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11/14/90

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: EUREKA

ALTERNATE NAMES:

PINAFORE

YAVAPAI COUNTY MILS NUMBER: 101B

LOCATION: TOWNSHIP 13 N RANGE 10 W SECTION 2 QUARTER SW  
LATITUDE: N 34DEG 29MIN 28SEC LONGITUDE: W 113DEG 16MIN 36SEC  
TOPO MAP NAME: ARRASTRA MTN NE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

ZINC  
COPPER

BIBLIOGRAPHY:

USGS ARRASTRA MTN NE QUAD  
ADMMR EUREKA FILE

ARRATRA MIN. NE QUADRANGLE  
ARIZONA  
7.5 MINUTE SERIES (TOPOGRAPHIC)

289 17'30" 290 90 000 FEET (CENTRAL) 292 293 113



- REFERENCE 1 F1 < AGGMT CLIPPINGS FILE >
- REFERENCE 2 F2 < USGM - AGGMT FILE DATA >
- REFERENCE 3 F3 < USGM. FED. MINE MAP REPOSITORY REEL 4055-525 >
- REFERENCE 4 F4 < AZ DEPT MIN. RESOURCES FILE DATA >

N 40 < PROT B U1PB OLDER THAN 1770 MILLION YEARS >  
 N 40A < HILLSIDE MICA SCHIST - NAMES EXTRAPOLATED FROM BAGDAD AREA >

Mils # 101B  
 (Eureka)

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

RECORD NUMBER B10 < \_\_\_\_\_ > RECORD TYPE B20 < X, I, M > DEPOSIT NUMBER B40 < \_\_\_\_\_ >  
 REPORT DATE G1 < 8 1 1 1 > INFORMATION SOURCE B30 < 1 2 > FILE LINK IDENT. B50 < USGM 004 025 0711 >  
YR MO  
 REPORTER(SUPERVISOR) G2 < DEW HT, ED, # > (last, first, middle initial)  
 REPORTER AFFILIATION G5 < AGGMT > SITE NAME A10 < PINAFRE MINE >  
 SYNONYMS A11 < EUREKA MINE >

LOCATION

MINING DISTRICT/AREA A30 < OLD DICK DISTRICT >  
 COUNTY A60 < YAVAPI > STATE A50 < AZ > COUNTRY A40 < U.S. >  
 PHYSIOGRAPHIC PROV A63 < 1, 2, 4 >  
 DRAINAGE AREA A62 < 1, 5, 0, 3, 0, 2, 0, 3, 4 >  
 QUADRANGLE NAME A90 < ARRASTRE MTN NE (1, 9, 6, 7) >  
 SECOND QUAD NAME A92 < \_\_\_\_\_ >  
 ELEVATION A107 < 3, 2, 8, 0, 4, F, T >  
 LAND STATUS A64 < 0, 1, 4, 4, 1 >  
 QUADRANGLE SCALE A100 < 2, 4, 0, 0, 0 >  
 SECOND QUAD SCALE A91 < \_\_\_\_\_ >

UTM ACCURACY GEODETIC  
 NORTHING A120 < 3, 8, 1, 8, 6, 8, 0 > ACCURATE ACD (circle) ESTIMATED EST < \_\_\_\_\_ > LATITUDE A70 < \_\_\_\_\_ N >  
 EASTING A130 < 2, 9, 0, 9, 6, 0 > LONGITUDE A80 < \_\_\_\_\_ W >  
 ZONE NUMBER A110 < 1, 1, 2 >

CADASTRAL  
 TOWNSHIP(S) A77 < 0, 1, 3, N, 1, 4 > RANGE(S) A78 < 0, 1, 0, W, 1, 4 >  
 SECTION(S) A79 < 02 >  
 SECTION FRACTION(S) A76 < SE OF SW >  
 MERIDIAN(S) A81 < GILA AND SALT RIVER >

POSITION FROM NEAREST PROMINENT LOCALITY A82 < 4.1 MILES SOUTH-SOUTHWEST OF "GRAYBACK 5113" ON NORTHERN PEAK OF GRAYBACK MTS. >  
 LOCATION COMMENTS A83 < UTM COORDINATES TO SHAFT. TWO ADITS ARE LOCATED JUST DOWNSLOPE AND NW OF THE SHAFT >

\* ESSENTIAL INFORMATION  
 - ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

\* COMMODITIES PRESENT C10 < C.U. WZN, P.B., P.A.G., P.A.U. >  
 \* ORE MINERALS C30 < Sphalerite, CH Pyrite, Galena, Chalcocite >  
 \* COMMON SUBTYPES C41 < >  
 \* GEN. ANALYTICAL DATA C43 < >  
 \* COM. INFO. COMMENTS C50 < >

\* SIGNIFICANCE

MAJOR PRODUCTS	MAJOR < C.U. WZN, P.B., P.A.G., P.A.U. >	NON-PRODUCER	MAIN COMMODITIES PRESENT C11 < >
MINOR PRODUCTS	MINOR < P.B., P.A.G., P.A.U. >	NON-PRODUCER	MINOR COMMODITIES PRESENT C12 < >
POTENTIAL PRODUCTS	POTEN < >	NON-PRODUCER	OCCURRENCES OCCUR < >
OCCURRENCES	OCCUR < >	NON-PRODUCER	OCCURRENCES OCCUR < >

\* PRODUCTION

PRODUCTION < YES > (circle)	PRODUCTION SIZE < SM > MED LGE (circle one)	NON-PRODUCER	PRODUCTION UND NO (circle one)
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\* STATUS

PRODUCTION	EXPLORATION OR DEVELOPMENT
STATUS AND ACTIVITY A20 < 4 >	STATUS AND ACTIVITY A20 < >

\* DISCOVERER L20 < JOHN LAWLER >  
 \* YEAR OF DISCOVERY L10 < 1900's > \* NATURE OF DISCOVERY L30 < B > \* YEAR OF FIRST PRODUCTION L40 < 1935 > \* YEAR OF LAST PRODUCTION L45 < 1957 >  
 \* PRESENT/LAST OWNER A12 < HULLINGER AND MCFARLAND (1956) >  
 \* PRESENT/LAST OPERATOR A13 < HILLSIDE MINING (1950's) >  
 \* EXPL./DEV. COMMENTS L110 < PATENTED CLAIMS INCLUDE EUREKA, EUREKA EXTENSION AND ALL SURROUNDING CLAIMS ARE UNPATENTED >

DESCRIPTION OF DEPOSIT

\* DEPOSIT TYPE(S) C40 < STRATIFORM MASSIVE SULFIDE >  
 \* DEPOSIT FORM/SHAPE M10 < LENS >  
 \* DEPTH TO TOP M20 < > \* UNITS M21 < > \* MAXIMUM LENGTH M40 < 80 > \* UNITS M41 < FT >  
 \* DEPTH TO BOTTOM M30 < 150 > \* UNITS M31 < FT > \* MAXIMUM WIDTH M50 < 150 > \* UNITS M51 < FT >  
 \* DEPOSIT SIZE M15 < SMALL > M16 < MEDIUM > M17 < LARGE > (circle one) \* MAXIMUM THICKNESS M60 < 10 > \* UNITS M61 < FT >  
 \* STRIKE M70 < N 20 E > \* DIP M80 < 70 E >  
 \* DIRECTION OF PLUNGE M100 < > \* PLUNGE M90 < >  
 \* DEP. DESC. COMMENTS M110 < OREBODY WAS CRESCENT-SHAPED AND PLUNGED STEEPLY >

DESCRIPTION OF WORKINGS

\* Workings are: SURFACE M120 UNDERGROUND M130 BOTH M140 (circle one)  
 \* DEPTH BELOW SURFACE M160 < 150 > \* UNITS M161 < FT > \* OVERALL LENGTH M190 < 350 > \* UNITS M191 < FT >  
 \* LENGTH OF WORKINGS M170 < 600 > \* UNITS M171 < FT > \* OVERALL WIDTH M200 < 15 > \* UNITS M201 < FT >  
 \* DESC. OF WORK. COM. M220 < ADIT 250 FT LONG, TWO LEVELS - 70 FT AND 150 FT. > \* OVERALL AREA M210 < 5250 > \* UNITS M211 < SQ FT >

GEOLOGY

\* AGE OF HOST ROCK(S) K1 < P.R.O.T., W, U/PB ZIRCON DATE = 1770 MILLION YEARS OR OLDER >  
 \* HOST ROCK TYPE(S) K1A < METARHYOLITE, METANDESITE, QUARTZ-MICA SCHIST >  
 \* AGE OF IGNEOUS ROCK(S) K2 < P.R.O.T., W, AS LIKE K1 >  
 \* IGNEOUS ROCK TYPE(S) K2A < RHYOLITE, ANDESITE >  
 \* AGE OF MINERALIZATION K3 < P.R.O.T., W, U/PB ZIRCON EQUAL TO OR OLDER THAN 1770 MILLION YEARS >  
 \* PERT. MINERALS (NOT ORE) K4 < QUARTZ, CHLORITE, CALCITE, PYRITE >  
 \* ORE CONTROL/LOCUS K5 < STRATIGRAPHY, IGNEOUS ACTIVITY >  
 \* MAJ. REG. TRENDS/STRUCT. N5 < FOLIATION IN PAECAMBRIAN METAVOLCANIC ROCKS TRENDS N20E TO N30E >  
 \* TECTONIC SETTING N15 < >  
 \* SIGNIFICANT LOCAL STRUCT. N70 < MASSIVE SULFIDE LENSES PARALLEL FOLIATION AND BEDDING >  
 \* SIGNIFICANT ALTERATION N75 < CHLORITIZATION, PIRITIZATION >  
 \* PROCESS OF CONC./ENRICH. N80 < OXIDATION AT NEAR SURFACE >  
 \* FORMATION AGE N30 < P.R.O.T., W, AS LIKE K3 >  
 \* FORMATION NAME N30A < BRINE FORMATION, UNNAMED METANDESITE - NAMES EXTRAPOLATED FROM BAGDAD AREA >  
 \* SECOND FM AGE N35 < P.R.O.T., W, AS LIKE K3 >  
 \* SECOND FM NAME N35A < DICK RHYOLITE - NAMES EXTRAPOLATED FROM BAGDAD AREA, MAY NOT BE TRUE EQUIVALENT >  
 \* IGNEOUS UNIT AGE N50 < >  
 \* IGNEOUS UNIT NAME N50A < >  
 \* SECOND IG. UNIT AGE N55 < >  
 \* SECOND IG. UNIT NAME N55A < >  
 \* GEOLOGY COMMENTS N85 < DEPOSIT IS MASSIVE SULFIDE LENS IN PROTEROZOIC METAVOLCANIC ROCKS. DEPOSIT LOCALIZED AT OR NEAR CONTACT OF RHYOLITE AND ANDESITE, OR NEAR QUARTZ-MICA SCHIST >

GENERAL COMMENTS

GENERAL COMMENTS GEN < >

NAME OF MINE: ✓ PINAFORE COUNTY: YAVAPAI C  
 OWNERS: Mike L. Lynch, Prescott, & Lawler estate DISTRICT:  
 METALS: CU, ZN

OPERATOR AND ADDRESS:

MINE STATUS

DATE:

DATE:

5/1/44 Owner: L. F. Albrecht

5/1/44 Shut down

5/31/44 *R. R. Belknap, lease*  
*Bagdad*

5/31/44 *Developing*

9/44 Jim C. Lovett, Box 487,  
Prescott; ~~Roy Belknap &~~  
~~E.G. Green, Hillside.~~

9/44 Shipping

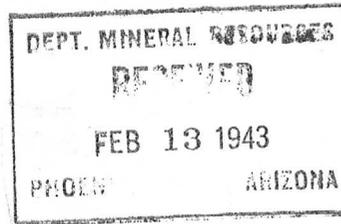
9/46 Idle

CLAUDE C. FINDLY

February 12, 1943.

OPERATING  
Key Group of Mining Claims  
Congress, Arizona

Address Reply To:  
P.O. Box "Q",  
Wickenburg, Ariz.



Mr. J.S. Coupal,  
413 Home Builders Building,  
Phoenix, Arizona.

Dear Sam:

Both Vena and myself thank you very much for your kind letter of February 4th. I also wish to thank you for the slip giving Mr. Hanson's full name and where he can be reached.

I wish you would try to get me some information on the Pinafore. The last information I had was that the parties holding the lease had expended a preliminary Gov. Loan, and that during December, Gov. Engineers had been at the property for over three weeks, supposedly determining whether an additional loan should be granted.

Very likely your office has a record of what has taken place since December and whether or not an additional loan has been recommended or granted. If you haven't this information, very likely you can get it from the RFC for me.

As stated over the 'phone, last week, that your Field Engineer was to be in and you would find out and let me know just what was taking place at the property at this time. Very likely this slipped your mind as I have heard nothing from you. I am very much interested, and any information you can get to me will be very much appreciated.

You statement about your Denver meeting and the discussions on the Gold Closing Order was interesting, but you could amplify the information and also express your opinion as to just what possibly might be done after June 8th, the expiration date of my extension period.

\* Since my return I have been trying to locate strategic metals so as to include same in my operation, that is why I would like to learn as much about the Pinafore as possible.

Very truly yours,

*Claude C. Findly*

3-23-70

February 17, 1943

Mr. Claude C. Findly  
P. O. Box Q  
Wickenburg, Arizona

Dear Claude:

I have written Nebeker, our engineer in Prescott, and have asked him to get me full information on the Pinafore. I will send it to you as soon as it is received.

I find no record in our office regarding rejection or otherwise of the additional loan on the Pinafore. I have just called the RFC Mine Loan Division and found that the examination by the RFC mine engineer was such that Gohring could not approve an additional loan. This does not mean that the property is not worthwhile but simply that it did not fit into the RFC mine loan program.

Gohring has so advised Mr. L. F. Albrecht of 3742 Chestnut Avenue, Long Beach, California. Albrecht mentioned that he might find private capital and go ahead and mine out the ore in sight, so it is possible that you might make a deal with him.

In regard to the gold closing order, there has been a tendency to ease up on the part of the authorities where the men employed in the gold mines were old and could not be used in other production. I cannot express any opinion as to what might happen to you at the expiration of your extension period, June 8.

With best wishes and kindest regards, I am

Very truly yours,

J. S. Coupal, Director

JSC:kk

DEPT. MINERAL RESOURCES  
RECEIVED  
FEB 19 1943  
PHOENIX, ARIZONA

MEMO.

Feb. 17th, 1943.  
Prescott, Ariz.

PINAFORE MINE  
HILLSIDE, ARIZ.

OWNER: M.L.Lynch  
Prescott, Ariz.

TO. J. S Coupal

FROM; A. C. Nebeker

I called on Mr M. L. Lynch who is one of the owners of the Pinafore mine and who has all the data on the property. He informed me that Mr F. Albrecht and pardner are over in Long Beach and that the water has been allowed to fill the shaft after Mr Gokring and Yount made the examination.

They are waiting to hear the results of that examination.

Mr Lynch informed me that there was nobody at the property now, and that it would be wasted time for me to drive out there.

*A. C. Nebeker*

\*

# DEPARTMENT OF MINERAL RESOURCES

## REPORT TO OPA ON ACTIVE MINING PROJECT

DEPT. MINERAL RESOURCES  
**RECEIVED**  
JUN 4 1945  
PHOENIX, ARIZONA  
Filing Information

Date Apr 17 - 1945

Name of Mine Empire ✓

Owner or Operator J. C. Lovett ✓

Address 1358 Pleasant St. Prescott

Mine Location Woodhulda - Empire Dist.

File System.....

File No.....

This chart to be used for gallons of gasoline required per month.

**PRESENT OPERATIONS:** (check X)

Production ; Development ; Financing.....; Sale of mine.....;

Experimental (sampling).....; Owner's occasional trip.....;

Other (specify).....

**PRODUCTION: Past and Future.**

Tons

Approx. tons last 3 months .....

Approx. present rate per 3 months .....

Anticipated rate next 3 months .....

If in distant future check (X) here .....

**EQUIPMENT OPERATED:**

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars	.....	.....	.....
Light or Service Trucks	.....	.....	.....
* Ore Hauling Trucks	.....	.....	.....
Compressors	25	.....	660
Other Mine or Mill Eqpt.	.....	.....	.....

**PRODUCT PRODUCED OR CONTEMPLATED:** Name metals or minerals.

Copper ✓

**REMARKS:**

Been producing for some time

Approved

**ARIZONA DEPARTMENT OF MINERAL RESOURCES**

By.....

W. J. Baker  
Field Eng'r

February 19, 1943

Mr. Claude C. Findly  
Box Q  
Wickenburg, Arizona

Dear Claude:

I am enclosing a copy of a news item and a memorandum from A. C. Nebeker, our engineer in Prescott, on the Pinafore Mine.

You will note on the news item that the property is called the Copper King at the present time.

You may have written Mr. F. Albrecht, and if so, you may have additional information at this time.

With best wishes and kindest regards, I am

Very truly yours,

J. S. Coupal, Director

JSC:kk  
Enclosures

# DEPARTMENT OF MINERAL RESOURCES

## REPORT TO OPA ON ACTIVE MINING PROJECT

Date: Nov 25, 1944  
 Name of Mine: Pinaro  
 Owner or Operator: J. C. Lovett, Green & Belknap  
 Address: 1135 E. Pleasant St  
 Mine Location: Cooke District - 10 mi from Bagdad

**Filing Information**

File System.....  
 File No.....  
 This chart to be used for gallons of gasoline required per month.

**PRESENT OPERATIONS:** (check X)

Production ; Development.....; Financing.....; Sale of mine.....;  
 Experimental (sampling).....; Owner's occasional trip.....;  
 Other (specify).....

**PRODUCTION: Past and Future.**

	Tons
Approx. tons last 3 months	150
Approx. present rate per 3 months	.....
Anticipated rate next 3 months	600
If in distant future check (X) here	.....

**EQUIPMENT OPERATED:**

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars	.....	.....	.....
Light or Service Trucks	.....	.....	.....
Ore Hauling Trucks	.....	.....	.....
Compressors	25	.....	200
Other Mine or Mill Eqpt.	.....	.....	.....

**PRODUCT PRODUCED OR CONTEMPLATED:** Name metals or minerals.

Copper

**REMARKS:**

This property has been operating & shipped for just seven months.  
I recommend the allowance of 200 gals per month be given.

**ARIZONA DEPARTMENT OF MINERAL RESOURCES**

By: W. H. ...  
 Field Engineer - Douglas R

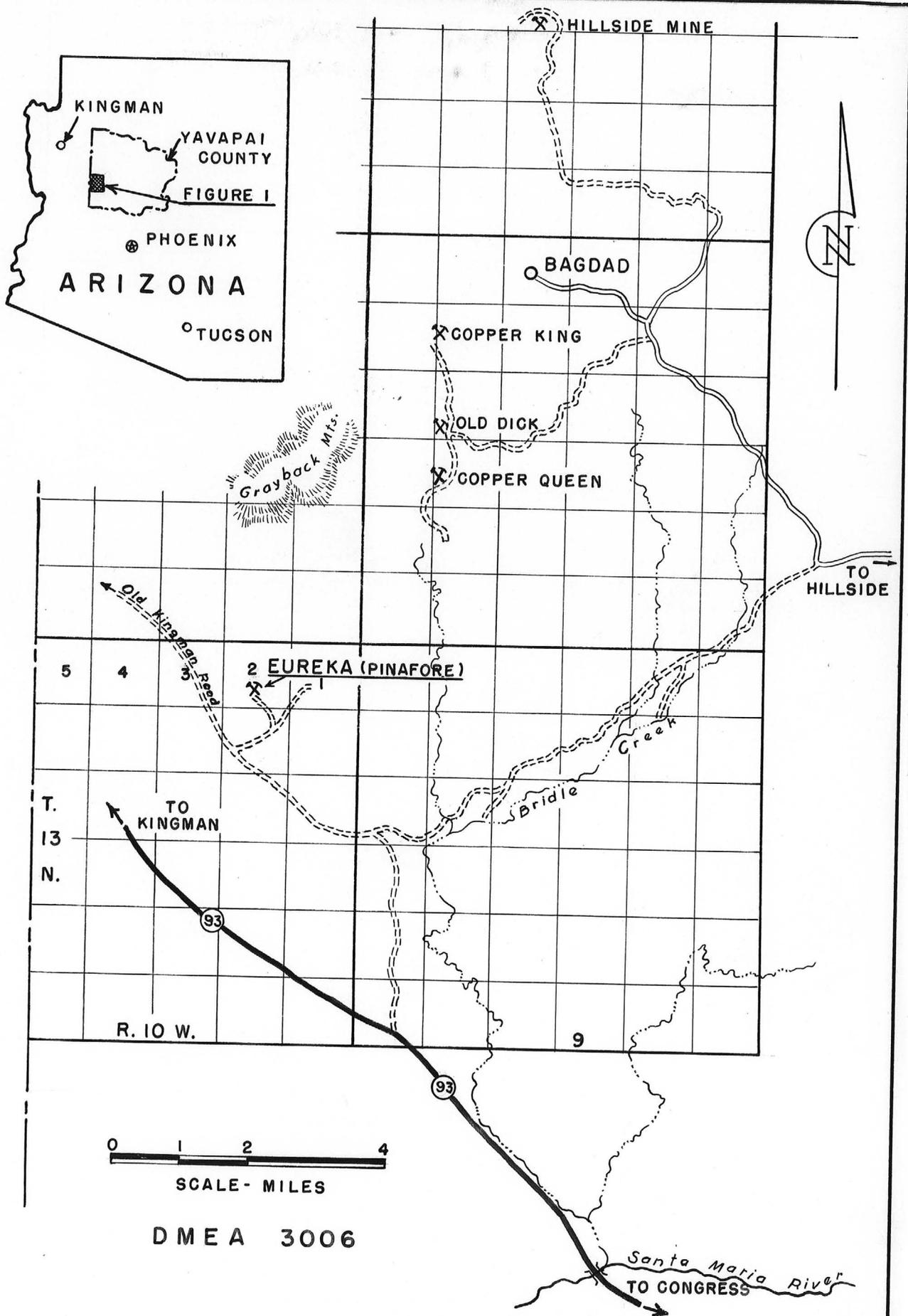
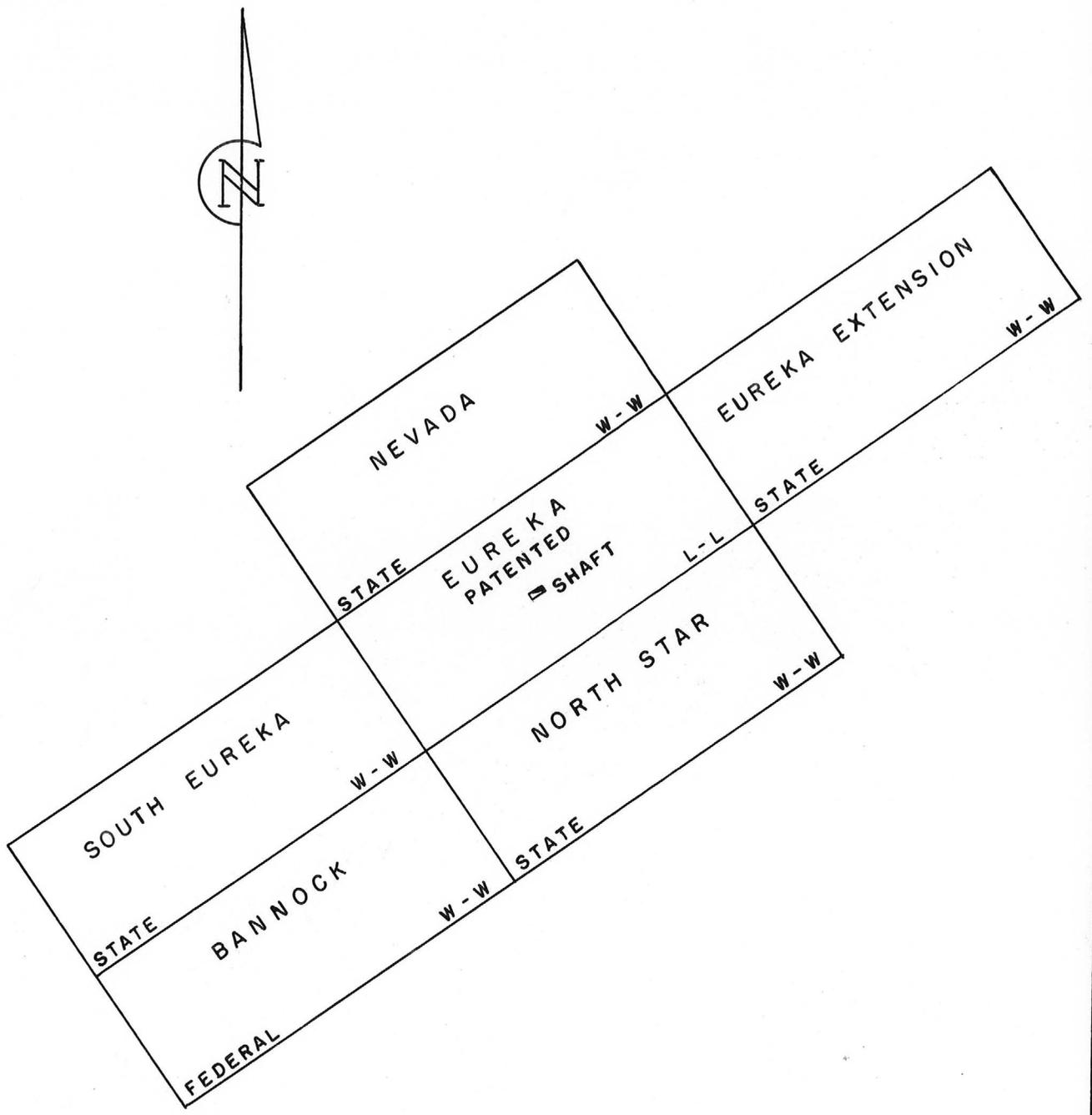


FIGURE I. - LOCATION MAP - EUREKA CLAIM  
YAVAPAI COUNTY, ARIZONA



0 300 600 1200  
SCALE - FEET

DMEA 3006

FIGURE 2. - EUREKA CLAIMS  
YAVAPAI COUNTY, ARIZONA

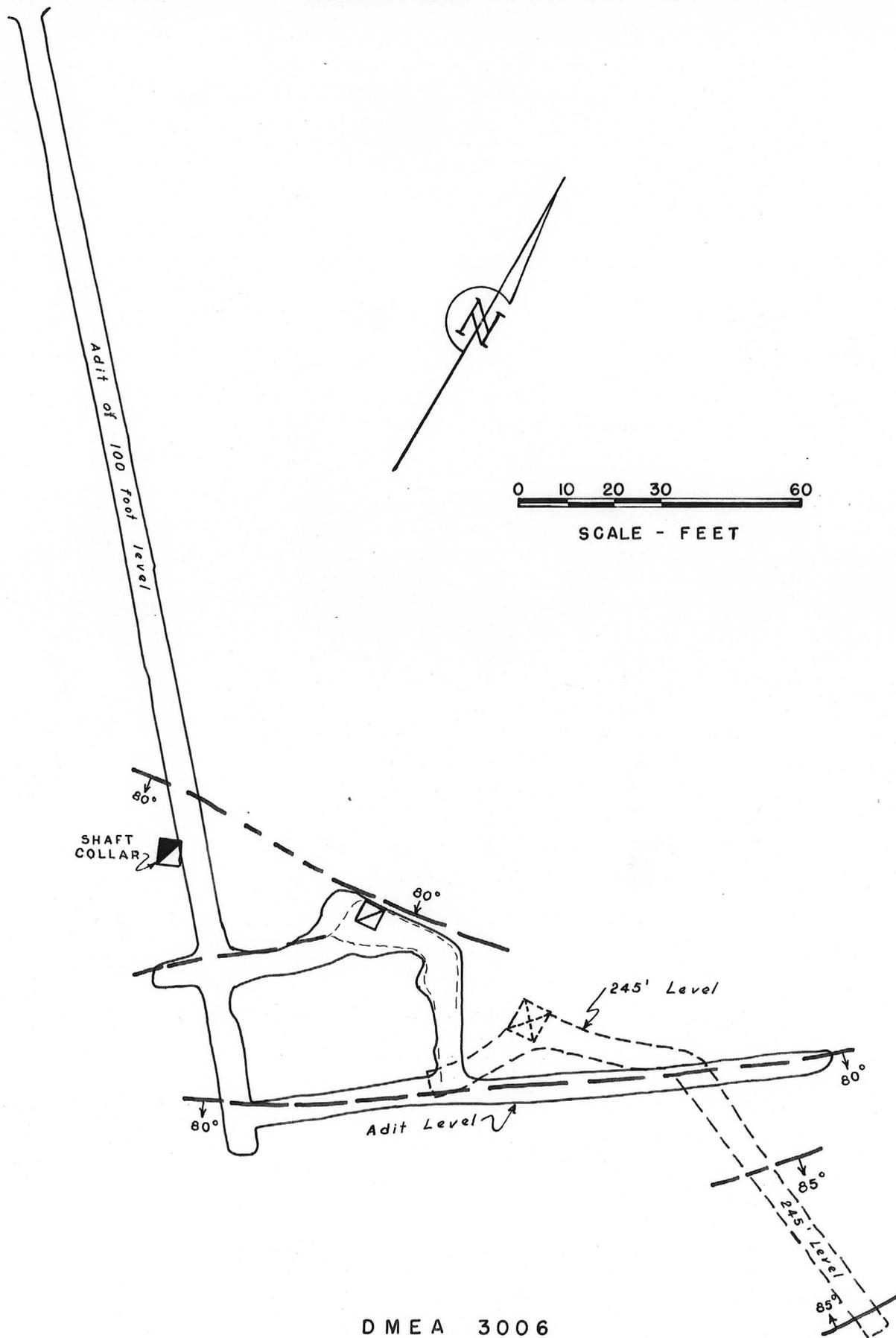
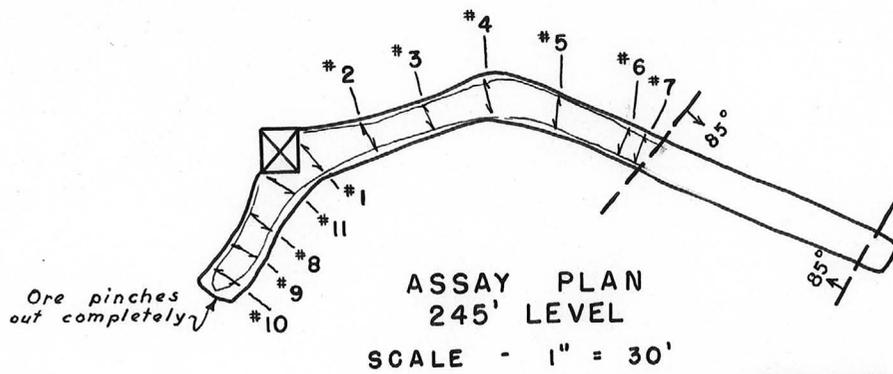
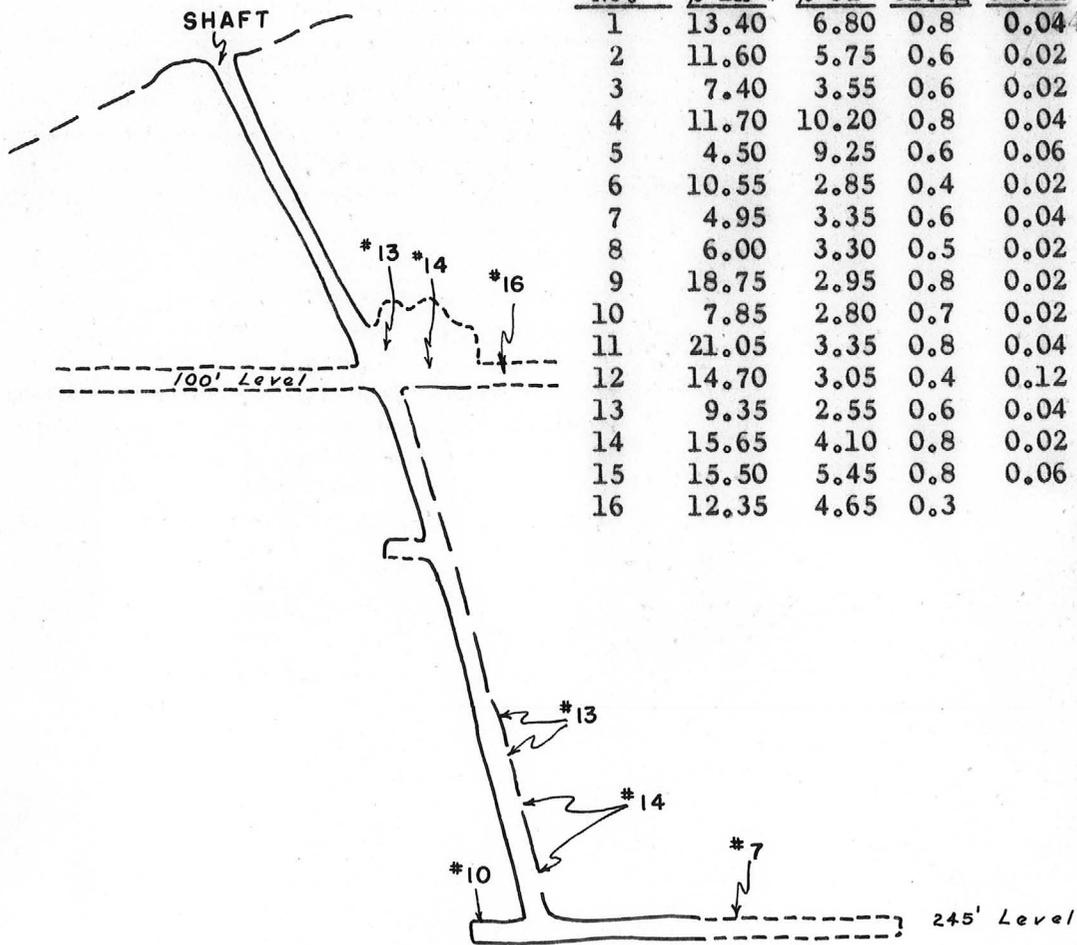


FIGURE 3. - PLAN OF EUREKA (PINAFORE) WORKINGS  
YAVAPAI COUNTY, ARIZONA



ASSAY DATA

Sample No.	% Zn	% Cu	Oz. Ag	OZ. Au	Width
1	13.40	6.80	0.8	0.04	7'
2	11.60	5.75	0.6	0.02	6'
3	7.40	3.55	0.6	0.02	5.5
4	11.70	10.20	0.8	0.04	5'
5	4.50	9.25	0.6	0.06	4.5
6	10.55	2.85	0.4	0.02	5'
7	4.95	3.35	0.6	0.04	5'
8	6.00	3.30	0.5	0.02	5.3
9	18.75	2.95	0.8	0.02	4.3
10	7.85	2.80	0.7	0.02	5'
11	21.05	3.35	0.8	0.04	7'
12	14.70	3.05	0.4	0.12	8'
13	9.35	2.55	0.6	0.04	5'
14	15.65	4.10	0.8	0.02	5'
15	15.50	5.45	0.8	0.06	4.5'
16	12.35	4.65	0.3		3'



AFTER U. S. G. S. - MARCH 1944

D M E A - 3006

FIGURE 4.- ASSAY DATA - EUREKA (PINAFORE) PROSPECT  
YAVAPAI COUNTY, ARIZONA

Geological Report  
Pinafore Mine  
(Eureka Patented Mine)  
Bagdad, Arizona  
Yavapai County

*Eureka Mine file  
Yavapai Co.*

Introduction

The purpose of this report is to validate the geological reports prepared by Arizona Explorations Inc. (A.E.I.) a syndicate comprised of Placer Dome U.S. Inc, Barrick Gold Exploration Inc. P.R.G. and Arizona Explorations Partnership; and Anthony Lane of Anthony Lane & Associates. Dr. Stanley W. Holmes became interested in the Bagdad Basin in the late 1980's. His interest in this area resulted in the formation of the syndicate on November, 1989. I have been fortunate to contact several syndicate members including Ken Rye of Homestake (Prime/Corona). Mr. Rye acknowledged that he was hoping the syndicate would discover a property with gold potential although he was impressed with the V.M.S. deposit. I was able to acquire most of the syndicate records, reports and drill results. These are available for inspection. Dr. Holmes was quite knowledgeable about locating massive sulphide deposits. The Pinafore Mine is located in the Central Arizona Precambrian volcanic belt.

During his mapping of exhalitive horizons it was discovered that the anomalies for all the critical elements are completely contained within the single Pinafore Claim.

During my field visits to the mine, numerous north-south quartz veins were observed outcropping on the ridge by the mine. The high silica content forms a distinct ridge on which the mine is located.

The purpose of the exhalitive mapping was to trace the Bridle/Dick (mafic/felsic) Formational contact. During subsequent mapping the occurrence of an inlier of altered Bridle/Dick stratigraphy within the Dick Rhyolite Porphyry was defined near the Pinafore shaft.

The exploration drilling was targeted initially to explore the extension of the Pinafore ore zone. A study of the drill hole mapping indicates that these drill holes intersected two separate V.M.S. zones of ore grade mineralization.

The drill results reflect continuance of this V.M.S. mineralization at least 800 feet vertically below existing workings with a strike length of over 550 feet. Anthony Lane of Anthony Lane & Associates states in his geological summary dated January 6, 1998 that there is over 1,000,000 tons in the two V.M.S. zones of probable, possible and anticipated reserves.

**The Pinafore deposit is a massive sulphide occurrence within a felsic package of volcanic rocks capped by an exhalite unit comprised of cherts, iron formations and siliceous members surrounded by a zone of intense alteration consisting of chlorite, sericite, silicification, pyritization, biotite, carbonates, cordierite and some garnet. The alteration observed and substantiated by the Na, Ca, geochemistry support a volcanogenic origin for the mineralization.**

**The Pinafore mine is located about 7.5 miles southwest of Bagdad in the southern portion of Section 2, T13N, and R10W in the Eureka Mining District, Yavapai County, Arizona. The recent drilling has shown that the mineralization does not continue to the northeast of the Eureka Claim.**

**The quartz-sericite schist unit is a hydrothermally altered felsic volcanic (Dick Rhyolite). Base metal mineralization accompanies the most intensely altered areas, presumably overlying volcanic vents. Indications are that the mineralization continues at depth and to the southwest. The quartz-sericite schist is the host rock for the Cu, Zn, Pb, Ag and Au mineralization.**

**A zone of hydrothermal alteration occurs southwest of the Pinafore shaft. This area is typified by intense sericitization. The quartz veins outcrop on the ridge by the shaft and continue toward the southwest following the ridge top. The area between these two alteration zones is named the Pinafore Syncline. This is the structural link between the two areas of outcropping Cu-Zn mineralization. The quartz-sericite schist continues south of the Eureka Claim. No drill holes have tested the quartz-sericite schist south of the Pinafore shaft.**

**It now appears that the Pinafore deposit may occur on the western flank of a large syncline, and re-emerge in the form of a Cu-Zn prospect located approximately 2,800 feet to the southwest from the Pinafore shaft. Evidence for this exists in the geology and the airborne magnetics. The connection between the two areas of mineralization is also manifest in the form of structure, tentatively named the "Pinafore Syncline."**

**If the Pinafore mineralization continues from the Pinafore shaft to the southwest following the synclinal structure at depth this would indicate a major volcanic massive sulphide deposit.**

**Dr. Stanley W. Holmes died in 1993 and the syndicate pursued nothing further. At the time of his death Mr. Holmes had the property under option. Upon Dr. Holmes death in 1993 the property reverted back to the Lawler and Lynch families.**

**Silver Nickel Mining Co. purchased the patented mining claim and located nine (9) adjoining unpatented claims covering the alteration zone to the southwest. The key exploration guide is the silicification, sericite, and cherts. The Pinafore shaft is**

found on a high ridge due to its high silica content. This ridge trends to the southwest from the Pinafore shaft directly to the Jerome Unpatented Mining Claim where Cu/Zn mineralization occurs in the chert. An extensive area of hydrothermal altered quartz-sericite schists with numerous quartz veins occurs between these two zones of outcropping Cu/Zn mineralization. This exploration target was completely missed by the syndicate. The V.M.S. deposit is clearly marked by the trend of this ridge (high silica content, altered schist and sericite).

I have been an exploration geologist for 30 years and have learned "always follow the quartz." This siliceous zone along with chert overlies the most intensely altered areas and is an exploration guide to the exhalative trends. Its geomorphology (high silica content forming a ridge), the favorable Bruce-Old Dick horizon and the associated geochemical signature and preliminary drilling makes this a first class target.

The Arizona Syndicate drilled seven reverse circulation holes on the Pinafore property. It is based on these holes that reserve calculations have been made. The quartz-sericite schist unit pinches out to the NE on the Pinafore but continues south. No drill holes have tested the quartz-sericite schist south of the Pinafore shaft.

In April of 1991 the syndicate conducted a helicopter airborne survey of the Bagdad Basin. The quartz-sericite schist unit at the Pinafore occurs along the flank of the broad magnetic low. The broad magnetic low appears to indicate that a large syncline occurs in this area.

This is the proposed exploration target. The strike of the Pinafore zone should be explored to the southwest along the exhalative trend. This program should greatly expand the reserves into a major deposit. Private individuals previously staked the anomaly located in Section 11. The syndicate did not have a favorable ground position along this horizon during the study of the Bagdad Basin.

Silver Nickel Mining Co. has staked nine (9) unpatented mining claims recently which completely covers the north east trending geochemical anomaly. This anomaly is located on the southern contact of the Dick Subvolcanic Intrusive and felsic to intermediate tuffs, lapilli tuffs and chert. The anomaly is characterized by elevated Cu, Zn and Cd values within the tuffs and cherts over a strike length of over 1,000 feet. This anomaly basically follows the ridge from the Pinafore shaft. Na depletion occurs in both the tuffs and Dick Subvolcanic Intrusive.

The lack of favorable ground position prevented exploration of this target by the syndicate. The ground covering the syncline is now owned by Silver Nickel Mining Co, a family owned corporation. This area has the potential for hosting a major V.M.S. deposit.

The Pinafore area hosts volcanogenic massive sulphides within a highly altered felsic

**tuff/exhalitive package proximal to the historically productive Bridle/Dick Formation contact (Old Dick, Bruce).**

**The Pinafore lies on the same time horizon, below the same exhalite cap as the Old Dick/Bruce. The Pinafore is located on the western limb of the Bagdad Basin Proterozoic Belt approximately 4 miles south of the Old Dick/Bruce V.M.S. ore deposits.**

**John B. Rothermel**

**Silver Nickel Mining Co.**

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine <sup>✓</sup> Eureka (Pinafore) <sup>✓</sup>

Date March 23, 1957

District Eureka

Engineer Mark Gemmill

Subject: Present Status

Since reporting on this property Oct. 30, 1956. it has been shut down and given up by Hullinger and McFarland. It is reported that their exploration work did <sup>not</sup> disclose what they had hoped to find in the way of deeper ore bodies. It was stated <sup>not</sup> that they did not think the property was hopeless but that they could afford to continue further exploration.

Details and maps of work recently done might be obtained from Mr. Ken Erickson who is now in the southern part of the State. His address is not available at the moment.

\*

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Eureka (Pinafore)

Date Oct. 30, 1956

District Eureka - just off old Kingman Road  
near Bunro Creek

Engineer Mark Gemmill

Subject: Present Status

OWNERSHIP

The property now called the Eureka but formerly sometimes called the Pinafore was recently acquired by Hullinger & McFarland from members of the Lawler family.

HISTORY

It was located and patented some 50 years ago by John Lawler. Work consisted of a short tunnel and winze which exposed the ore shoot for about 150 ft. in depth. There was no production until World War 2 when most of the ore developed by the old workings was mined and shipped. No record of production is available but is was probably about 5000 tons of ore which ran from 2 to 5 % copper and from 5 to 15 % Zinc.

PRESENT OPERATION

\* When the present owners took over the property they found the old workings is such bad shape that they decided to abandon them. They drove a new tunnel on a level with the bottom of the old workings. From that they have sunk a winze 150 ft. and are at present exploring the ore shoot at that level. The property is well equipped with Diesel driven compressor and a small electric generator for underground lighting and to operate auxillary equipment. Ten men are currently employed. Ken Erickson, Bagdad, is in charge of the work.

HULLINGER & McFARLAND

EUREKA (PINAFORE) MINE, Eureka Dist., Yavapai Co. 10-30-56

**Arizona Department of Mines and Mineral Resources**  
**Verbal Information Summary**

**Mine: Eureka aka Pinafore**  
**County: Yavapai**  
**Location: T13N, R10W, Sec. 2 SW**

**Date: June, 14, 1995**  
**Engineer: Nyal Niemuth**

Ted Holmes, local mining engineer reports that from summary data he has seen a resource estimate for the Eureka mine would be about 100,000 tons grading 4.5% Cu and 11.5 Zn. This estimate is based on sampling of the 245 level and 5 or 6 750' drill holes done by Arizona Exploration Inc. under the direction of Stan Holmes. The mineralization occurs in the form of a steeply dipping Precambrian volcanogenic massive sulfide deposit.

Arizona Explorations Inc.

Bagdad Basin Project

1992 RC Drilling Project

Pinafore Area

Results and Recommendations

March 4, 1992

Report # 1

Compiled By: Mike Glover, B.Sc.  
(Staff Geologist)

## ABSTRACT

- OBJECTIVE:** To provide a preliminary evaluation of the potential of the Pinafore Claim for hosting a Volcanogenic Massive Sulphide (VMS) deposit of economic importance.
- METHOD:** One (1) reverse circulation drill hole (790') was drilled to test the down dip/rake extension of Cu/Zn mineralization encountered and documented in the Pinafore underground workings.
- RESULTS:** Massive sulphides, logged at 18' between 709'-727', yielding 3.7% Cu and 10.4% Zn over the interval 705'-725' were intersected in PIN-1.
- CONCLUSIONS:** The Pinafore Area hosts volcanogenic massive sulphides within a highly altered felsic tuff/exhalative package proximal to the historically productive Bridle/Dick Formation contact (Old Dick, Bruce). The horizon has excellent potential for hosting a significant VMS deposit.
- RECOMMENDATIONS:** The horizon warrants further testing.

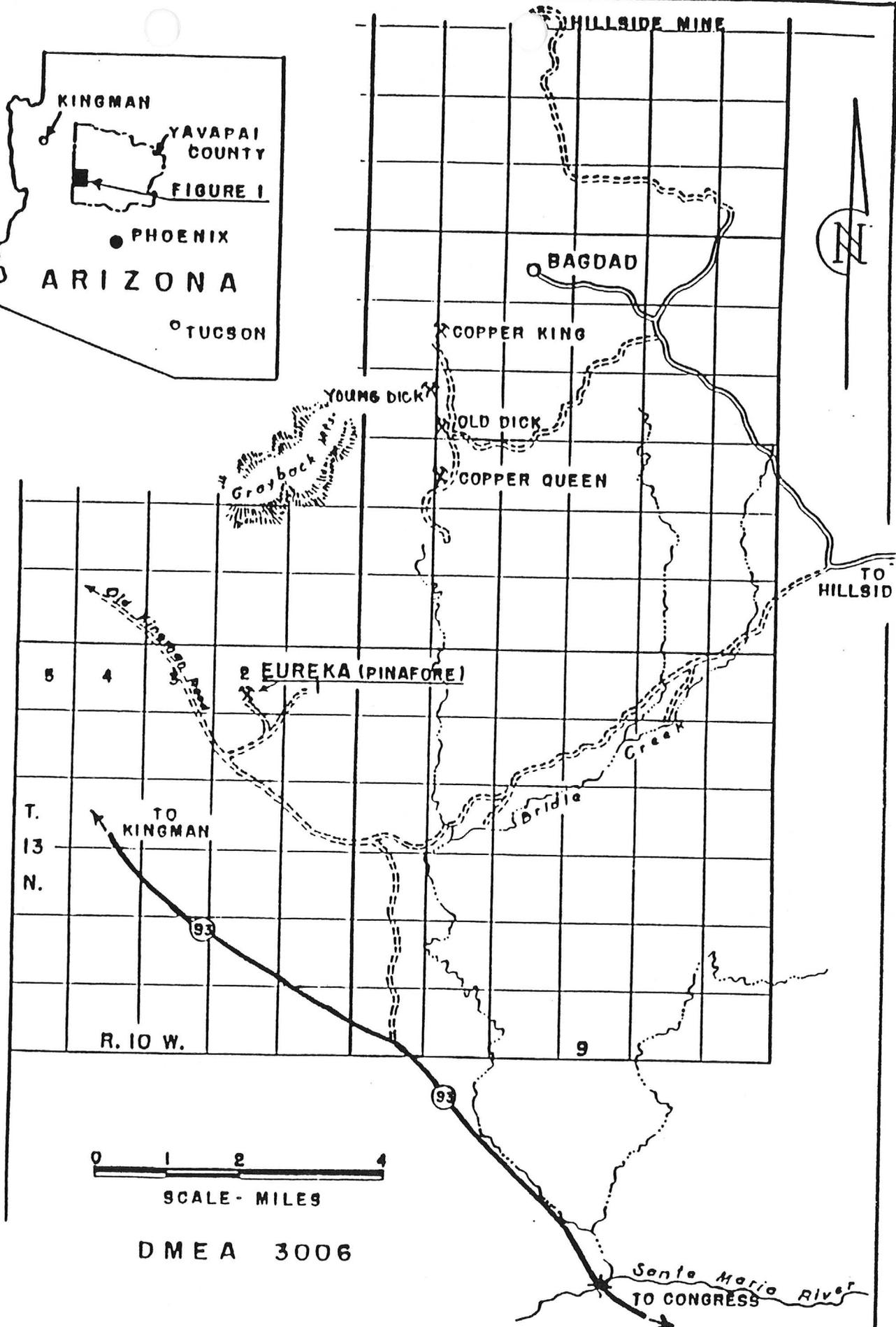
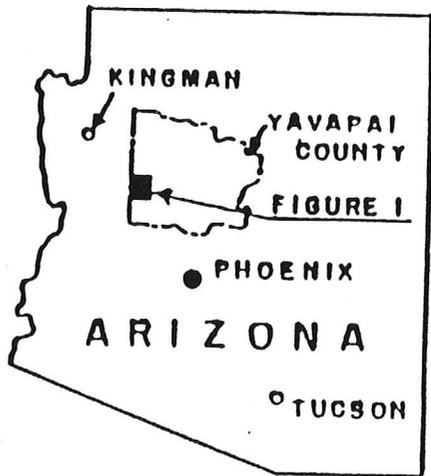


FIGURE I. - LOCATION MAP - EUREKA CLAIM  
YAVAPAI COUNTY, ARIZONA

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Cross Section 2W with Pinafore workings	
Longitudinal Section	
Geochemical Cross Sections PIN-1	
Cu	
Zn	
Cd	
Na	
Mg	
Ca	
Ti	
Al	

## Introduction

The Pinafore Claim, a single patented 600'\*1500' mining claim is located in the south-central portion of section 2 approximately 1/2 mile south and west of AEI's main Bagdad Basin Property. The balance of Section 2 has been temporarily withdrawn from staking by the BLM as a Sonoran Desert Tortoise Sanctuary. Underground exploration workings following, apparently secondary, copper mineralization in the central portion of the claim consist of a 245' inclined shaft and some 610' of drift.

The claim was examined during the course of AEI's initial reconnaissance mapping of the Bagdad Basin Property however the nature of the mineralization observed on the 100' level and intense re-crystallization of the hosting stratigraphy masking the alteration lead to the conclusion that the mineralization was strictly secondary and fracture controlled. This lead to the temporary dismissal of the potential of the area for hosting Volcanogenic Massive Sulphides. During the course of further mapping designed to define the Bridle (Mafic)/Dick (Felsic) Formational contact, the occurrence of an inlier of altered Bridle/Dick stratigraphy within the Dick Rhyolite Porphyry was defined near the shaft. Discussions with Dr. S.W. Holmes suggested that assays from the lower levels of the workings were yielded by VMS mineralization and it was decided to test the contact horizon below the shaft.

## PIN-1

During the period Feb., 16, 1992 through Feb., 18, 1992 A.E.I. completed a single 790 foot, dual tube reverse circulation drill hole on the Pinafore Claim. The drilling was done by Lang Exploratory Drilling of Salt Lake City, Utah. The hole was designed to provide a preliminary evaluation of the Pinafore Stratigraphic package.

Chip logging was done on 5' intervals and observations recorded on a "fill-in the blanks" type log sheet to facilitate consistency of logging. Small representative samples of each interval were retained in plastic vials and are available for inspection. 20' composite geochemical samples were submitted to Acme Labs in Vancouver for 35 element ICP analysis. 5' intervals containing significant sulphides were submitted to American Assay Labs in Tucson for ore grade Cu, Pb, Zn, Au, Ag analysis. All analyses have been compiled digitally and copies of the relevant files are appended to this report as is a detailed log with complete assay and geochemical data. Geological cross sections at 1":100' with geochemical overlays and a longitudinal are also appended.

PIN-1 was engineered to pierce 400' below the 245' level workings at the Pinafore on the down rake extension (mineral lineation and shaft geometry) of the mineralization reported on the level. The hole was successful and intersected 18' of base metal rich massive sulphides yielding 5% Cu and 13% Zn within the felsic tuffs of the Dick formation. Calculated true widths are in the order of 11' assuming the cut is perpendicular to strike. Intervals returning significant Cu/Zn values were analyzed for Au, Ag, and Pb. The VMS interval yields an average grade of 0.37 g/T Au and 13.5 g/T Ag. Pb values are less than 0.01% for the interval.

On the basis of correlation between the underground workings and a single pierce point, the apparent thickness of the mineralization is increasing with depth and the zone has good vertical continuity and excellent base metal content. Alteration observed and substantiated by the Na, Ca, Mg geochemistry (see sections) support a Volcanogenic origin for the mineralization.

## Geology

Briefly, the property is located on the western limb of the Bagdad Basin Proterozoic Belt approximately 4 miles south of the Old Dick/Bruce VMS ore deposits and occupies the same stratigraphic position as the Old Dick/Bruce deposits at the Bridle/Dick formational contact. These deposits, in conjunction with the nearby Copper Queen deposit yielded 1.7 million tons of ore grading 3.6% Cu and 11.6% Zn. Precious metals values are very low, in the order of 0.002 oz/ton Au.

The Pinafore property geology is best subdivided into four major litho-types:

- 1/ Variably hydrothermally altered felsic to intermediate tuffs and minor exhalites of the Dick Formation.
- 2/ Variably altered intermediate to mafic tuffs, agglomerates and flows of the Bridle Formation.
- 3/ A generally conformable but locally cross-cutting quartz porphyritic sub-volcanic rhyolitic intrusive known as the "Dick Rhyolite" and,
- 4/ Hybrid phases of the three resulting from more or less complete digestion of what were probably tuffaceous volcanics.

The entire stratigraphic package has undergone intense re-crystallization due to the proximity of Proterozoic granites to the immediate West.

The stratigraphy strikes irregularly East through North, dips very steeply to the east and stratigraphic tops are to the South/East.

The stratigraphy of the area is interpreted to represent a normal facing mafic/felsic homoclinal structure partially digested by the Dick Rhyolite.

Secondary Cu mineralization occurs on surface in shears related to the Dick porphyry contact. The shaft and 100' level workings closely follow the intersection lineation of this Dick Contact Shear and a weaker oblique set. While inaccessible, primary VMS mineralization is reported from the second or 245' level. This is supported by the Cu/Zn grades and ratios reported from this level.

Arizona Explorations Reverse Circulation Drill Hole Summary Sheet

HOLE# PIN-1 PROPERTY: Bagdad Basin ZONE: Pinafore

Collar Coordinates

Hole Info

Lat 0E N Az. 150 Started: 16-Feb-92 ICP #'s 348571-348609  
 Long 0N E Dip -45 Completed 18-Feb-92 Assay #'s 348925-348936  
 El 3190 Depth 790 Geologist M.J. Glover

Summary Log

From	To	Rock Type
0	10	Casing
10	215	3e rx, 7c
215	240	3e/1 Hy rx
240	300	3e/1 Hy rx tr py
300	330	3e/1 Hy rx
330	540	3e rx, 7c, QV
540	565	3e/2 Hy rx
565	580	1/3e Hy rx gnt
580	605	7c
605	625	3? rx 1% py
625	640	3? rx bt tr py
640	685	3? rx
685	700	3a/5a? rx 1% py
700	705	2-3? rx tr py
705	710	2-3?+VMS
710	725	VMS
725	730	VMS, 3e rx
730	740	3e rx
740	760	3e rx hem
760	790	3e qe rx

	From	To	Cu%	Zn%	Cu%	Zn%	Cu%	Zn%
PIN-1	705	710	2.0	2.8	7.9	11.0		
PIN-1	710	715	8.3	11.7	8.3	11.7	8.3	11.7
PIN-1	715	720	3.1	10.8	3.1	10.8	3.1	10.8
PIN-1	720	725	3.3	15.9	3.3	15.9	3.3	15.9
PIN-1	725	730	1.9	11.0	2.8	16.5		
Weighted Averages			3.7	10.4	5.1	13.2	4.9	12.8
			/25'	/25'	/18'	/18'	/15'	/15'

NB: /25' is strict average of the 705-730 interval

/18' is massaged average yielded by increasing base metal values from the 705-710 and 725-730 intervals to around the mean for the 710-725 interval, ie attributing all metals values in the outside intervals to the massive sulphides observed. This is probably a fair figure although not really "by the book".

/15' is strict average of the 710-725 interval

PIN-1 Significant Assays

		Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppn)
348930	705-710	180	5.8	19800	257	27600
348931	710-715	472	19.3	82900	135	117000
348932	715-720	414	15.4	31400	122	108000
348933	720-725	504	16.6	33400	50	159000
348934	725-730	280	10.2	18900	88	110000

		Au (g/T)	Ag (g/T)	Cu %	Pb %	Zn %
348930	705-710	0.18	5.8	1.98	0.03	2.76
348931	710-715	0.47	19.3	8.29	0.01	11.70
348932	715-720	0.41	15.4	3.14	0.01	10.80
348933	720-725	0.50	16.6	3.34	0.01	15.90
348934	725-730	0.28	10.2	1.89	0.01	11.00
	Avg/25'	0.37	13.5	3.73	0.01	10.43

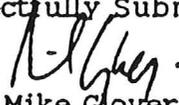
### Conclusions

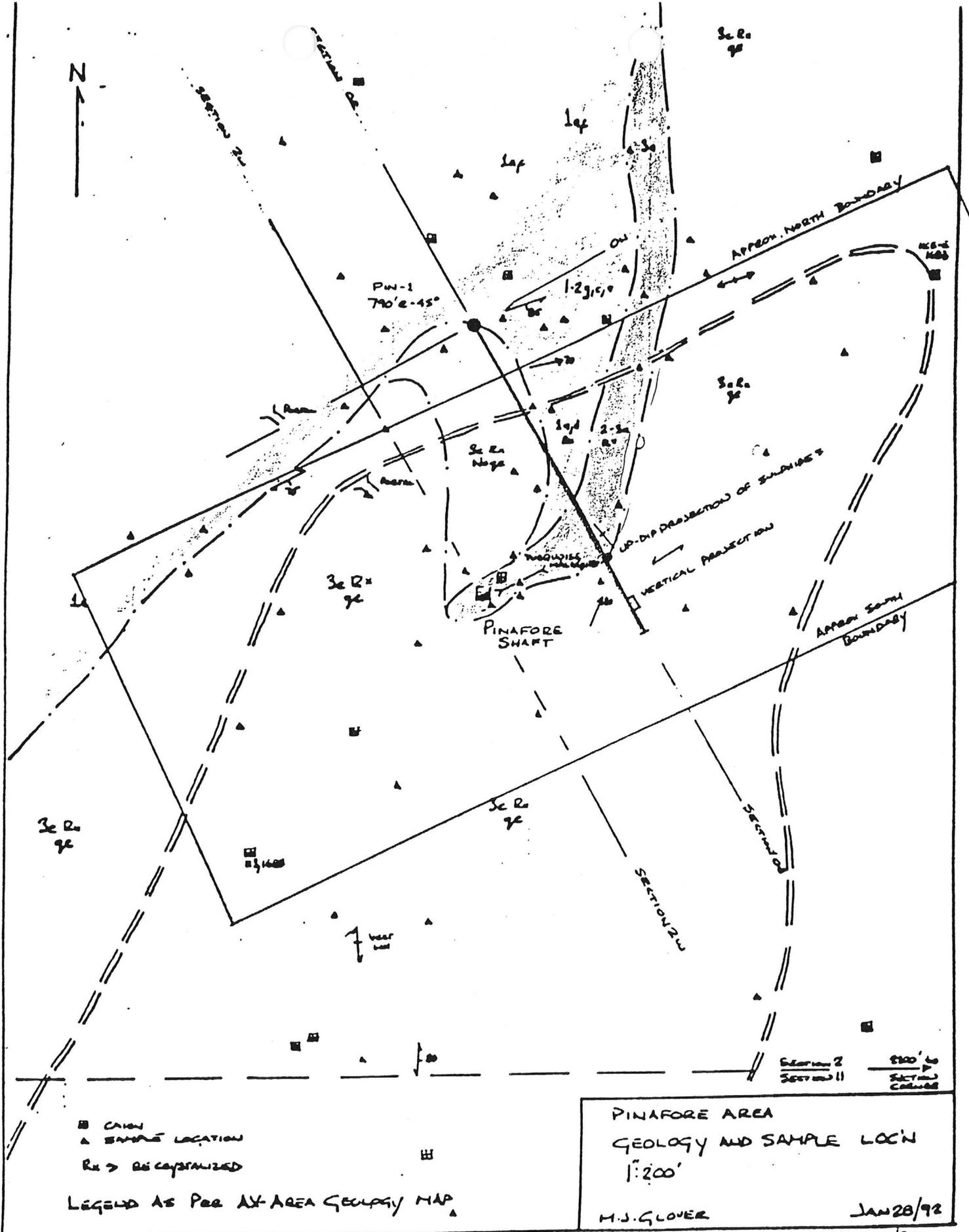
The Pinafore has excellent potential for hosting a significant massive sulphide deposit and further examination is required.

### Recommendations

The BLM is being cautiously petitioned to re-instate section 2 as active ground for mineral exploration. Subsequent to acquiring a stronger ground position, further surface RC drilling is recommended to test the down rake continuation and lateral extent of the Pinafore mineralization. Testing to depths of 1200' should be possible utilizing the equipment employed on PIN-1. 5 holes fanned from the PIN-1 set-up, 2 testing the lateral continuity of the zone at the same elevation as the PIN-1 pierce point and three testing the continuity at depth (300' below the PIN-1 pierce) should adequately provide a preliminary picture of the geometry and mineral potential of the zone. 5000' of drilling total at \$16.00/ft= \$80,000 plus supervision is recommended.

Respectfully Submitted,

  
Mike Glover, B.Sc.  
A.E.I. Staff Geologist

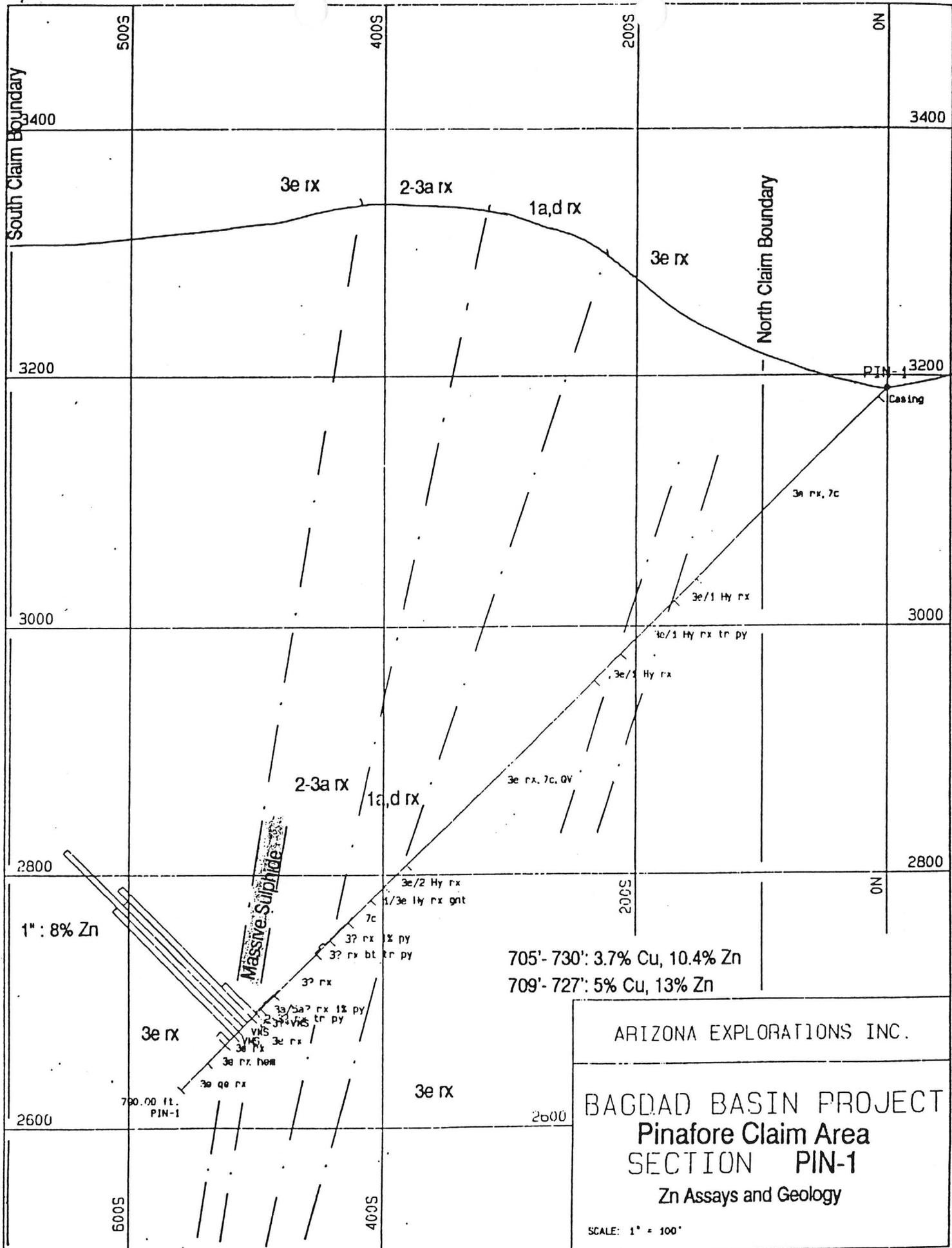


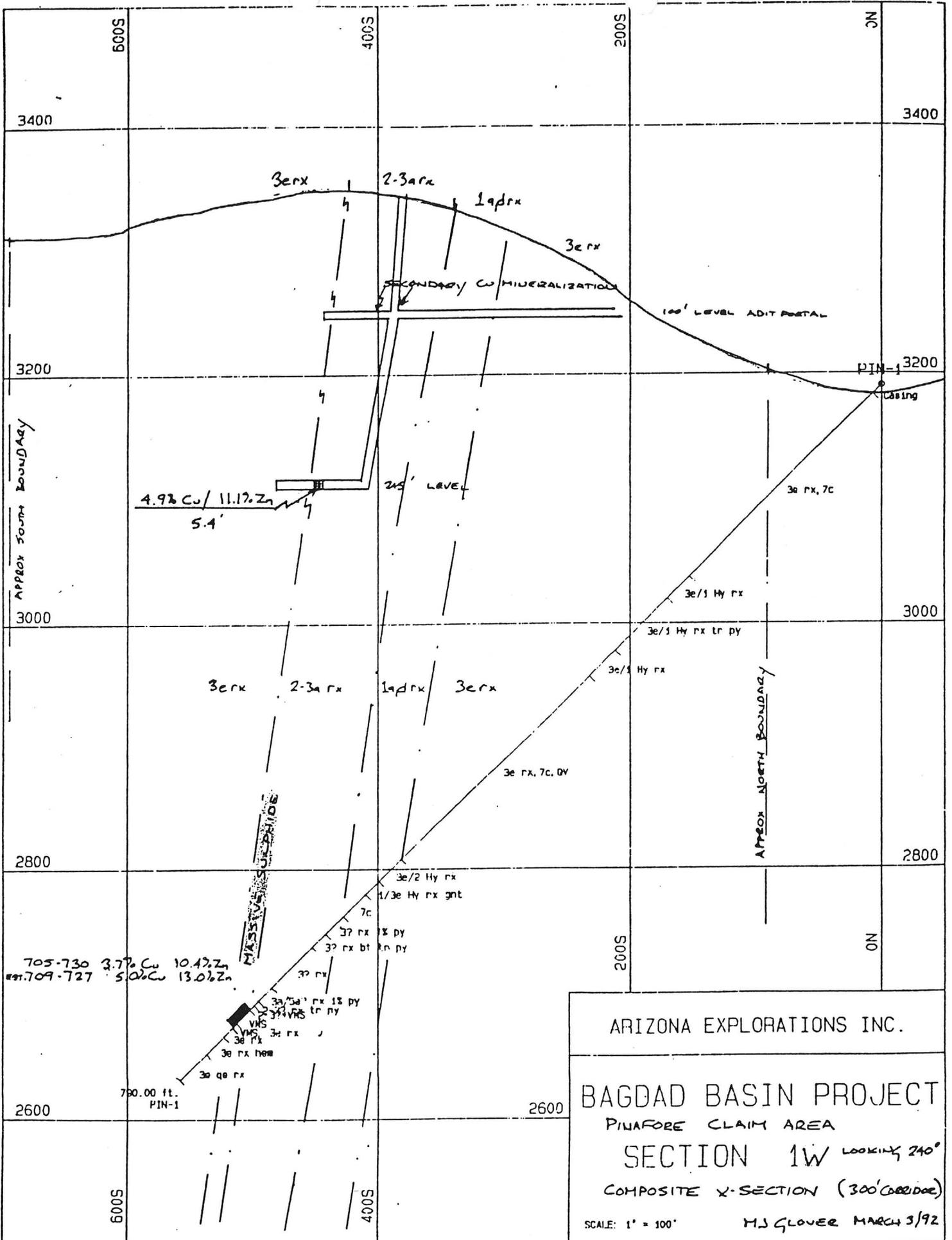
■ CANYON  
 ▲ SAMPLE LOCATION  
 Re → RECAPITULATED

LEGEND AS PER AX-AREA GEOLOGY MAP

PINAFORE AREA  
 GEOLOGY AND SAMPLE LOC'N  
 1:200'  
 H.J. GLOVER  
 JAN 28/92  
 MARCH 1/92





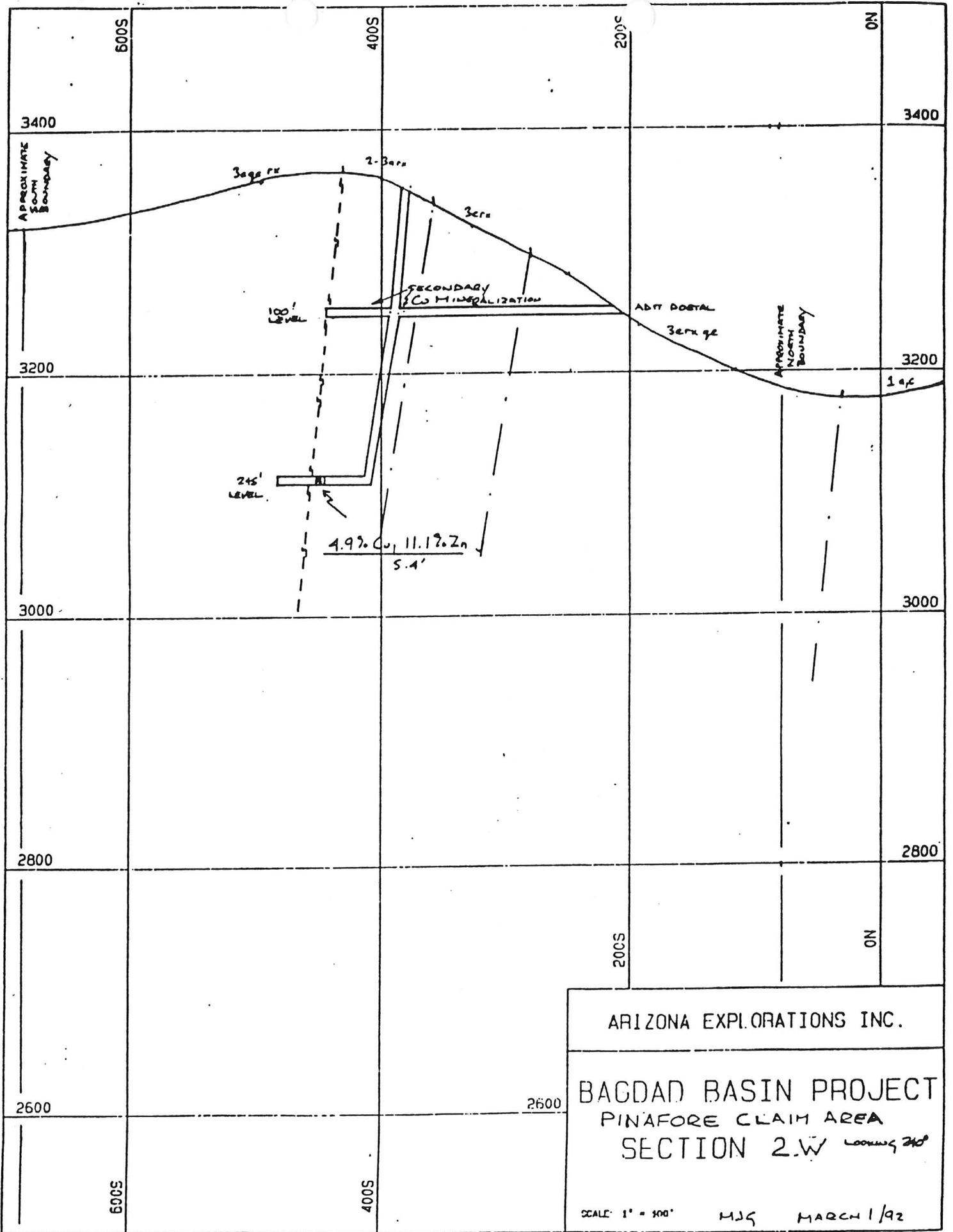


ARIZONA EXPLORATIONS INC.

BAGDAD BASIN PROJECT  
 PINAFORE CLAIM AREA  
 SECTION 1W LOOKING 240°  
 COMPOSITE X-SECTION (300' WIDE)

SCALE: 1" = 100'

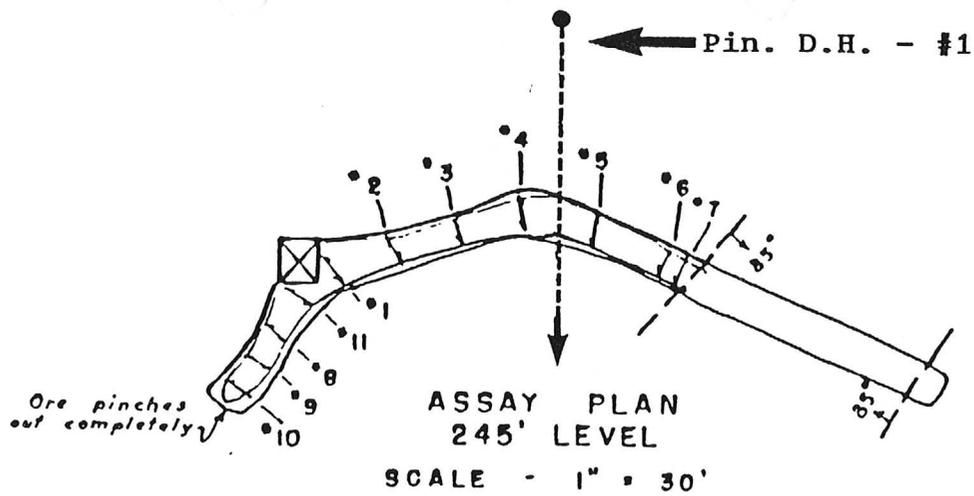
M.J. GLOVER MARCH 3/92



ARIZONA EXPLORATIONS INC.

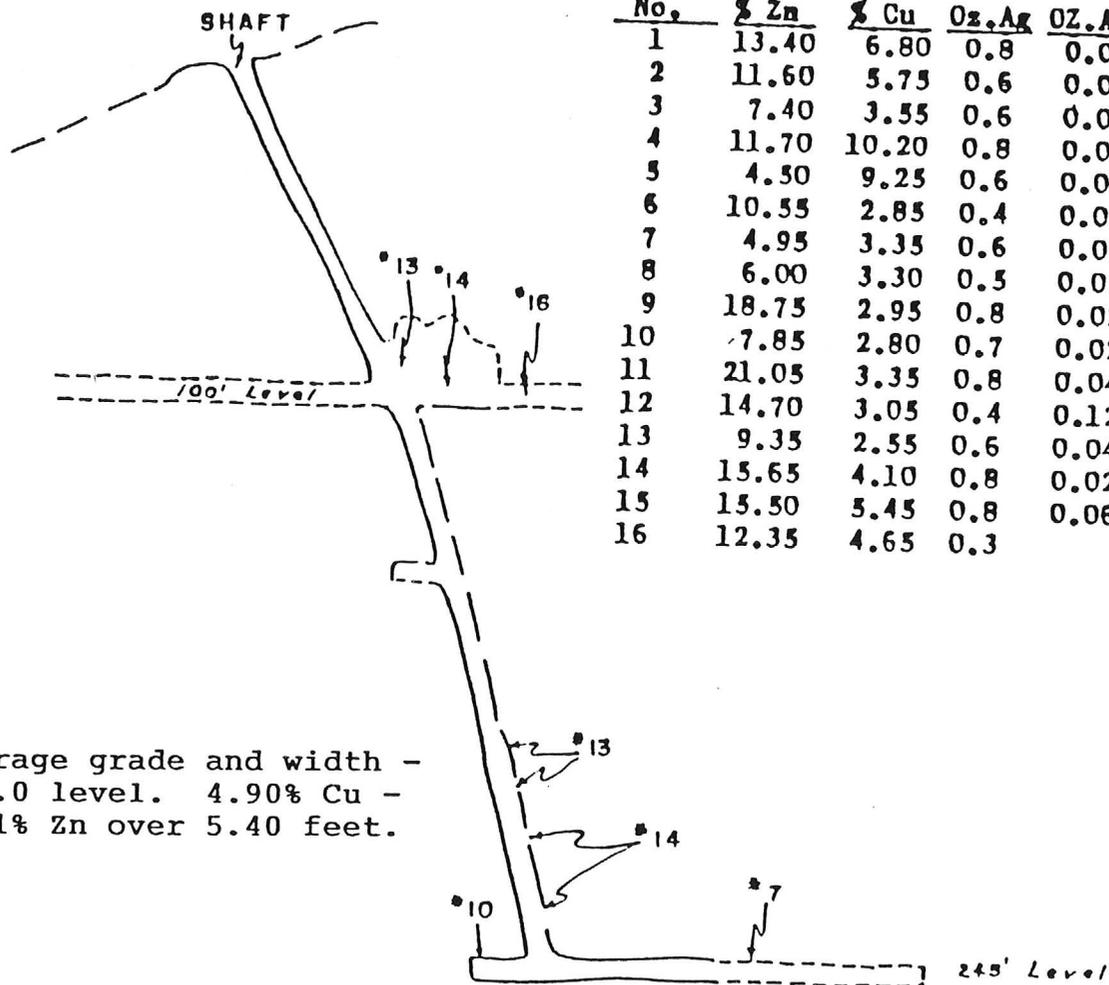
BAGDAD BASIN PROJECT  
 PINAFORE CLAIM AREA  
 SECTION 2.W Looking 240°

SCALE: 1" = 500' HJG MARCH 1/92

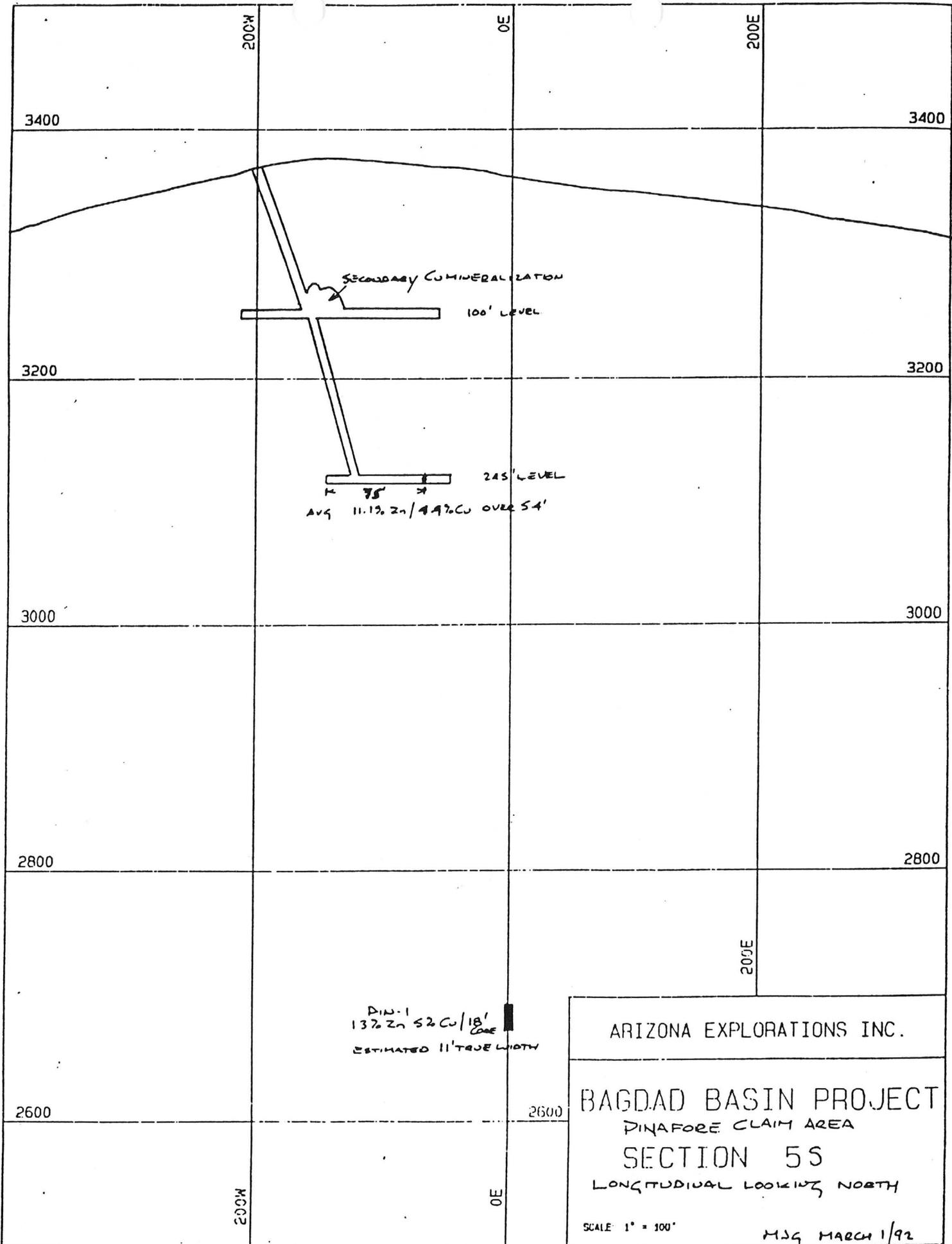


ASSAY DATA

Sample No.	% Zn	% Cu	Oz. Ag	OZ. Au	Width
1	13.40	6.80	0.8	0.04	7'
2	11.60	5.75	0.6	0.02	6'
3	7.40	3.55	0.6	0.02	5.5
4	11.70	10.20	0.8	0.04	5'
5	4.50	9.25	0.6	0.06	4.5
6	10.55	2.85	0.4	0.02	5'
7	4.95	3.35	0.6	0.04	5'
8	6.00	3.30	0.5	0.02	5.3
9	18.75	2.95	0.8	0.02	4.3
10	7.85	2.80	0.7	0.02	5'
11	21.05	3.35	0.8	0.04	7'
12	14.70	3.05	0.4	0.12	8'
13	9.35	2.55	0.6	0.04	5'
14	15.65	4.10	0.8	0.02	5'
15	15.50	5.45	0.8	0.06	4.5'
16	12.35	4.65	0.3		3'



Average grade and width -  
245.0 level. 4.90% Cu -  
11.1% Zn over 5.40 feet.



200W

0E

200E

3400

3400

3200

3200

3000

3000

2800

2800

2600

2600

200W

0E

200E

SECONDARY CUMINERALIZATION

100' LEVEL

245' LEVEL

75'

AVG 11.1% Zn / 4.9% Cu OVER 54'

DIN-1  
13% Zn 5.2% Cu / 18' core  
ESTIMATED 11' TRUE WIDTH

ARIZONA EXPLORATIONS INC.

BAGDAD BASIN PROJECT

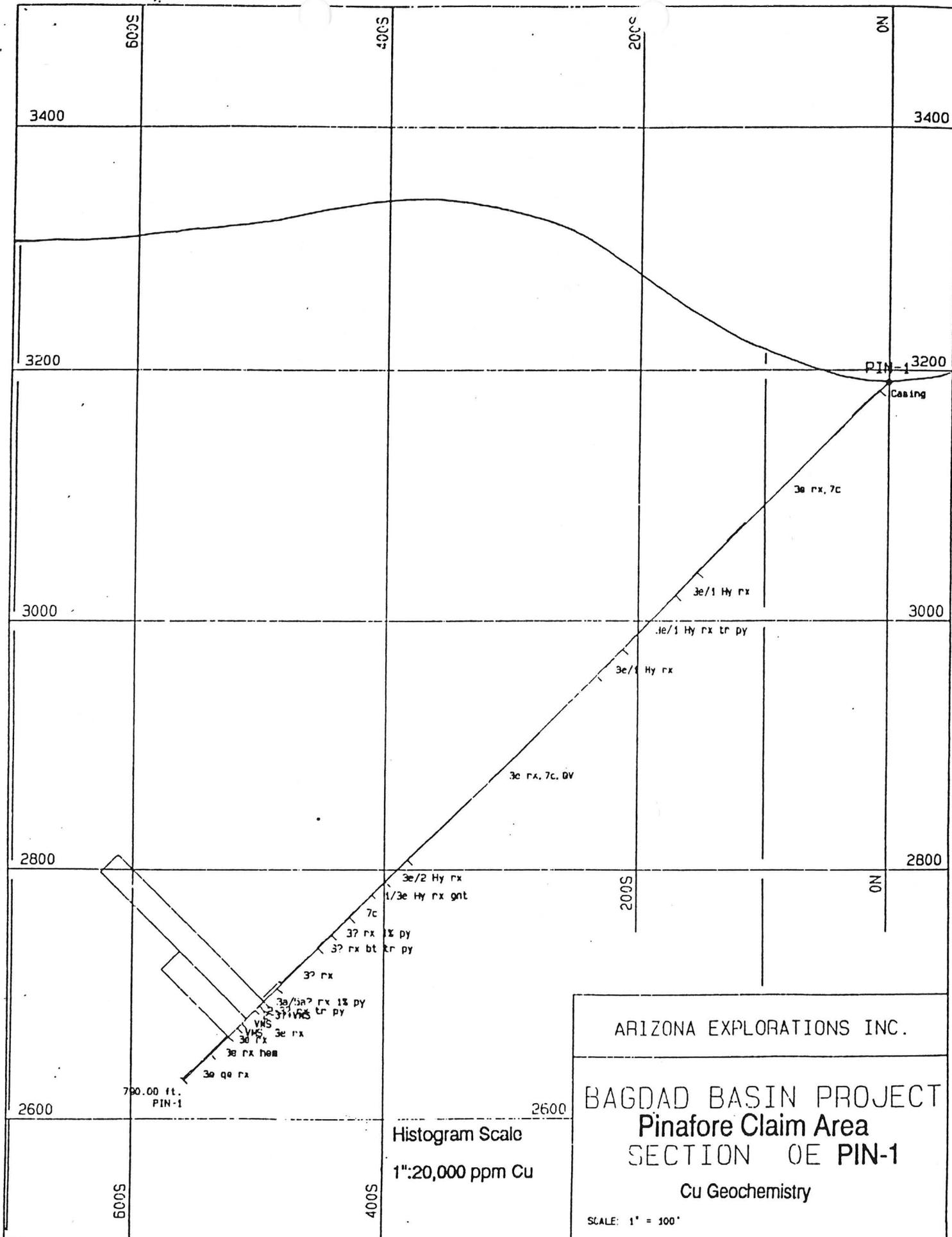
DINAFOR CLAIM AREA

SECTION 55

LONGITUDINAL LOOKING NORTH

SCALE 1" = 100'

MSG MARCH 1/92

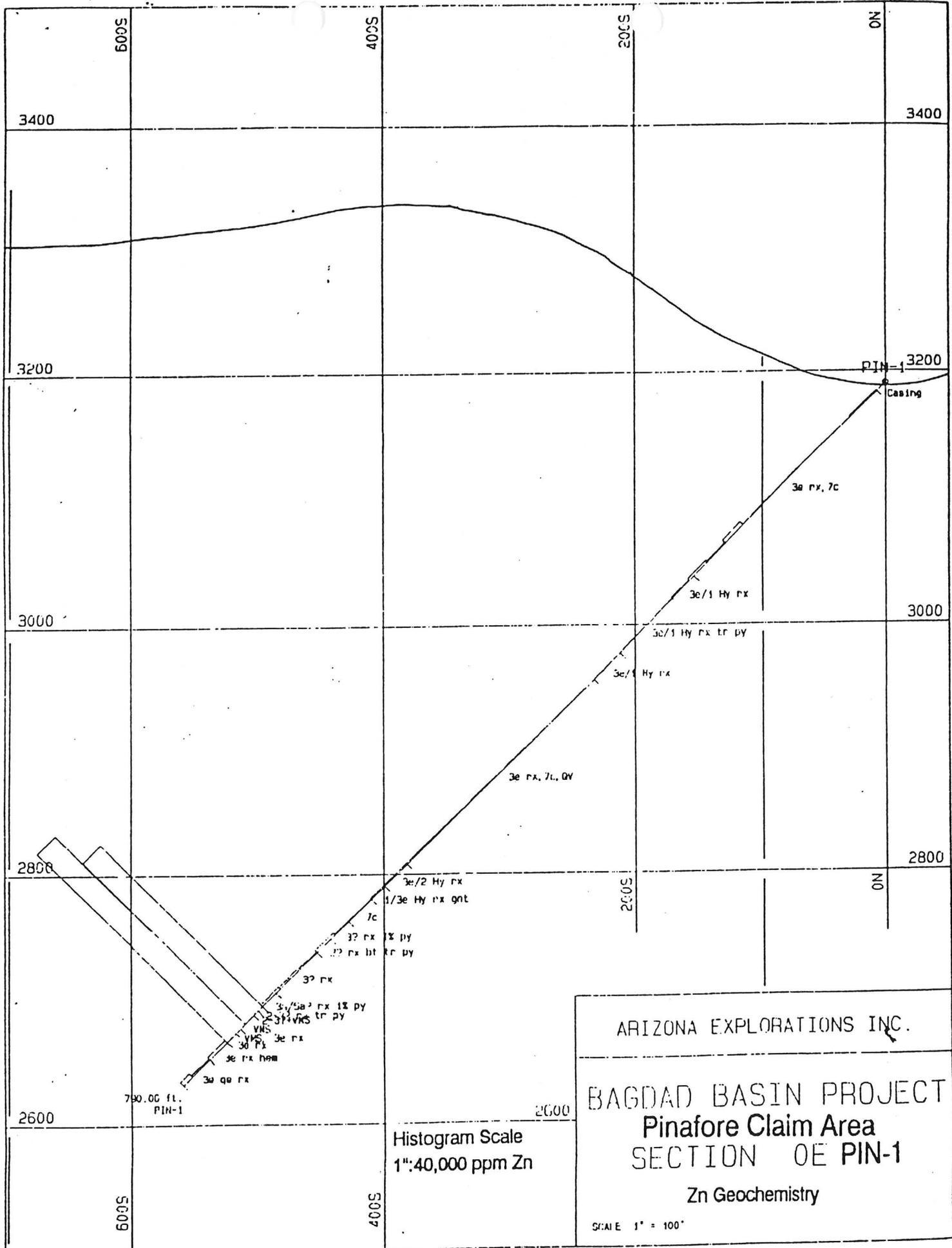


ARIZONA EXPLORATIONS INC.

BAGDAD BASIN PROJECT  
**Pinafore Claim Area**  
 SECTION OE PIN-1  
 Cu Geochemistry

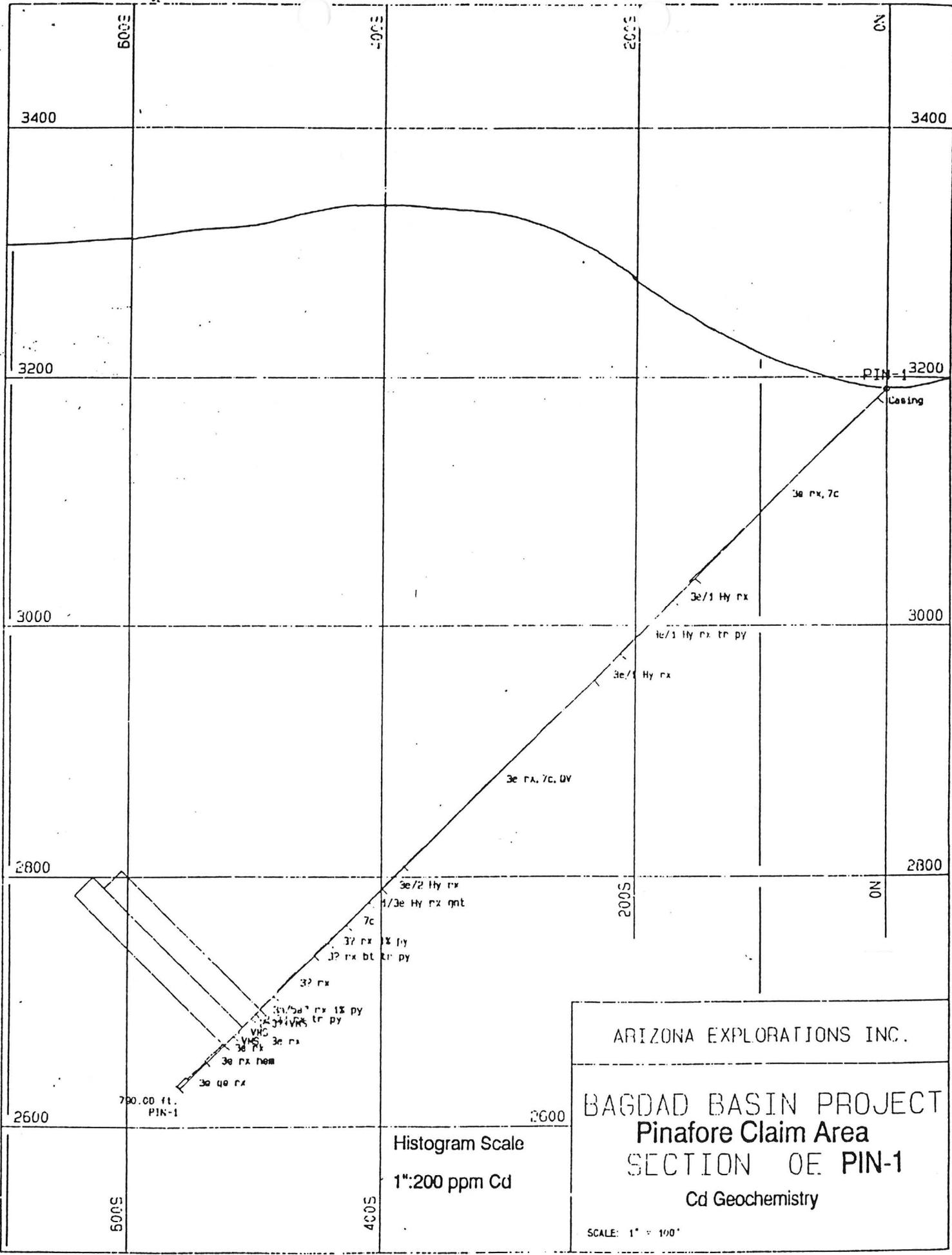
SCALE: 1" = 100'

Histogram Scale  
 1":20,000 ppm Cu



Histogram Scale  
1"=40,000 ppm Zn

ARIZONA EXPLORATIONS INC.  
 BAGDAD BASIN PROJECT  
 Pinafore Claim Area  
 SECTION OE PIN-1  
 Zn Geochemistry  
 SCALE 1" = 100'

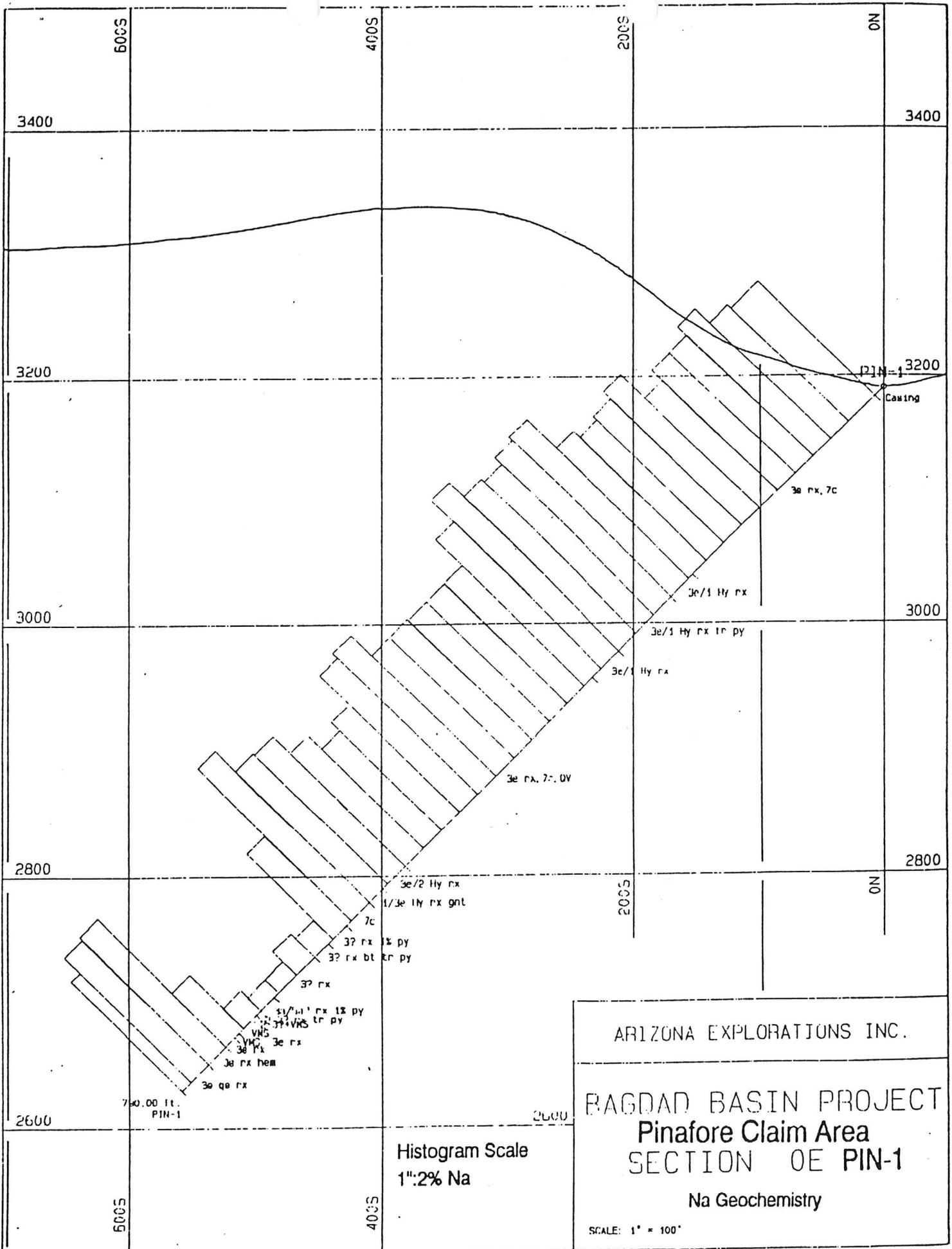


ARIZONA EXPLORATIONS INC.

BAGDAD BASIN PROJECT  
**Pinafore Claim Area**  
 SECTION OF PIN-1  
 Cd Geochemistry

SCALE: 1" = 100'

Histogram Scale  
 1":200 ppm Cd



ARIZONA EXPLORATIONS INC.

BAGDAD BASIN PROJECT  
**Pinafore Claim Area**  
 SECTION OE PIN-1  
 Na Geochemistry

SCALE: 1" = 100'

Histogram Scale  
 1":2% Na

740.00 ft.  
 PIN-1

PIN-1  
 Casing

3e rx, 7c

3e/1 Hy rx

3e/1 Hy rx 1r py

3e/1 Hy rx

3e rx, 7c, 0V

3e/2 Hy rx

1/3e Hy rx gnt

7c

37 rx 1r py

37 rx bt 1r py

37 rx

31/31 rx 1r py

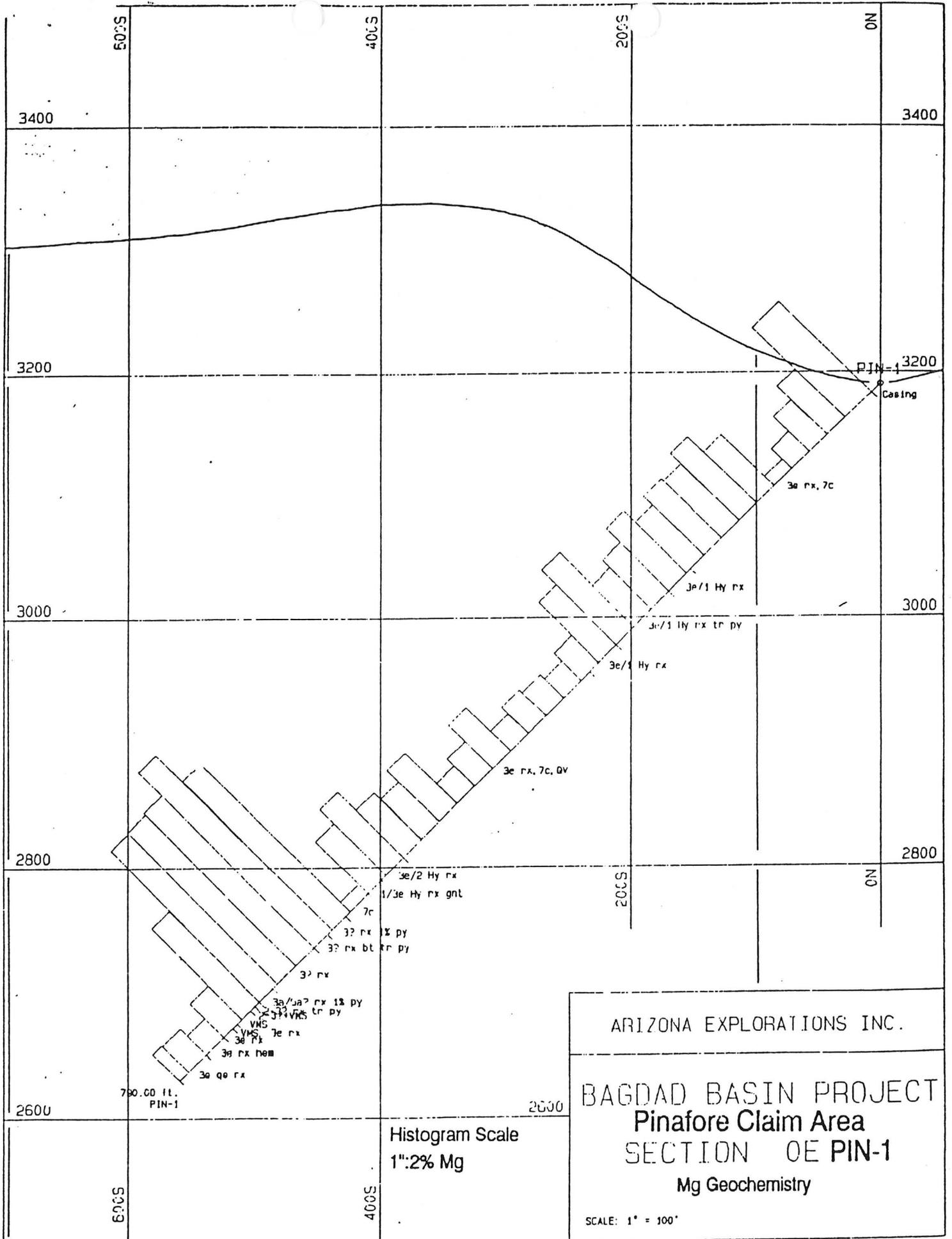
31/31 rx 1r py

VNS 3e rx

3e rx

3e rx hem

3e qa rx



3400

3400

3200

3200

3000

3000

2800

2800

2600

2600

600S

400S

200S

ON

600S

400S

500S

ON

790.00 ft.  
PIN-1

PIN-1  
Casing

3e rx, 7c

3e/1 Hy rx

3e/1 Hy rx tr py

3e/1 Hy rx

3e rx, 7c, 0v

3e/2 Hy rx

1/3e Hy rx gnt

7c

3? rx 1% py

3? rx bt tr py

3? rx

3e/2 rx 1% py

3e/2 rx tr py

VMS 3e rx

3e rx hem

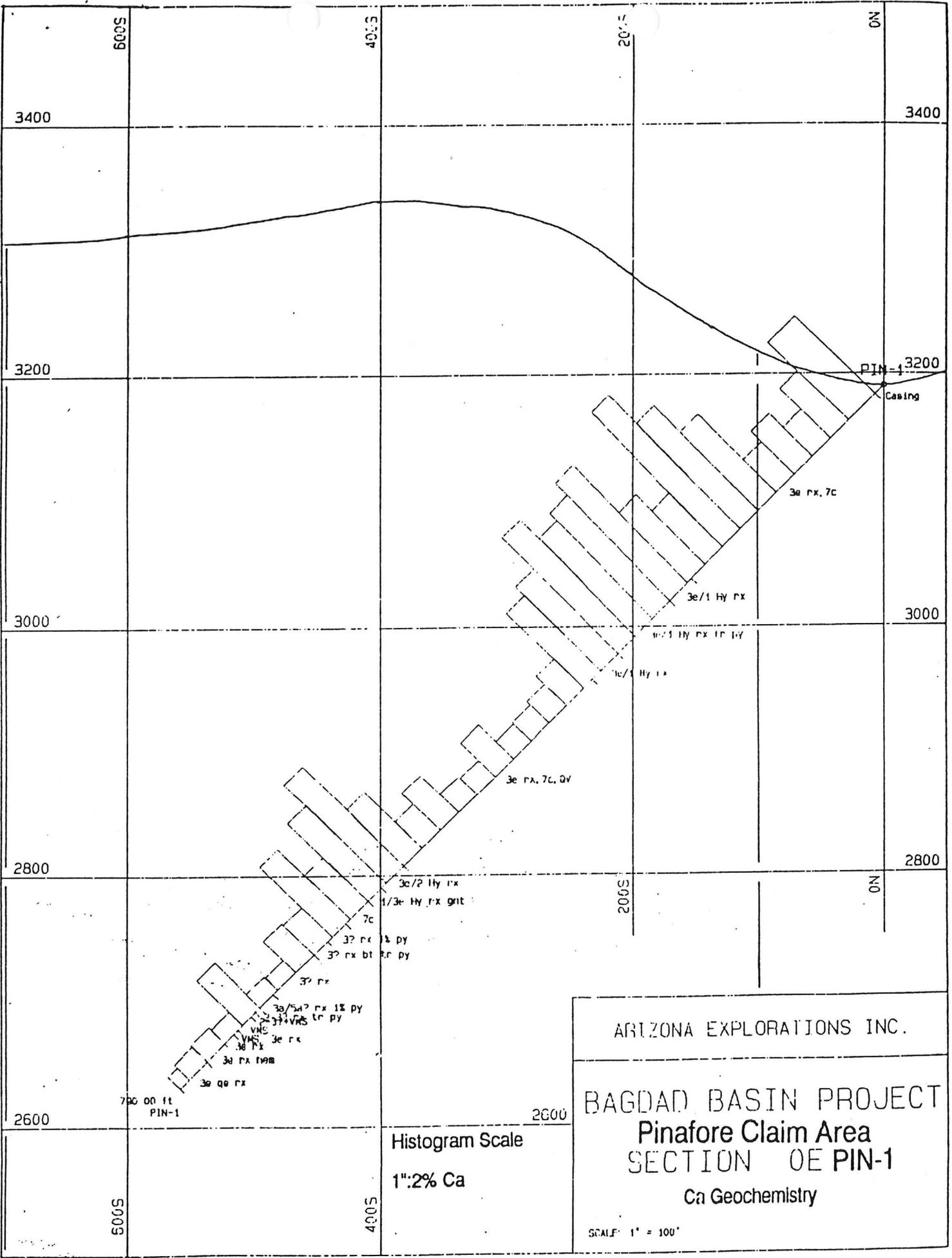
3e qe rx

ARIZONA EXPLORATIONS INC.

BAGDAD BASIN PROJECT  
Pinafore Claim Area  
SECTION OE PIN-1  
Mg Geochemistry

Histogram Scale  
1" = 2% Mg

SCALE: 1" = 100'

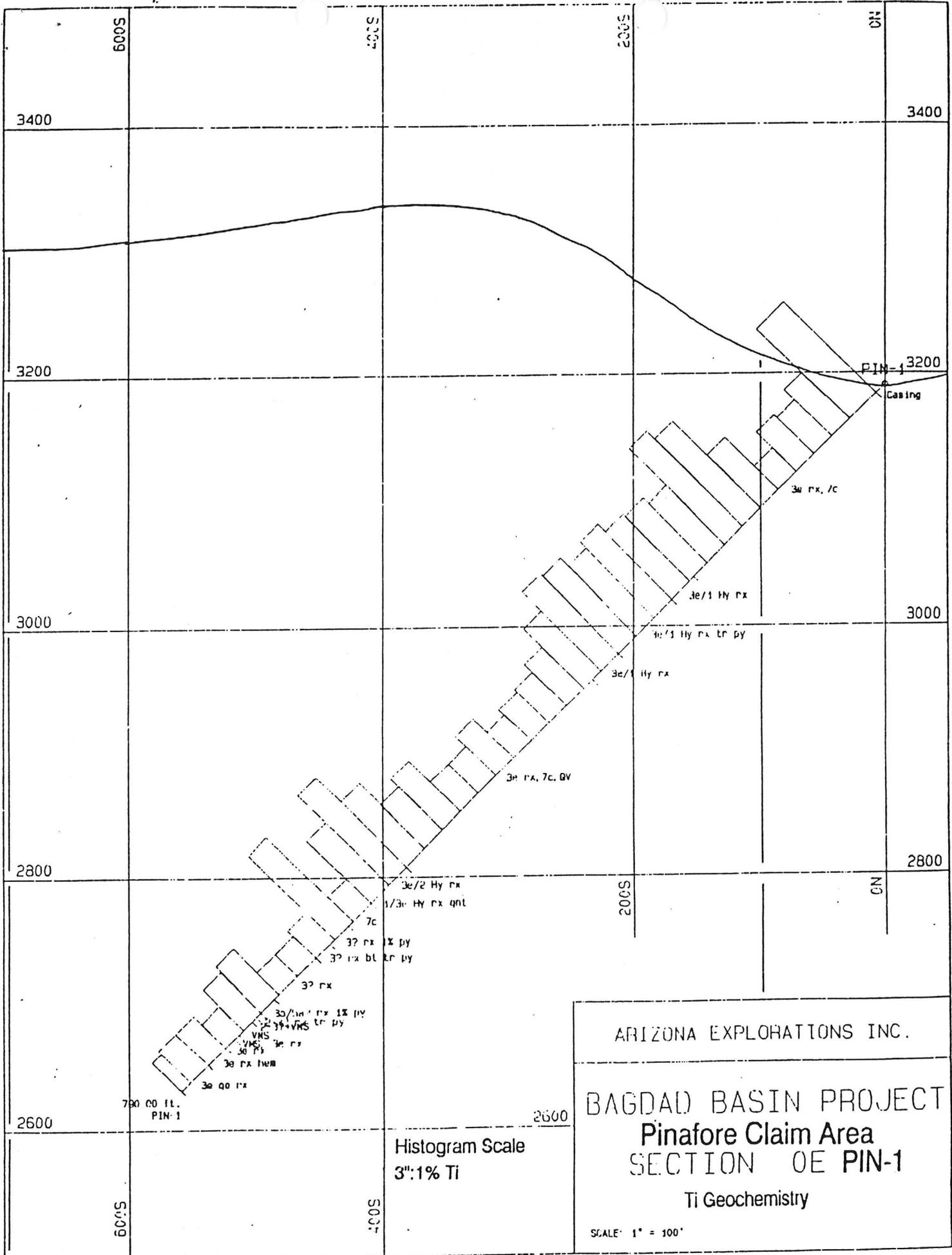


ARIZONA EXPLORATIONS INC.

BAGDAD BASIN PROJECT  
**Pinafore Claim Area**  
 SECTION OF PIN-1  
 Ca Geochemistry

SCALE: 1" = 100'

Histogram Scale  
 1" = 2% Ca



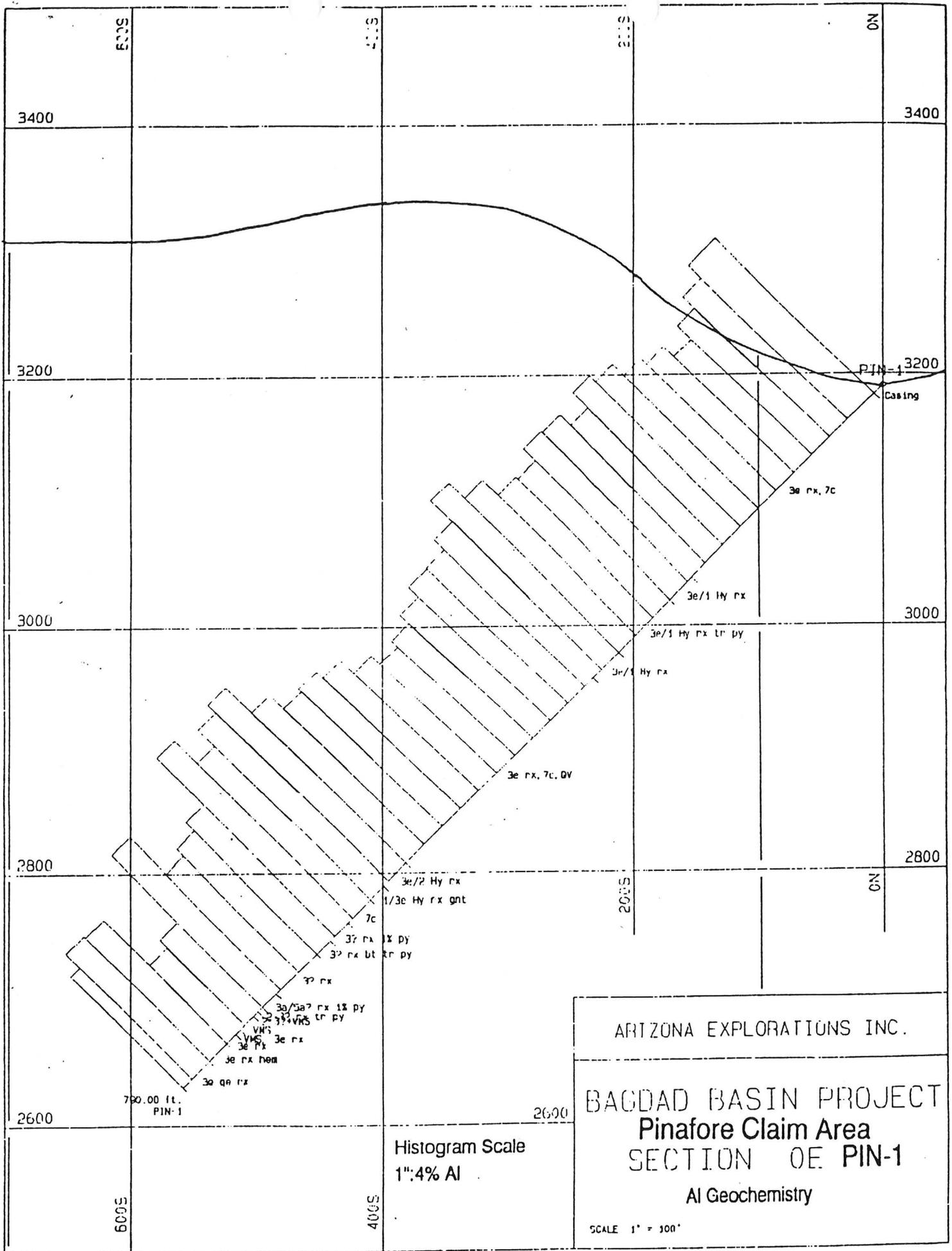
ARIZONA EXPLORATIONS INC.

BAGDAD BASIN PROJECT  
**Pinafore Claim Area**  
 SECTION OF PIN-1

Ti Geochemistry

SCALE: 1" = 100'

Histogram Scale  
 3":1% Ti



## BAGDAD BASIN

(Abstract)

PINAFORE MINE V.M.S.

Eureka Mining District

Eureka Claims

Yavapai County, Arizona, U.S.A.

Sept. 1, 1993

### General Statement

The Pinafore V.M.S. occurrence is typical of all V.M.S. deposits in the Central Arizona Precambrian volcanic belt with respect to its geologic environment. The deposits are polymetallic (Cu-Zn-Pb) massive sulphide occurrences within a felsic package of volcanic rocks (tuffs, acid flows, fragmentals, meta-seds) capped by an exhalite unit comprised of cherts, iron formations and siliceous members. Intense alteration, consisting of chlorite, sericite, silicification, pyritization, biotite, carbonates, cordierite and minor garnet, is present within the exhalite horizon. Sodium and calcium depletion are significant. In most cases the cherty horizon lies directly on the massive sulphides.

The massive sulphides occur as lenses or pipe-like bodies showing Cu and Zn banding. They are 60% metallic. The average length is 300 feet -- width 40 feet -- depth 1000 feet. These lenses formed in paleotopographic depressions, basins or puddles on the slope area of a volcanic vent. The massive sulphides interfinger with the enclosing tuffs and flows and are surrounded by an envelope of disseminated sulphides -- mainly pyrite -- which may be very extensive. The Pinafore lens outcropped as Cu-oxides, and phased at depth into massive sulphides at the 150' level. Drilling at depth (800' vertically) shows a well developed massive sulphide body, which may be unique to itself, or the tip of a major deposit. The Pinafore V.M.S. body plunges 80° to the NE and is open at depth.

### Land Situation-Location

The Eureka claim is patented and located in the Eureka Mining District approximately 10 miles southwest of the town of Bagdad, a company town of *Cyprus Mines Ltd.* This is approximately 100 miles NW from Phoenix. Accessibility is by paved roads, then an all-weather dirt road for 5 miles north of highway # 97 (see attached map). The land is owned by the Lawler family, descendants of John Lawler, who staked the claim in 1904. The property is now under option to Stanley W. Holmes.

## History

The Eureka claim was staked in 1904 by a successful mining entrepreneur in the Bagdad area -- John Lawler. He mined the upper part of the surface Cu-oxides to a depth of 100 feet through a small shaft and adit.

In the early part of World War II (1942-1944), a second adit was driven at the 250 level (see section) and further mining of the massive sulphide protore was carried out. It is estimated that 10,000 tons averaging 11.0% Zn and 5.0% Cu was mined from the Pinafore (Arizona Mines Dept).

*Bagdad Copper Co.* and *Cyprus Mines Ltd.* operated in the Bagdad Basin continually from the turn of the century until 1975. There were four mines located immediately north of the Pinafore (see map). The most important were the Old Dick (800,000 tons) and the Bruce (1,000,000 tons). The mine/mill grade averaged 13.0% Zn and 3.95% Cu. Both mines are now closed. *Cyprus* still controls those mine areas and carries out exploration sporadically. *Cyprus* operates the rich open pit mine in Bagdad, a porphyry copper with 100,000,000+ tons reserves of 0.7% Cu, now being operated at 100,000 tons per day.

No recent work had been done at the Pinafore until the property was optioned to Arizona Explorations Inc. (A.E.I. -- Syndicate of *American Barrick, Placer Dome, and Homestake*). It was part of the Bagdad Volcanic Basin region, under exploration by the Syndicate for two (2) years. The Pinafore discovery was a direct result of this program. Two (2) other promising V.M.S. deposits were delimited that deserve follow-up -- the Rudkin and AX zones (see map).

## Work Program -- A.E.I.

1. Staking and acquisition
2. Aerial photography -- coloured
3. Airborne E.M. -- Geoterrex
4. Geologic Mapping -- "Recce"
5. Geologic Mapping -- detail
6. Geochemical Surveying -- 40 elements
7. Surface I.P. Surveys -- B & J
8. 20,000 ft. Reverse circulation drilling
9. 3,000 ft. Core drilling

## Results -- Discovery of:

1. Pinafore Deposit
2. Rudkin Zone
3. AX Zone

## Expenditures to Date

\$ 485,000.00

## Geology

The general geologic setting is explained in the General Statement. The most important features are:

1. Abundant V.M.S. type alteration exists over most of the Bagdad area;
2. The Pinafore is on the same productive time horizon as the Bruce and Old Dick;
3. Deposits mined to date in the Bagdad Basin are relatively small by Arizona standards (1 - 2,000,000 tons, compared to other 5 - 40,000,000 ton Arizona V.M.S. deposits).

There is every reason to believe that a large V.M.S. deposit exists in the Bagdad Basin. The Pinafore could well be just the tip of a much larger system, comprising one or more massive sulphide bodies at depth. Interestingly, the Bruce orebody was discovered blind below the Old Dick orebody, almost by accident. Both deposits lie on the same time horizon, below the same exhalite cap -- the same time horizon as the Pinafore.

## Potential

Bagdad run of mine grade from all operations, including dilution:

Copper	3.65%
Zinc	12.67%
Gold and Silver	present, not recovered
Tonnage	1,000,000 / 2,000,000

## Possible Cash Flow

Tons per year (250 /day)	87,500
Capital Cost	\$ 6,500,000.00
Profit per year after taxes	\$ 4,481,050.00

Life -- 12 years  
(see Cash Flow sheet for details)

## Proposed Program

10,000 ft. of core drilling  
(See Longitudinal Section for hole locations)

Note: Capital Cost based on new equipment -- lower figure for used equipment.

STANLEY W. HOLMES & ASSOCIATES

CONSULTING GEOLOGISTS

THE QUADRANGLE, SUITE # 481

2701 EAST CAMELBACK ROAD

PHOENIX, ARIZONA, 85016

FAX: (602) 957-8445

PHONE: (602) 957-8230

POSSIBLE CASH FLOW (±10%)

PINAFORE MINE V.M.S.

Eureka Mining District

Eureka Claims

Yavapai County, Arizona, U.S.A.

Sept. 1, 1993

Grade

Assume known production grade, including dilution -- Bruce-Old Dick

Copper	3.65%
Zinc	12.67%

Mill Con. Rec. -- 90%

Cu	-	65.70 lbs
Zn	-	228.06 lbs

Price -- Assume Current

Cu	-	\$ 0.90 / lb.
Zn	-	\$ 0.50 / lb.

Value per Ton

Cu	-	\$ 59.13
Zn	-	\$ 114.03

GROSS	\$ 173.16
-------	-----------

Costs

Mining	\$ 35.00 / ton
Mill	25.00 / ton
Amort.	5.00 / ton
Admin.	5.00 / ton
Smelter	30.00 / ton
TOTAL	\$ 100.00 / ton

Net

Value	\$ 173.16 / ton
Costs	\$ 100.00 / ton

N.S.R.	\$ 73.16 / ton
--------	----------------

## POSSIBLE CASH FLOW (±10%)

### Profit

Tons / year -- (250 day)	-	87,500.00
Profit / ton	-	73.16
Profit / year	-	\$ 6,401,500.00
Tax - (30%)	-	\$ 1,920,450.00
Profit / year	-	<u>\$ 4,481,050.00</u>

### Capital Costs

Plant / 250 / day	-	\$ 3,000,000.00
Shaft / Undgrnd Dev.	-	2,500,000.00
Ancillary	-	1,000,000.00
* TOTAL	-	<u>\$ 6,500,000.00</u>

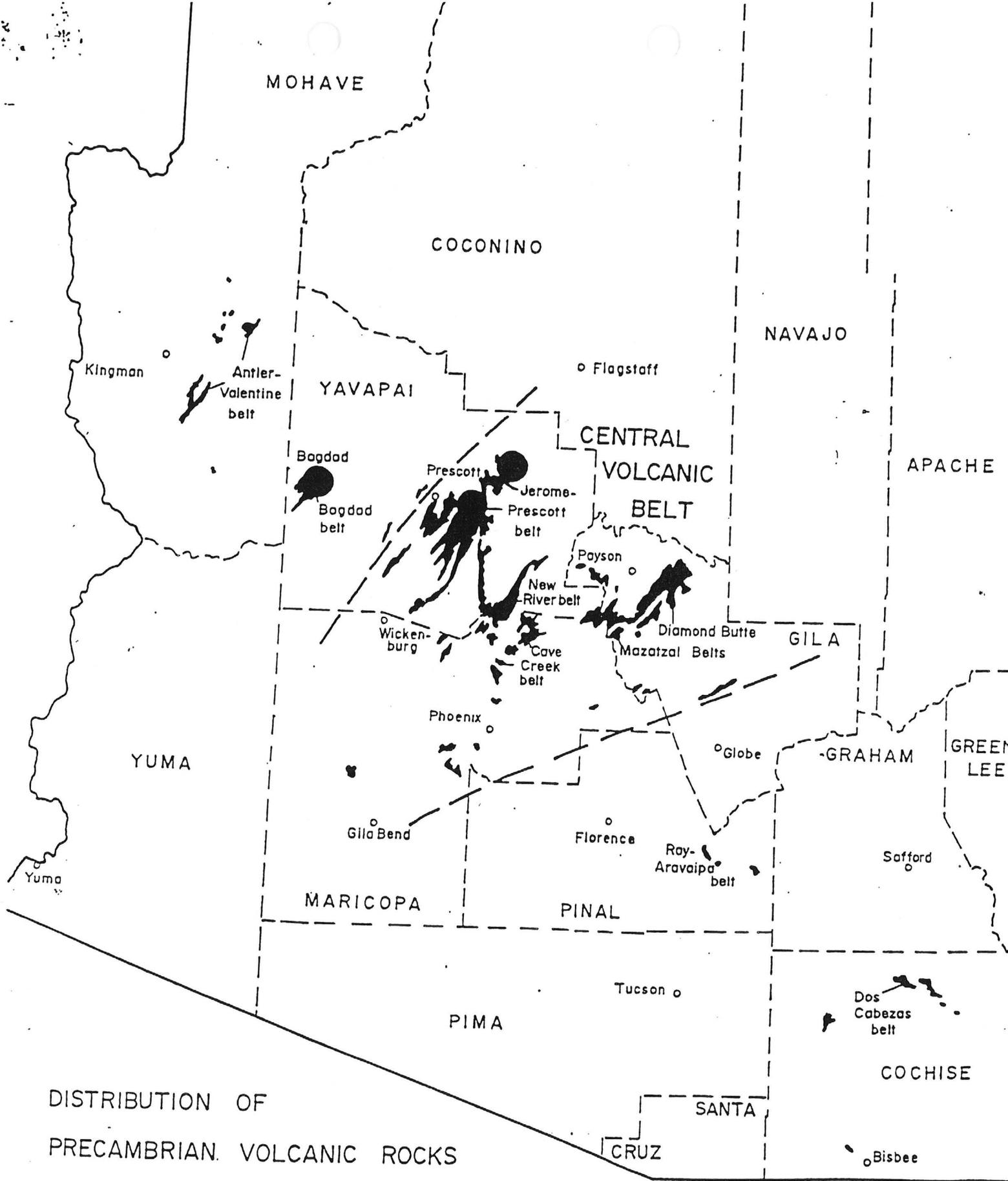
### Payback

1.5 years

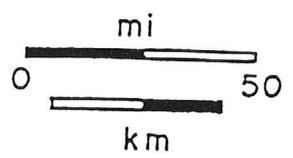
### Reserves

Preliminary first-stage drill indications already exceed payback.

\* Less if used equipment is purchased.



DISTRIBUTION OF  
 PRECAMBRIAN VOLCANIC ROCKS  
 AND VOLCANIC BELTS IN ARIZONA



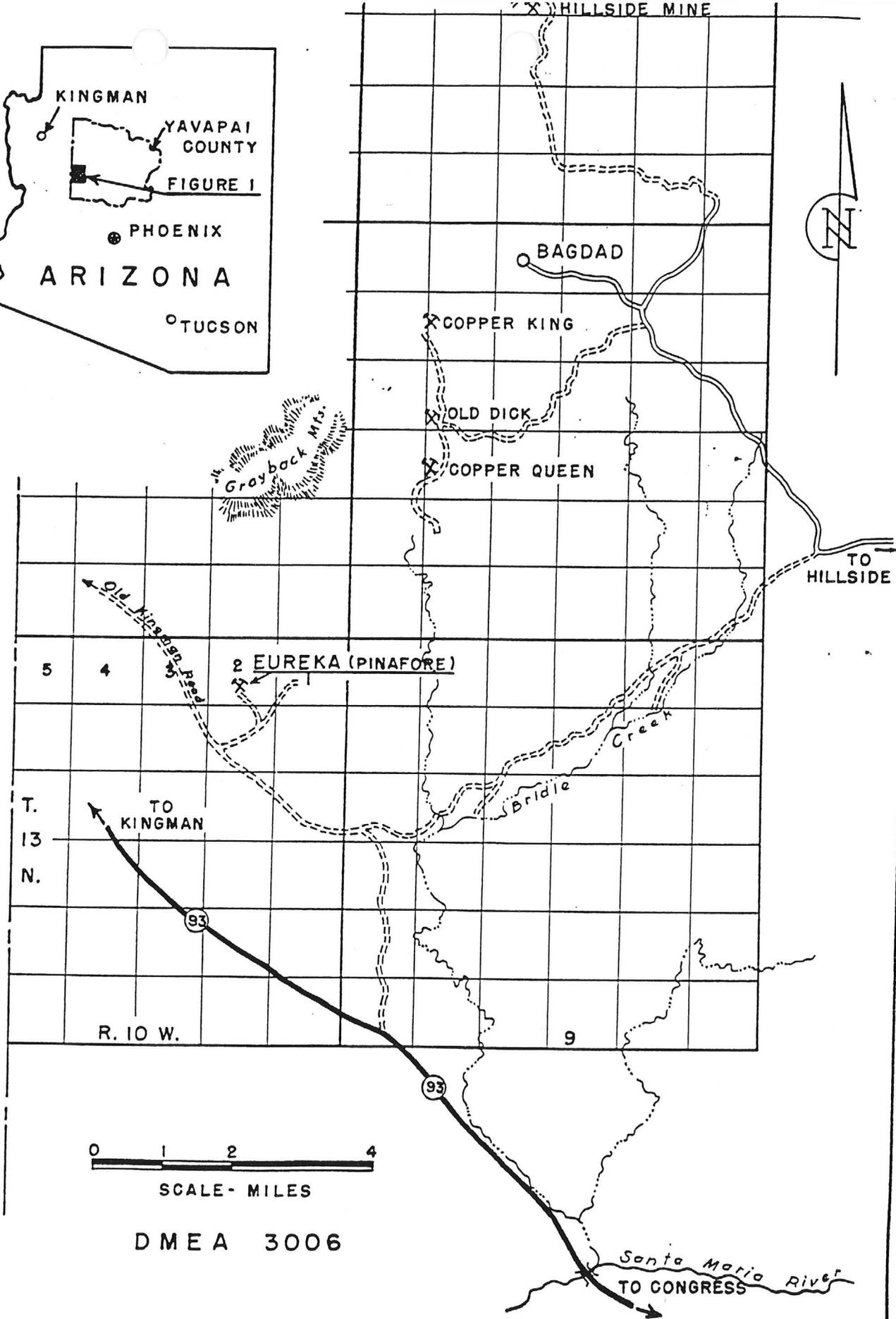
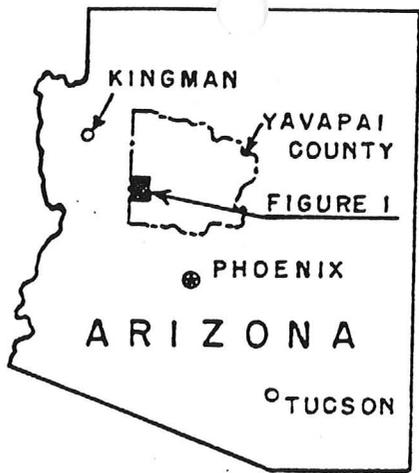
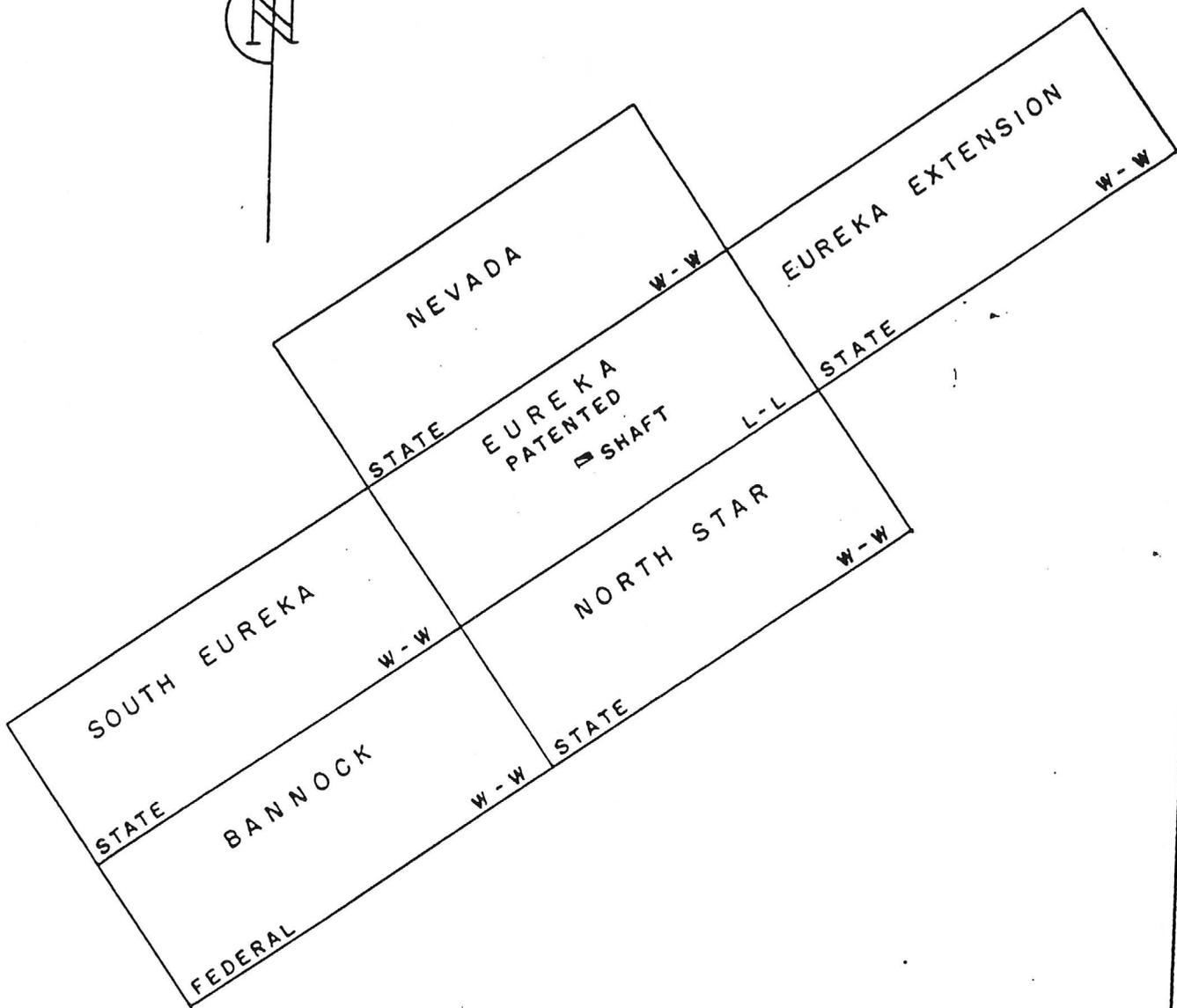


FIGURE I. - LOCATION MAP - EUREKA CLAIM  
YAVAPAI COUNTY, ARIZONA



0 300 600 1200  
SCALE - FEET

DMEA 3006

FIGURE 2. - EUREKA CLAIMS  
YAVAPAI COUNTY, ARIZONA

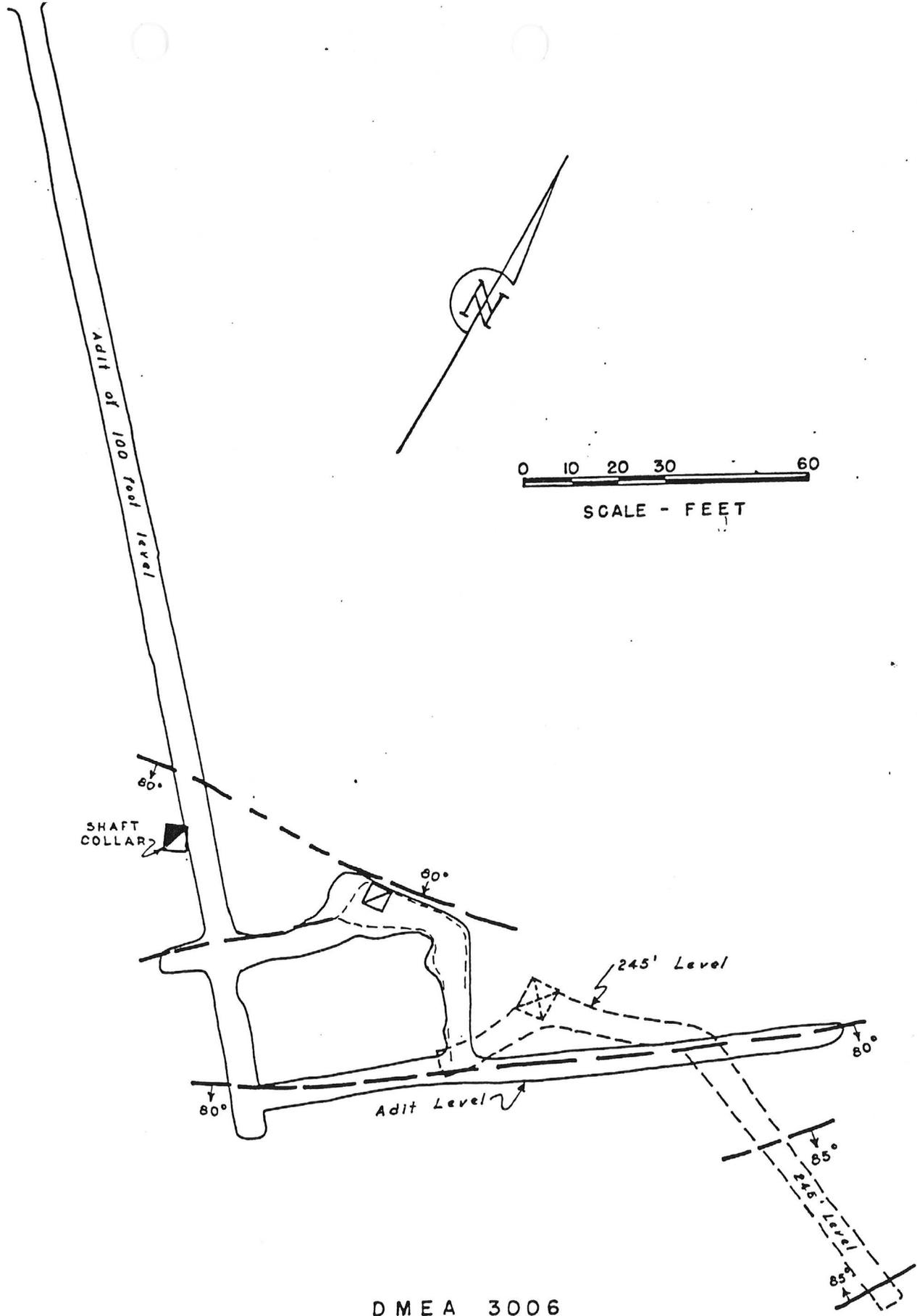
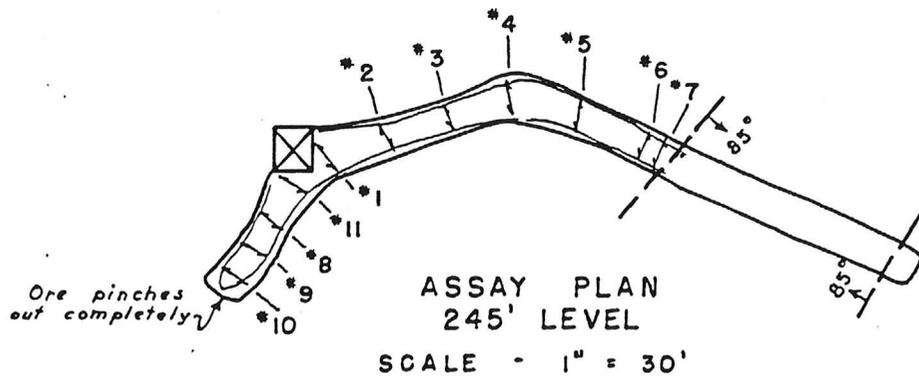
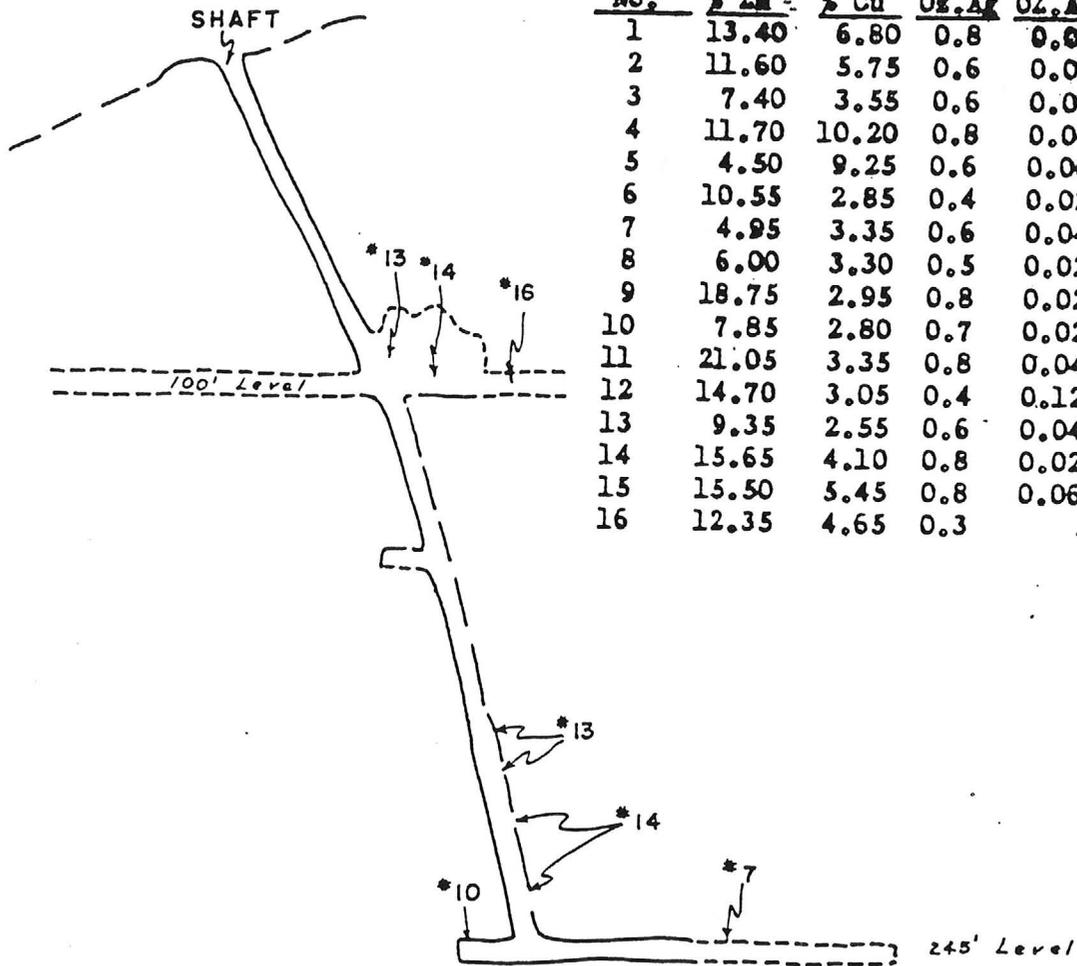


FIGURE 3. - PLAN OF EUREKA (PINAFORE) WORKINGS  
 YAVAPAI COUNTY, ARIZONA



ASSAY DATA

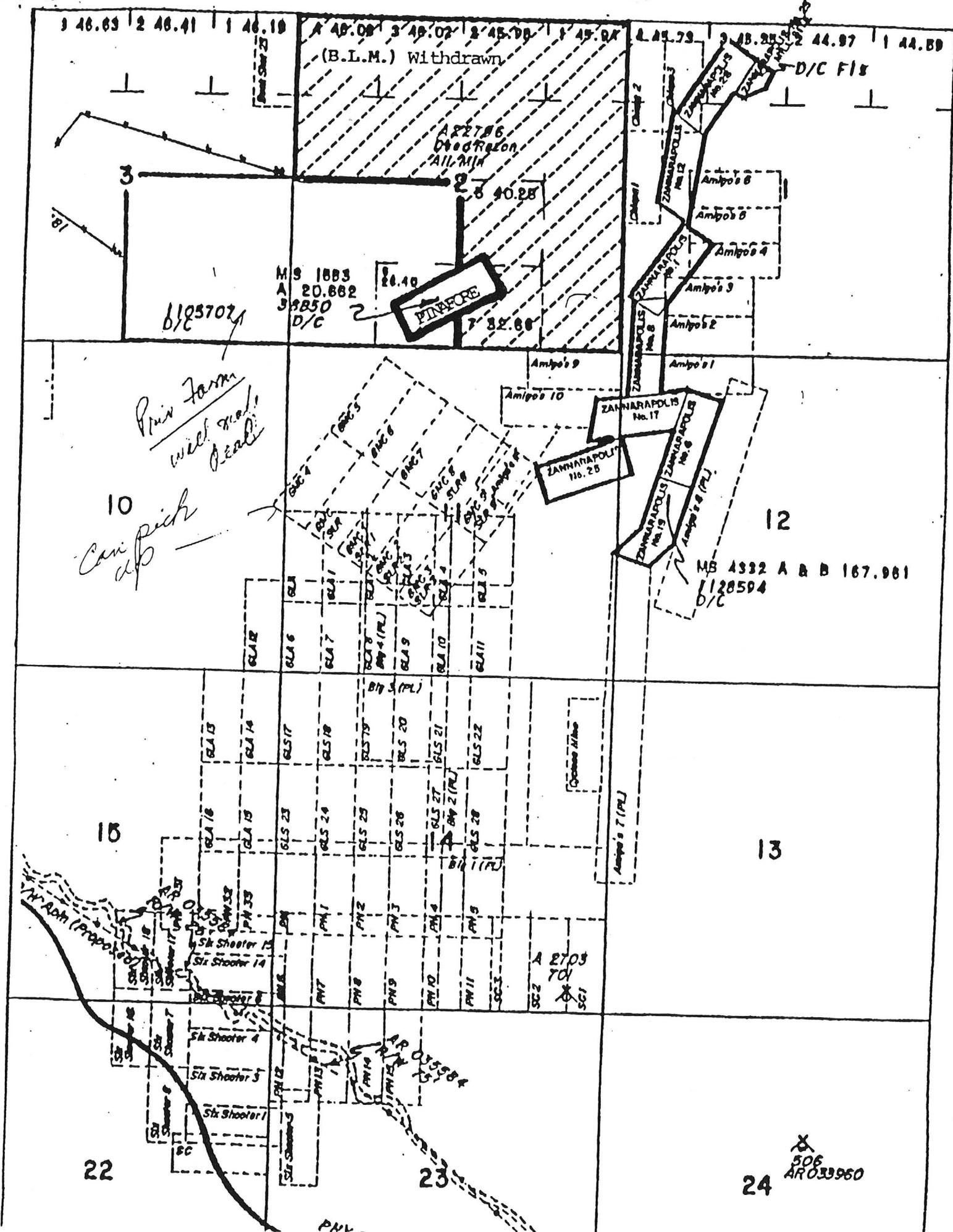
Sample No.	% Zn	% Cu	Oz. Ag	OZ. Au	Width
1	13.40	6.80	0.8	0.04	7'
2	11.60	5.75	0.6	0.02	6'
3	7.40	3.55	0.6	0.02	5.5
4	11.70	10.20	0.8	0.04	5'
5	4.50	9.25	0.6	0.06	4.5
6	10.55	2.85	0.4	0.02	5'
7	4.95	3.35	0.6	0.04	5'
8	6.00	3.30	0.5	0.02	5.3
9	18.75	2.95	0.8	0.02	4.3
10	7.85	2.80	0.7	0.02	5'
11	21.05	3.35	0.8	0.04	7'
12	14.70	3.05	0.4	0.12	8'
13	9.35	2.55	0.6	0.04	5'
14	15.65	4.10	0.8	0.02	5'
15	15.50	5.45	0.8	0.06	4.5'
16	12.35	4.65	0.3		3'



AFTER U. S. G. S. - MARCH 1944

DMEA-3006

FIGURE 4.- ASSAY DATA - EUREKA (PINAFORE) PROSPECT  
YAVAPAI COUNTY, ARIZONA



9 46.63 | 2 46.41 | 1 46.19 | A 46.09 | 3 46.02 | 2 45.98 | 1 45.94 | 2 45.79 | 3 45.25 | 2 44.97 | 1 44.89

(B.L.M.) Withdrawn

A 22786  
Dredge  
All Min

MS 1883  
A 20.882  
3850  
D/C

PINAFORE

ZAMNARAPOLIS  
No. 17

ZAMNARAPOLIS  
No. 25

ZAMNARAPOLIS  
No. 19

MB 4332 A & B 167.961  
1128594  
D/C

*Pin Farm  
will deal  
10  
Can pick  
up*

15

13

22

23

24

X  
506  
AR 039960

*WASH (Proposed)*

*Six Shooter 1*  
*Six Shooter 2*  
*Six Shooter 3*  
*Six Shooter 4*  
*Six Shooter 5*  
*Six Shooter 6*  
*Six Shooter 7*  
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*Six Shooter 15*

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A 2703  
704  
SC 1

Amigo's 7 (PL)

Occasional Inland

Amigo's 9

Amigo's 10

Amigo's 11

Amigo's 12

Amigo's 13

Amigo's 14

Amigo's 15

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Amigo's 196

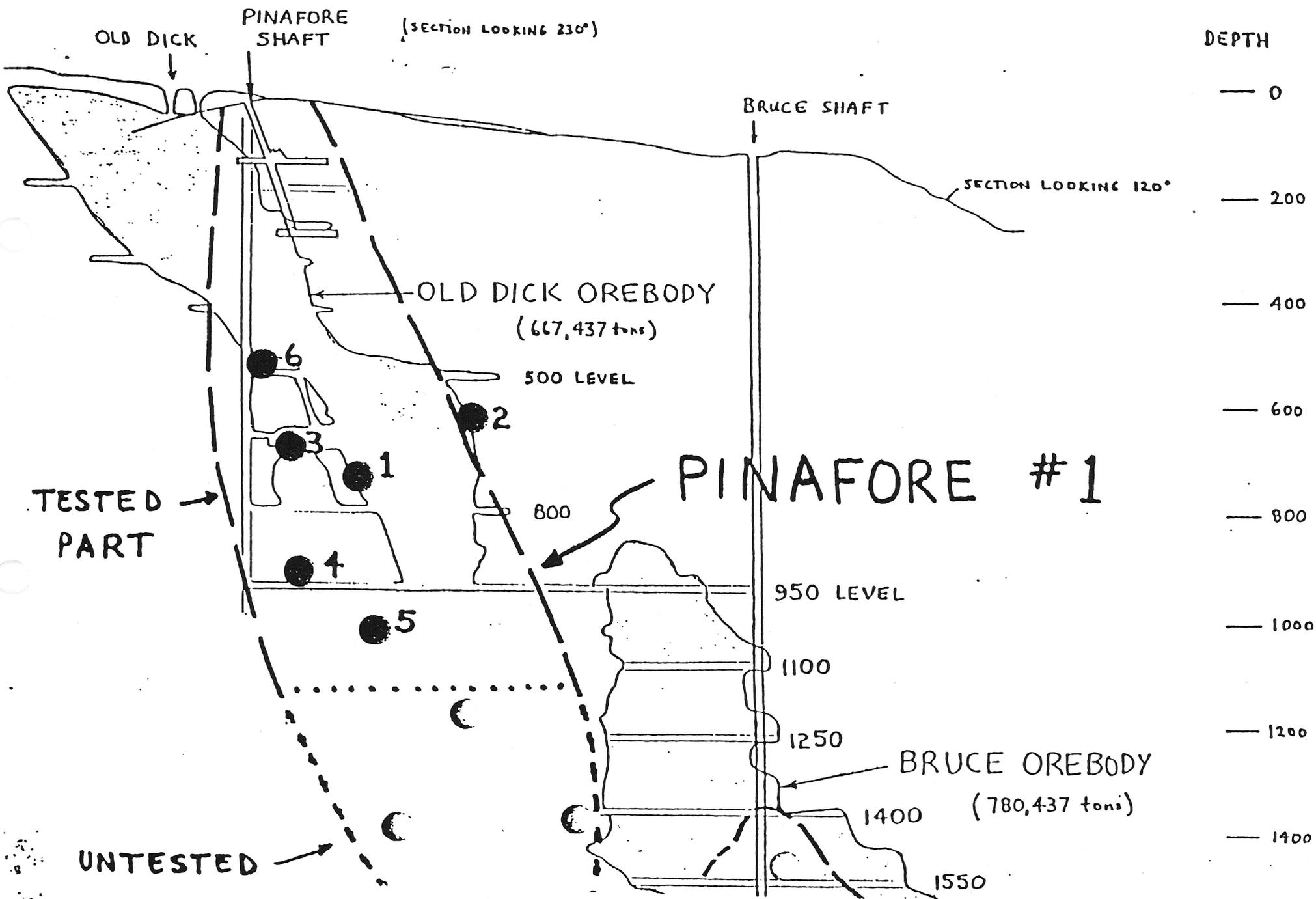
Amigo's 197

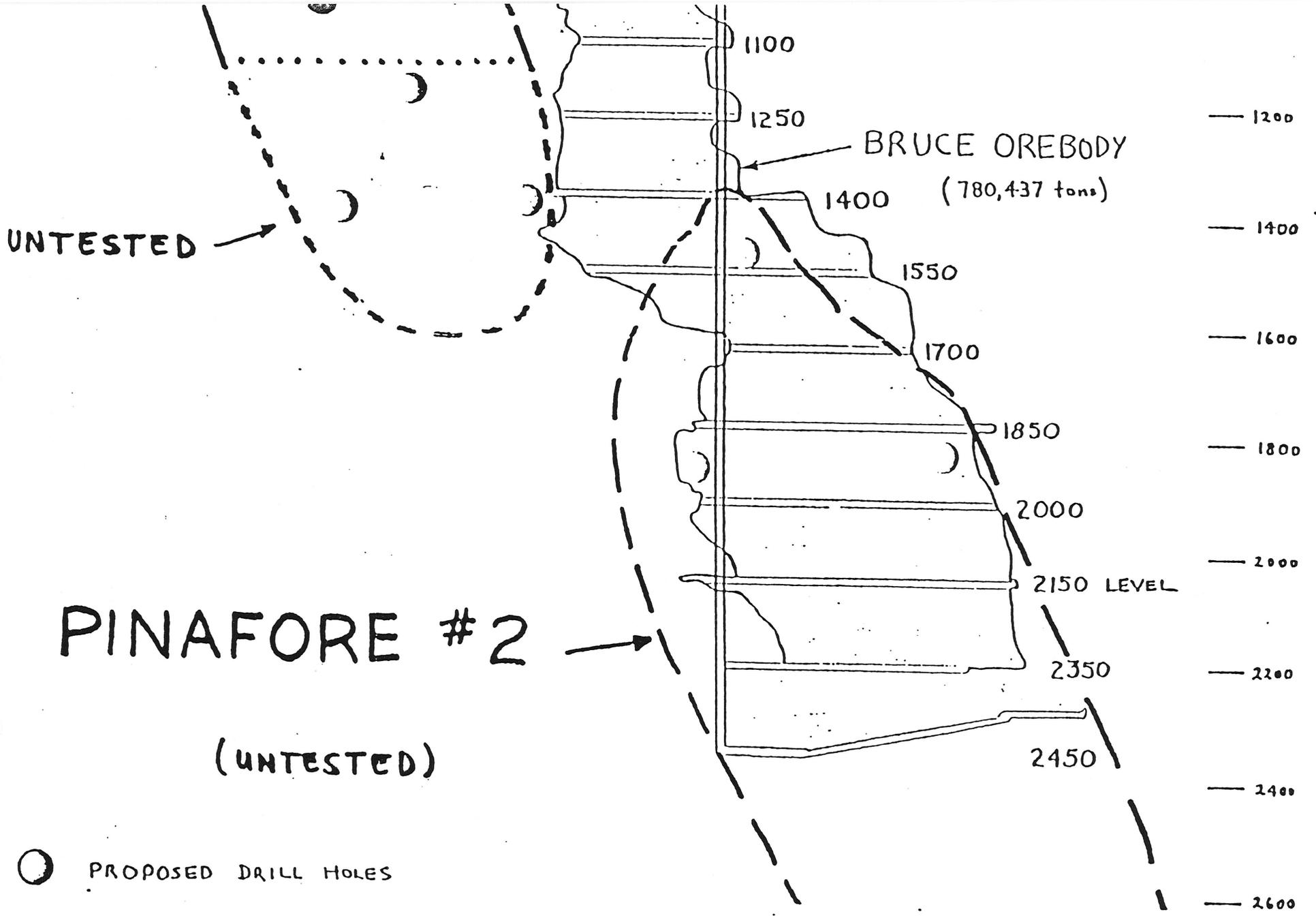
Amigo's 198

Amigo's 199

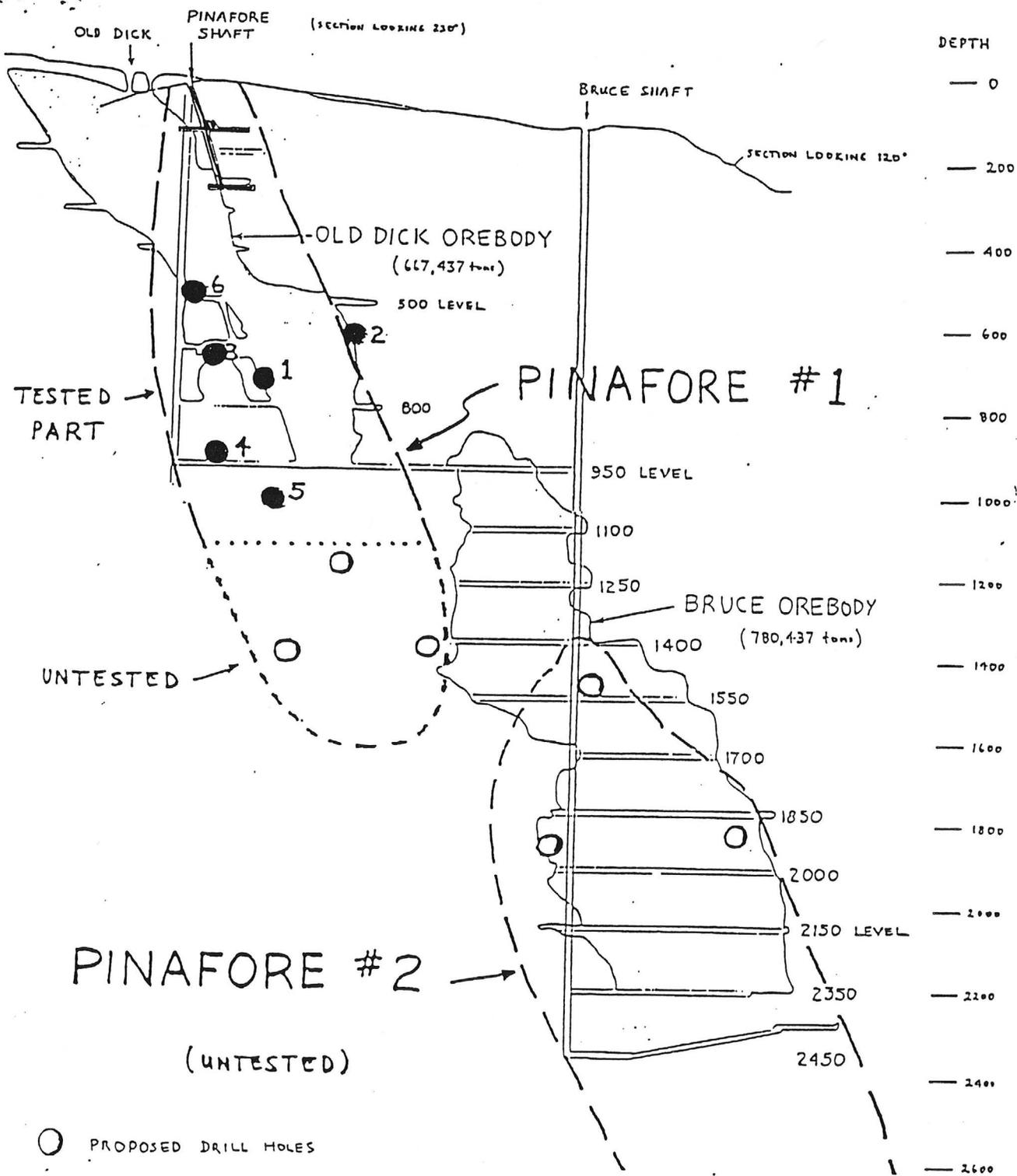
Amigo's 200

# LONGITUDINAL SECTION OF PINAFORE MASSIVE SULPHIDE SUPERIMPOSED ON BRUCE - OLD DICK WORKINGS





LONGITUDINAL SECTION OF PINAFORE MASSIVE SULPHIDE SUPERIMPOSED ON BRUCE - OLD DICK WORKINGS





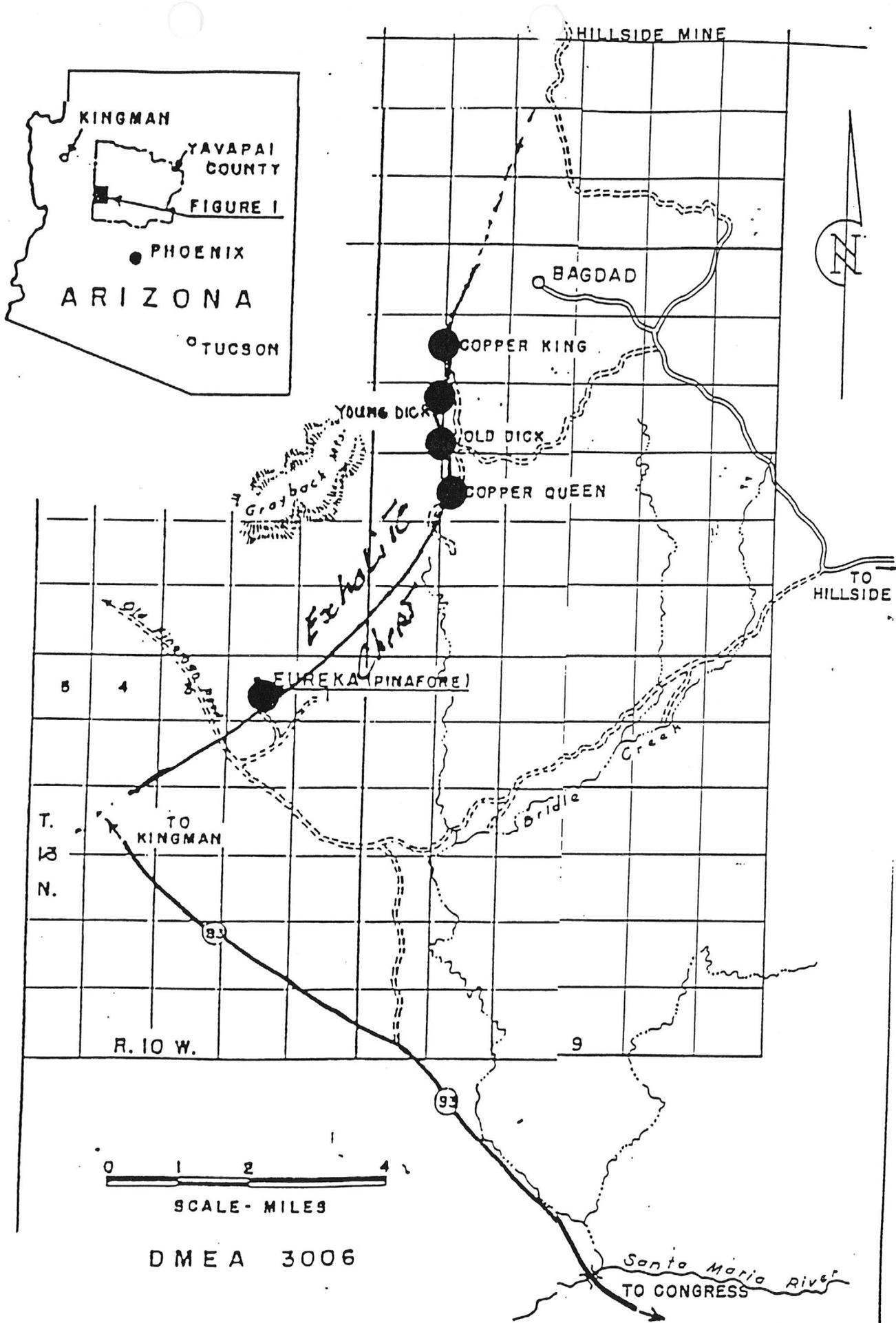


FIGURE I. - LOCATION MAP - EUREKA CLAIM  
 YAVAPAI COUNTY, ARIZONA

210 ←

4 +00 W

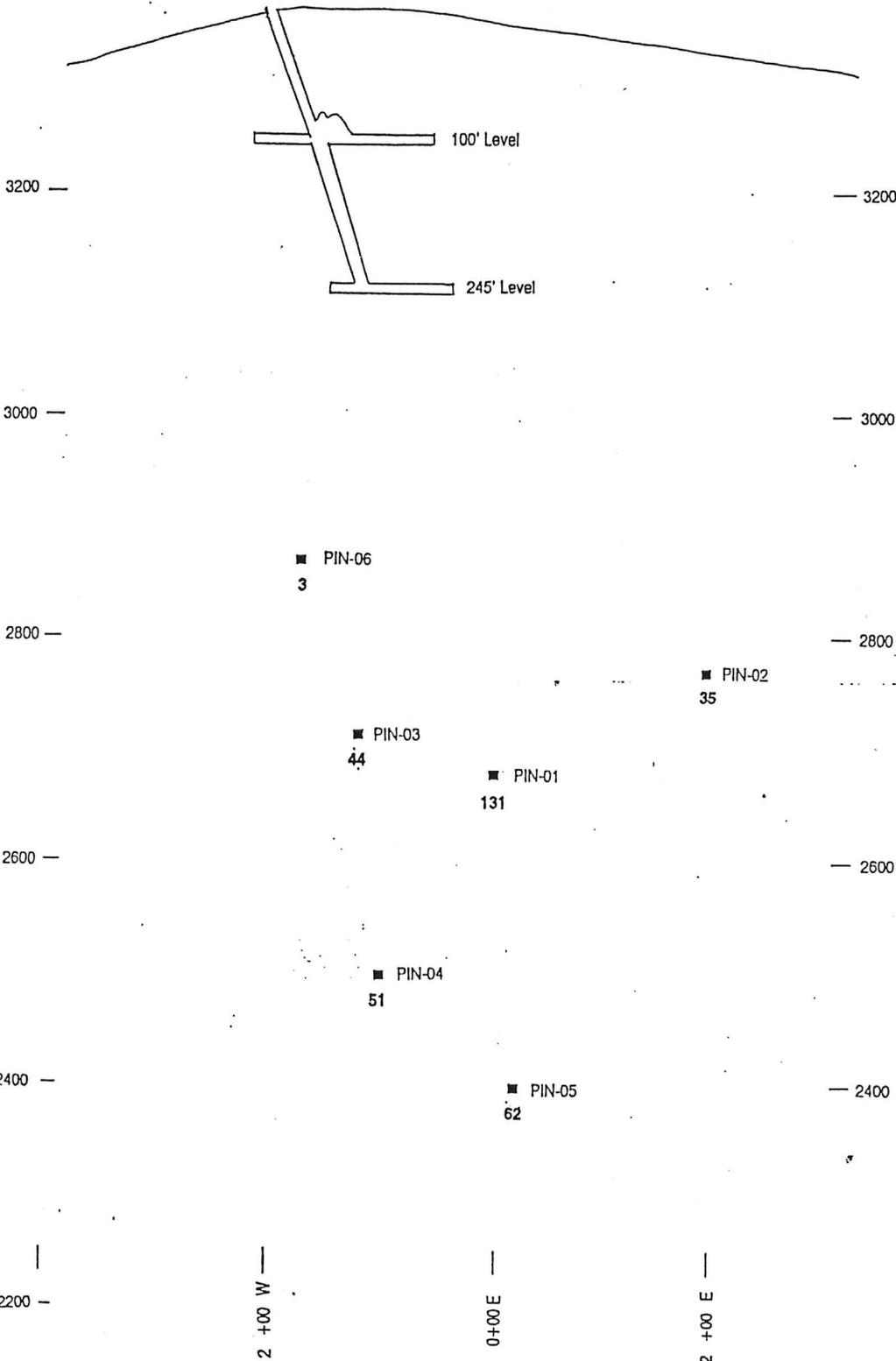
2 +00 W

0+00 E

2 +00 E

→ 60

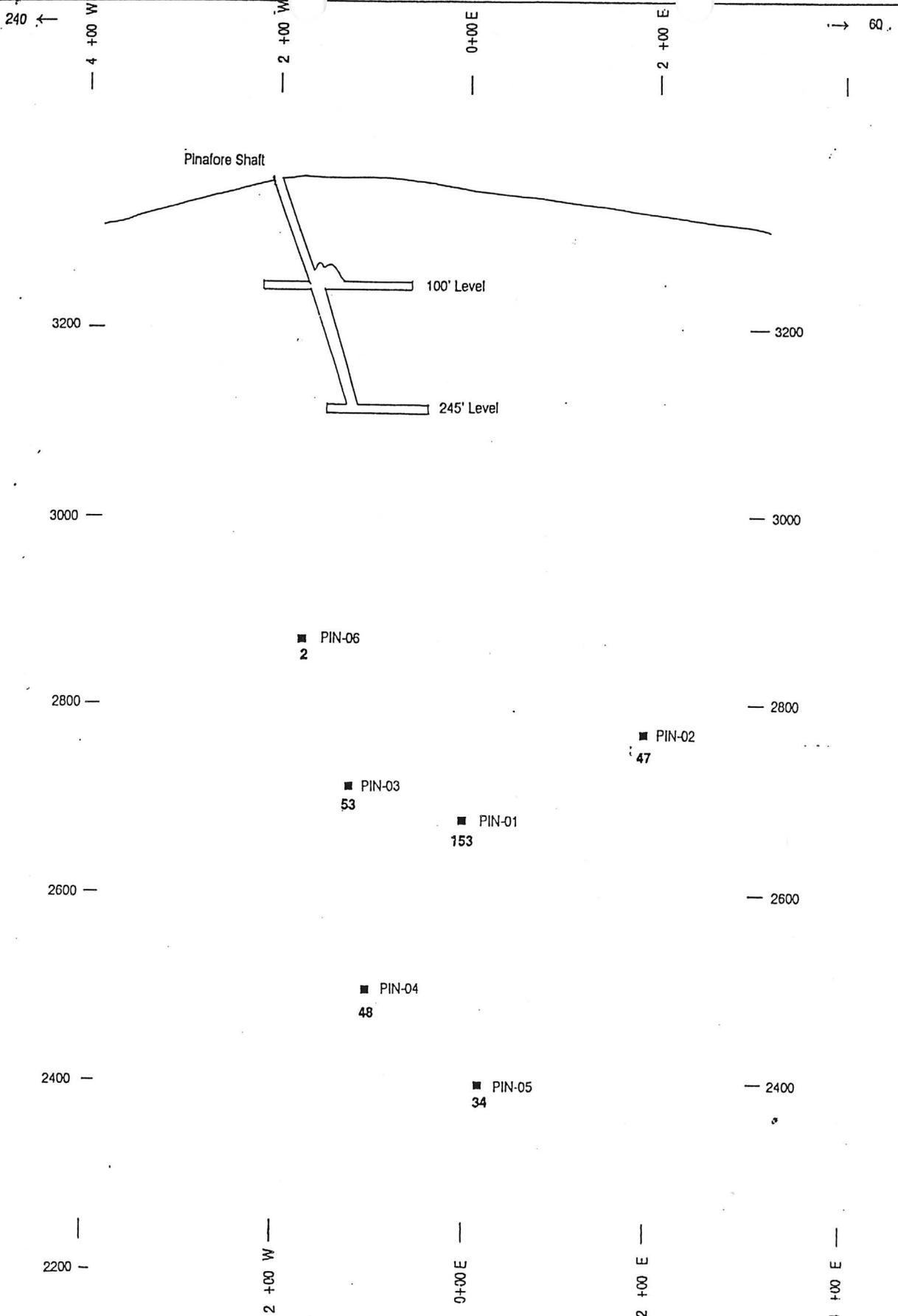
Pinalore Shaft



$(\%Cu * Ft) + (\%Zn * Ft)/2$   
 1% Cu or Zn Cut-off or maximum value from Intersection.



<b>ARIZONA EXPLORATIONS INC.</b>
Bagdad Basin Project
Pinalore Claim
Longitudinal Section (Looking 330)
M.J. Glover, June 2, 1992



%Zn \* Ft  
 1% Cu or Zn Cut-off or maximum value from Intersection.



ARIZONA EXPLORATIONS INC.
Bagdad Basin Project
Pinafore Claim
Longitudinal Section (Looking 330)
M.J. Glover, June 2, 1992

240 ←

← 4 +00 W

← 2 +00 W

0+00 E

→ 2 +00 E

→ 60

Pinafore Shaft

3200 —

— 3200

100' Level

3000 —

— 3000

245' Level

2800 —

— 2800

■ PIN-06

%Cu	%Zn	T.W.
0.42	0.56	4.0'

■ PIN-02

%Cu	%Zn	T.W.
0.87	3.20	13.0'

■ PIN-03

%Cu	%Zn	T.W.
1.51	12.00	3.2'

■ PIN-01

%Cu	%Zn	T.W.
4.17	12.35	11.8'

2600 —

— 2600

■ PIN-04

%Cu	%Zn	T.W.
4.59	8.30	5.8'

2400 —

— 2400

■ PIN-05

%Cu	%Zn	T.W.
8.43	6.39	5.3'

2200 —

2 +00 W

0+00 E

2 +00 E

4 +00 E

3% Cu or Zn Cut-off or maximum value from intersection.



ARIZONA EXPLORATIONS INC.
Bagdad Basin Project
Pinafore Claim
Longitudinal Section (Looking 330)
M.J. Glover, June 2, 1992

240 ←

4 +00 W

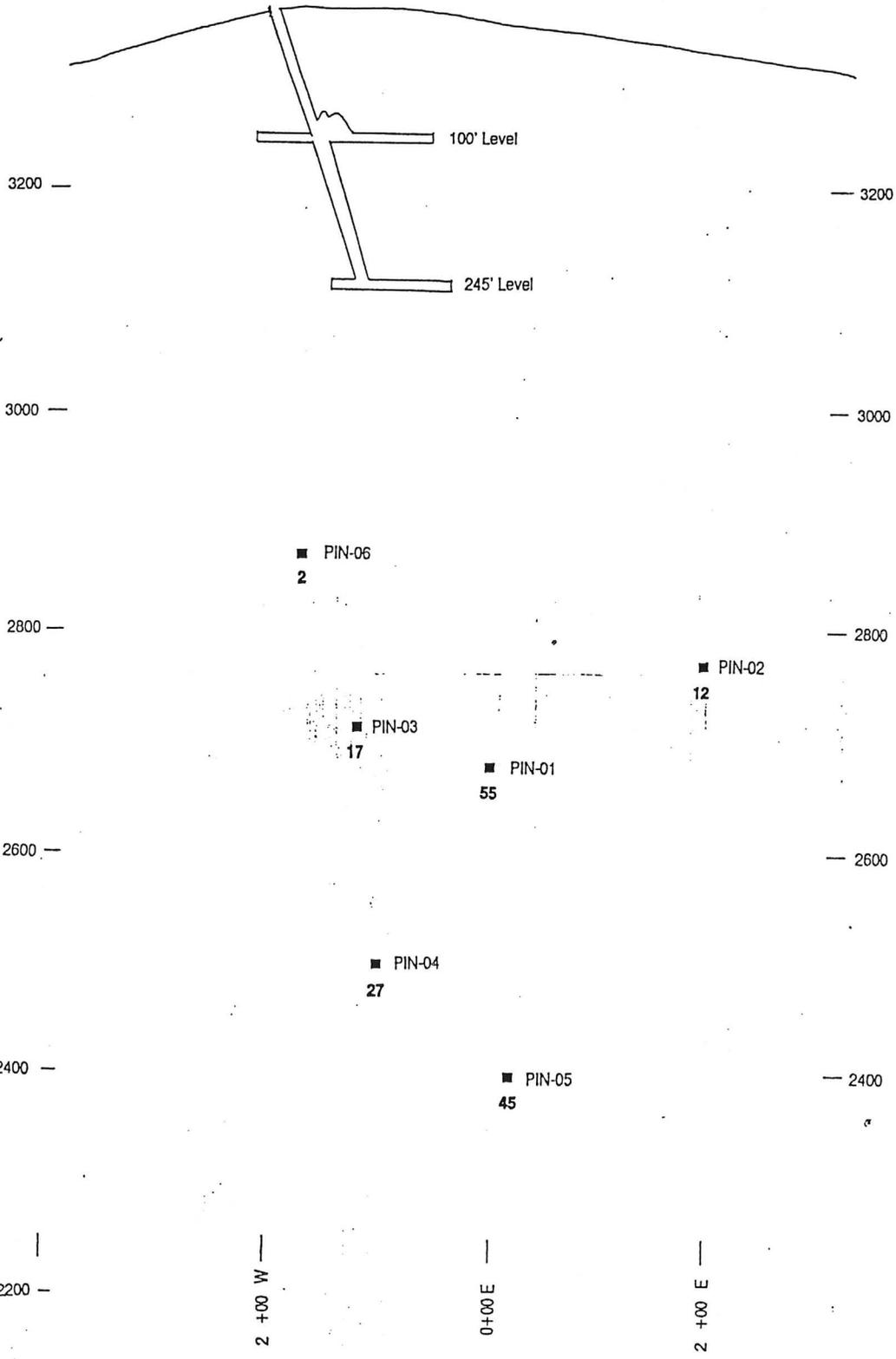
2 +00 W

0+00 E

2 +00 E

→ 60

Pinafore Shaft



%Cu \* Ft

1% Cu or Zn Cut-off or maximum value from intersection.



ARIZONA EXPLORATIONS INC.
Bagdad Basin Project
Pinafore Claim
Longitudinal Section (Looking 330)
M.J. Glover June 2, 1992

240 ←

4 +00 W

2 +00 W

0+00 E

2 +00 E

→ 60

Pinafore Shaft

3200 —

— 3200

100' Level

3000 —

— 3000

245' Level

2800 —

— 2800

■ PIN-06

%Cu	%Zn	T.W.
0.42	0.56	4.0'

■ PIN-02

%Cu	%Zn	T.W.
0.68	2.70	17.5'

■ PIN-03

%Cu	%Zn	T.W.
1.79	5.57	9.6'

■ PIN-01

%Cu	%Zn	T.W.
3.73	10.43	14.7'

2600 —

— 2600

■ PIN-04

%Cu	%Zn	T.W.
4.59	8.30	5.8'

2400 —

— 2400

■ PIN-05

%Cu	%Zn	T.W.
8.43	6.39	5.3'

2200 —

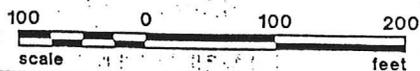
2 +00 W

0+00 E

2 +00 E

4 +00 E

1% Cu or Zn Cut-off or maximum value from intersection.



<b>ARIZONA EXPLORATIONS INC.</b>
Bagdad Basin Project
Pinafore Claim
Longitudinal Section (Looking 330)
M.J. Glover, June 2, 1992

107 ←

287 →

BL 0+00

8+00 S

6+00 S

4+00 S

2+00 S

3200

3000

2800

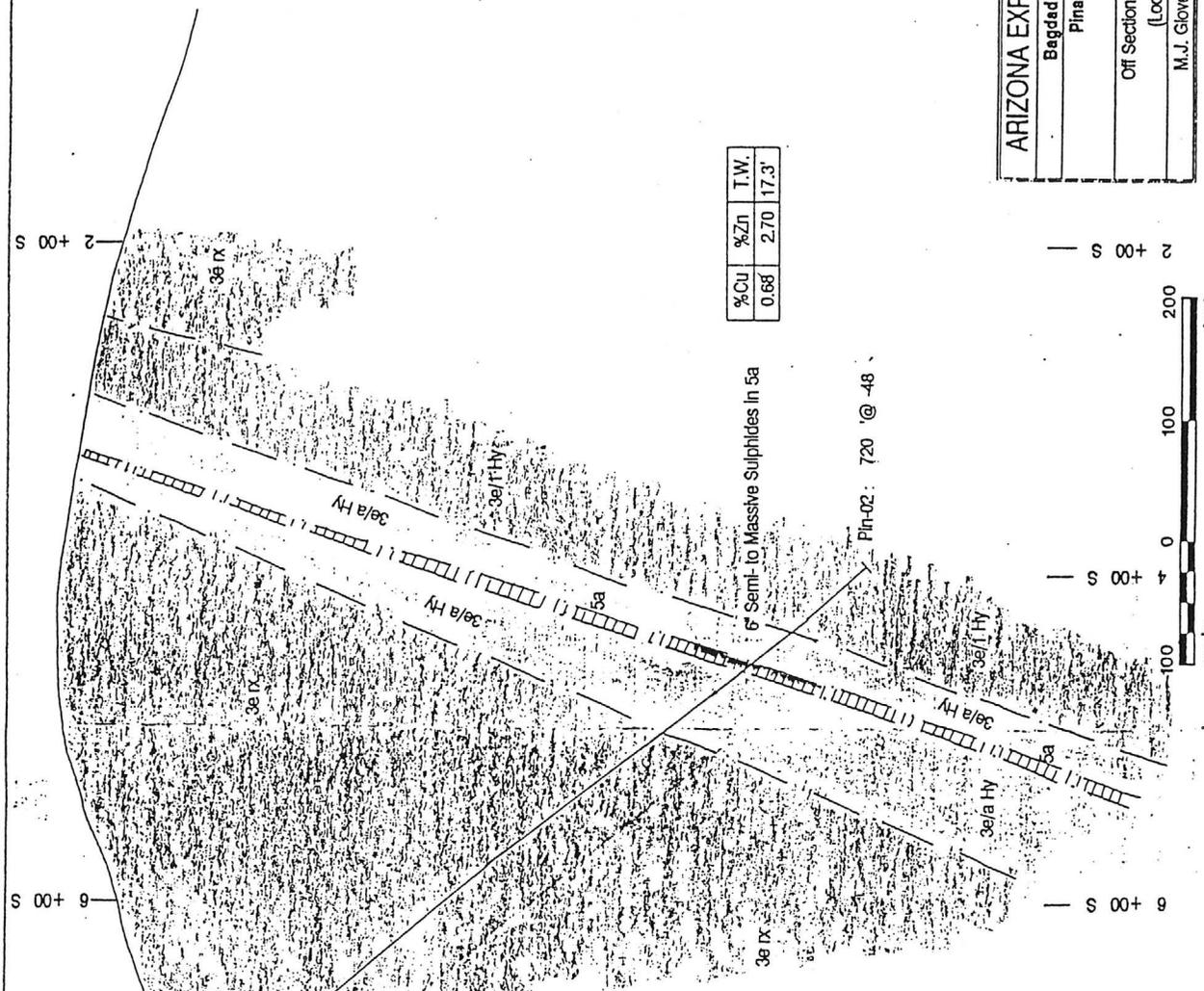
2600

Pin-02

Pin-02: 720' @ -48'

%Cu	%Zn	T.W.
0.66	2.70	17.3

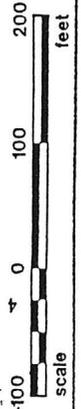
6' Semi- to Massive Sulphides in 5a

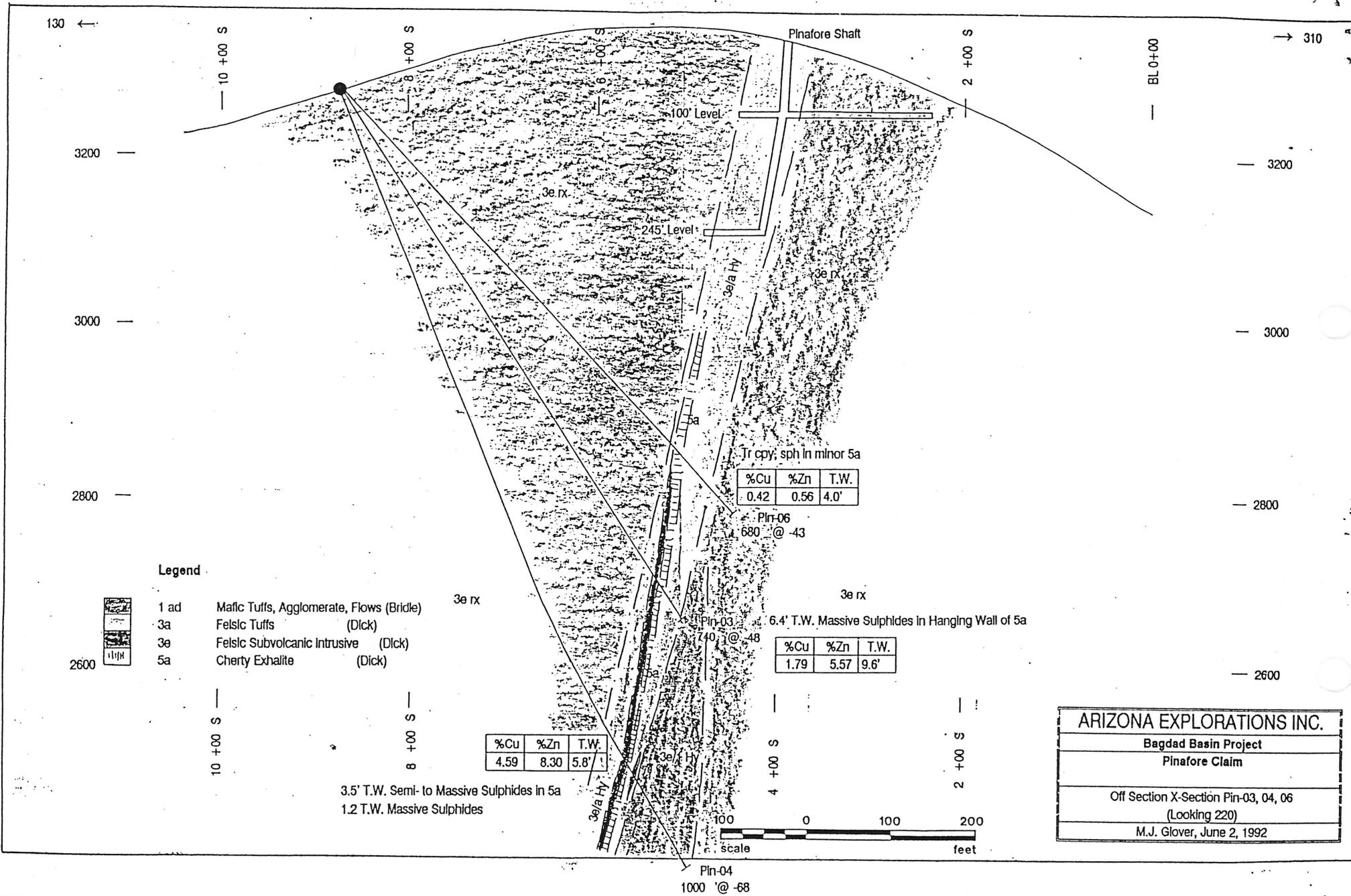


Legend

- 1 ad Mafic Tuffs, Agglomerate, Flows (Bridle)
- 3a Felsic Tuffs (Dick)
- 3e Felsic Subvolcanic Intrusive (Dick)
- 5a Cherty Exhalite (Dick)

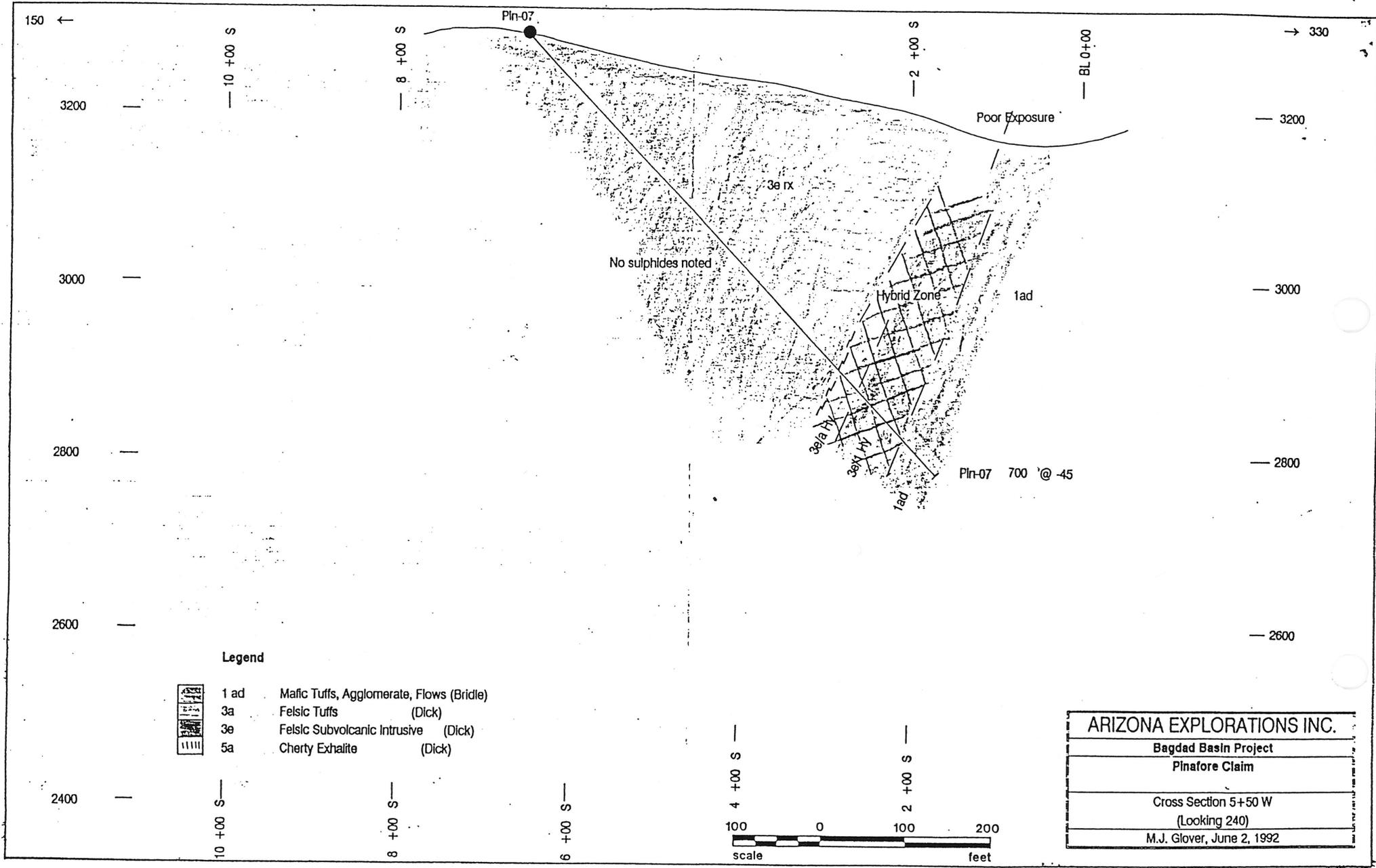
**ARIZONA EXPLORATIONS INC.**  
 Bagdad Basin Project  
 Pinalore Claim  
 Off Section X-Section Pin-02  
 (Looking 197)  
 M.J. Glover, June 2, 1992





**ARIZONA EXPLORATIONS INC.**  
 Bagdad Basin Project  
 Pinafore Claim  
 Off Section X-Section Pin-03, 04, 06  
 (Looking 220)  
 M.J. Glover, June 2, 1992





**Legend**

- 1 ad Mafic Tuffs, Agglomerate, Flows (Bridle)
- 3a Felsic Tuffs (Dick)
- 3e Felsic Subvolcanic Intrusive (Dick)
- 5a Cherty Exhalite (Dick)

<b>ARIZONA EXPLORATIONS INC.</b>
Bagdad Basin Project
Pinafore Claim
Cross Section 5+50 W (Looking 240)
M.J. Glover, June 2, 1992

## BAGDAD BASIN

(Abstract)

**PINAFORE MINE V.M.S.**  
Eureka Mining District

**Eureka Claims**  
Yavapai County, Arizona, U.S.A.

Sept. 1, 1993

### General Statement

The **Pinafore V.M.S.** occurrence is typical of all **V.M.S.** deposits in the **Central Arizona Precambrian** volcanic belt with respect to its geologic environment. The deposits are polymetallic (Cu-Zn-Pb) massive sulphide occurrences within a felsic package of volcanic rocks (tuffs, acid flows, fragmentals, meta-seds) capped by an exhalite unit comprised of cherts, iron formations and siliceous members. Intense alteration, consisting of chlorite, sericite, silicification, pyritization, biotite, carbonates, cordierite and minor garnet, is present within the exhalite horizon. Sodium and calcium depletion are significant. In most cases the cherty horizon lies directly on the massive sulphides.

The massive sulphides occur as lenses or pipe-like bodies showing Cu and Zn banding. They are 60% metallic. The average length is 300 feet -- width 40 feet -- depth 1000 feet. These lenses formed in paleotopographic depressions, basins or puddles on the slope area of a volcanic vent. The massive sulphides interfinger with the enclosing tuffs and flows and are surrounded by an envelope of disseminated sulphides -- mainly pyrite -- which may be very extensive. The **Pinafore** lens outcropped as Cu-oxides, and phased at depth into massive sulphides at the 150' level. Drilling at depth (800' vertically) shows a well developed massive sulphide body, which may be unique to itself, or the tip of a major deposit. The **Pinafore V.M.S.** body plunges 80° to the NE and is open at depth.

### Land Situation-Location

The **Eureka** claim is patented and located in the **Eureka Mining District** approximately 10 miles southwest of the town of **Bagdad**, a company town of **Cyprus Mines Ltd.** This is approximately 100 miles NW from Phoenix. Accessibility is by paved roads, then an all-weather dirt road for 5 miles north of highway # 97 (see attached map). The land is owned by the Lawler family, descendants of John Lawler, who staked the claim in 1904. The property is now under option to Stanley W. Holmes.

## History

The Eureka claim was staked in 1904 by a successful mining entrepreneur in the Bagdad area -- John Lawler. He mined the upper part of the surface Cu-oxides to a depth of 100 feet through a small shaft and adit.

In the early part of World War II (1942-1944), a second adit was driven at the 250 level (see section) and further mining of the massive sulphide protore was carried out. It is estimated that 10,000 tons averaging 11.0% Zn and 5.0% Cu was mined from the Pinafore (Arizona Mines Dept).

**Bagdad Copper Co.** and **Cyprus Mines Ltd.** operated in the **Bagdad Basin** continually from the turn of the century until 1975. There were four mines located immediately north of the Pinafore (see map). The most important were the **Old Dick** (800,000 tons) and the **Bruce** (1,000,000 tons). The mine/mill grade averaged 13.0% Zn and 3.95% Cu. Both mines are now closed. **Cyprus** still controls those mine areas and carries out exploration sporadically. **Cyprus** operates the rich open pit mine in **Bagdad**, a porphyry copper with 100,000,000+ tons reserves of 0.7% Cu, now being operated at 100,000 tons per day.

No recent work had been done at the Pinafore until the property was optioned to **Arizona Explorations Inc.** (A.E.I. -- Syndicate of **American Barrick, Placer Dome, and Homestake**). It was part of the **Bagdad Volcanic Basin** region, under exploration by the Syndicate for two (2) years. The **Pinafore** discovery was a direct result of this program. Two (2) other promising V.M.S. deposits were delimited that deserve follow-up -- the **Rudkin** and **AX** zones (see map).

## Work Program -- A.E.I.

1. Staking and acquisition
2. Aerial photography -- coloured
3. Airborne E.M. -- Geotrex
4. Geologic Mapping -- "Recce"
5. Geologic Mapping -- detail
6. Geochemical Surveying -- 40 elements
7. Surface I.P. Surveys -- B & J
8. 20,000 ft. Reverse circulation drilling
9. 3,000 ft. Core drilling

## Results -- Discovery of:

1. Pinafore Deposit
2. Rudkin Zone
3. AX Zone

## Expenditures to Date

\$ 485,000.00

## Geology

The general geologic setting is explained in the General Statement. The most important features are:

1. Abundant V.M.S. type alteration exists over most of the **Bagdad** area;
2. The **Pinafore** is on the same productive time horizon as the **Bruce** and **Old Dick**;
3. Deposits mined to date in the Bagdad Basin are relatively small by **Arizona** standards (1 - 2,000,000 tons, compared to other 5 - 40,000,000 ton Arizona V.M.S. deposits).

There is every reason to believe that a large V.M.S. deposit exists in the Bagdad Basin. The **Pinafore** could well be just the tip of a much larger system, comprising one or more massive sulphide bodies at depth. Interestingly, the **Bruce orebody** was discovered blind below the **Old Dick orebody**, almost by accident. Both deposits lie on the same time horizon, below the same exhalite cap -- the same time horizon as the Pinafore.

## Potential

**Bagdad** run of mine grade from all operations, including dilution:

Copper	3.65%
Zinc	12.67%
Gold and Silver	present, not recovered
Tonnage	1,000,000 / 2,000,000

## Possible Cash Flow

Tons per year (250 /day)	87,500
Capital Cost	\$ 6,500,000.00
Profit per year after taxes	\$ 4,481,050.00

Life -- 12 years  
(see Cash Flow sheet for details)

## Proposed Program

10,000 ft. of core drilling  
(See Longitudinal Section for hole locations)

Note: Capital Cost based on new equipment -- lower figure for used equipment.

# STANLEY W. HOLMES & ASSOCIATES

## CONSULTING GEOLOGISTS

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2701 EAST CAMELBACK ROAD  
PHOENIX, ARIZONA, 85016

FAX: (602) 957-8445

PHONE: (602) 957-8230

### POSSIBLE CASH FLOW (±10%)

PINAFORE MINE V.M.S.  
Eureka Mining District

Eureka Claims  
Yavapai County, Arizona, U.S.A.

Sept. 1, 1993

#### Grade

Assume known production grade, including dilution -- **Bruce-Old Dick**

Copper	3.65%
Zinc	12.67%

#### Mill Con. Rec. -- 90%

Cu	-	65.70 lbs
Zn	-	228.06 lbs

#### Price -- Assume Current

Cu	-	\$ 0.90 / lb.
Zn	-	\$ 0.50 / lb.

#### Value per Ton

Cu	-	\$ 59.13
Zn	-	\$ 114.03

GROSS		\$ 173.16
-------	--	-----------

#### Costs

Mining	\$ 35.00 / ton
Mill	25.00 / ton
Amort.	5.00 / ton
Admin.	5.00 / ton
Smelter	30.00 / ton
TOTAL	\$ 100.00 / ton

#### Net

Value	\$ 173.16 / ton
Costs	\$ 100.00 / ton

N.S.R.	\$ 73.16 / ton
--------	----------------

## POSSIBLE CASH FLOW (±10%)

### Profit

Tons / year -- (250 day)	-	87,500.00
Profit / ton	-	73.16
Profit / year	-	\$ 6,401,500.00
Tax - (30%)	-	\$ 1,920,450.00
		<hr/>
Profit / year	-	\$ 4,481,050.00
		<hr/>

### Capital Costs

Plant / 250 / day	-	\$ 3,000,000.00
Shaft / Undgrnd Dev.	-	2,500,000.00
Ancillary	-	1,000,000.00
		<hr/>
* TOTAL	-	\$ 6,500,000.00
		<hr/>

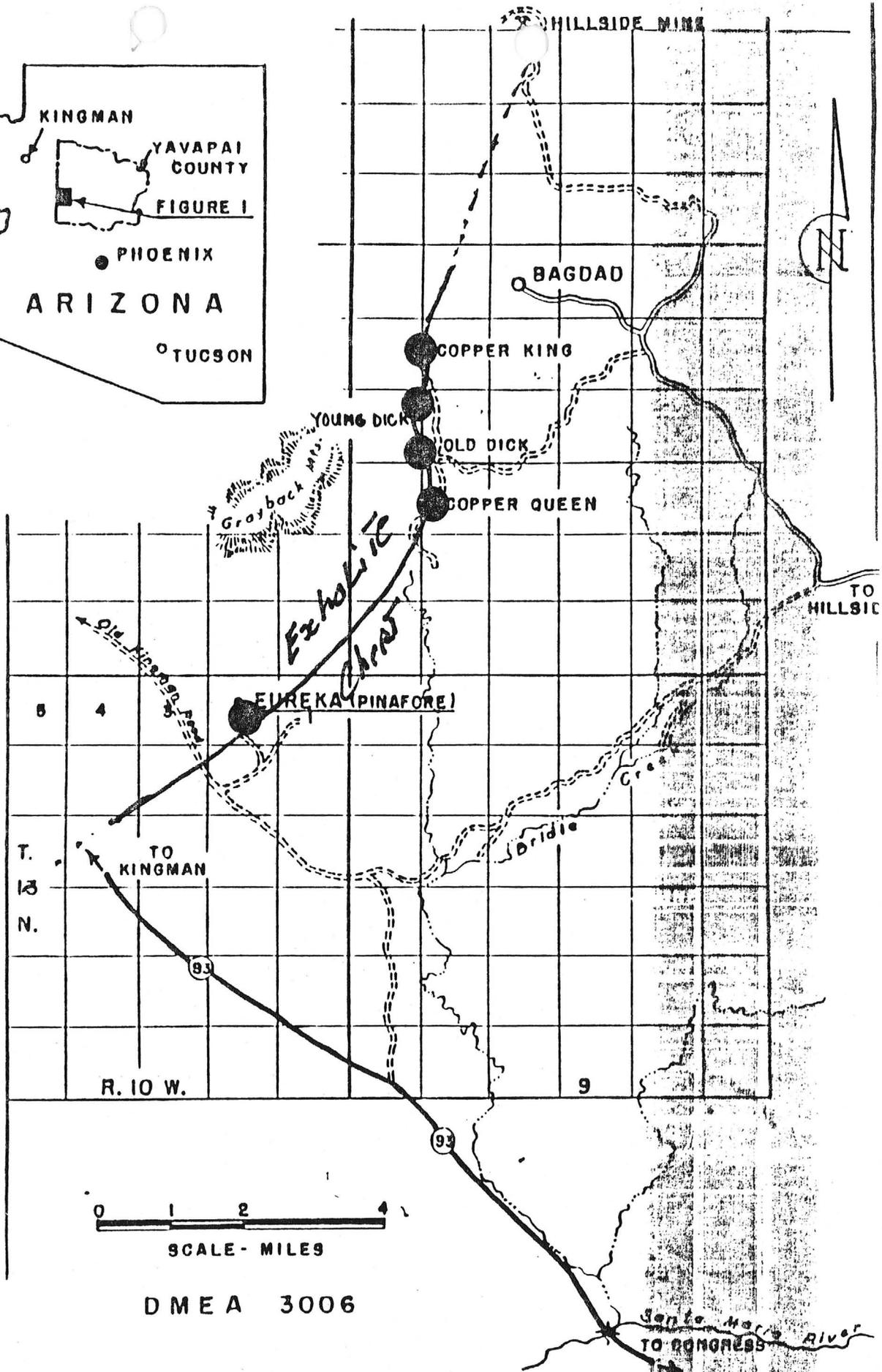
### Payback

1.5 years

### Reserves

Preliminary first-stage drill indications already exceed payback.

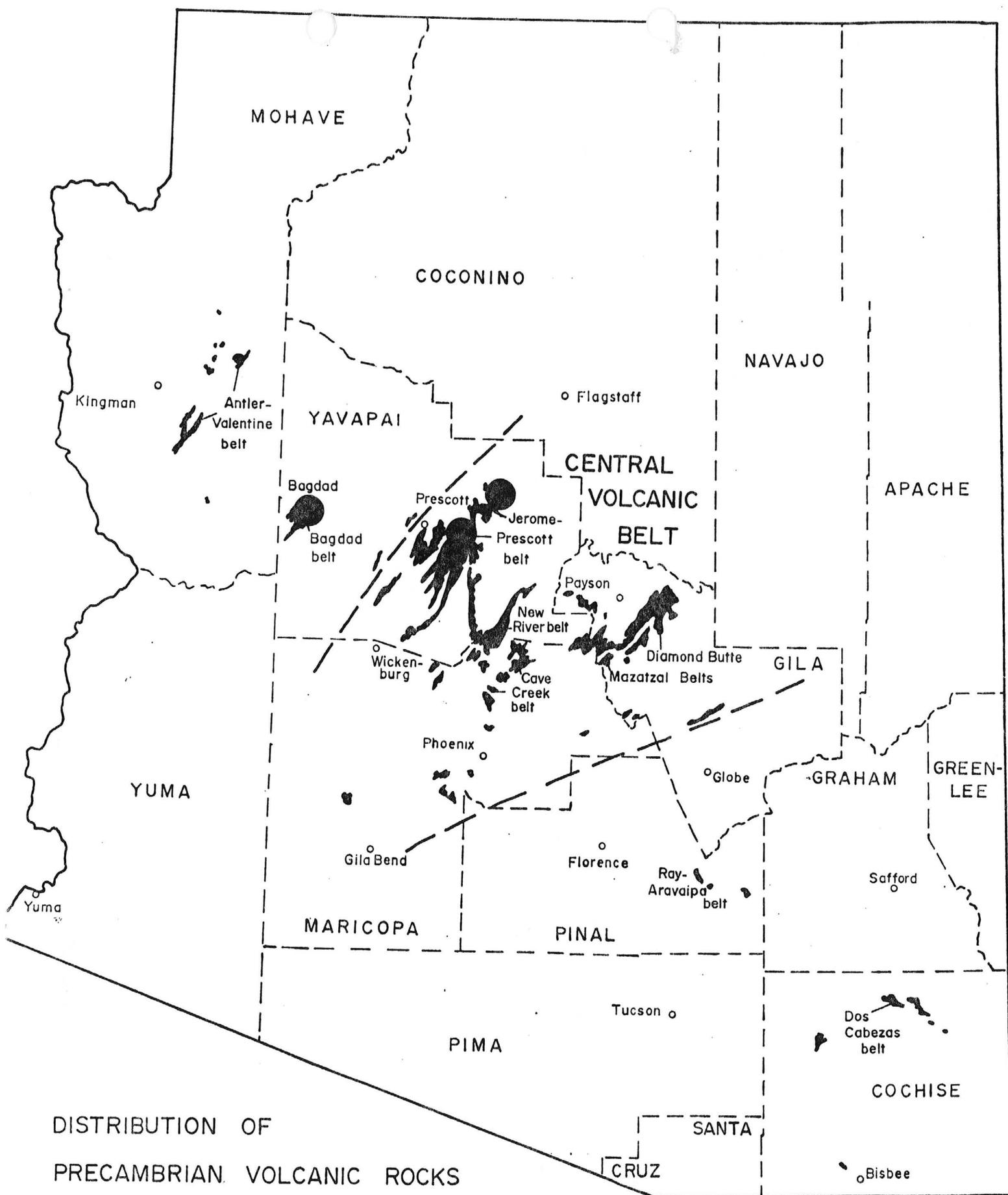
\* Less if used equipment is purchased.



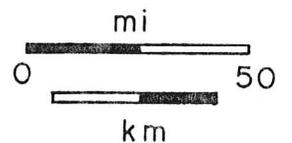
SCALE - MILES

DMEA 3006

FIGURE I. - LOCATION MAP - EUREKA CLAIM  
YAVAPAI COUNTY, ARIZONA



DISTRIBUTION OF  
 PRECAMBRIAN VOLCANIC ROCKS  
 AND VOLCANIC BELTS IN ARIZONA



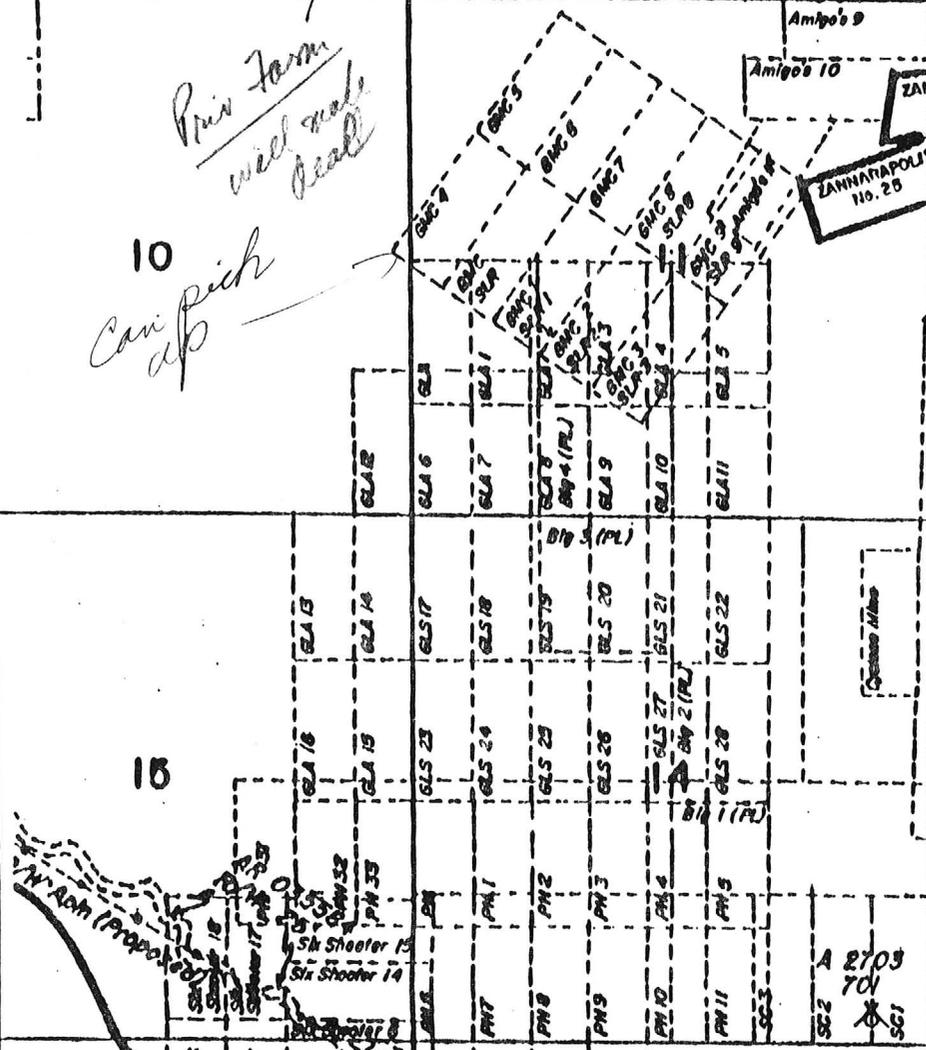
6105707  
b/c

M 9 1883  
A 20.682  
9850  
D/C

20.40  
PINAFORE  
7-32.68

*Pin Farm  
will make  
deal*  
10  
*Can pick  
up*

Amigo's 9  
Amigo's 8  
Amigo's 1  
Amigo's 10  
ZANARAPOLIS No. 17  
ZANARAPOLIS No. 25  
ZANARAPOLIS No. 6  
ZANARAPOLIS No. 19  
Amigo's 8 (PL)  
MS 4332 A & B 167.961  
6128594  
b/c



15

13

22

23

24

27

26

25

A 2709  
701  
SC2  
SC1  
AS-R-55

AR 035584  
506  
AR 033960

AR 07036

UNTESTED

PINAFORE #2

(UNTESTED)

○ PROPOSED DRILL HOLES

1100

1250

1400

1550

1700

1850

2000

2150 LEVEL

2350

2450

BRUCE OREBODY  
(780,437 tons)

— 1200

— 1400

— 1600

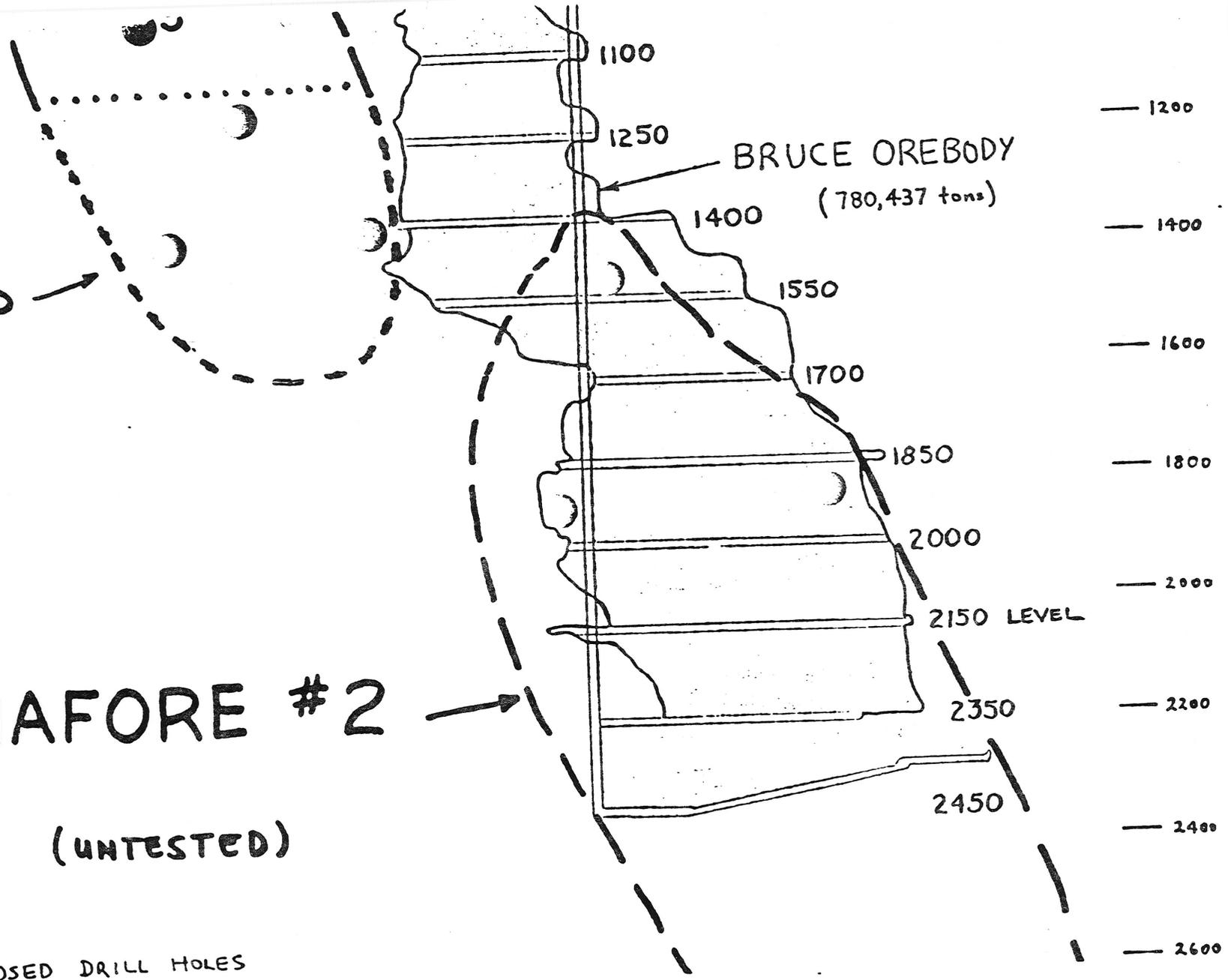
— 1800

— 2000

— 2200

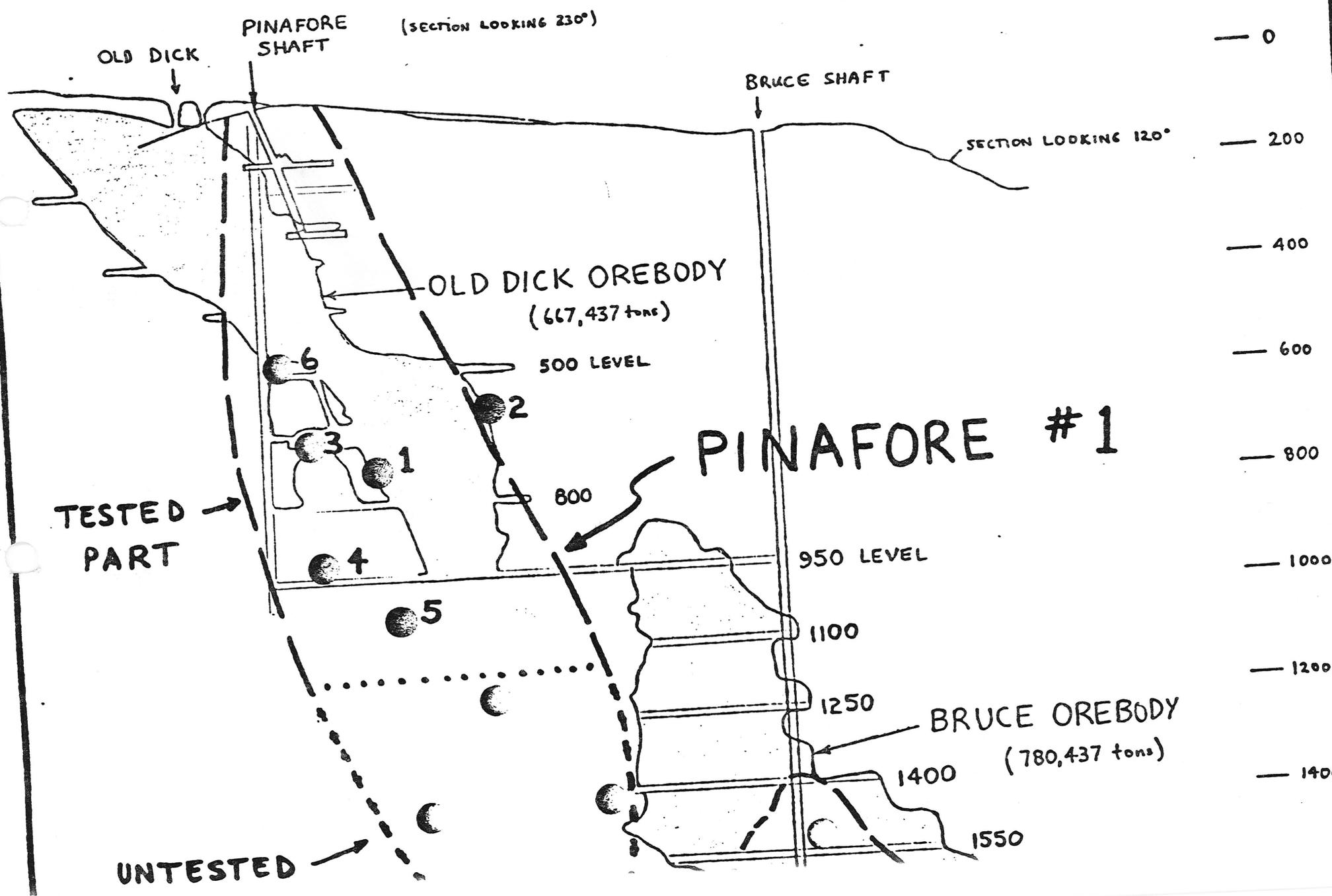
— 2400

— 2600



# LONGITUDINAL SECTION OF PINAFORE MASSIVE SULPHIDE SUPERIMPOSED ON BRUCE - OLD DICK WORKINGS

DEPTH



— 0

— 200

— 400

— 600

— 800

— 1000

— 1200

— 1400

OLD DICK

PINAFORE SHAFT

(SECTION LOOKING 230°)

BRUCE SHAFT

SECTION LOOKING 120°

OLD DICK OREBODY  
(667,437 tons)

500 LEVEL

PINAFORE #1

800

950 LEVEL

1100

1250

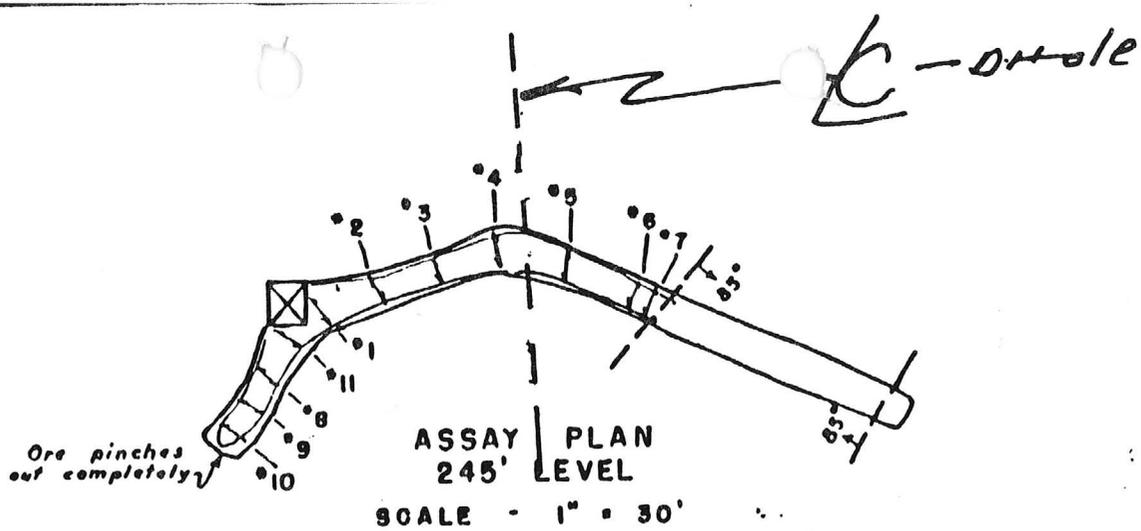
BRUCE OREBODY  
(780,437 tons)

1400

1550

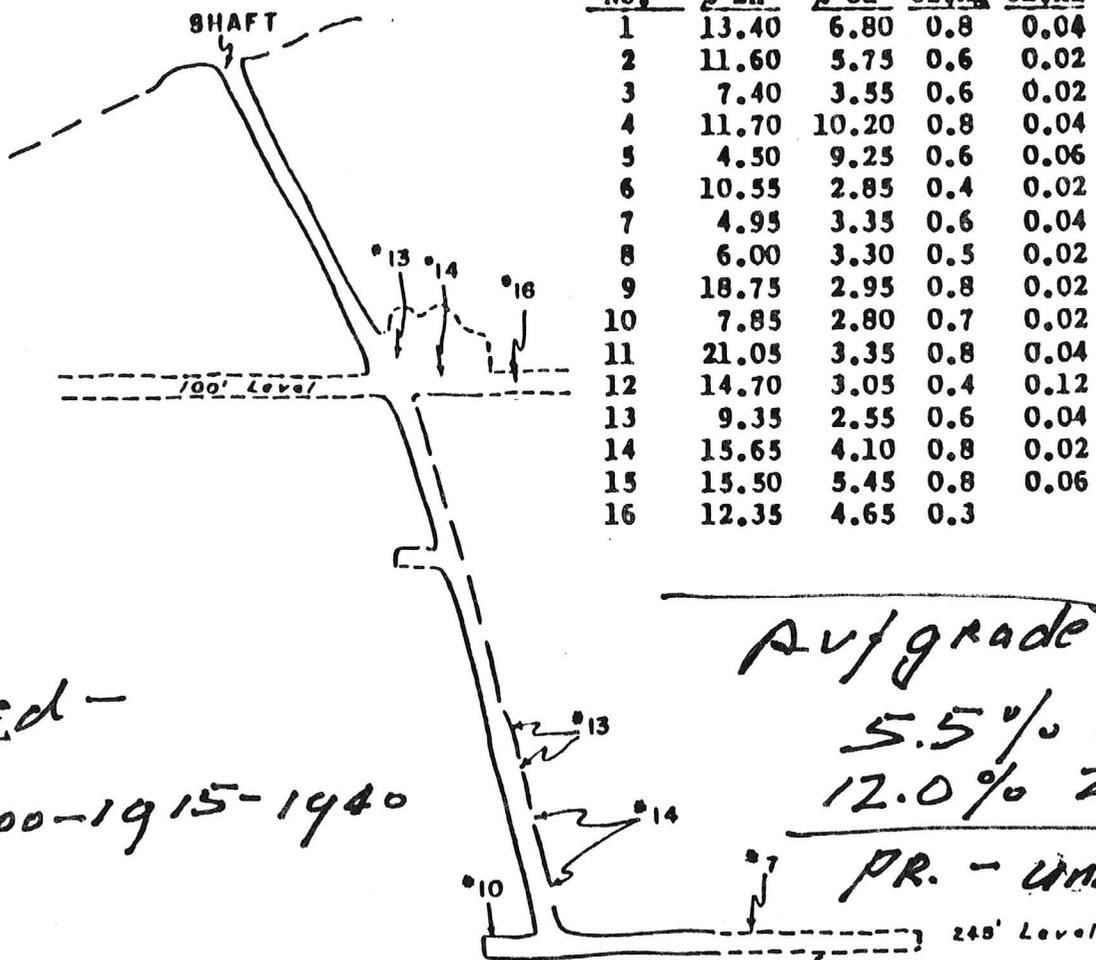
TESTED PART

UNTESTED



ASSAY DATA

Sample No.	% Zn	% Cu	Oz. Ag	OZ. Au	Width
1	13.40	6.80	0.8	0.04	7'
2	11.60	5.75	0.6	0.02	6'
3	7.40	3.55	0.6	0.02	5.5
4	11.70	10.20	0.8	0.04	5'
5	4.50	9.25	0.6	0.06	4.5
6	10.55	2.85	0.4	0.02	5'
7	4.95	3.35	0.6	0.04	5'
8	6.00	3.30	0.5	0.02	5.3
9	18.75	2.95	0.8	0.02	4.3
10	7.85	2.80	0.7	0.02	5'
11	21.05	3.35	0.8	0.04	7'
12	14.70	3.05	0.4	0.12	8'
13	9.35	2.55	0.6	0.04	5'
14	15.65	4.10	0.8	0.02	5'
15	15.50	5.45	0.8	0.06	4.5'
16	12.35	4.65	0.3		3'



VERTICAL SECTION  
SCALE - 1" = 50'

AFTER U. S. G. S. - MARCH 1944

DMEA - 3006

FIGURE 4.- ASSAY DATA - EUREKA (PINAFORE) PROSPECT  
YAVAPAI COUNTY, ARIZONA





**EXPLANATION**

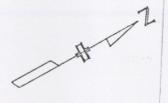
- Intrusive Rocks
- 6 Granite
- Intrusive+Volcanic Rocks
- DICK FORMATION
- 5 Flow banded rhyolite
- 4 Rhyolitic Subvolcanic Intrusive

- 3s Felsic-intermediate volcanics (sericitic)
- 2 Quartz-sericite schist
- BRIDLE FORMATION
- 1B Mafic breccia (agglomerate?)
- 1A Mafic volcanics

- x 3s Outcrop ("s" indicates sericite)
- B10610 indicates sample location
- Unit contact, dashed where inferred
- Bedding trend
- Bedding attitude
- Schistosity, vertical
- Schistosity, inclined
- Lineation, showing plunge direction

- Survey station
- Folding, showing plunge direction
- Fault, known
- Fault, projection
- Prospect pit
- Areas of pervasive hydrothermal alteration

Abbreviations used:  
 qtz - quartz  
 hbd - hornblende  
 bio - biotite  
 cord - cordierite  
 FeO - iron oxide(s)



See Map  
 R273-33-2