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

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To:

FXC, pls review

and discuss w/ me

KB

Alamo mining dist. Little Horns

33-34 113-114

Yuma

Visited by FXC & MMM 2-29-72

19 Geoch. samples taken

Prospect not followed up

as not interesting

FXC.

SKYLINE LABS, INC.
SPECIALISTS IN GEOCHEMICAL EXPLORATION
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033 • TEL.: (303) 424-7718

REPORT OF ANALYSIS

Job No. 42065
March 13, 1972

Nuclear Dynamics, Inc.
P.O. Box 20766
Phoenix, Arizona 85036

Attention: Francis X. Cannaday

Analysis of 19 Rock Chip Samples

Item	Sample No.	Cu (ppm)
1.	AL- 1	60
2.	2	60
3.	3	55
4.	4	40
5.	5	100
6.	6	80
7.	7	30
8.	8	25
9.	9	80
10.	10	20
11.	11	25
12.	14	45
13.	15	20
14.	16	5
15.	17	10
16.	18	40
17.	19	85
18.	20	55
19.	AL-21	40

for Edwin V. Post
Charles E. Thompson
Chief Chemist

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TEL.: (303) 424-7718

INVOICE

INVOICE NO.: 7282
JOB NO.: 42065
P.O. NO.:

DATE: March 13, 1972

TERMS: NET 30 DAYS

SOLD TO: Nuclear Dynamics, Inc.
P.O. Box 20766
Phoenix, Arizona 85036

Attention: Francis X. Cannaday

Analysis of 19 Rock Chip Samples

19 Copper @ $1.00	$ 19.00
19 Samples crushed, split and pulverized @ $.50	9.50
TOTAL	$ 28.50

INVOICE COPY

Taken Feb. 29, 1972

GEO CHEM SAMPLES

ALAMO DIST LITTLE HORN MTS.
28, 29, FEB. '72

SAMPLES @ 200' INTERVALS
UNLESS NOTED OTHERWISE

AL #1
AL #2 } GR
AL #3

AL #4 175' FROM AL #3

AL #5 300' BEYON AL #4 HEAVY SERICITE?

AL #6 GRNT. EPIDOTE OXID

AL #7 GRNT OXID CHLOR EPID

AL #8 GR. OXID CHLOR EPID

AL #9 GRNT CHLOR EPID OXID

AL #10
AL #11 } GR

NOT TAKEN

AL #12 NO SAMPLE TAKEN
AL #13 NO SAMPLE TAKEN } NO OUTCROPS (USED AS DISTANCE INTERVAL STATIONS ONLY)

AL #14 GR

AL #15
AL #16 } GR
AL #17

AL #18 GRNT, EPID, CHLOR

AL #19 GRNT, OXID, CHLOR, SER?

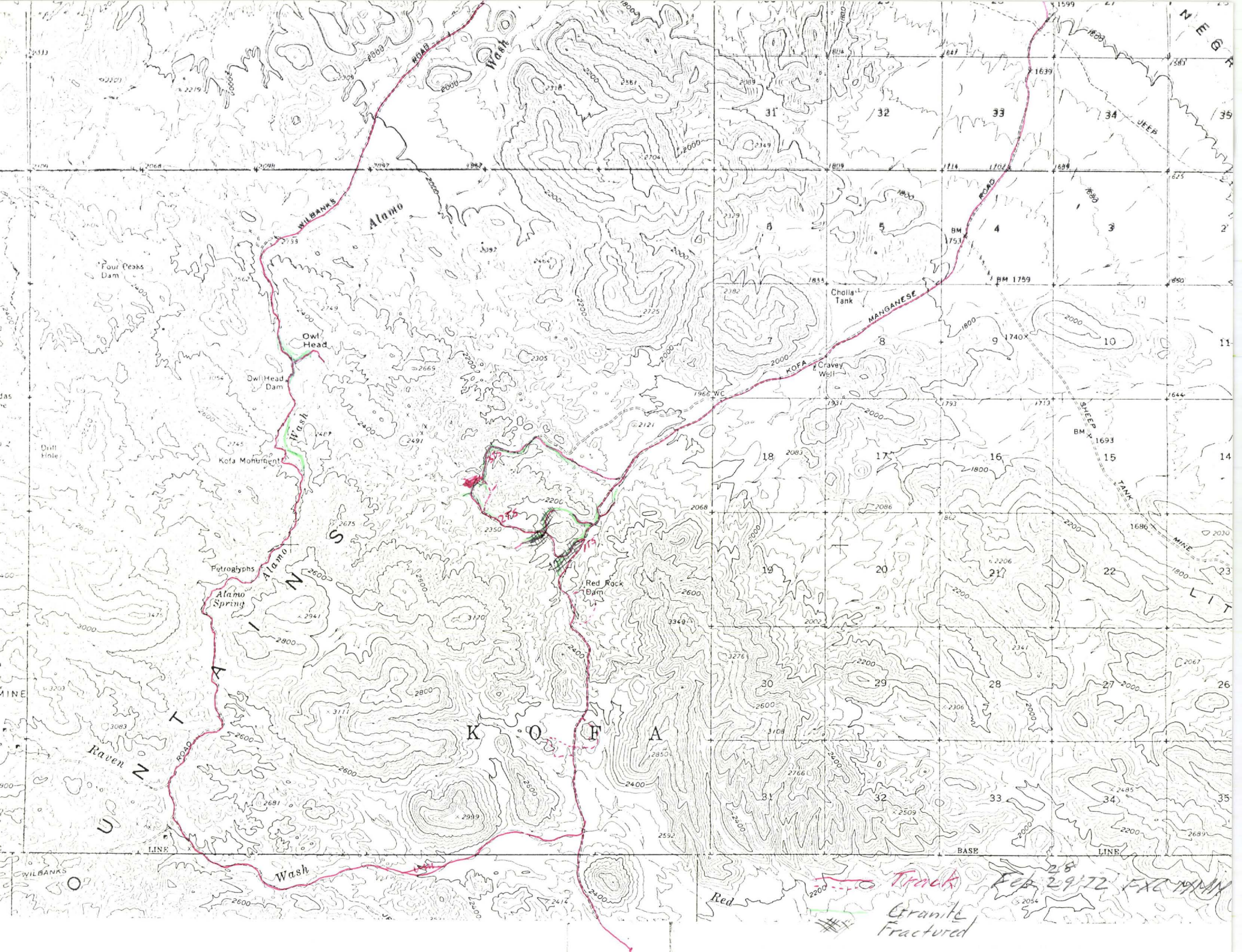
AL #20 GRNT, OXID, SER?

AL #21 GRNT EPID OXID SER?

19 samples.

F.XC MMM | Feb 29 '72

Geochem Co ppm



Alamo
Wash
WILBANKS
ROAD
Four Peaks Dam
Owl Head
Owl Head Dam
Kofa Monument
Petroglyphs
Alamo Spring
Alamo
Wash
Red Rock Dam
Cholla Tank
KOFA
MANGANESE
ROAD
Cravey Well
SHEEP
TANK
MINE
JEEP
Raven
ROAD
K O F A
Wash
Red
WILBANKS
LINE
BASE
LINE
Track
Granite Fractured
Feb 29 '72 FXC MMN

Alamo Wash
WILBANKS ROAD
Four Peaks Dam
Owl Head
Owl Head Dam
Kofa Monument
Drill Hole
Petroglyphs
Alamo Spring
Red Rock Dam
Cholla Tank
Cravey Well
KOFA MANGANESE ROAD
SHEEP TANK MINE
JEEP
K O F A
Raven
Wash
Red
BASE LINE
LINE

Four Peaks Dam
Owl Head
Owl Head Dam
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Drill Hole
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KOFA MANGANESE ROAD
WILBANKS ROAD
JEEP
SHEEP TANK MINE
Raven
K O F A
M O U N T A I N S
BASE LINE
Red

WILLARD C. LACY
4031 EAST BURNS STREET
TUCSON, ARIZONA 85711
326-6305 Home
884-2147 University

June 6, 1970

[redacted]

DR. W.C. LACY, AZ BU. MINES, IS ONE OF THE TOP AUTHORITIES ON PORPHRY COPPER MINERALIZATION.

[redacted]

Antelope Peak, Arizona
Diasy Mae Claim Group

1) It was a real pleasure last Saturday to have your company in the field in the visit to the Elsing-Cook "Daisy Mae" group of claims -- south of Antelope Peak, Arizona.

2) Although there are widespread showings of copper in the Pinal Precambrian Schist in the area, that would deserve investigation should an operation be established in the locality, most of the copper shows were concentrated in a north-west-trending zone about 2000 feet long and about 300 feet wide. This lies near the bottom of the valley. The following observations are pertinent:

a) Copper values occur in oxides or silicates as chrysacolla, malachite, cuprite and tenorite -- all of which can be decomposed and the copper values extracted by acid leach.

b) The Pinal Schist is free of carbonate, except for minor "caliche" which is deposited as cementing of talus or penetrated the rock to shallow depths along fractures. The host rock is generally non-reactive and acid consumption would not be excessive.

c) Relict pseudomorphs after sulphide minerals with the copper values indicate that these values have not migrated far. Also, associated with the copper mineralization in the Schist there has been strong silicification and feldspathization along a network of veinlets. This altered rock becomes almost aplitic in character.

d) There does not appear to have been much pyrite present with the primary sulphides -- the primary sulphides are probably chalcopyrite and bornite and in insufficient quantities to produce much of an induced polarization response.

e) Copper values, and the alteration, are restricted to the vicinity of steep shears -- generally 4 to 8 feet wide, but possibly locally considerably wider. The areas between these shear zones are essentially barren. The shears do not appear to be parallel, but exposures are not adequate to obtain a clear structural pattern.

3) I would suspect that:

a) Oxidation would extend to a depth of +200 feet with the encountering of some chalcocite (also leachable) at depths below 100 feet.

b) The area of greatest concentration of mineralized shears might overlie the top of an igneous cupola which could contain disseminated copper mineralization.

c) There is a potential for leachable oxide copper material of between one and five million tons that might contain 1.0 to 1.5% copper. This could be mined selectively by open pit methods, crushed and dump-leached.

4) Possibilities for the property lie in the following:

a) Development of a primative copper oxide leach operation (1 to 5 Million tons of 1-1.5% Cu) to establish a source of income and a base of operations.

b) There are possibilities for a disseminated copper sulphide deposit in a buried cupola beneath the area of most intensive copper mineralization. This is porphyry copper country. Such a deposit might carry a large tonnage mineable by block-caving methods. Depth is unknown, but test drilling should extend to 3,000 feet.

5) I would suggest the following steps:

a) Collect representative samples of the oxide material and have leach tests run by the Arizona Bureau of Mines. (I will take care of this step.)

b) Carry out a rock-chip geochemical survey over the area of most intense mineralization on a 50-foot grid, and a 200-foot grid over the remainder of the claims.

c) Using a wagon drill, drill 50-foot holes on 50-foot centers in the area of the maximum copper anomaly.

d) Obtain trench samples across the major axis of the copper anomalous area.

e) Evaluate results to see if a leach operation still appears to be feasible.

6) A small leach operation is very attractive at the present time because of low capital investment required, low operating costs, the abundance of cheap sulphuric acid (± $5/T at the smelter), and prospects for higher copper prices in view of environmental restrictions placed on the smelters.

Sincerely,

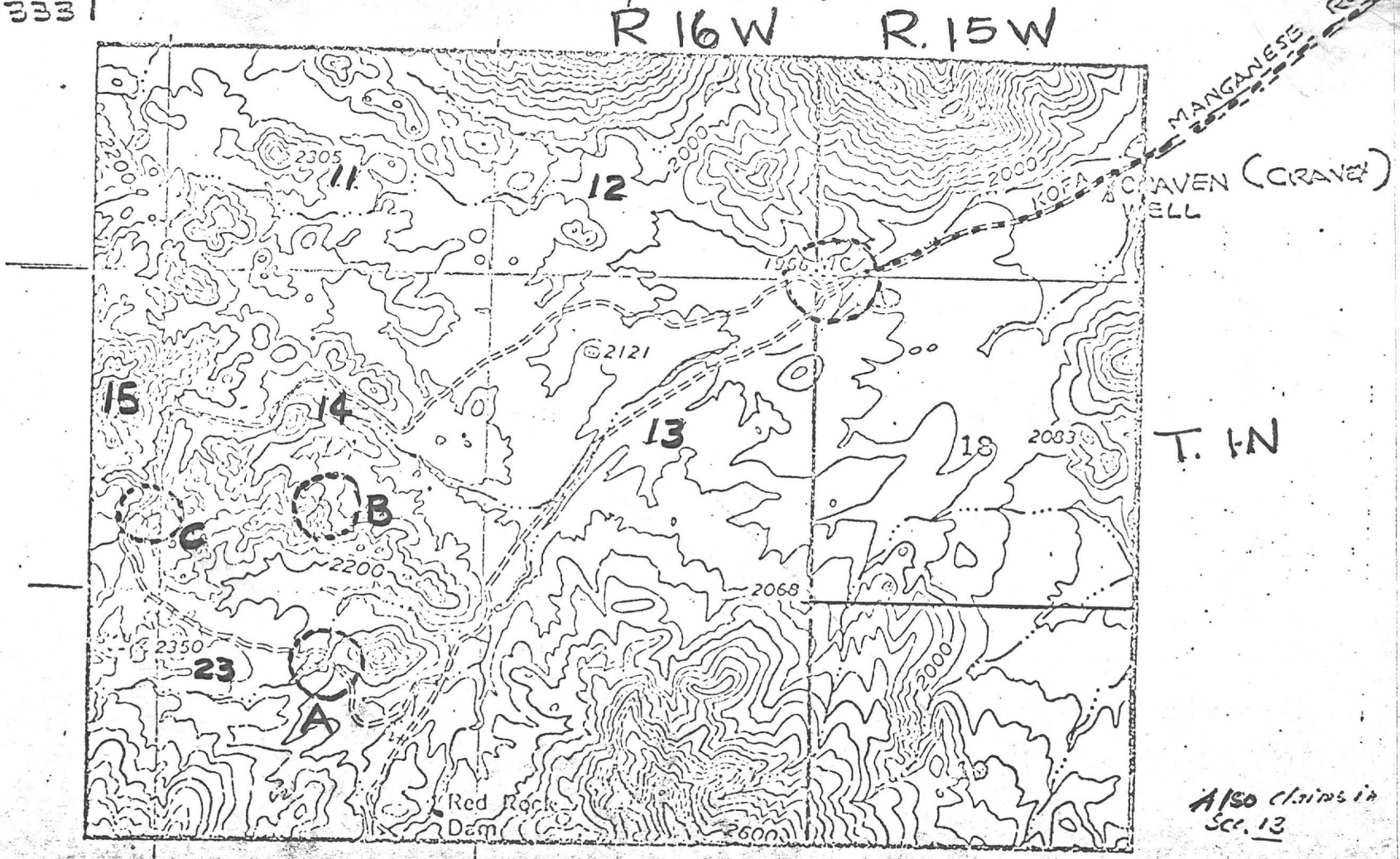
Willard C. Lacy
Geological Consultant

MALACHITE COPPER MINING CLAIMS:

MARY MCLEAN 1-10 INCL.
JIM CRAVEN 1-8 INCL
ALAMO MINING DIST.
YUMA COUNTY, ARIZ.

CONTACT:
PAUL E COOK
721 E. MITCHELL DR.
PHOENIX, AZ 85014.
602 274-3331

FROM U.S.G.S.
KOFA BUTTE ARIZONA
TOPOGRAPHICAL QUAD.
YUMA COUNTY.



Also claims in Sec. 13

A. SHAFT & CUTS ON MARY MCLEAN No 1 - SEC. 23
B. " " " JIM CRAVEN No 8 - SEC. 14
C. " " " MARY MCLEAN No 7 (?) - SEC. 14+15

MALACHITE MINING CLAIMS DATA

LOCATION: The Malachite groupe of mining claims are situated in Sections 13, 14, and 23, R-16-W, T-1-N, Alamo Mining District, Yuma County, Arizona. Reference U.S.G.S Kofa Butte Arizona Topographic Quadrangle map.

ACCESSIBILITY: This property is easily accessible by car. Routing from Salome, Arizona take U. S. 60 west eleven miles to Vicksburg Road then south fifteen miles to El Paso Gas pipeline road then west one and one-half miles to Manganese Road then southwesterly seven and one-half miles to the property. The mileage is twenty four miles from U. S. 60.

DEVELOPMENT: The above topographic quadrangle indicates the location of the shaft and the two open cuts on the property. Three carloads of ore were shipped in the late nineteen forties but road and copper prices were unfavorable at that time. The ore in these shipments were reported to run eight to fifteen percent copper per carlot basis. Subsequent down-the-hole hammer drilling to more than 200 feet by a Phoenix driller reports "good" grade copper throughout the depth however no drill log is available. Examination of cuttings from these drill holes shows presense of sulphide copper ores. Sampling done in March 1970 by an independent engineer through-out the open cut areas assayed an average six and seventyseven hundredths percent total copper with oxide value of five and eightynine hundredth percent copper.

The leaching characteristics of this ore are excellent with practically stoichimetric acid consumption values.

Paul E. Cook,
Chemical Consultant

721 E. Mitchell Dr., Phoenix, Arizona
602 274-3331