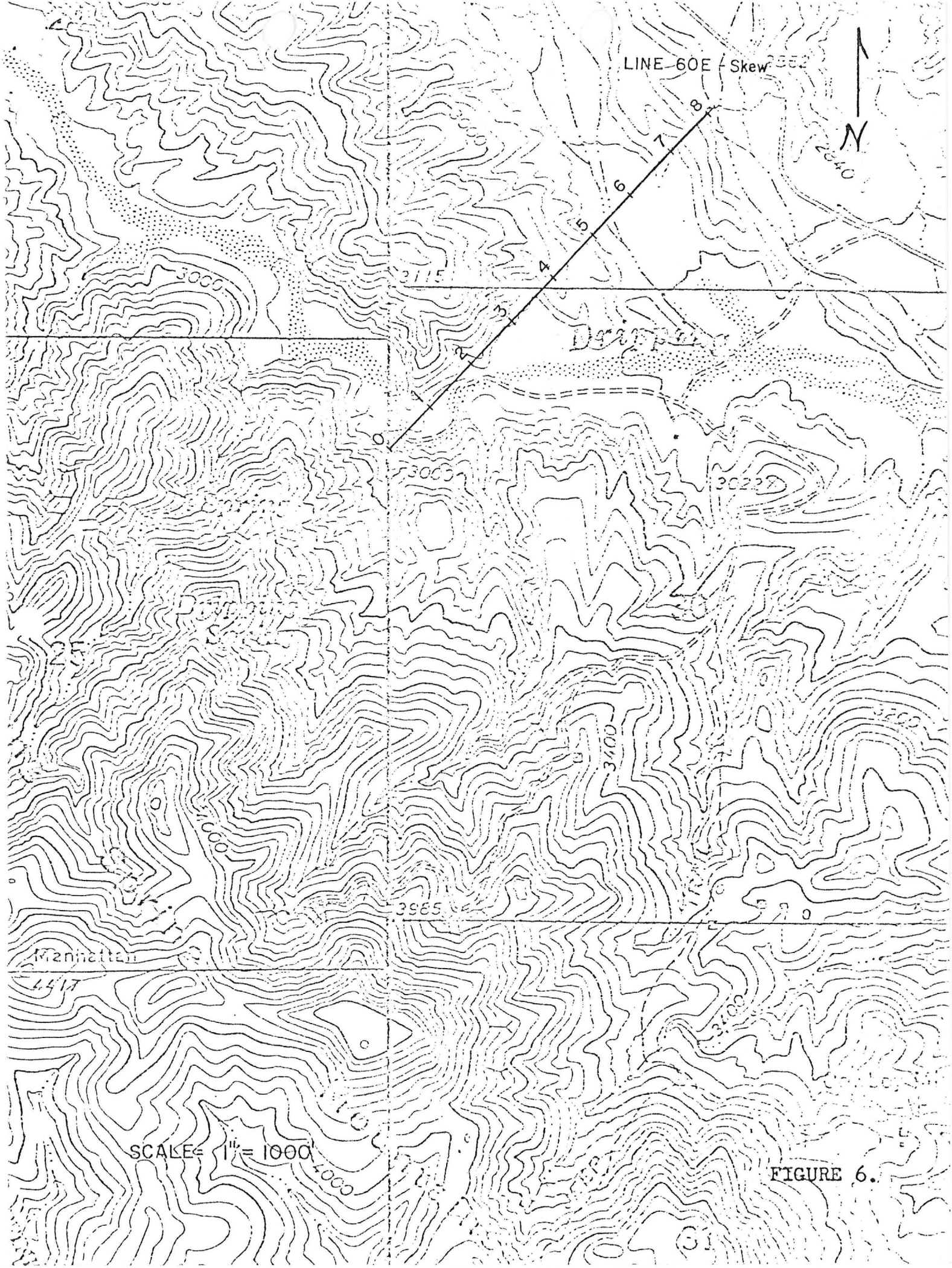



FIGURE 6.

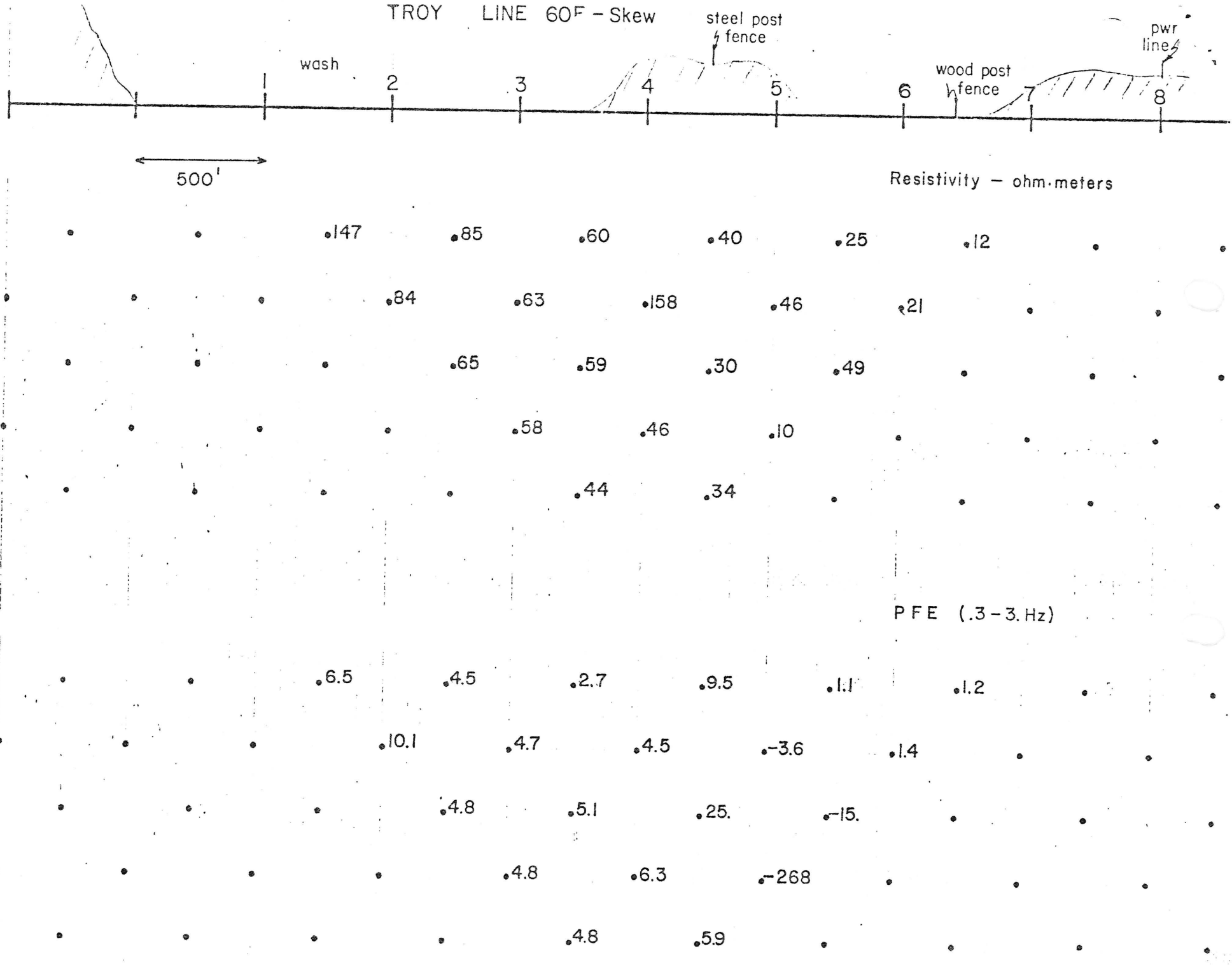

TROY LINE 60F - Skew
steel post fence
pwr line
wash
wood post fence
1
2
3
4
5
6
7
8
500'
Resistivity - ohm.meters
147
85
60
40
25
12
84
63
158
46
21
65
59
30
49
58
46
10
44
34
PFE (.3 - 3. Hz)
6.5
4.5
2.7
9.5
1.1
1.2
10.1
4.7
4.5
-3.6
1.4
4.8
5.1
25.
-15.
4.8
6.3
-268
4.8
5.9

FIGURE 7.

D.D.H. T-1 (continued)

| From | To | Int. | Description |
|---|---|---|---|
| 315.6 | 495.0 | 179.4 | 60° contact with quartz monzonite porphyry dike. Biotite altered to chlorite, incipient argillic alteration of feldspars. Weak K-feldspar and epidote near contact. Weakly magnetic. Traces of fine disseminated pyrite. Variable fracture intensity. |
| 495.0 | 549.4 | 54.4 | Precambrian diabase, strongly fractured and sheared, across 70° contact. Chloritic alteration as before, but obscured by cataclastic effects. Shearing probably post-mineral. ± 1% pyrite, possibly 5% magnetite. Calcite veinlets as before. |

D.D.H. T-2

| | | | |
|---|---|---|---|
| 0.0 | 165.0 | 165.0 | Alternate gravel and conglomerate. Locally well indurated, may be in part Gila conglomerate. |
| 165.0 | 378.5 | 213.5 | Precambrian diabase, upper 4 feet bleached and oxidized. Diabase is fine-grained, pervasively chloritized. Numerous high-angle fracture zones with epidote, calcite, occasional K-feldspar and quartz. Paragenesis apparently quartz-pyrite-magnetite-epidote-calcite. Pyrite ranges from 2 to 10%, probably averages 3-4%. Magnetite variable with more direct association with high-angle quartz-pyrite veins. Zones of low-angle, parallel pyrite veinlets may indicate filling of cooling cracks in diabase. |
| 378.5 | 392.3 | 13.8 | Quartz monzonite porphyry dike at 55° contact. Chlorite-epidote alteration, sparse magnetite and pyrite. |

| From | To | Int. | Description |
|---|---|---|---|
| 0.5 | 15.0 | 15.0 | Poor core recovery. Mescal limestone with serpentine and chlorite. Weak limonite and pyrolusite on fractures. |
| 15.0 | 165.0 | 150.0 | Precambrian diabase, variably fractured, showing chloritic alteration throughout. Several high-angle epidote-K-feldspar zones. Locally magnetic. Dark red hematite on fractures after magnetite. Consistent calcite veining. |
| 165.0 | 315.6 | 150.6 | Base of oxidation at ± 165.0. Precambrian diabase, fine to medium-grained, uniformly chloritized. ± 1% pyrite occurs finely disseminated and in hairline fractures. Fine-grained magnetite throughout, ranges up to 10% by volume. Numerous calcite veinlets, local epidote and serpentine. |

D.D.H. T-2 (continued)

| From | To | Int. | Description |
|---|---|---|---|
| 392.3 | 465.0 | 72.7 | Precambrian diabase, more strongly fractured, same chloritic alteration. Pyrite and magnetite closely associated with quartz-epidote veins. Traces chalcopyrite and moly around 400 feet. Premineral breccia zones at ± 420 feet. Pyrite averages ± 3%, magnetite ± 5%. |
| 465.0 | 474.0 | 9.00 | Quartz monzonite porphyry dike with chlorite, epidote and K-feldspar alteration. Sparse disseminated magnetite, no visible sulfides. |

D.D.H. T-1

ASSAY RESULTS

| From | To | Int. | Rock Type | Cu (ppm) | Mo (ppm) |
|---|---|---|---|---|---|
| 0.0 | 4.0 | 4.0 | Overburden | 45 | -1 |
| 4.0 | 15.0 | 11.0 | Mescal Ls. | 100 | -1 |
| 43.5 | 52.0 | 8.5 | Diabase | 120 | 1 |
| 140.2 | 148.0 | 7.8 | Diabase | 65 | -1 |
| 219.0 | 228.6 | 9.6 | Diabase | 30 | -1 |
| 273.4 | 282.0 | 8.6 | Diabase | 110 | 1 |
| 318.4 | 326.3 | 7.9 | Quartz Monzonite | 10 | -1 |
| 401.9 | 410.0 | 8.1 | " " | 11 | 4 |
| 482.1 | 490.0 | 7.9 | " " | 16 | 3 |
| 523.5 | 533.2 | 9.7 | Diabase | 125 | 5 |

D.D.H. T-2

| | | | | | |
|---|---|---|---|---|---|
| 166.5 | 173.7 | 7.2 | Diabase | 206 | 2 |
| 330.5 | 339.6 | 9.1 | Diabase | 137 | 5 |

Assay Results - D.D.H. T-2 (continued)

| From | To | Int. | Rock Type | Cu (ppm) | Mo (ppm) |
|---|---|---|---|---|---|
| 366.5 | 375.0 | 8.5 | Diabase | 193 | 6 |
| 392.3 | 402.3 | 10.0 | Diabase | 101 | 2 |
| 417.9 | 426.9 | 9.0 | Diabase | 36 | 3 |
| 454.4 | 463.0 | 8.6 | Diabase | 23 | 50 |
| 463.00 | 474.0 | 11.0 | Quartz Monzonite | 44 | 4 |

## COMPETITOR ACTIVITY

Date Printed: 01/21/93

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

**VERBAL INFORMATION SUMMARY**

Information from: **Office visitor**

Company:

Address:
City, State ZIP:
Phone:

**MINE:** **Dripping Springs Mine**

ADMMR Mine File: Troy Claims
County: **Gila**
AzMILS Number: **22C**

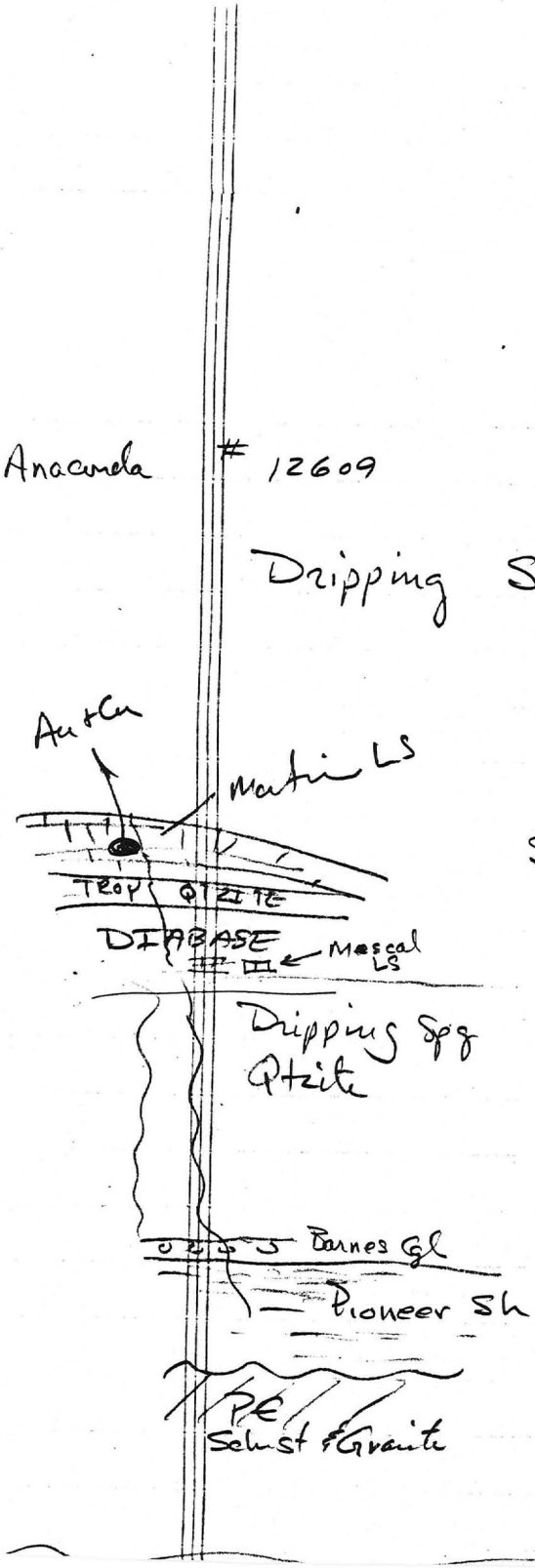
SUMMARY

An exploration geologist was in to review an number of files on properties of interest. Oone was the Dripping Springs Mine, Gila County AzMILS 22C. Our information on this property is in the Columbia Mine file and the Troy Claims file. He provided a copy of his notes made from data in the Anaconda Files at the Heritage Center in Wyoming.

Ken A. Phillips, Chief Engineer Date: Jan. 21. 1993

Anaconda # 12609 X-ref USGS PP 115

Dripping Spgs Mine ~ 9 mi NW of Christmas -- 7 mi east of Ray
"VNS" are fractures w/ mineralization along
structs. Cu to 5% Cu
Zn to 15%




System cut the Dripping Spgs Qtzite
but works men along deep fractures
in the P? Martin LS & Troy Qtzite

* Potential of PEx-Y units
is untested, but Cu+Au
fluids passed through

EXECUTIVE OFFICES
1270 AVENUE OF THE AMERICAS, NEW YORK, N.Y. 10020
PLAZA 7-9700

AMAX EXPLORATION, INC.
SUBSIDIARY OF AMERICAN METAL CLIMAX, INC.
2510 N. CAMPBELL AVE., TUCSON, ARIZONA 85719

TELEPHONE
AREA CODE 602
795-4731

March 20, 1974

Mr. Clarence W. Via
Rt. 1, Box 1370
Albuquerque, New Mexico 87105

Re: AMAX-VIA OPTION
PIMA COUNTY, ARIZONA

Dear Mr. Via:

In regard to your note of February 26, 1974, I enclose the following factual, geological, and geophysical information that AMAX developed on your mining claims, subject to the AMAX-Via option agreement.

1. Molybdenum anomaly map, Via property.

2. Copper anomaly map, Via property.

3. Geologic map, Via property.

4. Drill hole logs and assay results from the two AMAX drill holes drilled on the Via property.

5. Location of the AMAX geophysical lines and the raw geophysical data concerning the Via property.

6. A report on complex resistivity measurements on the Via property by Zonge Engineering.

In addition to this factual information, I am also returning to you a sketch map showing the outline of your original claims and a folder containing photographs and correspondence on the property which you had forwarded to us.

If there is any further information I may send you, please do not hesitate in asking for it. I apologize for the delay in sending this information to you, and hope that you will find some good use for it. If you wish any duplicate copies of this data I would be very pleased to send it to you also.

Sincerely,

Charles P. Miller

Charles P. Miller
Regional Manager

CPM:mm Atts.

TROY CLAIMS

GILA COUNTY

KP WR 3/15/79 Amax reportedly drilled one 600 foot churh dril hole, but no data was available. Mr. Via felt that most of the historic production came from the Gold Queen and the highest grade gold ore came from the Round Top. The property is for sale or lease.

KAP WR 3/15/79 Past Activity and future plans for the Troy Group of 54 Troy Claims, Dripping Springs District, Gila County, were discussed with the Group's owner, Clarence Via, 1769 S. 74th St. Mesa, AZ 85208. A property map supplied by Mr. Via shows the Troy group of claims to overlap five old properties: Cave Mine, Columbia Mine, Gold Queen Mine, Gold Nugget Mine, and Round Top Mine, all in Sec. 25, T3S, R14E. The properties contain many old prospects drifts and workings. At various times during the 1970's the property has been under exploration least to Exxon and Amax.

# DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Troy Mine

Date January 18, 1962

District Mineral Creek District, ~~Pinal~~ Gila Co.

Engineer Lewis A. Smith

Subject: Interview with Bert Reed, Geologist, Inspiration Copper Company and Carley Moore who owns considerable ground in the Troy Mountain area.

Reed stated that Inspiration had examined an area 300 feet wide and about 2000 feet in length on Carley Moore's claims. He revealed that the oxidized copper zone is 90 to 100 feet thick in the main 300 x 300 foot area. Below this massive pyrite with spotty chalcopyrite continued down for several hundred feet. The 2500 foot tunnel below this area showed erratic values locally. This tunnel connects with an old 450 foot shaft. [redacted]. The ore lenses lie within a broken contact zone between Troy quartzite and Mescal limestone and intrusives which Mr. Reed said were mainly a quartz-mica-diorite. He said also that some considered the dikes to be of this rock and granodiorite. A granodiorite stock is nearby as are diabase sills and dikes. The main contact zone is traceable for 2000 feet. The mineralizing solutions replaced Mescal limestone and Troy quartzite, but preferred the Mescal. The Troy in this area generally trends NE and dips 12-45 degrees E and SE, usually 12-15 degrees. Blocks have been variously tilted by transverse fractures. The sampling revealed considerable variation in grade locally.

Carley Moore took a general sample from several outcrops bared by cat work, over a length of 450 feet. The composite sample weighed 66 tons and ran 2.69 percent Cu, 0.30 oz. gold and 0.67 oz. silver. This sample was obtained from piles that were blasted out for sample purposes. Moore stated that Kennecott drilled a hole next to his side line but would not advise him as to results.

Both Reed and Moore estimated a total of about 1,000,000 tons of low grade ore at the present stage of development. Moore said he had tried to negotiate a deal with Kennecott for the massive pyrite but, since they would not pay him but $15.00 and gave him no credit for copper, he turned the proposed contract down. He doubted if he could mine the material and haul it down the mountain for $15.00.

The ore, according to Reed, contains considerable lime which is due to included blebs of unreplaced limestone and calcite crystals, making it tough to leach.

D.W. Jaquays was out 1-17-62 with Moore and will later make a more thorough examination.

Phelps Dodge previously had looked over the property.

Inspiration, however, still has Moore's claims optioned.

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**Interview with Carley Moore, Globe.**

**Carley Moore said that Inspiration Copper Co. had taken a years option on his claims at the Troy. He also stated that they appeared to be interested in the heavy sulphides, that underlie the oxides.**

**MEMO: LEWIS A. SMITH 3-29-63**

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DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

# FIELD ENGINEERS REPORT

Mine Troy Mine — Date April 11, 1961

District Banner District, Gila Co. — Engineer Lewis A. Smith

Subject: Interview with Carley Moore.

Rusty Moore stated that he had upwards of 1,000,000 tons of oxide ore which was sampled by Inspiration. The general sample taken on the exposed portion ran 2.08% copper. This was largely malachite with some residual sulphide and mainly lies in a porphry (probably of rhyolitic composition). Deep down the 27 degree dip heavy pyritic sulphides occur. The specimen contains pyrite with some bornite and a gray mineral which appears to be chalcocite. The heavy sulphides run according to Moore, between 30 and 55 percent iron, so that he is negotiating with Kennecott for their sale for the L.P.F. plant. The hitch so far seems to be that Kennecott does not want to pay for the copper which is estimated to run 1.6 percent. Another conference with them will occur in a few days. Moore reported that they made an offer of $20.00 per ton.

Inspiration and Phelps Dodge have looked at the property.

Mr. Moore has added 30 new claims to the original 14.

# DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Troy Mine

Date November 18, 1960

District Banner District, ~~Gila~~ Co.

Engineer Lewis A. Smith

Subject: Interview with Carley Moore - 11-18-60.

Carley Moore stated that he had two men doing bulldozer stripping on the unpatented claims. So far considerable 2+ percent copper ore has been disclosed. Moore states that most of this ore contains considerable calcite (or free lime) and is thus not economic to leach or ship. Some "hot spots" may be shipable.


TROY GROUP
T20S R12E
Dripping
Columbic mine
Spring
Gold Queen
Dripping Spring
Mill site
Gold Nugget
Round Top
Manhattan
GILA
PINAL
Cowboy
25
30

ANDREW THICKSTUN
CERTIFIED MINERAL TECHNOLOGIST
CONSULTING MINING ENGINEER

BY APPOINTMENT AT:
TWINING LABORATORIES
2527 FRESNO STREET PHONE 9-2116
P. O. BOX 1478
FRESNO 16, CALIFORNIA

11/10/47

TO:

The Board of Directors
Central Nevada Milling Corporation
Globe, Arizona

Gentlemen:

Herewith my report on your holdings in The Dripping Springs Area, 32 miles southeast of Globe, Arizona.

I arrived at Globe, Arizona by air on July 24, 1947. The next day, July 25, 1947, I drove to the property for a tactical "once over".

As the jeep topped the ridge overlooking the Dripping Springs River and the uplifted fault-block which constitutes the property came into full view, I was at once intensely interested. The longer I looked, the more interested I became.

It was a job calling for the best and most modern tools available to your geologist, as well as his experience and ability.

The next day, the 26th of July, I reconoitered the area by helicopter from both high altitude and from distances of four and five feet above the ground.

My next step was to secure high quality pix of every square foot of the terrain. Some of these are incorporated in the body of this report. The use of the helicopter and aerial camera assured detailed accuracy that might well have taken six months by older methods. Methods which must allow for human error. The camera records what it sees with unerring accuracy for future study and deduction. My work progressed rapidly. Samples were cut and analized, elevations checked and the labor of field work completed September 20, 1947. Then came the laboratory research work, done in Fresno, California at the Twining Laboratories and the corelating of field notes, rechecking against the aerial pix and the writing hereof.

I wish to thank the management and staff of The Twining Laboratories of Fresno, California for the high quality of analytical service rendered in connection herewith - especially Donald S. Piston, PhD, Chief Physicist.

Thanks are also due The Kurth Aerial Photo Service, Tucson Arizona for top quality photogrammetric work.

My respects also to Eldred D. Wilson of the University of Arizona for text matter related to the economic geology of the region reported herein.

Many thanks also to The American Smelting & Refining Company and The International Smelting & Refining Company for sincere cooperative effort in checking tonnages and quality of ore previously shipped to their respective plants from the various properties which are the subject of this writing.

I have drawn no estimates of the potential value of copper ore existing below the 3000 ft. elevation line. That is beyond the scope of this paper. Nor is it necessary for the purpose at hand. That large bodies do exist is beyond question. The cost of delineation and exploration is included herein - however. The indicated value of the upper, or oxidized zone, i.e., that portion lying above 3000 feet elevation - alone is ample to carry the weight of the entire development expenditure recommended in the attached report.

Working with you has been a great pleasure to me and I wish to express my gratitude for the many pleasant happenings that has marked our association. I shall be happy to answer any questions - within reason - that any interested parties may care to ask regarding the properties reported on herein.

Very truly,

## GEOGRAPHICAL LOCATION

These mines are located in the Dripping Springs District approximately 32 miles south east of Globe Arizona.

This entire area has never been sectionized by the United States General Land Office.

Therefore all locations are necessarily made by "metes and bounds" and cannot be delineated by "legal subdivisions." No survey plat was available at the time of examination. It should be noted that this fact in no way clouds the title to lands so located.

All of the lands so located lie either in the Valley of the Dripping Springs River--as shown in the accompanying aerial pix--or on the north slope of the Dripping Springs Range to the south of the river valley.

The Dripping Springs River divides the Pinal range and the Dripping Spring Range. The river's course at this point is approximately west to east.

## GEOMORPHOLOGICAL ASPECTS

Because of the steep angles resulting from the last earth disturbance in this area, erosion has been rapid and detrital material has been carried cleanly away from the canyons and gulches. This condition favors the study of the areal geology.

Only in a few places has slide detritus remained. Notably that area lying between the Gold Queen and the Round Top at 150 to 250 feet above the river bed level which also marks the top crust of the olivine diabase--mentioned later under the heading, Geology.

## ELEVATION

River level elevation 2900feet above sea level.

Elevation of the crest of Round Top Mountain approximately 4000 feet above sea level. Maximum lift 1100 feet.

## TOPOGRAPHICAL ASPECTS

As seen, by the accompanying aerial pix, the southern slope of the Pinals is approximately 9 degrees off horizontal and dips south. The gray, blocky, sedimentary limestone predominates the surface to within one mile of the river valley and then gives way to deep beds of Gila conglomerate.

Some Gila conglomerate remnants are in evidence as we cross the dry stream bed of the Dripping Springs River to the south side.

The river, however, marks a sharp change in the topography of the region. Ascending the south slope we find the grade sharply increases to an average of 16 degrees, dominated by Round Top Mountain approximately 5000 feet distant on a horizontal line, it towers 1100 feet above the river vertically.

Three steep sided canyons and their tributary gulches pitch down sharp slopes northward to the Dripping Springs River, cutting the surface limestone in their course to depths of many hundreds of feet.

## TRANSPORTATION ASPECTS

An excellent gravel-surfaced all year state highway connects the holdings with Globe, Arizona--32 miles northwest--and Hayden, Arizona--location of the great American Smelting & Refining Co.--4 miles airline distant--southeasterly.

Two good access mine roads have been built--mainly from solid rock--see pix--during the summer just past, by The Central Nevada Milling Corporation.

The access road to the workings of the Round Top is 1.8 miles long.

That to the Gold Queen workings is 1.4 miles long. Each connects at river level with a servicable county road leading to the state highway a short distance away.

These are the first mine roads ever built on these properties.

A railroad connection is available at Christmas siding 9.5 miles away.

In short--the transportation aspects are excellent.

## WATER

A 10-inch well has been drilled at river level just below the northeast corner of the Round Top Group.

The drill penetrated to 195 feet. The water raised to within 80 feet of the surface.

A 5-inch highhead pump was installed and pumped steadily around the clock for 17 days without lowering that level.

The water is clear, sweet and potable.

At intermediate levels on each of the three groups of claims springs of pure water assure enough for limited mining use.

The well first mentioned is capable of producing enough water for any conceivable milling operation and for domestic use of a sizable mining town.

The water situation is, therefore, highly satisfactory.

## AREAL COVERAGE
## THE ROUND TOP GROUP

Beginning at the eastern boundary, N.E. corner--(see aerial mosaic pix)--of the Round Top group of claims--we find this line extends from the river southwards to a point beyond the limestone crest of Round Top Mountain. A distance--roughly--of 1½ miles.

Thence westward to the southeast corner of The Gold Nugget group--a distance of 3000 feet.

There are 10 full claims--200 acres--in the Round Top Group.

## THE GOLD NUGGET GROUP

See Mosaic

120 acres--6 claims

## THE GOLD QUEEN GROUP
(see aerial mosaic)

This group completes the areal coverage of this fault-block-system on the west. It is composed of 8 full mining claims of 20 acres each plus 2 fractions which all told contain 180 acres.

## THE COMBINED HOLDINGS

The three groups--The Round Top with 200 acres--The Gold Nugget with 120 acres and the Gold Queen with 180 acres, gives The Central Nevada Milling Corporation 500 acres of extremely valuable mineral lands in this well recognized mining district.

Miami, Arizona--home of The American Smelting and Refining Company's mines and smelter. Looking west along the great mineralized fault zone. Middle background 4th peak from left is Round Top. Superior Smelter and mines on beyond skyline.

## HISTORICAL ASPECTS

Situated as these properties are--between The American Smelting Company's diggings at Hayden and the Phelps-Dodge operations at Superior--and in the same mineralized belt--the history is interesting in the extreme.

The acreage now held by The Central Nevada Milling Corporation has been held for years by a number of small owners, private individuals unable to command sufficient capital to even blast access roads to their various diggings.

Yet for years these properties have been "mined at" by crude hand mining methods. The ore was laboriously hand sorted, packed on burros down a zig zag trail to the road along the Dripping Springs River Valley. There it was loaded on trucks and hauled to the smelters. Only the richest ore could be considered.

There are written statements in my possession proving that over $250,000.00 worth of gold and silver has been recovered in this manner.

The dumps--(see Estimated Value) contain approximately 13,000 tons of profitable ore--by up to date mining, transport and milling standards.

These numerous "coyote holes" all expose bodies of presently valuable milling ore.

None which were driven into major ore bodies have been "worked-out" according to later day standards.

In addition they furnish the investigator with invaluable access to the underground picture--in part at least. It completes as near as possible the proof that actual mineralization took place--as indicated by the surface geological aspects referred to later on.

It is reliably reported that various major mining companies have offered as high as $150,000.00 for a single group of 6 claims now contained in these holdings.

Other major companies have attempted to acquire and combine these same groups into one unit.

It remained, however, for officers of The Central Nevada Milling Corporation to accomplish this feat.

In 1940 they began negotiations on the first group, and backed their efforts and judgement with their own hard cash. It was not until this present year of 1947, that they completed the last deal and the whole, 500 acres in all, were incorporated into a single unit, a unit ready for the next logical step, i.e., the development by scientific methods of the value. The blocking out--en situ--of the underground deposits to the end that economical exploitation may go forward.

## GEOLOGICAL ASPECTS
### General

The oldest rocks observed here are the preCambrian schists. Locally this satiny rock is called the Pinal schists. They are, of course, crystalline having been metamorphosed by both heat and pressure. Quite possibly this silvery schist underlies the entire area.

The Cambrian rocks--known as the Apache group--were lain down upon the Pinal schists. These are shales, conglomerates and quartzite. The latter is known as the Dripping Springs Quartzite. The conglomerate is called the Gila conglomerate. The Apache Group range up to 700 feet in thickness.

Overlying the Cambrian--or Apache--group, we find the gray limestone of Carboniferous or Devonian era. This is known as the Globe limestone. Thickness of the Globe limestone was observed of over 350 feet.

No evidence of further deposition of sedimentary material--such as those of the Mesozoic age--were observed.

It is quite evident that earth disturbances occurred during all of the ages mentioned. The intricate faulting--and crossfaulting--establish this fact.

Extensive diabase intrusions--allowed to flow upward through these fault vents--have spread out between the cracks and along the bedding planes of the Pinal schists--the Apache group (shale conglomerate and quartzite) and the gray blocky stratified Globe limestone.

In places the earlier sedimentary rocks seem to have fairly been suspended on, and engulfed by, the then semi-liquid masses of green diabase---before it cooled and solidified.

Undigested portions, or "horses" of the older rocks are frequently observed included within the mass of the younger rock.

Intrusions of porphyritic rock within the older, metamorphosed rock mass indicate batholithic upheaval as the origin of the Dripping Springs Range--rather than a buckling action caused by horizontal compression of surface strata.

GEOLOGY
Areal Aspects

When this area is viewed from overhead--(see aerial mosaic attached) one is at once attracted by the contrast in surface contour of the north and the south side of the Dripping Springs River.

On the north side the moderate down grade of the Globe limestone is hardly broken as it slips beneath the Gila conglomerate on the riverbank.

Look now at the south side. Rugged slopes rear upward rapidly--crowned by towering Round Top Mountain.

The same limestone capping slipping gently beneath the rivers north bank--crowns Round Top Mountain--looks down 1100 feet upon its other half--there on the north bank.

It is this kind of natural phenomenon which quickens the pulse of the economic geologist and causes the travelling prospector to hastily search out a permanent campsite. For it is one of the best surface indications of the location of mineral depositions. As you will see, both prospector and geologist are right. For prospectors, by crude hand mining and patient burro-back hauling, have cashed in a quarter of a million dollars dug from "coyote holes" on

these properties, none of which were over 1½ miles from the bed of Dripping Springs River.

And as for the geologist? Just peruse and digest all that which follows!.

Let us now go back to the bed of Dripping Springs River. Which at this point is 2900 feet above sea level. Here we find that the bedrock is dark olivine-diabase. (see aerial pix) Follow that precipitous slope upward with your eye. Just a few feet--at most 20--and the dark green gives way to pinkish and buff quartzite. Bold cliffs characterize this stratum. It continues up and up for 350 feet. This is Dripping Springs Quartzite. Then, at 3250 feet a change occurs. Blocky limestone appears. This is the Globe limestone. The line of demarcation between the quartzite and the lime is marked--rather unevenly--by a red, green and brown band. In places this band extends far up into the limestone. In other places it extends downward into the quartzite. This is a sub-zone of mineralization. In places it is 75--100 feet thick. The red and brown coloration is caused by oxides of iron and manganese. The green by copper. These minerals and others were carried upward in hot solution through vent cracks and faults from deep in the lithosphere. Seeking outlet these solutions invaded the cracked and broken host rock. As they chilled the mineral content crystallized and was deposited upon and in the sedimentary host rock.

both sides of the Gold Nugget. These strata have been tilted at different angles by the uneven uplift.

Round Top strata dip gently into the mountain. Gold Nugget dips steeply--32 degrees easterly through Gold Nugget ridge. Gold Queen strata dip very slightly from west to east through Gold Queen ridge.

All of the foregoing has been stated in large generalities. It has been necessarily so. For the area is very large. Five hundred acres in all. And that is only part of the story. That which has to do with surface area only.

In consideration of these mines we have two dimensions with which to grapple. They are first--horizontal area; second--vertical depth.

In consideration of the second we must divide the vertical dimension into two zones. The two into which it seems naturally to fall are that upper portion existing above 3000 feet elevation and lower portion lying below that point.

This separation line is lithologically logical. Above 3000 feet the rocks--except for igneous intrusions--are sedimentary and the mineralization is largely oxides.

Where as that portion lying below 3000 feet is either igneous or meta-sedimentary and the value is in sulphides.

We might think of the division in still another sense, i.e.,

In large areas the hot solutions engulfed and "digested" the host orck. Especially the limestone--which yeilds readily to hydrothermal attack. In this manner the area was mineralized. Later batholithic upheavals cracked and faulted the area. We have here an uplifted fault block which has been modified by rapid erosion.

The faulting and subsequent erosion exposed some of these heavily mineralized portions of the host rock--much in the same manner as the interior layers of a cake are exposed by carving.

At some of these exposures the prospectors have driven in with their "coyote hole" mine tunnels--taken out some of the richest of the ore--and after packing it to the road, burro-back--have shipped it to the various smelters referred to later.

As the top limestone capping of Round Top Mountain is identical with the tip capping on the ridge at Gold Queen, we must conclude that prior to the batholithic upthrust that they were one and the same stratum, or layer, although at present, Round Top is approximately 500 feet higher than Gold Queen ridge. (see aerial pix) And that of Gold Nugget lying between the two--both laterally and vertically is a part of the same, although separated by canyons on

as the gold zone (urper) and copper zone (lower). For, while we find some copper, and rather high grade too, in the upper zone, the value lies preponderantly in the gold content of the brown aphanitic ore lying in large, irregular lens-like masses between the bedding planes of the quartzite and the limestone; and in the more or less vertical ore-shoots which fill perpendicular cracks and preore faults; and in the urper division of the Dripping Springs Quartzite which is named The Blue Ribbon Quartzite. Whereas the value below 3000 feet, while containing some gold, is preponderantly copper.

The urper zone may be more quickly appraised and more readily developed. For (see pix) it is cut by canyons which partially expose <u>some</u> of the orebodies.

The indicated end value here--while of truly great proportions--may well be dwarfed by that in the lower zone where the main value is copper. The downward persistence of which is indicated to great depth. An historically great mine, the Magma--on the same mineralized belt and but a few miles distant--is mining high grade copper (chalcocite-bornite) all the way down to the 4000 foot level.

MINERALOGICAL ENRICHMENT ASPECT
The Sub-zone--Above 3000 ft. elev.

We have here two distinct occurences of enrichment--the quartzite, when it was loose marine sand, underwent surface enrichment by wave and current action of its black sand and gold content. At that time it was placer material. The upper portion of varying thickness, usually about 10 feet when broken vertically, exhibits a wavy banded structure carrying identifiable black sands, i.e.,biotite, ilmenite, limonite-after-sulfide, and grains of gold.

Massive layers of succeeding sediments consolidated the sand to sandstone and the sandstone to quartzite. Because of its ribbony, bluish appearance we for definitive purpose we shall call this portion Blue Ribbon Quartzite.

The next period of mineralization occurred when earth disturbances cracked the quartzite, and hydrothermal solutions ascended along these vents under pressure from below. These solutions did not greatly alter the tough, hard quartzite but spread out on the bedding plane between the quartzite and the softer, pervious rocks, mainly limestone, bedded thereon.

This seeping, infiltering, digesting process by the ascended mineral solutions was both extensive and protracted.

The exact area affected is not known as it over laps the boundaries of the holdings herein described.

That the period extended over a great length of time is evidenced by the fact that along the sub-zone often referred to later, the values are uniform over a length of 6000 feet and a width 3600 feet. Large areas along this bedding plane--or sub-zone--are completely metamorPhosed, leaving little or no trace of the host rock.

Mineralization also took place up and down vertical planes, as ore-shoots, referred to later, bear witness. These shoots are upwards from the bedding plane into pre ore cracks in the blocky limestone and downward into pre ore cleavages in the hard quartzite.

Looking Southwest. Millsite lower left. Ranch and river bed, lower right, are resting on top of olivine-diabase or sulfide zone. Copper showing across central portion marked by prospect holes.

## THE PRINCIPAL ZONE OF ENRICHMENT
### Below 3000 ft. elevation

Detailed treatment of this zone is beyond the scope of this report. It has to do with different minerals--in the main--with copper, lead, and zinc--sulfides. And with great depth--possibly 5000 feet, to a large extent on vertical planes. It will lie below the top of the olivine-diabase. Geograrhically it lies along the course of the great Quartz-Monzonite dyke which breaks up to--but does not penetrate the sedimentary limestone, and strikes along these properties from end to end at N. 87 degrees W. The author traced this dyke for over 7000 feet.

Some inadequate prospecting was done at 2900 feet elevation at the point of Gold Nugget Ridge, some years ago. Rich bornite (copper-iron sulfide 55% Cu.) was encountered. Core drilling--at that time an unperfected technique--ended in a stuck and lost diamond drill. Inadequate financing forced abandonment.

Out-croppings along this level, approximately 3000 ft. elevation, of chalcocite and cuprite have been sampled by the author. This, together with the inadequate core drill results mentioned, coupled with the history of the great mines east and west of this location with similar geological background add up to but one answer. That of course is an adequately financed, properly staffed, deep drilling operation directed by a competent geologist, at

Looking south up Round Top Ridge. Note bedding planes in stratified limestone. End of road marks site of 330 ft. tunnel. Road follows mineralized sub-zone for 3300 ft. Ore transport by gravity to millsite means economic l operation.

proper points along this dyke, which has had a profound influence on the mineralization of this area.

Companion minerals in minor quantity above 3000 ft. elevation are copper, iron, lead, zinc, manganese, zircon vanadium, silver and tungsten. Below 3000 ft. those identifiable near the surface are gold, lead, zinc, iron and manganese.

## THE UPPER ZONE

Value in gold, silver, and some copper.

Let us now consider--by groups of claims--the mines in the upper zone of enrichment. Beginning on the eastern end of the area we have first:

### THE ROUND TOP
10 Claims 200 Acres
(see pix)

The various strata here dip into Round Top Ridge, at the base of Round Top Mountain, an average of 9 degrees. This exposed out-crop of the mineralized sub-zone of enrichment--i.e., the bedding plane between Dripping Springs quartzite and limestone ascends at an average 11 degrees.

Here--as elsewhere--we find the value in the Blue Ribbon Quartzite (see mineralogical aspects) and in the lenses and ore-shoots of brown aphanitic ore.

Two "coyote hole" tunnels--driven by crude hand methods--into this enriched sub-zone are typical and worthy of note here. Others have been driven in short distances along the sub-zone as may be seen in the accompanying pix. They serve to prove the persistence of the ore along the out crop. The lower of these two tunnels was driven a distance of 330 feet. It ends in ore--where a raise has been started on a promising ore-shoot. The foot and hanging wall are both ore.

Thirty feet in from the adit, a lens of ore has been cross cut 12 feet high, 18 feet wide and 75 feet long. Three sides of this "room" are in ore as is also the hanging wall and foot wall.

From this tunnel a lens of ore 7 feet thick raises upward at 37 degrees for a distance of 60 feet on the incline to another tunnel--this second tunnel is 100 feet long. This lens of ore has not been "bottomed" in the lower tunnel nor has it been "topped" in the upper tunnel. Like the longer tunnel, this one ends in ore also.

The upper and shorter tunnel was driven into the mountain

first. When the miners had progressed 100 feet they decided to start another tunnel on the same lens 60 ft. below the first and be in a position to "raise" on the ore. Finding good ore each foot they advanced in the lower tunnel, they continued driving tunnels until they sold to the present owners.

The tunnels referred to were carefully chosen by the author as representative of this mineralized sub-zone. Four other "diggings" spaced from the millsite-(see pix) to the end of the present road serve to prove the persistence of ore in the sub-zone outcrop for a distance of 5/8th of a mile.

The 330 foot tunnel proves the existence of ore into the mountain for that distance at least. No changes were noted in the sub-surface geology which would indicate any change in the bedding plane system upon which the mineralization took place. We can safely assume, therefore, that mineralization does continue along this plane for an undetermined distance beyond the end of this tunnel.

As the opposite side of the mountain is not exposed at this same level--as is the case at Gold Queen and Gold Nugget--we must surmise that the condition exists only as far as a fault line striking south-west from a point south and east of the millsite. (see pix) This line would be intersected at approximately 800 feet, if the

330 foot tunnel or core drill is driven on in the same direction. This would give us a total breadth of this bedding plane of 1130 feet. Prospect holes driven along the outcrop as we have seen prove--horizontally--continuous mineralization for a distance of 5/8ths of a mile or 3300 feet.

We therefore have an area roughly, of 3300 by 1130 feet--or 3,729,000 square feet.

As for the thickness of this mineralized sub-zone--observations were made of millrock payore outcropping over a vertical distance of 125 feet.

In the continuous oreshoot or lens referred to in the two tunnels, we have here a known, measured vertical distance from the footwall of the lower tunnel to the hanging wall in the raise of the upper tunnel of 55 feet.

Indications at other points of comparable bulges in the horizontal orebody referred to in the foregoing paragraph were observed.

However, for the purpose of computation used in this report I shall at all times adhere to known minimum measurements and values. The minimum thickness of this roughly horizontal orebody is 15 feet. As we have seen the area is 3,729,000 square feet. Multiplied by the minimum thickness--15 feet equals 55,935,000 cubic feet.

The dumps--which represent the waste rock from the selective process--was sampled and submitted three different assayers, they were Ross Finley, of Globe, Arizona, The International Smelting Company of Miami, Arizona, and the Twining Laboratories of Fresno, California.

Their findings are given below.

Assay by Ross Finley:

Sample # 1-A 0.24 oz. Au. - $8.40 per ton.

" # 1-B 0.44 oz. Au. - $15.40 per ton.

International Smelting & Refining Company:

Sample # 1-A 0.37 oz. Au. - $12.95 per ton.

" # 1-B 0.375 oz. Au. - $13.02 per ton.

The Twining Laboratories:

Sample # 1-A 0.30 oz. Au. - $10.50 per ton.

" # 1-B 0.35 oz. Au. - $12.25 per ton.

An average of the above figures gives us $12.04 per ton in gold left in the dumps.

If we take the smelter returns mentioned earlier of $67.00 ore worth $12.04 was discarded. For the purpose of computing value let us drop the four cents--make it $12 even money.

A composite value undoubtedly lies between the two. We may safely assume that these two undeniable figures are

nearer representative than can be had by cutting samples from the walls of these mine workings.

It is pertinent at this point to draw attention to the fact that many successful operating mines today are working $5.00 ore and that $10.00 rock is carce. By such standards the dump rock--or waste--on this property becomes better than average mill feed.

Apropos of dump rock--measurements of three dumps on The Round Top Claims show a computed tonnage of 650, 675 and 1125 tons respectively or a total of 2450 tons. At an average of $12.04 per ton these waste dumps contain $29,400.00 in gold.

Of measured ore--in place--the author can vouch for a minimum of 6000 tons. Reasonably this value should range between the known quality of the ore shipped to the smelter i.e., $67.60 per ton and the assay value of $12.04 per ton.

To be conservative we will compute the ore in place at the known figure of the wasterock in the dump, and not at the figure received by the miners from the smelters. We have $72,240.00 worth of "ore in place". Add to this the $29,400.00 remaining in the dumps and we find that there is 101,640.00 worth of mill rock available "in sight".

[illegible] west--[illegible] bottom [illegible] top--Kid [illegible] running right to left across [illegible] [illegible] travel[illegible]ed by zi[illegible]-zag new road is known as Top Ridge--the lower left is known as Top. Centre ri[illegible]e is Gold Nugget. [illegible] Ridge and [illegible] roa[illegible]. Centre of [illegible]pring Springs [illegible] Price [illegible].

"In place", i.e., unbroken, this rock averages 12 cubic feet per ton. We find that we have a total of 4,661,250 tons.

In deposits of this character--i.e., contact metamorphic--our experience has been that 10 percent--or 10 tons out of every 100 is "pay"--i.e., millrock.

We therefore may assume that an "indicated" tonnage of 466,125 of millable rock awaits development in this one ore body.

As it can be seen that ore does exist both above and below the arbritrary 15 feet in thickness which I have chosen, we may assume that the inferred tonnage of millrock is much greater than I have computed as "indicated". This is done advisedly in order to be on the conservative side.

Statements in my possession from the international Smelting And Refining Company's, Miami plant, show gross returns--at $35.00 per troy ounce, of $8654.90 for 128 tons of ore shipped from the Round Top Claims. This is an average of $67.60 per ton. These figures are for the years 1945-46-and 47. No accurate figures are available before that date. The ore constituting these shipments was, of course, selected because of excessive cost of burro-back transportation.

(Computed on the basis of value of the smelted ore, we arrive at $405,600.00 value in ore in place, besides the dump ore, ready mined, valued at $29,400.00. A total of $435,000.00. As remarked before--the figure of average value lies somewhere between the two. It is unreasonable to believe that all the ore will have as high a value as that sorted and shipped to the smelter.)

It is also unreasonable to believe that the average will not be much higher than that which was discarded and left in the dumps.

The reason the author does not set a figure between the two is due quite simply to the fact that records are not available of shipments made prior to 1945, which means prior to World War II.

Nor is it necessary. The most conservative actual value is that of the dump material. An average, by three well known assaying firms is $12.00.

Go back now to the indicated tonnage in this one deposit. That figure is 466,125 tons. And remember--this figure is but one tenth of the mineralized tonnage in the deposit. multiply this by the known value left in the dump rock:

466,125
$12.00
$5,593,500.00

Dumps and measured ore in place $101,640.00

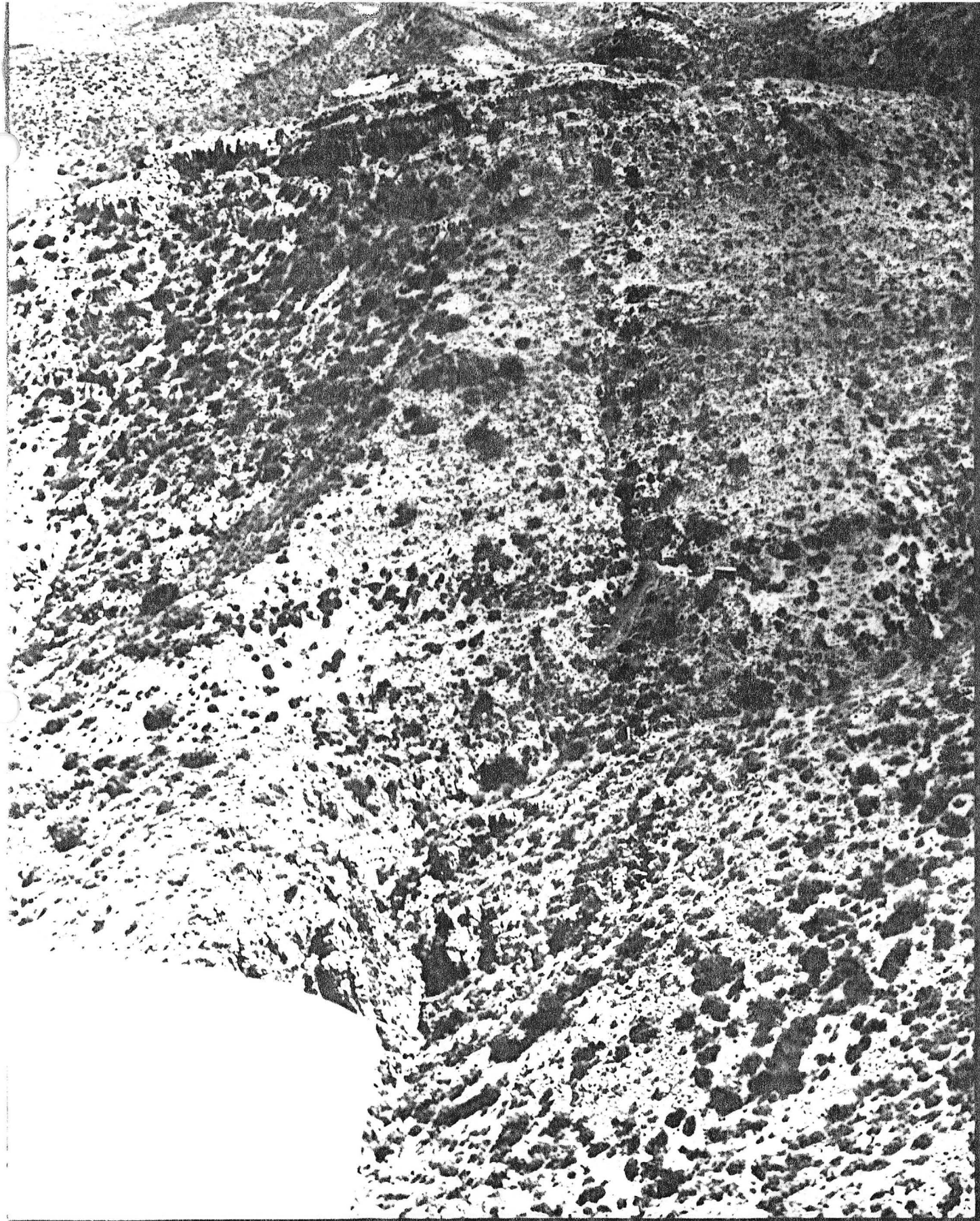
"Indicated" ore "in place" at $12.00-5,593,500.00

Total 5,695,140.00

This entire mineralized sub-zone can be core drilled along both horizontal and vertical planes. The pay ore can be blocked out far in advance of actual mining. But little timbering will be necessary as the lime capping lends itself to the "room and pillar" method. Conveyor belt and slusher scraper system can be successfully operated here and assure a maximum tonnage of mill feed at a minimum cost per ton.

There are several smaller ore bodies above and below the one just discussed, which are worthy of investigation. That such investigation will be made during a well conducted exploratory operation is of course logical. A system of "finger raises" and winzes driven off of the main workings can drain these scondary ore bodies economically.

The author's assignment has been heavy--reporting on the main indicated ore bodies--no attempt will be made to deal separately and in detail in this report--with these numerous, branching, secondary ore bodies, except to note their presence.-- Although their combined tonnage may well assume the proportions of a major mining operation.



Inclined shaft at Gold Nugget. Mineralized zone comforms in dip and strike to top stratum. Note prospect holes along this zone. Ore--"in place" is exposed 750 feet through this ridge identical with ore in shaft.

THE GOLD NUGGET
6 Claims---120 acres
(see pix)

Here we have a large segment or block of the same sedimentary rocks, i.e., Dripping Springs Quartzite and Globe limestone which characterize the Round Top.

At the southern and highest end, the stratification is unbroken and is continuous with that of The Round Top.

As can be seen--the northern two-thirds is cut sharply on each side by south-north canyons. The sharp clear exposure on the west side allows detailed study of both stratification and mineralization.

Note the clearly outlined sub-zone of mineralization reaching from 500 feet south of the main adit (near iron roofed building) sloping downward in a northerly direction to the adit and dumps on the Dripping Springs Claims. Note also the "prospect" holes along this line. And the two minor slip faults cutting the ridge from west to east.

As can be seen the strata dip N.E. 32 degrees. Identical ore occurences are evident on the east side of the ridge 750 feet distant in the same strata. It is also traceable all the way through the same ridge near its northern extremity in the Dripping Springs tunnel, 2500 feet north of the Gold Nugget inclined shaft. Note dumps on both east and west sides of the ridge at this point.

It is therefore logical to conclude that a continuous ore body is "indicated" from west to east through the 750 feet of Gold Nugget Ridge beginning at the adit near the iron roofed building shown in the accompanying pix.

Likewise it may safely be presumed that these same strata connecting at the southern end with the Round Top carry similar value. However I have omitted the probable tonnage in that area from my calculations, preferring to report only on that which is clearly exposed to examination.

Samples were cut from the exposed outcrop from a point 500 feet south of the adit referred to above to a point 1000 feet north--a total distance of 1,500 feet. This material assayed $13.00 per ton. The average width of the ridge is 750 feet.

The minimum thickness of the mineralized sub-zone is 15 feet. Although outcrops occur over a vertical distance of 125 feet,--as elsewhere.

For the purpose of computation we will disregard all but the central portion--i.e., that measuring 15 feet vertical thickness.

Computed--this result is a block containing 16,875,000 cubic feet. Reduced to tons at 12 cu. feet per ton the result is, 1,406,250 tons.

Using the same computation method as when de the Round Top I have dropped nine out of every ten tons as waste. Which is as I have explained befo e, in contact-metamorphic deposits of this nature, quite conservative.

Therefore--the "indicated" tonnage is 140,625.

Smelter returns in my possession prove that a known 427 tons were shipped from the inclined shaft shown--(see pix)

This 60 foot shaft follows the dip of the strata at 32 degrees. It is in the brown aphanitic ore <u>above</u> the Blue Ribbon artzite, none of which was mined. The Mexican miners with heir "hand steel" methods preferred the soft ore. The shaft is in ore on both sides--hanging wall and foot wall and <u>ends</u> in ore.

The average value was 0.997 ounces of gold per ton, computed at $35.00 per ounce, $34.90 per ton.

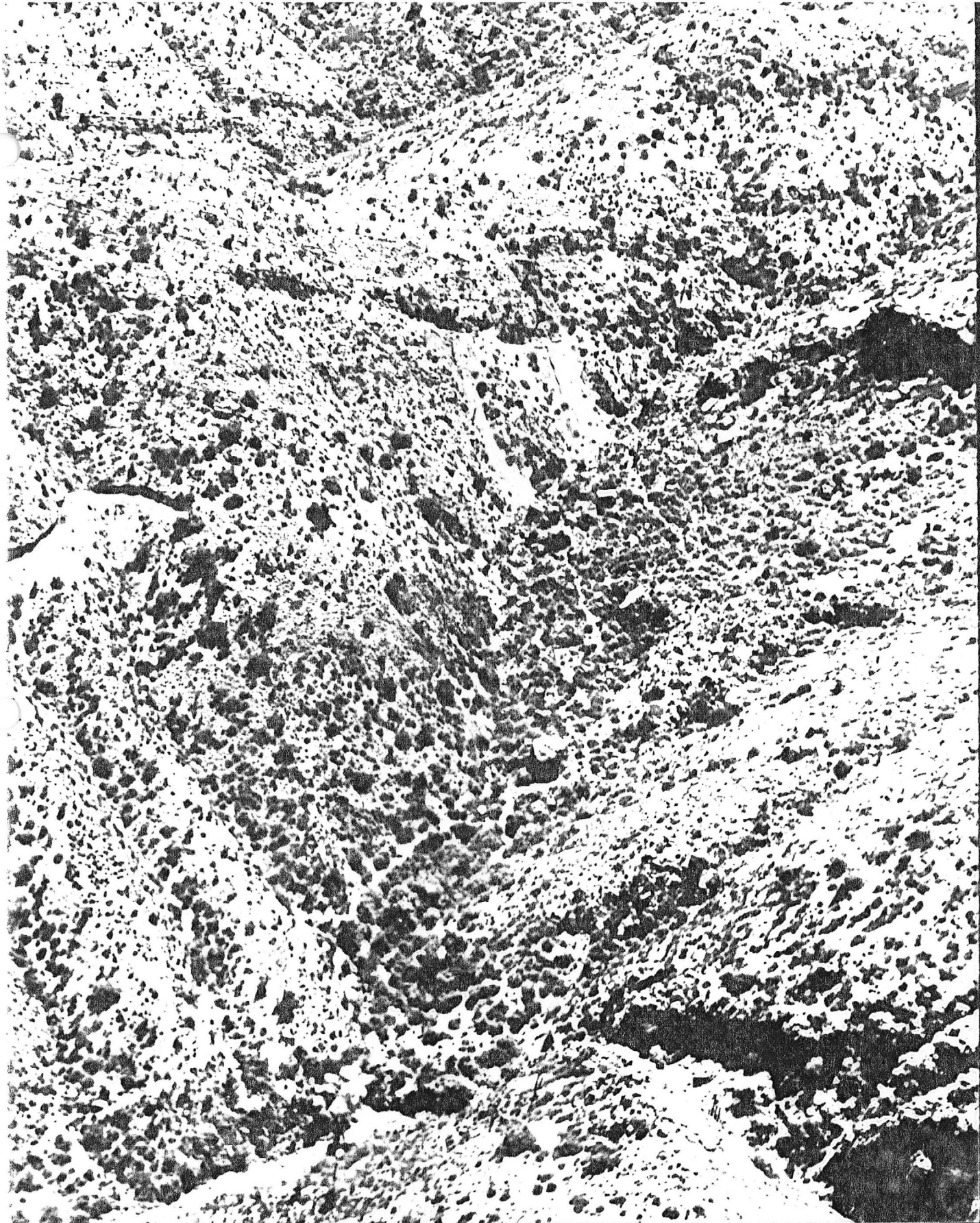
The descrepancy in value between the smelter returns from ore shipped from Round Top and from ore shipped from the Gold Nugget is easily explained. Practically all the ore mined from the Gold Nugget was shipped to the smelter. This is borne out by the fact that practically no waste dump is found on the Gold Nugget. While large dumps of good value remain on the Round Top.

As the samples cut from the exposed outcrop--which of course is weather leached ore--indicate a value of $12.00 per ton and as smelter returns prove $34.00 per ton we may be sure that if the value is computed at the lowest known figure --i,e., $12.00 per ton--that we are completely on the safe and conservative side.

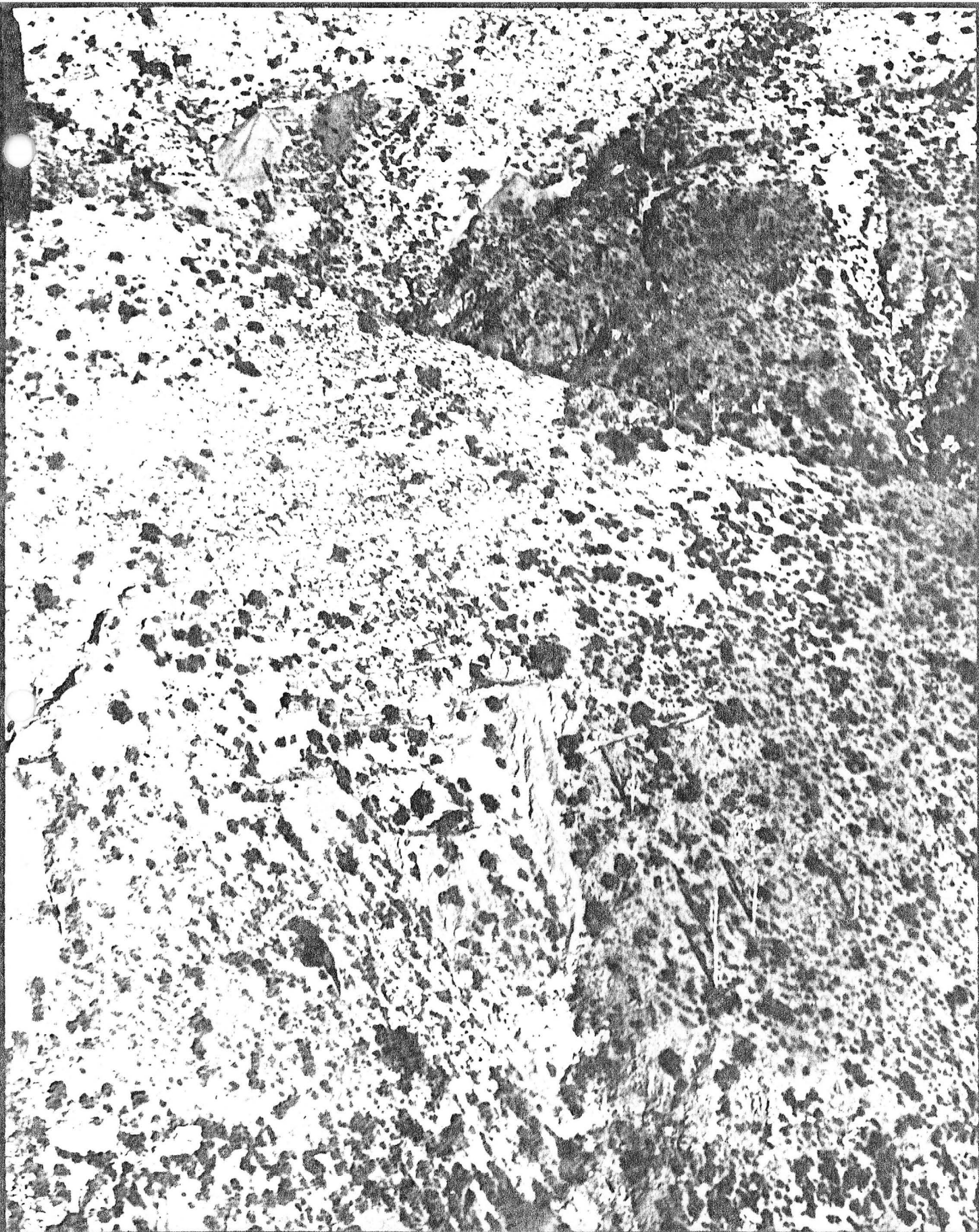
Therefore the 140,625 computed tons--and remember that this represents but 10 percent of the ore body--at $12.00--there is a clearly indicated, $1,687,500.00 worth of gold in this ore body.

One might safely "infer" a tonnage of four times this amount considering known outcrops above and below that which has been computed herein.

However--for the use of this report the author prefers--as always-- to be clearly conservative until after exploration work has been accomplished. Reccomendations of which will be appended to this report.



Note end of road--left--and dumps. Note also change of strike. At Gold Nugget--just out of pix at top strike is north and down. Here strike is south and down. Ore is identical. Tunnel runs through ridge under compressor house. Bottom of pix--olivine-diabase and heavy copper showings.



Top--east side of Gold Queen Ridge--showing other end of tunnels. Center east side of Dripping Springs Ridge. Mineralization and petrology, ditto, surface topography alone differs.

THE GOLD QUEEN GROUP
Eight Claims plus two Fractions
180 acres

Here we have the western most and last of the three groups. Look at the aerial pix on the opposite page. Note the dyke cutting from west to east. Through this property and on eastward to the far boundary of the Round Top Group. Take note also of the two west--east post-mineralization minor faults parallel with the large up-thrust dyke. These minor faults are identical with--in fact are extensions of the same ones appearing across the canyon on the Gold Nugget.. Take special note of the straight, deep, south--north canyons on the east and west sides of Gold Queen Ridge. These are typical stress cracks caused by the upheaval.

See the dumps on either side of the narrow part of the ridge. These dumps are waste ore mined from the same strata treated on at length in the author's findings re both the Round Top and the Gold Nugget groups.

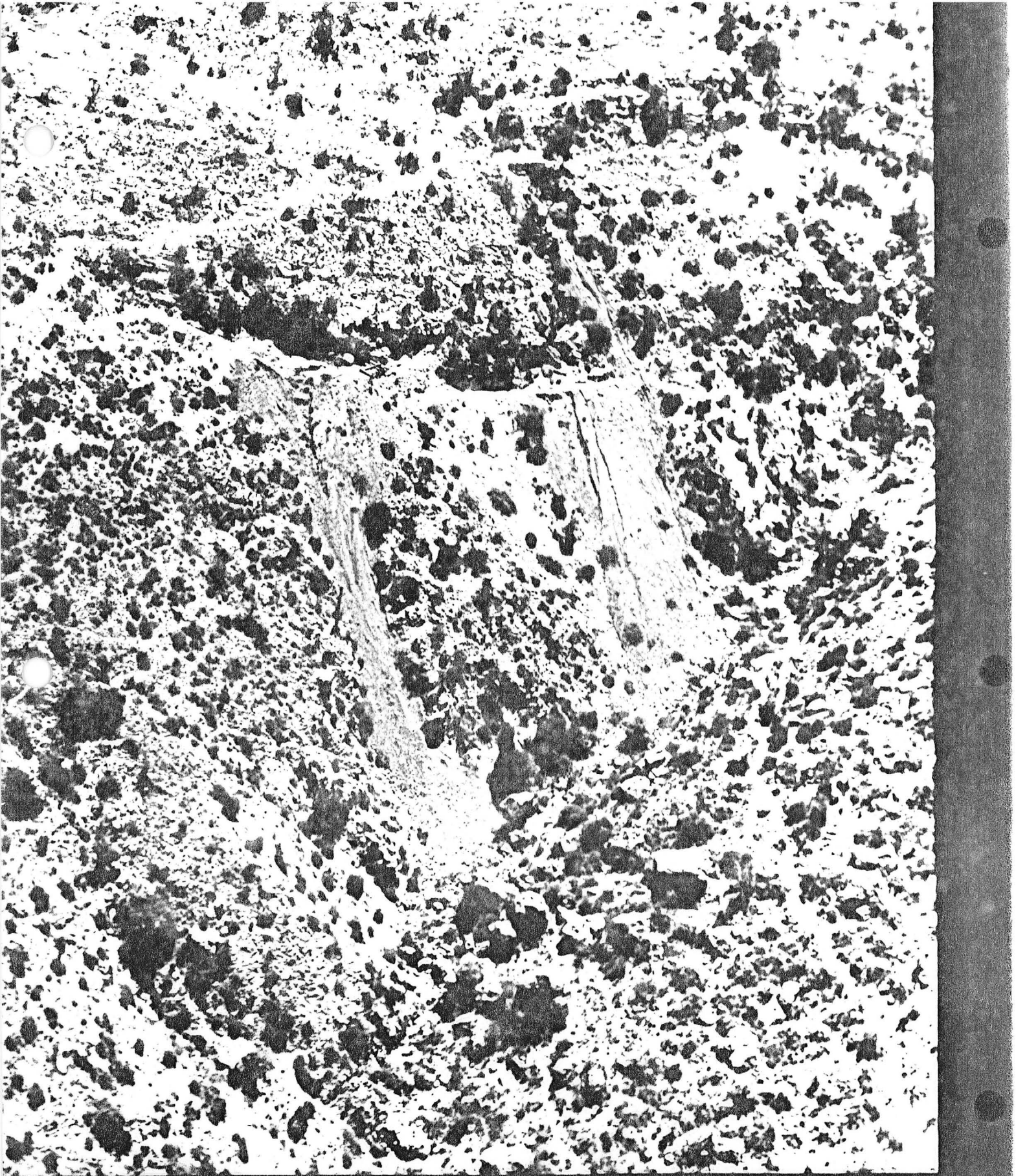
Here is the proof of the author's contention that ore presists continuously along this mineralized sub-zone. For at this point it has been mined through from side to side.

And while lower in altitude than on the Round Top and Gold Nugget that it is one and the same. That at the time mineralization took place, it was one continuous

level stratum. That upheaval of the underlying batholith elevated the other segments to their presently different elevations. That the canyons are cracks, or breaks, caused by the dynamic force of the upheaval. Were enlarged later by the rapid erosion characteristic of high winds and torrential cloudbursts.

And so--except in regards to surface topography and difference in elevation--all factors are essentially identical with the other two segments, reported on in the foregoing, as the Round Top and Gold Nugget.

The Dripping Springs Mine--(see in pix directly across the canyon eastward from the Gold Queen and at the tip of Gold Nugget Ridge.) does not at this time, belong to The Central Nevada Milling Corporation. It has been fairly well exploited at this elevation and is of no particular importance economically. It did produce heavily and serves to bear out the author's conclusions as to the "indicated" value of the mineralized sub-zone which contains the major value above 3000 feet in altitude of the entire area under consideration. Like the Gold Queen it has been mined from side to side of the ridge. In other words the pay ore was continuous along the sub-zone. Note the dumps on each side of the ridge.



Close up of west slope Gold Queen workings upper tunnel is in vertical orebody. Prospect hole upper right is in another vertical ore shoot. Orebody traceable 900 ft. south of this point.

But the Gold Queen--while parallel tunnels have been driven completely through the ridge from side to side--in ore all the way and in ore on both sides--has not been mined out--as the ore found "in place" between the two tunnels described below will testify.

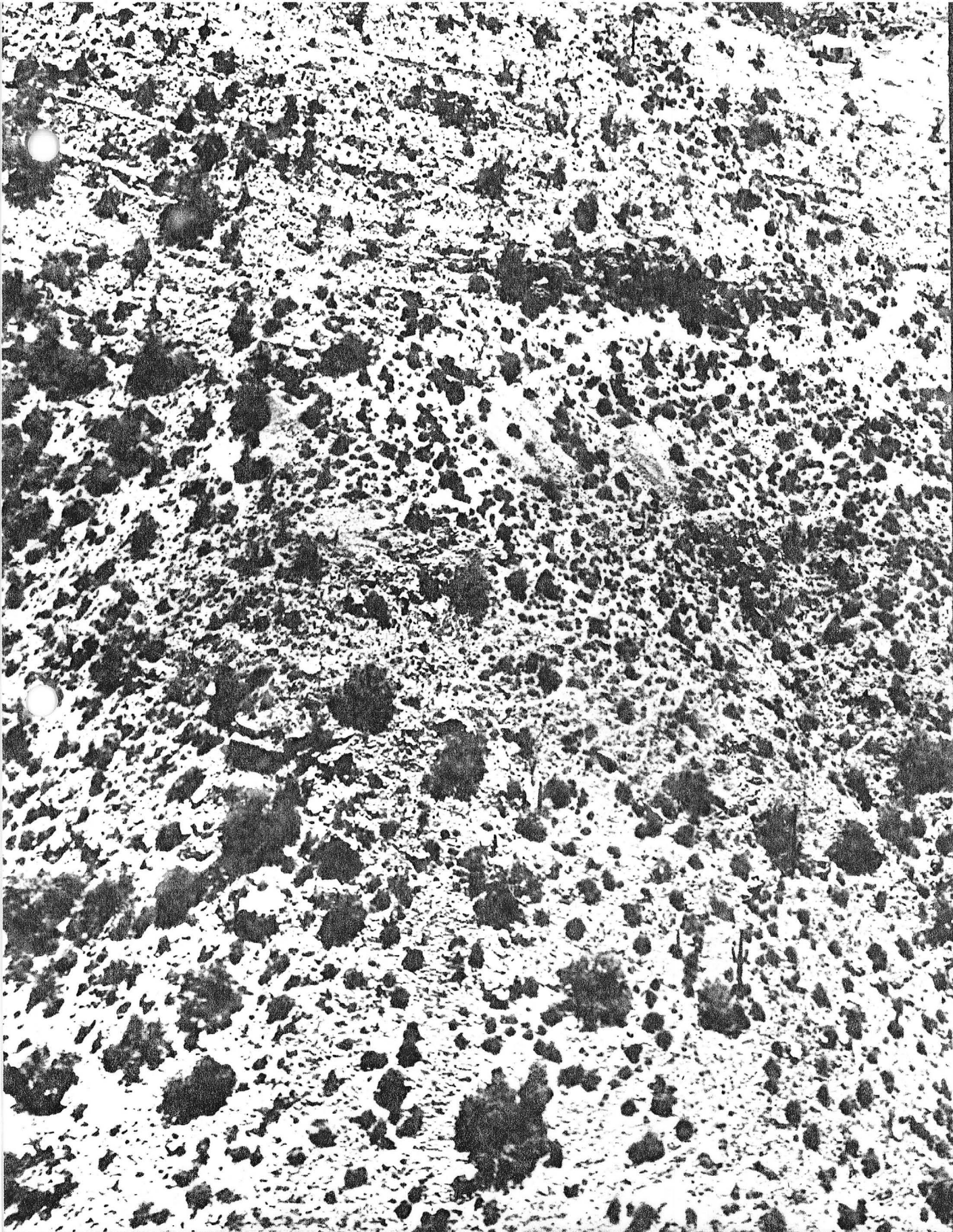
Beginning on the west side at adits #1 and # 2, there is a measurable orebody between the two tunnels 375 feet long by 150 feet wide which maintains an average thickness of 15 feet. Computed tonnage 70,312.

In addition--beginning at adit #1 there is a vertically inclined ore shoot reaching through to the surface of the ridge 200 feet above, near the water tank seen in the pix. The measurements of this shoot are 200' x 50' x 12'. Computed tonnage 10,000.

Indications of similar vertical ore bodies at other points were observed. Such vertical shoots are to be expected in blocky ground of this nature where contact-metamorphizm accounts for mineralization.

The combined tonnage of these two measurable ore bodies is 80,312.

These tunnels are driven through the ridge at a point almost exactly half way--from south to north of an "indicated" ore body 1800 feet long. The exposed outcrop is readily traceable on the accompanying pix. Numerous prospect



Close up of area north of pix on last page showing row of prospect holes on sub-zone--all "in ore".--A characteristic condition of all three properties.

holes--as can be seen--mark its course. The width--at its narrowest point is 400 feet. The thickness is computed at 15 feet. Although, as in the case of the known oreshoot just mentioned, we know that in places it is much thicker.

The dimensions of this ore-block are 1800 feet by 400 feet by fifteen feet. The computed tonnage of "indicated" ore is therefore 900,000.

Again--as with the Round Top and the Gold Nugget I shall use the conservative method and disregard 9 out of every 10 tons of indicated" ore. Which leaves:

| | | |
|---|---|---|
| Measured tonnage "in place" | | |
| Ore between adits #1 and #2 | | 70,312 |
| Oreshoot rising from tunnel #1 to surface | | 10,000 |
| One-tenth of 900,000 "indicated" tons in ore block. | | 90,000 |
| | TOTAL | 170,312 tons |

Computed measurements of the 5 main dumps on the Gold Queen show 10,925 tons of this material. These dumps are somewhat "spotty". Limerock over burden has been dumped indiscriminately with lower grade ore to form the terrace plainly outlined in the accompanying pix. A careful sampling by the author and assays by the three assaying firms mentioned earlier show a lower average value than

that of the dumps on the Round Top--$10.24 per ton.

The value of the dumps will therefore be computed at that figure. Records of the American Smelting and Refining Company, Hayden Arizona in my possession show that shipments from this mine totaling 406 tons returned to the miners $12,898.78. An average of $31.77 per ton.

One shipment of 48 tons averaged $77.36 per ton. Complete returns are not available as many leasers and sub-leasers operated off and on and shipments were pooled with those from The Dripping Springs Mine. The 406 tons referred to were positively identified as originating exclusively from the Gold Queen.

Ore "in place" and "indicated" ore are computed at the same low value as used in computing the Round Top and Gold Nugget, i.e., $12.00 per ton.

Also ore "in place" and "indicated" ore is computed on the basis of 1 ton in each 10.

Computed in this manner, the breakdown of the basic value follows:

| | |
|---|---|
| 10,925 tons dump ore at...$10.24 | $111,872.00 |
| 1/10th of 70,312 tons between tunnels # 1 and # 2, 7,031 tons at $12.00 | 84,372.00 |
| 1/10th of 10,000 tons in vertical ore shoot from tunnel # 1 to surface on top of ridge--1000 tons at $12.00 | 12,000.00 |
| 1/10th of 900,000 tons of "indicated" ore in ore-block 400 feet by 1800 feet by 15 feet--90,000 tons at $12.00 | 1,080,000.00 |
| | 1,288,244.00 |

Combined "Indicated Value"

| | |
|---|---|
| Round Top..... | $5,695,140.00 |
| Gold Nugget..... | $1,687,500.00 |
| Gold Queen..... | $1,288,244.00 |
| Total..... | $8,670,884.00 |

## INFERRED VALUE

Approximately one-fourth of the area of the mineralized sub-zone has been reported. Three-fourths have not been reported. While otherwise identical with the reported portions, this three-fourths was incompletely exposed outcrops. Such a portion is that area lying between the reported Round Top and the reported Gold Nugget which measures 800 feet by 1000 feet. And that portion of the The Gold Queen lying south of the reported area thereof, which measures 800' x 2000'. These and smaller portions--unreported for the same reasons could be "inferred" to quadruple the total figure given above. All of which deals exclusively with the horizontal plane of the sub-zone which the author has arbritrarily reduced to 15 feet in thickness. Which is <u>less</u> than the <u>minimum observed thickness.</u>

The giant mill-tailing dump at Hayden, Arizona. Approximately 4 miles air line from Round Top Mountain. Note comparative size of town and smelter. It is still growing.

Another 10 percent may be "inferred" in the as yet unseen vertical ore bodies or shoots such as reported in the Round Top --55 feet shoot-- and the Gold Queen 200 ft.

The total reasonable "inferred" value would be $34,635,768.00 plus 10 percent for the vertical orebodies--$3,463,576.80-- or $38,099,344.80.

Furthermore it should be remembered that the above figures deal exclusively with that accessable zone lying above 3000 ft. elevation.

The author considers the greatest potential value lies below 3000 ft. in the sulfide zone--that for a greater return will be had here from recovery of copper--than the quite respectable figure above indicates may be won in gold.

He is backed in this conviction by geologic observation, by a life long acquaintance with Arizona mines and by over half a century of mining history of the region. one half century which has seen mine and smelter dumps grow to mountainous proportions. And they are still growing with no foreseeable let-up.

## RECCOMENDATIONS

Roads. The Round Top road should be pushed around, following the contour, to the Gold Nugget Group. The Gold Queen road should be pushed southward, also following the contour to the top of the ridge. This calls for approximately 5000ft and 2500 ft . of road respectively. Another 4000 feet of road will be needed reaching from the mill site along the strike of the dyke N. 87 degrees west from the millsite.

The first mentioned roads will make all three groups, Round Top, Gold Nugget and Gold Queen accessable for core drilling exploration.

The last mentioned will allow the deep drills access to the copper value lying along the strike of the dyke mentioned above.

## CAMP CONSTRUCTION

In order to properly prosecute the exploration program outlined in the foregoing it will be in the interests of economy to erect a camp on the ground. The nearest livable town is 32 miles distant.

As but little unskilled Mexican labor can be utilized, the camp must have livable facilities for skilled workers, i.e., electricity, modern plumbing, refrigeration.

Good water--luckily--as already mentioned--is available in quantity.

A machine shop and repair shop is also indicated to speed up repairs.

The camp should accomodate a minimum of 25 workers and their families.

Cost estimates therefor will be given under that heading.

Core Drilling--Horizontal. In order to delineate the ore bodies lying on horizontal planes in the mineralized sub-zone characterizing all three of these groups the portable type tool capable of drilling a horizontal hole 1500 feet long will do nicely. Several of these can be employed simiultaneously under the direction of a head driller, himself supervised by a competent and experienced geologist.

Proper core-drill exploration will make possible the by-passing of the lower grade ore and waste. This foreknowledge of the exact location size and shape of the best orebodies permits selective mining with its attendant economy of operation. The lower grade and the waste remain as supporting pillars to the hanging wall.

Three such drills should begin operation on the orebody at the Round Top--as this is the only orebody presently accessible by road. These drills should commence work at indicated points of attack as soon as water lines can be completed from the well on the river at the N.E. corner of the properties.

About 1½ miles of 2 inch water pipe will need be laid to service this operation.

With the initial drilling operation in action the new roads should be pushed to completion as rapidly as possible.

Vertical Drilling. As soon as the road along the strike of the dyke is usable two drills capable of 5000 feet of vertical hole should attack the mineralized zone lying below 3000 feet, elevation, that is to say, the sulfide zone. An additional mile of 2 inch water pipe will be needed to carry water from the millsite to the western extremity of this operation. A second booster pump will be needed to assure even flow of water to its points of consumption.

With completion of the roads to the Gold Nugget and Gold Queen two additional horizontal type drills should be employed at the Gold Nugget. As these operations will only be about ½ mile apart the same head driller and of course, supervising geologist, can attend the double operation--jeeping between the two.

Water for the Gold Nugget can be pumped from a supply ½ mile south of that operation.

As drilling is completed at Round Top the tools used there can be moved to the Gold Queen and begin that operation. The same water supply can be used for both operations at the Gold Nugget and at the Gold Queen.

As the drilling operation at Gold Nugget is completed the tools working there can be moved to the Gold Queen to supplement the two already there.

This entire program can be accomplished in between 10 and 12 months if efficiently managed. All the factors can be fairly well approximated.

THE VERTICAL DRILLING OPERATION however, presents more unknown factors. The distance to the basement is unknown Naturally, if the bit is still in ore at a given depth of, say, 3000 feet the hole will be driven on until the ore body is bottomed.

The same holds true regarding area. The Modus Operandi governing such work is as follows: A hole is drilled to maximum depth at an indicated point on or near the axis, then at spaced intervals other holes are drilled each farther and farther from the axis until the lateral boundary of the orebody is outlined.

## COST ESTIMATES

Camp for 25 workers at $1500.00 each..... $37,500.00

Repair shop and garage .....$15,000.00

$52,500.00

Horizontal core drilling--long hole.

Gold Queen -- 50 ft. intervals--1800 ft.

exposure--36 holes--400 ft. long

14,400 core ft. at $3.00..... $43,200.00

Gold Nugget --50 ft. intervals--1500 ft.

exposure--30 holes--700 ft. long--21,000

core ft.....at $3.00..... $63,000.00

Round Top -- 50 ft. intervals--3300 ft.

exposure--66 holes 1100 ft. long

72,600 core ft....at $3.00.....$217,800.00

$324,000.00

Vertical Drilling--Below 3000 ft elev.

3 deep (5000 ft) petrographic deter-

mination cores--15,000 core ft....at

$12.00.....$180,000.00

15,000 core ft. intermediate ore-

body delineation drilling ...at $7.50.....$112,500.00

$292,500.00

Water Lines

A high head pump is on the ground and pipeline from the 10 inch well at river level to the millsite on the spur of Round Top Ridge. (See Pix)

Additional 1½-inch pipe and pumps will be needed as follows:

Pipeline from Millsite to Round Top
tunnel--5000 ft. at..22¢.....$1100.00
Pipeline from Millsite west to Gold Nugget
Ridge--4500 ft...at....22¢.....$ 990.00
Booster pump and engine at Millsite.....$ 650.00

Booster pump at Gold Nugget Ridge
to force water 2500 ft. southward
up ridge.....$ 650.00
2500 ft ..1½ inch pipe as above.....$ 550.00
Pipeline from Gold Nugget Ridge booster
pump station across canyon to Gold
Queen and south up Gold Queen Ridge
4000 ft. 1½..inch pipe...at...22¢.....$ 880.00

Transportation and Installation
of above.....$2100.00
$5920.00

The road construction cost is based upon cost experience of road already constructed on the same property, within the past year, plus allowance for advances in price of materials and wages.

Camp and machine shop cost is based upon figures by a construction company specializing in camp construction.

## CONCLUSION

The proven and indicated, i.e., probable, value of the oxidized sub-zone--that portion lying above 3000 feet elevation--is $8,658,942.00.

The recommended expenditure for development work is, $886,467.00.

This value is, therefore, almost ten times the cost. And that cost includes not only the development of the oxidized gold zone but also includes the development of the inferred value in the sulphide or copper zone lying below 3000 feet elevation. The three recommended deep holes--5000 feet each and the 15,000 core feet of delineation drilling will be paid from the same development fund backed by the $8,658,942.00 worth of proven and indicated ore in the upper, or oxidized zone.

Camp and Machine Shop.....$ 52,500.00

Horizontal Core Drilling.....$324,000.00

Vertical Core Drilling.....$292,500.00

Water Lines.....$ 5,920.00

Additional Roads, 11,000 ft. at...$3.50.....$ 40,050.00

Administrative cost -- Office expense,
salaries engineering fees, travel, etc.,
10% of above.....$ 71,497.00

Additional emergency capital desired.....$100,000.00

Additional capital necessary.....$886,467.00

## SUMMATION

The foregoing is based as nearly as may be--in changing industrial times--upon actual cost of similar accomplished operations and known factors.

The core drilling costs result from consultation with one of the largest contract core drilling concerns in the west.

The cost of pipelines are based upon prices quoted within the month by one of the largest pipe supply houses in the west. The laying of pipe is based on presently accepted wage scales.

In due consideration of the foregoing facts it is logical to conclude that the present capitalization--- $1,000,000.00, of The Central Nevada Milling Corporation is inadequate to meet the demand of the necessary development needs.

I, therefore, recommend that the directors of The Central Nevada Milling Corporation give immediate consideration to such plans as they may devise to increase the capitalization of the corporation to not less than $5,000,000.00. And that in the interest of the stockholders that the development program herein outlined be executed forthwith at the same time setting aside such reserve funds and treasury stock as they deem essential to the best interests of the corporation and it's stockholders.

Very truly,

3
Round top

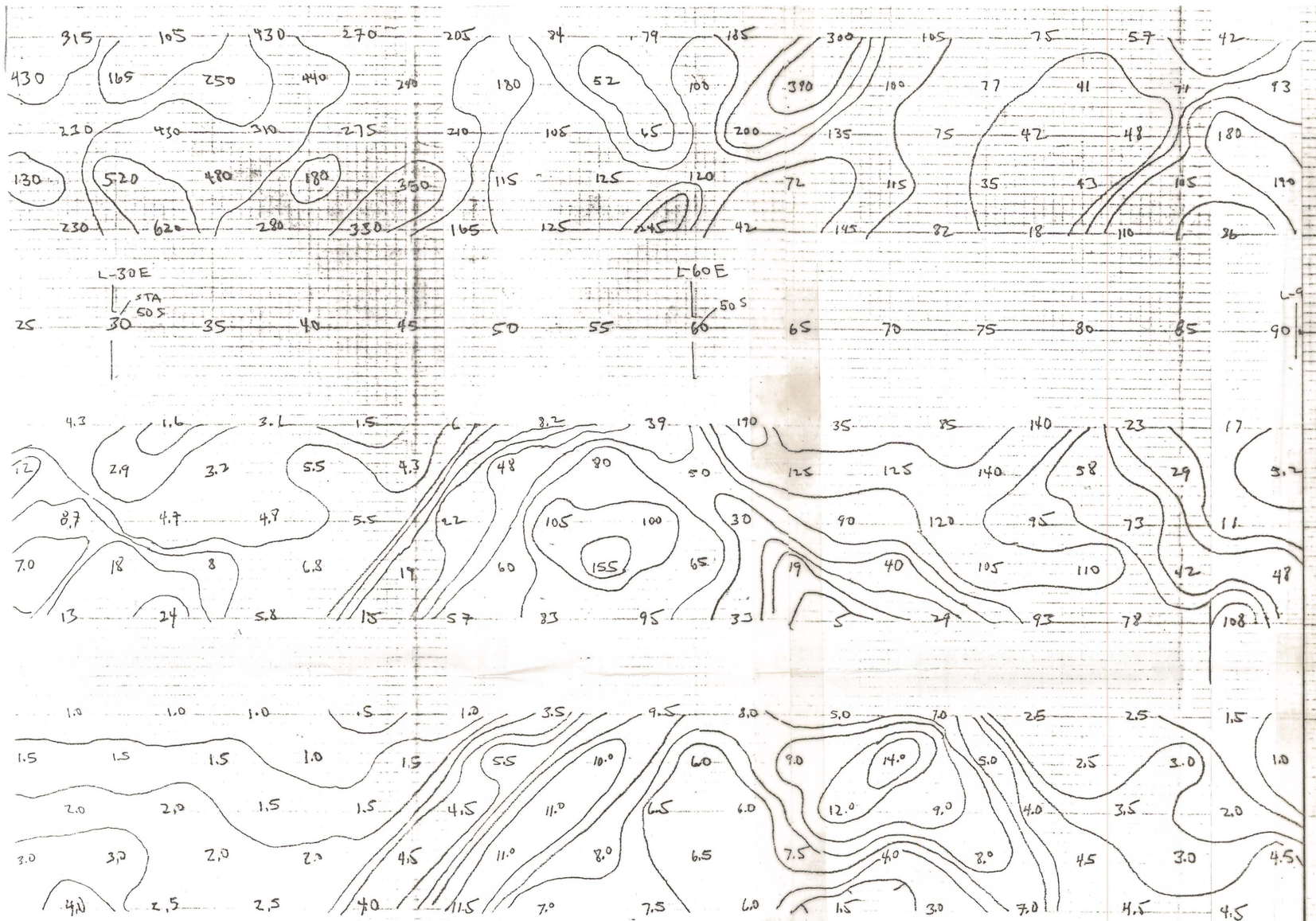
Inclined Shaft
Gold Nugget
SB
2

Gold Queen Ridge

N
Gold Queen

Mill Site

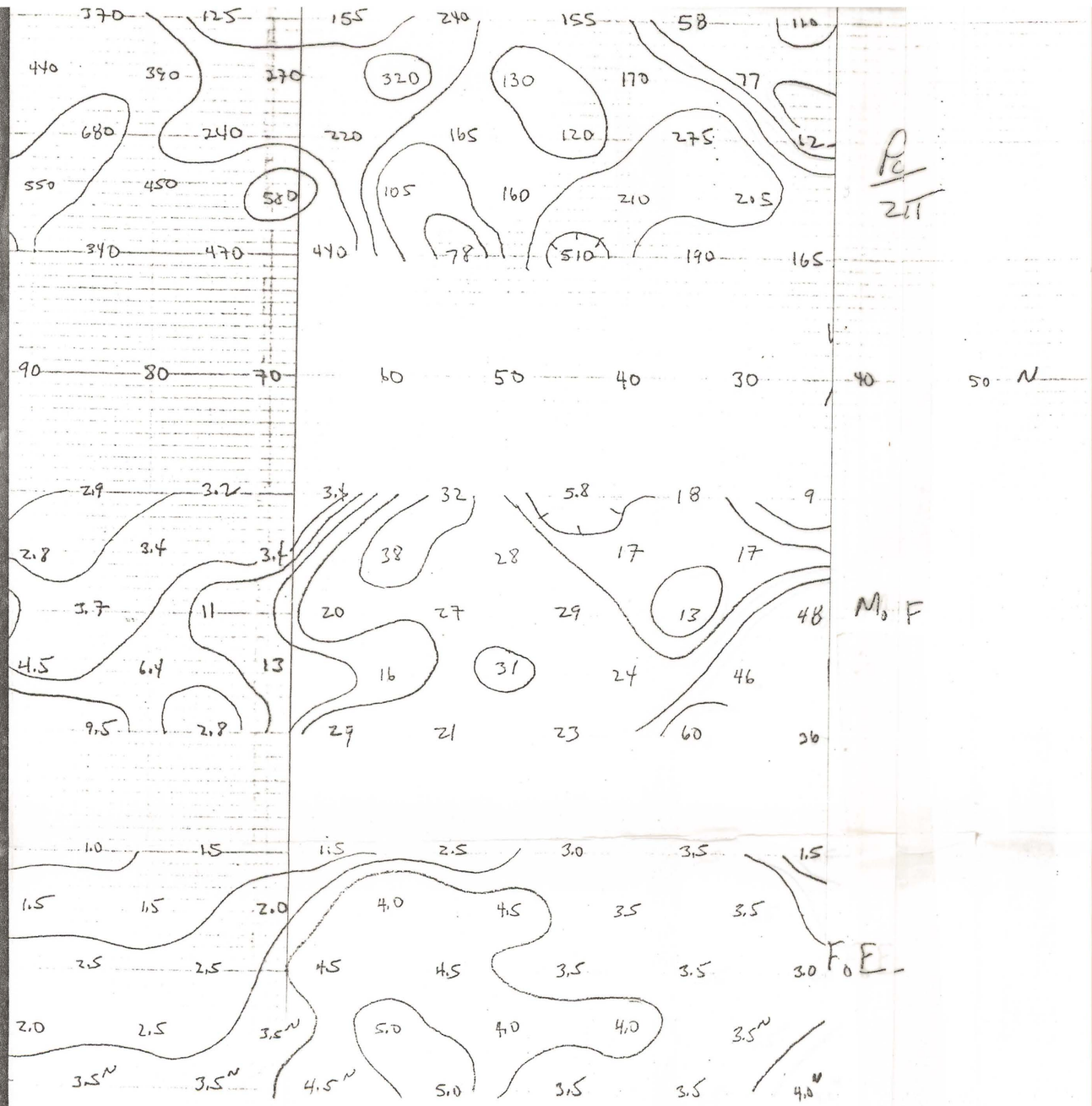
1
Columbia mine




Arnaud
Pinal County, Ariz
Troy Area
Frequencies .3 & 2.5 C.P.S.
Scale 1" = 500 ft.
May 16, 1972

LINE 505

Juan Lang




Pc
211

M. F

F. E.

Amarg
Gila + Pinal Counties, Ariz.

TROY Area

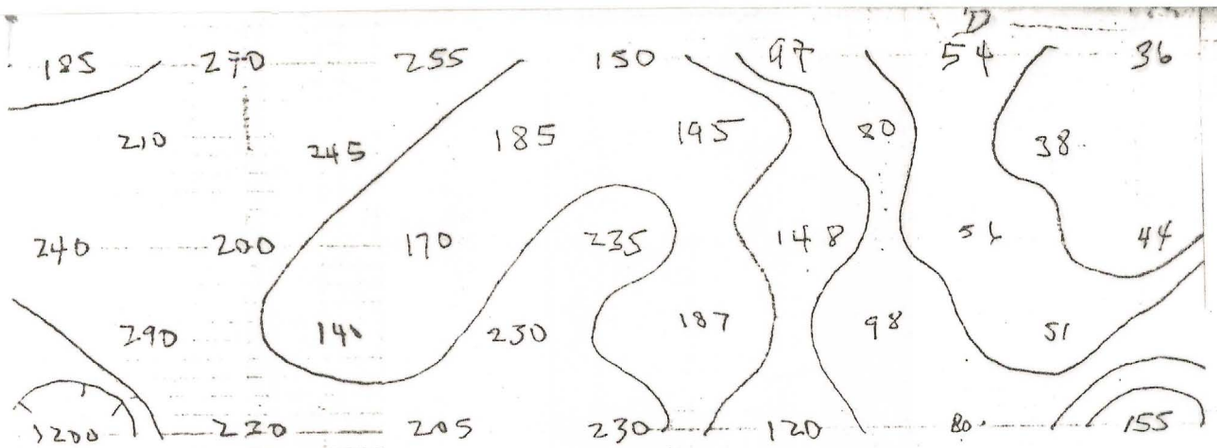
Frequencies .3 + 2.5 C.P.S.

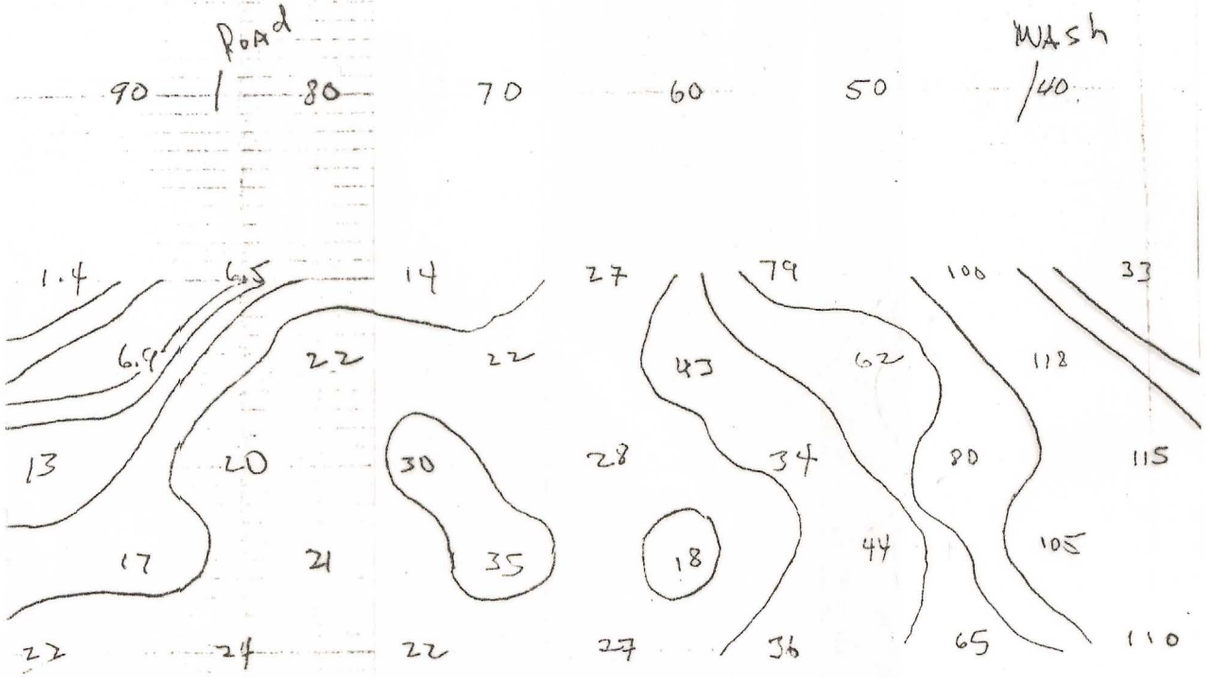
Scale 1" = 1000 ft.

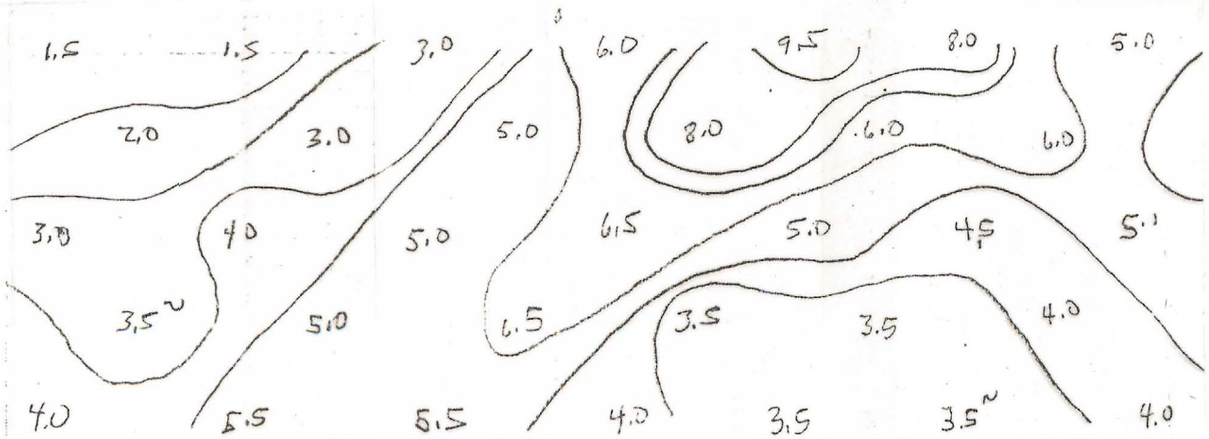
April 20, 1972

LINE ~~6E~~ 3E

from Laing




Amax
Gila & Pinal Counties, Ariz.
Trav Over
Frequencies .3 & 2.5 C.P.S.
Scale " = 1000'.
April 14, 1972

LINE 6E

from base


Dripping
Spring
Manhattan
Cowboy Mine
GILA
PINAL CO
25
30
3115
2762
3985
3345
3200
3400
3600
3800
4000
4200
2800
3000