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VACANT



INFORMATION

G.A. - Guy Anderson
Patented Claims

H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims

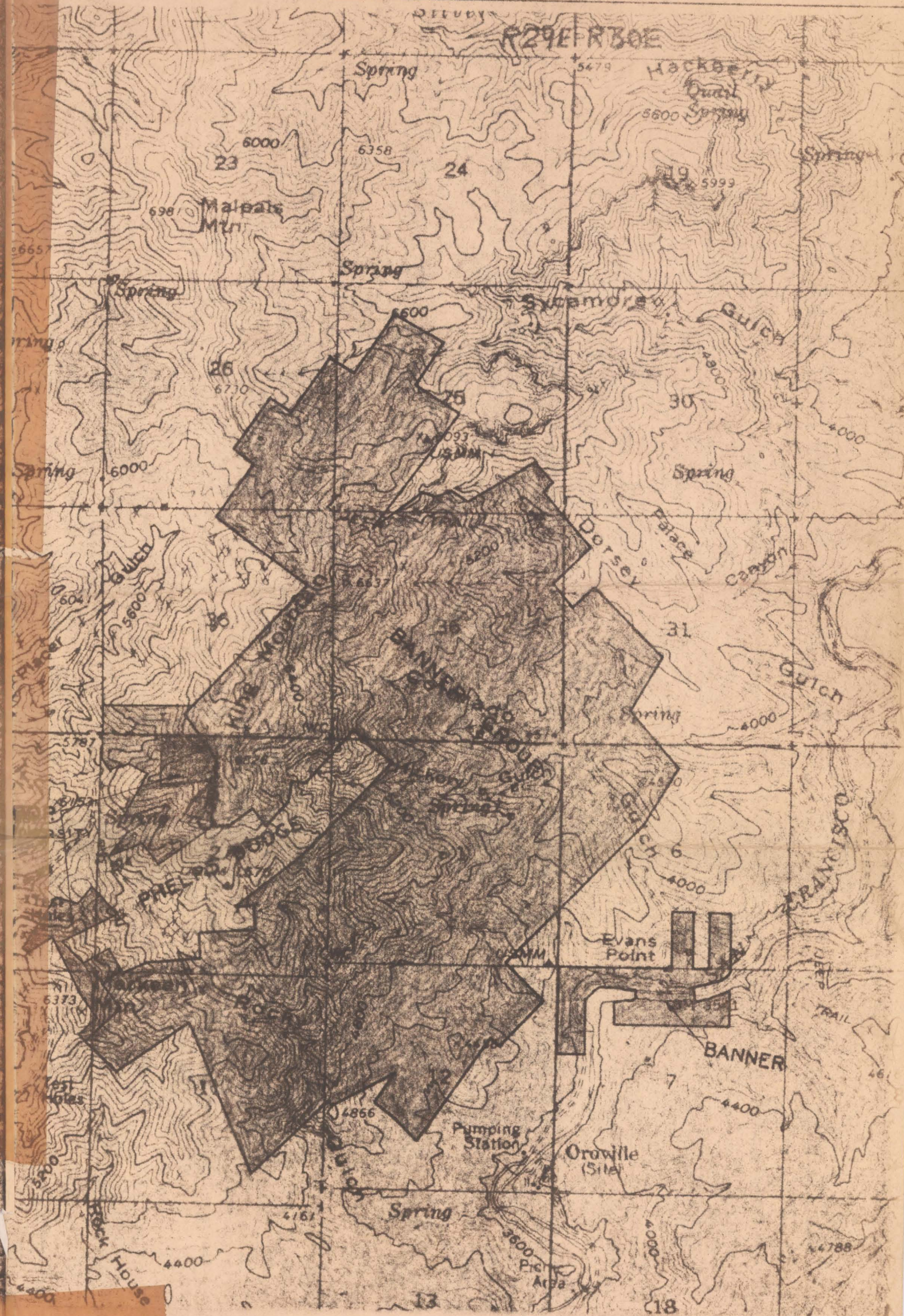
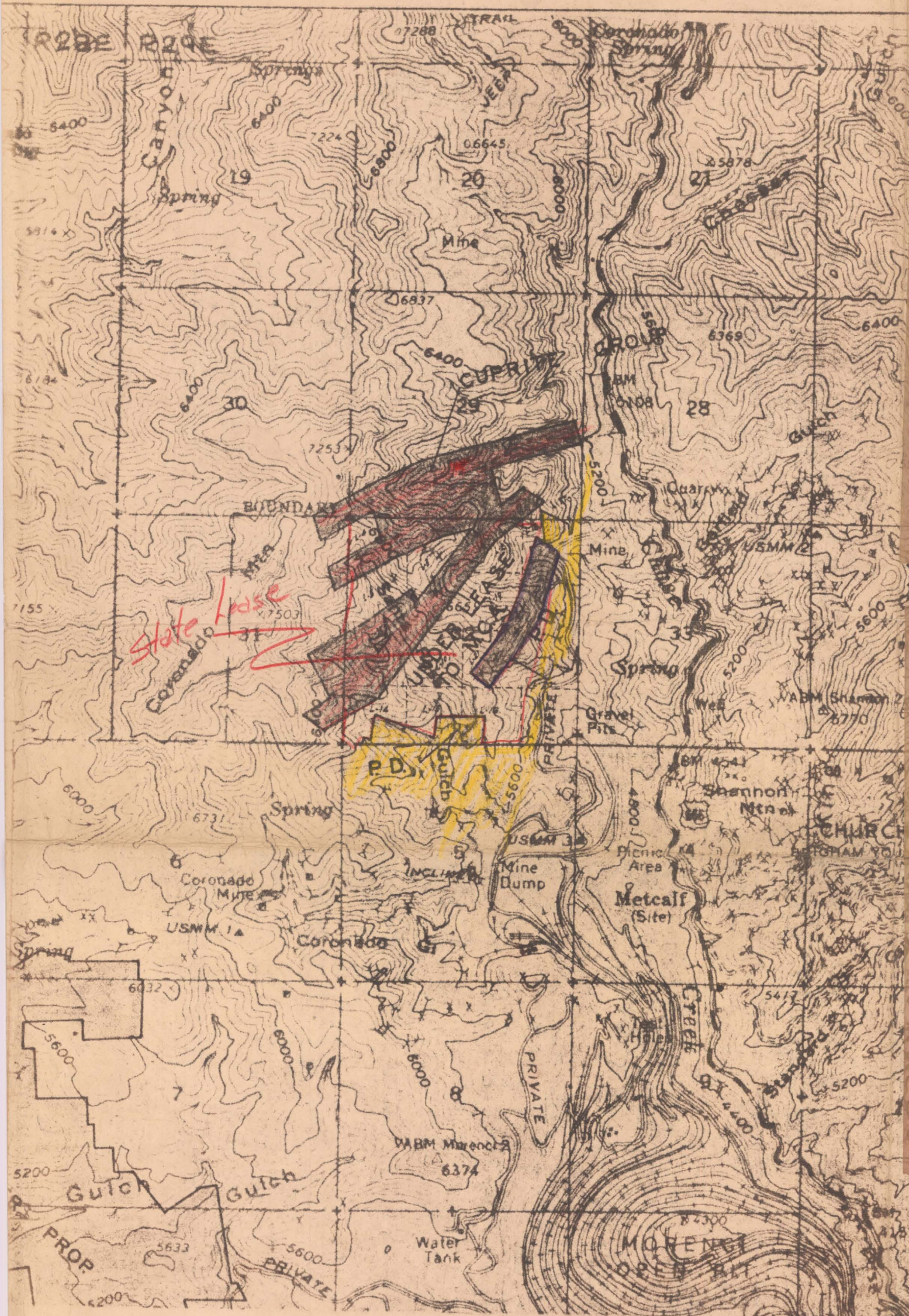
① - State Lots
Prospecting Permit to H.C.D.

P.P.? - May be State Owned

B. - Bienes & Claridge
? - Ownership in Question.
May have reverted to State

DATE: NOV. 23, 1970

Cuprite



8-31-72

Cuprite Project

Observations by E.G.H.
for
Assessment year 1971-1972

INST. ASKANIA TORSION

Claims Covered

Wanpurn #1 & Wanpurn #2

Base Station located at
mouth of canyon

NOTE

Subtract 18000 x from all readings
for arbitrary base.

WAMPUM - Cuprite 8-31-72

STA.	READING	V	Time	
0	87.22	18795	12:50	Base @ Bottom of WASH. 200' WEST OF NEW Rd.
↓	87.22	18795	1:05	
WEST	87.23	18798	1:20	IN Bottom of WASH
	AVG.	18796		
1+00 W	87.14	18779	1 30	0
2+00 W	87.18	18787	1 34	0
3+00 W	87.38	18830	1 40	0
4+00	87.30	18813	1 45	0
5+00	87.27	18807	1 50	+1 808
6+00	87.40	18835	1:55	+1 836
7+00	87.38	18830	2 00	+1 831
8+00	87.28	18809	2 07	+2 811
9+00	87.34	18828	2 13	+2 824
10+00	87.47	18850	2 16	+2 852
11+00	87.47	18850	2 19	+2 852
12+00	87.41	18837	2 25	+2 839
13+00	86.67	18677	2:40	+2 @ JUNCTION of Trail & WASH
14+00	86.64	18671	2:44	{ @ Large cliff & WATERFALL & JUNCTION of 2 MAJOR WASHES
15+00	87.11	18772	3:00	
16+00	87.98	18960	3:12	→ ON side of cliff face
				→ ON crest of cliff

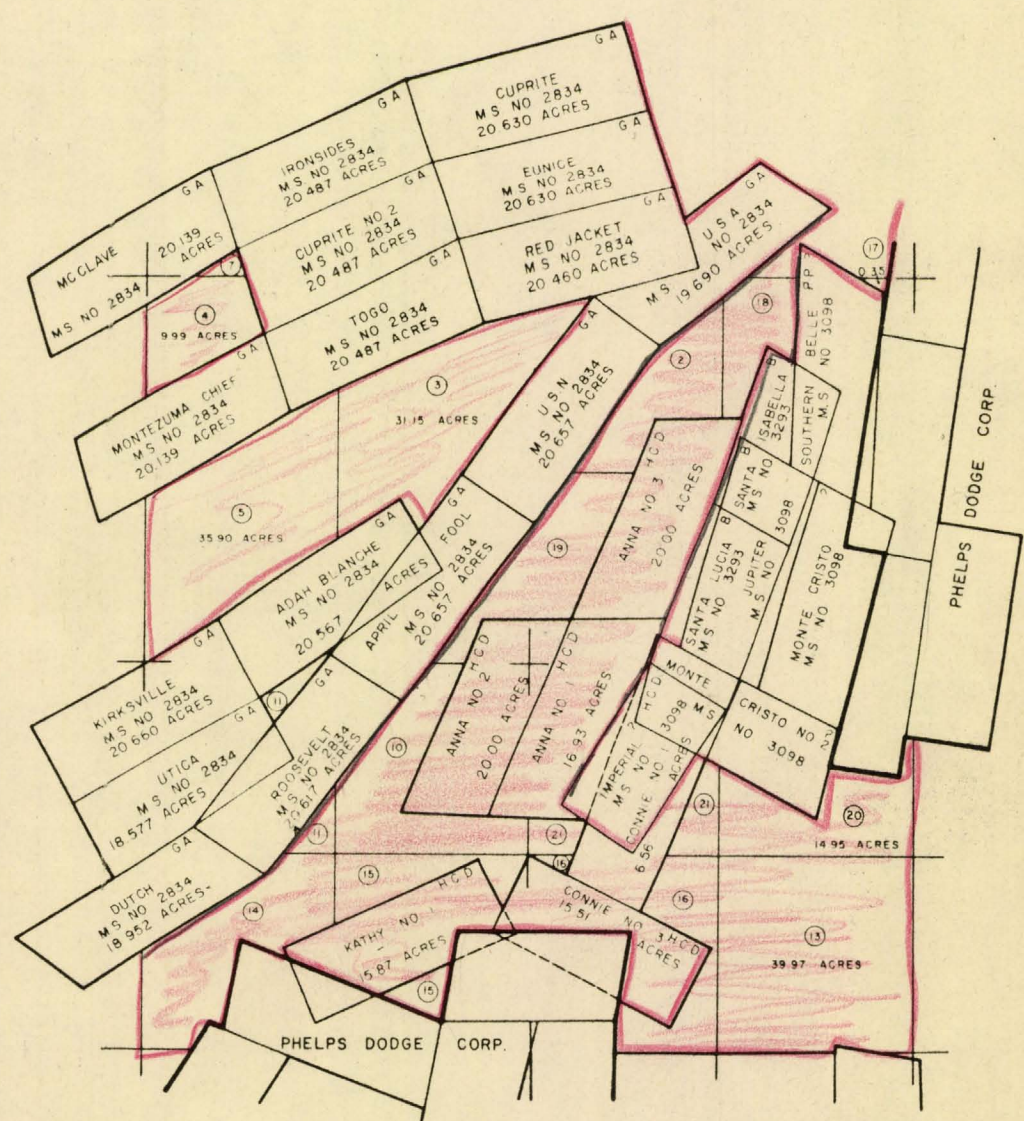
17+00	87.97	18958	3:21	IN WASH to South west near trail
18+00	87.44	18843	3:29	Junction WASH due So.
19+00				
20+00 W				
STATION Base O	87.45		3 50	
	87.20	18797	3 52	
	87.20		3.54	
		9-1-78		
Base O	87.31	18815	11:30	18796
1+00 W Repeat	87.22	18795		776
2+00 W Repeat	87.25	18802		783
1+00 E	87.33	18819		800
2+00 E	87.15	18781		762
3+50 E	<u>CULVERT ON RD.</u>			
Base	87.38	18817	11:40	817
Base	C			IN Center new Rd. Steel CULVERTS at mouth of canyon
MAIN Rd. intersects new rd N. from BM 0.25 miles				

+4 962

+4 847

SECTION 32 AND VICINITY
T 3S., R 29E.

*Indicates
area of
Proposed Assessment work
STATE LEASE*



- INFORMATION**
- G.A. - Guy Anderson Patented Claims
 - H.C.D. - H. Clyde Davis et al State Lease Claims & State Prospecting Claims
 - ① - State Lots
 - P.P. 2 - Prospecting Permit to H.C.D.
 - B. - May be State Owned
 - 2 - Blanes & Claridge
 - 7 - Ownership In Question, May have reverted to State

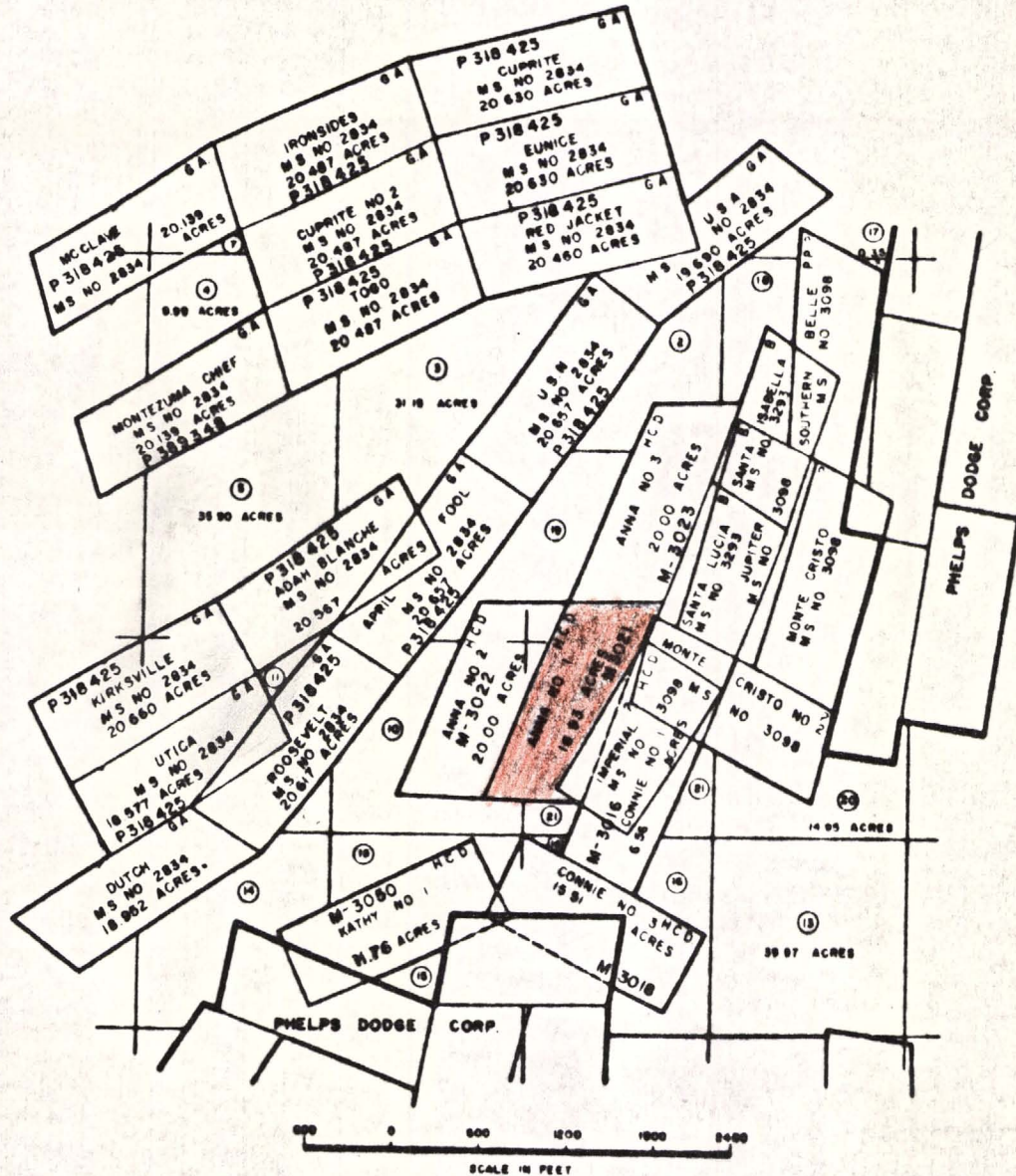
LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 23, 1970

ARIZONA STATE

SECTION 32 AND VICINITY
T. 35. N. R. 29E.

LEASE M-3021



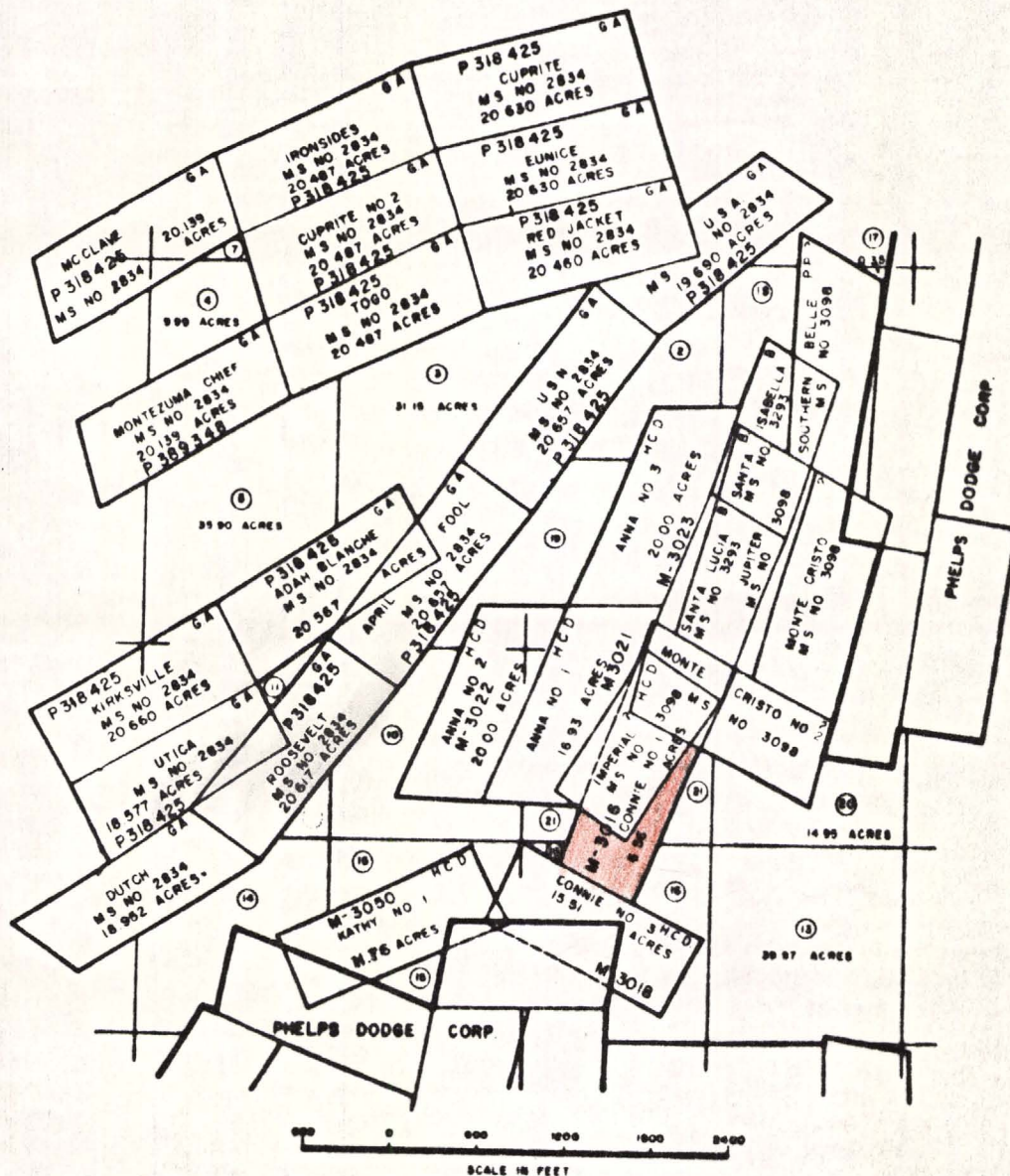
INFORMATION
G.A. - Guy Anderson
Patented Claims
H.C.D. - M. Clyde Davis et al
State Lease Claims &
State Prospecting Claims
① - State Lease
Prospecting Permit to H.C.D.

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 23, 1970

SECTION 32 AND VICINITY
T. 3S., R. 29E.

LEASE M-3016



INFORMATION

INFORMATION

G.A. - Guy Anderson
Patented Claims

H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims

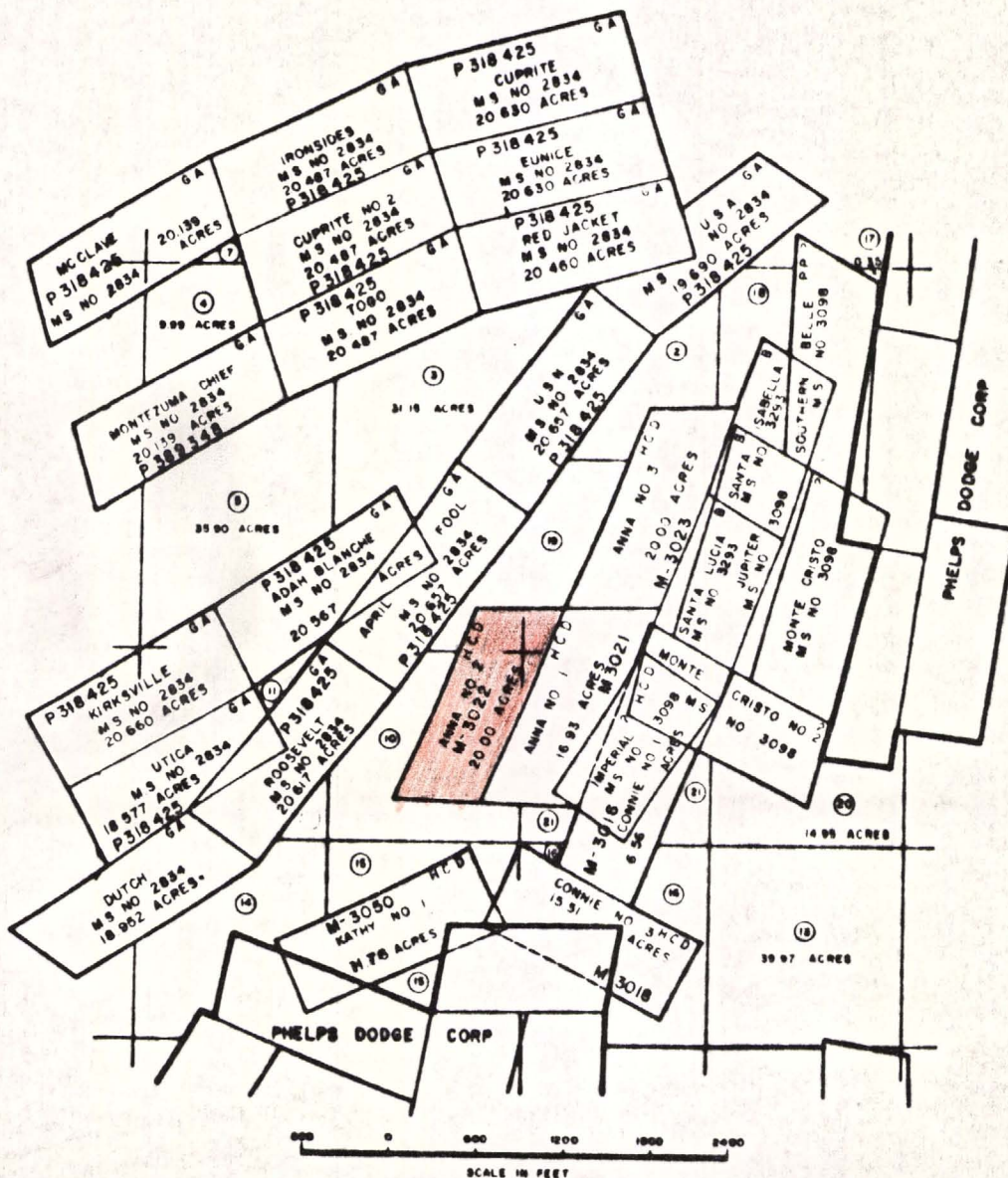
① - State Lots
Prospecting Permit to H.C.D.

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 23, 1970

SECTION 32 AND VICINITY
T. 38, R. 29E.

LEASE M-3022



INFORMATION

INFORMATION

G.A. - Guy Anderson
Patented Claims

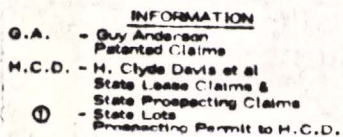
H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims

① - State Lots
Prospecting Permit to H.C.D.

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

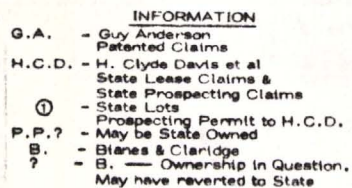
DATE: NOV. 23, 1970

ARIZONA STATE
LEASE M-3023



DATE: NOV. 23, 1970

SECTION 32 AND VICINITY
T. 3 S., R. 29 E.



DATE: NOV. 23, 1970

RECONNAISSANCE GEOPHYSICAL
and
GEOCHEMICAL SURVEY

Cuprite Prospect
Greenlee County, Arizona

for
ESSEX INTERNATIONAL, INC.

October - November 1971

by
Heinrichs GEOEXploration Company
P. O. Box 5964, Tucson, Arizona 85703

GEOEX Job # 667

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Appendix

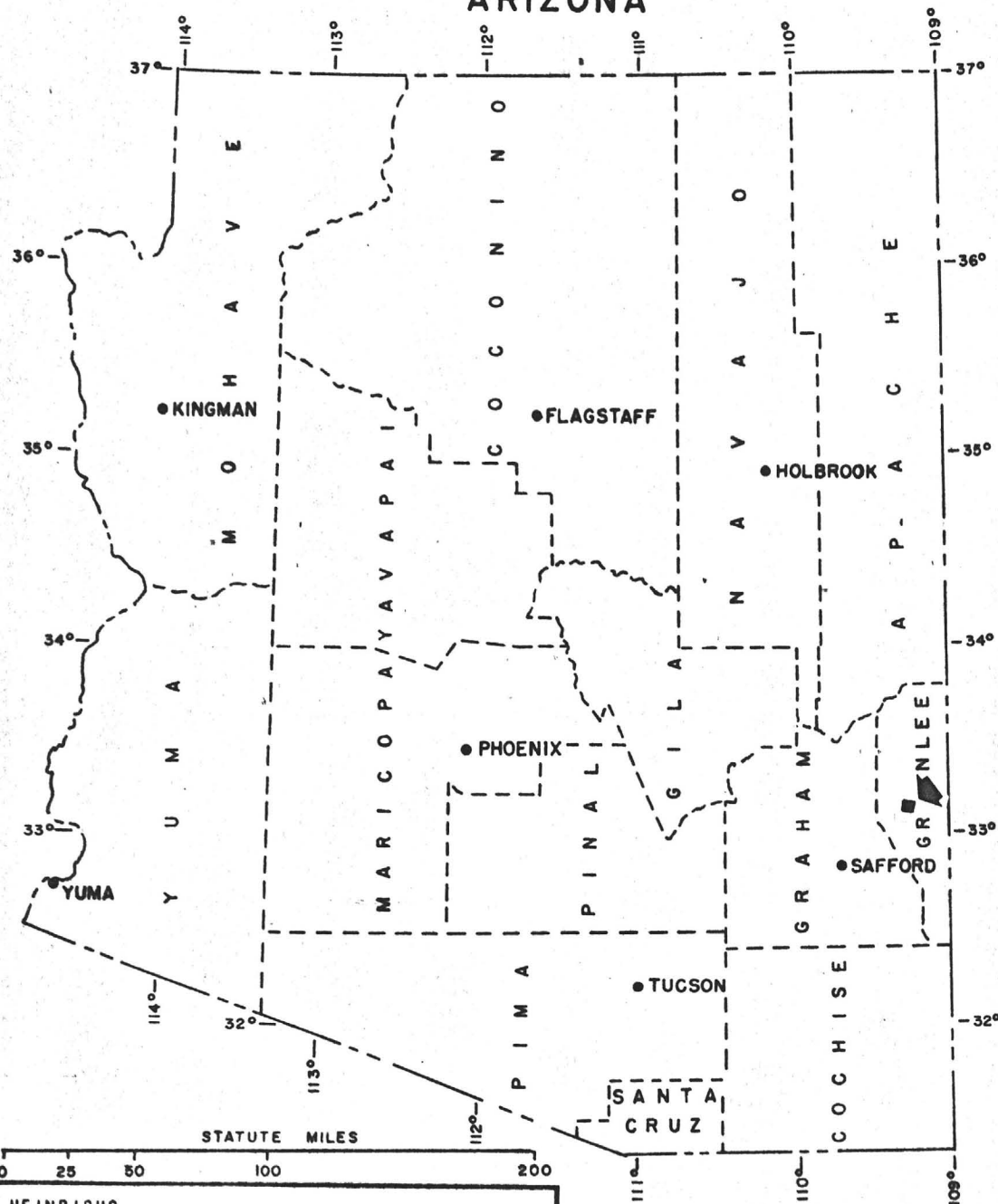
EFGO Laboratory Reports # 712511 and # 712614

In Map Tube:

1. Topographic base map, 1" = 500'
2. Geochemical Sample Location Map, Overlay, 1" = 500'
3. Vertical Intensity Magnetic Map, " " "
4. Gradient Array Location Plan and Apparent Resistivity Contour Map, Overlay, 1" = 500'
5. Gradient Array Location and Percent Frequency Effect Interpretation Plan. Overlay 1" = 500'

GENERAL LOCATION
of
CUPRITE PROSPECT
for
ESSEX INTERNATIONAL, INC.

ARIZONA



**HEINRICHS
GEOEXPLORATION COMPANY**

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(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793

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**GEOPHYSICAL
ENGINEERS**

INTRODUCTION

At the request of Mr. E. G. Heinrichs and on behalf of Essex International Inc., Heinrichs GEOEXploration Company performed a general geophysical and geochemical reconnaissance program in Section 32, T. 3 S., R. 29 E., near Morenci, Arizona. Specifically, the line locations of all work are shown on the accompanying maps and were placed to best examine the Essex holdings as indicated to GEOEX on a map supplied by Mr. E. G. Heinrichs titled "Land Status, Cuprite Prospect, Greenlee County, Arizona, Essex International Inc. November 23, 1970 of Section 32, T. 3 S., R. 29 E." The field work was completed during the period from October 12, 1971 to November 19, 1971.

We wish to thank Mr. Heinrichs of Essex and Mr. Kinneberg of Phelps Dodge Corp. for expediting entry to the Cuprite Prospect Area through Phelps Dodge property.

The GEOEX personnel in charge of this work were Paul Head, Project Geophysicist and William Freeman, Geophysicist - Crew Chief who were assisted by various helpers. Compilation of data and report were done by Paul Head assisted by the GEOEX staff.

PROCEDURES

Four basic procedures were used on this project; induced polarization, resistivity, magnetics and geochemistry. Placement of the survey on the ground was governed primarily by ease of accessibility across the rugged terrain comprising the Essex property and was not intended to be an ideal grid of lines. The basic intent here was to provide a broad reconnaissance of the section and to help determine which method provides the best information about any possible mineralization.

The multi-frequency induced polarization system using a gradient array electrode configuration and a heavy duty Mark 4 sender coupled with a Mark 4C receiver was used to obtain four lines of data totaling 16,300 feet of surface coverage. Standard frequencies of 3.0 Hz and 0.3 Hz were used and the amount of electromagnetic coupling effects checked with 1.0 and 0.1 Hz. The gradient array technique utilized two grounded current electrodes placed far enough on either side of the area to be processed so that the area is in an approximately uniform electric field. This field is preferably oriented normal to the expected target strike, if known, and measurements are taken along lines normal to strike. In this case, the grounded current electrodes were placed about 5,200 feet north and 5,200 feet south of the center of the gridded area, as shown on the "Induced Polarization Location Map". The connecting current wire was laid out along the road as shown on the "Gradient Array Location Plan". Rugged topography would have made it very expensive to locate the north electrode so as to center the area processed. This resulted in a skewed array set-up which is suitable only for reconnaissance purposes. Since the topography is very rugged, any routinely obtained resistivity data will be seriously compromised, so errors contributed by a skewed array were not considered immediately important and no skew angle correction was applied to the data. Since percent frequency effects are dimensionless quantities, topographic and geometric errors do not seriously affect I. P. data, providing the location of the receiving dipole relative to the sending dipole (and connecting wire) is known.

Also, the voltage measurement dipole is made short enough relative to the current dipole length, in this case 100 feet, so that it will approximate (when divided by that distance) the gradient of the voltage in the normal-to-strike direction. This potential dipole was moved along the traverses in 100 foot increments.

One important item to note in gradient work is that the depth of penetration is determined by the current dipole length and not the voltage measuring dipole length. For a given grid, depth manifests itself by broadness of anomaly shape just as in a magnetic, gravity or SP survey and the resulting I. P. data is interpreted and presented in a very similar fashion to these other geophysical techniques. Changing the voltage measuring lengths (station spacings) only effects the detail of the resultant data and not the depth response.

The plan data is plotted at the midpoint between the two voltage measuring points. All I. P. data has been corrected for electromagnetic coupling errors by electronic computer techniques and results plotted and contoured on an overlay to an enlargement of the Clifton, Arizona topographic quadrangle map, scale 1"=500'.

There were 65 geochemical samples collected from the Cuprite Prospect. These samples were for the most part, rock chips obtained after cutting a fresh surface on outcrop. Since the samples were taken at the same time the magnetic data was obtained, at every fifth station, it was occasionally necessary to take residual soil samples when no outcrop was near the traverse. These soil samples were taken after carefully digging several inches down to avoid surface contamination. All samples collected were analyzed for copper and molybdenum using standard geochemical techniques (atomic absorption spectroscopy for copper and a colorimetric organic extraction for molybdenum). The laboratory results are a part of this report and appear in Appendix "A". These samples were taken at the positions shown on an overlay, scale 1" = 500', titled "Geochemical Sample Location Map".

A McPhar M700 fluxgate vertical magnetometer was used to obtain most of the magnetic data presented in this report. The exception is the westerly extension of Line 5 where an Askania G2 torsion fiber vertical intensity magnetometer was used. A total of 260 stations, at 100 foot intervals on five lines were obtained. All data was corrected to a common base station and the results plotted on an overlay at a scale of 1" = 500' titled "Vertical Intensity Magnetic Map".

CONCLUSIONS AND RECOMMENDATIONS

Of the four exploration methods used, geochemical copper analysis and induced polarization seem to give the best results. Whether this correlation has any economic significance is not determined. The field crews report observing fairly abundant fresh pyrite in the general area of the I. P. anomaly "I" so at least part of the I. P. anomalism can be explained by visible mineralization, and the presence of copper in the area is proven by geochemical means.

The quantity of data now on hand is insufficient to select drilling targets but there is adequate reason to believe that targets can be developed by detailing the present coverage.

Prior to recommending any specific additional geophysical work, about 38 additional geochemical rock chip samples should be obtained, beginning at the southeast corner of Section 32 and traversing northwest about 3,800 feet to meet the starting point of Line 4. This will check the validity of a significant geochemical copper anomaly running diagonally across Section 32 and confirm the possibility of a large zone of mineralization worth pursuing.

Assuming that the copper trend still persists, we recommend that an I. P., geochemical and magnetic program be set up to detail zone "I" and "II" and also the vicinity of magnetic anomaly "A". Additional reconnaissance I. P. is needed over the east half of Section 32.

INTERPRETATION

Correlation of data between such widely spaced lines is uncertain at best and in rugged topography such as at the Cuprite Prospect, interpretation of line-to-line continuity is particularly risky. Use of several corroborating techniques on the reconnaissance work has added some confidence to the interpretation.

The Dirk Den Baars geology map of Section 32 shows that Precambrian granite is the predominate rock type present. This granite is typified by highly variable station to station magnetic effects which cannot be properly contoured between lines. There were no very strong magnetic effects which could be related to magnetite deposition of any significance. Although, the anomaly ("A") at the south end of Line 4 may be caused by a fairly sizeable magnetic zone, possibly associated with a tongue of Laramide quartz monzonite (Den Baars)., plus a probable extension of anomalous frequency effects from Line 3 and anomalous copper values from the geochemical work. The only other magnetic feature of note is a magnetic intensity level change "B" extending across the south ends of Lines 1, 2 and 3 which might also relate to the monzonite intrusion.

Four zones of weak anomalous frequency effects are outlined on the "Percent Frequency Effect Location and Interpretation Map". These have been designated "I", "II", "III" and "IV". Zone "I" is open to the southeast, southwest and northeast, and correlates quite well with the magnetic intensity level change "B". Zone "II" seem to converge on Zone "I" to the east and may be part of the same feature and is open to the southwest. Zone "III" is somewhat weaker than either "I" or "II" but is larger and more persistent. It very likely continues through to Line 4 where it would correlate with magnetic anomaly "A". Zone "IV" is a weak anomaly, open to the southwest and merging with Zone "III" near Line 3. It has no obvious correlation with any other feature. The I. P. data on hand is not sufficient to make a good appraisal of size and depth of the polarizing bodies causing the observed anomalies. The general impression is that they are tabular bodies coming within 200 feet of the surface and possibly outcropping.

The apparent resistivity data obtained in conjunction with the I. P. seems consistent with the over all "grain" of the other types of data obtained. This is probably not completely true as the contours are strongly influenced by the line spacing and there are no gross background or level changes which can be used as a guide to the grain of the geology.

Since the resistivity data is compromised by topography and the skewed array, no Metallic Conduction Factors were computed for this project. It was felt that they would be more misleading than helpful.

Self potential data were also obtained along with the I. P. data and have not been presented in this report. It is uniformly non-anomalous, showing station to station variations of no more than 30 millivolts. This indicates no actively oxidizing massive sulfide bodies near the I. P. traverses completed.

A somewhat schematic alignment, "C", of old prospect pits and workings is shown on the topographic map which rather closely agrees with a line approximating the 300 ppm copper cut-off. Southeast of this alignment, copper values seem to be consistently high, to the northwest they approach a background level of 20 to 50 ppm. Using 15 ppm as the anomalous threshold for molybdenum, we find no useable correlation to any other part of this project. Only two of the 65 samples exceeded 15 ppm.

Respectfully submitted,
Heinrichs GEOEXploration Company

Paul A. Head
Paul A. Head
Geophysicist

C. S. Ludwig
C. S. Ludwig
Senior Geophysicist

December 3, 1971
P. O. Box 5964
Tucson, Az. 85703



EFCO LABORATORIES

North Freeway at Ruthrauf Road P. O. Box 5526
TUCSON, ARIZONA 85703
PHONE (602) 887-4241

Laboratory Analysis Report

Heinrichs Geoexploration Company
808 W. Grant Rd.
Tucson, Arizona 85705

C. Ludwig
Charge No. 667 & 702

REPORT NO. 712511

DATE SUBMITTED 10-25-71

DATE REPORTED 10-27-71

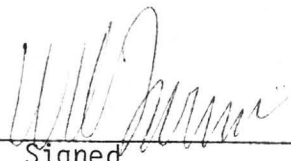
Sample No.	PPM Copper	PPM Molybdenum	
2951	89	43	LINE 1 STATION 0
2952	54	4	
2953	75	3	
2954	58	4	
2955	66	4	
2956	24	9	
2957	52	3	
2958	44	3	
2959	20	11	
2960	104	6	
2961	29	4	
2962	39	6	
2963	36	1	
2964	356	7	LINE 2 STATION 0
2965	102	1	
2966	90	11	
2967	68	1	

Sample No.	PPM Copper	PPM Molybdenum	
2968	37	1	
2969	48	10	
2970	50	1	
2971	+1000	13	LINE 3 STATION -1
2972	+1000	9	
2973	92	1	
2974	119	< 1	
2975	98	6	LINE 5 STATION 0
2976	68	< 1	
2977	148	< 1	
2978	348	7	
2979	122	3	
2980	175	14	
2981	656	1	
2982	458	< 1	
2983	+1000	13	
2984	+1000	< 1	
2985	176	7	
2986	147	14	LINE 3 STATION 20 N
2987	145	14	
2988	36	6	
2989	59	3	

Sample No.	PPM Copper	PPM Molybdenum	
2990	26	7	
2991	39	9	
2992	38	3	
2993	46	3	
2994	46	3	
2995	32	6	LINE 4 STATION 27 N
2996	29	6	
2997	31	9	
2998	30	11	
2999	276	9	
3000	119	6	LINE 4 STATION 0

GEOCHEMICAL ASSAY

	% Copper
2971	0.96
2972	0.25
2983	1.09
2984	0.40


Signed



EFCO LABORATORIES

North Freeway at Ruthrauf Road P. O. Box 5526
TUCSON, ARIZONA 85703
PHONE (602) 887-4241

Laboratory Analysis Report

Heinrichs Geoexploration Company
808 W. Grant Rd.
Tucson, Arizona 85705

C. Ludwig
Charge No. 002931

REPORT NO. 712614

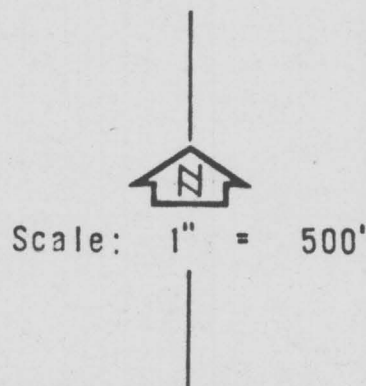
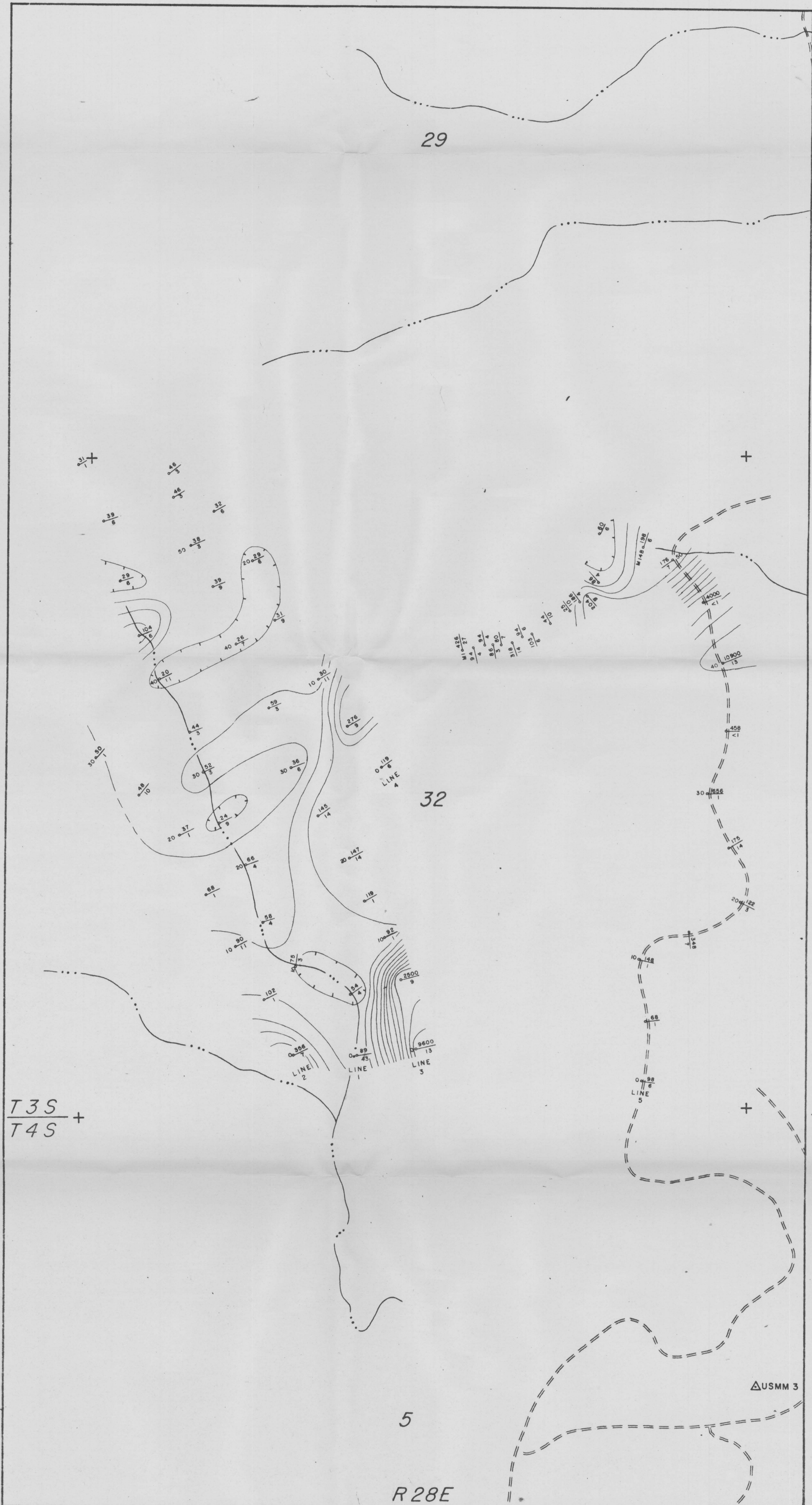
DATE SUBMITTED 11-19-71

DATE REPORTED 11-23-71

Sample No.	PPM Copper	PPM Molybdenum
M-1	426	27
M-2	94	4
M-3	94	6
M-4	86	3
M-5	80	7
M-6	318	14
M-7	94	6
M-8	103	6
M-9	44	10
M-10	75	10
M-11	186	4
M-12	204	9
M-13	86	11
M-14-A	60	6
M-14-B	198	6

LINE 5 WEST

Nancy A. Highswonger
Signed

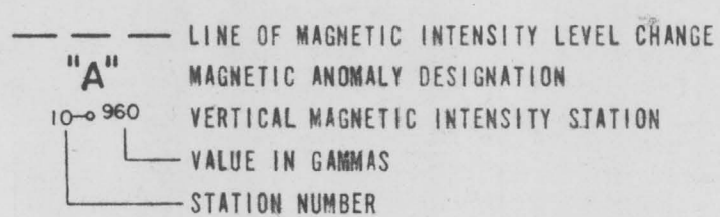
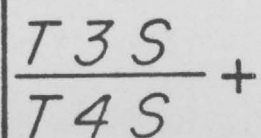


COPPER IN PARTS PER MILLION
 SAMPLE STATION LOCATION
 MOLYBDENUM IN PARTS PER MILLION

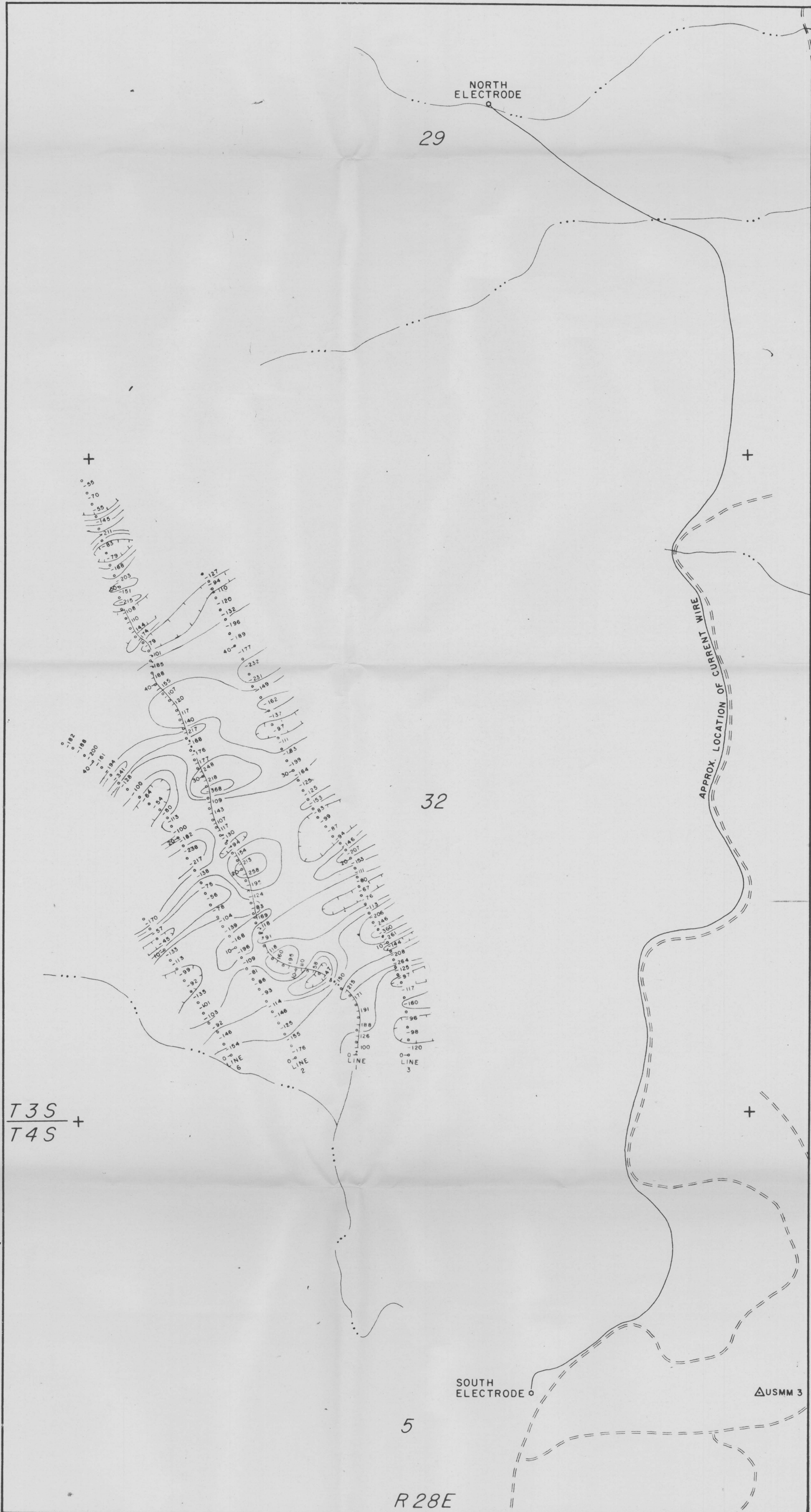
NOTE: SEE REPORT APPENDIX "A" FOR SAMPLE NUMBER AND LOCATION KEY.

GEOCHEMICAL SAMPLE LOCATION MAP
 of
 CUPRITE PROSPECT
 GREENLEE COUNTY, ARIZONA
 for
 ESSEX INTERNATIONAL INC.
 by
 HEINRICHS GEOEXPLORATION COMPANY,
 Job number 667-71 November 1971

29



VERTICAL INTENSITY MAGNETIC MAP
of
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
for
ESSEX INTERNATIONAL INC.
by
HEINRICHS GEOEXPLORATION COMPANY
Job number 667-71 November 1971



GRADIENT ARRAY LOCATION PLAN
& APPARENT RESISTIVITY CONTOUR MAP
of
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
for
ESSEX INTERNATIONAL INC.
by
HEINRICHS GEOEXPLORATION COMPANY
Job number 667-71 November 1971

DEN-BAARS & ASSOCIATES
MINERAL EXPLORATION AND RESEARCH CONSULTANTS

DRS. DIRK DEN-BAARS
CONSULTING GEOLOGIST
ARIZONA REG. 4032

6318 EAST HAYNE STREET
TUCSON, ARIZONA 85710
[602] 298-3551

Report on the Examination of the Cuprite Group of
Patented and Unpatented Lode Claims Located in
Section 29 and 32, T 3 S, R 29 E, Greenlee County, Arizona

Introduction

During the last week of April 1971, the writer examined the mineralization and mapped the geology of the group of patented and unpatented claims known as the Cuprite Group, which also includes the parcels of state mineral land as shown on the attached property and land status map.

Location

The claims are located mostly in the S-1/2 of Section 29 and in Section 32, T 3 S, R 29 E, while fractions of 5 claims are protruding into Section 31 and a fraction of the McClave claim is located in Section 30 of the same township and range, all in Greenlee County, Arizona.

The claims are located 2-1/2 to three miles N 20° W in a straight line of the Morenci open pit, and can be reached by road from the town of Morenci following Route 666 in a northwesterly direction following Chase Creek for about 8 miles to where a new dirtroad turns off to the left. This road connects to an old limestone quarry where it passes through the Southern Belle claim. This dirtroad will eventually be improved and paved by the Phelps Dodge Company, and will serve to detour Route 666 around the Metcalf and Morenci pit areas.

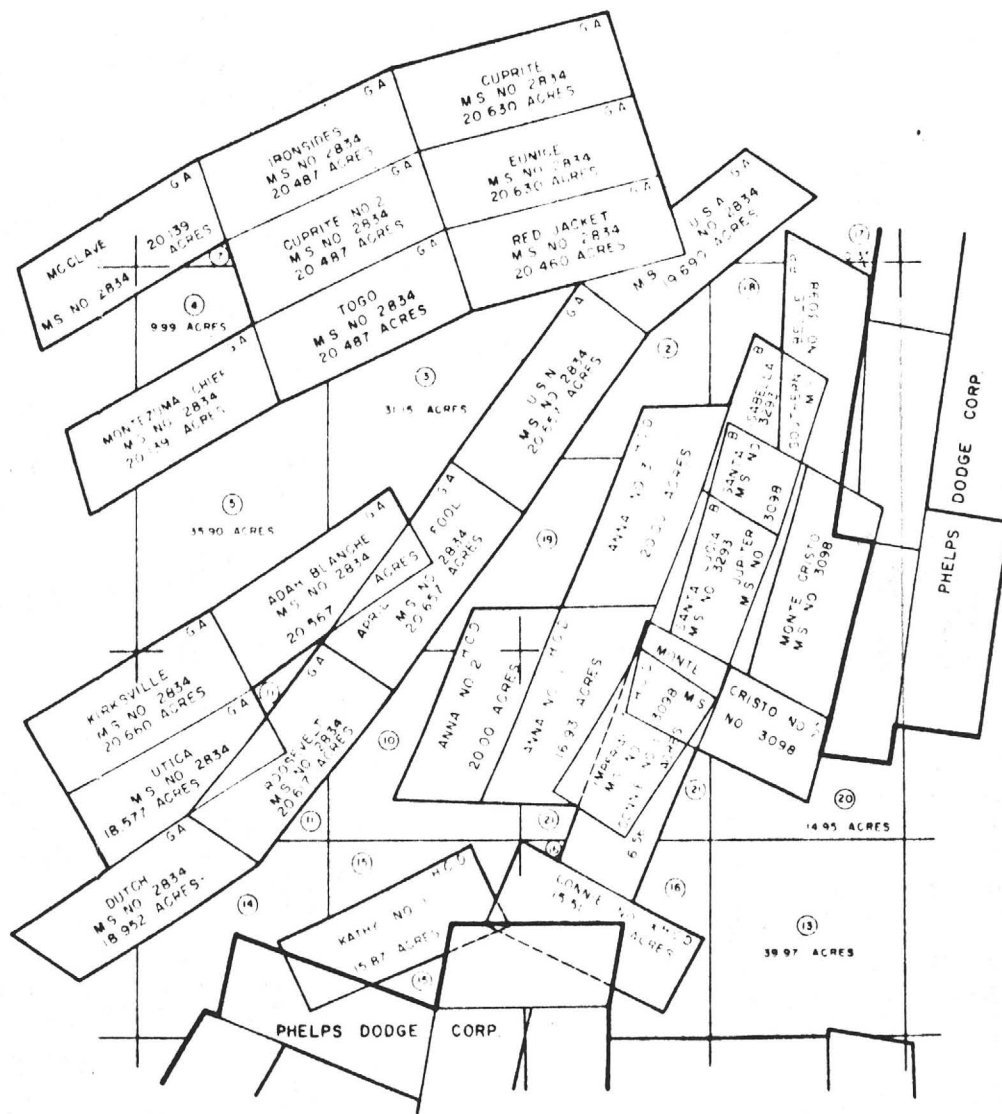
Reference is made to the geologic map, sections and USGS publication P.P. #43 by Waldemar Lindgren which were extensively used during the fieldwork. As basemap for the geological mapping was used, an enlargement to a scale of approximately 1" = 1000 ft. of a portion of USGS topographic map of the Clifton, Arizona quadrangle map 1962. Also, six aerial photographs of the area were used for stereoscopic observation of structural and geologic features.

General Observations

As can be seen on the geological map, the area under examination is largely made up of Pre-Cambrian granite. To the north and northwest, the granite is overlain by Coronado Quartzite, a coarse to fine-grained banded quartzitic-sandstone which varies in color from light gray to dark brown. These quartzites were briefly examined for possible copper

SECTION 32 AND VICINITY

T. 3S, R. 29E



600 0 600 1200 1800 2400
SCALE IN FEET

- THE DODGE CORP.
G.A. - Guy Anderson
Patented Claims
H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims
State Land
① - Prospecting Permit to H.C.D.
P.P.? - May be State Owned
H. - Haines & Heritage
? - Ownership in Question,
May have reverted to State

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 23, 1970

mineralization, but none was observed. A faulted block of Ordovician, Devonian and Mississippian limestones overlays the Coronado quartzite to the north and east. Post pre-Cambrian igneous rocks are few and of minor significance in the northern part of the area.

A diabase dike striking northerly was exposed in the new road cut along the sectionline 28/29, dipping steeply east. Several narrow lenses of monzonite porphyry and granite porphyry were mapped in the Cuprite claim area, striking north to northwest as indicated on the map. Sheeting or jointing in the Pre-Cambrian granite is predominantly N 45-50° E in the S-1/2 of Section 29. The Pre-Cambrian granite is mostly brown and reddish brown in color, and coarse grained with feldspars of up to 8 mm not uncommon. The red color is due to the iron oxide content, while several joint fillings were observed of hematite and manganese oxides. In other outcrops, the Pre-Cambrian granite is gray to light green in color and apparently lacking the iron oxide impregnation which may be of secondary nature. The iron content of the Pre-Cambrian granite is obviously not derived from the oxidation and alteration of sulphides, since no typical gossan type sulphide "box works" can be observed anywhere in the Pre-Cambrian granite in the area mapped, except where sulphides were introduced associated with the Laramide intrusive porphyrys which occur further south and southeast in Section 32.

East of Coronado Mountain at Chase Creek the Coronado quartzite is conformably overlain by the Ordovician Longfellow limestone, which is a sandy and marly limestone of gray to brown color, above which are outcropping the Morenci shales and shaley limestones. The upper section on which the old limestone quarry is located is Modoc limestone of lower Carboniferous age. Here, the upper Modoc limestone has been mined for smelter flux and for the fabrication of metallurgical lime at the Phelps-Dodge Corporation lime plant.

About 1000 feet south of the quarry along the west bank of the road a diamond drillhole marked #9 was found. This drillhole appears to have explored the mineralization on the contact of the sedimentary rocks with the monzonite porphyry below.

Quartz Veins

The hill to the west and southwest of this drillhole shows numerous diggings, cuts, shafts and tunnels, most of which show copper mineralization in quartz veins of up to five feet wide. The quartz veins and the sulphide mineralization associated with them are formed in the Pre-Cambrian granite along or in contacts with the Laramide porphyry intrusions which have a N 30 to 40° E strike. The quartz veins are mostly well defined and carry most of the sulphides which consist of pyrite with some chalcopyrite, however, there seems to be an increase of sulphides disseminated in the wallrock on both sides of the veins going from NW to SE with intense "quartz flooding" and sulphide mineralization increasing in a southeasterly direction. There seems to be a definite northeasterly trend in the mineralization observed, which corresponds to the direction of the Laramide porphyry intrusions.

A number of northwest trending quartz veins also occur which seem to be conjugated with the northeasterly trending veins.

The quartz veins in the NW 1/4 of Section 32 also carry sulphide minerals but the wallrock is not impregnated with sulphides as the ones to the southeast. Rather narrow quartz veinlets appear to have formed in joints and fractures of the granite. Granite porphyry or monzonite porphyry dikes are not as strong and continuous as in the SE 1/4 of Section 32, instead they appear as elongated lenses of north to northwesterly strike and up to 20 or 30 feet wide and three to five hundred feet in length.

Copper content of the veins is generally low, except where oxide enrichment has formed pockets of ore which could run up to 5% Cu. Most of the diggings are shallow and confined to the extent of the oxide or mixed oxide-sulphide ores. These ores consist of malachite and chrysocolla, with possibly cuprite and limonite and hematite and with or without pyrite and chalcopyrite or remnants of these sulphides in partially oxidized form. Some chalcocite was also observed in some of the prospect diggings on the E 1/2 of Section 32, but the occurrences are of minor significance.

Cuprite Mine

The northernmost copper occurrence examined was on the Cuprite claim located in the south 1/2 of Section 29. The quartz vein in Precambrian granite strikes N 40 to 50° E and appears to be a fissure vein, three to four feet wide intruded by narrow stringers of granite porphyry (see photograph) or granitic aplite up to 4" in width. The northeast side of the vein is not exposed and partially buried under waste dump material from the shaft and adit. The total length of the vein is estimated at around 400 feet.

On the southwest side, the outcrop of the vein is strongly oxidized and fractured, (see photographs) with well defined walls and slickensides on the footwall. The outcrop here was opened up by surface cuts showing some low grade copper oxide ore heavy with iron and manganese oxides. Box works of mostly pyrite and some chalcopyrite were observed in the upper portion of the vein and along the vein walls but no apparent dissemination of sulphides in the altered wallrock except for strings of narrow limonite seams of about 1/8 of an inch mostly parallel to the footwall of the vein. Copper oxide minerals were mostly malachite, some chrysocolla and possibly cuprite and tenorite. No secondary chalcocite was found but could possibly occur underground. No attempt was made to sample the vein underground. Several narrow quartz veins were found north of the Cuprite vein about 4" wide and up to 10 feet long with no apparent sulphide content or iron staining. (See photograph). The closest area of interesting copper mineralization is somewhat over a mile southeast of the Cuprite prospect at Garfield. Old mines and prospects in this area have been described in some detail by Waldemar Lindgren, P.P. #43, pages 350 to 354, incl. Most of the prospects are along contacts of granite porphyry with the quartzitic and limy sedimentary rocks.

Conclusions

1. The intensity of copper mineralization as observed in Sections 29 and 32 and surroundings decreases from southeast to northwest.
2. The Laramide intrusive porphyrys likewise decrease in occurrence and size or volume from southeast to northwest.
3. Major masses of intrusive porphyry and favorable hostrocks are mostly located from the Morenci pit north to Metcalf and Garfield and northeast toward Copper King mountain and further northeast to where they disappear under tertiary volcanic rocks.
4. None of the veins and copper occurrences in Sections 32 or 29 could be profitably mined because of narrow width and small volume, except maybe for a few high grade pockets of ore that may exist.
5. Possibilities of finding a large low grade, chalcocite enriched orebody below the surface of Sections 29 and 32 are extremely remote.
6. The only claims worth any nuisance value are those located in a triangle formed by the southeast half of Section 32 (a line drawn N 45° E through Section 32).
7. There seems to be a discrepancy in claims. The Phelps-Dodge map which was shown to me showed 2 more claims east of the Cuprite claim, named the Wampum and Wampum #1. The Anna No. 1, 2, and 3, the Kathy #1, the Connie #1 and 3 and others were not shown on their map.
8. Structurally the area has been subjected to faulting in three main directions. Northeasterly trending faults, north to northwesterly trending faults and east-west faulting. This faulting took place in post Laramide-intrusive times, while movements were generally down towards the southeast (see overlay transparency).
9. Eight of the rock specimens taken were studied in thin section to see if any differences in alteration could be observed. The results of this study were negative. All eight specimens showed similar alterations of the sericite-chlorite type. Alteration intensity is about equal in the area mapped, except for possibly more quartz introduction towards the south (3A and 4).
10. A general discussion on the geology of the area with Mr. Jack Langton, Chief Geologist for the Phelps Dodge Corporation

was helpful, even though their investigations of the area described in this report was negative, except possibly in the Garfield-Chase Creek area to the east.

This report was written for Essex International, Inc. and is respectfully submitted to Mr. Howard Lanier, General Manager of Copper Operations and Mr. Paul Eimon, Exploration Manager.



Dirk Den-Baars.

By: Dirk Den-Baars

Tucson, Arizona, June 7, 1971.

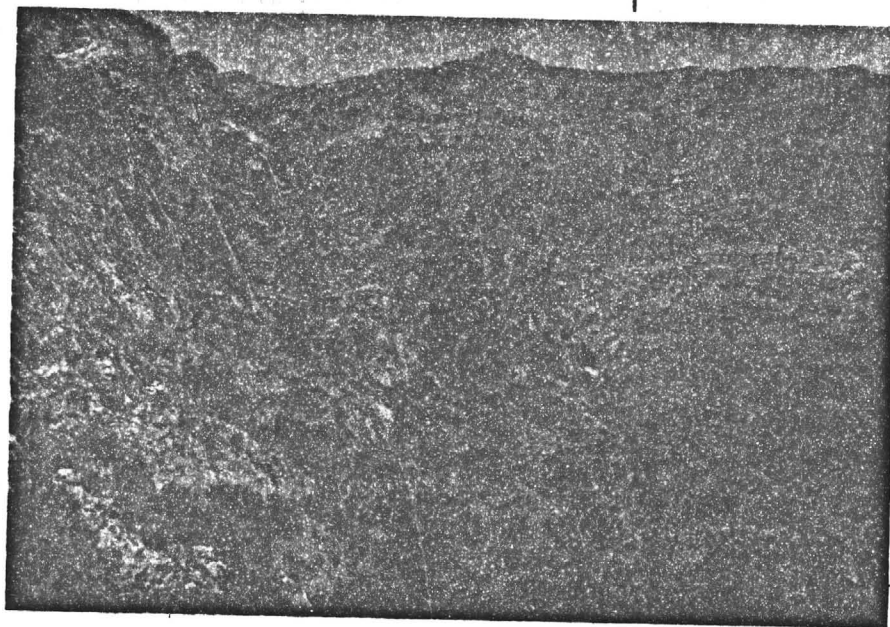
DDB/1h1

Appended material:

10 Color prints.

1 Geologic Map to scale 1" = 1,000 ft.

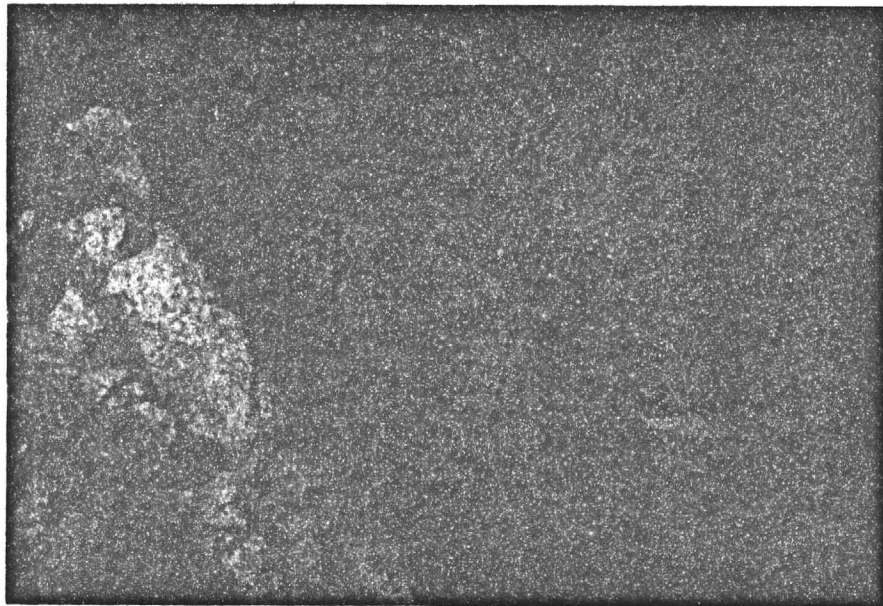
1 Fault map transparency



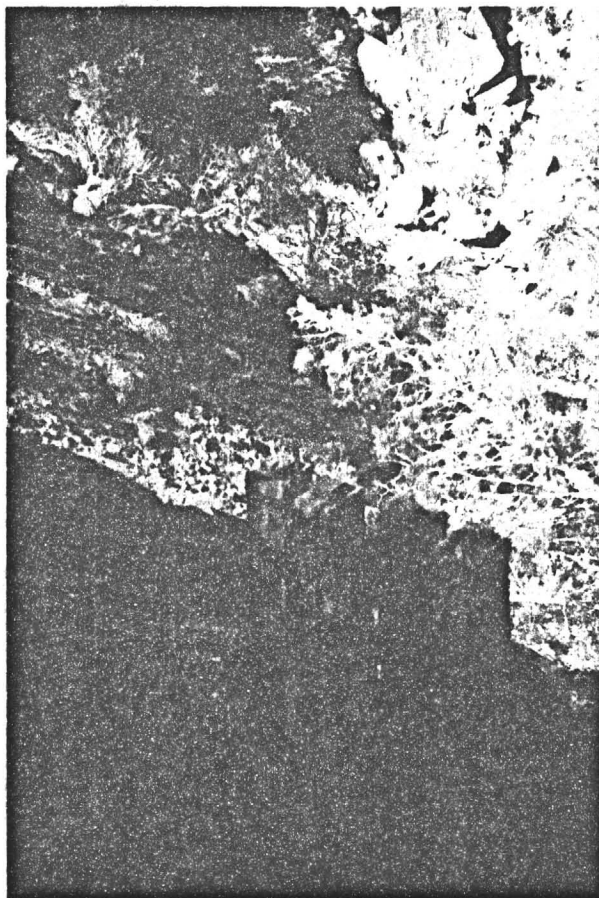
Pre-Cambrian Granite at NE End of Cuprite Vein



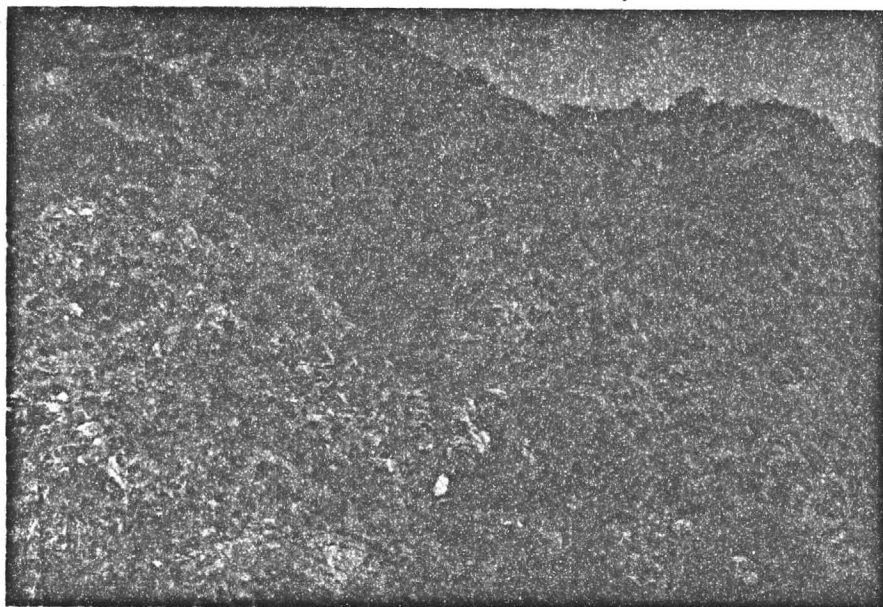
Southwest End of Cuprite Vein Showing Altered
Vein Quartz with Iron and Manganese Oxides



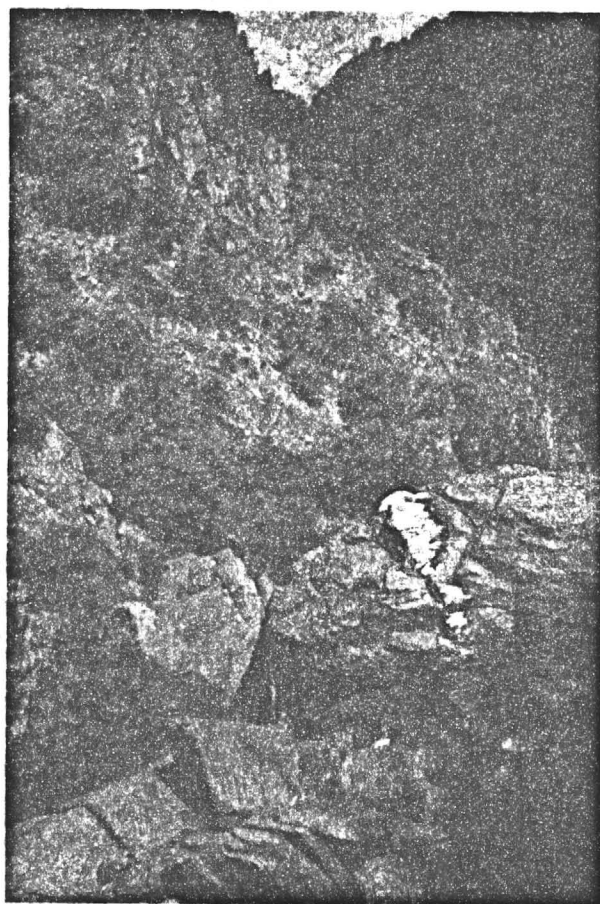
Southwest End of Cuprite Vein, 42" Wide Alteration and
Oxidation Products of Cupriferous Pyrite.
Note Small Granitic Dike



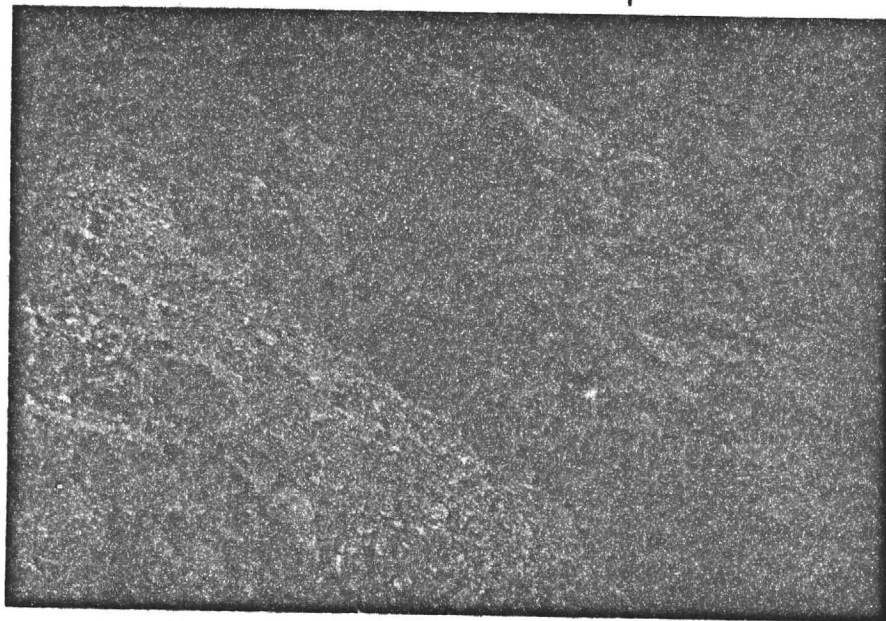
Old Cuprite Shaft, About 60' to
Water Standing in Shaft



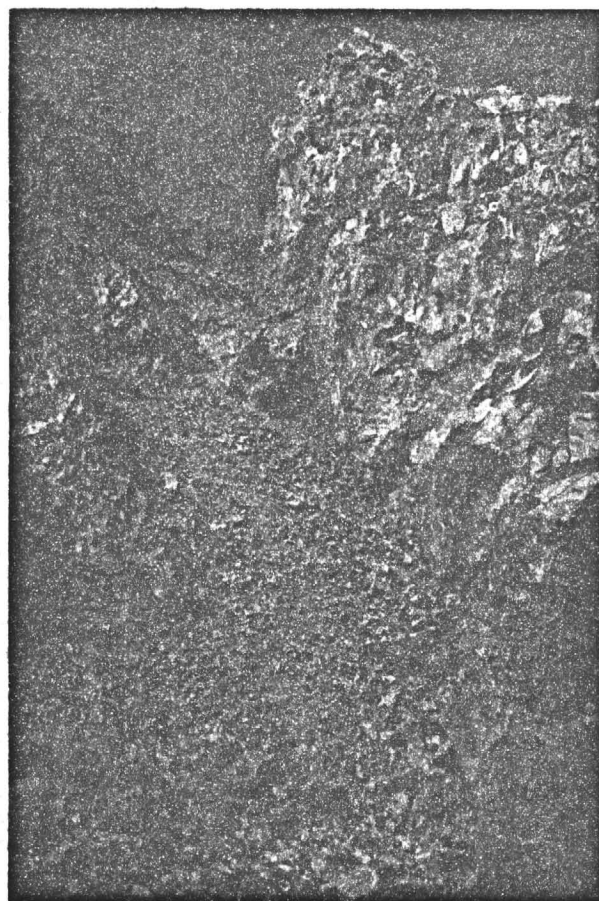
Northeasterly Trending Joints in Pre-Cambrian Granite at Right,
Light Greenish Pre-Cambrian Granite in Foreground.



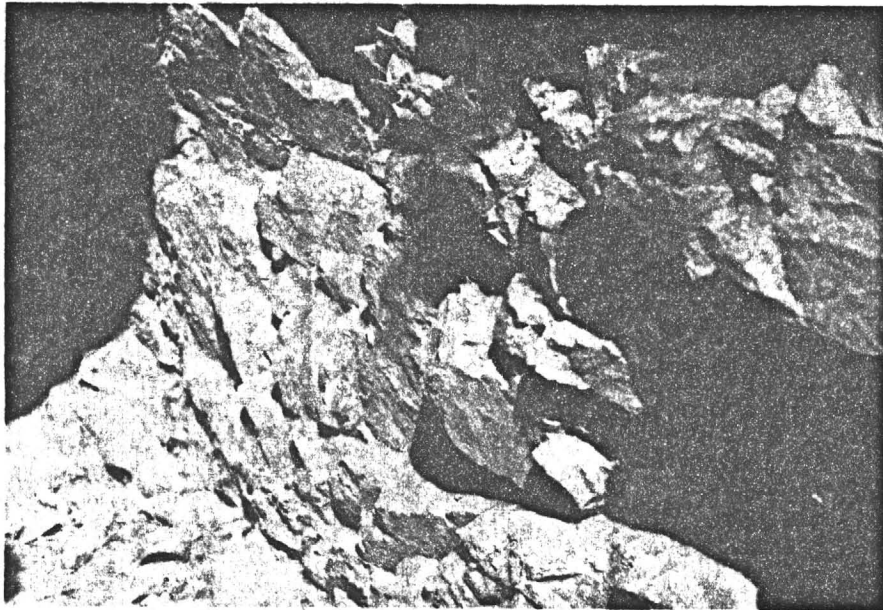
Quartz Vein 4" Wide in Pre-Cambrian Granite
West of Cuprite Vein and Parallel to it.



Northwest Trending Vein at Cut in NW 1/4 Section 32
About 4 Ft. Wide, Some Sulphides in Walls.

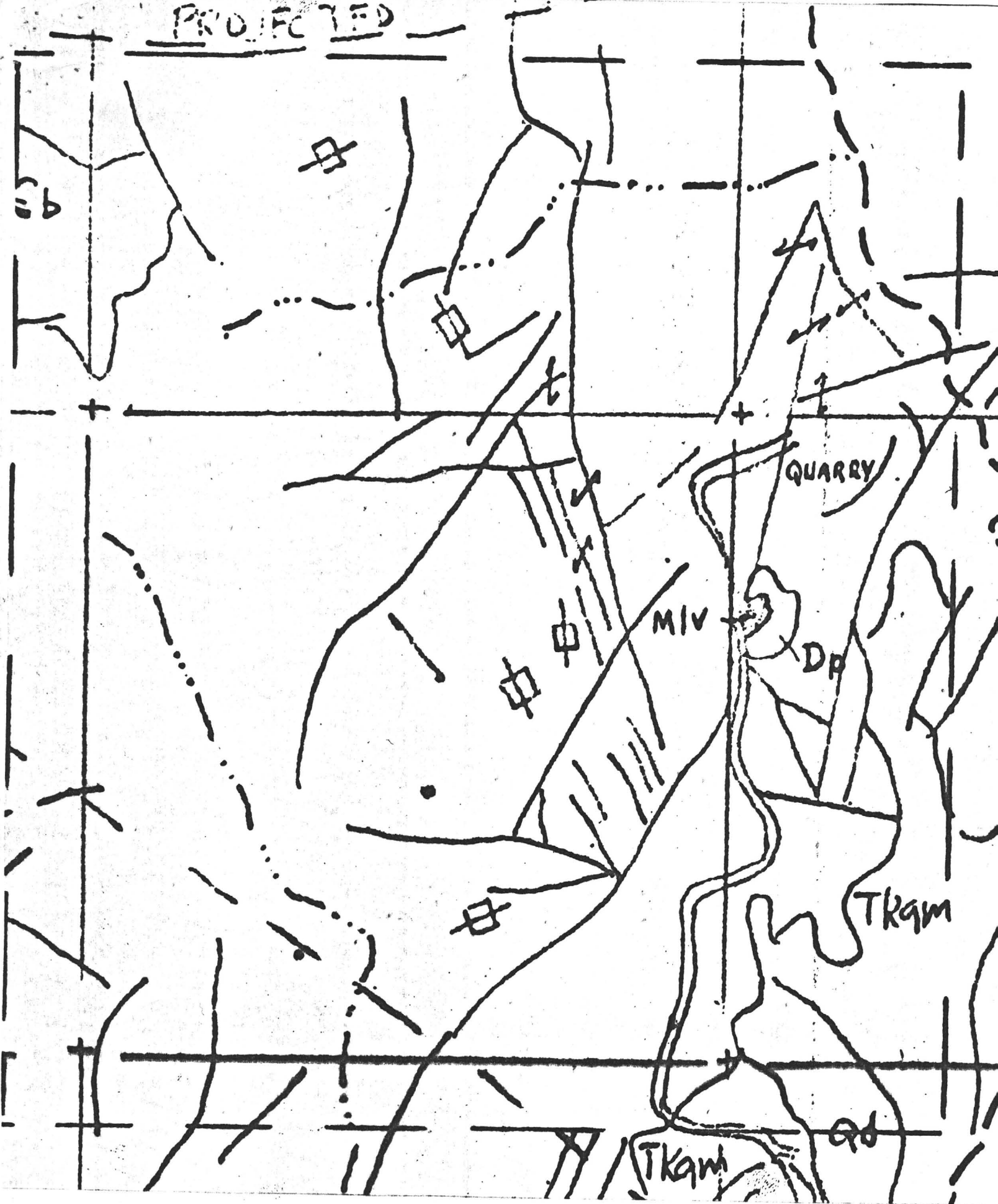


Northeast Trending Vein in SE 1/4 of Section 32
About 5 Ft. Wide with Stringers of Mineralized
Veinlets on Both Sides of Main Veins



Northeast Trending Quartz Vein 5 Ft. Wide in Quartz Monzonite
Porphyry with Abundant Pyrite on Both Sides of Vein.
Located on Southernmost Ridge, East of Santa Rosa Gulch
in S-1/2 S-1/2 Section 32.













PROJECTED



Essex Cuprite
by Dirk Den Baars Proj.



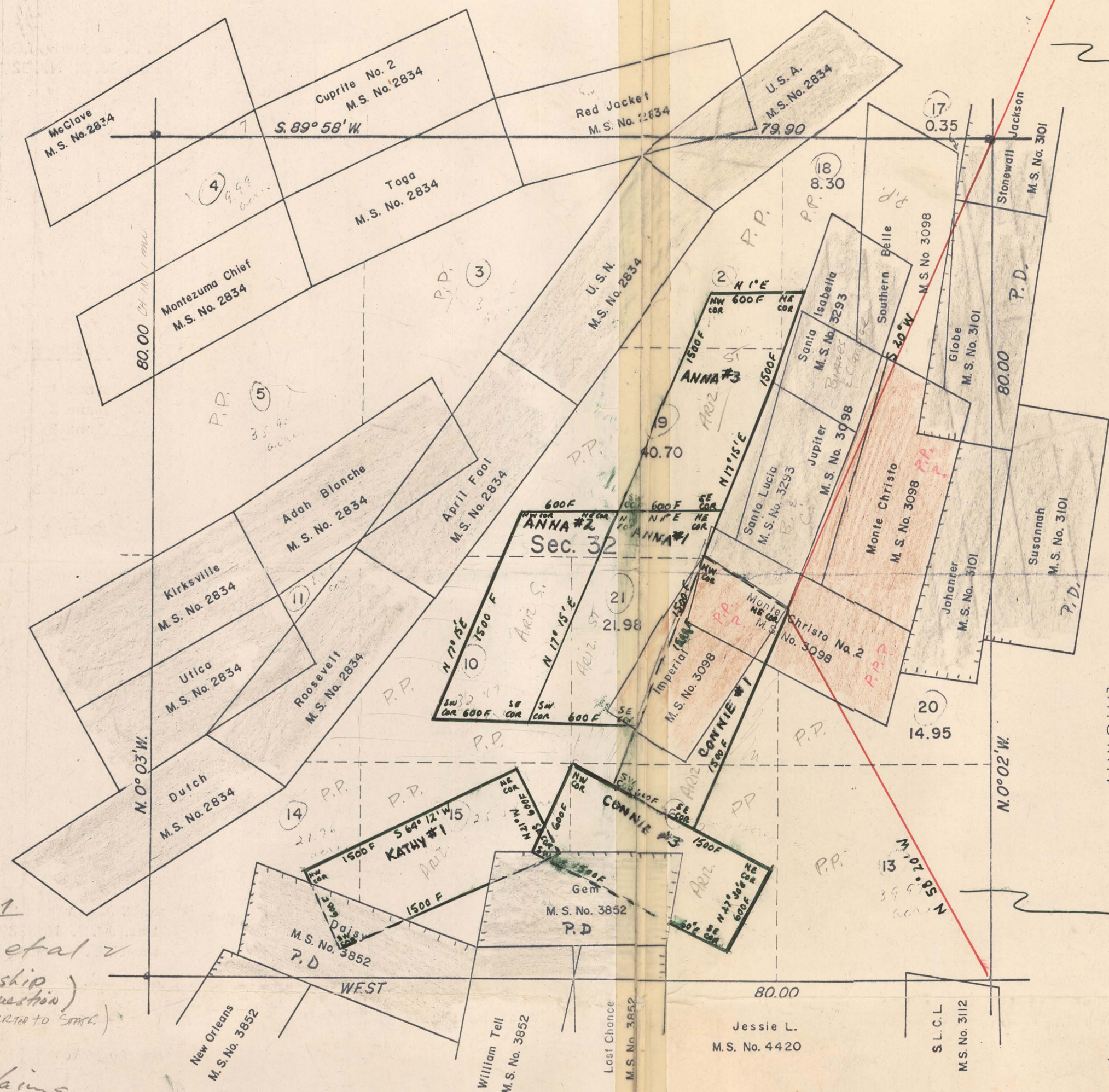
SECTIONS 29 & 32, T3S, R29E, GREENLEE COUNTY, ARIZONA
 GEOLOGY MOSTLY BY: W. LINDGREN - SCALE 1"=1000' --

- | | | |
|--|---|---|
|  Cm |  Qal |  Fault |
|  Dm |  Tr |  Veins |
|  Ol |  Tb |  Lqm, gp |
|  Ec |  Db |  Pc gr |

Essex Cuprite Proj.
 Scale 1"=1000'
 Geology by
 Dirk Dan BARKS
 7-71

TOWNSHIP 3 SOUTH, RANGE 29 EAST, OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA

SUPPLEMENTAL PLAT OF SEC. 32



S.E. Corner of Santa Lucia
Pat. M.S. No. 3293

PATENTED CLAIMS
 QUESTIONABLE OWNERSHIP

Acreage	
Anna 1	16.93
Anna 2	20
Anna 3	20
Connie 1	6.56
Connie 3	15.51
Kathy 1	15.87

This supplemental plat, showing amended lottings in sec. 32, T. 3 S., R. 29 E., Gila and Salt River Meridian, Arizona, is based upon the plats approved June 7, 1923 and April 2, 1959, and mineral survey records.

S.E. Corner of Santa Lucia
Pat. M.S. No. 3293 which is
the N.E. Corner of Connie #1

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Washington, D.C. March 20, 1962

This plat, showing amended lottings, is based upon the official records, and having been correctly prepared in accordance with the regulations, is hereby accepted

For the Director

E. Remington

P.P. = PROSPECT PERMIT

Guy Anderson 1
H. Clyde Davis et al 2
Bianes (ownership in question)
(may revert to Smith)

Patented claims & ownership
Unpatented claims & ownership
State Lease claim & owners
State Lots Leased owners

8" = 1 mi

PRELIMINARY RECONNAISSANCE EXAMINATION

Date:

By:

Name of Property: *Cyprite* State: *ARIZONA* County: *Greenlee*

Location: *Sec. ²⁹ 32, T. 35. R. 29E* District: *Morenci*

Date of this Report: *4-27-70* By: *E. G. H.*

Map & Aerial Photo Ref.: *U. S. G. S. 15' Quad. "Clifton"*
B. L. M. Survey plat 2854

Extent of Property: *10 Patented Claims balance of Sec. 32 unpatented and state leases.*

Ownership (Name & Address):

Leased or Optioned to (Name & Address):

Guy Anderson et al

?

Facilities:

- (a) Accessibilities (Roads, Trails, *Very rugged area. Up etc.*): (f) Water: *Can be developed*
Chase Creek to North D. B. mi. from Garfield Gulch & 4000' west from main
(b) Air Fields: *Clifton* (g) Labor: *local road up dry wash in a prominent steep canyon.*
(c) Power: *Can be developed* (h) Climate: *Mountain desert*
(d) Telephone: *Morenci* (i) Supply Source:
(e) Housing: (j) Miscellaneous:

Type of Deposit: (Describe briefly under following headings; Structure, Lithology, Mineralogy, Stratigraphic conditions, Physiographic conditions, Reserves, Possible Extensions, Geology, Geophysics & Drilling):

Numerous faults & veins adjacent to & parallel the primary mineralized structure. The mineralization on the dump appears to be mainly iron oxide with some copper oxide staining & pyrite. Appears to have considerable strike length.

Mine Workings: (Brief description of methods used, map to be attached if available)

Reportedly there is a winze 400' deep located about 60' from an adit on the dump. I personally crawled into the adit & did see the winze though I was unable to measure the depth.

Production Data: (Past, present and possible future)

No information

Sampling and Analysis: (By whom--Results)

None

Mining Equipment on Property: *None*

Mill Equipment on Property: *None*

Misc. Equipment on Property: _____

Camp Facilities: _____

Ore Reserve Estimates: _____

Recommendations and Conclusions: The exposed surface indications suggest a small very limited underground type operation unless ^{intersections of} cross faulting increased the width of the mineralization at depth. To check this possibility out a few I.P. lines (2) could detect the approximate depth & width of sulphides. If the I.P. survey results were encouraging then perhaps a drilling program should be undertaken to develop grade & tonnage estimates. The property because of its proximity to the Morenci Pit should be

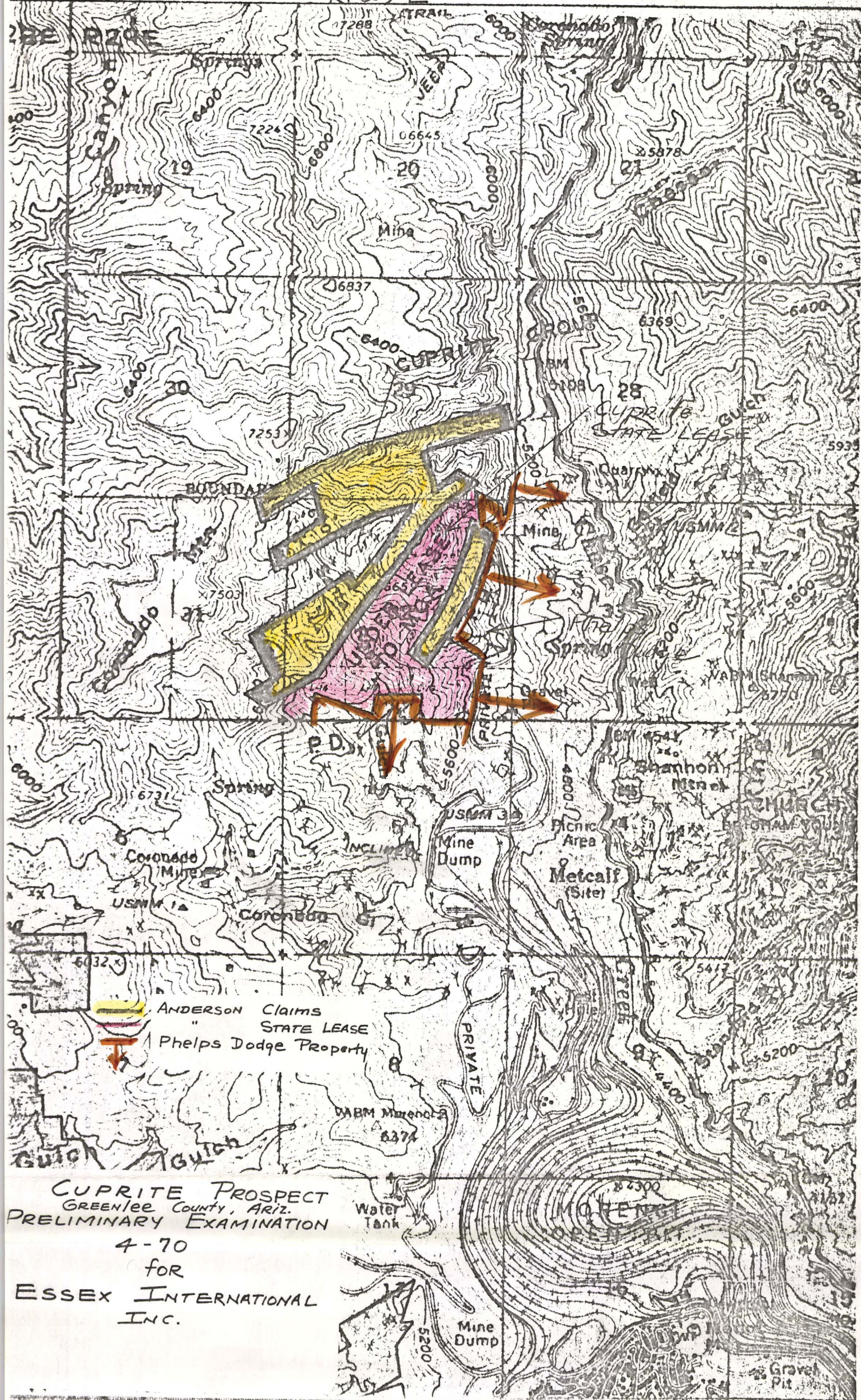
References: (Bibliography, Maps, Former Workers or Engineers) Carefully mapped
Donald E. Cole, Clyde Davis geologically.

Titley, S.R. & Hicks C., 1966

Moolick, R.T. & Durek J.S., 1966

VANCE BACON, 1960

R. 29 E



T. 3 S.

T. 4 S.

CUPRITE PROSPECT
GREENLEE COUNTY, ARIZ.
PRELIMINARY EXAMINATION
4-70
for
ESSEX INTERNATIONAL
INC.

PRELIMINARY EXAMINATION OF CUPRITE GROUP OF CLAIMS

By: Vance Bacon, April, 1960

SUMMARY

The Cuprite Group of sixteen patented mining claims is located approximately three miles north of the Morenci Open Pit Mine. Pre-cambrian granites have been intruded by Early tertiary diabase and by monzonite porphyry. Widely spaced veins and veinlets containing iron oxides, quartz, and occasionally chrysocolla may be seen outcropping at various places on all the claims. The general trend of the mineralization is to the northeast although some intersection of fault veins is occasionally indicated.

All previous workings on the claims have been of very limited extent, the greatest amount having been done on the Cuprite claim. Some excellent gossan and ore specimens were found in abundance on the dump on this claim. The underground workings were not easily accessible at the time of this examination, however the surface indications coupled with the favorable appearance of the dump material tend to suggest good possibilities for ore for a considerable length along a mineralized fault zone.

Favorable gossan also appears along fault veins on the Montezuma Chief, Roosevelt, and Dutch claims.

There seems little doubt that some ore is present on the claims; the principal problem is development to determine the amount. Some drilling in conjunction with drifting off the present underground workings, would be necessary to determine the grade and vertical extent of the enriched zone and of the overlying oxidized ore zone.

LOCATION:

The claims are situated in Sections 29, 30, 31, and 32, township 3 South, Range 29 East, G & S R M. They are about five miles northerly from the town of Morenci. Access to the Cuprite Mine may be gained by driving up U. S. 666 to the first large gulch heading west beyond the Garfield Lime Quarry. This is about 8.2 miles by road from the Clifton Post Office. By walking about 4,000 feet up this gulch from the highway the mine may be reached. Access to other claims in the group may be gained by hiking from the Cuprite Claim or by walking up Santa Rosa Gulch (the lower portions of which are covered by waste dumps from the Morenci Mine).

The Cuprite claim is about a mile northwesterly from the Molinar (or Black Cat) Mine in Garfield Gulch. This was the most recent producing small mine in the immediate vicinity; it was closed in 1936.

HISTORY:

The claims were located from 1903 to 1905. They were surveyed for patent in July and August of 1910 by Lamar Cobb for the Cuprite Copper Co. A total of \$20,174.00 worth of work was claimed on the patent application. This consisted of 5 tunnels, 2 winzes, 2 crosscuts, 11 shafts, 1 raise, 5 cuts, and 1 drift. As near as could be determined from this examination, no work has been done since patent (No. 2834) was granted.

Most of the work appears on the Cuprite and the Montezuma Chief. 217 feet of tunnels and 521 feet of shafts, winzes, and raises were claimed on the Cuprite. 156 feet of tunnels, drifts, and cuts and 115 feet of shafts were claimed on the Montezuma Chief.

It is said that some ore was shipped from the Cuprite claim, although no records were available on tonnage or grade.

The Coronado Mine, situated about a mile south of the southerly portion of the claims, was once one of the major producers in the district and still contains a large tonnage of ore.

GEOLOGY:

An original basement of pre-cambrian granite has been first intruded by dikes of a slightly younger granite than by aplitic granite. Both of the younger intrusive granites are believed to also be pre-Cambrian in age. The entire area is presumed to have at one time been covered by the normal column of Paleozoic rocks found elsewhere in the district. During late cretaceous or early tertiary time (about 70,000,000 years ago), the area was again intruded by igneous rocks, this time by diabase and by monzonite porphyry. Some faulting accompanied this intrusion. Almost simultaneously, but slightly

following this came the hydrothermal mineralizing solutions which caused the mineralization that is now indicated along the various fault zones intersecting the claim area.

A period of erosion followed the mineralization and resulted in the removal of the entire column of Paleozoic sedimentary rocks. Some oxidation, leaching, and redeposition has occurred during the erosional activity and resulted in a zone of enriched sulfide mineralization below a near-surface zone of oxide mineralization.

The fault veins in the claim area contain considerable breccia and some slickensides. Their displacement is unknown, but is probably not great. They are all connected, by various minor slips and dislocations, to two major mineralized faults of the district -- the Coronado Fault, to the South, and the Chase Creek Fault to the east.

Although the pyrite mineralization which has followed the faults in this area could reasonably be expected to persist at depth and even become stronger, the zone containing the enrichment normally could not be expected to extend more than about 200 feet below the bottom of the oxide zone in this environment. Several of the mineralized fault zones on the claims occasionally widen, but in most instances the strength of mineralization diminishes in proportion to its distance from the main portion of the fault vein.

The topography of the area is extremely rugged, the elevation ranging from about 5,100 feet above sea level at the highway to over 7,000 feet less than a mile to the west on the Togo claim.

In general the granite is not greatly altered and has a rather blocky to angular appearance. On the Dutch and Montezuma Chief claims, however, there has been a general bleaching of the granite in areas measuring over 100 by 400 feet.

MINERALIZATION:

Several widely spaced, northeasterly trending, faults and fractures have been mineralized by hydrothermal solutions, resulting in a deposition of pyrite and chalcopyrite along veins and in places disseminated into the surrounding wall rock. The fault vein upon which the Cuprite and the Ironsides claims were located may be traced for a distance of over 3,000 feet, although exposures are limited over much of this length due to a thin cover of talus over the hillsides. The surface exposures in the vicinity of the Cuprite Mine show the width of the fault zone varying from two to ten feet. Considerable brecciation (recemented by quartz and iron oxides) is in evidence. No Copper minerals are visible on the surface due to the effects of leaching and oxidation. Much of the capping, however, appears quite favorable.

A study of the dump material at the Cuprite indicates most of the old workings were in the oxidized zone. The dumps contain strong iron oxide, considerable chrysocolla and cuprite, and a rather limited amount of sulfides (mostly pyrite and minor chalcopyrite with some enrichment by chalcocite). The sulfides are assumed to have been mined from the deepest shaft (which had a depth of 400 feet). Many of the pieces of mineralized granite and porphyry on the dump exhibit disseminated coarse blebs of iron oxide and cuprite with weak to moderate chrysocolla staining the kaolinized matrix. A random sample of an average piece of this material gave an assay of 4.28% copper, .69 oz. silver, and .13 oz. gold. Many places containing a much higher percentage of copper were in abundance throughout the dump area, but none were taken for assay.

From the surface indications, it appears that a possible ore zone may be expected for a length of over 1,000 feet, a width averaging perhaps 3 feet and a vertical extent of perhaps 100 feet consisting of both oxides and sulfides.

Since the amount and extent of chalcocite enrichment will be the determining factor of the amount of ore existing in the sulfide zone, it will be necessary to reopen the old workings and drill exploratory test holes from underground stations.

Another area which has possibilities for containing some ore is a zone of

intersection between two mineralized fault zones which may be found near the center of the Dutch claim. One of the fault veins may be traced for 2,500 feet east into the Gem claim where some excellent ore is visible on the dumps. The other fault vein strikes northeasterly through the Roosevelt claim. Both of these fault veins contain nearly continuous favorable iron oxide gossan along their entire length. A small caved working is in evidence on the Roosevelt claim, however the dump indicates that this working was entirely in the oxidized zone and shows only iron oxides (hematite, limonite, magnetite). At this working the fault zone is about eight feet wide and has a steep dip (about 85°) to the southeast. In the vicinity of intersection of these two fault veins, numerous intersecting iron oxide veinlets may be found on the surface over an area measuring about 150 by 400 feet. A zone of 1% copper mineralization averaging at least 100 feet thick could reasonably be expected in the enriched portion of the sulfide zone under this capping. The major fault veins would be expected to average considerably higher grade, of course.

The nearby Daisy and Gem claims were both good producers at one time in the history of the district.

The dumps from the workings on the Montezuma Chief show a considerable amount of chrysocolla. Only minor amounts of iron oxides and cuprite are present. This mineralization, also, has occurred along a northeasterly trending fault zone. Although a zone of fracturing and weak mineralization measuring perhaps 200 by 400 feet surrounds these workings, the mineralization does not appear of sufficient strength to make ore averaging much over 0.7% copper except along the major fault zone. Even here, the width of the fault is insufficient to provide possibilities for a commercially feasible mining operation.

CONCLUSIONS AND RECOMMENDATIONS:

Although there are no open pit ore possibilities indicated either on or near this group of claims, the aforementioned mineralized fault veins do offer definite possibilities for developing limited tonnages of commercial copper ore. It should be pointed out that mineralized rock which could, in localities closer to a railroad,

be classified as "ore" could not qualify as such in this locality at the present time due to the haulage problem and lack of a nearby custom mill. At the present price for copper, an average grade of 5% copper ore would probably be the lowest grade that could be economically mined and shipped from these claims. There is a chance for 1,000,000 tons of 1% copper ore to be about equally distributed between the Dutch and the Cuprite claims. Of this, about one fifth, or 200,000 tons, would have a chance to average over 5% copper. During times of high copper prices, perhaps a lower average grade could be economically mined. Naturally, any tonnage estimates at the present time are little more than guesses and must be based on an evaluation of the spotty exposures of capping along the fault veins on the surface. This capping is completely leached and, in most instances, only quartz and iron oxides remain. The appearance of the iron oxides was compared to that of the iron oxides found over some nearby mines containing known ore along similar fault veins in granite.

It is recommended that approximately \$10,000.00 be spent on the Cuprite claim. This money could be spent as follows: about \$1,000.00 on improving access and cleaning out old shafts and drifts; about \$4,000.00 extending the drifts on the lowest level open; about \$5,000.00 core drilling from underground stations established in the drifts. An intermediate evaluation could be made after reopening the old workings.

The foregoing information is accurate to the best of the author's knowledge, but necessarily is somewhat limited due to restrictions as to the amount to be spent for the examination.

Signed /s/ Vance N. Bacon

Geologist

SECTION 32 AND VICINITY
T.35., R.29E.

IRONSIDES
M 5 NO 2834
20.487 ACRES
P 318 425

CUPRITE
M 5 NO 2834
20.630 ACRES
P 318 425

EUNICE
M 5 NO 2834
20.630 ACRES
P 318 425

RED JACKET
M 5 NO 2834
20.480 ACRES
P 318 425

MONTANA CHIEF
M 5 NO 2834
20.131 ACRES
P 318 425

UTICA
M 5 NO 2834
20.640 ACRES
P 318 425

CRISTO
M 5 NO 2834
20.640 ACRES
P 318 425

MONTA
M 5 NO 2834
20.640 ACRES
P 318 425

SOUTHERN
M 5 NO 2834
20.640 ACRES
P 318 425

DODGE CORP.

PHELPS

M 3050 KATY
M 3018
M 3019
M 3020
M 3021
M 3022
M 3023
M 3024
M 3025
M 3026
M 3027
M 3028
M 3029
M 3030
M 3031
M 3032
M 3033
M 3034
M 3035
M 3036
M 3037
M 3038
M 3039
M 3040
M 3041
M 3042
M 3043
M 3044
M 3045
M 3046
M 3047
M 3048
M 3049
M 3050

SCALE IN FEET

0 600 1200 1800 2400

INFORMATION

G.A. - Guy Anderson
Patented Claims

H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims

① - State Lease

P.P.P. - Prospecting Permit to H.C.D.

B. - May be State Claimed

— - Blanks & Claridge

Q. - Ownership in Question

— - May be reverted to State

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 23, 1970

DATE: NOV. 23, 1970

SECTION 32 AND VICINITY

T. 33., R. 29E.



INFORMATION

G.A. = Guy Anderson

Patented Claims

H.O.D. = H. Clyde Davis et al
State of Texas vs. Davis et al

State Lease Claims &
State Prosecution Claims

① - State Lots

P.P.2 - May be State Owned

⑧. - Blanes & Claridge

9. B. — Ownership in Que
May have reverted to title

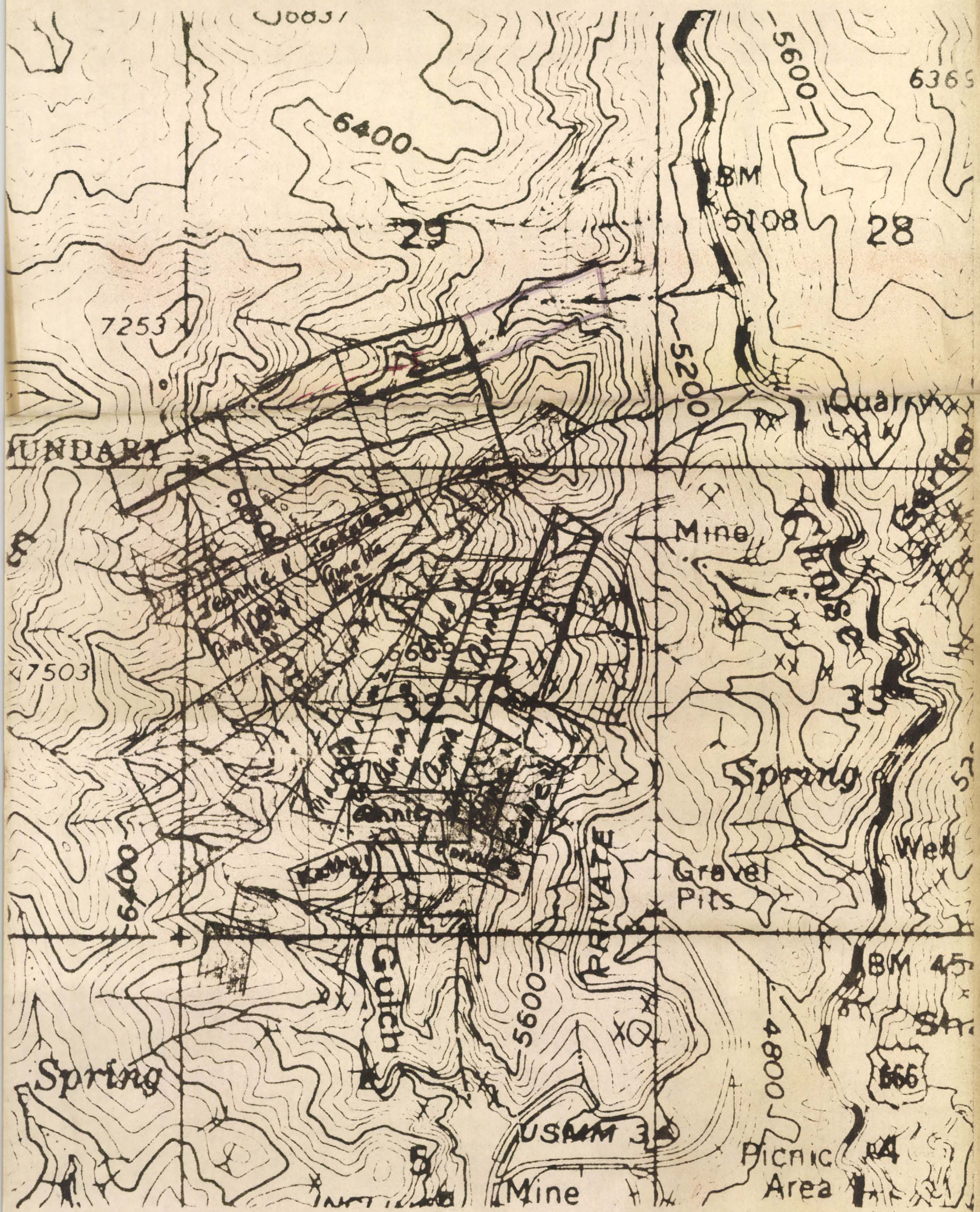
Why Have Favored Us

CUPRITE PROSPECT

GREENLEE COUNTY, ARIZONA

ERISK INTERNATIONAL, INC.

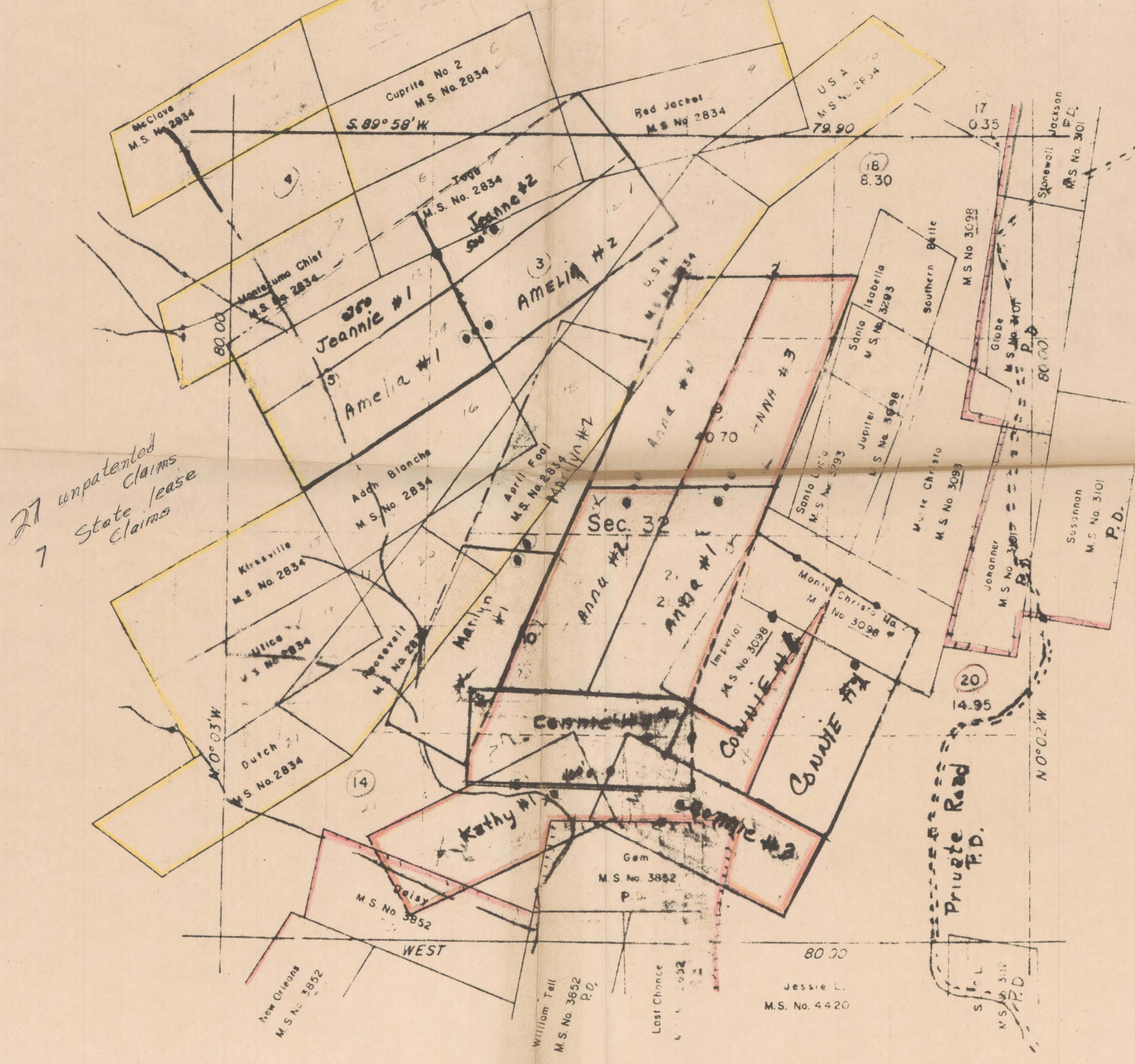
DATE: NOV. 23, 1970



Cuprate Group

Morenci Arizona

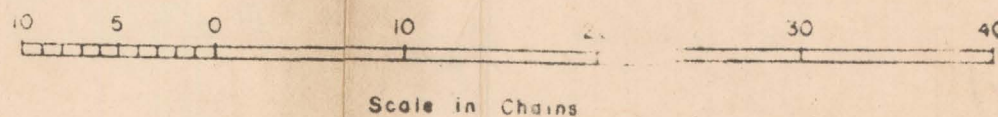
SUPPLEMENTAL PLAT OF SEC. 32



27 unpatented
7 State lease
Claims

Status
Pinal Copper?

- State Leases
- Patented Claims
- Phelps Dodge Corp.



This supplemental plat
showing lottings in Sec. 32,
Gila and Salt River
is based upon the
1903 and April 1904
survey records.

UNITED STATES DEPARTMENT
BUREAU OF LAND
WASHINGTON, D.C.

This plat, showing
the official records, and
in accordance with the
regulations.

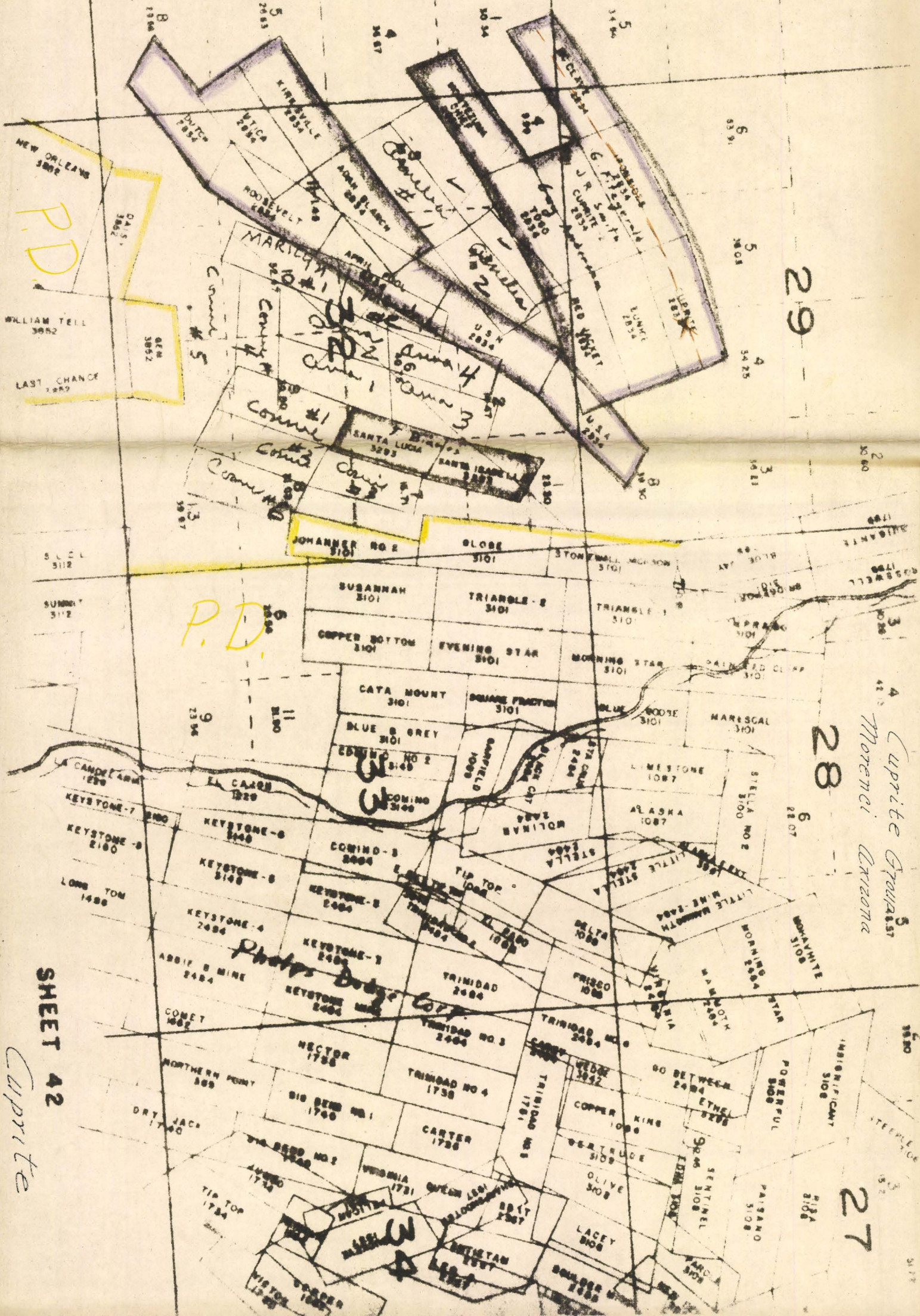
For the I.

Cuprite
Greenlee County, Arizona

EF 7

27

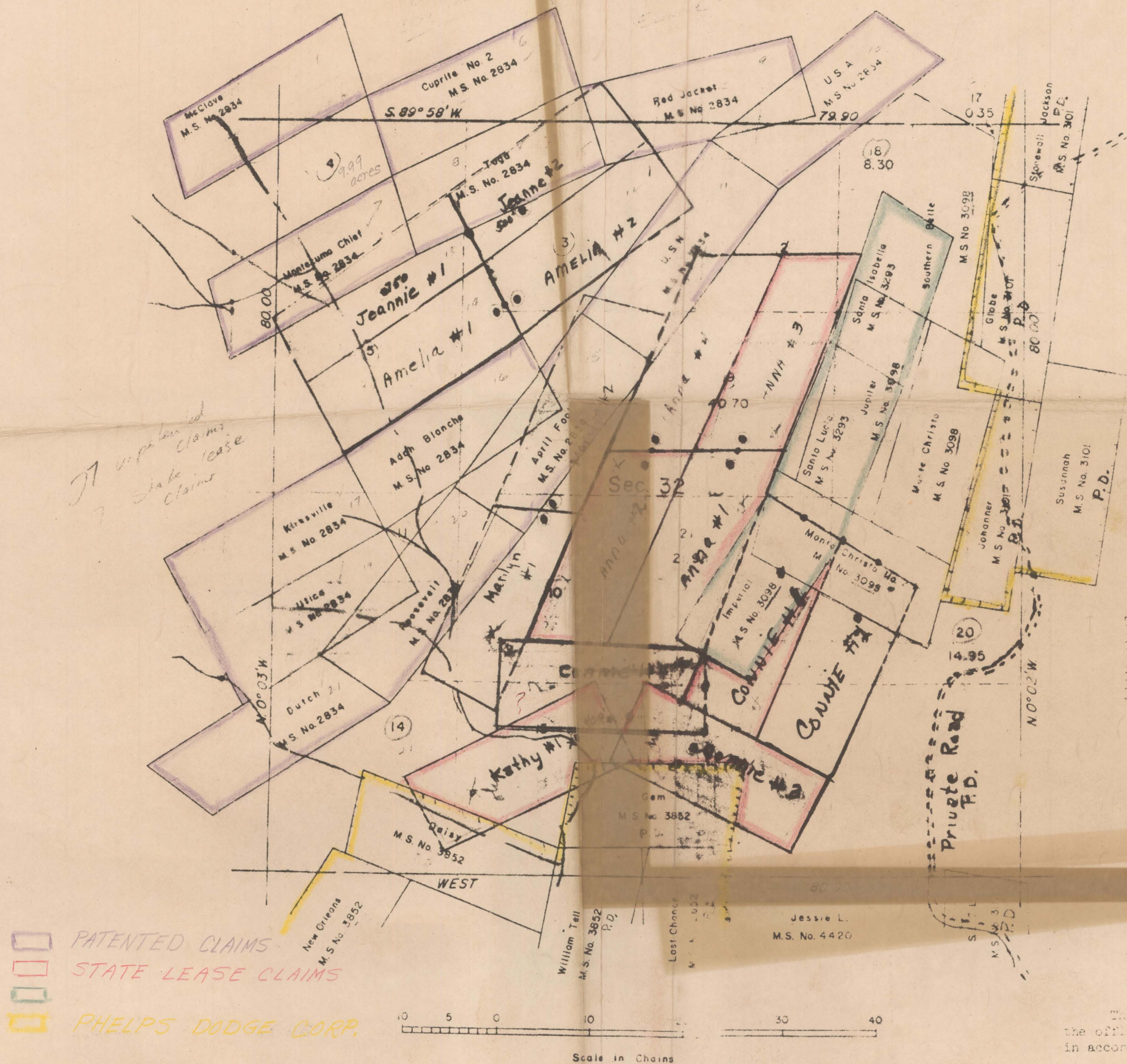
Upright Group 5



Cuprite

TOWNSHIP 3 SOUTH, RANGE 29 EAST, OF THE GILA AND SALT RIVER MERIDIA

SUPPLEMENTAL PLAT OF SEC. 32




This supplement of
lotteries in 1943, 1944 and 1945
is based on the 1941
1943 and April 1946
vey records.

UNITED STATES DEPARTMENT
BUREAU OF LAND
WASHINGTON, D.C.

This file, showing under the official records, and have in accordance with the regula

For the

Cuprite Group



^I
Cuprite Prospect

Land Status

I Patented Claims 16

II Unpatented Claims None (Blanes)

1. State Lease Claims 6

2. State Lots Leased 16

Prospecting Permit

Ownership

I Guy Anderson

a. Patented Claims

1. Claim No. 389348

1. Montezuma Chief

2. Claim No. 318425

1.-McClave

2.-Ironides

3.-Cuprite

4.-Cuprite No. 2

5.-Gunnice

6.-Togo

7.-Red Jacket

I. A. 2.

- 8 - M. S. A.
- 9 - M. S. N.
- 10 - April Fool
- 11 - Roosevelt
- 12 - Dutch
- 13 - Mtica
- 14 - Kirksville
- 15 - Adah Blanche

Total Acreage = 314.887 acres

II H. Clyde Davis et. al.

~~Matt Danenhauer
Ed Danenhauer
Guy Anderson
M. J. Rapier
H. Clyde Davis~~

a. State Lease Claims

- 1 - Anna No. 1
- 2 - Anna No. 2
- 3 - Anna No. 3
- 4 - Connie No. 1
- 5 - Connie No. 3
- 6 - Kathy No. 1

II. a. State Lease Claims

Total Acreage = 94.87 acres

B. State Lots Leased
Prospecting Permit

- 1 - Lot No. 2
- 2 - Lot No. 3
- 3 - Lot No. 4
- 4 - Lot No. 5
- 5 - Lot No. 7
- 6 - Lot No. 10
- 7 - Lot No. 11
- 8 - Lot No. 13
- 9 - Lot No. 14
- 10 - Lot No. 15
- 11 - Lot No. 16
- 12 - Lot No. 17
- 13 - Lot No. 18
- 14 - Lot No. 19
- 15 - Lot No. 20
- 16 - Lot No. 21

Total acreage = ?

IV

III Bianus and Claridge

a. Patented Claims

1. - Santa Lucia
2. - Santa Isabella

Total Acreage = ?

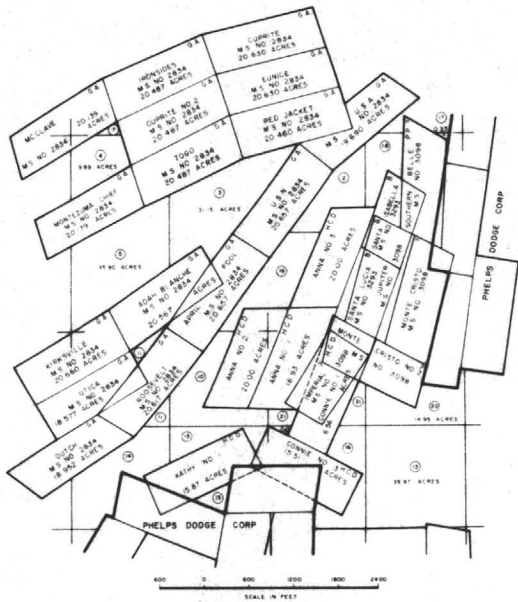
B. Questionable Ownership

(May have reverted to state)

1. - Imperial
2. - Monte Cristo
3. - Monte Cristo No. 2

Total Acreage = ?

SECTION 32 AND VICINITY
T 35 R 29E



INFORMATION

Q. A. - Guy Anderson
Patented Claim

A. C. C. - H. Clyde Davis et al
State Lease (Claims &
State Prospecting Claims)
State Lots
Prospecting Permit to H. C. C.
M. B. State Owner

① - Blanes & Company
Blanes & Company
G. - Ownership in Question,
May have reverted to State

LAND STATUS
CUPRITE PROSPECT
GREGG COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE NOV. 11, 1970

2" = 1 MILE

SECTION 32 AND VICINITY
T 35. N 29E

McCLURE
M.S. NO. 1834
20.79 ACRES

HONNIGSEN
M.S. NO. 1834
20.84 ACRES

CUPRITE
M.S. NO. 1834
20.84 ACRES

EUNICE
M.S. NO. 1834
20.84 ACRES

PED JACKET
M.S. NO. 1834
20.84 ACRES

BOONE CORP

PHELPS

PHILIPS DODGE CORP

SCALE IN FEET
0 400 800 1200 1600 2000 2400

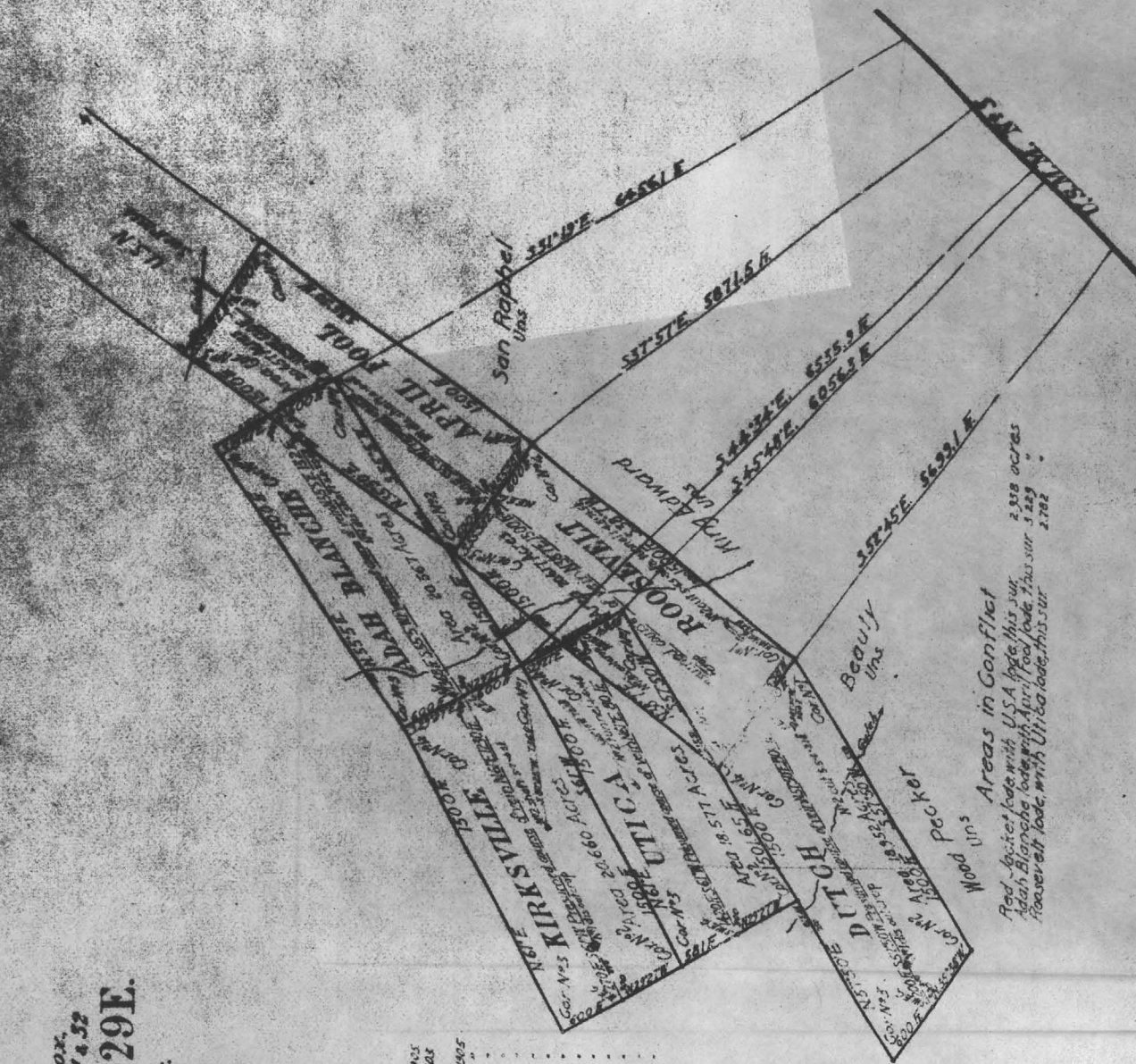
DATE: NOV. 23, 1970

$$2'' = 1 \text{ MILE}$$

Urs.

[illegible]

96-22297
J.B. 83488 (Morgan County)
J.B. 83491
J.B. 83490 or 83489
J.B. 83485
J.B. 83483



from which this plat has been made under my direction, have been examined and approved, and are on file in this office) and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fasten to the locus thereof.

I further certify that the Hundred Dollars worth of labor has been expended on improvements made upon said Mining Claim by claimant or grantors, and that said improvements consist of _____ or _____

that the location of said improvements is correctly shown; upon these plans, and that no portion of said labor or improvements has been included in the estimate of expenditure upon any other claim.

U.S. Survey General's Office.

W. S. Sawyer General Secy

Mineral Survey No 2834

Lot No
Arizona

Land District

PLAT

OF THE CLAIM OF
The Cuprite Copper Co.

KNOWN AS THE

Butch, Red Jacket, F.N.A., U.S.M., Ad. 10
Blanche, Montezuma, Cuprite, No. 2,
Roosevelt, M. T. Cuprite, April 1901, Kicks-
ville, Eunice, Ironsides, Togo and C. Lica
IN Copper Mountain MINING DISTRICT,
Graham County, Arizona
Containing an Area of 3.14 007 Acres

Scale of 500 Feet to the inch

Variation 15.40 E.

STREED July 25-Aug 5 1910 B)

Laurie Cobb

U.S. Mineral Survey No.

The Original Field Notes of the Survey of the Mining Claim of
The Cuprite Copper Co.

known as the
Ad. 10 Blanche Montezuma, Cuprite, No. 2,
Roosevelt, M. T. Cuprite, April 1901, Kicks-
ville, Eunice, Ironsides, Togo and C. Lica
IN Copper Mountain MINING DISTRICT,
Graham County, Arizona

from which this plat has been made under my direction
have been examined and approved, and are on file in this office
and I hereby certify that they furnish such an accurate descrip-
tion of said Mining Claim as well, if incorporated into a patent,
serve fully to identify the premises, and that such reference
as made therein to natural objects or permanent monuments
as will perpetuate and tie the locus thereof.

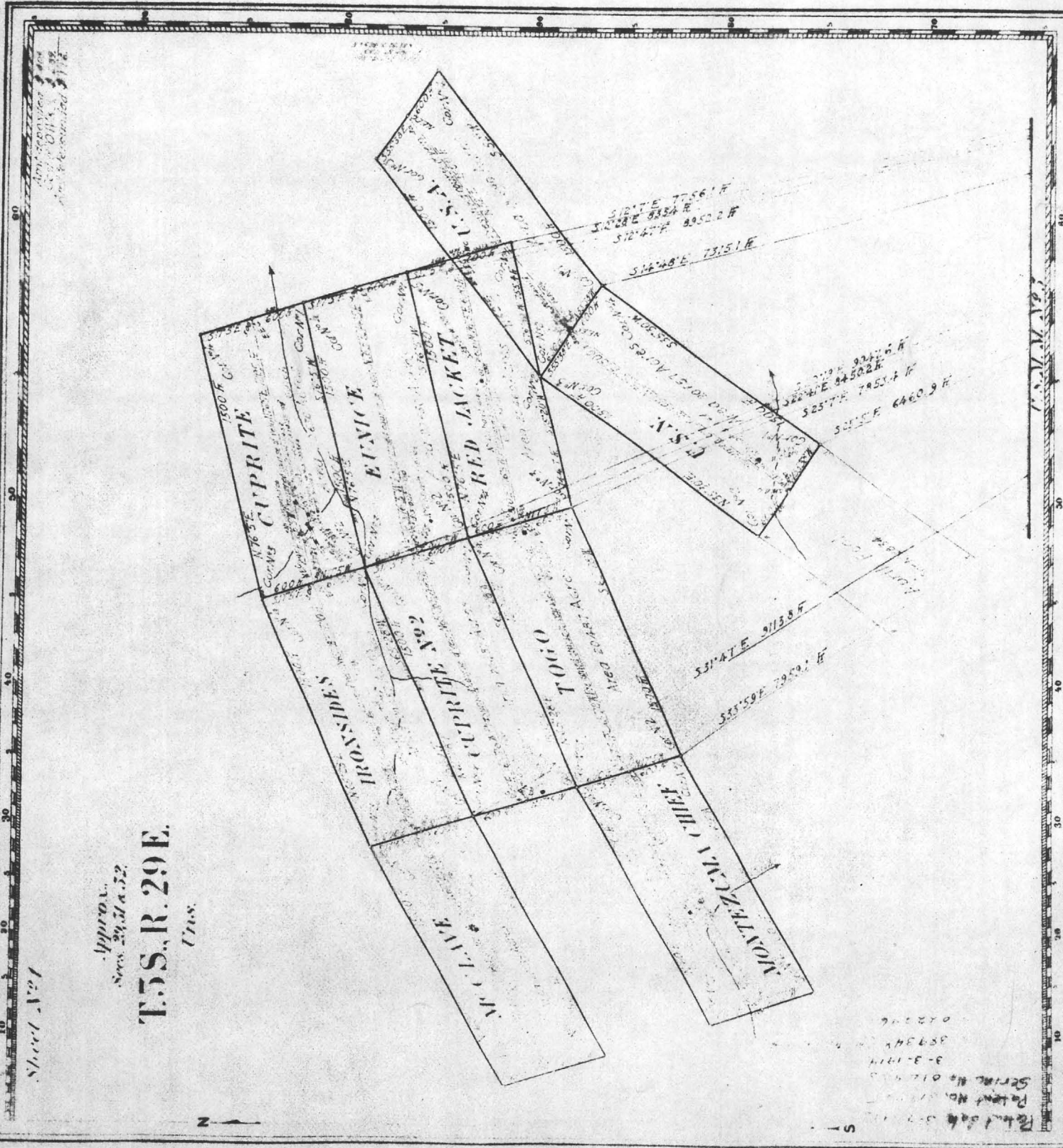
I further certify that five hundred dollars worth of labor has
been expended or improvements made upon said Mining
claim by claimant or its grantor, and that
said improvements consist of buildings, water races,
and other improvements, and that the same are shown on this plat.

that the location of said improvements is correctly shown
upon this plat, and that no portion of said labor or im-
provements has been included in the estimate of expendi-
tures upon any other claim.

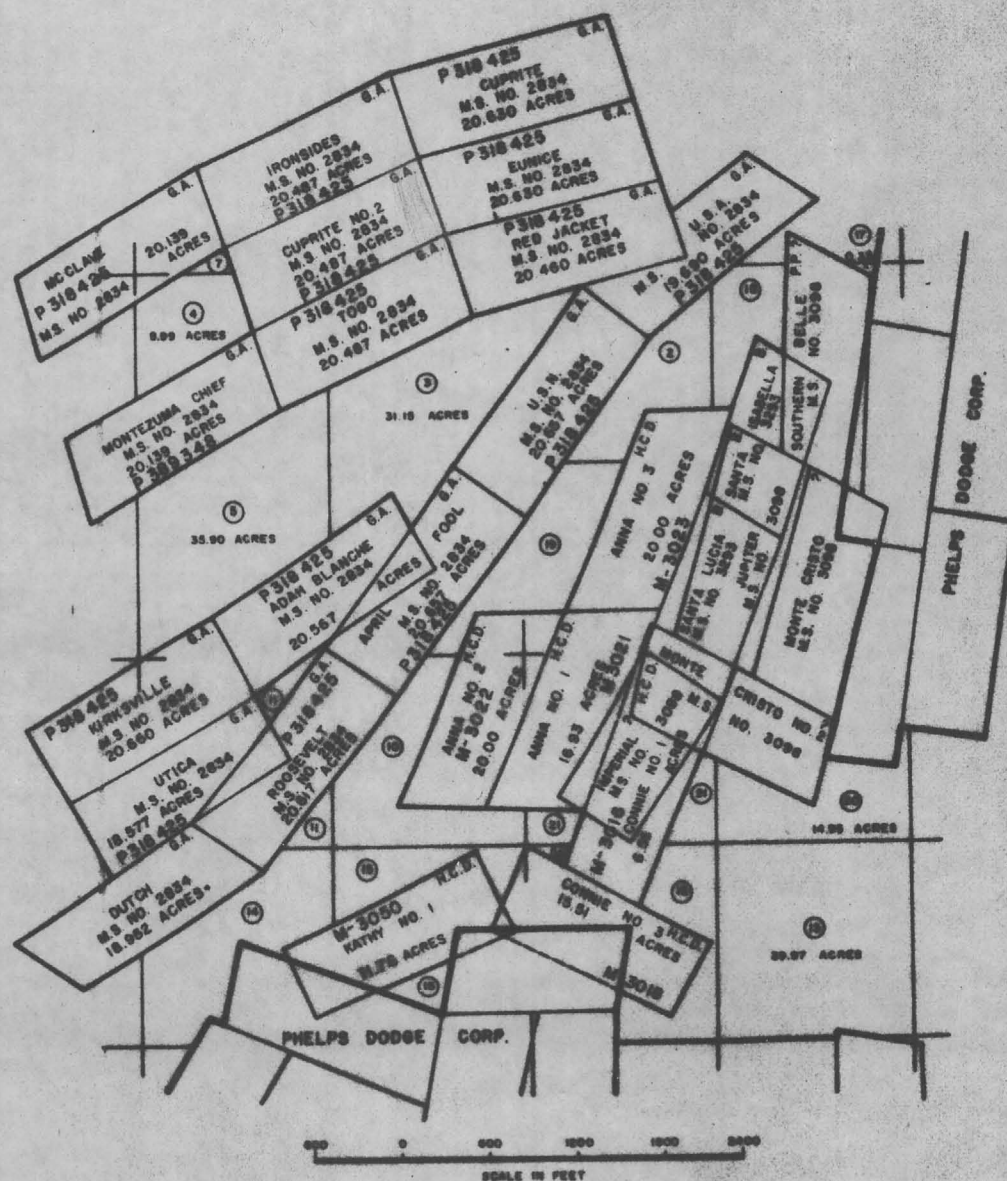
And I further certify that this is a correct plat of said Mining
Claim made in conformity with said original field notes of the
survey thereof, and the same is hereby approved.

U.S. Surveyor General's Office, Grand P. S. G. A.
Phoenix, Ariz.

October 6, 1910 Arizona



SECTION 32 AND VICINITY
T. 3 S., R. 29 E.



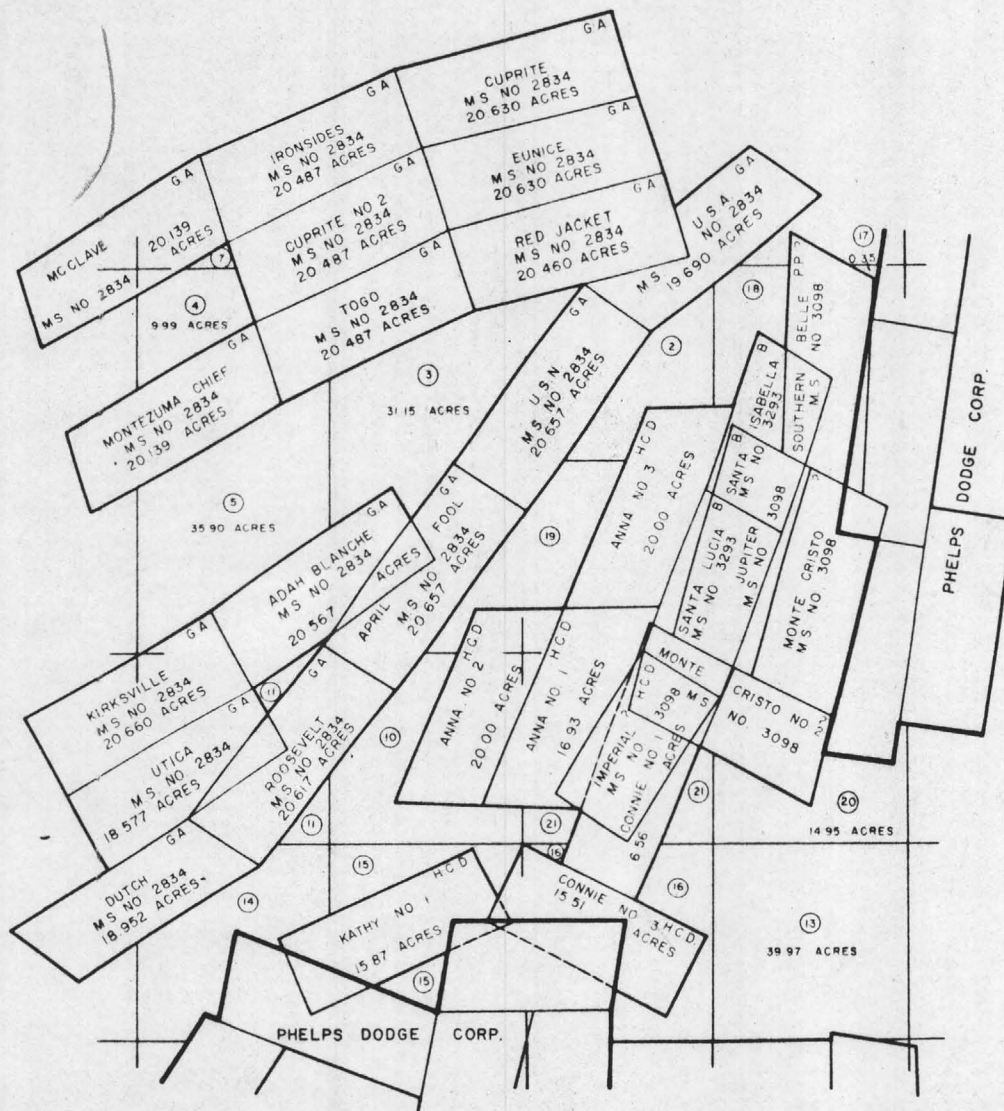
INFORMATION

- Not a Question
- G.A. - Guy Anderson
Patented Claims
- H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims
- ① - State Lots
Prospecting Permit to H.C.D.
- P.F. ? - May be State Owned
- ? - B. - Ownership in Question.
May have reverted to State

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 28, 1970

SECTION 32 AND VICINITY
T.35S., R.29E.



INFORMATION

- G.A. - Guy Anderson Patented Claims
- H.C.D. - H. Clyde Davis et al State Lease Claims & State Prospecting Claims
- ① - State Lots
- P.P.T. - Prospecting Permit to H.C.D.
- B. - May be State Owned
- ? - Blanes & Claridge
- B. - Ownership in Question, May have reverted to State

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 23, 1970

T. 3 S., R. 29 E.



INFORMATION

G.A. - Guy Anderson
Patented Claims

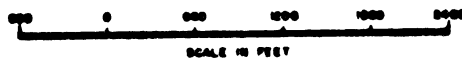
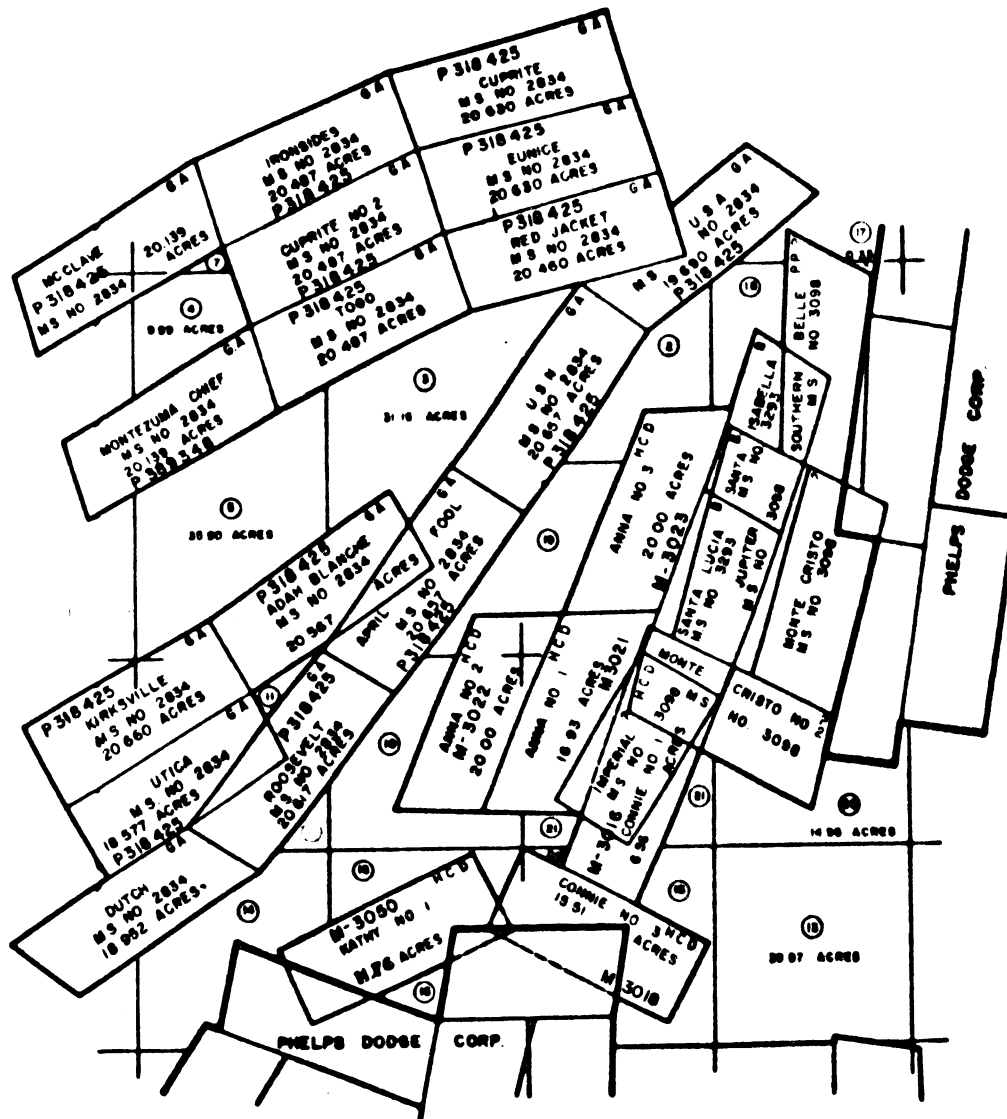
H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims
① - State Lots
Prospecting Permit to H.C.D.

P.P.? - May be State Owned

B. - Banes & Claridge
? - B. — Ownership in Question.
May have reverted to State

DATE: NOV. 23, 1970

SECTION 32 AND VICINITY
T. 33S., R. 29E.

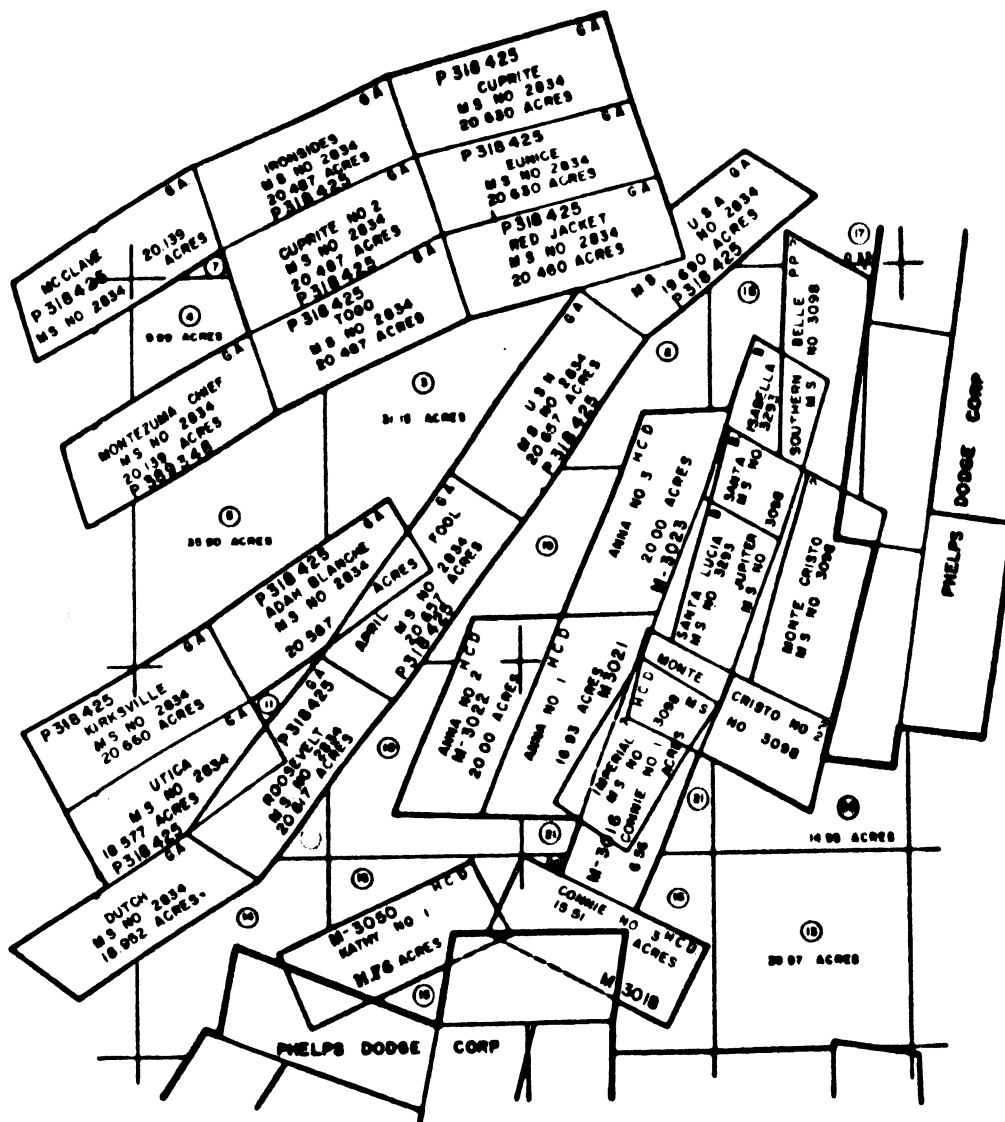


- INFORMATION**
- G.A. - Guy Anderson
Patented Claims
 - H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims
 - ① - State Lots
Prospecting Permit to H.C.D.
 - P.P.? - May be State Owned
 - B. - Blane & Claridge
 - Q. - Ownership in Question
May have reverted to State

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 83, 1970

SECTION 32 AND VICINITY
T.33S., R.29E.



INFORMATION

G.A. - Guy Anderson
Patented Claims

H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims

① - State Lots
Prospecting Permit to H.C.D.

P.P.? - May be State Owned

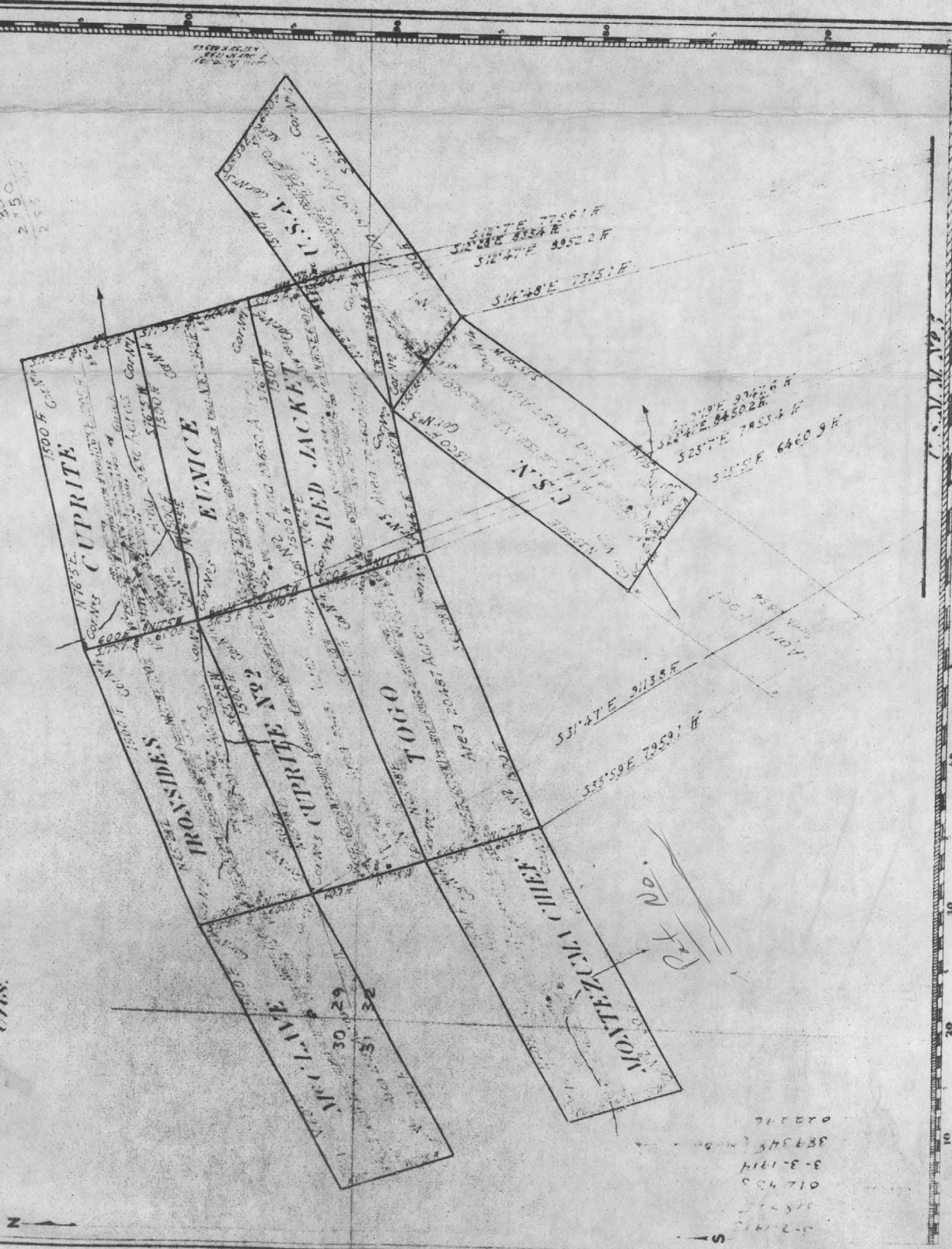
B. - Blane & Claridge

? - Ownership in Question.
May have reverted to State

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 23, 1970

Approved
Since 24.3.32
T3S., R. 29E.
This.



Also deposited
Copy of Office
Amended 116

Chart located see table sheet 2 100

Mineral Survey No 2854

Lot No
Arizona

Land District

PLAT

OF THE CLAIM OF

The Cuprite Copper Co.

KNOWN AS THE

Dutch Flat, Jacket, U.S.L., N.E., A. 1000
Blanche, Montezuma, Red Jacket, Togo
Hawell, W. 1000, Cuprite, April Red Jacket
Rille, Eunice, Ironsides, Togo and U.S.L.
IN Copper Mountain, MINING DISTRICT
Graham County, Arizona

Containing an Area of 314.007 Acres

Scale of 300 Feet to the inch

Variation 1540 E.

STEREED July 23-Aug. 5 1910 BY

Lamar Cobb

U.S. Mineral Survey

The Original Field Notes of the Survey of the Mining Claim of
The Cuprite Copper Co.

known as the Dutch Flat, Jacket, U.S.L., N.E., A. 1000
Blanche, Montezuma, Red Jacket, Togo
Hawell, W. 1000, Cuprite, April Red Jacket
Rille, Eunice, Ironsides, Togo and U.S.L.
IN Copper Mountain, MINING DISTRICT
Graham County, Arizona

from which this plat has been made under my direction
have been examined and approved, and are on file in this office,
and I hereby certify that they furnish such an accurate descrip-
tion of said Mining Claim as will, if incorporated into a patent
serve fully to identify the premises, and that such reference
is made therein to natural objects or permanent monuments
as will perpetuate and fix the locus thereof

I further certify that five Hundred Dollars worth of labor has
been expended on improvements made upon said Mining
Claim, claimant or its grantees, and that
said improvements consist of buildings, fences, and other
improvements, the location of which is shown on this plat.

that the location of said improvements is correctly shown
upon this plat, and that no portion of said labor or im-
provements has been included in the estimate of expense
thereupon any other claim.

And I further certify that this is a correct plat of said Mining
Claim made in conformity with said original field notes of the
survey thereof, and the same is hereby approved.

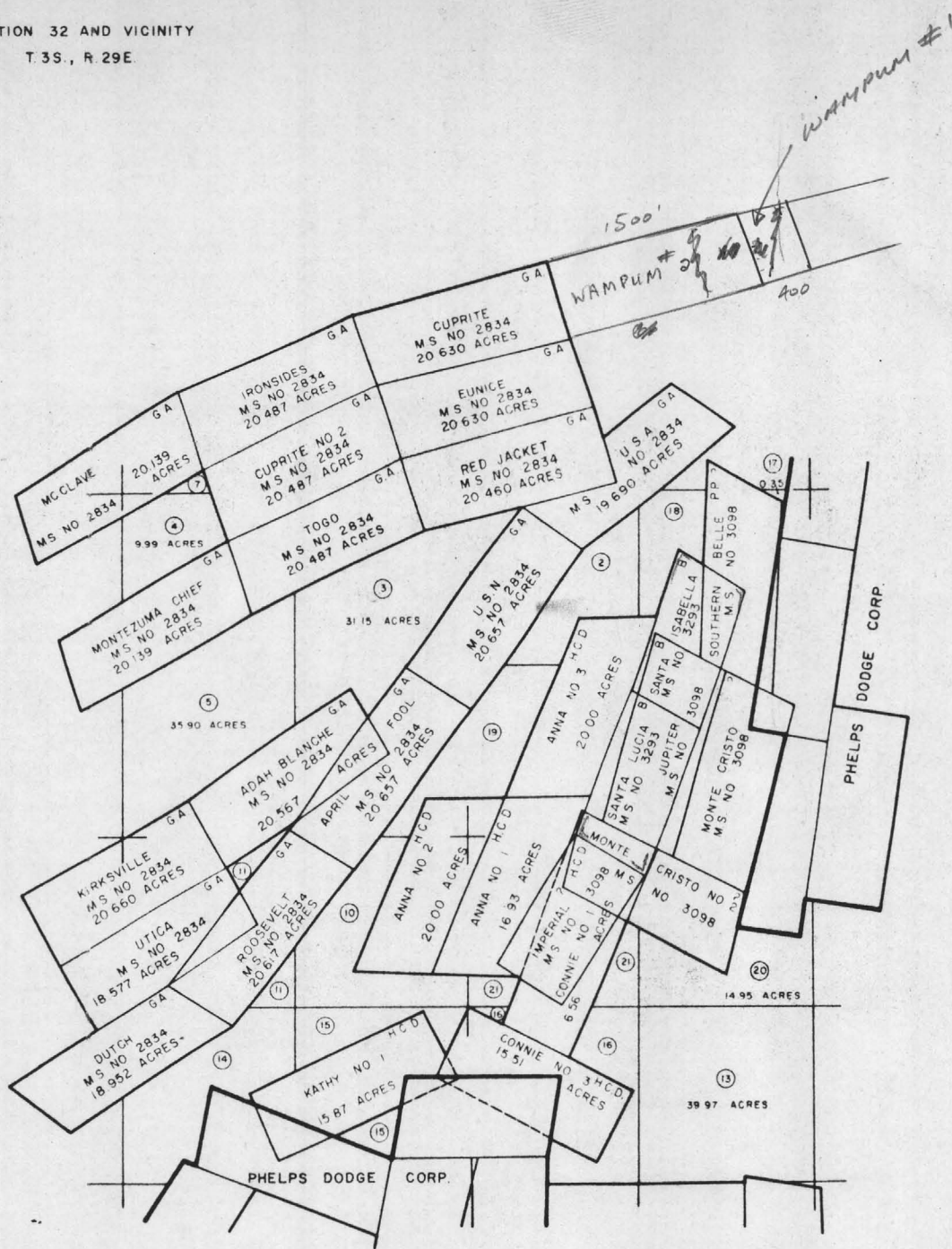
U.S. Surveyor General's Office, Grand Canyon

Phoenix, Ariz.

October 6, 1910

Arizona

SECTION 32 AND VICINITY
T. 3S., R. 29E.



INFORMATION
G.A. - Guy Anderson
Patented Claims
H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims
① - State Lots
P.P.? - Prospecting Permit to H.C.D.
? - May be State Owned
B. - Blanes & Claridge
? - Ownership in Question,
May have reverted to State

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 23, 1970

ATC

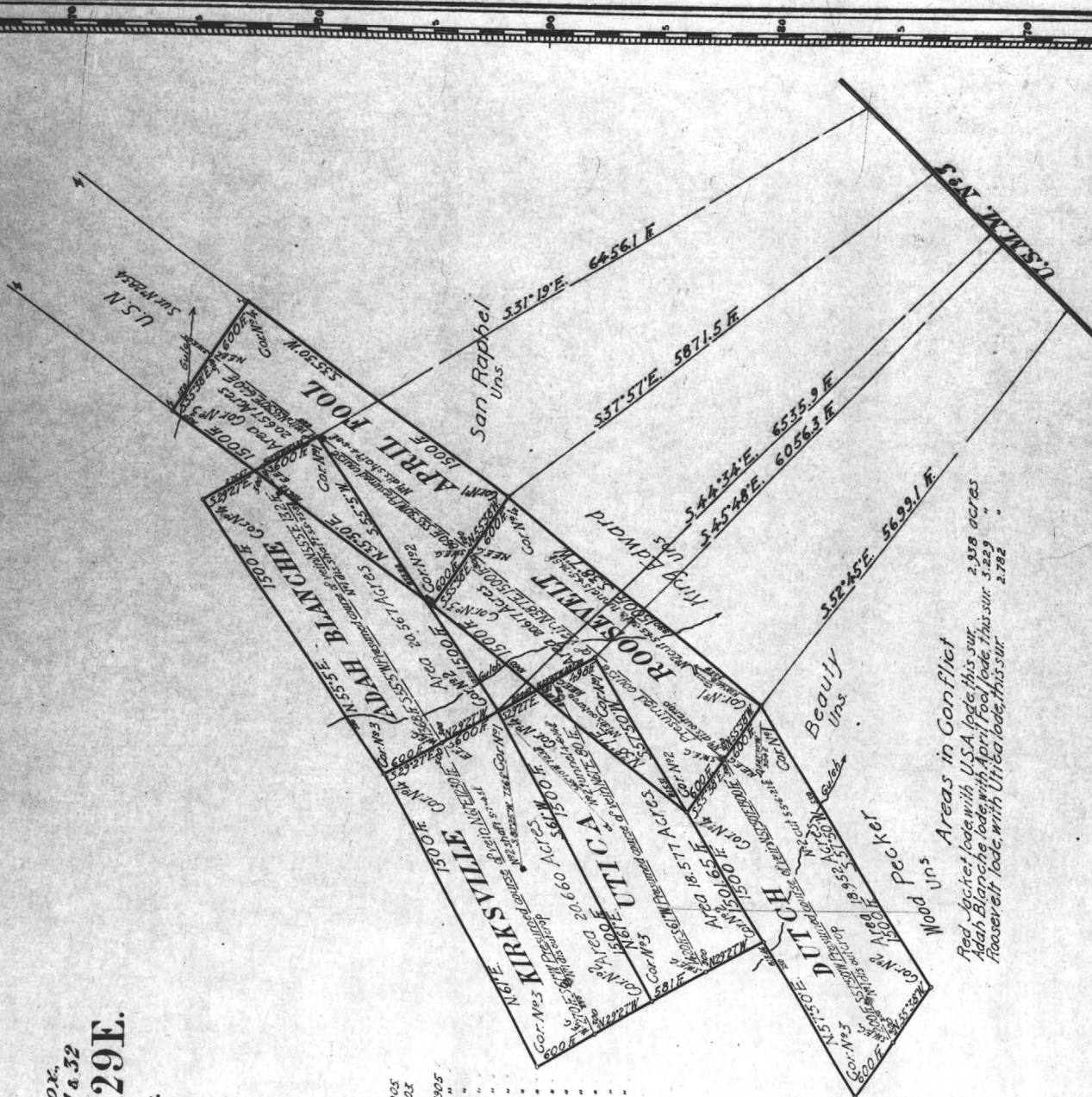
T. Blanes.



Approx.
Secs 29, 31 & 32
T.3S., R.29E.
Uns.

Type	Claims Located
Utica	December 1, 1905
Dutch	March 31, 1903
Red Jacket	December 1, 1905
USA	" "
Adah Blanche	" "
Montezuma Chief	" "
Guy's No 2	" "
Roosevelt	" "
McClure	" "
Cuprite	" "
Adair Pool	" "
Kirkville	" "
Eunice	" "
Ironides	" "

Patent No. 3,184,25
Serial No. 0,124,33
Serial No. 3,3-3,194
Serial No. 3,893,48 (Montezuma Chief)
Serial No. 0,222,96



Areas in Conflict
Adah Blanche lode with USA lode this sur. 2,978 acres
Adah Blanche lode with April Pool lode this sur. 5,229
Roosevelt lode with Utica lode this sur. 2,702

Claims Located see table

Mineral Survey No 2834

Lot No

Land District

PLAT OF THE CLAIM OF

KNOWN AS THE

IN **MINING DISTRICT,**
Containing an Area of **COUNTY,**
Scale of 500 Feet to the inch.
VARIED 190 **BY**
U.S. Mineral Surveyors

The Original Field Notes of the Survey of the Mining Claim of
known as the

from which this plat has been made under my direction, have been examined and approved, and are on file in this office, and I hereby certify that they furnish such accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the locus thereof.
I further certify that Five Hundred Dollars worth of labor has been expended on improvements made upon said Mining Claim, by claimant or grantors, and that said improvements consist of

that the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.
And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.

U.S. Surveyor General's Office.

U.S. Surveyor General for

Mineral Survey No. 2854

Lot No.
Arizona

Land District

PLAT

OF THE CLAIM OF

The Cuprite Copper Co.

KNOWN AS THE

Butch Jacket, U.S.A., U.S.A., Adah, Blanche, Monte, Monte, Cuprite, No. 2, Beaver, No. 1, Cuprite, April, Kinksville, Eunice, Ironsides, Togo and Ute in Copper Mountain, Mining District, Graham County, Arizona.

Containing an area of 314.007 Acres.

Scale of 500 feet to the inch.

Variation 15° 40' E.

STRENGTH July 27-Aug. 5 1910 BY

Lamar Cobb

U.S. Mineral Surveyor.

The Original Field Notes of the Survey of the Mining Claim of

The Cuprite Copper Co.

known as the Butch Jacket, U.S.A., Adah, Blanche, Monte, Monte, Cuprite, No. 2, Beaver, No. 1, Cuprite, April, Kinksville, Eunice, Ironsides, Togo and Ute.

from which this plat has been made under my direction have been examined and approved, and are on file in this office and I hereby certify that they furnish such accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the locus thereof.

I further certify that five hundred dollars worth of labor has been expended or improvements made upon said Mining Claim by claimant or its grantors, and that said improvements consist of substantial improvements, including buildings, cuts and 1,471.7 total value \$20,174.00 (See field notes for details of improvements).

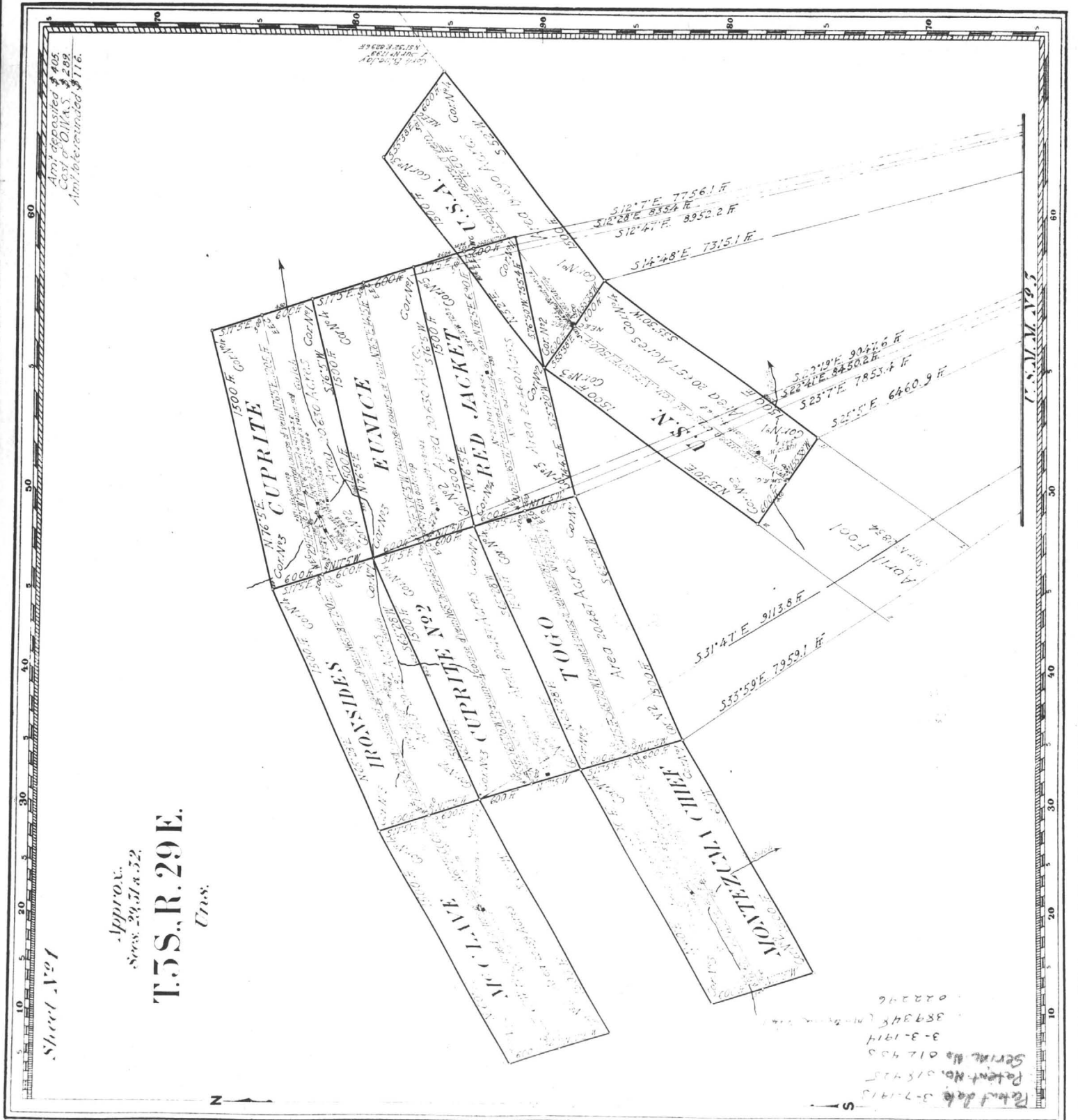
that the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.

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U.S. Surveyor General's Office, Grand Canyon

Phoenix, Ariz.

October 6, 1910 Arizona

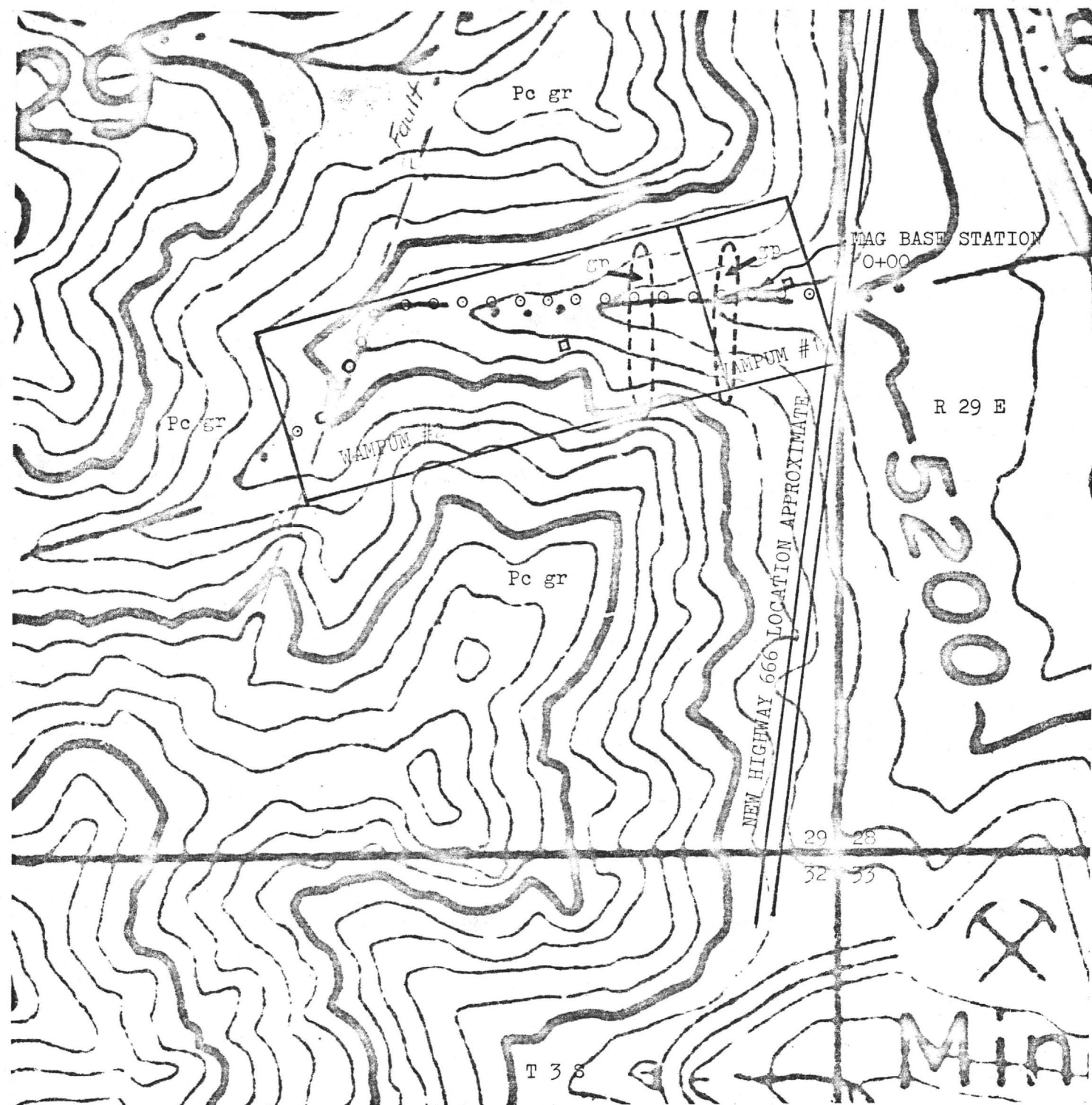


Approx.
Sec. 29, T.5S., R.29E.

T.5S., R.29E.

116.

Patent No. 515,415
Serial No. 403
3-3-1914
389,445 (1st-2nd-3rd-4th-5th-6th-7th-8th-9th-10th-11th-12th-13th-14th-15th-16th-17th-18th-19th-20th-21st-22nd-23rd-24th-25th-26th-27th-28th-29th-30th-31st-32nd-33rd-34th-35th-36th-37th-38th-39th-40th-41st-42nd-43rd-44th-45th-46th-47th-48th-49th-50th-51st-52nd-53rd-54th-55th-56th-57th-58th-59th-60th-61st-62nd-63rd-64th-65th-66th-67th-68th-69th-70th-71st-72nd-73rd-74th-75th-76th-77th-78th-79th-80th-81st-82nd-83rd-84th-85th-86th-87th-88th-89th-90th-91st-92nd-93rd-94th-95th-96th-97th-98th-99th-100th-101st-102nd-103rd-104th-105th-106th-107th-108th-109th-110th-111th-112th-113th-114th-115th-116th-117th-118th-119th-120th-121st-122nd-123rd-124th-125th-126th-127th-128th-129th-130th-131st-132nd-133rd-134th-135th-136th-137th-138th-139th-140th-141st-142nd-143rd-144th-145th-146th-147th-148th-149th-150th-151st-152nd-153rd-154th-155th-156th-157th-158th-159th-160th-161st-162nd-163rd-164th-165th-166th-167th-168th-169th-170th-171st-172nd-173rd-174th-175th-176th-177th-178th-179th-180th-181st-182nd-183rd-184th-185th-186th-187th-188th-189th-190th-191st-192nd-193rd-194th-195th-196th-197th-198th-199th-200th-201st-202nd-203rd-204th-205th-206th-207th-208th-209th-210th-211st-212nd-213rd-214th-215th-216th-217th-218th-219th-220th-221st-222nd-223rd-224th-225th-226th-227th-228th-229th-230th-231st-232nd-233rd-234th-235th-236th-237th-238th-239th-240th-241st-242nd-243rd-244th-245th-246th-247th-248th-249th-250th-251st-252nd-253rd-254th-255th-256th-257th-258th-259th-260th-261st-262nd-263rd-264th-265th-266th-267th-268th-269th-270th-271st-272nd-273rd-274th-275th-276th-277th-278th-279th-280th-281st-282nd-283rd-284th-285th-286th-287th-288th-289th-290th-291st-292nd-293rd-294th-295th-296th-297th-298th-299th-300th-301st-302nd-303rd-304th-305th-306th-307th-308th-309th-310th-311st-312nd-313rd-314th-315th-316th-317th-318th-319th-320th-321st-322nd-323rd-324th-325th-326th-327th-328th-329th-330th-331st-332nd-333rd-334th-335th-336th-337th-338th-339th-340th-341st-342nd-343rd-344th-345th-346th-347th-348th-349th-350th-351st-352nd-353rd-354th-355th-356th-357th-358th-359th-360th-361st-362nd-363rd-364th-365th-366th-367th-368th-369th-370th-371st-372nd-373rd-374th-375th-376th-377th-378th-379th-380th-381st-382nd-383rd-384th-385th-386th-387th-388th-389th-390th-391st-392nd-393rd-394th-395th-396th-397th-398th-399th-400th-401st-402nd-403rd-404th-405th-406th-407th-408th-409th-410th-411st-412nd-413rd-414th-415th-416th-417th-418th-419th-420th-421st-422nd-423rd-424th-425th-426th-427th-428th-429th-430th-431st-432nd-433rd-434th-435th-436th-437th-438th-439th-440th-441st-442nd-443rd-444th-445th-446th-447th-448th-449th-450th-451st-452nd-453rd-454th-455th-456th-457th-458th-459th-460th-461st-462nd-463rd-464th-465th-466th-467th-468th-469th-470th-471st-472nd-473rd-474th-475th-476th-477th-478th-479th-480th-481st-482nd-483rd-484th-485th-486th-487th-488th-489th-490th-491st-492nd-493rd-494th-495th-496th-497th-498th-499th-500th-501st-502nd-503rd-504th-505th-506th-507th-508th-509th-510th-511st-512nd-513rd-514th-515th-516th-517th-518th-519th-520th-521st-522nd-523rd-524th-525th-526th-527th-528th-529th-530th-531st-532nd-533rd-534th-535th-536th-537th-538th-539th-540th-541st-542nd-543rd-544th-545th-546th-547th-548th-549th-550th-551st-552nd-553rd-554th-555th-556th-557th-558th-559th-560th-561st-562nd-563rd-564th-565th-566th-567th-568th-569th-570th-571st-572nd-573rd-574th-575th-576th-577th-578th-579th-580th-581st-582nd-583rd-584th-585th-586th-587th-588th-589th-590th-591st-592nd-593rd-594th-595th-596th-597th-598th-599th-600th-601st-602nd-603rd-604th-605th-606th-607th-608th-609th-610th-611st-612nd-613rd-614th-615th-616th-617th-618th-619th-620th-621st-622nd-623rd-624th-625th-626th-627th-628th-629th-630th-631st-632nd-633rd-634th-635th-636th-637th-638th-639th-640th-641st-642nd-643rd-644th-645th-646th-647th-648th-649th-650th-651st-652nd-653rd-654th-655th-656th-657th-658th-659th-660th-661st-662nd-663rd-664th-665th-666th-667th-668th-669th-670th-671st-672nd-673rd-674th-675th-676th-677th-678th-679th-680th-681st-682nd-683rd-684th-685th-686th-687th-688th-689th-690th-691st-692nd-693rd-694th-695th-696th-697th-698th-699th-700th-701st-702nd-703rd-704th-705th-706th-707th-708th-709th-710th-711st-712nd-713rd-714th-715th-716th-717th-718th-719th-720th-721st-722nd-723rd-724th-725th-726th-727th-728th-729th-730th-731st-732nd-733rd-734th-735th-736th-737th-738th-739th-740th-741st-742nd-743rd-744th-745th-746th-747th-748th-749th-750th-751st-752nd-753rd-754th-755th-756th-757th-758th-759th-760th-761st-762nd-763rd-764th-765th-766th-767th-768th-769th-770th-771st-772nd-773rd-774th-775th-776th-777th-778th-779th-780th-781st-782nd-783rd-784th-785th-786th-787th-788th-789th-790th-791st-792nd-793rd-794th-795th-796th-797th-798th-799th-800th-801st-802nd-803rd-804th-805th-806th-807th-808th-809th-810th-811st-812nd-813rd-814th-815th-816th-817th-818th-819th-820th-821st-822nd-823rd-824th-825th-826th-827th-828th-829th-830th-831st-832nd-833rd-834th-835th-836th-837th-838th-839th-840th-841st-842nd-843rd-844th-845th-846th-847th-848th-849th-850th-851st-8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MAGNETOMETER SURVEY ASKANIA TORSION BALANCE
VERTICAL INTENSITY

Pc gr PRE-CAMBRIAN GRANITE FOR ASSESSMENT YEAR 1971/1972
gp GRANITE PORPHYRY ☐ LOCATION MONUMENT
☐ MAGNETIC STATION

WAMPUM CLAIM GROUP

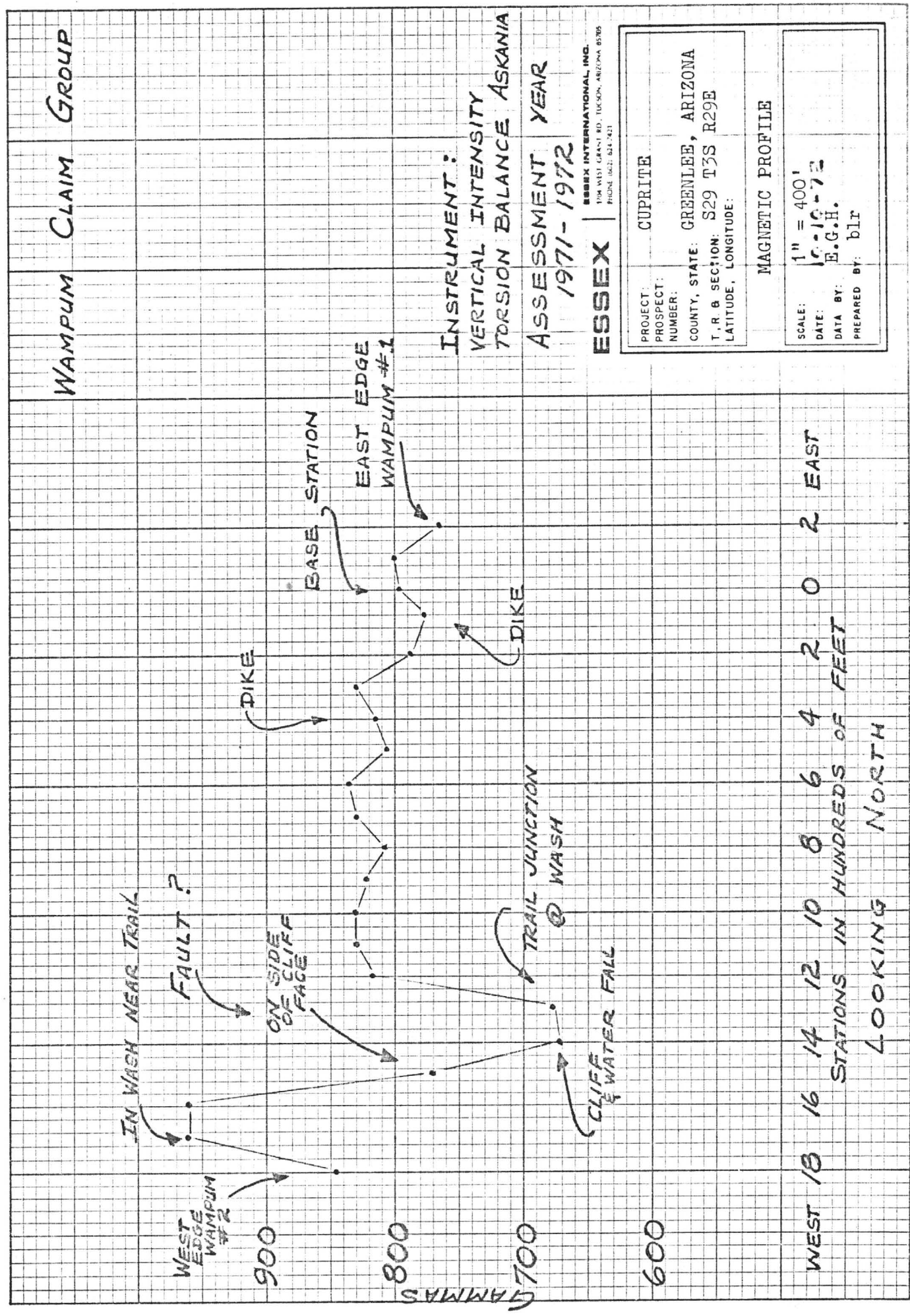
ESSEX

ESSEX INTERNATIONAL, INC.
1704 WEST GRANT RD., TUCSON, ARIZONA 85705
PHONE (602) 624-7421

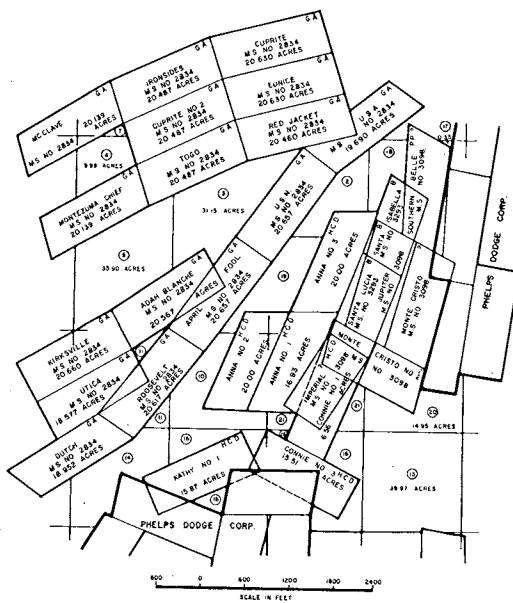
PROJECT: MORENCI AREA
PROSPECT: MORENCI AREA
NUMBER:
COUNTY, STATE
T. R. & SECTION: S29 T3S-R29E
LATITUDE, LONGITUDE:

MAGNETICS & GEOLOGY

SCALE: 1" = 500'
DATE:
DATA BY: G. Heinrichs
PREPARED BY: blr



SECTION 32 AND VICINITY
T.3S., R.29E.



INFORMATION

G.A. - Guy Anderson
Packed Claims

H.C.D. - H. Clyde Davis et al
State Lease Claims &
State Prospecting Claims

① - State Lots

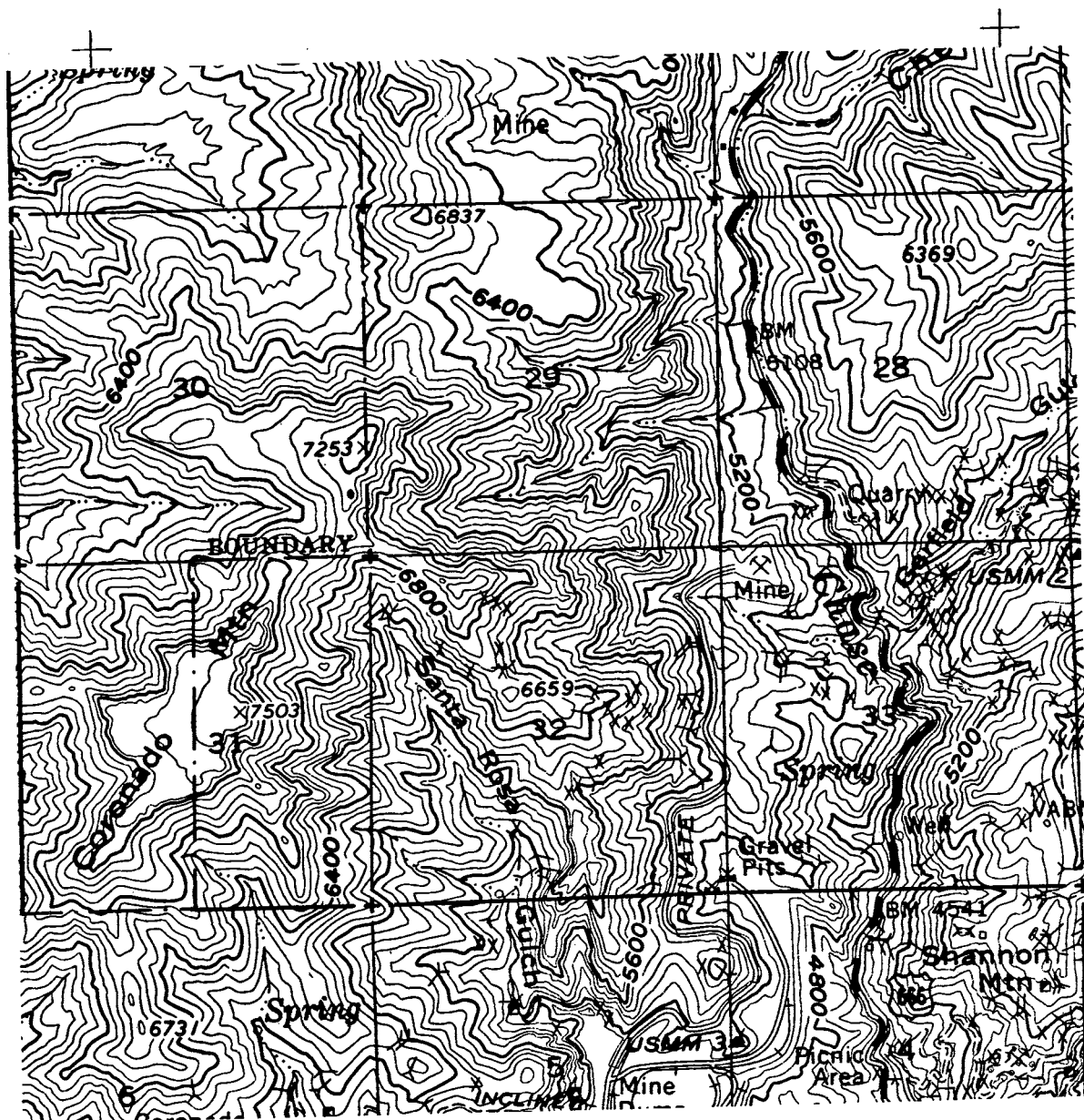
P.P.? - Prospecting Permit to H.C.D.
May be State Owned

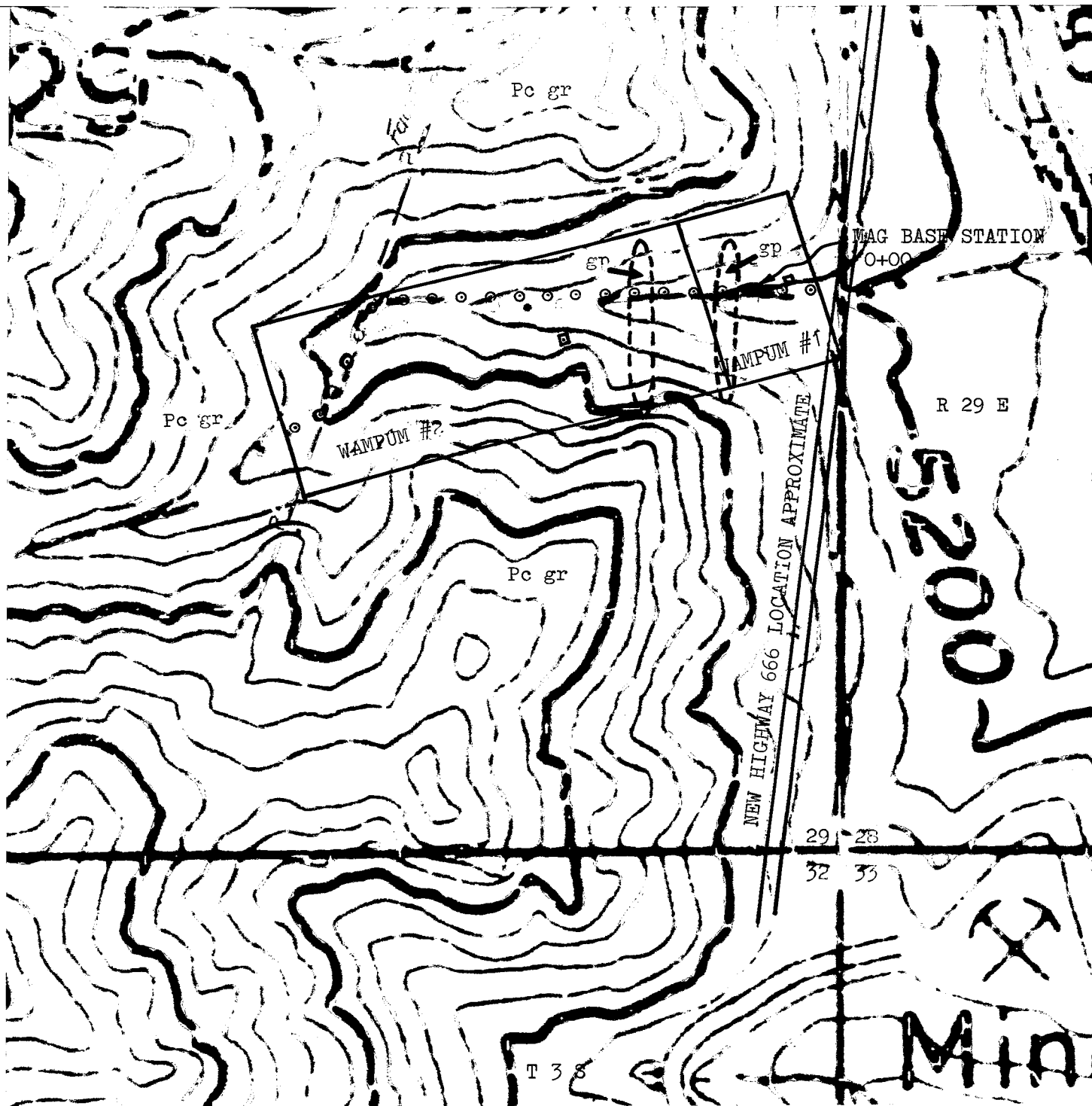
B. - Baines & Claridge
B. — Ownership in Question,
May have reverted to State

LAND STATUS
CUPRITE PROSPECT
GREENLEE COUNTY, ARIZONA
ESSEX INTERNATIONAL, INC.

DATE: NOV. 23, 1970

ATC





MAGNETOMETER SURVEY ASKANIA TORSION BALANCE
VERTICAL INTENSITY

Pc gr PRE-CAMBRIAN GRANITE FOR ASSESSMENT YEAR 1971/1972

gp GRANITE PORPHYRY

□ LOCATION MONUMENT

○ MAGNETIC STATION

WAMPUM CLAIM GROUP

ESSEX

ESSEX INTERNATIONAL, INC.
1704 WEST GRANT RD., TUCSON, ARIZONA 85705
PHONE (602) 624-7421

PROJECT:
PROSPECT: MORENCI AREA
NUMBER:
COUNTY, STATE
T., R. & SECTION: S29 T3S-R29E
LATITUDE, LONGITUDE:

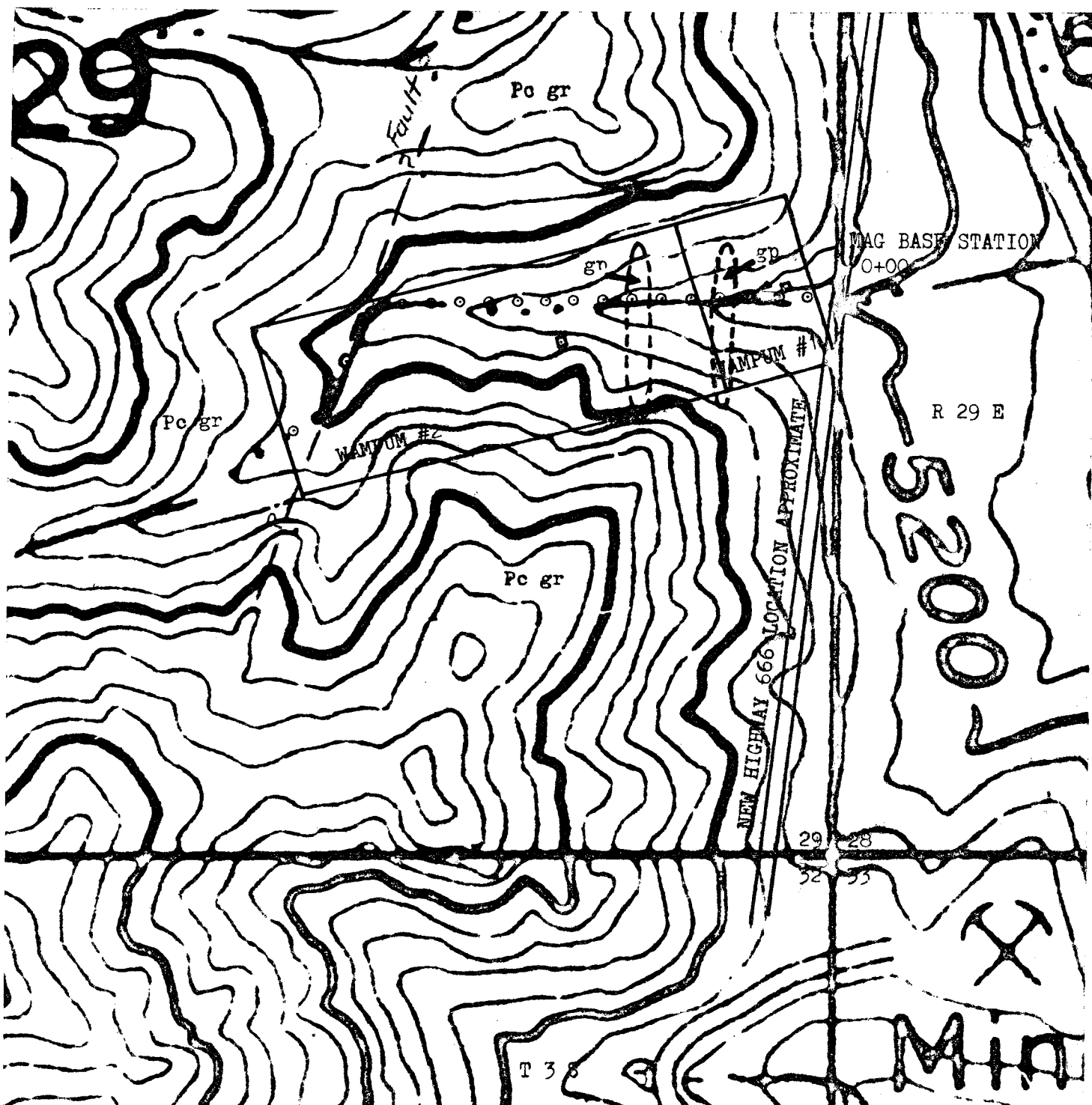
MAGNETICS & GEOLOGY

SCALE: 1" = 500'

DATE:

DATA BY: G. Heinrichs

PREPARED BY: blr



MAGNETOMETER SURVEY ASKANIA TORSION BALANCE
VERTICAL INTENSITY

Pc gr PRE-CAMBRIAN GRANITE
gp GRANITE PORPHYRY

FOR ASSESSMENT YEAR 1971/1972

☐ LOCATION MONUMENT
◎ MAGNETIC STATION

WAMPUM CLAIM GROUP

ESSEX

ESSEX INTERNATIONAL, INC.
1704 WEST GRANT RD., TUCSON, ARIZONA 85703
PHONE (602) 624-7421

PROJECT:
PROSPECT: MORENCI AREA
NUMBER:
COUNTY, STATE: GRAHAM, ARIZONA
T. R. & SECTION: S29 T3S-R29E
LATITUDE, LONGITUDE:

MAGNETICS & GEOLOGY

SCALE: 1" = 500'
DATE:
DATA BY: G. Heinrichs
PREPARED BY: blr

GEOLOGICAL-GEOPHYSICAL REPORT
FOR
AFFIDAVIT OF LABOR PERFORMED

This report is for the purpose of outlining the nature and extent of geologic work done on the unpatented mining claims known as the Wampum Claim Group located in Section 29 T.3S, R.29E, Greenlee County, Arizona.

The work done on the above described property was performed as a requirement for annual labor for the period of September 1, 1971 to September 1, 1972 and consisted of geologic mapping.

The cost of work done was in excess of \$200.00 and fulfills the requirements of assessment work as prescribed by the statutes of the State of Arizona and the United States of America.

The geologic work was done for and at the expense of Essex International, Inc. by Paul I. Eimon, Essex Manager of Exploration, and the geophysical work was done for and at the expense of Essex International, Inc. by E. Grover Heinrichs, Essex Assistant Manager of Exploration, both residents of Tucson, Arizona, and can be contacted at 1704 W. Grant Road, Tucson, Arizona 85705.

All the above personnel are qualified by many years of experience or education or both, to conduct such work.

Basic findings are as follows:

Geological

The Wampum Claims are occupied predominantly by Pre-Cambrian granite having northeasterly trending jointing pattern and a dark reddish brown color interspersed with occasional zones of lightish green colored rock of the same type.

Two northerly trending granite porphyry dikes or elongated lenses about 60' wide and 600' long, occur at the west end line of Wampum #1 and east end line of Wampum #2.

Geophysical

A vertical intensity torsion balance Askania tripod type magnetometer was used to observe a line of 21 observations with approximately 100' between stations. The magnetic gradient varied from a high of 960 γ to a low of 770 γ .


The initial 15 observations starting at the east end line of Wampum #1 and proceeding westerly up a dry wash had rather minor fluctuations of magnetic gradient of up to 70 γ with a gradually increasing gradient to the west.

At station 13 west the magnetic gradient drops 140 ✓ , at station 16 W. This appears to be a magnetic expression of a north-easterly trending fault that disects the Wampum #2 at its westerly edge.

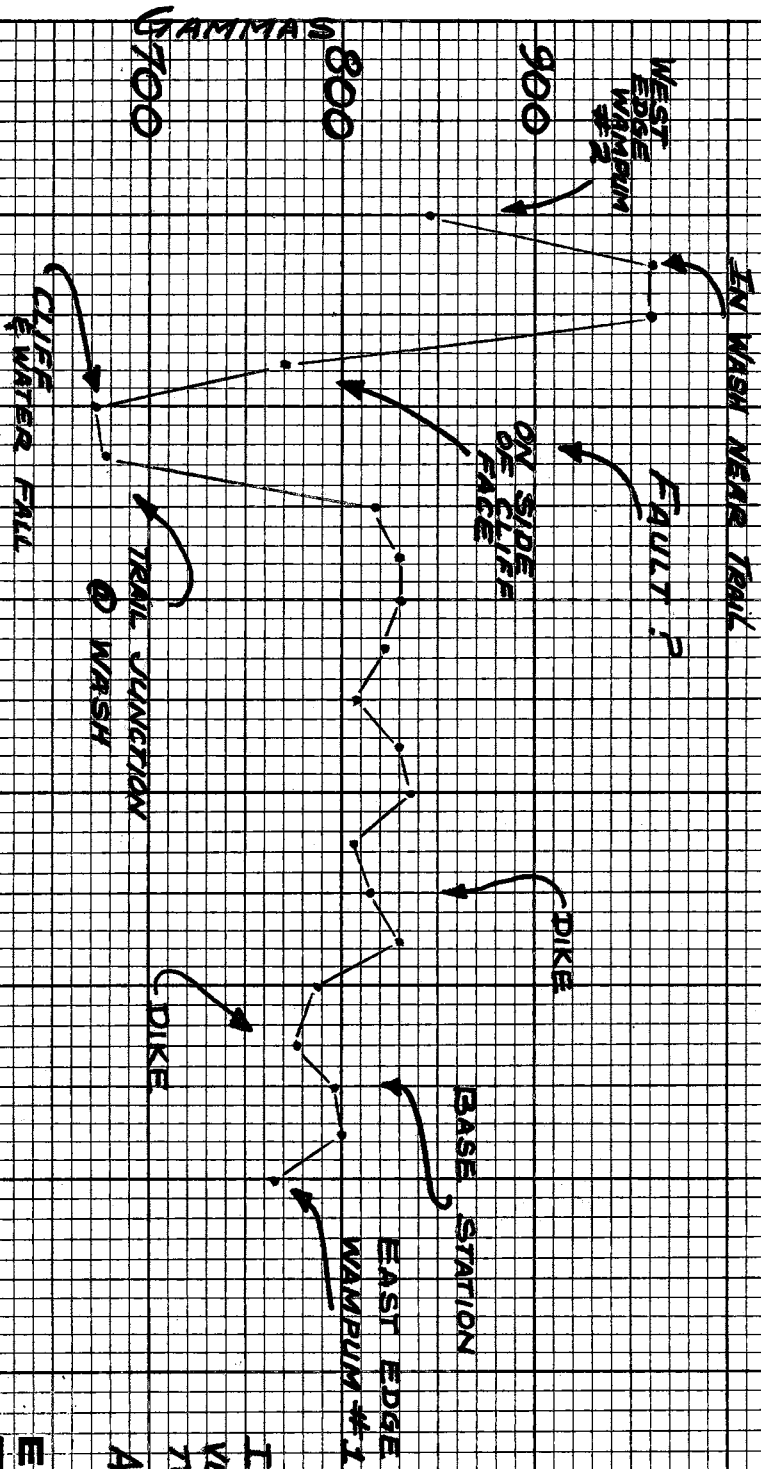
The attached sketch map and magnetic profile indicate the location and nature of the work performed upon subject claims relative to the claim boundaries and posted location notice.

ESSEX INTERNATIONAL, INC.


E. Grover Heinrichs


Paul I. Eimon

WAMPUM CLAIM GROUP



WEST 18 16 14 12 10 8 6 4 2 0 2 EAST
STATIONS IN HUNDREDS OF FEET
LOOKING NORTH

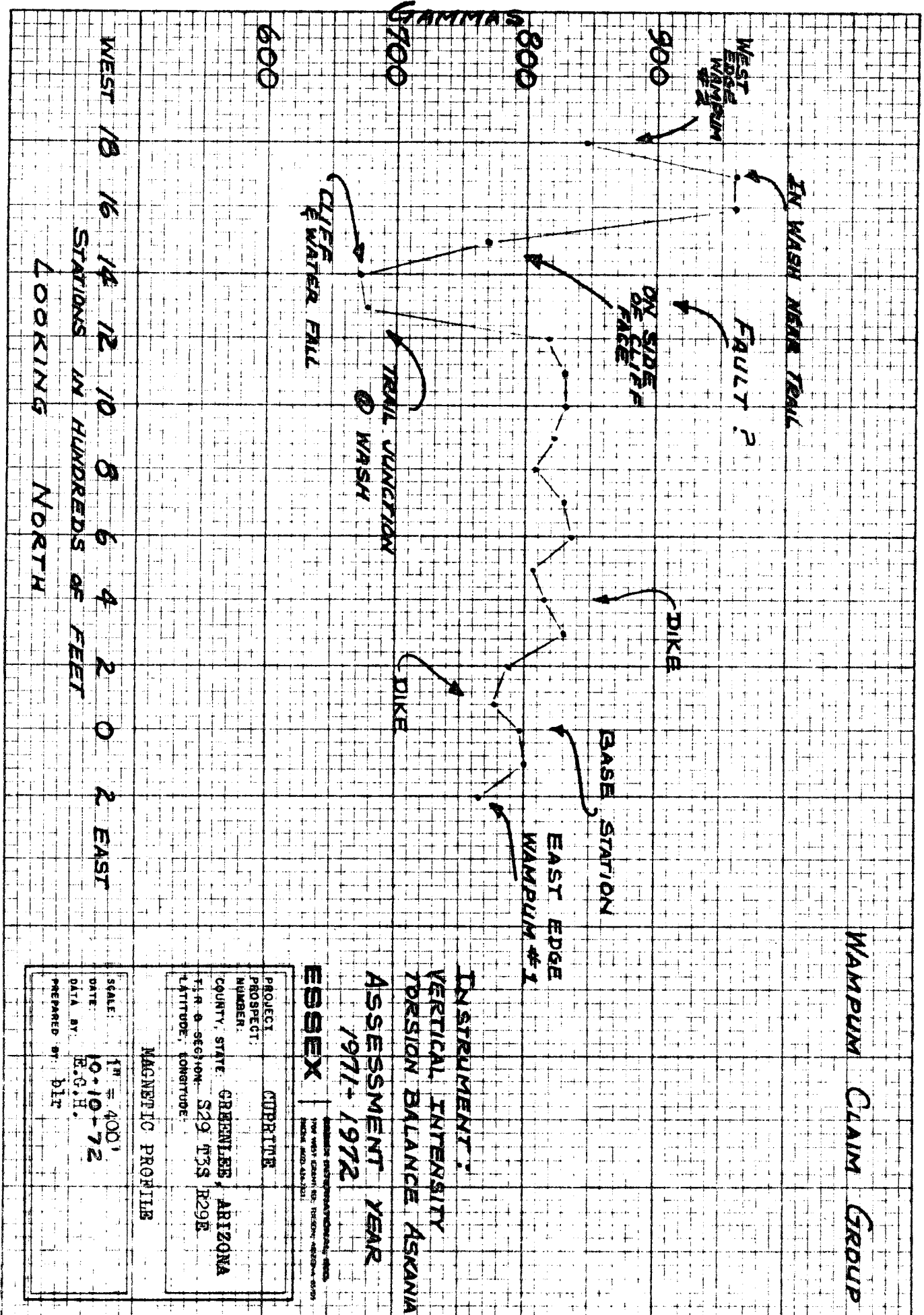
INSTRUMENT:
VERTICAL INTENSITY
TORSION BALANCE ASKANIA
ASSESSMENT YEAR
1971-1972

ESSEX
ESSEX INTERNATIONAL, INC.
700 WEST GAVITT RD. - TUCSON, ARIZONA 85705
PHONE (602) 644-2021

PROJECT:	CURRYTINE
PROSPECT NUMBER:	
COUNTY, STATE:	GREENLEE, ARIZONA
T-R & SECTION:	S29 T35 R29E
LATITUDE, LONGITUDE:	

MAGNETIC PROFILE

SCALE:	1" = 400'
DATE:	10-10-72
DATA BY:	D.G.H.
PREPARED BY:	D.L.T.



GEOLOGICAL-GEOPHYSICAL REPORT
FOR
AFFIDAVIT OF LABOR PERFORMED

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At station 13 west the magnetic gradient drops 140 γ , at station 16 W. This appears to be a magnetic expression of a north-easterly trending fault that dissects the Wampum #2 at its westerly edge.

The attached sketch map and magnetic profile indicate the location and nature of the work performed upon subject claims relative to the claim boundaries and posted location notice.

ESSEX INTERNATIONAL, INC.


E. Grover Heinrichs


Paul I. Eimon

GEOLOGICAL, GEOPHYSICAL, &
GEOCHEMICAL REPORT
FOR
AFFIDAVIT OF LABOR PERFORMED

This report is for the purpose of outlining the extent and nature of work done on the Arizona State Land contained in Lease Number M-3021 in Sec. 32, T.3S., R.29E., Greenlee County, Arizona.

The work done on the above described property was performed to fulfill the requirements for annual labor for the period of Feb. 6, 1971 through Feb. 6, 1972 and consisted of geologic mapping, magnetic surveys, induced polarization surveys, and geochemical sampling.

The cost of the work done was in excess of \$100.00 and completes the requirements of assessment work as prescribed by the statutes of the State of Arizona.

The geologic work was done by Dirk DenBaars (geological consultant), and by Paul Eimon, Essex Manager of Exploration.

The geophysical and geochemical work was done by Heinrichs Geoexploration Co. under the supervision of Paul Head, Project Geophysicist, and William Freeman, Geophysicist, employees of Heinrichs Geoexploration Co. All the above described work was done for and at the expense of Essex International, Inc. and under the general supervision of Paul Eimon, and assisted by E. Grover Heinrichs, both employees of Essex International, Inc.

Basic Findings

Geological

The dominant rock in the area is pre-Cambrian granite. To the north and northwest the granite is overlain by Coronado Quartzite, a coarse to fine-grained banded quartzitic-sandstone which varies in color from light gray to dark brown. These quartzites were briefly examined for possible copper mineralization, but none was observed. A faulted block of Ordovician, Devonian and Mississippian limestones overlays the Coronado quartzite to the north and east. Post pre-Cambrian igneous rocks are few and of minor significance in the northern part of the area.

GEOLOGICAL, GEOPHYSICAL, &
GEOCHEMICAL REPORT
FOR
AFFIDAVIT OF LABOR PERFORMED

This report is for the purpose of outlining the extent and nature of work done on the Arizona State Land contained in Lease Number M-3022 in Sec. 32, T.3S., R.29E., Greenlee County, Arizona

The work done on the above described property was performed to fulfill the requirements for annual labor for the period of Feb. 6, 1971 through Feb. 6, 1972 and consisted of geologic mapping, magnetic surveys, induced polarization surveys, and geochemical sampling.

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Basic Findings

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GEOLOGICAL, GEOPHYSICAL, &
GEOCHEMICAL REPORT
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AFFIDAVIT OF LABOR PERFORMED

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Geological - continued

A diabase dike striking northerly was exposed in the new road cut along the sectionline 28/29, dipping steeply east. Several narrow lenses of monzonite porphyry and granite porphyry were mapped in the claim area, striking north to northwest as indicated on the map. Sheeting or jointing in the pre-Cambrian granite is predominantly N 45-50° E in the S-1/2 of Section 29. The pre-Cambrian granite is mostly brown and reddish brown in color, and coarse grained with feldspars of up to 8 mm not uncommon. The red color is due to the iron oxide content, while several joint fillings were observed of hematite and manganese oxides. In other outcrops, the pre-Cambrian granite is gray to light green in color and apparently lacking the iron oxide impregnation which may be of secondary nature. The iron content of the pre-Cambrian granite is obviously not derived from the oxidation and alteration of sulphides, since no typical gossan type sulphide "bod works" can be observed anywhere in the pre-Cambrian granite in the area mapped, except where sulphides were introduced associated with the Laramide intrusive porphyrys which occur further south and southeast in Section 32.

Geophysical

Magnetics

The granite in the area is typified by highly variable station-to-station magnetic effects which cannot be properly contoured between lines. There were no very strong magnetic effects which could be related to magnetic deposition of any significance. Two magnetic features were observed:

- 1) A magnetic anomaly was observed at the north end of Anna No. 2 (M-3022), which is possibly associated with a tongue of Laramide quartz monzonite.
- 2) A level change extending from the Kathy No. 1 (M-3050), S.W. corner, N. 35 E. to south part of Anna No. 1 (M-3021), which might relate to a monzonite intrusion.

Induced Polarization

Observations

Four weak anomalous zones of frequency effects were observed, and some correlation appears to exist between some of the frequency effects and the magnetic level change.

Induced Polarization - Observations - continued

The I.P. data on hand is not sufficient to make a good appraisal of size and depth of the polarizing bodies causing the observed anomalies. The general impression is that they are tabular bodies coming within 200 feet of the surface and possibly outcropping.

The apparent resistivity data obtained in conjunction with the I.P. seems consistent with the overall "grain" of the other types of data obtained. This is probably not completely true as the contours are strongly influenced by the line spacing and there are no gross background or level changes which can be used as a guide to the grain of the geology.

The resistivity data quality is compromised by extreme topographic effects and the skewed orientation of the electrode and receiver arrays, therefore the metallic conduction factors were disregarded.

Self potential data were obtained in conjunction with the I.P. survey and no variations greater than 30 millivotes were observed between stations.

Geochemical

Sixty-five samples were collected and analyzed for copper and molybdenum, using standard sampling techniques. Analyses were by atomic absorption spectroscopy for copper, and colorimetric organic extraction for molybdenum.

The copper determinations varied from a low of 20 ppm to a high of 10,900 ppm. Molybdenum determinations varied from a low of less than 1 ppm to a high of 43 ppm.

By: ESSEX INTERNATIONAL, INC.

E. Grover Heinrichs
Assistant Manager Exploration

Cuprite Mine

PRELIMINARY EXAMINATION OF CUPRITE GROUP OF CLAIMS

By: Vance Bacon, April, 1960

SUMMARY

The Cuprite Group of sixteen patented mining claims is located approximately three miles north of the Morenci Open Pit Mine. Pre-cambrian granites have been intruded by Early tertiary diabase and by monzonite porphyry. Widely spaced veins and veinlets containing iron oxides, quartz, and occasionally chrysocolla may be seen outcropping at various places on all the claims. The general trend of the mineralization is to the northeast although some intersection of fault veins is occasionally indicated.

All previous workings on the claims have been of very limited extent, the greatest amount having been done on the Cuprite claim. Some excellent gossan and ore specimens were found in abundance on the dump on this claim. The underground workings were not easily accessible at the time of this examination, however the surface indications coupled with the favorable appearance of the dump material tend to suggest good possibilities for ore for a considerable length along a mineralized fault zone.

Favorable gossan also appears along fault veins on the Montezuma Chief, Roosevelt, and Dutch claims.

There seems little doubt that some ore is present on the claims: the principal problem is development to determine the amount. Some drilling in conjunction with drifting off the present underground workings, would be necessary to determine the grade and vertical extent of the enriched zone and of the overlying oxidized ore zone.

LOCATION:

The claims are situated in Sections 29, 30, 31, and 32, township 3 South, Range 20 East, G & S R M. They are about five miles northerly from the town of Morenci. Access to the Cuprite Mine may be gained by driving up U. S. 666 to the first large gulch heading west beyond the Garfield Lime Quarry. This is about 8.2 miles by road from the Clifton Post Office. By walking about 4,000 feet up this gulch from the highway the mine may be reached. Access to other claims in the group may be gained by hiking from the Cuprite Claim or by walking up Santa Rosa Gulch (the lower portions of which are covered by waste dumps from the Morenci Mine).

The Cuprite claim is about a mile northwesterly from the Molinar (or Black Cat) Mine in Garfield Gulch. This was the most recent producing small mine in the immediate vicinity; it was closed in 1956.

HISTORY:

The claims were located from 1902 to 1905. They were surveyed for patent in July and August of 1910 by Lamar Cobb for the Cuprite Copper Co. A total of \$20,174.00 worth of work was claimed on the patent application. This consisted of 5 tunnels, 2 winzes, 2 crosscuts, 11 shafts, 1 raise, 5 cuts, and 1 drift. As near as could be determined from this examination, no work has been done since patent (No. 2834) was granted.

Most of the work appears on the Cuprite and the Montezuma Chief. 217 feet of tunnels and 521 feet of shafts, winzes, and raises were claimed on the Cuprite. 156 feet of tunnels, drifts, and cuts and 115 feet of shafts were claimed on the Montezuma Chief.

It is said that some ore was shipped from the Cuprite claim, although no records were available on tonnage or grade.

The Coronado Mine, situated about a mile south of the southerly portion of the claims, was once one of the major producers in the district and still contains a large tonnage of ore.

GEOLOGY:

An original basement of pre-cambrian granite has been first intruded by dikes of a slightly younger granite than by aplitic granites. Both of the younger intrusive granites are believed to also be pre-Cambrian in age. The entire area is presumed to have at one time been covered by the normal column of Permozoic rocks found elsewhere in the district. During late cretaceous or early tertiary time (about 70,000,000 years ago), the area was again intruded by igneous rocks, this time by diabase and by monzonite porphyry. Some faulting accompanied this intrusion. Almost simultaneously, but slightly

following this came the hydrothermal mineralizing solutions which caused the mineralization that is now indicated along the various fault zones intersecting the claim area.

A period of erosion followed the mineralization and resulted in the removal of the entire column of Paleozoic sedimentary rocks. Some oxidation, leaching, and redeposition has occurred during the erosional activity and resulted in a zone of enriched sulfide mineralization below a near-surface zone of oxide mineralization.

The fault veins in the claim area contain considerable breccia and some slickensides. Their displacement is unknown, but is probably not great. They are all connected, by various minor slips and dislocations, to two major mineralized faults of the district -- the Coronado Fault, to the South, and the Chaco Creek Fault to the east.

Although the pyritic mineralization which has followed the faults in this area could reasonably be expected to persist at depth and even become stronger, the zone containing the enrichment normally could not be expected to extend more than about 200 feet below the bottom of the oxide zone in this environment. Several of the mineralized fault zones on the claims occasionally widen, but in most instances the strength of mineralization diminishes in proportion to its distance from the main portion of the fault vein.

The topography of the area is extremely rugged, the elevation ranging from about 5,000 feet above sea level at the highway to over 7,000 feet less than a mile to the west on the Togo claim.

In general the granite is not greatly altered and has a rather blocky to angular appearance. On the Dutch and Montezuma Chief claims, however, there has been a general bleaching of the granite in areas measuring over 100 to 400 feet.

MINERALIZATION:

Several widely spaced, northeasterly trending, faults and fractures have been mineralized by hydrothermal solutions, resulting in a deposition of pyrite and chalcopyrite along veins and in places disseminated into the surrounding wall rock. The fault vein upon which the Cuprite and the Ironsides claims were located may be traced for a distance of over 3,000 feet, although exposures are limited over much of this length due to a thin cover of talus over the hillsides. The surface exposures in the vicinity of the Cuprite Mine show the width of the fault zone varying from two to ten feet. Considerable brecciation (cemented by quartz and iron oxides) is in evidence. No Copper minerals are visible on the surface due to the effects of leaching and oxidation. Much of the cupping, however, appears quite favorable.

A study of the dump material at the Cuprite indicates most of the old workings were in the oxidized zone. The dumps contain strong iron oxide, considerable chrysocolla and cuprite, and a rather limited amount of sulfides (mostly pyrite and minor chalcopyrite with some enrichment by chalcocite). The sulfides are assumed to have been mined from the deepest shaft (which had a depth of 450 feet). Many of the pieces of mineralized granite and porphyry on the dump exhibit disseminated coarse blebs of iron oxide and cuprite with weak to moderate chrysocolla staining the kaolinized matrix. A random sample of an average piece of this material gave an assay of 4.22% copper, .69 oz. silver, and .13 oz. gold. Many pieces containing a much higher percentage of copper were in abundance throughout the dump area, but none were taken for assay.

From the surface indications, it appears that a possible ore zone may be expected for a length of over 1,000 feet, a width averaging perhaps 2 feet and a vertical extent of perhaps 100 feet consisting of both oxides and sulfides.

Since the amount and extent of chalcocite enrichment will be the determining factor of the amount of ore existing in the sulfide zone, it will be necessary to reopen the old workings and drill exploratory test holes from underground stations.

Another area which has possibilities for containing some ore is a zone of

intersection between two mineralized fault zones which may be found near the center of the Dutch claim. One of the fault veins may be traced for 2,500 feet east into the Gem claim where some excellent ore is visible on the dumps. The other fault vein strikes northeasterly through the Roosevelt claim. Both of these fault veins contain nearly continuous favorable iron oxide gossan along their entire length. A small caved working is in evidence on the Roosevelt claim, however the dump indicates that this working was entirely in the oxidized zone and shows only iron oxides (hematite, limonite, magnetite). At this working the fault zone is about eight feet wide and has a steep dip (about 85°) to the southeast. In the vicinity of intersection of these two fault veins, numerous intersecting iron oxide veinlets may be found on the surface over an area measuring about 150 by 400 feet. A zone of $\frac{1}{2}$ % copper mineralization averaging at least 100 feet thick could reasonably be expected in the enriched portion of the sulfide zone under this capping. The major fault veins would be expected to average considerably higher grade, of course.

The nearby Daisy and Gem claims were both good producers at one time in the history of the district.

The dumps from the workings on the Montezuma Chief show a considerable amount of chrysocolla. Only minor amounts of iron oxides and cuprite are present. This mineralization, also, has occurred along a northeasterly trending fault zone. Although a zone of fracturing and weak mineralization measuring perhaps 200 by 400 feet surrounds these workings, the mineralization does not appear of sufficient strength to make ore averaging much over 0.7% copper except along the major fault zone. Even here, the width of the fault is insufficient to provide possibilities for a commercially feasible mining operation.

CONCLUSIONS AND RECOMMENDATIONS:

Although there are no open pit ore possibilities indicated either on or near this group of claims, the aforementioned mineralized fault veins do offer definite possibilities for developing limited tonnages of commercial copper ore. It should be pointed out that mineralized rock which could, in localities closer to a railroad,

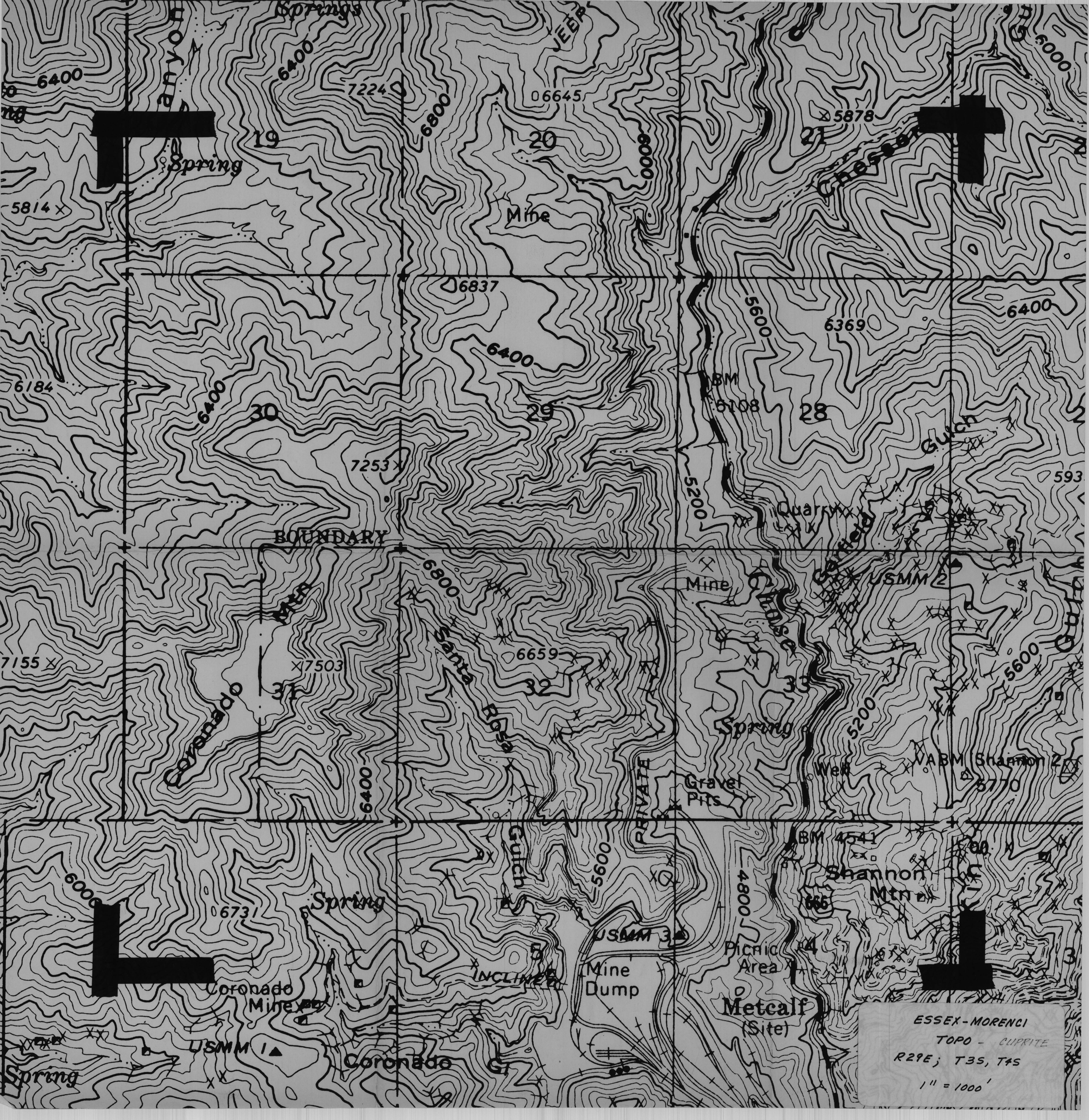
be classified as "ore" could not qualify as such in this locality at the present time due to the haulage problem and lack of a nearby custom mill. At the present price for copper, an average grade of 5% copper ore would probably be the lowest grade that could be economically mined and shipped from these claims. There is a chance for 1,000,000 tons of 1% copper ore to be about equally distributed between the Dutch and the Cuprite claims. Of this, about one fifth, or 200,000 tons, would have a chance to average over 5% copper. During times of high copper prices, perhaps a lower average grade could be economically mined. Naturally, any tonnage estimates at the present time are little more than guesses and must be based on an evaluation of the spotty exposures of capping along the fault veins on the surface. This capping is completely leached and, in most instances, only quartz and iron oxides remain. The appearance of the iron oxides was compared to that of the iron oxides found over some nearby mines containing known ore along similar fault veins in granite.

It is recommended that approximately \$10,000.00 be spent on the Cuprite claim. This money could be spent as follows: about \$1,000.00 on improving access and cleaning out old shafts and drifts; about \$4,000.00 extending the drifts on the lowest level open; about \$5,000.00 core drilling from underground stations established in the drifts. An intermediate evaluation could be made after reopening the old workings.

The foregoing information is accurate to the best of the author's knowledge, but necessarily is somewhat limited due to restrictions as to the amount to be spent for the examination.

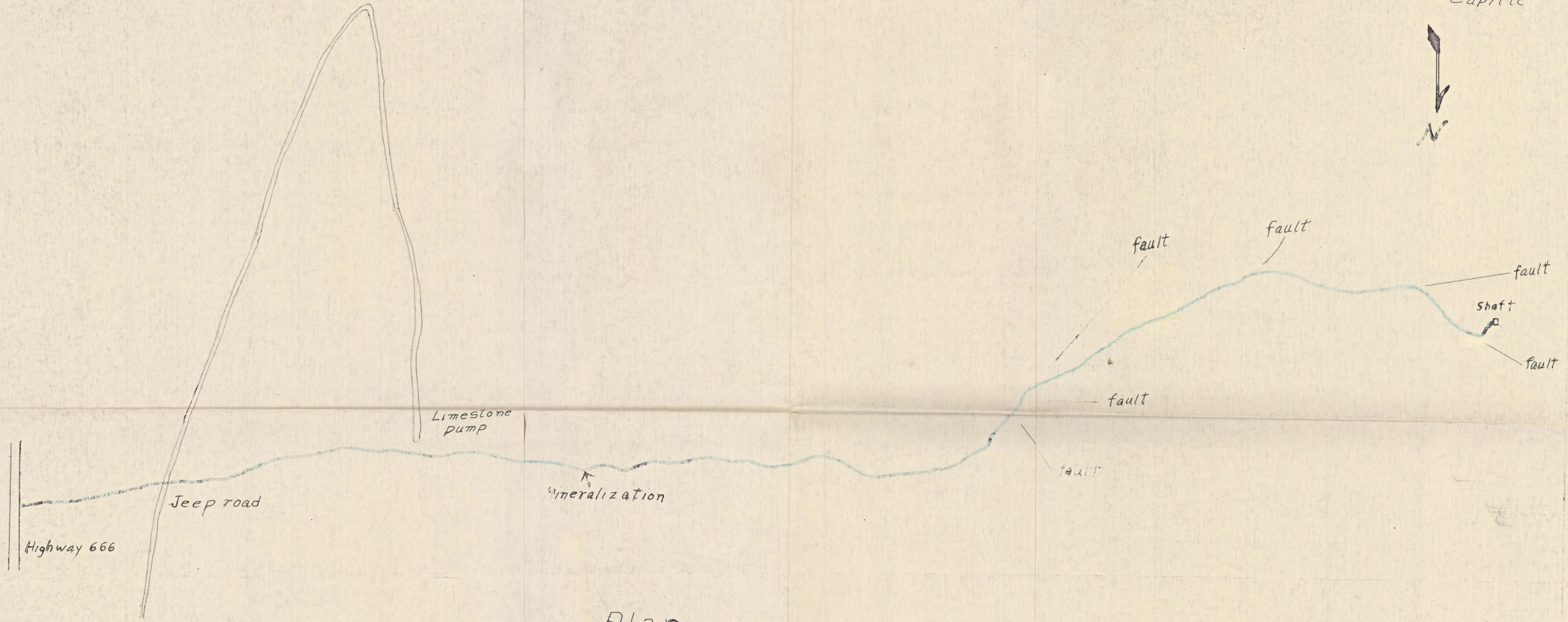
Signed /s/ Vance N. Bacon

Geologist

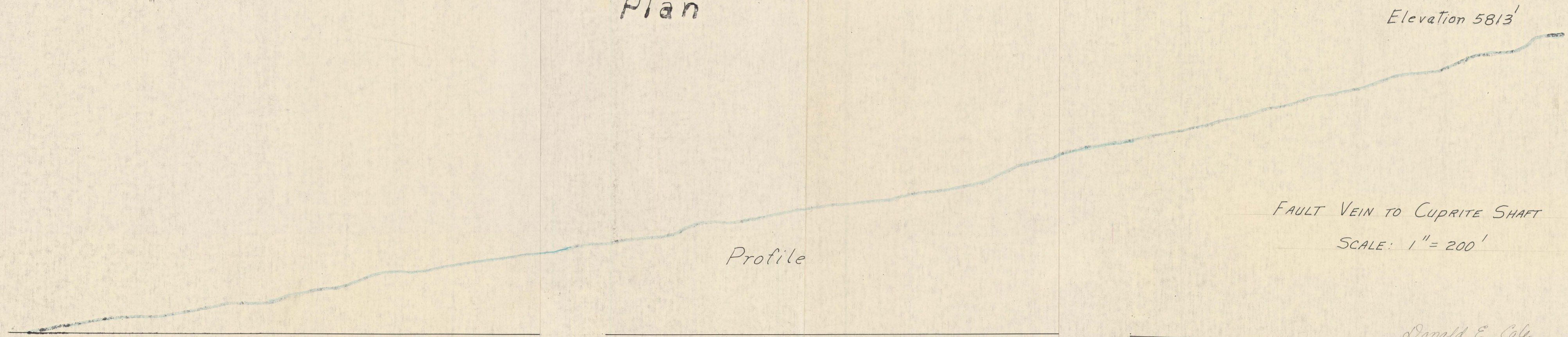


ESSEX-MORENCI
TOPO - COPRITE
R29E; T3S, T4S
1" = 1000'

Cuprite



Plan



Profile

FAULT VEIN TO CUPRITE SHAFT
SCALE: 1" = 200'

Elevation 5000'

Donald E. Cole

PROPERTY SUMMARY

Nov. 13, 1970

CUPRITE PROSPECT

LOCATION

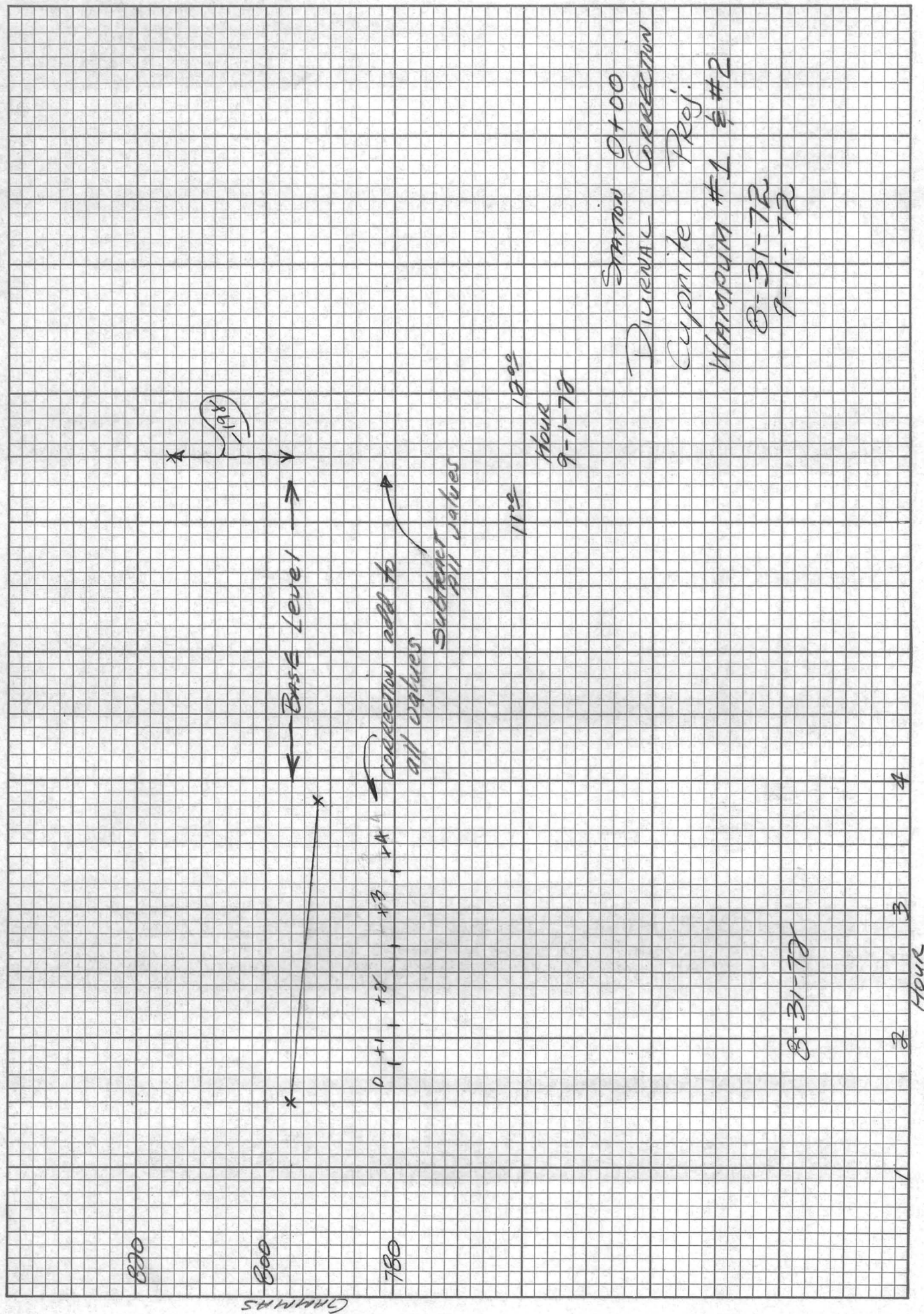
Portions of Sec. 29, 30, 31, 32
Greenlee County, Arizona

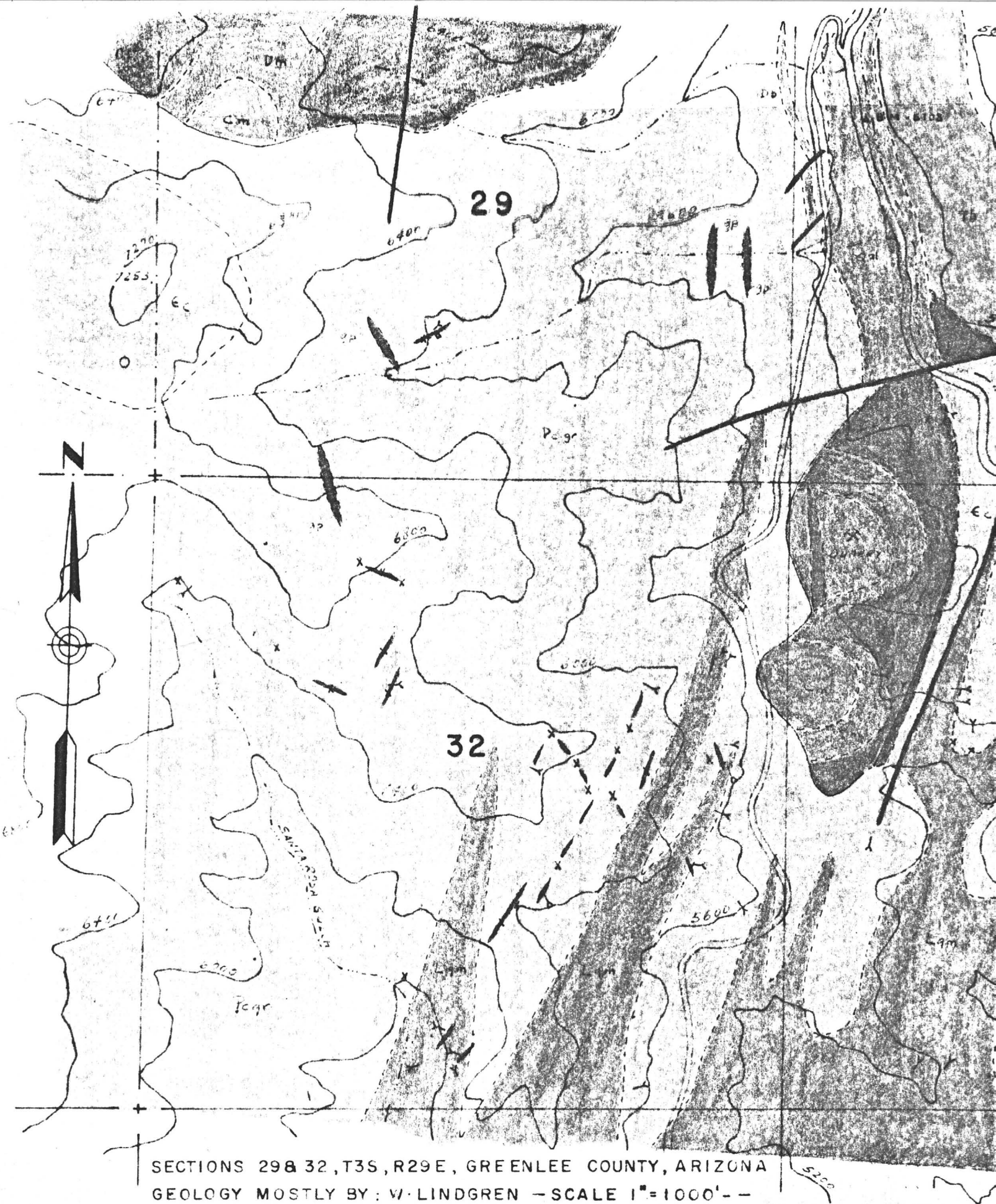
Following patented mining claims:

Montezuma Chief	Cuprite
Togo	Cuprite No. 2
U.S.A.	U.S.N.
Dutch	Adah Blanche
Eunice	Ironsides
April Fool	Kirksville
Red Jacket	McClave
Roosevelt	Utica

and the following State leases:
carried in the name of Clyde H. Davis of Provo, Utah.

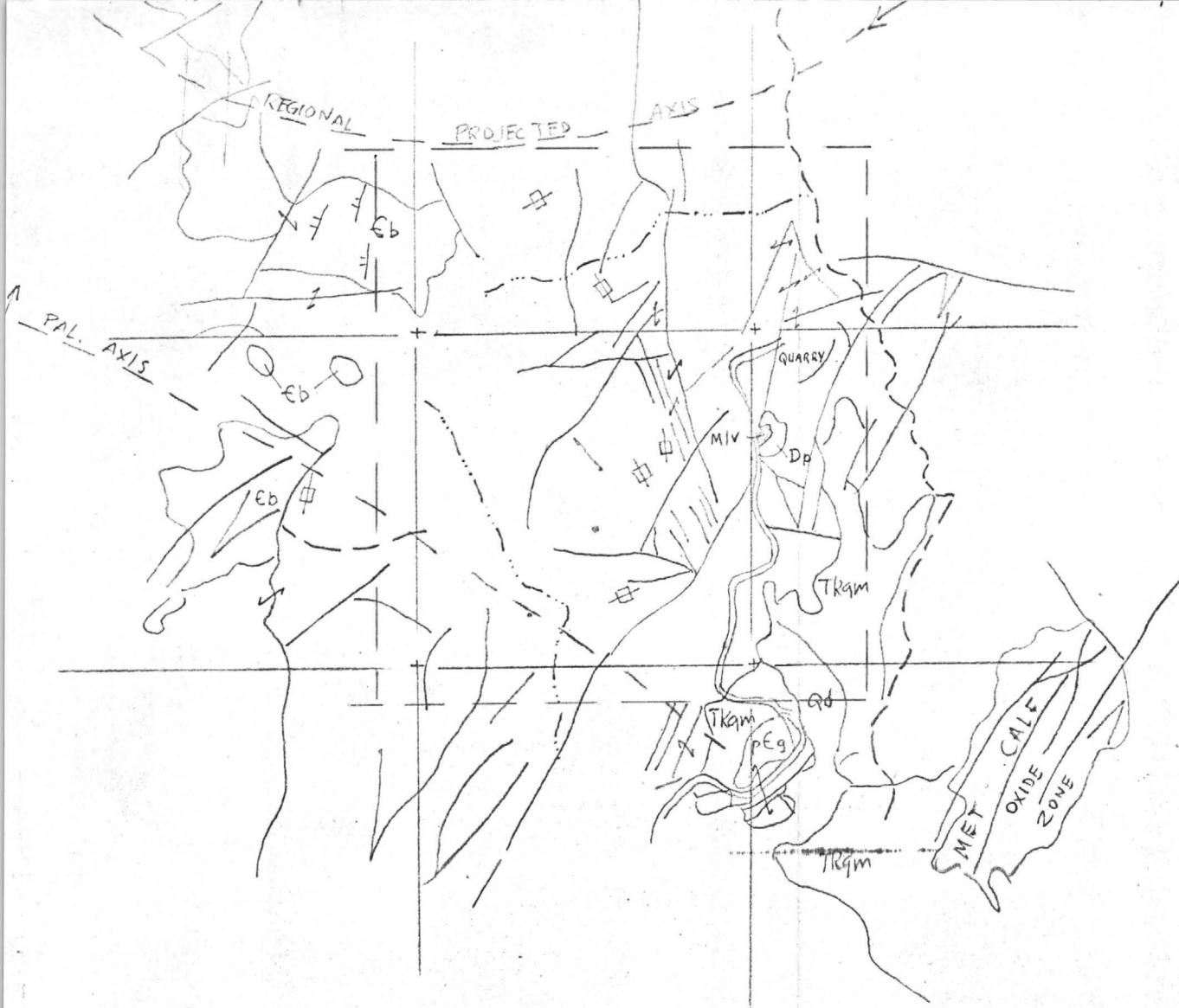
<u>Lease No.</u>	<u>Lot No.</u>	<u>Acres</u>	<u>Sec.</u>
03050	14 & 15	11.76	32
03023	2, 18, 19	20.00	"
03022	10, 19, 21	20.00	"
03021	10, 19, 21	16.93	"
03018	15, 16	15.51	"
03016	16, 21	6.56	"





SECTIONS 29 & 32, T3S, R29E, GREENLEE COUNTY, ARIZONA
 GEOLOGY MOSTLY BY: W. LINDGREN - SCALE 1"=1000' - -

	Cm		Qal		Fault
	Dm		Tr		Veins
	Ol		Tb		Lqm, gp
	Ec		Db		Pc gr



5 3/8"

6/16/71

Cuprite - North of Barr

PROJECTED



CUPRITE - DIRK DEN BARRS
6/10/71

PROPERTY SUMMARY

Nov. 13, 1970

CUPRITE PROSPECT

LOCATION

Portions of Sec. 29, 30, 31, 32
Greenlee County, Arizona

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03018	15, 16	15.51	"
03016	16, 21	6.56	"

Unpatented Claims

Wampum #1
Wampum #2

Recorded Greenlee County
Book 15 Page 40
" 15 " 41

GEOLOGICAL, GEOPHYSICAL, &
GEOCHEMICAL REPORT
FOR
AFFIDAVIT OF LABOR PERFORMED

This report is for the purpose of outlining the extent and nature of work done on the Arizona State Land contained in Lease Number M-3018 in Sec. 32, T.3S., R.29E., Greenlee County, Arizona.

The work done on the above described property was performed to fulfill the requirements for annual labor for the period of Jan. 24, 1971 through Jan. 24, 1972 and consisted of geologic mapping, magnetic surveys, induced polarization surveys, and geochemical sampling.

The cost of the work done was in excess of \$100.00 and completes the requirements of assessment work as prescribed by the statutes of the State of Arizona.

The geologic work was done by Dirk DenBaars (geological consultant), and by Paul Eimon, Essex Manager of Exploration.

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Basic Findings

Geological

The dominant rock in the area is pre-Cambrian granite. To the north and northwest the granite is overlain by Coronado Quartzite, a coarse to fine-grained banded quartzitic-sandstone which varies in color from light gray to dark brown. These quartzites were briefly examined for possible copper mineralization, but none was observed. A faulted block of Ordovician, Devonian and Mississippian limestones overlays the Coronado quartzite to the north and east. Post pre-Cambrian igneous rocks are few and of minor significance in the northern part of the area.

GEOLOGICAL, GEOPHYSICAL, &
GEOCHEMICAL REPORT
FOR
AFFIDAVIT OF LABOR PERFORMED

This report is for the purpose of outlining the extent and nature of work done on the Arizona State Land contained by Lease Number M-3016 in Sec. 32, T.3S., R.29E., Greenlee County, Arizona.

The work done on the above described property was performed to fulfill the requirements for annual labor for the period of Jan. 24, 1971 through Jan. 24, 1972 and consisted of geologic mapping, magnetic surveys, induced polarization surveys, and geochemical sampling.

The cost of the work done was in excess of \$100.00 and completes the requirements of assessment work as prescribed by the statutes of the State of Arizona.

The geologic work was done by Dirk DenBaars (geological consultant), and by Paul Eimon, Essex Manager of Exploration.

The geophysical and geochemical work was done by Heinrichs Geoexploration Co. under the supervision of Paul Head, Project Geophysicist, and William Freeman, Geophysicist, employees of Heinrichs Geoexploration Co. All the above described work was done for and at the expense of Essex International, Inc. and under the general supervision of Paul Eimon, and assisted by E. Grover Heinrichs, both employees of Essex International, Inc.

Basic Findings

Geological

The dominant rock in the area is pre-Cambrian granite. To the north and northwest the granite is overlain by Coronado Quartzite, a coarse to fine-grained banded quartzitic-sandstone which varies in color from light gray to dark brown. These quartzites were briefly examined for possible copper mineralization, but none was observed. A faulted block of Ordovician, Devonian and Mississippian limestones overlays the Coronado quartzite to the north and east. Post pre-cambrian igneous rocks are few and of minor significance in the northern part of the area.