PRINTED: 12-14-2006

3083

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS 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

Table I - Summary of Exploration History & Significant Intersections - Pinafore Project R-273

Company	Year	Description of Work Undertaken	Drill Holes	Length (Ft.)	Significant Intersections (true thickness)
John Lawler	Early 1900's	Pinafore prospect discovered by John Lawler			
Hillside Mining	1935-1957	250' long adit completed & limited to two levels, 100' and 245' below surface. Small mill constructed. Last production occurred in 1957. Minor amount of underground production (several thousand tons.)			
Arizona Syndicate	1991-1992	Initially, R.C. drill core hole (PIN-01) drilled from the stratigraphic footwall under the old workings. Promising results led to drilling of holes PIN-02 to PIN-07. Property "second'staged" in June, 1992 to Syndicate members. PDUS becomes operator of the project.	PIN-01 PIN-02 PIN-03 PIN-04 PIN-04 PIN-06 PIN-07	790 720 740 1000 1135 680 700	4.17% Cu, 12.35% Zn/11.8' 0.87% Cu, 3.20% Zn/13.0' 1.51% Cu, 12.00% Zn/3.2' 4.59% Cu, 8.30% Zn/5.8' 8.43% Cu, 6.39% Zn/5.3' 0.42% Cu, 0.56% Zn/4.0' No significant values
PDUS, American Brick, Corona	July-Dec. 1992	One core hole drilled at depth under previous intersections (PIN-08). PIN-09 drilled 600' northeast of PIN-08 to test for downplunge extension of orebody. Regional-type mapping & geochemical sampling. Surveying of infrastructure & drill holes. E.M. surveying of drill holes.	PIN-08 PIN-09	1442 1737	0.33% Cu, 4.15% Zn, 0.85% Pb, 126 ppb Au, 5 ppm Ag/10.4' No significant values
		Total	9 Drill Holes	8,944'	

PLACER DOME U.S. INC
ROCKY MOUNTAIN DISTRICT

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

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

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

Date: Mar 25 [illegible]

Name of Mine: Pina Lore

Owner or Operator: J. R. Scott, Geo. J. Bilkey

Address: 1135 So. Pleasant St.

Mine Location: Eureka Dist. 8-10 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 & shipping for past seven months, & I recommend the allowance of 200 gals per month be given.

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By [illegible]

Field Engineer - District [illegible]

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Eureka (Pinafore)

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 not disclose what they had hoped to find in the way of deeper ore bodies. It was stated that they did not think the property was hopeless but that they could not 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.

CLAUDE C. FINDLY

February 12, 1943.

OPERATING
...ey Group of Mining Claims
Congress, Arizona

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

DEPT. MINERAL RESOURCES
RECEIVED
FEB 13 1943
PHOENIX ARIZONA

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

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.

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

INSTRUMENT # 880
OFFICIAL RECORDS
YAVAPAI COUNTY
PATSY C. JENNE
REQUEST OF:
AZ STATE LAND DEPT
DATE: 01/13/88 TIME: 11:00
FEE: 3.00
BOOK 2008 PAGE 668 PAGES:

STATE OF ARIZONA

DEED OF RECONVEYANCE

96-95200

INDEXED & MICROFILMED

$3 | P | 4 | Co | 5 | St
Bk | Map | Pcl

For and in consideration of the granting of certain lands as authorized by the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1201 et. seq.) THE STATE OF ARIZONA does herewith remise, release, quitclaim, grant, convey and relinquish to the UNITED STATES OF AMERICA its interest in the lands described as follows:

TWP.	RGE.	SEC.	SUBDIVISION	ACRES
11N	8W	6	That portion SWly of Hwy 93	28.35
		7	That portion SWly of Hwy 93	269.13
		8	That portion SWly of Hwy 93	101.24
		16	That portion of SW SWly of Hwy 93	8.84
		17	That portion SWly of Hwy 93	502.60
		18	Lots 1 - 8	291.20
		19	Lots 1 - 4	145.19
		20	N2	320.00
		21	That portion of NW SWly of Hwy 93	100.00
11N	9W	1	That portion SWly of Hwy 93	575.09
		2	Lots 1 - 4; S2N2; S2	639.64
		11	All	640.00
		12	All	640.00
		13	NE; NENW; S2NW; S2	600.00
		14	All	640.00
		23	NE	160.00
		24	N2	320.00
11N	10W	3	Lots 1 and 2; S2NE	159.55
12N	9W	5	That portion of SW SWly of Hwy 93	8.05
		6	That portion SWly of Hwy 93	382.89
		7	Lots 1 - 4; E2; E2W2	627.04
		8	That portion SWly of Hwy 93	397.82
		17	All	640.00
		18	Lots 1 - 4; E2; E2W2	626.00
		19	Lots 1 - 4; E2; E2W2	625.20
		20	All	640.00
		26	That portion of S2; NE; E2NW; SWNW; SWly of Hwy 93	205.79
		29	Lots 1 - 6; NENE; W2W2; SESW; NESE; S2SE	593.72
		30	Lots 1 - 4; E2; E2W2	626.16
		31	Lots 1 - 4; E2; E2W2	629.00
		35	That portion SWly of Hwy 93	609.08
		36	That portion SWly of Hwy 93	152.60
12N	10W	3	Lots 1 - 4; S2	489.12
		4	Lots 1 - 4; S2	487.28
		5	Lots 1 - 4; S2	485.40
		6	Lots 1 and 2; SE	241.95
		10	E2	320.00

I hereby certify that this instrument is a true and complete copy as shown by the Records of the Arizona State Land Department.

WITNESS my signature and seal this 12th day of January 1988

TWP.	RGE.	SEC.	SUBDIVISION	ACRES
12N	10W	11	All	640.00
		12	All	640.00
		13	All	640.00
		24	E2	320.00
		25	E2	320.00
		34	N2; N2S2; S2SW; SWSE	600.00
		35	All	640.00
		36	NE; S2NW; S2	560.00
13N	9W	5	Lots 1 - 4; S2N2; S2	661.56
		6	Lots 1 - 7; S2NE; SENW; E2SW; SE	654.60
		7	Lots 1 - 4; E2; E2W2	635.04
		8	All	640.00
		31	That portion SWly of Hwy 93	322.03
13N	10W	2	Lots 1 - 5; LOT 7; S2N2; E2SE	496.94
		16	All	640.00
		32	All	640.00
		33	All	640.00
		34	All	640.00
		35	All	640.00
14N	9W	30	Lots 1 - 4; E2; E2W2	635.44
		31	Lots 1 - 4; E2; E2W2	636.00
		32	W2; W2SE;	400.00
14N	10W	6	Lots 1 - 7; S2NE; SENW; E2SW; SE	634.45
		23	All	640.00
		24	S2	320.00
		31	Lots 1 - 4; E2; E2W2	635.60
		32	All	640.00
		33	All	640.00
		34	All	640.00
		36	ALL	640.00

The above described parcels contain a total of 32,359.59 acres, more or less.

Subject to existing reservations, easements, or rights-of-way heretofore legally obtained and now in full force and effect.

IN WITNESS WHEREOF, I, Evan Mecham, Governor of the State of Arizona, have caused this DEED OF RECONVEYANCE to be executed and the GREAT SEAL of the State of Arizona to be attached hereto this 16th day of November 1987.

GOVERNOR OF ARIZONA

SECRETARY OF STATE

IN REPLY REFER TO:

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE
3707 N. 7th Street
P.O. Box 16563
Phoenix, Arizona 85011

A-22796
2200 (921-ML)

March 9, 1988

CERTIFIED MAIL--RETURN RECEIPT REQUESTED

DECISION

State of Arizona

State Exchange
Application A-22796

Title to Reconveyed Lands Accepted

Pursuant to Section 206 of the Act of October 21, 1976, 90 Stat. 2756; 43 U.S.C. 1716 (1982), the above numbered State Exchange application has been found to be in the public interest and otherwise in conformance with the laws and regulations. Proper public notice has been accomplished and appropriate governmental authorities were notified. There are no protests of record.

The State of Arizona has filed Deed of Reconveyance No. 96-95200 dated November 16, 1987, conveying 32,359.59 acres, more or less, to the United States. Title to 32,359.59 acres of reconveyed land in Yavapai and Mohave Counties, described as follows, is hereby accepted:

Gila and Salt River Meridian, Arizona

T. 14 N., R. 10 W.,
sec. 6, lots 1-7 incl., S½NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 23, all; (Surface only)
sec. 24, S½; (Surface only)
sec. 31, lots 1-4 incl., E½, E½W½; (Surface only)
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 36, all.

T. 14 N., R. 9 W.,
sec. 30, lots 1-4 incl., E½, E½W½; (Surface only)
sec. 31, lots 1-4 incl., E½, E½W½; (Surface only)
sec. 32, W½, W½SE¼.

T. 13 N., R. 9 W.,
sec. 5, lots 1-4, incl., S½N½, S½; (Surface only)
sec. 6, lots 1-7, incl., S½NE¼, SE¼NW¼, E½SW¼, SE¼; (Surface only)
sec. 7, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 8, all; (Surface only)
sec. 31, that portion SWly of Hwy 93.

T. 13 N., R. 10 W.,
sec. 2, lots 1-5, incl., lot 7, S½N½, E½SE¼;
sec. 16, all;
sec. 32, all;
sec. 33, all; (Surface only)
sec. 34, all; (Surface only)
sec. 35, all. (Surface only)

T. 12 N., R. 10 W.
sec. 3, lots 1-4, incl., S½;
sec. 4, lots 1-4, incl., S½;
sec. 5, lots 1-4, incl., S½;
sec. 6, lots 1 & 2, SE¼;
sec. 10, E½; (Surface only)
sec. 11, all; (Surface only)
sec. 12, all; (Surface only)
sec. 13, all; (Surface only)
sec. 24, E½; (Surface only)
sec. 25, E½; (Surface only on SW¼SE¼ and E½SE¼)
sec. 34, N½, N½S½, S½SW¼, SW¼SE¼; (Surface only)
sec. 35, all; (Surface only)
sec. 36, NE¼, S½NW¼, S½.

T. 12 N., R. 9 W.,
sec. 5, that portion of SW¼ SWly of Hwy 93;
sec. 6, that portion SWly of Hwy 93;
sec. 7, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 8, that portion SWly of Hwy 93; (Surface only)
sec. 17, all; (Surface only)
sec. 18, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 19, lots 1-4, incl., E½, E½W½; (Surface only).
sec. 20, all; (Surface only)
sec. 26, that portion of S½, NE¼, E½NW¼, SW¼NW¼ SWly of Hwy 93; (Surface only)
sec. 29, lots 1-6 incl., NE¼NE¼, W½W½, SE¼SW¼, NE¼SE¼, S½SE¼; (Surface only)
sec. 30, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 31, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 35, that portion SWly of Hwy 93, (Surface only)
sec. 36, that portion SWly of Hwy 93.

T. 11 N., R. 10 W.,
sec. 3, lots 1 & 2, S½NE¼. (Surface only)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE
3707 N. 7th Street
P.O. Box 16563
Phoenix, Arizona 85011

A-22796
2200 (921-ML)

March 9, 1988

CERTIFIED MAIL--RETURN RECEIPT REQUESTED

DECISION

State of Arizona

State Exchange
Application A-22796

Title to Reconveyed Lands Accepted

Pursuant to Section 206 of the Act of October 21, 1976, 90 Stat. 2756; 43 U.S.C. 1716 (1982), the above numbered State Exchange application has been found to be in the public interest and otherwise in conformance with the laws and regulations. Proper public notice has been accomplished and appropriate governmental authorities were notified. There are no protests of record.

The State of Arizona has filed Deed of Reconveyance No. 96-95200 dated November 16, 1987, conveying 32,359.59 acres, more or less, to the United States. Title to 32,359.59 acres of reconveyed land in Yavapai and Mohave Counties, described as follows, is hereby accepted:

Gila and Salt River Meridian, Arizona

T. 14 N., R. 10 W.,
sec. 6, lots 1-7 incl., S½NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 23, all; (Surface only)
sec. 24, S½; (Surface only)
sec. 31, lots 1-4 incl., E½, E½W½; (Surface only)
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 36, all.

T. 14 N., R. 9 W.,
sec. 30, lots 1-4 incl., E½, E½W½; (Surface only)
sec. 31, lots 1-4 incl., E½, E½W½; (Surface only)
sec. 32, W½, W½SE¼.

T. 13 N., R. 9 W.,
sec. 5, lots 1-4, incl., S½N½, S½; (Surface only)
sec. 6, lots 1-7, incl., S½NE¼, SE¼NW¼, E½SW¼, SE¼; (Surface only)
sec. 7, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 8, all; (Surface only)
sec. 31, that portion SWly of Hwy 93.

T. 13 N., R. 10 W.,
sec. 2, lots 1-5, incl., lot 7, S½N½, E½SE¼;
sec. 16, all;
sec. 32, all;
sec. 33, all; (Surface only)
sec. 34, all; (Surface only)
sec. 35, all. (Surface only)

T. 12 N., R. 10 W.
sec. 3, lots 1-4, incl., S½;
sec. 4, lots 1-4, incl., S½;
sec. 5, lots 1-4, incl., S½;
sec. 6, lots 1 & 2, SE¼;
sec. 10, E½; (Surface only)
sec. 11, all; (Surface only)
sec. 12, all; (Surface only)
sec. 13, all; (Surface only)
sec. 24, E½; (Surface only)
sec. 25, E½; (Surface only on SW¼SE¼ and E½SE¼)
sec. 34, N½, N½S½, S½SW¼, SW¼SE¼; (Surface only)
sec. 35, all; (Surface only)
sec. 36, NE¼, S½NW¼, S½.

T. 12 N., R. 9 W.,
sec. 5, that portion of SW¼ SWly of Hwy 93;
sec. 6, that portion SWly of Hwy 93;
sec. 7, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 8, that portion SWly of Hwy 93; (Surface only)
sec. 17, all; (Surface only)
sec. 18, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 19, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 20, all; (Surface only)
sec. 26, that portion of S½, NE¼, E½NW¼, SW¼NW¼ SWly of Hwy 93; (Surface only)
sec. 29, lots 1-6 incl., NE¼NE¼, W½W½, SE¼SW¼, NE¼SE¼, S½SE¼; (Surface only)
sec. 30, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 31, lots 1-4, incl., E½, E½W½; (Surface only)
sec. 35, that portion SWly of Hwy 93, (Surface only)
sec. 36, that portion SWly of Hwy 93.

T. 11 N., R. 10 W.,
sec. 3, lots 1 & 2, S½NE¼. (Surface only)

01-nov-1995 TITLE INQUIRY T203QS

Land# 13.0-N-10.0-W-02-13-030

Type: 30 DISPOSAL
Ownr: 30 DISPOSAL
Wdrl: 502 HOMESTEAD (HMSD.)

County: YAVAPAI
Grant: PERM COMMON SCHLS
Lst Maint: 03-feb-1990 00:00:00

D I S P O S A L D A T A:

Code: 50 INDEMNITY LIEU SEL SURVEYED
Subj: 0
Date: 19-jun-1959

From QTRS: 04.0-N-11.0-W-20
Ref#: C 257
Fed#: 18567
St #: 7161

	ACRES
Surface:	146.400
Oil Gas:	146.400
Mineral:	146.400

Surface: L6 N2SW SWSW

Oil Gas: L6 N2SW SWSW

Mineral: L6 N2SW SWSW

Comment:

Help(F1) TopFrame(F5) End(F10) :

01-nov-1996 TITLE INQUIRY T203QS

Land# 13.0-N-10.0-W-02-13-030

Type: 30 DISPOSAL
Ownr: 30 DISPOSAL
Wdrl: 505 MINERAL CLASSIFICATION

County: YAVAPAI
Grant: PERM COMMON SCHLS
Lst Maint: 03-feb-1990 00:00:00

D I S P O S A L D A T A:

Code: 50 INDEMNITY LIEU SEL SURVEYED
Subj: 0
Date: 20-jan-1960

From QTRS: 03.0-S-11.0-W-18
Ref#: C 266
Fed#: 19164
St #: 7230

	ACRES
Surface:	20.660
Oil Gas:	20.660
Mineral:	20.660

Surface: MS 1683 A

Oil Gas: MS 1683 A

Mineral: MS 1683 A

Comment:

Help(F1) TopFrame(F5) End(F10) :

TITLE INQUIRY

Land# 13.0-N-10.0-W-02-13-030

Type: 30 DISPOSAL

Owner: 30 DISPOSAL

Wdrl: 0

County: YAVAPAI

Grant: PERM COMMON SCHLS

Lst Maint: 03-feb-1990 00:00:00

From QTRS: 06.0-N-11.0-W-10

Ref#: REC 96-95200

Fed#:

St #:

	ACRES
Surface:	496.940
Oil Gas:	496.940
Mineral:	496.940

D I S P O S A L D A T A:

Code: 59 DEED OF RECONVEYANCE -REC

Subj: 913 SUB TO EXIST RESRV,EASEMNT,R

Date: 16-nov-1987

Surface: LOTS 1 THRU 5 7 S2N2 E2SE

Oil Gas: LOTS 1 THRU 5 7 S2N2 E2SE

Mineral: LOTS 1 THRU 5 7 S2N2 E2SE

Comment: FROM-TO 060N110W 17

Help(F1) TopFrame(F5) End(F10) :

Patent Notes

Indicate Type and Location of Water: ☐ Well ☐ Spring ☐ Stream ☐ Reservoir ☐ Stock Tank

STATE LAND DEPARTMENT OF ARIZONA

SCHOOL LANDS

Reconveyed to the United States 11-16-87
Reconveyance No. 96-95200 496.94 Ac.
Surface and Sub-Surface Lots 1-7, S½N½, E½SE¼

YAVAPAI County, G. & S. R. B. & M.

Section 2 Township 13-N Range 10-W

STATUS	DATE FILED	USED AS BASE: SUBDIVISION	ACRES	LIST No.	CLEAR LIST No.	Date of Clear List	SELECTIONS: SUBDIVISION	SEC.	TWP.	RNG.	ACRES	TITLE IN STATE SUBDIVISION	ACRES
Surveyed 664 GRANT 030 S													
Homestead	5/3/58	Lot 6 N½SW SWSW	146.40	7/61	257	6/11/59	N2	20	1N	11W	320.00	Lots 1,2,3,4,5,7;	496.94
Patent Mining Claim	11/13/58	Mineral Survey No 1683-A	20.66	7230	266	1/20/60	E2	18	3S	11W	320.00	S½N½, E½SE¼	

01

ABSTRACT OF ENTRIES

S. C. Pat. 10/18/39 N½SW¼, SW¼SW¼, Lot 6 - 146.40 Ac.
Pat. Min M. S. 1683 20.66

DATE	TYPE of LEASE	LEASE No.	SUBDIVISION	ACRES	NAME	APP'D	BEGINS	Expires	PAID TO	REJECTED	REMARKS
10/30/33		18658-S	All	640	R. L. Gray	11/1/33	10/31/33	10/31/38	10/31/34		Or date of sale
9/9/37		36079-S	Lots 1,2,3,4,5,7; N½SE¼ S½N½, E½SE¼	496.94	Juan Olea	9/9/37	9/9/37	9/8/42	9/8/38 9/8/39 9/8/40 9/8/41 9/8/42	10/23/34	Homestead on section
7/25/42		36079-S	Lots 1,2,3,4,5,7; S½N½, E½SE¼	496.94	Juan & Laurie Olea	9/9/42	9/9/47	9/8/52	9/8/43 9/8/44 9/8/45 9/8/46 9/8/47 9/8/48 9/8/49 9/8/50 1/31/51 1/31/52		Or date of sale
12/1/47	LS	778-S	"	496.94	Milo W. Lines & J.W. Skousen	1/1/47					BOUNDER CLAUSE - AMENDED LAWS CODE MARCH 14, 1950
12-27-51	G	778-S	"	496.94	Milo W. Lines & J.W. Skousen	7/1/51	7/1/51	1/31/67	1/31/51 1/31/52 1/31/53		
12-31-57	L.T.	G-778-S	"	496.94	Milo W. & Lena S. Lines		12/31/57	1/31/67			
1/4/62	G	778-S	Lots 1-5, 7; S½N½, E½SE	496.94	Milo W. & Lena S. Lines	2/1/62	2/1/62	1/31/72			
2/27/71	G	778-S	" "	496.94	M. W. & L. S. Lines	3/1/72	3/1/72	1/31/82			
4-16-54											Transferred see next page
4-1-54	Min	252-S	W½SE¼SE¼	20	R. L. Gray & F.E. Kirkpatrick	4/1/54	4/1/54	3/31/74	3/31/55	10-24-55	Non Payment
ac 4-25-56 2-6-56	Min	557-S	S½S½N½N½S½S½	6.0	Ray Stella Stellar	2/6/56	2/6/56	2/5/76		4/25/57	non payment
ac 7-3-56 7-25-56	Min	623-S	Mill in 6	219.93	Lela Hackell	7/25/56	7/25/56	7/25/76		8/29/60	non payment

Section 2

Township 13-N

Range 10-W

ABSTRACT OF ENTRIES

DATE	TYPE of LEASE	LEASE No.	SUBDIVISION	ACRES	NAME	APP'D	BEGINS	Expires	PAID TO	REJECTED	REMARKS
12-9-2572 7-14-56 Min		640 S	McBain SE	20	McFarland v Hullinger	7/14/56	7/14/56	7/13/76.		12/21/57	By Request
11/19/71	P.L.	21315 S	Lots 1,2,3,4,5,7; S2N2; E2SE	496.96	Reginald Skiles	12/21/71	1/1/72	1/1/77		1/6/72	NON-COMPLETION
1/11/72	PP	21515 S	" "	496.90	Reginald Skiles	2/15/72	3/1/72	2/28/77		3/2/72	NON-COMPLETION
4/4/72	PP	21524 S	" "	496.90	Reginald Skiles	4/4/72	5/26/72	5/25/77		5/26/72	NON-COMPLETION
1/26/73	PP	23023 S	" "	496.94	Reginald Skiles	3/5/73	3/16/73	3/16/78		3/21/73	Non-Completion
10-12-73	PP	25546 S	LOT #7	32.66	Kenneth L. Erickson	1/31/74	3/5/74	3/4/79.		2/6/74	Non-Completion
10-19-78	PP	71058 S	Lots 1,2,3,5,7; SENW; S2NE; E2SE	410.88	Pioneer Exploration, Inc.	7/31/79	7/31/79	7/31/83		12/9/81	Per Request - Land Open 12/10/81
11-21-79	HE	778 S	Lots 1 thru 5; 7; S2N2; E2SE	496.94	Thomas W. Lines	1/31/79		1/31/82.			
12-28-81	G	778 S	Lots 1-5, 7; S2N2; E2SE;	496.84	Thomas W. Lines	2/1/82	2/1/82	1/31/92			
4/11/86	ASSIGN OF	778S	Lots 1-5, 7; S2N2; E2SE	496.94	Al Francis Production Co. Inc.	4/11/86		1/31/92			
10/7/86	ORDER		Lots 1-5; 7; S2N2; E2SE	496.94	Ordered that lands be classified as suitable for exchange with BLM.		Lands closed to new applications for surface and/or subsurface leases, permits sales or exchanges except mineral applications and oil and gas exploration leases until further order of the State Land Commissioner.				Comm. Order #289-86/87
4-29-87	NEW OF	778-S	Lots 1 thru 5, 7; S2N2; E2SE	496.94	JOHN JAMES ANDERSEN JR.	5-14-87	1-31-92			4-15-88	Canceled. Doc 96-95200.

01-nov-1996 TITLE INQUIRY T2030S

Land# 13.0-N-10.0-W-02-13-030
Type: 30 DISPOSAL
Owner: 30 DISPOSAL
Mnrl: 502 HOMESTEAD (HMSD.)
D I S P O S A L D A T A:
Code: 50 INDEMNITY LIEU SEL SURVEYED
Subj: 0
Date: 19-jun-1959

County: YAVAPAI
Grant: PERM COMMON SCHLS
Lst Maint: 03-feb-1990 00:00:00
From QTRS: 04.0-N-11.0-W-20 A C R E S
Ref#: C 257 Surface: 146.400
Fed#: 18567 Oil Gas: 146.400
St #: 7161 Mineral: 146.400

Surface: L5 N2SW SWSW

Oil Gas: L5 N2SW SWSW

Mineral: L6 N2SW SWSW

Comment:

Help(F1) TopFrame(F5) End(F10) :

01-nov-1996 TITLE INQUIRY T2030S

Land# 13.0-N-10.0-W-03-13-030
Type: 30 DISPOSAL
Owner: 30 DISPOSAL
Mnrl: 505 MINERAL CLASSIFICATION
D I S P O S A L D A T A:
Code: 50 INDEMNITY LIEU SEL SURVEYED
Subj: 0
Date: 20-jan-1960

County: YAVAPAI
Grant: PERM COMMON SCHLS
Lst Maint: 03-feb-1990 00:00:00
From QTRS: 03.0-S-11.0-W-18 A C R E S
Ref#: C 266 Surface: 20.560
Fed#: 19164 Oil Gas: 20.560
St #: 7230 Mineral: 20.560

Surface: MS 1683 A

Oil Gas: MS 1683 A

Mineral: MS 1683 A

Comment:

Help(F1) TopFrame(F5) End(F10) :

[illegible]ac# 13.0-N-10.0-W-02-13-000
[illegible]pe: 13 DISPOSAL
[illegible]nr: 30 DISPOSAL
[illegible]rl: 0

D I S P O S A L D A T A:

Code: 59 DEED OF RECONVEYANCE -REC
Subj: 913 SUB TO EXIST RESRV,EASEMNT,R
Date: 15-nov-1987

[illegible]
Grant: PERM COMMON SCHLS
Lst Maint: 03-Feb-1990 00:00:00
From GTRS: 06.0-N-11.0-W-10 [illegible] C R E [illegible]
Ref#: REC 96-95200 Surface: 496.9[illegible]
Fed#: Oil Gas: 436.[illegible]
St #: Mineral: [illegible]

Surface: LOTS 1 THRU 5 7 S2N2 E2SE

Oil Gas: LOTS 1 THRU 5 7 S2N2 E2SE

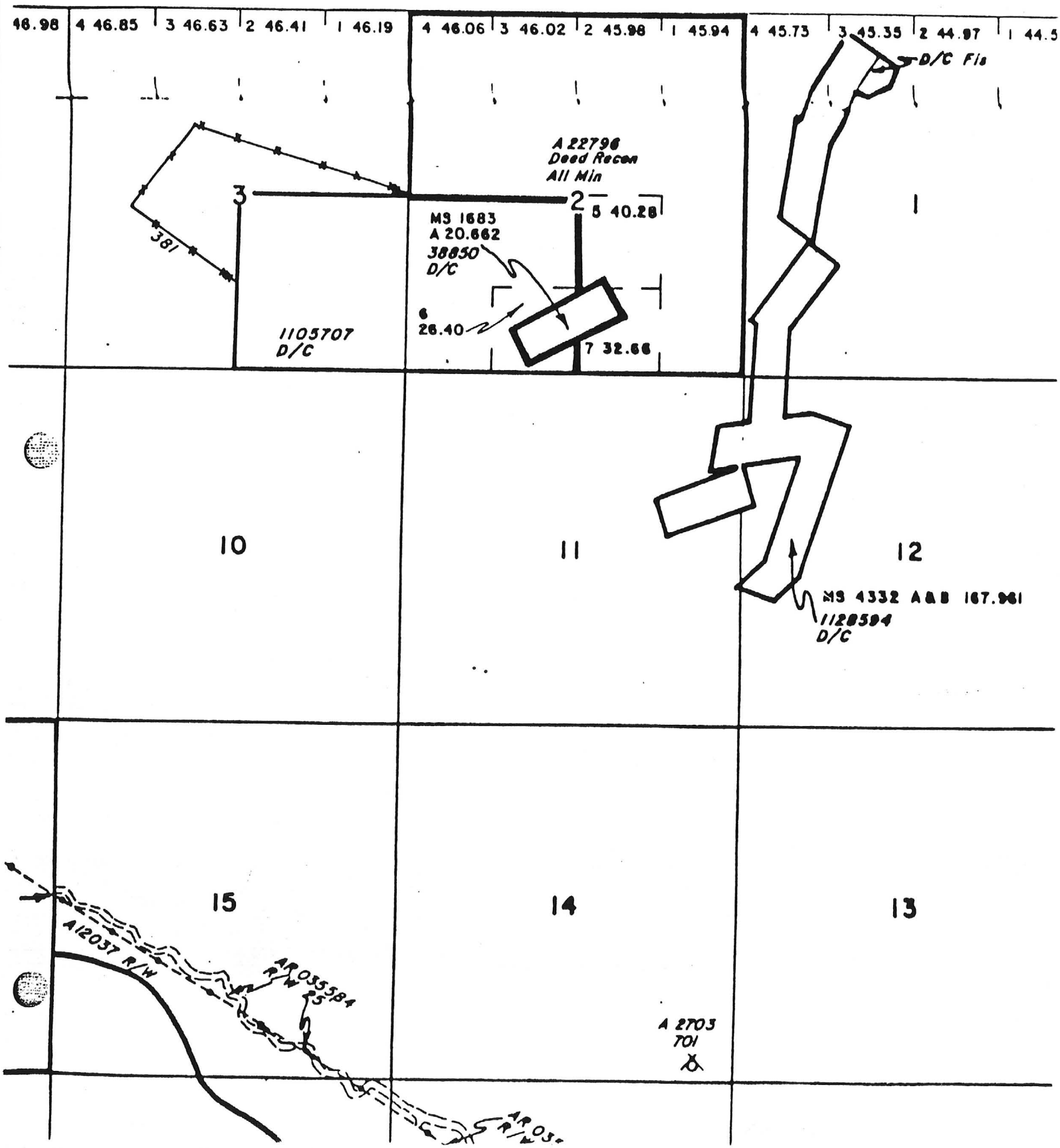
Mineral: LOTS 1 THRU 5 7 S2N2 E2SE

Comment: FROM-TO 060N110W 17

[illegible](F1) [illegible](F5) End(F10) :

RANGE 10 WEST OF THE GILA AND SALT RIVI

'MOHAVE COUNTY



Anthony Lane & Associates
Mining Consultants
P.O. Box 326
Arivaca, AZ 85601
Phone (520) 887-4632

January 26, 1998

GEOLOGICAL SUMMARY
PINAFORE MINE (EUREKA CLAIM)
Yavapai County, Arizona
U.S.A.

This summary of findings is in conjunction with a detailed report prepared by this concern on the above captioned property.

The property is located near Bagdad, Arizona, a Cypress Mining Company owned town. The Bagdad area is one of the oldest mining districts of Arizona, producing precious and base metals.

Dr. Stanley Holmes (deceased) became involved in the area in the late 1980's. His reputation and preliminary work resulted in the formation of a Syndication of Placer Dome, Barrick Gold, Homestake Mining and his own company A.E.I.

The subsequent drilling exploration completed by the Syndicate resulted in the delineation of some 550,000 tons of V.M.S. below the existing workings. This zone has been classified as "indicated" by V.S.E. definition.

Upon Holmes death, the property reverted back to the prior owners, the Lawler Family. John Rothermel and his company, Silver Nickel Mining, purchased the property and in turn entered into an agreement, with Vairochana Investments Inc., who assigned the property to Fortune Resources Corporation of Canada. Fortune Resources contracted with this concern to complete recommended and approved work, including the clearing of the portals and report.

The work program was halted after cleaning of the dump material outside the portal on the lower level, allowing for visual assessment of the workings. This showed that some thirty to forty feet was caved in. As the estimate of cost did not include this clearing, after consultation with Fortune Resources management, this program was held till later.

Based upon an in depth review of the obtained data, a mining plan was evolved. This plan calls for the rehabilitation

and expansion of the working. This allows for exposure of the ore zone between the existing "reported" workings and highest elevation drill hole.

This rehabilitation program is estimated at a cost of Two Hundred Five Thousand, Seven Hundred Fifty Dollars ($205,750.00) U.S., with an estimated time schedule of Two Hundred Seventy (270) working days. This is subject to availability of sub contractors and regulatory delays (permits etc.).

The result of this study is the identification of resources, indicated, inferred and anticipated, with combined value of $150,000,000.00 plus in place. These values are copper-zinc based on current market values.

Anthony Lane & Associates
Mining Consultants
P.O. Box 326
Arivaca, AZ 85601
Phone (520) 887-4632

January 26, 1998

GEOLOGICAL REPORT
PINAFORE MINE (EUREKA CLAIM)
Yavapai County, Arizona
U.S.A.

INTRODUCTION

This report is prepared at the request of Fortune Resource Corporations Management. The purpose of the report is (A) To reflect copper zinc prices (B) To reflect reserves resulting from ongoing data review and study (C) To conform with recommended terminology pertaining to resource/ reserves.

A preliminary study was completed by this concern based upon the reverse circulation drilling, completed by A.E.I., a Syndication of Dr. Stanley Holmes, a noted Canadian Geologist of Toronto, Barrick Gold U.S.A., Placer Dome and Homestake Mining (PRG Exploration Partnership).

This Syndication completed extensive geological mapping, geo chemical and geo physical surveys, followed by extensive drilling with favorable results (See Exhibits & maps).

LOCATION, ACCESS AND DESCRIPTION

The property consists of one patented claim (Eureka) and nine (9) unpatented adjoining claims.

The claims are located in the South half of Section 2 and North half of Section 11, Township 13 North, Range 10 West, in the Western quadrant of Yavapai County, Arizona.

Access to the property is by paved State Highway 93 some 44 miles North from Wickenburg, thence 2 miles East on State Road 97 (Bagdad Road), thence North on a County maintained road 4½ miles to the mine road turnoff. The mine is visible at this point. The mine has been developed on a ridge at an elevation of 3,200 to 3,300 feet above sea level.

The mine has been attacked by an incline shaft and two cross cut adits some 70 feet and 110 feet below the shaft

elevation, with winzes developed to 150 feet below the lower adit level.

The area of the claims is Section 2 and Section 11, Township 13 North, Range 10 West, G.&S.R.B.&M. Historically Section 2 of each Township were patented to the respective States as school lands. The State of Arizona deeded Section 2 back to the Federal Government, including all minerals as part of a land exchange (Exhibit 13), excepting the South West ¼, which is part of a homestead patent which patent includes mineral rights.

In addition, the area has been considered by the B.L.M. as a Mexican Tortoise Preserve. At this time, no permanent withdrawal for mineral entry is of record with the State Office of the U.S. B.L.M. in Phoenix, Arizona. However, final determination lies with the Kingman B.L.M. Office.

Telephone contact was made with Rebecca Peck of the Kingman B.L.M. Office on November 14, 1997, who advised that Section 2 was not included in present study areas, although Sections 4 and 5, Township 13 North, Range 10 West, were under study.

Review by legal counsel established that inspite of unpatented mining claims being accepted by the Bureau of Land Management, Section 2, Township 13 North, Range 10 West, was not open for mineral location at the time of location. Therefore, those mining claims and extended portions lying within Section 2 require relocation.

Request for opening of Section 2, Township 13 North, Range 10 West, has been made. The Kingman B.L.M. Office advises that said land will be open for mineral location thirty (30) days after publication in the Federal Register.

Therefore, at this time, the property consists of nine (9) unpatented claims, including portions which extend into Section 2, which will require relocation to include such portions when re-entry is allowed in Section 2. Climatically the property enjoys year round operations with occasional road closure during the rainy season. The terrain and vegetation is typical of High Sierra desert.

The property is located in Yavapai County, which lies in the North Central segment of the State of Arizona. The County Seat is Prescott, Arizona, accessible by air and road.

HISTORY AND DEVELOPMENT

The Eureka Patented Claim was located and patented by John Lawler, July 1904.

During the 1930's, a winze was sunk to the 245 foot level with 130 feet of lateral workings from the bottom of the shaft.

The property was mainly inactive until World Was II, when McFarland Hullinger, a major mining contracting company acquired the property. The company applied for a Defense Mineral Exploration Agency loan to develop the mine workings which was denied (See Exhibit 14). It is reported that some 693 tons plus of copper-zinc ore was produced during this period, being shipped to the Clarkdale Smelter.

After World Was II, McFarland Hullinger disposed of the property. This decision resulting from reduced metal prices and ore grades.

In 1953, a D.M.E.A. loan was applied for to allow for rehabilitation of the workings. Based upon lack of proven reserve, the loan was denied.

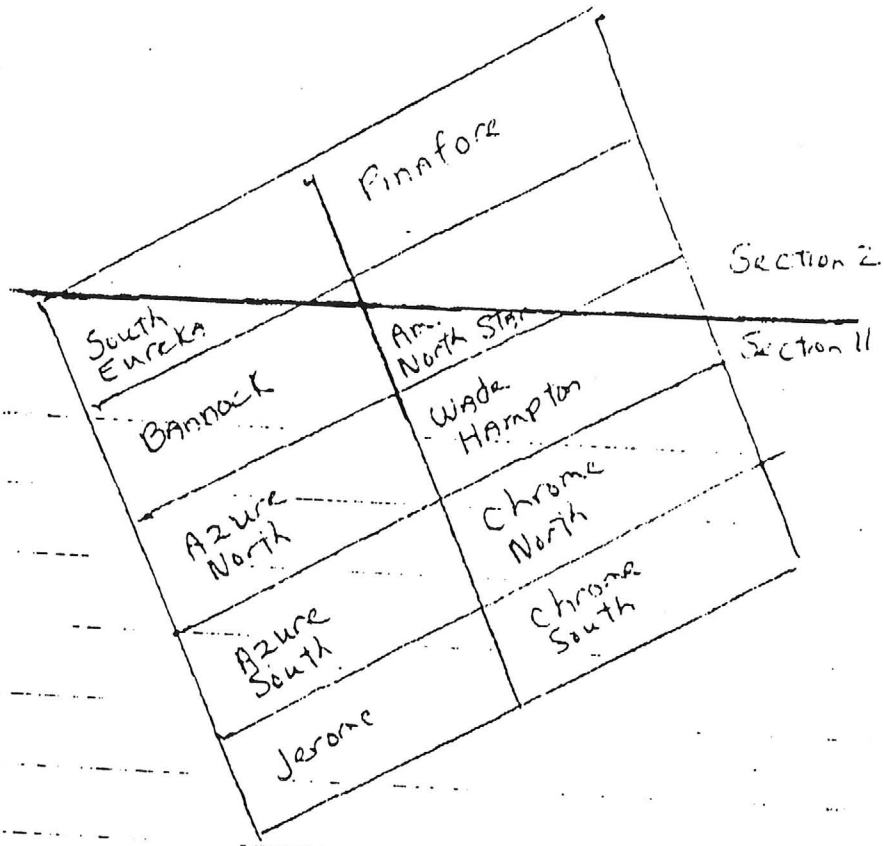
In the late 1980's, Dr. Stanley Holmes, a world recognized Geologist undertook a area appraisal. The Eureka Claim was acquired and five additional unpatented claims were located.

On November 1, 1989, a Syndication was entered into between Placer Dome U.S.A., Barrick Gold Exploration Inc., PRG., Arizona Exploration Partnership (Homestake Mining Co.), Stanley W. Holmes and Arizona Explorations Inc. (A.E.I., known as Arizona Explorations Syndicate.

Under this agreement the area was vigorously pursued, resulting in regional and detailed geological mapping, geo chemical, geo physical surveys, civil survey, with some 20,000 feet reverse circulation drilling and 3,000 feet core drilling on the Eureka Claim (Pinafore Mine). The reported direct costs to the Syndication was $485,000.00, which did not include the initial work completed by Holmes or A.E.I. Based on the scope of the project and the normal requirements of conservative companies such as Placer Dome, Barrick and Homestake expenditures on the project probably exceed One Million Dollars U.S. in prior work and the exploration program.

Subsequently, Dr. Holmes died in 1993 and nothing further was pursued by A.E.I. The Eureka Patent was returned to the Lawler Family and the unpatented claims were not maintained and dropped.

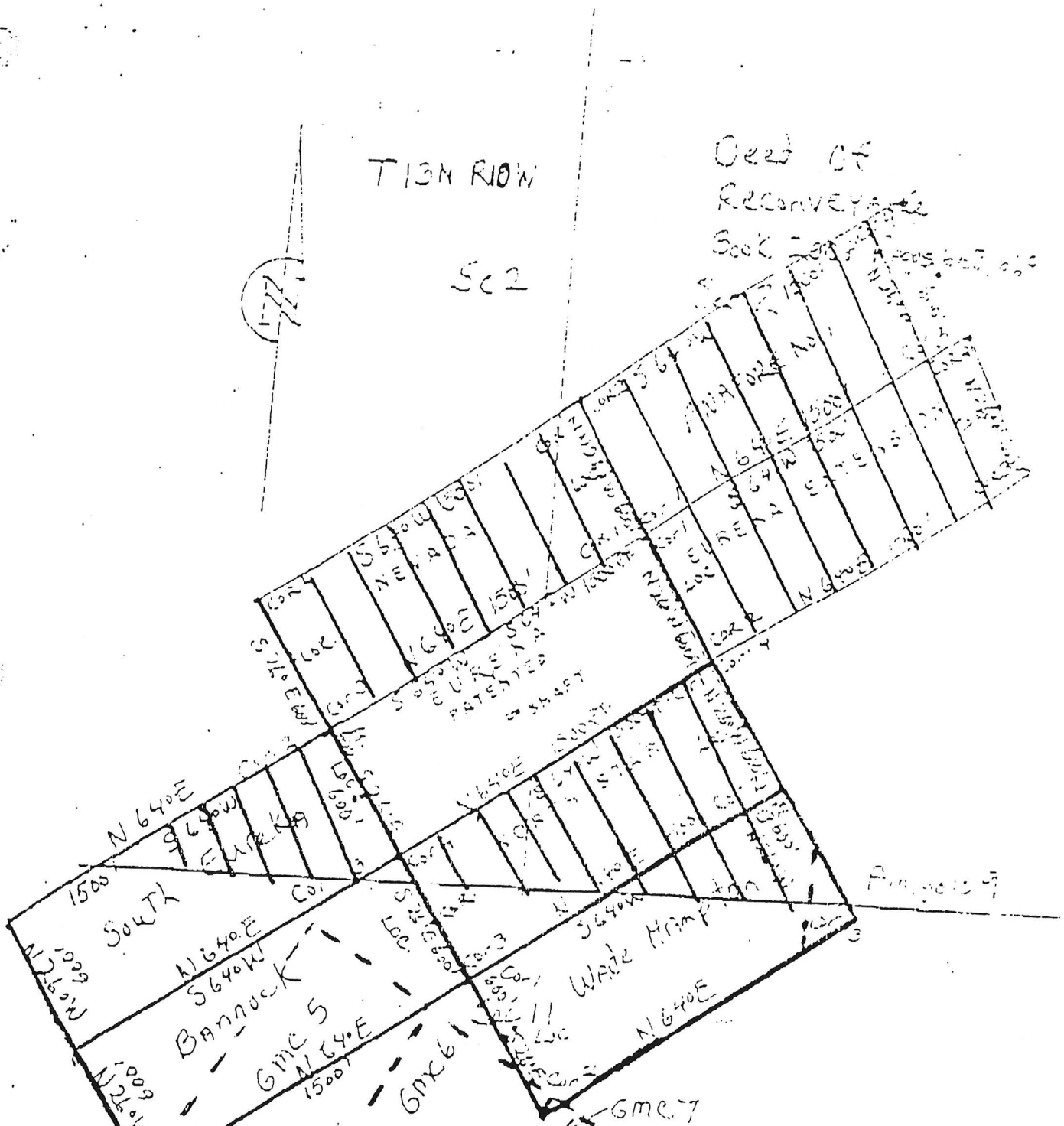
John Rothermel purchased the patented claim and located nine (9) adjoining unpatented claims. Title lies with Fortune Resources Corporation by agreement.



Fortune Resources Corporation list of claims

1 South Eureka (Portion in Section 11)
☆ 2 Bannock (Portion in Section 11)
3 Azure North
4 Azure South
5 Jerome
6 Am North Star (Portion in Section 11)
☆☆ 7 Wade Hampton (Portion in Section 11)
8 Chrome North
9 Chrome South

☆ only a small portion lies in Section 2
☆☆ majority of claim lies in Section 11



0 300 600 1200
SCALE - FEET

The Pinafore V.M.S. body plunges 70° to the NE

GEOLOGY

The property is located in an area broadly described as Proterzoic Volcanic belt of Arizona. This description is generally correct however, the mineralization is contained in the well defined highly altered contact of the Felsitic Volcanic's and the intermediate volcanic's.

The immediate area of the mined mineralization is locally structurally controlled intersecting the regional trend. The structural deformity is probably the result of volcano genetic action which in turn allowed the introduction mineralization. This occurrence locally is as pipes and lenses. Such was determined by McFarland Hullinger during the production period (See AS. DRT.-Mineral Resources Report-Exhibit #11).

The drill results confirm the mineralization continue to depth. The areas of sulphide mineralization intersected indicate continuance of the contact mineralization. There is no intersects of lenses or pods, although these will exist.

Comparison to the Bruce and Old Dick deposits result in identification of contact mineralization with pods and lenses with several paralleling structures. The Pinafore drill reflecting at least two other paralleling structures to the main contact, although similar in geologic setting.

Normally, most V.M.S. do not have oxidized zones associated. However, the cross fracturing (veinlets) allow for the oxidization to occur rather than being hypogenic of separate ore gensis.

The major ore is sulphide as exposed in the lower levels and adjunct working (150' and 70' winzes). Also as exposed in the drill holes which intersected the ore zone below the existing working. This drilling was completed by the Syndication with review of results by all Syndicate Representatives.

The contact with Felsic volcanic's is well defined on surface with gnesis serritatization. This contact has been interjected with a series of North South quartz veins in the immediate area of the mineralization. This probably relates to the area of V.M.S. which relates directly to volcano genic vents. Such venting does extend to surface as exposed in the original discovery. Such mineralization being oxidized, which oxidization extends to the 150 foot elevation.

GEOLOGIC CONCLUSIONS

The sulphide mineralization is hosted in a volcanic genetic setting. The mineralized zone is on a highly altered contact with localized shearing which results in mineralized pods and lenses.

The drill results reflect continuance of mineralization to at least 750 feet below existing workings, with a strike length of at least 550 feet (See Included Maps).

Based upon the source and the confirmation process, the drill results can be considered reliable. Further field verification of the drilling, drill pad and drill cuttings further authenticate the drilling. Further verification lies with the sample results for the 1944 D.M.E.A. loan application which has been verified. This sampling was taken on the lower adit level (245 foot).

ORE RESERVES
GENERAL STATEMENT

The exploration drilling was targeted initially to the extension of the "Pinafore" ore zone. It followed in concept with recommendation of L.L. Farnham of the U.S.G.S. as per 1953 report (Exhibit 14), as defined by D.H. Pin 01 and Pin 02 (See Included Maps).

These drill holes intersected two separate zones, such zones verified by sample plat (D.M.E.A. #3006) of lower winze level (245').

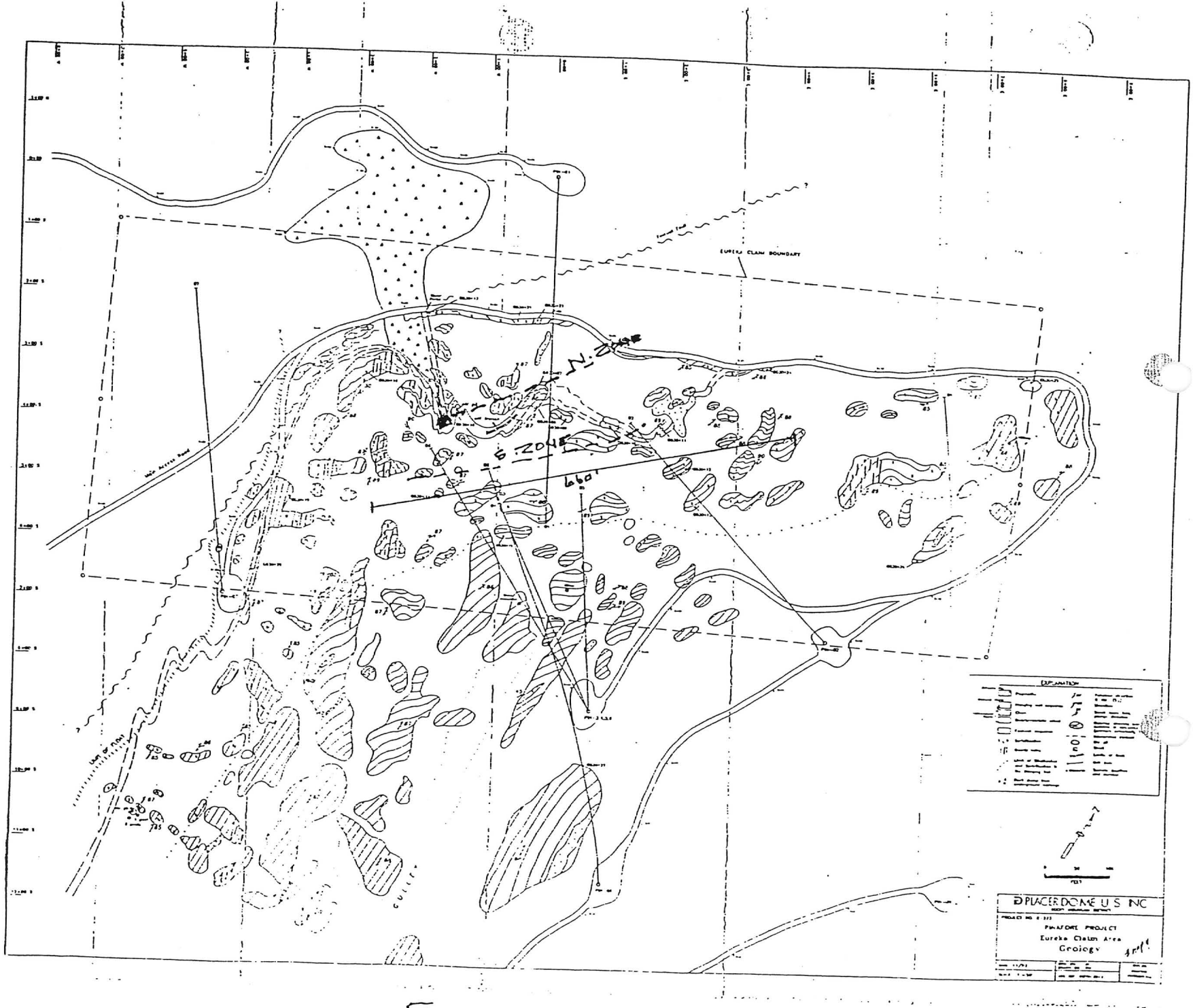
The primary (D.H. Pin 01) zone is referred to as the North zone (See Included Maps).

Additional drill holes (Pin 03-Pin 06) encountered a paralleling zone to the South which was not previously known or exploited.

This drilling delineated the lateral extension of the mineralization (500' plus) with a depth of 800 feet plus below known mineralization (245' level)(See Included Maps).

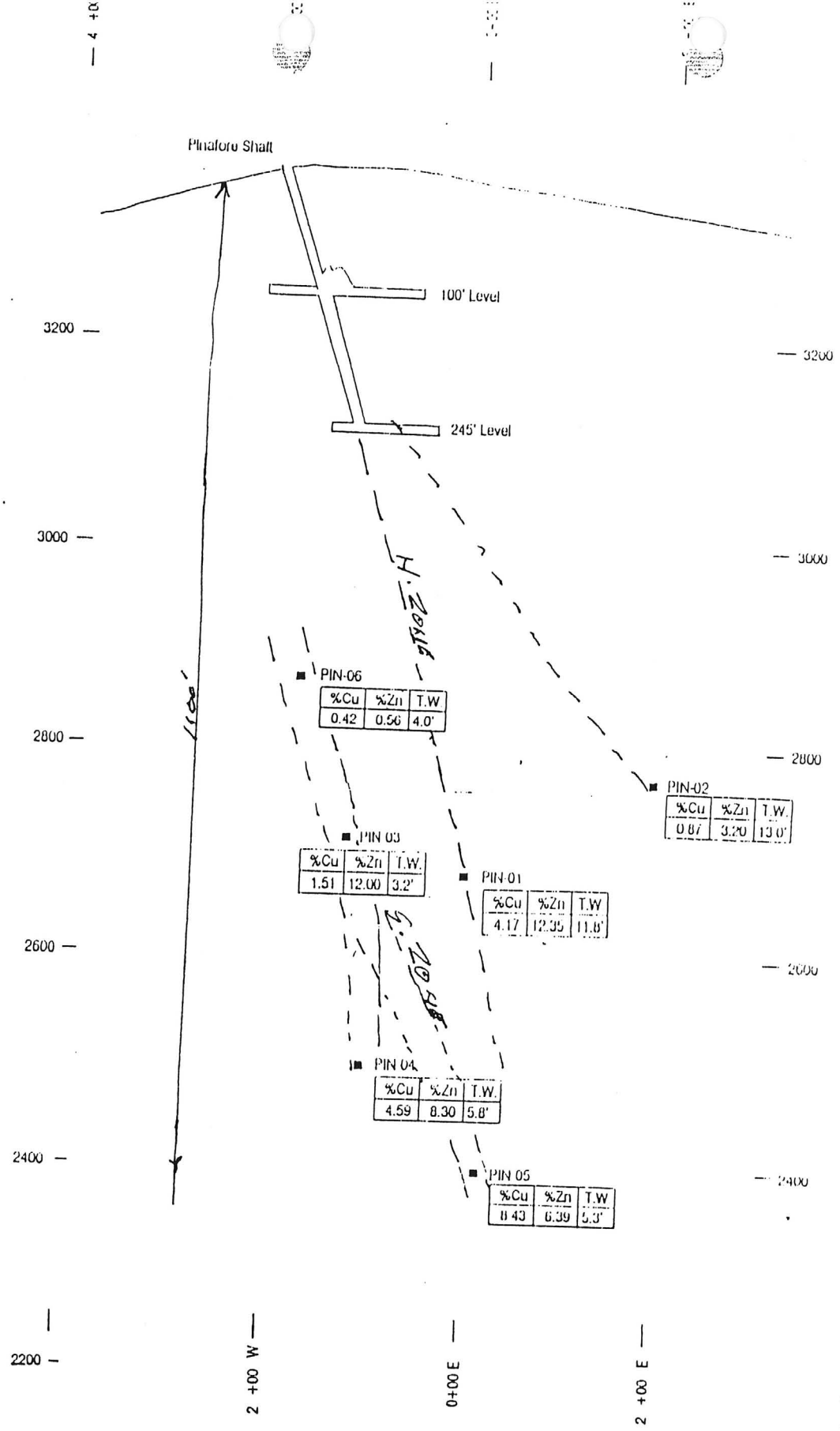
Depths of mineralization of comparable V.M.S. occurrences in the area extend to 2,400 feet (Bruce Old Dick) ore bodies occurring on same strike (See Included Maps).

Based upon the aforegoing facts the following resources have been identified and categorized;



SCALE 1" = 200' APPROX.

REDUCTION - MAP #4 - VOL II



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

HOLMES REPORT
SCALE 1" = 150' Approx

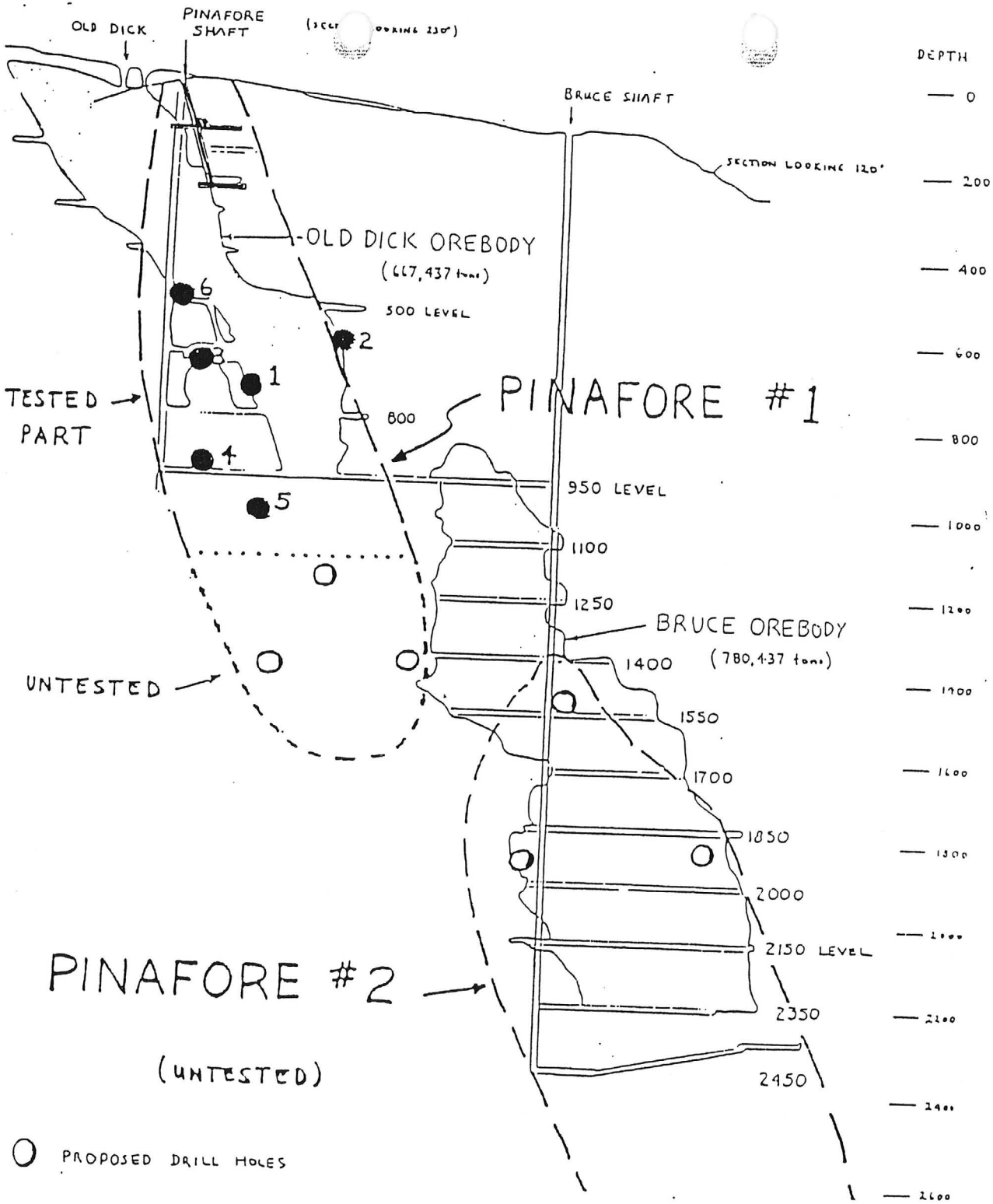
100 0 100 200
scale feet

ARIZONA EXPLORATIONS INC.

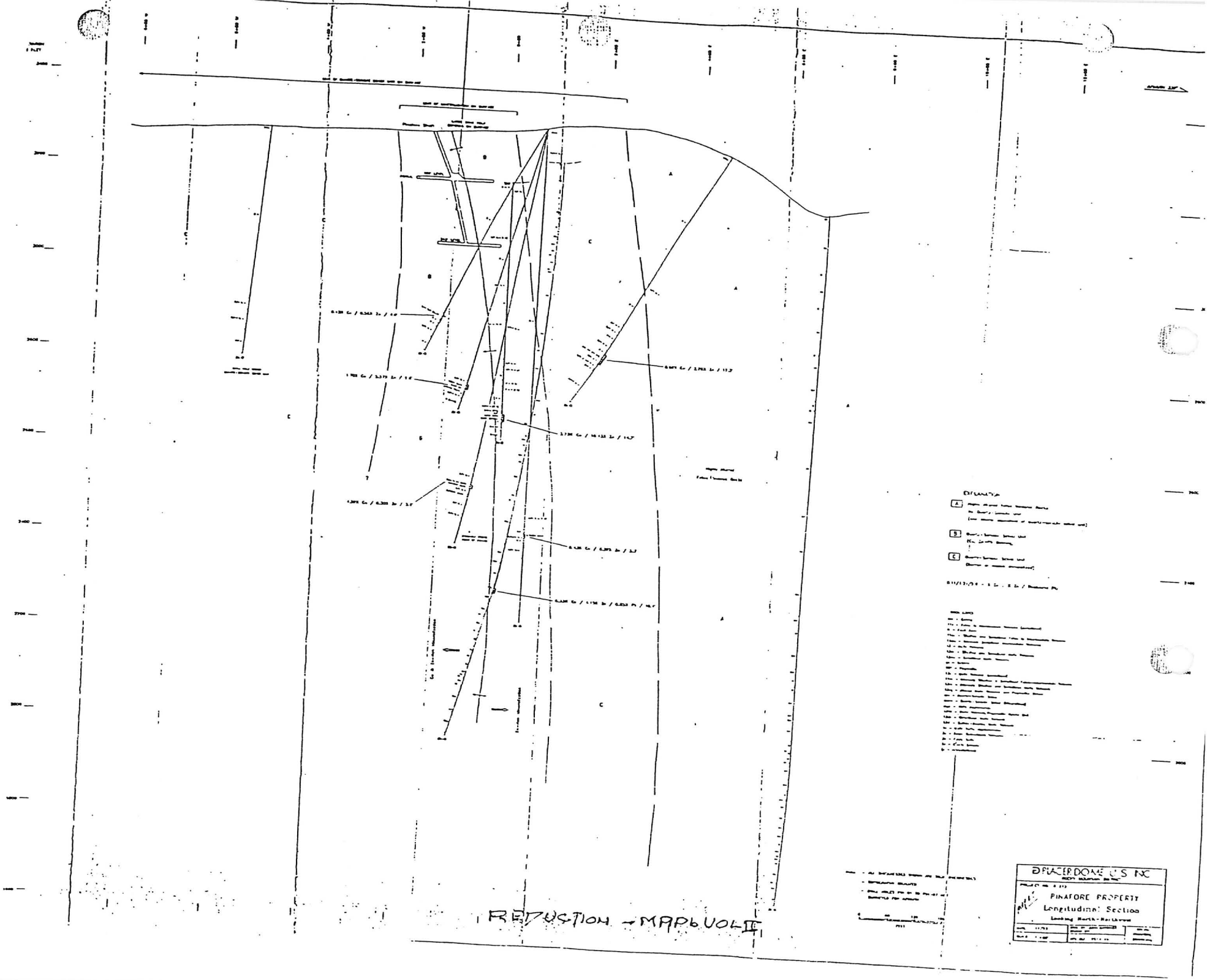
Baguad Basin Project

Pinafore Claim

Longitudinal Section
(Looking 330)
M.J. Glover June 2, 1992



MAP - HOLMES REPORT


PLACERDOME U.S. INC
PINAFORE PROPERTY
Longitudinal Section
REDUCTION - MAP 6 VOL II

1. N ZONE INDICATED RESOURCE/PROBABLE RESERVE

This zone is that on which the Pinafore was developed. The system was attacked by an incline shaft from the original discovery of the Eureka Claim. The zone was later accessed by two cross cut adits and subsequent winzes and workings.

Drill Holes Pin 01 and Pin 02 intersected the duel zones in this system (NO. 2 zone was not developed).

The total drill hole patterns established a strike length of 500 feet plus. This is extended 80 feet on strike to a length of 660 feet. Known depth is 800 feet with true width of 12.4 feet. This represents an indicated resource of $\frac{660' \times 800' \times 12.4'}{12}$ = 545,600 tons, with a grade of Cu. 3.33%, Zn. 7.13%.

2. S ZONE INFERRED RESOURCE/POSSIBLE RESERVE

This zone is delineated by D.H. 03 through 06. This zone parallels the Pinafore Zone, some 150 feet to the South. This zone which is one of three paralleling zones is some 660 feet in length with a depth of 600 feet with a width of 4.5 feet. This represents $\frac{660' \times 600' \times 4.5'}{12}$ = 148,500 tons

The average grade of the drill holes Cu. 3.73%, Zn. 6.8%.

However, Stanley Holmes and Associates had prepared and economic projection, which had reflected a drilled ore reserve, which allowed a 1.5 year "pay out" based on 250 t.p.d. operation. This would represent 250 t.p.d. x 18 months x 30 days = 135,000 tons. Therefore, this estimation of inferred resource is used. This classification is used as there is no history of production from this zone.

3. ANTICIPATED RESOURCE

As noted, the commercial extension to depth on comparable V.M.S. occurrences in the local area, extend to 2,400 feet below surface (Old Dick Bruce Deposits).

Therefore, it is reasonable to anticipate the Pinafore System is comparable. It is noted that the ore grades on the S System increase with depth. Therefore, the composite grade of the S Zone is used on the projection to depth. The widths of the ore zones are averaged between the N Zone and S Zone. This represents $\frac{4.5' + 12.4'}{2}$ = 8.45 feet. The same strike length is used for these calculations with a projected depth of 550 feet below other resource areas. This represents $\frac{8.45' \times 660' \times 550'}{12}$ = 255,612 tons.

N ZONE	255,612
S ZONE	255,612
	511,224 tons

Based on market price (Cash Price 1-23-98), Cu. @ 78¢ per lb., Zn. @ 527¢ per lb.

1.	N ZONE INDICATED RESOURCES/PROBABLE RESERVE 545,600 tons @ $127.09 per ton	$ 69,340,304.00
2.	S ZONE INFERRED RESOURCE/POSSIBLE RESERVE 135,000 tons @ $129.85 per ton	17,529,750.00
3.	S & N ZONE ANTICIPATED RESOURCE 511,224 tons @ $129.85 per ton	66,382,436.00
	GROSS VALUE IN PLACE = TOTAL	$153,252,490.00

PROPOSED MINE & MILL DEVELOPMENT

The ore zones as above have been defined by the exploratory drill holes. The zones as identified are contact mineralization with limited migration into the wall rock. Therefore, open pit or open cut mining is questionable at this time. Thus, the development of the mine should be approached on conventional underground techniques.

The most practical recommended program is to (1) Expose the ore for bulk sampling. (2) Verify drill results. (3) Expose the ore on three sides.

Based on the results of this work, it will be possible to complete full feasibility studies and convert the indicated and inferred resources to measured resources and proven reserve.

ESTIMATE FOR THIS PHASE

A.	Clearing existing adit	$ 20,000.00
B.	Clearing winze 145 feet @ $150 per ft.	21,750.00
C.	Clearing levels 600 feet @ $90 per ft.	54,000.00
D.	Sinking winze 200 feet @ $300 per ft.	60,000.00
E.	Drive levels on ore 200 feet @ $75 per ft.	15,000.00
F.	Sampling levels and surveys	10,000.00
G.	Feasibility	25,000.00
	Total	$ 205,750.00

CONCLUSIONS

Based upon the ground examination, and a in-depth review of the obtained data and the source of such data, such review has resulted in the conclusion that the property warrants the expenditure to verify the ore reserves, which on a practical basis can be termed highly indicated. The planned verification program in essence allows for totally independent evaluation or feasibility without use of prior work.

Environmental permitting and development of an adequate water source is a major consideration.

Review of the information obtained from the Arizona Department of Mineral Resources, indicate the mine may be making water on the lower levels. This is typical of the water resources in the region (fault related). Water requirements are about 1% of Bagdad operation (See Exhibit 11).

In order to obtain a Mining Plan of Operation from the B.L.M., it is first necessary to obtain approval from the State A.D.E.Q. In order to obtain State approval, metallurgical testing is necessary to determine chemical usage.

Respectfully submitted

Anthony Lane

Anthony Lane & Associates
Mining Consultants
P.O. Box 326
Arivaca, AZ 85601
Phone (520) 887-4632

January 26, 1998

CERTIFICATION

I, Anthony Lane, under oath do hereby certify and says:

1. That I, am a graduate Geologist and Mining Engineer of Loughborough College, Leicestershire, England, hold a Bachelor of Science degree in both disciplines.

2. That I, have practiced my profession of mineral evaluation and production for over forty-five years.

3. That I, have examined the property known as The Pinafore Mine (Eureka) Yavapai County, Arizona, U.S.A., on July 31, 1997 and November 11 and 12, 1997. Such examination was at the request of Vairochana Investments, Inc. and Fortune Resources Corporation.

4. That I, have reviewed the data obtained from John Rothermel from the Homestake Mining Company files pertaining to the A.E.I. Syndication exploration program.

5. That I, did obtain copies of files pertaining to the project from Arizona Department of Mineral Resources, Phoenix, Arizona and the U.S.G.S. Spokane, Washington directly.

6. That I, did compile a Report dated January 26, 1998, consisting of Eight (8) pages with Exhibits #1 through #14 and Maps #1 through #6 in Two (2) Volumes for Fortune Resources Corporation.

7. That I, do not hold any interest in the property or own any stock or interest in the afore referenced companies or individual, nor do I anticipate acquiring any interest.

FURTHER AFFIANT SAITH NOT

_____

Anthony Lane

RESUME

Anthony Lane
P.O. Box 326
Arivaca, Arizona 85601

Telephone: 602-398-9506
602-887-4632

Born: Ealing Middlesex, England

EDUCATION

B. Sc. - Geology
B. Sc. - Mining Engineering
Business Law - Minor
Loughborough College
Royal School of Mines

PROFESSIONAL EXPERIENCE

1950-1951	British National Coal Board
Duties:	Supervision 17 coal mines near Coalville, Leicestershire
1951-1953	Anglo-Iranian Oil Company
Duties:	Staff Engineer - Aide to V.P. Administration
1954	Immigration to U.S.A.
1954-1955	Dean Roland - Geologists, Denver, Colorado
Duties:	Field Geologist - Uranium Exploration
1955-1957	Geophysical Engineering Co., Colorado Springs, Colorado
Duties:	Field Manager - Petroleum and Mineral Geophysics South-West
1957-1959	Yucca Mining Co. & Florida Manganese Co., Deming, New Mexico
Duties:	General Manager - 500 t.p.d. Manganese Mine & Mill Operation - Fluorspar Production - Tungsten Exploration and Production
1959-1961	Mining & Milling Operation Carl M. Loeb, Jr. New York, New York (Owner of Yucca Mining & Florida Manganese)
Duties:	Special Consultant
1961-1966	Organized Anthony Lane & Associates Mining Consultants

1966-1969	Western Mineral Corporation 8967 La Due Road S. Louis, Missouri
Duties:	General Manager - 150 t.p.d. Lead, Zinc, Copper, Silver & Gold - Mine & Mill, Pima County, Arizona
1969-1980	Organized ALANCO LTD. (An Arizona Corporation) Complete Mining Claim Service
Duties:	President & C.E.O.
1980-1982	Reorganization and Expansion of ALANCO LTD. ad Subsidiaries Mining Services - Mining & Milling
Duties:	President & C.E.O.
1982 Present	Anthony Lane & Associates, Inc. Mining Consultant Complete Mining Services Abstracts, Title Certification
Duties:	President

REFERENCES

Ray Olson - Counsel, Retired
Anamax Mining Company - Tucson, Arizona
602-882-9004

John William Johnson
Attorney at Law
Tucson, Arizona
602-623-6961

John Lacey
Attorney at Law
Tucson, Arizona
602-322-5000

Abe Kalaf
B.S. & K. Mining Company
Venture Drilling
Tucson, Arizona
602-623-2211

Mason Coggins
Director
Arizona Mineral Resources
Phoenix, Arizona

Robert O'Brien
Mining Engineer, Retired
U.S. Park Service
San Francisco, California

Wayne Winters
Publisher
Tombstone, Arizona

Phillip M. Lynch
16210 Parkland Drive
Shaker Heights, Ohio

R.C. Jones
Chairman - Retired
Alanco Ltd.
Phoenix, Arizona

W. W. Arbogast
Chairman - Retired
Newberry Energy
Phoenix, Arizona

CLIENTELE

The Anaconda Company
American Metals - Climax
Utah International
Union Oil Company
Western Mineral Corporation
Venture Drilling Company
Knox-Arizona Corporation
B.S. & K. Mining Company
Anamax Mining Company
International Minerals & Metals, Inc.
Houston Mining & Resources, Inc.
Newberry Energy Company
Alanco Ltd.
Ecotech Inc.
Arizona Western Mines, Inc.
Caroni Mineral Corporation
Caronima De Venezuela, S.A.
Venezuelan Ministry of Mines

SPECIAL PROJECTS

Exploration & Mine & Mill Development
Manganese, Lead, Copper & Fluorspar - New Mexico

Exploration - Copper - Southern New Mexico
Exploration & Mine & Mill Development -

Gold, Silver, Lead & Zinc - Arizona

Exploration - Gold - Wyoming & Nevada

Exploration & Mine Development -
Tungsten & Gold - Utah

Metallurgy - Precious Metal Extraction
Pyro and Hydro Extractions

Land Management - Contractual

Claim Patenting - Federal

Feasibility Studies - Gold & Silver
La Paz, Mexico

Feasibility Studies - Venezuelan Gold Belt
Venezuela, South America

Environmental Metallurgic Consultation
Venezuelan Ministry of Mines

Exploration & Production Gold
Venezuela, South America

Property Evaluation Gold Placer
Yukon, Canada

Precious Metal Evaluation - Placer
Deposits - Plant Design and Installation
Sierra Leon, West Africa

Feasibility Studies - Gold-Diamond
French Guana, South America

Environmental Permitting Projects
Federal and State

PROFESSIONAL ASSOCIATIONS PRIOR TO RETIREMENT

N.M. Technical Registration

Registered Geologist

Registered Mining Engineer

Arizona Geological Association

Tucson Chapter A.I.M.E.

EXHIBIT 1

Anthony Lane & Associates
Mining Consultants
P.O. Box 326
Arivaca, AZ 85601
Phone (602) 398-9506

October 12, 1997

MEMORANDUM

To: William C. Bowes
Vairochana Investment

From: Anthony Lane

Re: Pinafore Project
Yavapai County, AZ.
U.S.A.

As per prior discussions, the pertinent aspects of the initial phase of feasibility should consist of;

A. ACCESS
Obtain access to upper and lower adits. Timber portals to meet State and Federal safety standards. The program should allow at least three (3) fall areas in drift and shaft intersections including clean out of fall areas.
ESTIMATED COSTS - $ 15,000.00 U.S.

B. SURVEY ELEVATIONS
The elevations stated probably originate from the footage of the incline shaft rather than actual vertical elevations. Therefore, a complete survey of surface workings, drill sites, roads and underground workings should be completed including elevations determination of deposit base (hillside) to consider such for possible working access.
ESTIMATED COSTS $ 7,500.00 U.S.

C. EVALUATION
1. Sample, map and assay lower workings. Determine transition zone, oxide to sulphide bulk sampling for metallurgical testing which will verify reported sampling.

2. Develop cross section plat based on true elevations to reflect the zone of sulphide mineralization (lower level and drill hole locations).

3. Based upon the result of metallurgical testing and up dated geologic review complete economic feasibility,

including mine plan etc.

4. Extend geological area study to include projection of ore zones and reserves, including a hydrological study to determine adequate water source for mill use.

5. Prepare area plat for mine/mill location for submittal to respective agencies for operations and permitting (B.L.M., Arizona State including A.D.E.Q., B.L.M. and M.P.O.).

6. Determine costs of mine development, mill acquisition and installation necessary bonding requirements.
ESTIMATED COSTS $ 35,000.00 U.S.

Project Budget Projection $ 57,500.00 U.S.

Excluding administrative, local etc.

EXHIBIT 2

Anthony Lane & Associates
Mining Consultants
P.O. Box 326
Arivaca, AZ 85601
Phone (602) 398-9506

PRELIMINARY GEOLOGIC REVIEW AND SUMMARY

PINAFORE PROJECT
EUREKA MINING DISTRICT
YAVAPAI COUNTY, ARIZONA

August 3, 1997

INTRODUCTION

This property was examined on July 31, 1997, at the request of William C. Bowes, President of Vairochana Investment Inc.

The property had been tendered by John Rothermel, who on behalf of Silver Nickel Mining Co. entered into a General Letter of Intent, re the property with Vairochana Investments Inc., on July 30, 1997.

HISTORY AND ABSTRACT

The property which consists of one patented mining claim and four adjoining unpatented mining claims lie in the S½ of Section 2, Township 13 North, Range 10 West, G.& S.R.B.& M., Yavapai County, Arizona.

This property is located some 100 miles northwest of Phoenix, Arizona. It is reached by following Highway 93 North from Wickenburg, approximately forty miles to the intersection of State Road 97 leading to Bagdad, a Cypress owned mining town.

This paved road is followed approximately two miles east to the intersection of the Old Kingman Highway. This unpaved road is followed north approximately six miles to the mine turnoff, thence approximately two miles to the mine.

The Pinafore Mine was patented in 1902 by William Lawler, now deceased, a mining entrepreneur, who was an avid gold prospector and miner. The property was acquired from the Lawler Estate by the Rothermel interests.

The last reported production of the mine was during World War II, for copper. It is reported that some 10,000 tons of 11% Zn. and 5% Cu. was produced during this period.

The mine has been developed by vertical shaft with cross cut adits at the 100 foot level and 245 foot level.

In the early 1900's, Stanley W. Holmes, a noted Geologist, completed extensive regional geological reconnaissance of the area and identified a potential volcanic massive sulphide deposit below the existing workings on the Pinafore Mine.

An ideal geologic model lies immediately north of the Pinafore being the "Old Dick and Bruce Mines".

These mines produced to 1,000 foot and 2,400 foot levels respectively. The reported grade of this production was 13% Zn. and 3.95% Cu. no precious metals are reported.

Subsequently, Dr. Holmes work and reputation was of sufficient merit to allow an exploration syndication of American Barrick, Placer Dome and Homestake Mining. A series of nine drill holds were completed with favorable results.

The syndication was aborted on the death of Stanley Holmes in 1993. The property reverted to the Lawler Estate and subsequently acquired by the Rothermel interests.

GEOLOGY

The Rothermel interests were able to obtain much of the syndication work including drill results and mapping therefore, no geologic analysis is needed, except for general observations.

Therefore, the reconnaissance by the writer was limited to orientation of the mine, drill sites and underground observations of the 100 foot level (the 245 foot level was not accessible due to the portal being caved). The mineralization was oxidized at the 100 foot level with copper predominantly oxidized and as carbonates. The same is true of the zinc occurring mainly as smithsonite.

The 100 foot workings were mainly open without support with the exception of the portal and two areas of minor cave. The wall rock is quite competent consisting of felsite and volcanic tuffs. The area mined is extremely brecciated and altered.

The strike of the high grade are is North 40 degrees, 50 degrees East with dip of 80-85 degrees South-east. Strike and dip of systems of this geologic origin fluctuate into lentrularal pods which may vary from the regional trend. The 245 foot level is sulphide as exhibited from the dump material.

Drill hole intersections have projected the sulphide zone to at least the 900 foot level with mineralized widths ranging from 4 foot to 17 foot in the area of drill holes 1, 2, and 3. Widths average 13.9 feet containing an average of Cu. 2.06%, Zn. 6.23%.

ORE RESERVES
POSITIVE

The area defined by drilling is 660 feet in width x 800 feet in depth

with average mineralized width of $\frac{13.9 \text{ feet}}{90\%}$ = 12.5 feet. This represents a reserve of 550,000 tons based on 12 cu. ft. per ton.

Based on present metal prices (Wall Street Journal 8-1-97) Cu. $1.09, Zn. $0.767, with an average of Cu. 3.33%, Zn. 7.13%, this represents a tonnage value of Cu. $72.59, Zn. $109.37 representing a reserve value of $100,078,000.00.

No value has been given to precious metals although upper level values represent Ag. .60 oz.per ton, Au. 0.04 oz. per ton. These values can be projected to the sulphide zone, which may be an additional attractive target subject to metallurgical considerations.

INFERRED OR INDICATED RESERVES

Projections from the known (positive) reserves to depth comparable to the bruce or body indicated or inferred reserves represent $\frac{1,200' \text{ depth} \times 660' \times 12.5}{12}$ = 825,000 tons.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the obtained data and the authenticity of the principles involved Holmes, American Barrick, Placer Dome and Homestake, the stated reserves are considered reliable. Further confirmation by comparison lies in the Dick and Bruce occurrences in like geologic settings.

The copper-zinc content of the upper zones confirm the mineral occurrence and ratio's.

Due to the erratic shape of the deposit, except for exploration drilling, development should be by conventional methods (shafts, drifts etc.).

The immediate program should allow the opening of the lower 245 foot level for access for sampling and mapping. Also, to obtain a bulk sample of metallurgical testing. The 100 foot level should be made fully accessible to State Mine Inspectors standards.

In addition to the mineral geology, hydrologic studies should be undertaken to determine adequate water source for processing needs.

Estimates are being prepared for the necessary mine rehabilitation including reporting of workings and fencing as necessary,

Respectfully submitted,

Anthony Lane

EXHIBIT 3

[Federal Register: July 21, 1998 (Volume 63, Number 139)]
[Notices]
[Page 39106-39107]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr21jy98-86]

DEPARTMENT OF THE INTERIOR

Bureau of Land Management
[AZ050-1020-00-241A; AZA 22796]

Title: Reconveyed Lands Opened to Entry--Mohave, Yavapai Counties

AGENCY: Bureau of Land Management.

ACTION: Notice.

SUMMARY: The following-described lands were reconveyed to the U.S. under the provisions of Sec. 206 of the Federal Land Policy and Management Act of 1976, on March 9, 1988. This order will open the lands to entry under the general mining laws and the mineral leasing laws.

Gila and Salt River Meridian, Arizona

T. [illegible] N., R. 8 W.,
Sec. 6, portion of lots 6, 7, and 8 lying southwest of Hwy 93;
Sec. 7, lots 2 to 8 incl., and portion of lot 1 lying southwest of Hwy 93;
Sec. 8, portion of W\1/2\ and SW\1/4\SE\1/4\ lying southwest of Hwy 93;
Sec. 16, portion SW\1/4\ lying southwest of Hwy 93;
Sec. 17, portion lying southwest of Hwy 93;
Sec. 18, lots 1 to 8, incl.;
Sec. 19, lots 1 to 4, incl.;
Sec. 20, N\1/2\;
Sec. 21, portion of NW\1/4\ lying southwest of Hwy 93.
T. 11 N., R. 9 W.,
Sec. 1, lots 3, 4, and portion of lots 1, 2, S\1/2\N\1/2\, S\1/2\ lying southwest of Hwy 93 and outside of Arrastra Mountain Wilderness;
Sec. 2, portion of lots 1, 2, and S\1/2\NE\1/4\ outside of Arrastra Mountain Wilderness;

[[Page 39107]]

Sec. 12, E\1/2\ and portion of W\1/2\ outside Arrastra Mountain Wilderness;
Sec. 13, portion of E\1/2\ and NE\1/4\NW\1/4\ outside Arrastra Mountain Wilderness;
T. [illegible] N., R. 9 W.,
Sec. 5, portion of SW\1/4\ lying southwest of Hwy 93;
Sec. 6, lots 3 to 6 incl., E\1/2\SW\1/4\, and portion lot 2 and SE\1/4\ southwest of Hwy 93;
Sec. 7, lots 1 to 4, incl., E\1/2\, E\1/2\W\1/2\;

Sec. 8, portion lying southwest of Hwy 93;
Sec. 17, All;
Sec. 18, lots 1 to 3, incl., NE\1/4\, E\1/2\NW\1/4\, and portion of lot 4 and S\1/2\ outside of Arrastra Mountain Wilderness;
Sec. 19, portion of E\1/2\ and E\1/2\NW\1/4\ outside of Arrastra Mountain Wilderness;
Sec. 20, All;
Sec. 26, portion of S\1/2\NW\1/4\ and S\1/2\ lying southwest of Hwy 93;
Sec. 29, lots 1 to 6, incl., E\1/2\E\1/2\, SW\1/4\SE\1/4\, and portion of W\1/2\W\1/2\ and SE\1/4\SW\1/4\ outside of Arrastra Mountain Wilderness;
Sec. 30, portion of E\1/2\NE\1/4\ outside of Arrastra Mountain Wilderness;
Sec. 35, portion of NE\1/4\ lying southwest of Hwy 93, and portion of W\1/2\ and SE\1/4\ outside of Arrastra Mountain Wilderness;
Sec. 36, portion of W\1/2\ and SE\1/4\ lying southwest of Hwy

T. [illegible] R. 9 W.,
Sec. 5, lots 1 to 4, incl., S\1/2\N\1/2\, S\1/2\;
Sec. 6, lots 1 to 7, incl., S\1/2\NE\1/4\, SE\1/4\NW\1/4\, E\1/2\[illegible]\1/4\, SE\1/4\;
Sec. 7, lots 1 to 7, incl., E\1/2\, E\1/2\W\1/2\;
Sec. 8, All;
Sec. 31, lots 3, 4, and portion of lots 1, 2, E\1/2\W\1/2\ and [illegible]\1/4\ southwest of Hwy 93.
T. 11 N., R. 9 W.,
Sec. 30, lots 1 to 4, incl., E\1/2\, E\1/2\W\1/2\ (including MS 4578 within sec.);
Sec. 31, lots 1 to 4, incl., E\1/2\, E\1/2\W\1/2\;
Sec. 32, W\1/2\, W\1/2\SE\1/4\.
T. 12 N., R. 10 W.,
Sec. 3, lots 1 to 4, incl., and portion of S\1/2\ outside of Arrastra Mountain Wilderness;
Sec. 4, lot 1, and portion of lots 2, 3, 4, and SE\1/4\ outside of Arrastra Mountain Wilderness;
Sec. 5, portion of lots 1 to 4 outside of Arrastra Mountain Wilderness;
Sec. 6, portion of lots 1, 2, and SE\1/4\ outside of Arrastra Mountain Wilderness;
Sec. 10, portion of NE\1/4\NE\1/4\NE\1/4\ outside of Arrastra Mountain Wilderness;
Sec. 11, portion of N\1/2\N\1/2\ outside of Arrastra Mountain Wilderness;
Sec. 12, E\1/2\, and portion of W\1/2\ outside of Arrastra Mountain Wilderness;
Sec. 13, portion of N\1/2\ and SE\1/4\ outside of Arrastra Mountain Wilderness.
T. 13 N., R. 10 W.,
Sec. 2, lots 1 to 5, incl., lot 7, S\1/2\N\1/2\, and E\1/2\SE;
Sec. 16, All;
Secs. 32 to 35, incl.
T. 14 N., R. 10 W.,
Sec. 6, lots 1 to 7, incl., S\1/2\NE\1/4\, SE\1/4\NW\1/4\, E\1/2\[illegible]\1/4\, and SE\1/4\;
Sec. 23, All;
Sec. 24, S\1/2\;
Sec. 31, lots 1 to 4, incl., E\1/2\, E\1/2\W\1/2\;
Secs. 32 to 34, incl., and sec. 36.

All descriptions according to the official plats on file at the Bureau of Land Management.

SUPPLEMENTARY INFORMATION: At 9 a.m. on August 20, 1998 the lands described above will be opened to entry under the general mining laws and the mineral leasing laws, subject to valid existing rights and requirements of applicable laws. Opening these lands to mineral entry is in conformance with the **Kingman Field Office** Resource Management Plan, as amended and approved March 7, 1995. Appropriation of the above-described lands under the general mining laws or mineral leasing laws prior to the date and time of restoration is unauthorized. Any such attempted appropriation, including attempted adverse possession under 30 U.S.C. 38 shall vest no rights against the United States. Acts required to establish a location and to initiate a right of possession are governed by State law where not in conflict with Federal laws. The Bureau of Land Management will not intervene in disputes between rival locators over possessory rights since Congress has provided for such determinations in local courts. All applications and offers received prior to 9 a.m. on August 20, 1998, will be considered as simultaneously filed as of that time and date. Applications and offers received thereafter shall be considered in the order of filing. The above-described lands remain closed to all other forms of appropriation.

FOR FURTHER INFORMATION CONTACT: John Thompson, Geologist, or Janna Paronto, Land Law Examiner, **Kingman Field Office**, Bureau of Land Management, 2475 Beverly Avenue, **Kingman**, AZ 86401-3629, (520) 692-[illegible].

Dated: July 9, 1998.
Mary Jo Yeas,
Supervisor, Lands and Minerals Operations.
[FR Doc. 98-19320 Filed 7-20-98; 8:45 am]
BILLING CODE 4310-32-P

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

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.

CONSULTING GEOLOGIS
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	-	$ 4,481,050.00

Capital Costs

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

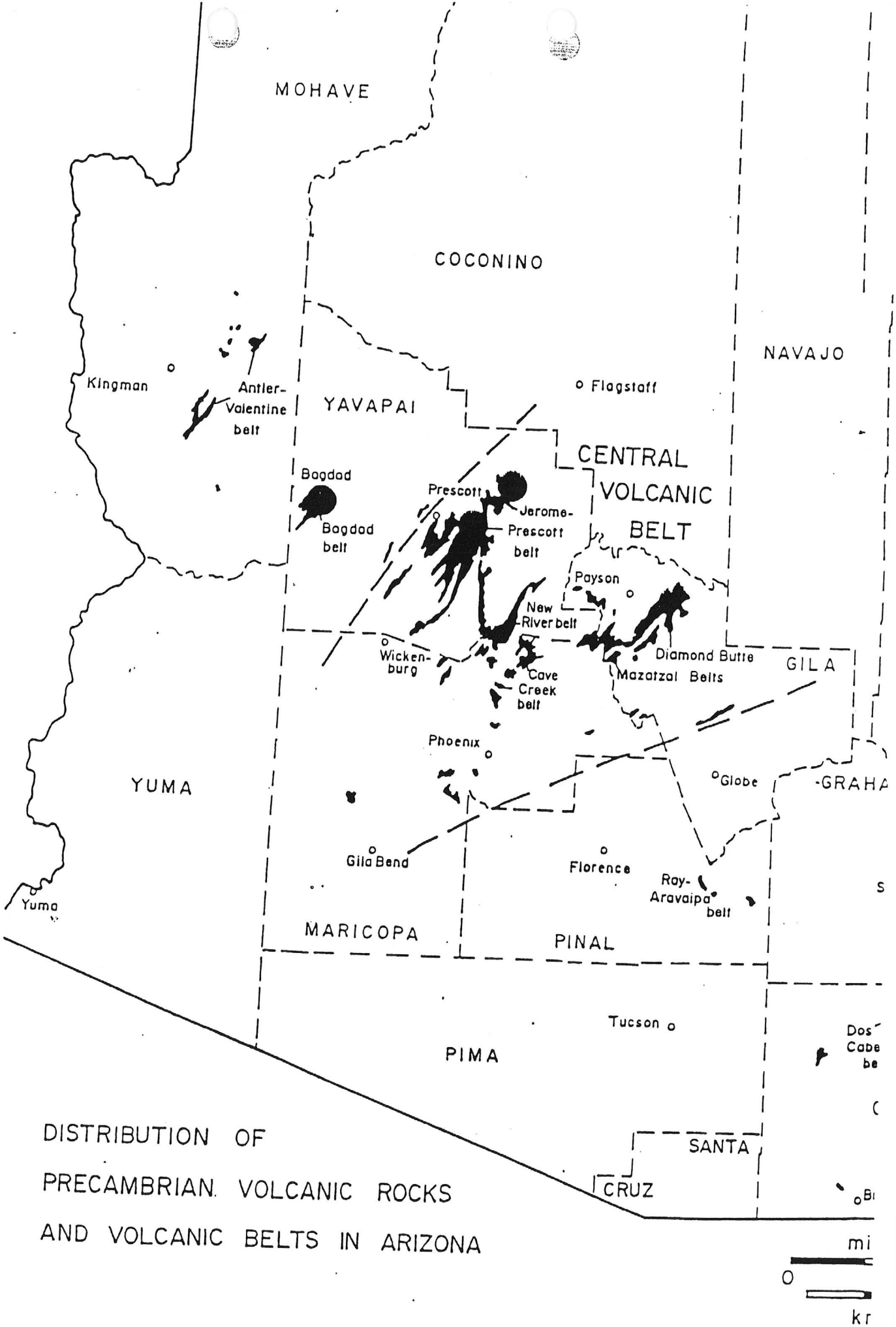
Payback

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

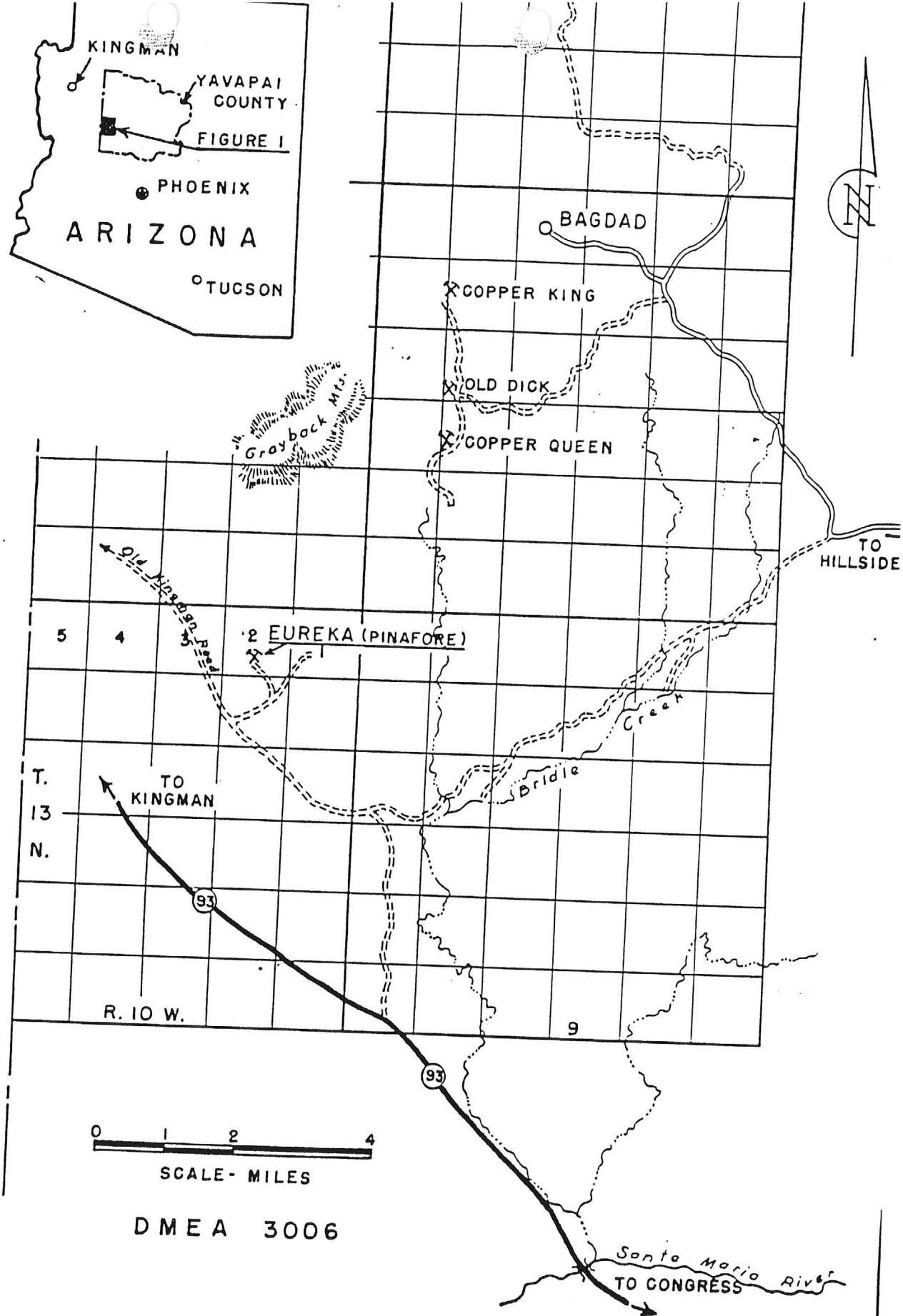
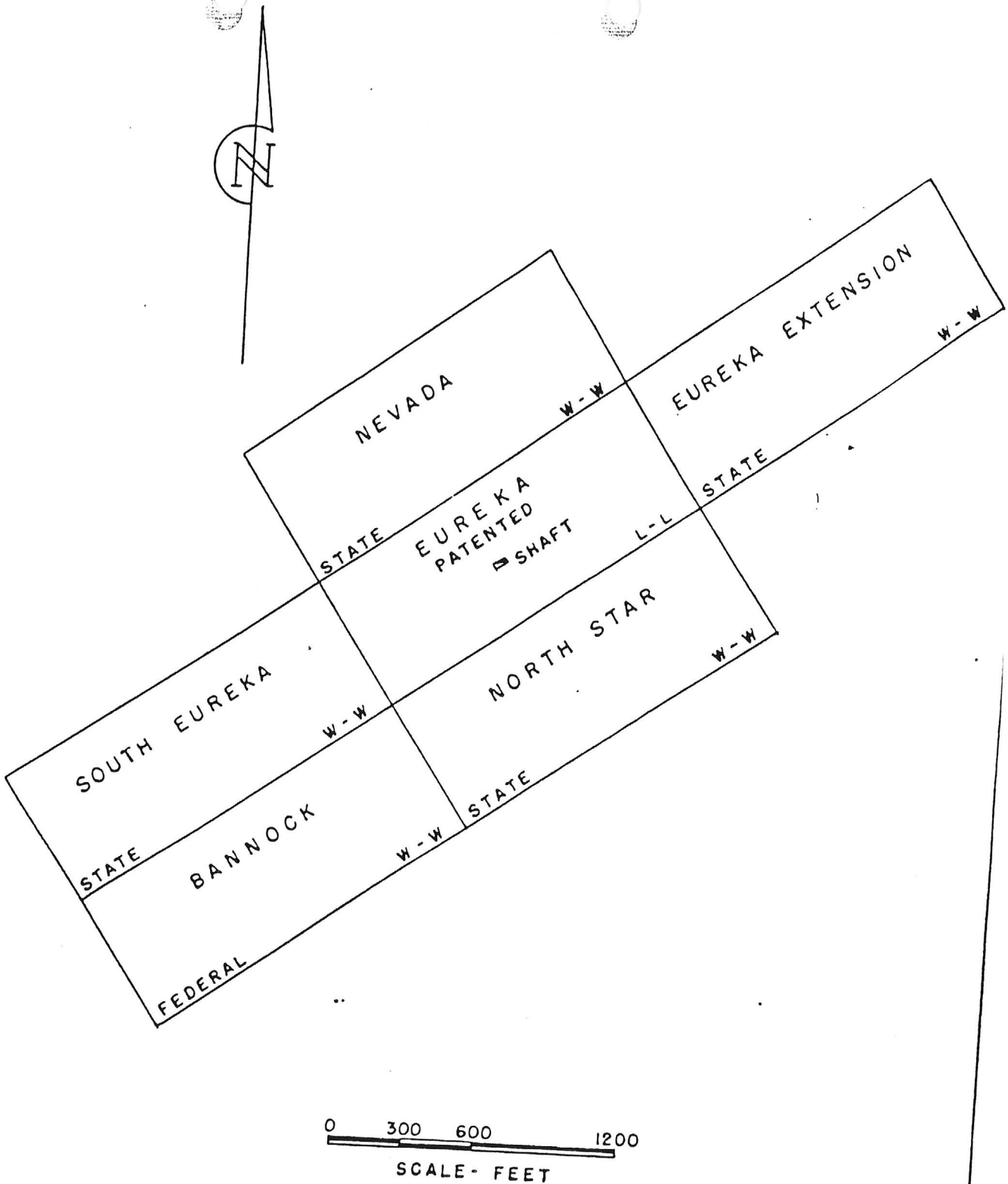
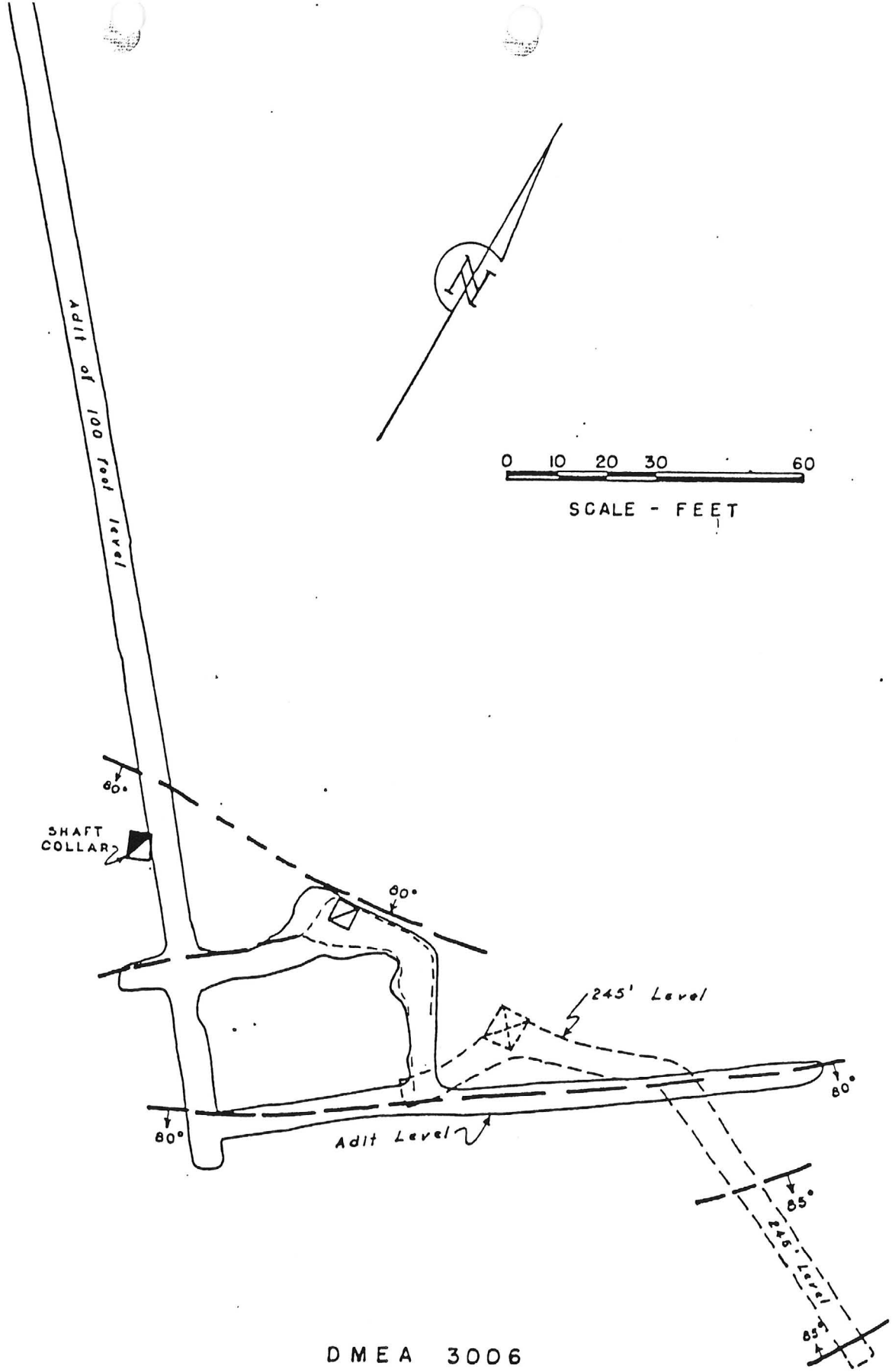


FIGURE 1. - LOCATION MAP - EUREKA CLAIM
YAVAPAI COUNTY, ARIZONA



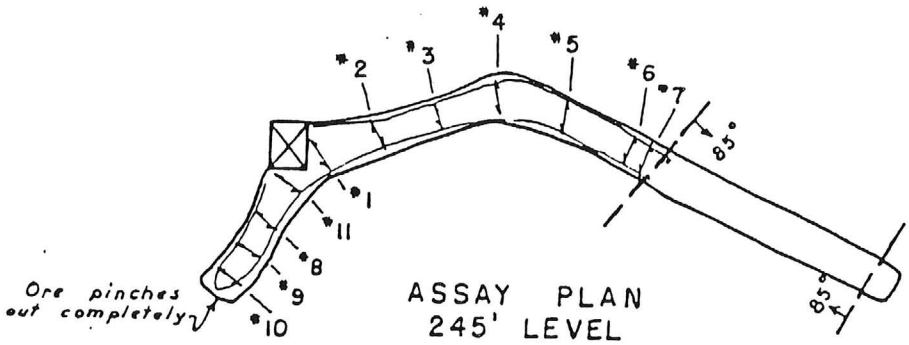
DMEA 3006

FIGURE 2. - EUREKA CLAIMS
YAVAPAI COUNTY, ARIZONA



DMEA 3006

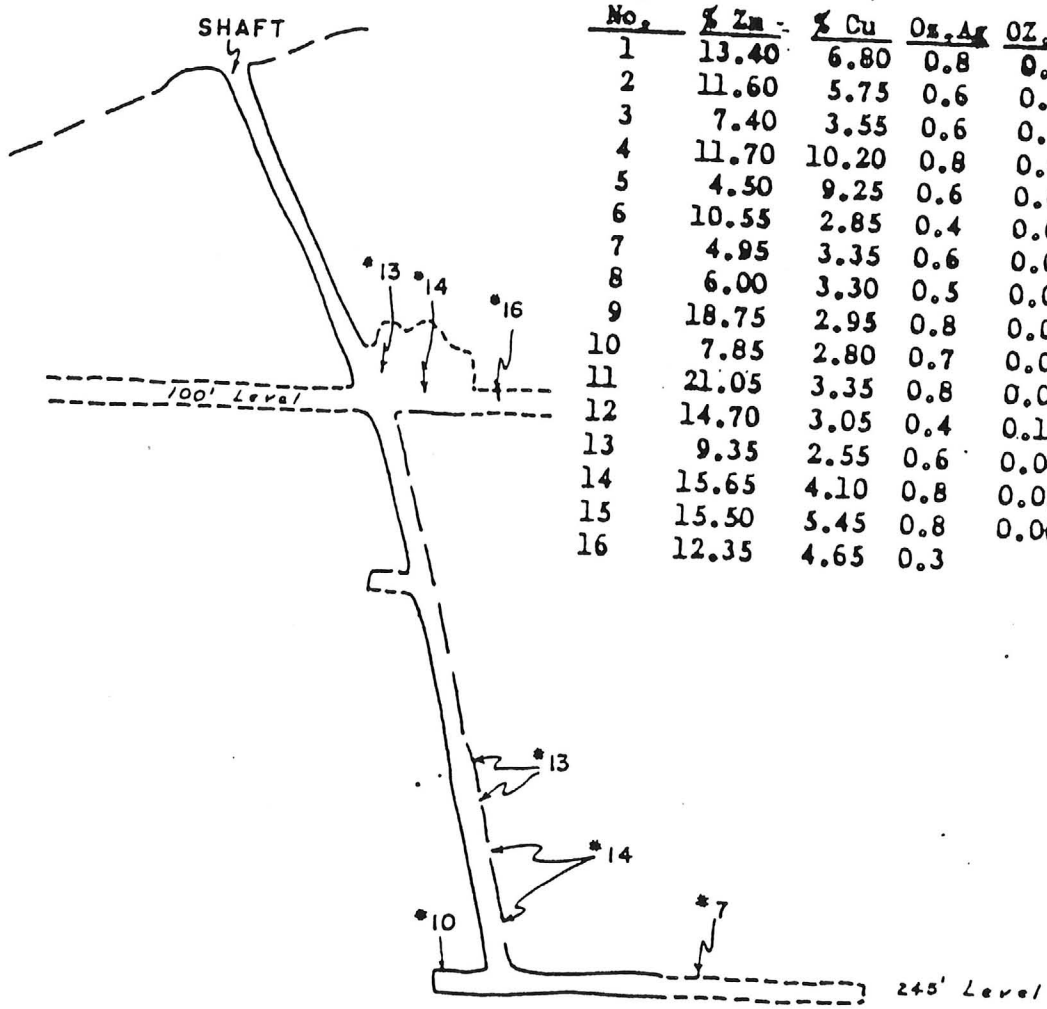
FIGURE 3. - PLAN OF EUREKA (PINAFORE) WORKINGS
YAVAPAI COUNTY, ARIZONA



ASSAY PLAN
245' LEVEL
SCALE - 1" = 30'

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		3.5'

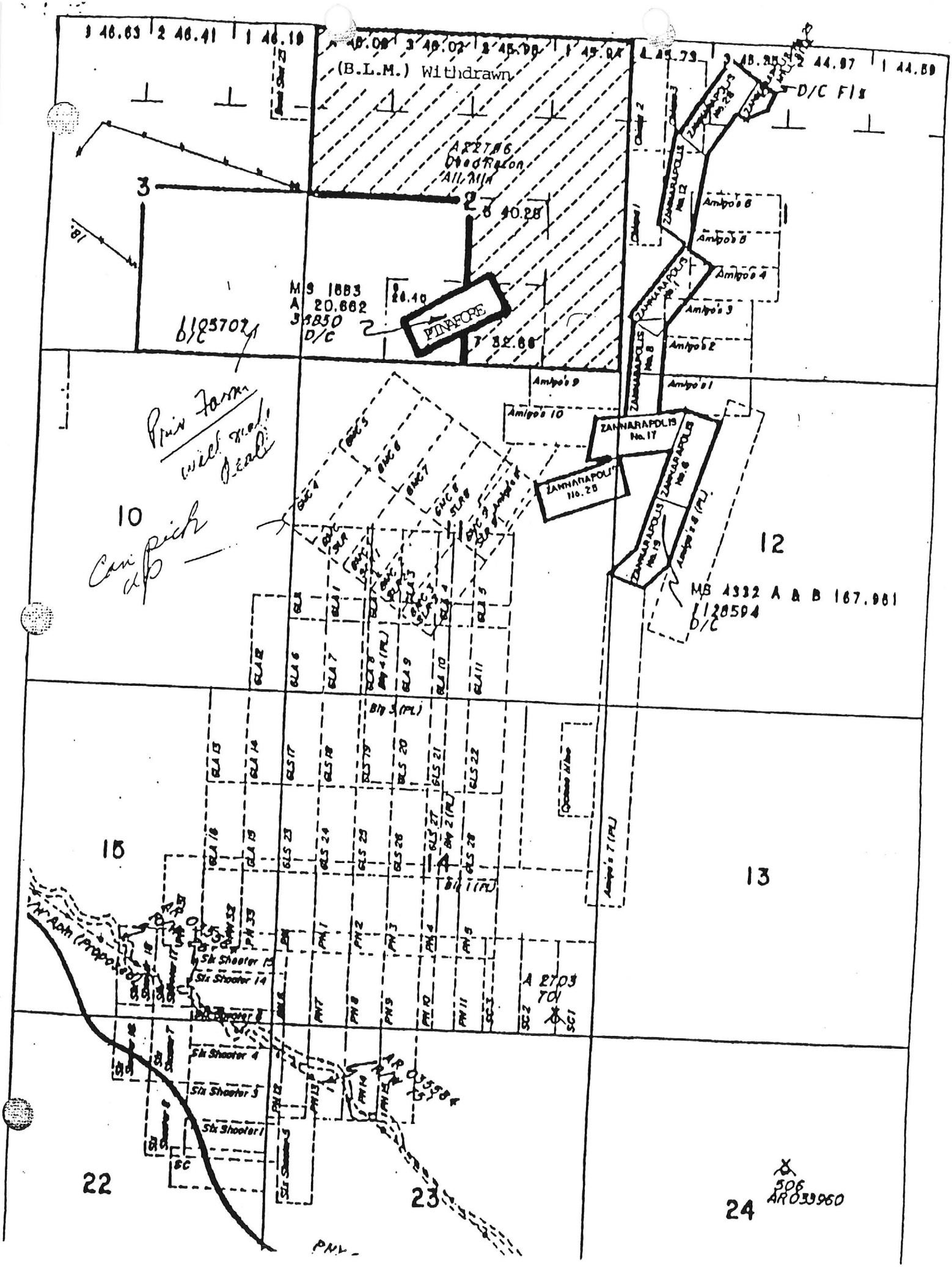


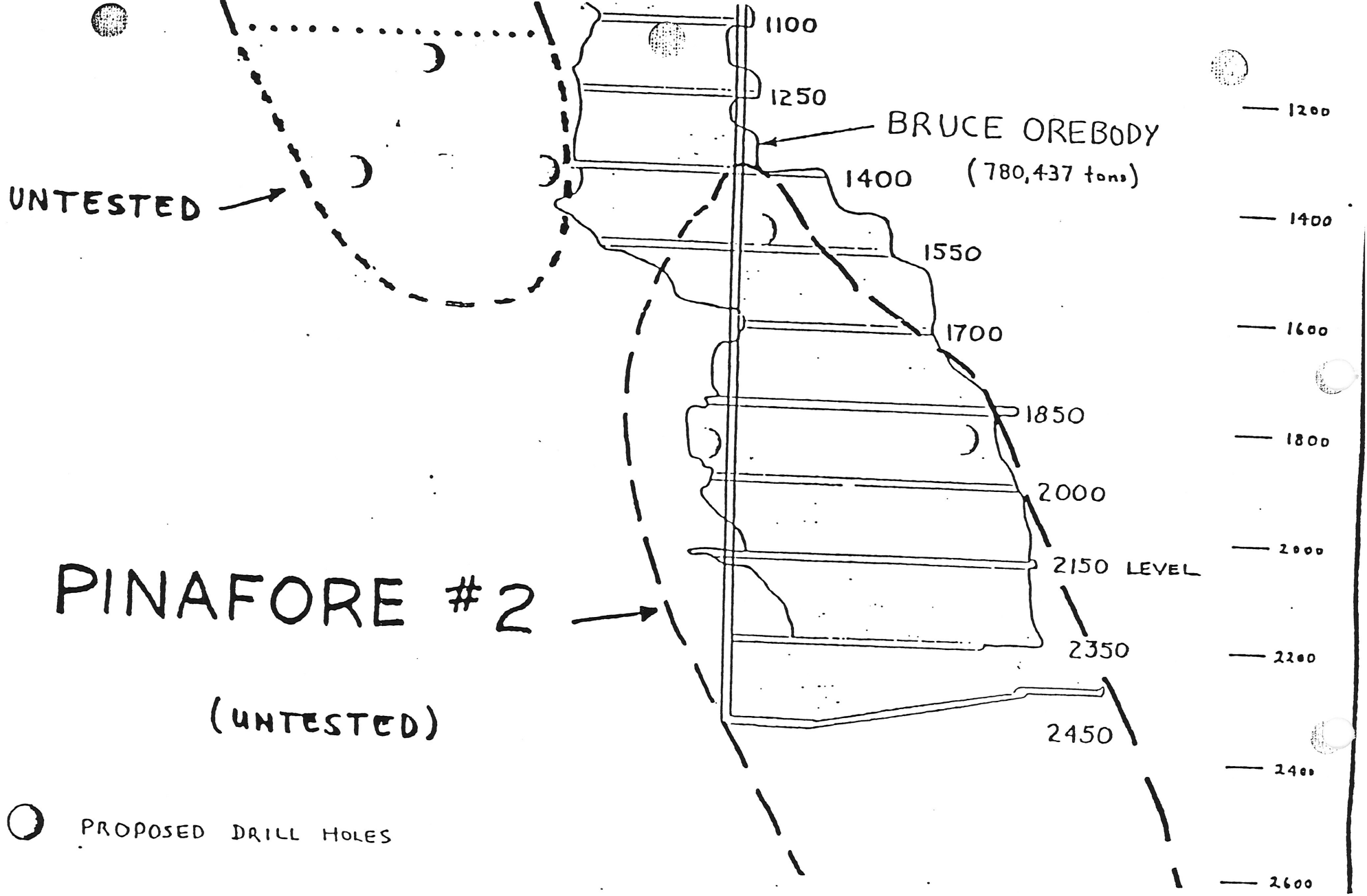
VERTICAL SECTION
SCALE - 1" = 50'

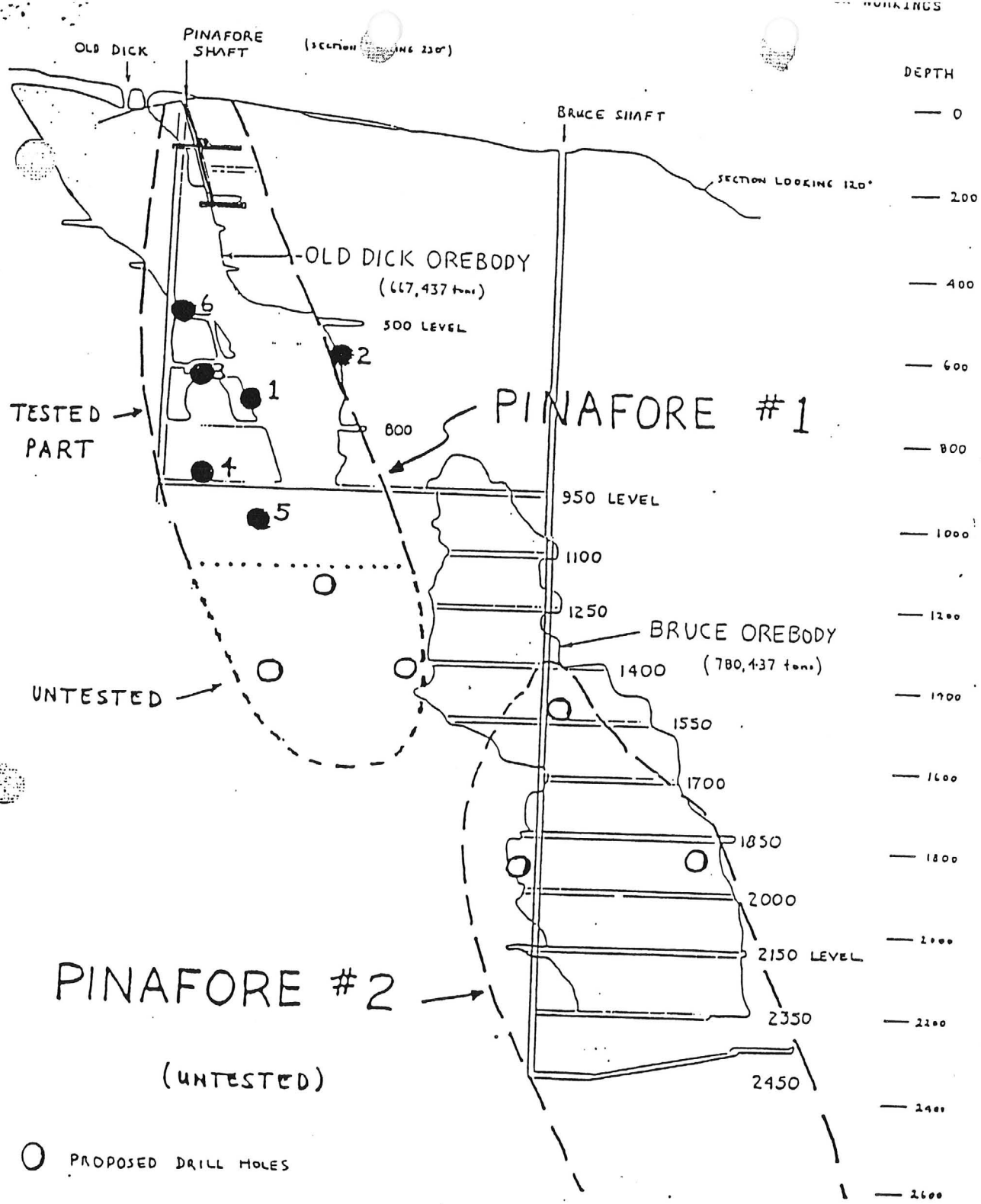
AFTER U. S. G. S. - MARCH 1944

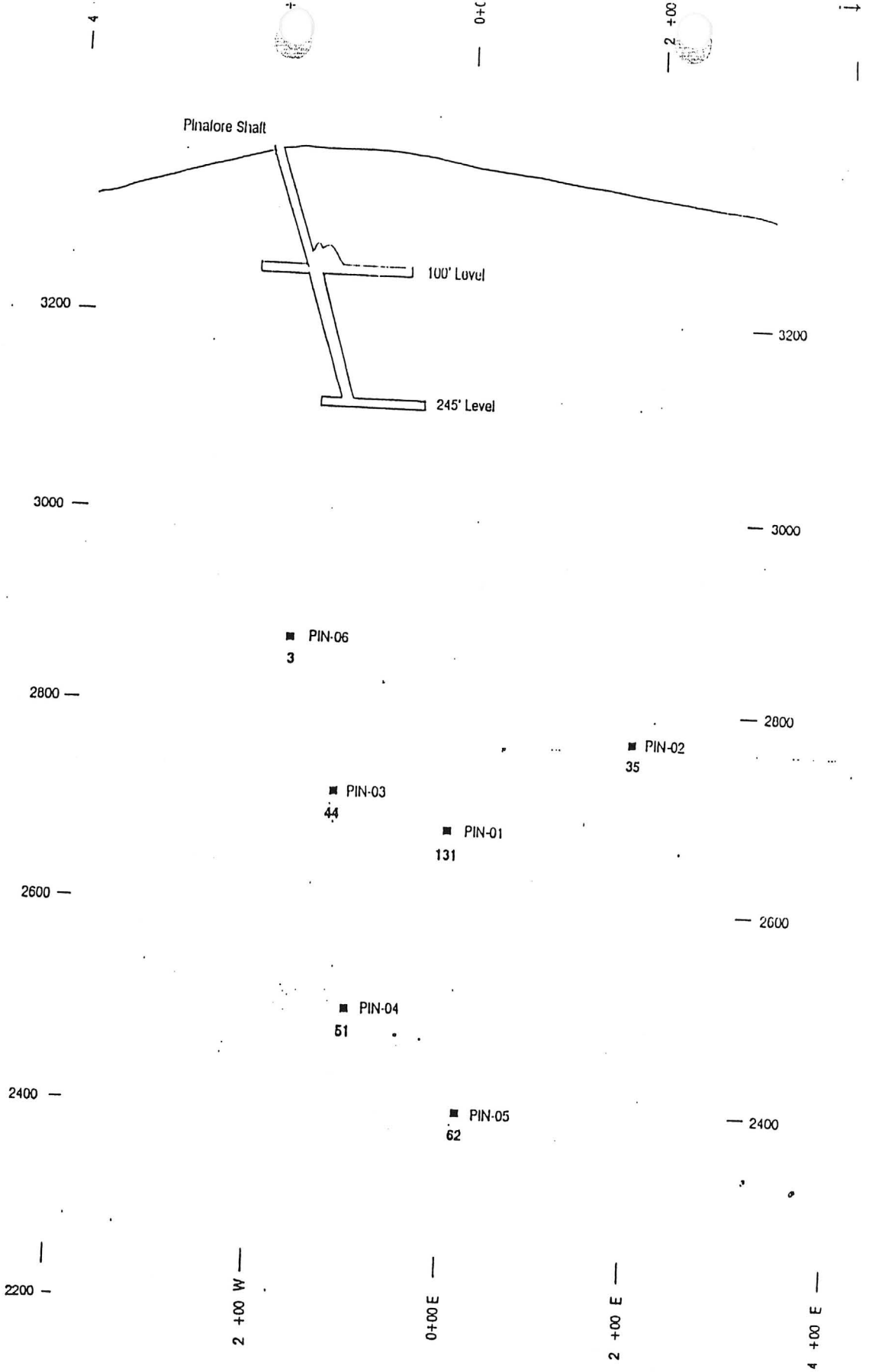
DMEA-3006

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


(B.L.M.) Withdrawn
D/C Fls
A 22786
Goodrich
All Min
MS 1883
A 20.662
34850
D/C
PINAFORE
Amigo's 9
Amigo's 10
Amigo's 8
Amigo's 7
Amigo's 6
Amigo's 5
Amigo's 4
Amigo's 3
Amigo's 2
Amigo's 1
ZANNARAPOLIS No. 17
ZANNARAPOLIS No. 28
ZANNARAPOLIS No. 19
ZANNARAPOLIS No. 6
MS 4332 A & B 167.981
128594
D/C
10
12
13
15
22
23
24
Six Shooter 15
Six Shooter 14
Six Shooter 4
Six Shooter 5
Six Shooter 1
A 2703
TOI
506
AR033960
PNV


1100
1250
BRUCE OREBODY
(780,437 tons)
1400
1550
1700
1850
2000
2150 LEVEL
2350
2450
1200
1400
1600
1800
2000
2200
2400
2600
UNTESTED
PINAFORE #2
(UNTESTED)
PROPOSED DRILL HOLES


OLD DICK
PINAFORE SHAFT
BRUCE SHAFT
SECTION LOOKING 120°
DEPTH
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
OLD DICK OREBODY
(667,437 tons)
500 LEVEL
800
950 LEVEL
1100
1250
1400
1550
1700
1850
2000
2150 LEVEL
2350
2450
TESTED PART
PINAFORE #1
BRUCE OREBODY
(780,437 tons)
UNTESTED
PINAFORE #2
(UNTESTED)
PROPOSED DRILL HOLES



(%Cu * Ft) + (%Zn * Ft)/2

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

100 0 100 200
scale feet

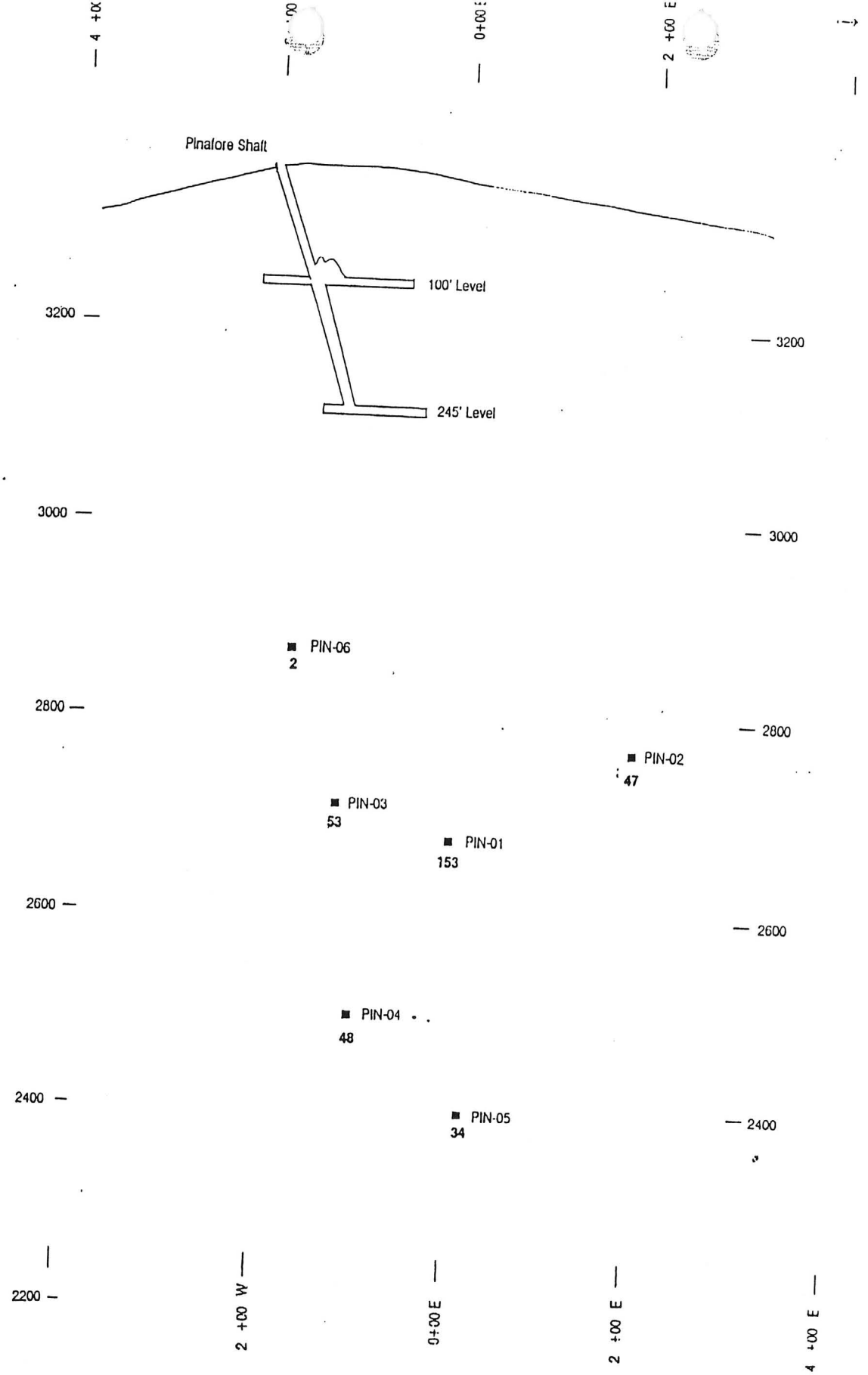
ARIZONA EXPLORATIONS INC.

Bagdad Basin Project

Pinafore Claim

Longitudinal Section
(Looking 330)

M.J. Glover June 2, 1992



%Zn * Ft

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

scale 100 0 100 200 feet

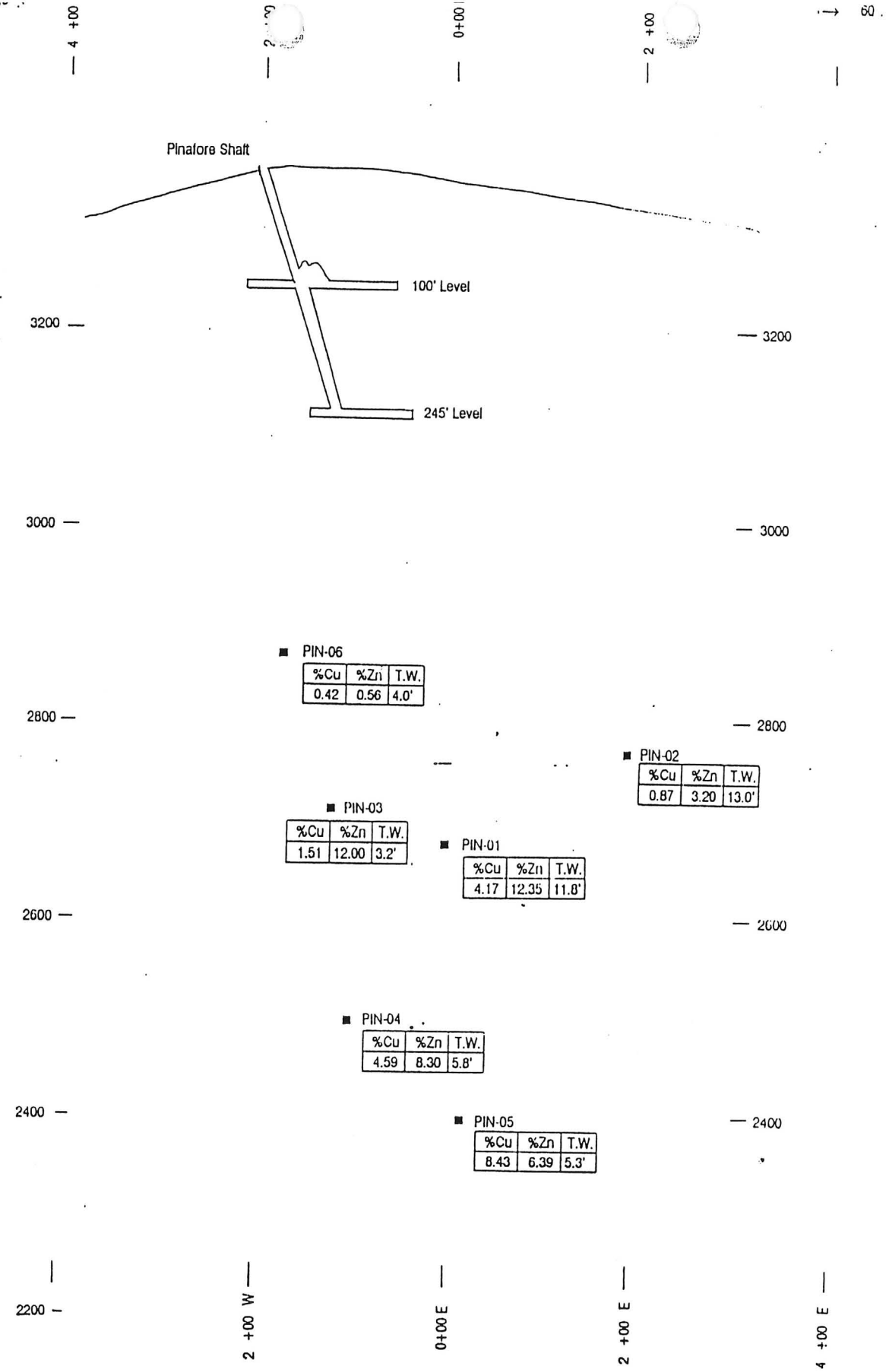
ARIZONA EXPLORATIONS INC.

Bagdad Basin Project

Pinafore Claim

Longitudinal Section
(Looking 330)

M.J. Glover June 2, 1992



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

100 0 100 200
scale feet

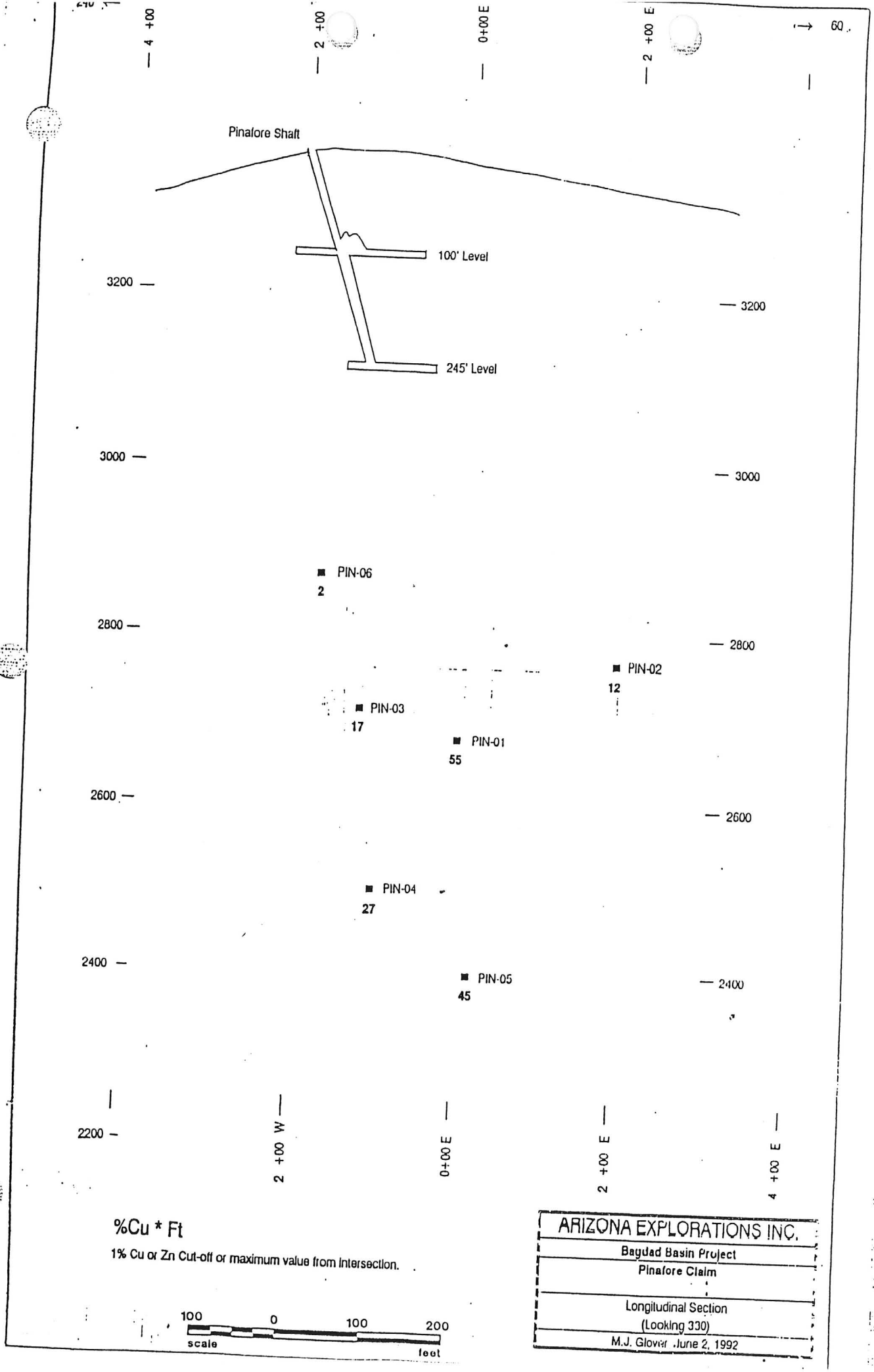
ARIZONA EXPLORATIONS INC.

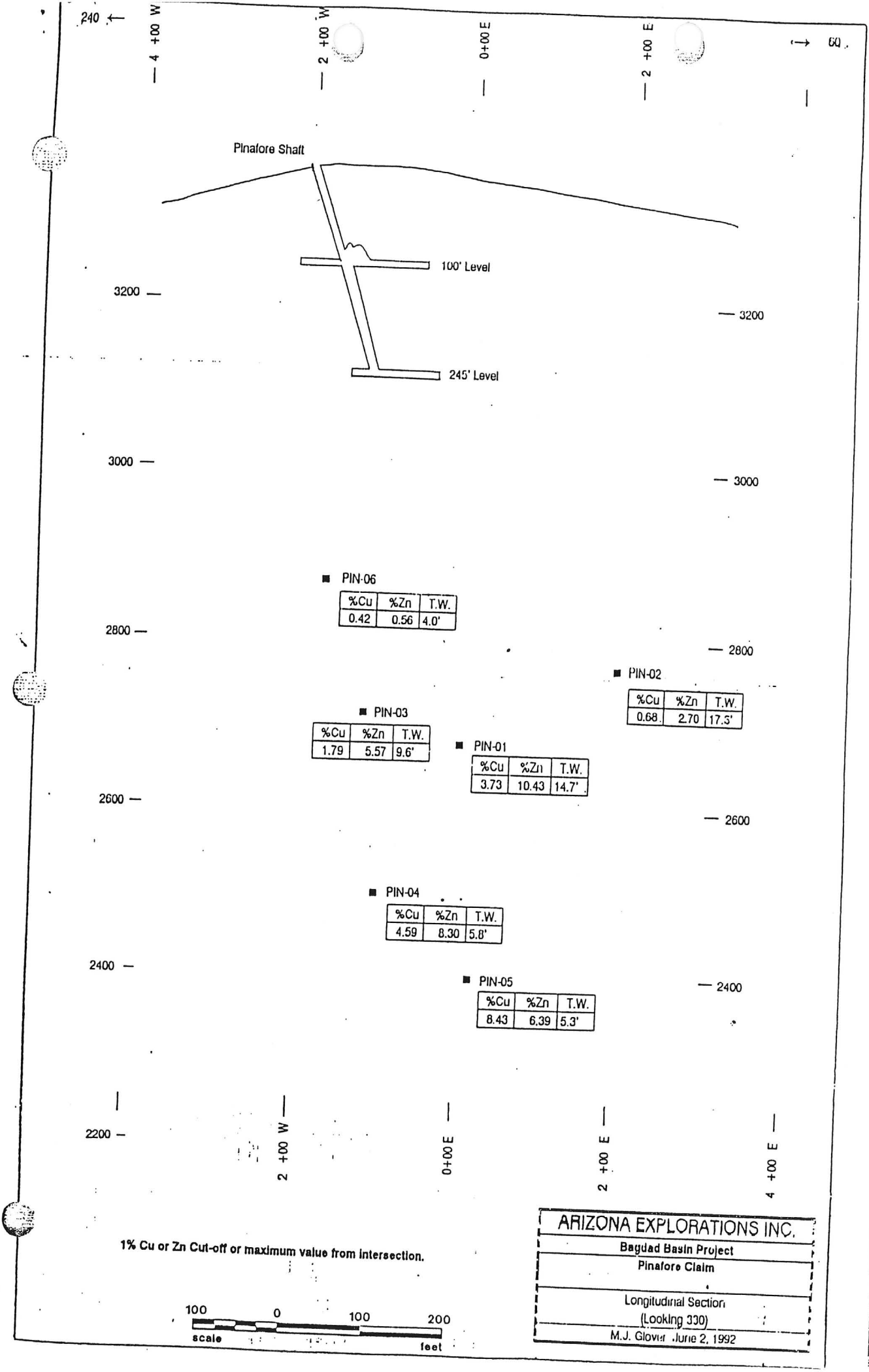
Bagdad Basin Project

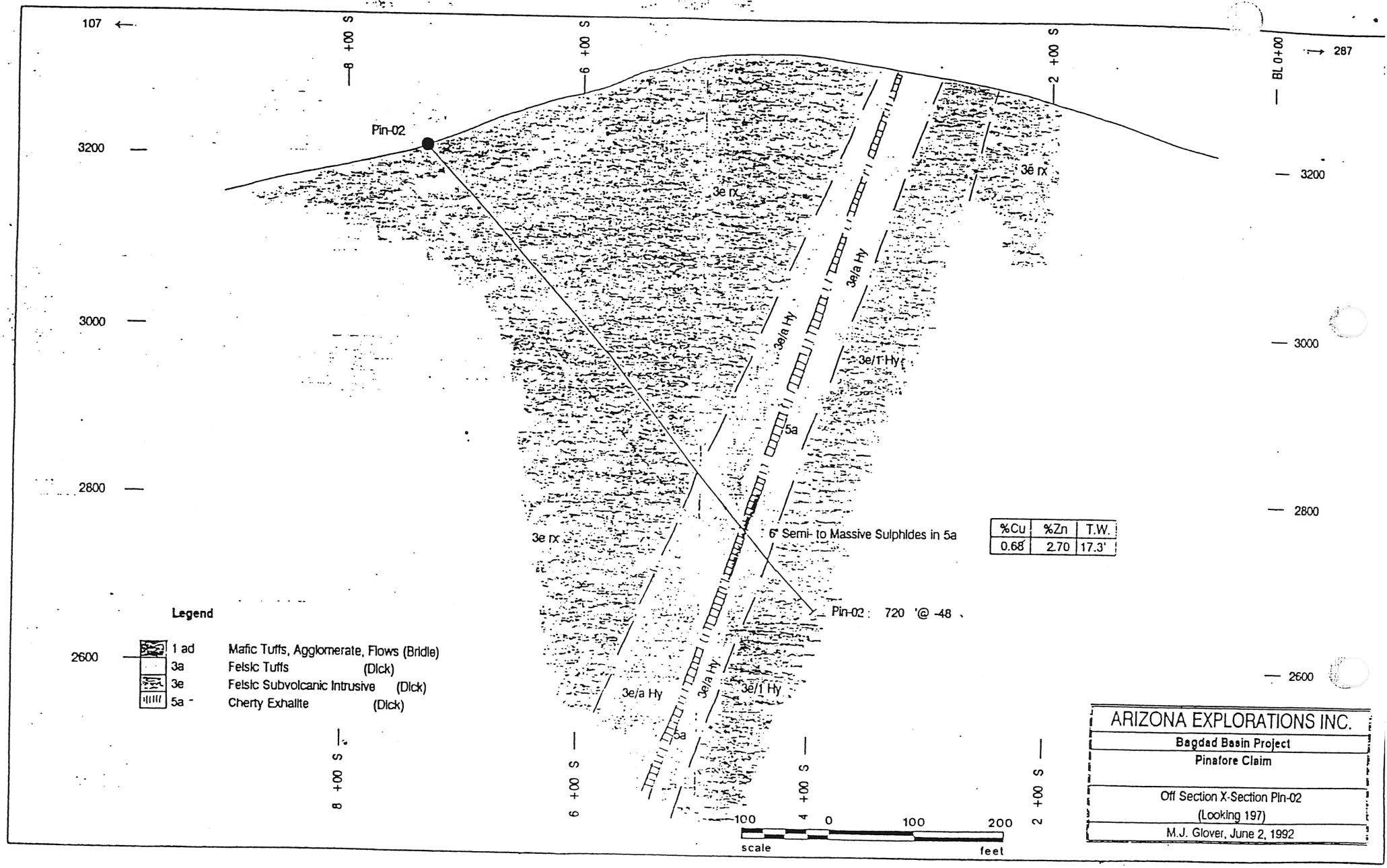
Pinafore Claim

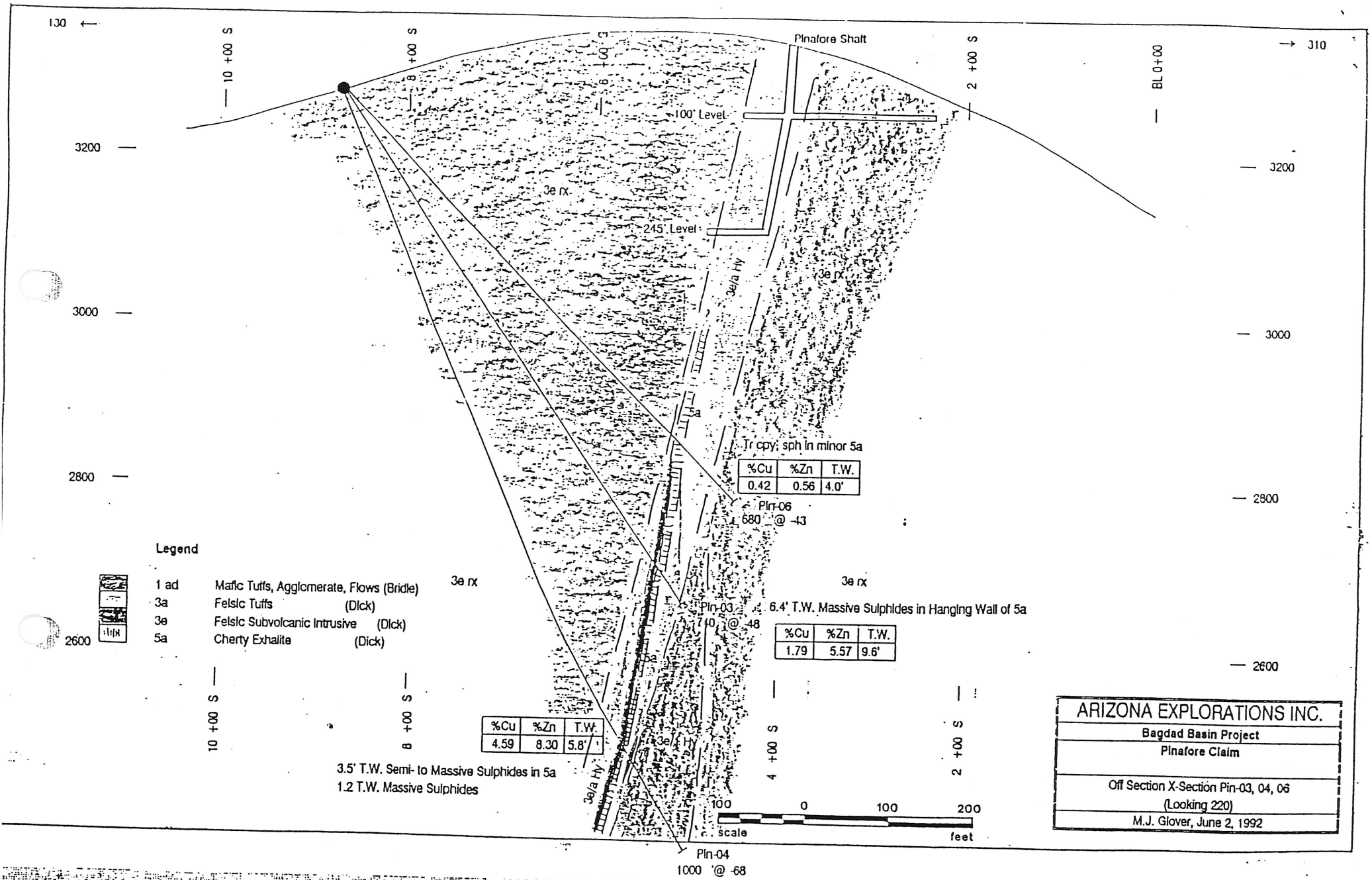
Longitudinal Section
(Looking 330)

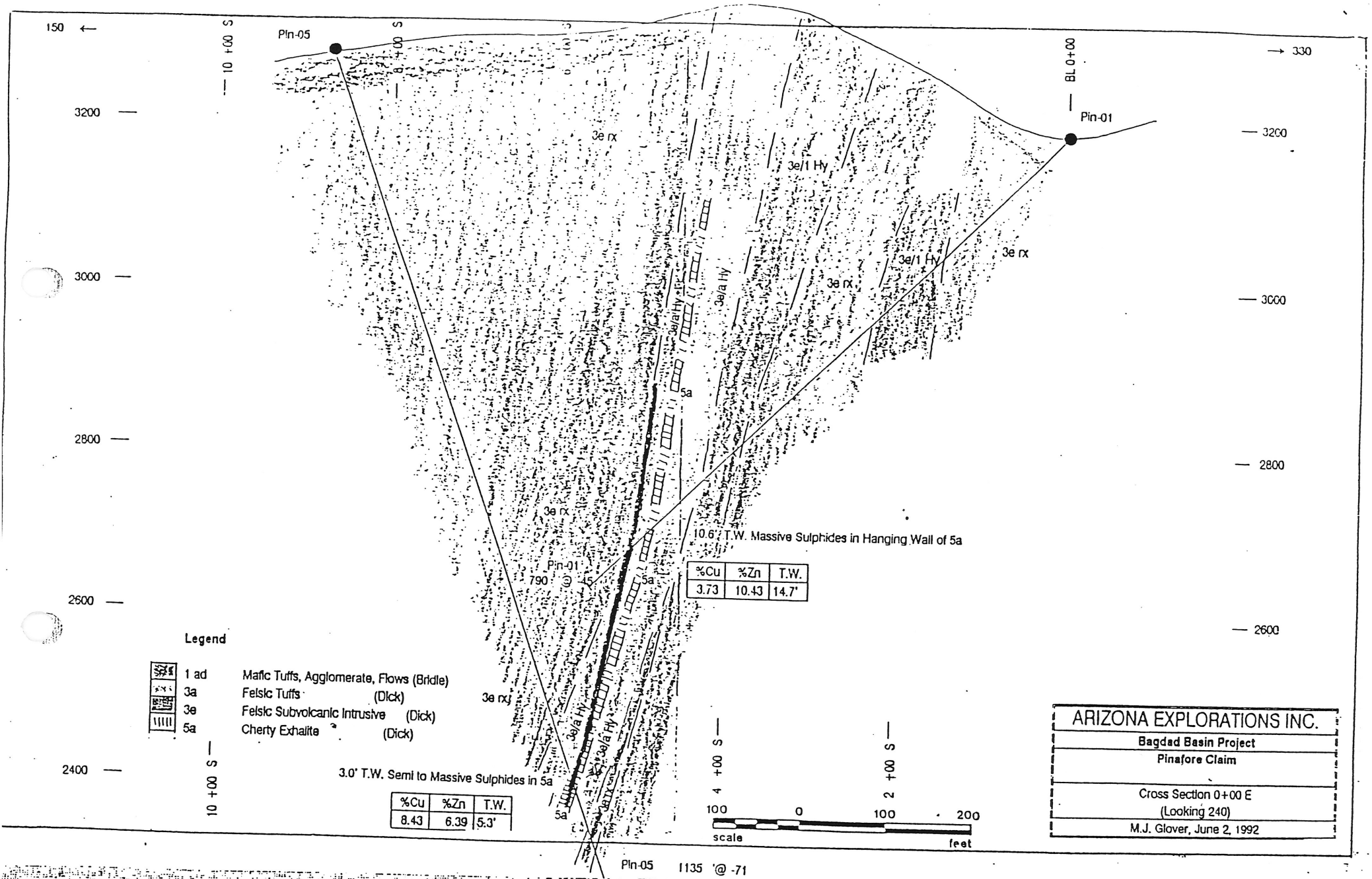
M.J. Glover June 2, 1992

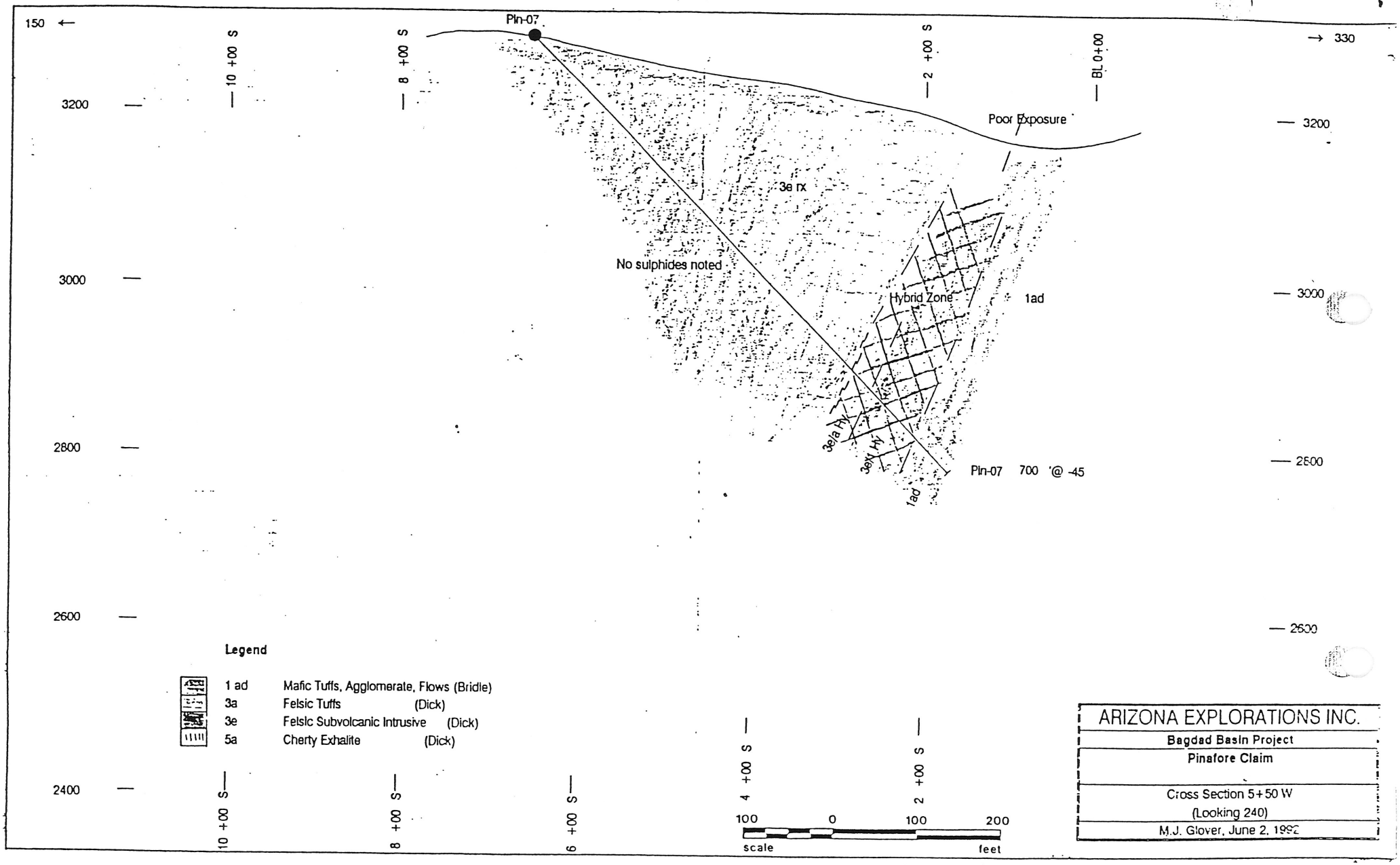

4 +00
2 +00
0+00 E
2 +00 E
60
Pinafore Shaft
100' Level
245' Level
3200
3000
2800
2600
2400
2200
PIN-06
2
PIN-02
12
PIN-03
17
PIN-01
55
PIN-04
27
PIN-05
45
2 +00 W
0+00 E
2 +00 E
4 +00 E
%Cu * Ft
1% Cu or Zn Cut-off or maximum value from intersection.
100
0
100
200
scale
feet
ARIZONA EXPLORATIONS INC.
Baguad 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
100' Level
245' Level
3200
3000
2800
2600
2400
2200
PIN-06
%Cu | %Zn | T.W.
0.42 | 0.56 | 4.0'
PIN-02
%Cu | %Zn | T.W.
0.68 | 2.70 | 17.3'
PIN-03
%Cu | %Zn | T.W.
1.79 | 5.57 | 9.6'
PIN-01
%Cu | %Zn | T.W.
3.73 | 10.43 | 14.7'
PIN-04
%Cu | %Zn | T.W.
4.59 | 8.30 | 5.8'
PIN-05
%Cu | %Zn | T.W.
8.43 | 6.39 | 5.3'
2 +00 W
0+00 E
2 +00 E
4 +00 E
1% Cu or Zn Cut-off or maximum value from intersection.
100 0 100 200
scale
feet
ARIZONA EXPLORATIONS INC.
Bagdad Basin Project
Pinafore Claim
Longitudinal Section
(Looking 330)
M.J. Glover June 2, 1992


107
287
8 +00 S
6 +00 S
2 +00 S
BL 0+00
3200
3000
2800
2600
Pin-02
3e rx
3e/a Hy
3e/1 Hy
5a
6' Semi- to Massive Sulphides in 5a
Pin-02 : 720 '@ -48
%Cu | %Zn | T.W.
0.68 | 2.70 | 17.3'
Legend
1 ad Mafic Tuffs, Agglomerate, Flows (Bridle)
3a Felsic Tuffs (Dick)
3e Felsic Subvolcanic Intrusive (Dick)
5a Cherty Exhalite (Dick)
4 +00 S
100 0 100 200
scale
feet
ARIZONA EXPLORATIONS INC.
Bagdad Basin Project
Pinafore Claim
Off Section X-Section Pin-02
(Looking 197)
M.J. Glover, June 2, 1992


130
310
10 +00 S
8 +00 S
6 +00 S
4 +00 S
2 +00 S
BL 0+00
Pinafore Shaft
100' Level
245' Level
3e rx
3e/a Hy
5a
3200
3000
2800
2600
Tr cpy; sph in minor 5a
%Cu | %Zn | T.W.
0.42 | 0.56 | 4.0'
Pin-06
680 @ -43
Pin-03
740 @ -48
6.4' T.W. Massive Sulphides in Hanging Wall of 5a
%Cu | %Zn | T.W.
1.79 | 5.57 | 9.6'
%Cu | %Zn | T.W.
4.59 | 8.30 | 5.8'
3.5' T.W. Semi- to Massive Sulphides in 5a
1.2 T.W. Massive Sulphides
Pin-04
1000 @ -68
Legend
1 ad Mafic Tuffs, Agglomerate, Flows (Bridle)
3a Felsic Tuffs (Dick)
3e Felsic Subvolcanic Intrusive (Dick)
5a Cherty Exhalite (Dick)
100 0 100 200
scale feet
ARIZONA EXPLORATIONS INC.
Bagdad Basin Project
Pinafore Claim
Off Section X-Section Pin-03, 04, 06
(Looking 220)
M.J. Glover, June 2, 1992


150
330
10 +00 S
8 +00 S
BL 0+00
Pin-05
Pin-01
3200
3000
2800
2600
2400
3e rx
3e/1 Hy
3e/a Hy
5a
10.6' T.W. Massive Sulphides in Hanging Wall of 5a
%Cu | %Zn | T.W.
3.73 | 10.43 | 14.7'
Pin-01
790 @ -45
3.0' T.W. Semi to Massive Sulphides in 5a
%Cu | %Zn | T.W.
8.43 | 6.39 | 5.3'
Pin-05 1135 @ -71
Legend
1 ad Mafic Tuffs, Agglomerate, Flows (Bridle)
3a Felsic Tuffs (Dick)
3e Felsic Subvolcanic Intrusive (Dick)
5a Cherty Exhalite (Dick)
4 +00 S
2 +00 S
100 0 100 200
scale feet
ARIZONA EXPLORATIONS INC.
Bagdad Basin Project
Pinafore Claim
Cross Section 0+00 E
(Looking 240)
M.J. Glover, June 2, 1992


150
330
Pln-07
10 +00 S
8 +00 S
2 +00 S
BL 0+00
3200
3000
2800
2600
2400
Poor Exposure
3e rx
No sulphides noted
Hybrid Zone
1ad
3e/a hy
3e/x hy
1ad
Pln-07 700 '@ -45
Legend
1 ad Mafic Tuffs, Agglomerate, Flows (Bridle)
3a Felsic Tuffs (Dick)
3e Felsic Subvolcanic Intrusive (Dick)
5a Cherty Exhalite (Dick)
10 +00 S
8 +00 S
6 +00 S
4 +00 S
2 +00 S
100 0 100 200
scale feet
ARIZONA EXPLORATIONS INC.
Bagdad Basin Project
Pinafore Claim
Cross Section 5+50 W
(Looking 240)
M.J. Glover, June 2, 1992

Surface Sampling
I.C.P. Geochemistry

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

PLACER DOME U.S.INC. File # 92-3946 Page 1

240-300 UNION BOULEVARD,, LAKEWOOD,COLORADO 80228

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
B10601	1	5	130	293	.2	4	1	825	3.05	4	5	ND	9	38	.6	2	2	2	.35	.003	36	9	.37	781	.16	5.58	2.07	2.47	5	96	6	50	32	5	2.1
B10602	1	2	66	177	.2	1	1	395	2.72	4	5	ND	8	32	.3	2	2	1	.26	.004	41	10	.32	676	.16	5.22	2.45	2.70	2	116	6	53	33	4	1.6
B10603	1	108	258	402	1.1	3	1	960	3.08	4	5	ND	9	68	.5	2	2	4	.21	.011	48	11	.80	1084	.14	6.03	.77	5.04	2	128	9	86	31	2	1.9
B10604	1	15	59	147	.2	3	1	387	2.65	5	5	ND	9	49	.2	2	2	1	.32	.001	52	8	.45	786	.14	5.63	1.02	4.31	2	115	6	67	32	3	1.8
B10605	1	44	38	143	.4	3	1	428	2.81	4	5	ND	9	18	.2	2	2	2	.14	.006	44	8	.40	1063	.14	5.88	.08	3.14	2	175	16	90	27	3	1.9
B10606	2	2	52	172	.2	6	1	525	2.17	4	5	ND	8	12	.2	2	2	2	.06	.003	44	12	.62	771	.17	5.14	.09	2.84	4	127	8	61	32	4	1.8
B10607	2	20	39	131	.5	4	1	795	3.18	5	5	ND	8	25	.2	2	2	4	.13	.002	48	8	.22	372	.16	5.85	1.19	1.83	4	75	7	68	32	4	2.3
B10608	1	15	38	150	.2	3	1	278	2.57	4	5	ND	7	26	.2	2	2	3	.16	.002	49	10	.23	614	.15	6.14	1.41	2.47	2	133	10	29	31	3	2.1
B10609	3	32	43	254	.2	6	1	218	2.49	4	5	ND	7	44	.6	2	2	1	.12	.001	46	11	.14	401	.14	5.85	1.70	1.62	2	73	6	42	28	2	2.2
B10610	10	87	395	1423	.9	3	1	184	1.34	4	5	ND	4	175	.6	2	2	1	1.20	.003	45	11	1.12	250	.04	4.50	1.41	.91	2	73	4	22	7	2	1.6
B10611	1	50	25	106	.2	25	18	846	3.88	4	5	ND	4	138	.2	2	2	84	3.10	.027	19	59	.88	238	.30	5.35	1.01	.39	2	45	1	19	6	1	11.2
B10612	1	15	16	88	.2	24	17	686	4.82	4	5	ND	4	207	.2	2	2	83	1.55	.066	15	47	1.46	619	.43	6.16	1.92	1.39	2	65	1	16	9	1	13.3
B10613	1	76	21	122	.4	52	45	1269	7.35	4	5	ND	1	459	.5	2	2	261	6.27	.099	11	205	3.25	132	.83	8.21	1.97	.28	2	6	1	20	3	1	31.7
B10614	1	110	18	117	.2	31	33	1243	7.62	4	5	ND	1	396	.2	2	2	176	6.22	.110	16	40	2.04	225	.79	8.11	2.13	.28	2	12	1	23	6	1	22.2
B10615	2	2	41	35	.2	7	2	2285	.99	4	5	ND	20	126	.2	2	2	10	2.53	.034	57	8	.36	1078	.11	7.89	.85	4.43	3	103	3	14	10	4	5.6
B10616	1	11	38	44	.2	6	2	189	1.15	7	5	ND	17	86	.2	2	4	11	.26	.013	38	18	.17	899	.08	5.87	1.37	4.68	5	55	6	9	10	2	4.1
B10617	1	2659	18	1927	.4	24	34	1087	7.67	5	5	ND	2	279	2.9	2	5	300	5.15	.064	11	64	1.73	180	.42	7.42	.84	.55	2	16	4	33	1	5	25.2
B10618	1	32	7	119	.2	16	36	1018	9.83	4	5	ND	2	225	.3	2	2	252	3.13	.060	8	25	2.24	187	.55	7.81	3.57	.57	2	40	1	35	1	3	36.6
B10619	1	79	54	390	.6	37	47	2151	8.71	4	5	ND	1	132	.4	2	2	298	3.92	.050	6	66	2.80	224	.66	8.75	3.57	.46	2	17	1	29	1	3	39.7
B10620	1	47	38	110	.2	9	5	554	3.66	15	5	ND	37	109	.2	2	3	39	.54	.068	72	14	.39	807	.25	6.62	2.85	4.07	13	58	4	45	20	6	6.3
B10621	1	6	17	91	.8	30	38	1567	7.86	11	7	ND	2	305	.2	5	2	224	7.48	.049	10	71	2.03	124	.48	8.54	2.28	.48	24	17	1	25	1	4	35.7
B10622	2	5	38	45	.2	4	3	282	1.36	4	5	ND	20	146	.2	2	2	23	.73	.025	28	9	.21	1122	.13	6.11	2.15	4.58	2	40	1	13	6	6	3.7
B10623	1	74	21	276	.2	33	50	2169	8.28	4	5	ND	1	192	.2	2	2	286	6.43	.046	9	72	2.48	322	.59	8.48	2.28	.67	2	16	1	29	1	1	42.6
B10624	1	4	16	268	.2	33	43	3154	8.18	4	5	ND	1	96	.2	2	3	286	4.26	.042	6	56	3.08	1698	.59	8.18	2.11	.58	2	11	2	23	1	1	39.8
B10625	1	2	10	53	.2	6	4	469	3.47	4	6	ND	11	23	.2	3	2	8	.19	.013	42	8	.81	898	.13	5.92	.25	2.31	2	25	1	15	20	2	4.3
B10626	1	7	16	315	.2	3	3	1136	4.31	5	5	ND	7	32	.2	2	2	2	.30	.009	41	10	.72	952	.16	5.89	2.04	1.90	2	100	8	49	31	3	2.1
B10627	1	5	36	98	.4	2	6	914	3.65	4	5	ND	8	29	.2	2	2	2	.26	.013	22	9	.61	532	.15	5.66	2.32	1.25	2	136	5	44	26	1	2.0
B10628	2	36	19	125	.2	6	1	674	3.91	4	5	ND	6	87	.3	2	2	6	.89	.021	17	11	.12	727	.19	6.67	3.16	1.09	2	104	6	33	31	3	6.2
B10629	1	13	10	115	.4	2	1	513	3.11	4	5	ND	9	34	.2	2	2	1	.34	.010	20	8	.37	688	.16	5.85	2.45	1.76	2	88	11	23	30	2	2.0
B10630	1	1	12	63	.2	5	1	549	2.97	6	5	ND	8	48	.2	2	2	1	.36	.009	34	11	.48	980	.15	5.94	2.93	1.49	2	94	9	31	31	3	1.8
B10631	1	11	15	59	.2	4	1	476	3.44	4	5	ND	6	44	.2	2	2	1	.41	.006	16	5	.69	755	.15	5.86	2.62	1.48	2	124	10	20	32	4	1.9
RE B10628	2	32	18	119	.4	6	2	637	3.75	4	5	ND	7	81	.9	2	2	6	.85	.022	16	12	.11	704	.17	6.44	3.07	1.08	4	99	5	32	29	3	5.9
B10632	1	7	9	20	.6	5	2	318	2.71	6	13	ND	9	41	.2	2	2	1	.65	.005	24	9	.52	804	.14	5.43	3.02	.94	2	87	6	32	30	2	1.8
B10633	1	2	7	22	.2	6	1	443	2.40	4	5	ND	8	45	.2	2	2	1	.88	.007	12	12	.46	792	.15	5.58	2.82	1.12	2	115	7	24	31	4	1.7
B10634	1	16	20	38	.2	6	3	255	2.46	5	5	ND	7	74	.2	2	2	1	.76	.016	31	9	.51	586	.12	5.90	3.30	.46	2	70	5	37	30	4	1.7
B10635	1	2	23	74	.6	3	2	448	3.58	7	6	ND	9	39	.2	3	2	1	.22	.007	21	10	.87	620	.12	5.14	2.60	.73	2	62	5	54	27	2	1.6
B10636	2	23	21	70	.2	6	1	534	3.37	4	5	ND	7	46	.2	2	2	1	.25	.009	29	15	.58	695	.13	5.49	3.03	.94	2	71	7	63	32	2	1.6
STANDARD HFC	20	63	42	148	7.3	101	46	1306	4.77	41	19	7	36	54	19.9	13	21	78	.56	.116	39	61	.93	244	.08	2.14	.09	.17	10	3	17	8	1	1	5.7

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 10ML HCLO4-HNO3-HCL-HF AT 200 DEG. C TO FUMING AND IS DILUTED TO 10 ML WITH DILUTED AQUA REGIA. THIS LEACH IS PARTIAL FOR MAGNETITE, CHROMITE, BARITE, OXIDES OF AL, ZR & MN AND MASSIVE SULFIDE SAMPLES. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: ROCK Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: NOV 9 1992 DATE REPORT MAILED: Nov 17/92 SIGNED BY. C. Leong .....D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL

PLACER DOME U.S.INC. FILE # 92-3946

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
B10637	1	7	5	16	.2	5	1	272	2.91	4	5	ND	7	52	.2	2	2	1	.73	.008	8	9	.62	1239	.17	4.97	2.49	1.52	8	127	7	27	34	4	1.7
B10638	1	3	4	107	.2	6	1	739	3.18	4	5	ND	5	56	.2	2	2	1	.41	.049	50	12	.58	979	.16	5.62	2.51	1.55	2	122	3	48	29	2	1.7
B10639	1	48	26	271	.2	6	1	719	2.88	4	5	ND	5	38	.2	2	2	1	.28	.006	23	10	.83	1034	.18	5.64	2.47	2.24	2	131	7	24	34	2	1.8
B10640	1	34	4	328	.2	2	1	555	2.62	4	5	ND	5	31	.2	2	2	1	.18	.007	28	9	.97	842	.17	4.95	2.11	2.22	2	110	5	28	30	3	1.6
B10641	1	11	4	39	.2	3	1	696	3.47	6	5	ND	8	44	.2	2	2	1	.49	.008	28	9	.29	1134	.18	6.08	2.62	2.55	2	114	9	60	33	3	1.9
B10642	1	3	4	105	.3	33	37	1483	8.21	4	5	ND	1	127	.2	2	3	301	4.92	.059	6	67	3.14	217	.55	8.42	3.18	.45	2	14	1	28	1	1	35.6
B10643	1	56	4	127	.5	12	43	1866	10.47	4	5	ND	2	123	.2	2	2	324	5.03	.074	11	8	1.80	189	.83	7.30	2.15	.59	2	14	1	39	1	1	33.1
B10644	1	12	14	185	.8	25	40	1779	8.31	5	5	ND	1	84	.2	4	2	277	4.73	.042	7	84	3.25	85	.57	8.21	2.88	.21	2	19	1	29	1	1	41.0
B10645	1	12	9	173	.3	6	1	146	2.82	4	5	ND	6	34	.2	2	3	6	.40	.001	20	10	.42	758	.14	4.89	2.26	2.07	6	99	5	23	26	4	1.8
B10646	1	14	7	142	.6	6	1	151	2.43	4	5	ND	7	25	.2	2	2	2	1.40	.001	50	8	.32	649	.13	4.82	1.63	2.00	2	127	4	33	25	4	1.8
[illegible]7	2	15	10	264	.5	2	1	468	2.19	4	5	ND	9	25	.2	2	2	3	.18	.001	33	9	.41	1165	.11	5.64	.38	4.35	2	106	7	21	21	5	2.2
B10648	7	6	7	101	.2	5	1	170	3.02	4	5	ND	4	25	.2	2	2	1	.25	.002	28	10	.26	712	.12	5.16	1.93	2.93	8	240	12	21	25	5	1.7
B10649	2	1	13	130	1.0	3	1	267	2.96	4	15	ND	10	37	.2	7	2	2	.37	.003	28	10	.39	889	.14	5.15	2.79	2.26	3	110	4	51	29	5	1.6
B10650	1	11	6	114	.2	1	1	269	2.38	4	5	ND	6	33	.2	2	2	1	.16	.011	30	6	.26	911	.15	5.19	3.01	2.86	2	95	5	78	28	2	1.2
B10651	2	1	9	104	.3	4	1	547	2.62	4	5	ND	8	37	.2	2	2	1	.52	.004	36	9	.66	674	.16	5.68	2.73	2.62	2	92	6	91	31	5	1.7
B10652	1	8	13	100	.2	3	1	349	2.69	4	5	ND	8	35	.2	2	2	1	.24	.005	34	8	.29	929	.17	5.57	3.27	2.74	2	119	5	114	31	4	1.5
B10653	3	3	9	114	.4	3	1	298	2.43	4	5	ND	9	23	.2	3	2	1	.22	.002	48	9	.30	1441	.14	5.58	1.77	4.45	2	206	4	81	33	3	1.5
B10654	1	36	21	171	.4	4	1	386	2.57	5	5	ND	8	32	.2	2	2	1	.17	.004	20	13	.69	1327	.16	5.52	2.39	3.69	2	127	7	39	33	3	1.7
B10655	1	126	4	98	.3	51	45	1173	6.10	4	5	ND	1	330	.2	2	2	241	7.18	.109	16	216	2.67	314	.86	8.61	2.96	.36	2	11	1	23	1	1	31.4
B10656	1	55	4	106	.4	40	45	1001	4.89	6	5	ND	2	241	.2	2	4	219	6.42	.127	19	104	1.39	823	1.23	8.89	3.50	1.13	2	8	1	30	6	2	28.2
RE B10653	2	3	11	117	.2	1	1	322	2.55	4	5	ND	8	23	.2	2	2	1	.24	.003	47	10	.31	1461	.15	5.40	1.82	4.61	2	210	3	80	33	3	1.7
B10657	2	17	6	89	.2	14	3	760	2.55	4	5	ND	1	509	.4	2	2	109	8.85	.181	24	25	.17	126	.88	8.83	1.93	.16	30	16	1	34	14	2	13.3
B10658	1	51	10	38	.2	9	5	226	2.45	4	5	ND	7	50	.2	2	2	22	.62	.053	21	14	.64	112	.38	3.03	.24	.09	2	4	1	20	10	1	5.0
B10659	1	143	4	85	.2	17	12	1331	3.67	5	5	ND	1	278	.2	2	3	291	9.63	.149	18	44	.98	509	1.02	9.59	3.08	1.32	2	25	1	32	3	2	28.5
B10660	1	29	18	55	.2	3	2	280	1.54	5	5	ND	6	149	.2	2	2	6	1.44	.014	21	12	.47	113	.18	4.45	2.26	.50	2	75	1	10	12	2	4.3
B10661	1	92	4	130	.2	72	63	1055	5.79	4	5	ND	1	268	.2	2	2	228	6.50	.098	11	203	2.21	106	.83	8.20	3.55	.10	2	9	1	19	1	1	28.9
B10662	1	5	4	64	.2	4	2	303	2.45	4	5	ND	8	18	.2	2	2	4	.17	.009	22	15	.34	1073	.16	5.62	.42	3.47	2	75	4	42	29	3	2.0
B10663	3	5	10	65	.3	6	1	198	2.81	4	6	ND	10	40	.2	2	2	4	.19	.003	24	13	.18	289	.10	5.52	3.83	1.27	3	45	5	21	25	1	1.5
[illegible]64	1	22	10	72	.2	4	1	296	2.26	4	5	ND	8	33	.2	2	2	1	.16	.010	8	11	.62	822	.15	4.51	.91	5.00	2	80	5	43	20	3	1.4
[illegible]55	1	22	10	166	.3	1	1	546	3.06	5	5	ND	9	59	.2	2	2	1	.58	.008	26	11	.43	1032	.17	5.45	3.11	2.07	2	126	8	72	32	3	1.8
B10666	1	9	19	106	.2	3	1	377	2.75	4	5	ND	9	49	.2	2	2	7	.33	.003	8	13	.23	769	.14	5.56	3.29	1.88	4	79	7	49	29	5	1.6
B10667	2	26	25	185	.2	6	2	866	2.98	4	5	ND	8	29	.2	2	3	2	.16	.008	33	12	1.97	928	.15	5.59	.55	2.09	2	48	2	14	17	4	4.5
B10668	1	18	13	59	.2	4	1	1122	6.22	9	6	ND	7	52	.2	2	2	12	.50	.013	32	11	1.43	1117	.25	5.93	1.96	1.87	5	37	7	21	25	3	8.2
B10669	1	3	4	155	.2	3	1	953	2.67	6	5	ND	7	33	.2	2	2	2	.20	.002	39	11	.89	879	.15	5.44	2.20	2.61	3	75	5	43	26	3	1.6
B10670	1	17	39	152	.2	6	1	845	2.76	4	5	ND	7	42	.2	2	2	9	.21	.003	32	10	.43	1399	.15	5.37	1.92	3.34	3	84	3	24	32	3	3.1
B10671	1	6	7	109	.2	3	1	697	3.71	4	5	ND	8	37	.2	2	2	3	.51	.008	65	12	.33	1145	.16	5.68	2.64	2.70	2	72	7	70	30	3	1.8
B10672	2	5	20	143	.4	7	1	529	3.00	10	9	ND	10	31	.2	4	2	2	.41	.003	36	17	.60	929	.17	5.13	2.99	2.30	2	121	7	46	31	3	1.7
STANDARD HFC	20	63	40	143	7.4	102	46	1296	4.62	42	22	7	37	55	20.0	19	21	80	.56	.116	39	57	.99	244	.08	2.02	.09	.17	10	4	18	8	1	1	5.7

Sample type: ROCK. Samples beginning 'RE' are duplicate samples.

ACME ANALYTICAL

PLACER DOME U.S.INC. FILE # 92-3946

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
B10673	1	6	4	54	.3	3	1	306	3.01	4	6	ND	7	39	.2	4	7	1	.46	.007	12	5	.27	710	.16	5.07	2.23	1.92	9	101	8	35	34	6	1.8
B10674	2	6	11	59	.2	3	1	414	2.77	4	5	ND	2	35	.2	2	2	4	.23	.007	5	10	.34	975	.15	4.24	2.18	2.37	4	118	6	20	34	5	1.2
B10675	3	20	9	217	.2	5	1	795	3.14	4	5	ND	1	35	.5	2	2	4	.30	.004	16	9	.51	764	.16	3.95	2.04	1.62	3	102	7	25	33	7	1.0
B10676	1	7	4	70	.2	6	2	516	2.54	4	5	ND	3	26	.2	2	2	3	.40	.007	12	12	.51	551	.13	3.35	2.11	.95	3	73	5	24	27	4	1.0
RE B10681	1	13	4	66	.2	3	1	334	2.74	4	5	ND	2	24	.2	3	2	1	.25	.033	22	6	.27	680	.16	3.33	2.38	1.87	4	95	5	29	33	4	.9
B10677	1	4	8	43	.2	2	1	470	2.37	4	5	ND	2	35	.2	2	2	1	.26	.027	18	4	.88	953	.16	4.11	1.94	1.54	2	84	3	21	30	5	1.1
B10678	1	6	11	55	23.1	5	1	883	3.04	4	5	ND	1	26	.2	2	2	1	.20	.005	8	10	.95	1081	.14	4.57	1.53	2.19	6	87	6	17	27	7	1.2
B10679	1	6	9	78	.6	7	2	637	2.78	4	12	ND	5	52	.2	2	2	2	.38	.013	15	12	.63	1681	.16	4.63	2.29	1.87	4	74	6	18	36	3	1.4
B10680	1	8	5	88	.2	5	3	564	2.62	4	5	ND	4	57	.2	2	2	9	.58	.026	24	12	.56	608	.22	5.59	2.97	1.41	2	49	6	38	29	7	3.0
B10681	1	11	4	66	.2	1	1	349	2.82	4	5	ND	5	32	.2	3	2	1	.30	.034	29	5	.27	770	.16	3.00	2.46	1.92	2	89	6	40	33	3	1.4
[illegible]2	1	9	25	42	.2	7	3	388	.84	4	5	ND	4	135	.2	2	2	3	.30	.021	16	16	.08	1268	.07	4.69	2.42	3.40	3	52	2	12	13	3	1.7
B10683	3	8	24	140	.2	6	1	544	2.70	4	5	ND	2	36	.2	2	3	4	.15	.010	13	13	.38	1013	.14	4.06	1.43	3.39	2	106	8	16	31	2	1.0
B10684	1	16	21	164	.2	7	1	296	3.11	4	5	ND	2	36	.2	2	2	3	.24	.007	5	15	.42	320	.12	3.61	2.11	1.59	3	88	9	28	28	5	.9
B10685	2	16	7	98	.2	4	1	640	2.28	4	5	ND	4	16	.2	2	2	1	.07	.022	56	6	.25	762	.13	5.08	.25	2.88	9	82	55	24	53	17	1.3
B10686	1	5	24	380	.2	5	1	350	1.54	4	5	ND	4	37	.2	2	2	7	.17	.016	14	19	.14	882	.17	4.04	1.83	2.85	3	47	4	20	29	3	1.2
B10687	4	12	24	205	.2	8	2	301	1.42	11	5	ND	4	37	.3	3	4	8	.08	.006	11	20	.17	973	.18	5.28	.80	4.85	5	81	8	14	32	3	1.8
B10688	5	27	30	128	.2	7	1	159	2.27	17	5	ND	5	29	.2	2	2	14	.10	.007	5	15	.14	1432	.12	4.81	.77	4.80	12	72	4	26	27	3	1.3
B10689	1	3	9	113	.2	1	1	825	2.69	4	5	ND	6	38	.2	2	2	3	.41	.004	12	6	.55	1085	.15	5.80	2.30	2.45	5	100	7	28	30	7	1.7
B10690	3	24	8	67	.3	7	1	311	1.91	4	5	ND	3	30	.5	3	2	3	.28	.010	6	11	.13	618	.12	3.67	2.42	1.82	8	100	8	9	29	5	1.0
B10691	1	22	16	95	.2	7	1	308	2.98	4	5	ND	3	28	.2	2	2	1	.24	.001	25	10	.22	605	.14	3.56	1.62	2.35	4	119	10	22	30	5	1.0
B10692	2	2	5	20	.2	6	1	446	3.04	4	5	ND	3	47	.2	2	3	1	.46	.005	26	12	.41	908	.16	4.39	2.74	1.04	2	95	8	31	33	4	1.2
B10693	1	7	6	103	.2	1	1	335	2.55	4	5	ND	1	20	.2	2	2	1	.18	.001	19	4	.52	872	.15	3.69	2.02	2.85	2	111	5	21	27	3	.8
B10694	1	10	4	46	.2	5	6	344	3.85	4	5	ND	4	13	.2	2	2	2	.06	.017	22	11	1.34	749	.17	6.11	.10	1.95	2	130	6	8	19	2	4.5
B10695	1	1305	4	1134	.2	33	174	2839	14.32	7	5	ND	1	32	.6	8	2	228	.14	.063	11	98	3.87	355	.47	10.04	.07	.71	2	9	1	20	1	1	39.6
B10696	1	29	4	172	.2	9	7	602	4.57	4	5	ND	4	13	.5	2	2	46	.11	.032	24	27	2.75	687	.13	7.11	.14	1.59	3	66	2	8	1	3	15.3
B10697	1	2	4	96	.2	308	55	1434	6.32	4	9	ND	10	357	.3	4	2	148	7.37	.218	75	770	4.67	355	.49	7.75	1.65	.37	2	30	1	24	1	3	21.8
B10698	1	26	5	95	.2	48	49	1771	8.61	4	5	ND	1	179	.2	2	2	214	8.67	.039	6	164	2.51	205	.49	9.48	.63	.32	2	14	1	26	1	1	40.2
B10699	1	26	10	116	.2	36	44	2054	8.92	4	5	ND	1	247	.2	2	2	237	3.74	.049	5	111	2.44	484	.58	10.12	3.14	.76	2	22	1	31	1	1	39.7
B[illegible]700	1	18	9	140	.2	4	5	1194	3.81	4	5	ND	5	72	.2	2	2	4	.88	.007	28	13	.88	581	.18	5.37	1.75	1.31	2	102	2	12	18	2	4.8
[illegible]1	1	3	4	109	.2	4	6	916	3.63	4	5	ND	1	15	.2	2	2	1	.12	.008	8	10	.89	423	.15	4.15	2.00	1.33	2	137	6	24	32	4	1.2
B10702	1	66	4	118	.2	34	51	1627	8.77	6	5	ND	1	186	.2	2	2	223	7.48	.050	9	64	1.81	146	.60	10.80	2.88	.37	2	12	1	32	1	1	38.4
B10703	1	3	4	61	.2	8	12	847	4.54	7	5	ND	5	197	.2	2	2	29	3.76	.018	19	12	.72	98	.20	6.16	1.25	.10	2	18	2	44	9	1	13.5
B10704	1	92	7	145	.2	32	45	1439	8.26	6	5	ND	1	160	.2	3	2	228	3.39	.042	6	135	3.16	308	.62	10.15	3.20	.71	2	28	1	27	2	1	42.3
B10705	1	55	4	90	.2	38	48	1413	7.52	4	5	ND	1	201	.2	2	2	228	6.52	.051	5	70	2.17	166	.62	10.57	2.30	.33	2	17	1	28	1	1	38.1
B10706	1	9	4	90	.2	28	50	1125	12.03	4	5	ND	1	54	.2	2	2	239	1.45	.050	8	28	3.88	75	.63	9.46	1.13	.40	2	34	3	18	1	1	34.1
B10707	2	5	10	110	.2	7	1	443	2.89	6	5	ND	3	32	.2	2	2	4	.49	.036	33	12	.39	712	.18	4.24	2.59	2.43	2	95	6	77	32	4	1.6
B10708	1	8	9	115	.2	6	1	348	2.67	4	5	ND	4	26	.2	2	2	1	.22	.006	20	11	.26	670	.14	4.42	2.94	2.40	2	99	5	46	26	3	1.2
STANDARD HFC	19	66	40	140	7.3	97	45	1295	4.66	41	17	7	36	61	19.3	15	19	80	.58	.115	39	63	.91	237	.08	2.14	.09	.16	8	4	15	8	1	1	5.8

Sample type: ROCK. Samples beginning 'RE' are duplicate samples.

ACME ANALYTICAL

PLACER DOME U.S.INC. FILE # 92-3946

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
B10709	1	2	9	98	.2	1	1	835	3.33	4	5	ND	6	10	.2	2	2	3	.08	.016	16	6	1.10	790	.14	4.93	.12	2.04	2	69	9	22	24	2	1.7
B10710	1	22	13	106	.3	65	48	1239	7.56	4	5	ND	3	403	.2	2	2	291	6.47	.101	12	248	2.98	160	.75	9.10	2.21	.54	2	10	1	22	3	1	33.4
B10711	2	20	12	64	.2	10	3	130	.86	10	5	ND	2	12	.2	2	2	24	.15	.007	10	40	.23	219	.06	1.70	.16	.59	3	9	4	7	1	2	3.1
B10712	1	3	10	147	.2	7	1	465	2.47	4	5	ND	9	90	.3	2	2	2	.42	.003	46	17	1.05	376	.14	5.56	1.16	1.77	2	65	7	32	22	3	2.0
B10713	1	9	11	29	.3	6	5	147	1.46	7	5	ND	11	116	.2	3	2	15	1.13	.012	24	13	.13	1541	.14	5.57	1.90	3.37	2	69	2	22	12	2	4.6
B10714	1	11	13	45	.2	5	3	231	1.98	4	5	ND	11	104	.2	4	4	11	1.00	.015	21	15	.36	1173	.16	6.01	1.41	4.01	2	85	3	15	12	2	4.3
B10715	1	61	9	72	.2	5	1	342	1.79	10	5	ND	7	39	.2	2	2	1	.38	.009	30	11	.16	940	.14	5.53	2.73	2.60	2	36	5	51	32	4	1.5
RE B10715	1	58	8	68	.2	6	1	352	1.84	8	5	ND	9	32	.2	4	2	1	.36	.008	34	12	.16	952	.14	5.66	2.81	2.68	5	32	4	56	33	4	1.2
B10716	1	80	39	233	.4	4	1	1314	2.26	10	5	ND	9	47	.3	5	2	1	.26	.009	14	10	.29	1632	.15	5.73	1.14	4.49	2	97	8	58	30	3	1.5
B10717	1	6	6	102	.2	3	1	1095	2.86	6	5	ND	8	45	.2	2	2	1	.43	.009	7	7	.41	1358	.15	5.36	1.57	2.31	2	156	5	29	31	4	1.4
NDARD HFC	20	66	39	134	7.1	96	45	1213	4.28	39	20	7	36	54	19.1	16	19	77	.55	.117	36	62	.96	222	.09	1.98	.10	.17	11	4	15	7	1	1	5.3

Sample type: ROCK. Samples beginning 'RE' are duplicate samples.

Survey Data
(Dietz & Associates)

A @	FS	H Ang	H Dist Feet	V Dist	Rod	Rotate Azmiuth	Elev	Northing Rotate	Easting Rotate	Translate Northing	Translate Easting
A							3343.13	10000.00	10000.00	321.86	-916.66
	B	0.0000	2250.39	157.26	8.40	105.7542	3496.99	9389.00	12165.86	-289.14	1249.20
	pad	3.6944	1817.47	81.36	5.00	109.4486	3424.49	9394.85	11713.77	-283.28	797.11
	cl rd	5.5611	1678.99	79.89	5.00	111.3153	3423.02	9389.69	11564.14	-288.45	647.48
	cl rd	7.9306	1542.10	72.03	5.00	113.6847	3415.16	9380.53	11412.21	-297.60	495.55
	cl rd	8.8750	1442.84	66.33	5.00	114.6292	3409.46	9398.71	11311.58	-279.43	394.92
	cl rd	11.2389	1359.91	67.74	5.00	116.9931	3410.87	9382.76	11211.76	-295.38	295.10
	cl rd	12.1500	1277.44	64.62	5.00	117.9042	3407.75	9402.17	11128.91	-275.97	212.26
	cl rd	14.5000	1184.03	66.23	5.00	120.2542	3409.36	9403.44	11022.76	-274.69	106.10
	cl rd	14.5444	1107.88	62.83	5.00	120.2986	3405.96	9441.07	10956.55	-237.07	39.89
	cl rd	15.8722	1036.95	60.12	5.00	121.6264	3403.25	9456.25	10882.95	-221.89	-33.71
	cl rd	17.5278	994.76	59.22	5.00	123.2819	3402.35	9454.12	10831.60	-224.02	-85.06
	cl rd	18.4056	952.82	56.81	5.00	124.1597	3399.94	9464.99	10788.44	-213.15	-128.22
	crest	19.3389	895.76	51.32	5.00	125.0931	3394.45	9485.02	10732.93	-193.11	-183.73
	Pt C	21.4778	911.93	52.51	5.00	127.2319	3395.64	9448.24	10726.07	-229.89	-190.59
	crest	22.1333	867.29	48.25	5.00	127.8875	3391.38	9467.39	10684.48	-210.75	-232.18
	pt d	28.2444	1038.35	136.99	5.00	133.9986	3480.12	9278.72	10746.94	-399.42	-169.71
	dm ?	26.7139	1070.88	151.20	5.00	132.4681	3494.33	9276.96	10789.94	-401.17	-126.72
	cl rd	24.7389	852.42	45.73	5.00	130.4931	3388.86	9446.48	10648.25	-231.66	-268.41
	cl rd	31.1278	804.42	40.85	5.00	136.8819	3383.98	9412.82	10549.82	-265.32	-366.83
	cl rd	39.1306	803.53	28.35	5.00	144.8847	3371.48	9342.72	10462.21	-335.42	-454.45
	cl rd	45.5556	844.04	14.30	5.00	151.3097	3357.43	9259.58	10405.20	-418.55	-511.46
	cl rd	54.8500	869.67	-4.62	5.00	160.6042	3338.51	9179.69	10288.81	-498.45	-627.85
	cl rd	64.0250	919.74	-27.64	5.00	169.7792	3315.49	9094.86	10163.20	-583.28	-753.46
	3-1683	64.7167	998.84	-12.81	5.00	170.4708	3330.32	9014.94	10165.36	-663.19	-751.30

	cl rd	69.8806	965.21	-40.90	5.00	175.6347	3302.23	9037.59	10073.47	-640.55	-843.19		
	cl rd	77.2722	1034.18	-66.66	5.00	183.0264	3276.47	8967.26	9945.40	-710.87	-971.26		
	cl rd	88.1417	1216.26	-109.65	5.00	193.8958	3233.48	8819.34	9707.91	-858.80	-1208.75		
	cl rd + ck	90.9417	1361.54	-121.48	5.00	196.6958	3221.65	8695.86	9608.84	-982.28	-1307.82		
	cl ck	91.8972	1072.49	-116.28	5.00	197.6514	3226.85	8978.00	9674.79	-700.13	-1241.86		
	2051	89.1222	1007.93	-105.21	5.00	194.8764	3237.92	9025.85	9741.23	-652.28	-1175.43		
	cl wash	88.4250	873.94	-112.46	5.00	194.1792	3230.67	9152.69	9785.92	-525.45	-1130.73		
	2-1683	45.8861	451.24	-80.66	5.00	151.6403	3262.47	9602.92	10214.34	-75.22	-702.32		
	cl rd	38.5889	409.79	-75.29	5.00	144.3430	3267.84	9667.04	10238.88	-11.10	-677.78		
	cl rd	37.5611	495.02	-81.58	5.00	143.3153	3261.55	9603.03	10295.73	-75.11	-620.93		
	cl ck	37.7722	581.61	-96.46	5.00	143.5264	3246.67	9532.31	10345.74	-145.83	-570.92		
	cl rd	15.6333	576.66	-79.31	5.00	121.3875	3263.82	9699.66	10492.27	21.53	-424.38		
	conc pad	8.0333	733.76	-41.33	5.00	113.7875	3301.80	9704.04	10671.43	25.90	-245.23		
	l. adit	12.1389	777.21	-35.39	5.00	117.8930	3307.74	9636.40	10686.92	-41.73	-229.74		
	cl drill pa	4.1583	990.74	-23.19	5.00	109.9125	3319.94	9662.57	10931.51	-15.57	14.85		
	WCE 1683	58.8611	716.51	-46.84	5.00	164.6153	3296.29	9309.17	10190.09	-368.97	-726.57		
	3-1683	64.7167	998.84	-12.81	5.00	170.4708	5987.19	9229.59	10635.73	-448.54	-280.93		
	2-1683	45.8861	451.24	-80.66	5.00	151.6403	5919.34	9763.29	10384.17	85.15	-532.49		
**	Found		590.01			184.7623		-533.69	251.57	-10211.83	-10665.09		
**	Record		600.00			184.0000							
B	A	0.0000	2250.39		5.00	285.7542	3496.99	9389.00	12165.86	-289.14	1249.20		
	1683 A	87.1055	1083.79	86.01	5.00	372.8597	3583.00	10445.60	12407.07	767.47	1490.41		
	1-1683	357.4333	483.96	-73.96	5.00	283.1875	3423.03	9499.41	11694.66	-178.73	778.00		
	ECE-1683	323.9306	531.88	-61.32	5.00	249.6847	3435.67	9204.33	11667.06	-473.80	750.40		
	OFF SET	304.1194	708.52	-148.37	5.00	229.8736	3348.62	8932.37	11624.10	-745.77	707.44		
	PAD	303.3167	1723.45	-187.93	5.00	229.0708	3309.06	8259.92	10863.75	-1418.22	-52.90		
	CL RD	306.0722	1546.03	-144.44	5.00	231.8263	3352.55	8433.48	10950.46	-1244.66	33.80		
	CL RD	306.9500	1422.82	-127.51	5.00	232.7042	3369.48	8526.87	11033.98	-1151.27	117.32		
	CL RD	310.0028	1301.87	-115.96	5.00	235.7569	3381.03	8656.43	11089.65	-1021.71	173.00		
	CL RD	312.6722	1049.52	-89.86	5.00	238.4264	3407.13	8839.47	11271.70	-838.66	355.04		
	CL RD	313.5389	898.19	-93.17	5.00	239.2930	3403.82	8930.34	11393.60	-747.80	476.94		

	CL RD	314.1167	824.30	-92.93	5.00	239.8708	3404.06	8975.24	11452.92	-702.90	536.26		
	CL RD	313.3000	715.47	-96.10	5.00	239.0542	3400.89	9021.08	11552.23	-657.06	635.57		
	CL RD	316.9667	508.27	-92.78	5.00	242.7208	3404.21	9156.04	11714.11	-522.09	797.45		
	CL RD	319.8167	456.29	-91.32	5.00	245.5708	3405.67	9200.29	11750.42	-477.85	833.76		
	CL/RD	325.1361	412.75	-88.08	5.00	250.8903	3408.91	9253.87	11775.85	-424.27	859.19		
	CL/RD	333.9917	409.61	-81.05	5.00	259.7458	3415.94	9316.08	11762.79	-362.06	846.13		
	1683 A	87.1055	1083.79	86.01	5.00	12.8597		11589.44	11861.78				
	1-1683	357.4333	483.96	-73.96	5.00	283.1875		10413.80	11717.91				
*	FOUND		1184.41			216.9768		1175.64	143.87				
*	RECORD		1257.00			217.4500							
	ECE-1683	323.9306	531.88	-61.32	5.00	249.6847		10144.46	11841.55	466.33	924.89		
	OFF SET	304.1194	708.52	-148.37	5.00	229.8736		9887.46	11940.33	209.32	1023.67		
	2-1683	45.8861	451.24	-80.66	5.00	151.6403		9763.29	10384.17	85.15	-532.49		
	1-1683	357.4333	483.96	-73.96	5.00	643.1875		10413.80	11717.91	735.66	801.26		
*	FOUND		1483.93			273.9999		-650.51	-1333.75				
*	RECORD		1500.00			274.0000							
Survey of 10.27.92			Rod HMC	Notes LED	HI =	5.3333							
B	1683A	0.0000	1080.64	85.58	0.00	372.8597	3502.32	9389.00	12165.86	-289.14	1249.20		
	B-2	289.2200	949.09	24.32	5.00	302.0797	3521.64	9893.05	11361.69	214.92	445.03		
	1863-1	270.6539	483.74	-73.72	5.00	283.5136	3423.60	9502.03	11695.51	-176.10	778.85		
	T-17	257.2458	486.52	-72.88	5.00	270.1055	3424.44	9389.89	11679.34	-288.24	762.68		
	T-16	245.8583	398.25	-81.87	5.00	258.7180	3415.45	9311.08	11775.31	-367.05	858.65		
	T-15	234.9481	418.50	-88.93	5.00	247.8078	3408.39	9230.92	11778.36	-447.21	861.70		
	T-14	227.2597	582.61	-98.37	5.00	240.1194	3398.95	9098.74	11660.69	-579.39	744.04		
	FLAGG	225.8192	689.97	-97.70	5.00	238.6789	3399.62	9030.33	11576.44	-647.81	659.78		
	T-13	225.8253	723.22	-95.16	5.00	238.6850	3402.17	9013.11	11548.00	-665.03	631.34		
	T-38	228.1314	790.84	-87.28	5.00	240.9911	3410.04	9005.48	11474.23	-672.66	557.57		
	T-39	231.4058	931.02	-61.89	5.00	244.2656	3435.43	8984.74	11327.17	-693.39	410.51		

	T-40	237.2333	1038.52	-46.97	5.00	250.0930	3450.36	9035.39	11189.39	-642.75	272.74		
	T-41	235.7000	1121.27	-47.52	5.00	248.5597	3449.80	8979.14	11122.18	-699.00	205.52		
	T-42	233.4044	1198.10	-47.27	5.00	246.2642	3450.05	8906.74	11069.11	-771.40	152.45		
	PIN 3,5,6	230.6956	1320.23	-56.55	5.00	243.5553	3440.77	8801.05	10983.76	-877.09	67.10		
	T-43	229.4908	1337.52	-58.41	5.00	242.3505	3438.91	8768.31	10981.08	-909.83	64.42		
	T-44	232.5908	1324.14	-50.45	8.50	245.4506	3443.37	8838.84	10961.41	-839.29	44.75		
	PIN 08	220.5078	1427.86	-126.92	5.00	233.3675	3370.41	8537.02	11020.03	-1141.12	103.37		
	T-9	221.6708	1327.60	-114.26	8.50	234.5305	3379.56	8618.63	11084.62	-1059.51	167.97		
	T-11	225.0364	1027.32	-90.38	5.00	237.8961	3406.95	8843.02	11295.63	-835.12	378.97		
	PIN 02	227.3947	912.42	-93.79	5.00	240.2544	3403.53	8936.30	11373.65	-741.84	456.99		
	T-12	225.8128	876.25	-93.89	5.00	238.6725	3403.43	8933.41	11417.36	-744.73	500.70		
	B-1	171.0939	1160.99	-61.89	5.00	183.9536	3435.43	8230.77	12085.81	-1447.37	1169.15		
	180	198.7728	1122.37	-192.34	5.00	211.6325	3304.99	8433.38	11577.21	-1244.76	660.55		
	T-26	260.1614	1487.23	-105.72	5.00	273.0211	3391.60	9467.38	10680.69	-210.76	-235.97		
	181	260.8897	1435.72	-102.45	5.00	273.7494	3394.87	9482.88	10733.21	-195.25	-183.45		
	T-24	260.5917	1359.82	-95.41	5.00	273.4514	3401.92	9470.86	10808.50	-207.28	-108.16		
	T-23	260.4339	1254.99	-92.57	5.00	273.2936	3404.75	9461.10	10912.94	-217.04	-3.72		
	T-22	258.5733	1162.12	-88.38	5.00	271.4330	3408.94	9418.06	11004.09	-260.08	87.43		
	T-21	257.1894	950.76	-85.84	5.00	270.0492	3411.48	9389.81	11215.09	-288.33	298.43		
	T-20	258.1369	826.14	-85.64	5.00	270.9967	3411.68	9403.37	11339.84	-274.77	423.18		
	T-19	256.3711	729.29	-80.82	5.00	269.2308	3416.50	9379.21	11436.63	-298.93	519.97		
	T-18	257.5636	633.91	-77.47	5.00	270.4233	3419.86	9393.68	11531.96	-284.46	615.30		
181	B	0.0000		HI=5.4		93.7494	3400.27	9482.88	10733.21	-195.25	-183.45		
	T-25	159.8875	54.83	-3.23	5.00	253.6369	3392.04	9467.44	10680.60	-210.70	-236.05		
	T-26	158.0944	197.82	-10.23	5.00	251.8439	3385.03	9421.24	10545.23	-256.90	-371.43		
	182	154.1272	235.69	-12.62	5.00	247.8767	3382.64	9394.12	10514.88	-284.01	-401.78		
	T-59	193.8736	479.67	-129.89	5.00	287.6230	3265.38	9628.10	10276.05	-50.03	-640.61		
	T-51	246.2542	279.98	-98.36	5.00	340.0036	3296.91	9745.98	10637.47	67.84	-279.19		
	T-52	230.2183	287.71	-97.50	5.00	323.9678	3297.77	9715.55	10563.96	37.42	-352.70		
	T-53	234.4511	230.88	-95.29	5.00	328.2006	3299.98	9679.10	10611.55	0.97	-305.11		
	T-54	221.2631	231.91	-95.47	5.00	315.0125	3299.79	9646.91	10569.26	-31.23	-347.40		
	T-55	197.6100	260.85	-93.47	5.00	291.3594	3301.80	9577.89	10490.28	-100.25	-426.38		

	PIN 01	309.4653	267.92	-74.25	5.00	43.2147	3321.02	9678.14	10916.66	0.00	0.00		
	T-45	300.4292	235.19	-79.59	5.00	34.1786	3315.68	9677.46	10865.33	-0.68	-51.32		
	T-46	288.1056	243.86	-84.03	5.00	21.8550	3311.24	9709.22	10823.99	31.08	-92.67		
	T-47	286.1200	194.42	-84.09	5.00	19.8694	3311.18	9665.73	10799.29	-12.41	-117.37		
	T-48	273.6833	217.58	-95.05	5.00	7.4328	3300.22	9698.63	10761.36	20.50	-155.30		
	T-50	260.6058	236.31	-94.42	5.00	354.3553	3300.84	9718.05	10709.96	39.91	-206.69		
	T-49	296.1500	253.72	-98.85	5.00	29.8994	3296.42	9702.84	10859.68	24.70	-56.97		
	T-56	247.7922	313.92	-106.95	5.00	341.5417	3288.31	9780.65	10633.82	102.51	-282.84		
	T-57	228.0356	357.33	-125.48	5.00	321.7850	3269.78	9763.64	10512.16	85.50	-404.50		
	T-58	209.7631	335.73	-136.09	8.50	303.5125	3255.68	9668.25	10453.29	-9.89	-463.37		
	B-3	223.3158	1017.50	10.70	5.00	317.0653	3405.97	10227.83	10040.12	549.69	-876.54		
	D&A A	**211.5603**	**898.17**	**-51.02**	**5.00**	305.3097	3344.25	10002.02	10000.27	323.88	-916.39		
							3343.13	**10000.00**	**10000.00**				
	ERROR OF CLOSURE						-1.12	-2.02	-0.27				
182	181	0.0000		HI=5.2		67.8767	3387.84	9394.12	10514.88	-284.01	-401.78		
	T-27	135.7681	51.91	4.13	5.00	203.6447	3386.98	9346.57	10494.05	-331.57	-422.60		
	T-28	121.0103	185.00	20.62	8.50	188.8869	3399.97	9211.34	10486.30	-466.79	-430.36		
	T-29	131.3717	305.19	24.98	8.50	199.2483	3404.33	9105.99	10414.26	-572.15	-502.39		
	T-30	129.5964	394.38	34.28	8.50	197.4730	3413.62	9017.94	10396.46	-660.20	-520.20		
	PIN 07	127.7500	425.52	35.23	8.50	195.6267	3414.57	8984.33	10400.25	-693.81	-516.40		
	T-31	161.5692	92.02	-8.83	8.50	229.4458	3370.51	9334.29	10444.96	-343.84	-471.70		
	T-32	156.0819	219.42	-27.93	8.50	223.9586	3351.41	9236.18	10362.57	-441.96	-554.09		
	T-33	162.3036	417.70	-58.10	8.50	230.1803	3321.24	9126.64	10194.05	-551.50	-722.61		
	T-34	164.5806	608.28	-83.44	8.50	232.4572	3295.91	9023.47	10032.57	-654.67	-884.09		
	T-35	165.9878	809.57	-115.36	8.50	233.8644	3263.98	8916.72	9861.05	-761.42	-1055.61		
	T-36	167.2578	984.09	-142.86	8.50	235.1344	3236.48	8831.57	9707.44	-846.57	-1209.22		
	T-37	165.0006	1297.94	-154.19	8.50	232.8772	3225.15	8610.78	9479.97	-1067.35	-1436.69		
180	B	0.0000		HI=5.4		31.6325	3310.39	8433.38	11577.21	-1244.76	660.55		
	T-1	349.7372	107.13	-15.71	5.00	21.3697	3289.68	8533.15	11616.25	-1144.99	699.59		
	DH	335.6744	87.86	-16.86	5.00	7.3069	3288.53	8520.53	11588.38	-1157.60	671.73		
	T-2	260.5386	162.49	-14.32	5.00	292.1711	3291.06	8494.70	11426.74	-1183.44	510.08		

	T-3	234.1981	331.19	-6.85	5.00	265.8305	3298.54	8409.30	11246.90	-1268.84	330.24		
	T-4	227.8225	517.25	-0.36	5.00	259.4550	3305.02	8338.72	11068.70	-1339.42	152.04		
	T-5	228.9789	689.90	12.07	5.00	260.6114	3317.46	8320.84	10896.55	-1357.30	-20.11		
	T-6	224.7169	830.49	4.21	15.50	256.3494	3299.10	8237.39	10770.18	-1440.75	-146.48		
	T-7	232.1400	747.22	21.38	6.15	263.7725	3325.61	8352.32	10834.40	-1325.81	-82.26		
	T-8	241.7883	584.59	56.19	5.00	273.4208	3361.57	8468.26	10993.67	-1209.87	77.01		
	T-10	271.3069	534.90	82.15	5.00	302.9394	3387.54	8724.24	11128.29	-953.90	211.63		

EXHIBIT 5

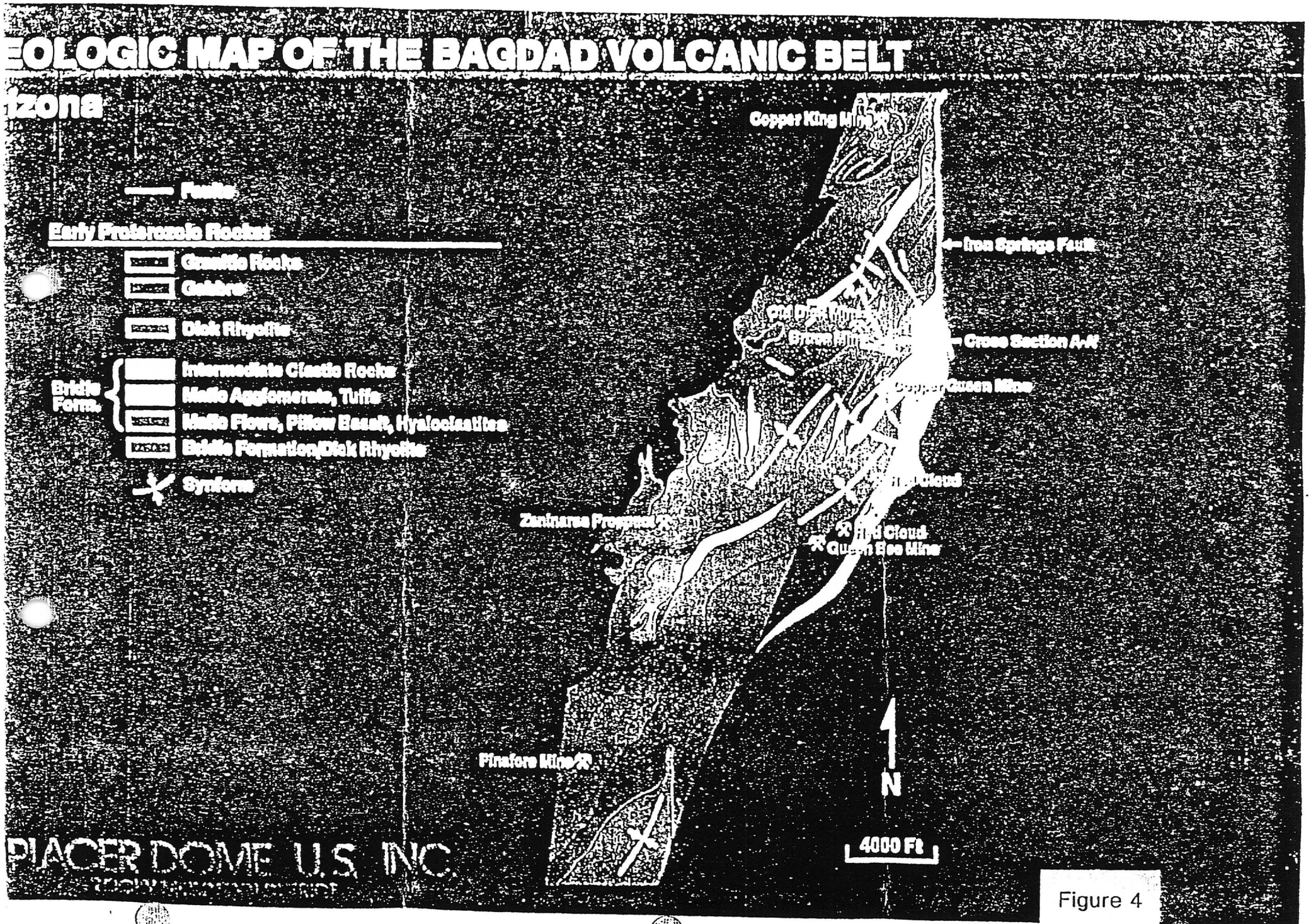
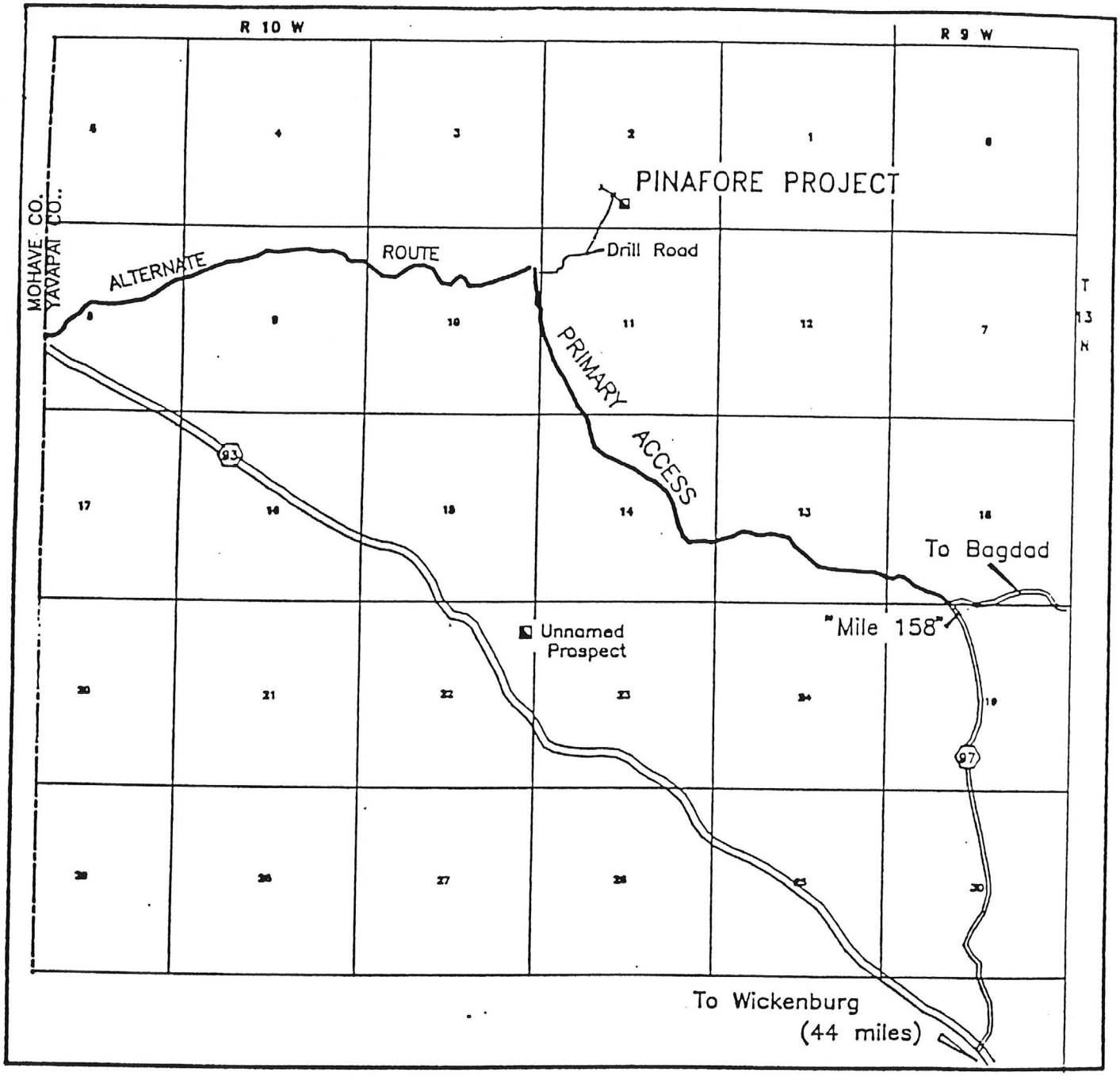

EOLOGIC MAP OF THE BAGDAD VOLCANIC BELT
izona
Fault
Early Proterozoic Rocks
Granitic Rocks
Gabbro
Dick Rhyolite
Bridle Form.
Intermediate Clastic Rocks
Mafic Agglomerate, Tuffs
Mafic Flows, Pillow Basalt, Hyaloclastites
Bridle Formation/Dick Rhyolite
Synform
Copper King Mine
Iron Springs Fault
Cross Section A-A'
Copper Queen Mine
Zaniaras Prospect
Red Cloud
Queen Bee Mine
Pinafore Mine
N
4000 Ft
PLACER DOME U.S. INC.

Figure 4



0 4000
SCALE IN FEET

N

PLACER DOME U. S. INC
ROCKY MOUNTAIN DISTRICT

PROJECT NO. 273

PINAFORE PROJECT

Location Map figure 2

Yavapai County, Arizona

DATE: 09/15/92	DRGC BY: DRAWN BY: J.S.	DWG NO. PINAFORE PINLOC.dwg
SCALE: NO SCALE	NTS REF. N/A	

The "Footwall Fault" has had a large impact on the Pinafore mineralization and has displaced the Bridle Formation in the map area. It may also have "rolled" mineralization within the quartz-sericite schist unit into a series of vertically plunging en-echelon shoots. Potentially of greater significance is the possibility 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 at 28+00S and 16+00W. Evidence for this exists in the geology and the airborne magnetics, and if the interpretation is correct, suggests exploration potential at great depth. The connection between the two areas of mineralization is also manifest in the form of structure, tentatively named the "Pinafore Syncline".

The recent drilling has shown that mineralization does not continue NE of the Eureka Claim. The land situation is potentially unresolvable in this direction owing to the Poachie Range Desert Tortoise Habitat. If any further work is done on the project, it should be done to the SW on the GMC Claims and on intervening area currently not staked.

Mineralization at surface is chiefly in the form of secondary copper and zinc oxide minerals. The oxide-form of mineralization continues down in the quartz-sericite, schist unit for 300 to 500' below surface. Below this level, the mineralization is primary in nature and consists of chalcopyrite, sphalerite and galena. It is recommended that if any further work be done on the project, that the drill hole intercepts for holes PIN-01 to PIN-06 be assayed for sulfur to ascertain which portions of the mineralization are supergene in nature. It may be possible that copper and zinc have been enriched in the upper portions of the Pinafore deposit.

Stratigraphy in the area gets progressively younger to the SE. A classic progression from mafic to felsic volcanism is observed. Rapid lateral interfingering of the volcanic pile is apparent from the mapping, and the succession is complicated by sub-volcanic intrusives, hydrothermal alteration, folding and faulting.

The quartz-sericite schist unit is a hydrothermally altered felsic volcanic. Base metal mineralization accompanies the most intensely altered areas, presumably overlying volcanic vents. The volcanic rocks overlying the quartz-sericite schist unit are sericitized, silicified and FeOx altered, indicating that hydrothermal activity continued into the younger, overlying rhyolitic volcanics. If any potential exists to enlarge the current framework of mineralization, it is at greater depth and to the SW.

The hydrothermal alteration can be mapped, and acts as a guide to ascertain the size and intensity of the hydrothermal system responsible for base metal mineralization. Geochemistry has also shown that the Eureka Claim contains approximately three times the threshold levels of Cu, Zn and Pb as that seen outside the claim. Rocks on the Eureka Claim also have about one-half the CaO content when compared to rocks outside the claim. This may indicate CaO depletion associated with the Pinafore mineralization.

At the Pinafore, mineralization does not occur at the major transition from mafic (Bridle Formation) to felsic (Dick Rhyolite) volcanism. The quartz-sericite schist occurs several hundred feet from the transition, in an area marked by rapid intercalations of felsic and mafic volcanism. This would explain the apparent contradiction in the presence of a mafic footwall in the diamond drilling and the absence of this unit directly underlying the quartz-sericite schist on surface.

5.0 Geology

The geology of the Bagdad Volcanic Belt is well described in the literature. Despite its excellent exposure, the geology is complicated by faulting, folding and the rapid interfingering of volcanic cycles. Various interpretations of the Proterozoic volcanic pile can be found in the literature.

5.0.1 Regional Geology of the Bagdad Volcanic Belt

The Bagdad area constitutes the third largest Proterozoic massive sulfide district in Arizona. Approximately 1,730,000 tons of ore were produced from the mines at an average grade of 3.47% Cu and 12.0% Zn.

The main orebodies were the Old Dick, the Bruce, the Copper Queen, and the Copper King, all located in the northeast portion of the Bagdad Volcanic Belt (Figure 4). The Bruce orebody was the largest and last deposit discovered and was found when the Old Dick was nearing exhaustion and drilling located the blind deposit along strike.

Other smaller deposits include the Red Cloud, Rudkin, Queen Bee and Pinafore deposits, all located south of the larger producers in the belt.

The most recent discussion on the geology of the belt is by Anderson (1989). Older papers discussing the volcanic stratigraphy of the belt include Conway et al (1986), Conway (1986), Anderson et al (1955, Baker and Clayton (1968), Cavalero (1976), Larson (1976, 1984), Collins (1977), and Conelly and Conway (1983).

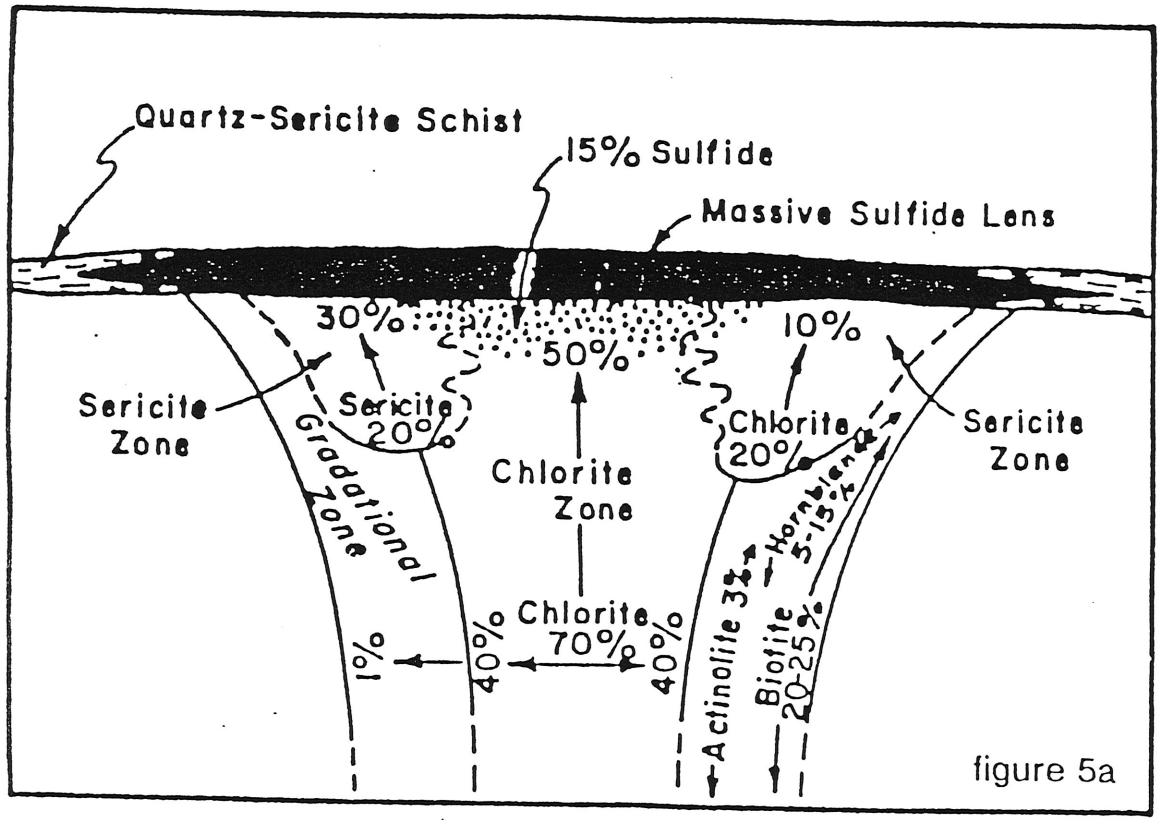
The oldest unit exposed in the Bagdad Volcanic Belt is the Bridle Formation. This unit is easily recognized by its mafic character and is composed of mafic agglomerate, pillow basalt, basaltic flows and rare felsic volcaniclastic rocks. In the vicinity of the Old Dick mine, the Bridle Formation strikes northeasterly and is overturned to the west. The Old Dick and Bruce massive sulfide deposits occur at the top of the Bridle Formation within a thin quartz-sericite schist unit.

Conformably overlying the Bridle Formation is the Dick Rhyolite. Conway (1986) regarded the Dick Rhyolite as a thick (>7,000') succession of southeast facing composite volcanics which demonstrate lateral flow interfingering with andesite flows, felsic tuffs and sediments.

Configuration of the Bruce orebody was described as an oval lens approximately 600' by 1,500' with its long axis raking 70° southwest. The mineralization is sandwiched between a mafic (andesite) footwall and felsic (rhyolitic) hanging wall rocks (Figure 5b). Massive sulfide is intricately associated with a thick (20-50') unit of quartz-sericite schist. The orebody was composed of approximately 90% sulfide, with pyrite as the chief gangue mineral. Sphalerite, galena and chalcopyrite form the main hypogene ore minerals. The

Summary and Recommendations

Two drill holes totaling 3,179' were completed on the Pinafore Property (Eureka Claim). One drill hole, PIN-08, intersected 0.33% Cu, 4.50% Zn, 0.85% Pb, 126 ppb Au and 5.8 g/t Ag over a true thickness of 10.4'. Drill Hole PIN-09 failed to uncover mineralization but intersected a wide zone of volcanics with pervasive hydrothermal alteration. This drill hole indicates that mineralization does not plunge to the northeast as previously believed but is subvertical to steeply plunging to the SE parallel to $So\text{-}S_1$.



SCHEMATIC CROSS SECTION THROUGH THE BRUCE OREBODY
(VALUES IN WT%)

after Lindberg, 1989

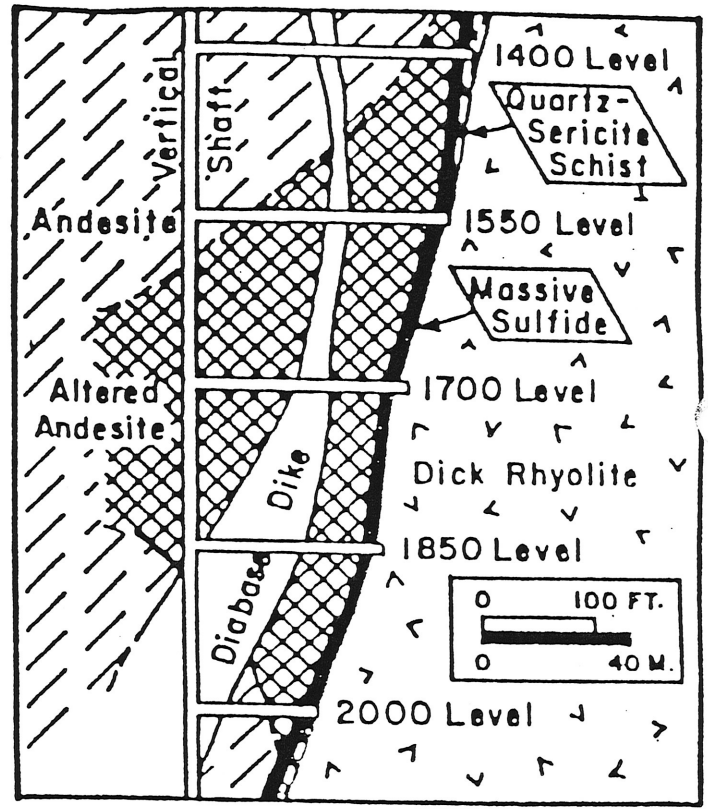


figure 5b

CROSS SECTION THROUGH THE BRUCE OREBODY

PLACER DOME U.S. INC
ROCKY MOUNTAIN DISTRICT

PROJECT NO. 273

PINAFORE PROJECT

figure 5

Yavapai County, Arizona

DATE: 09/15/92	DRAWN BY: JG	DWG NO. PINAFORE PINLOC.dwg
SCALE: NO SCALE	NTS REV. N/A	

orebody is thickest (~ 30 feet) directly overlying a large chlorite alteration zone in the footwall. Intense sericite alteration continues into the hanging wall of the deposit (Dick Rhyolite) directly overlying the deposit. Figure 5a demonstrates the typical alteration and metamorphic phases found in the Bruce alteration pipe.

Both massive and disseminated forms of mineralization occur in the Dick Mine, the northern portion being disseminated (sub-ore grade) and the southern portion being massive (ore grade).

The Copper Queen Deposit occurs southeast of the Old Dick and Bruce mines along the southeast contact of the Dick Rhyolite and a mafic (Bridle Formation?) unit (Figure 4). The Copper Queen orebody does not lie along the mafic/felsic contact, but occurs entirely within a 150' thick band of quartz-sericite schist 100' from the contact. The orebody at the Copper Queen Mine is 800' in plunge length and 200' in strike length (Figure 6a), plunging 70 degrees to the southwest and dipping steeply. The orebody is comprised chiefly of massive sulfides (Baker & Clayton, 1968) and ranges in thickness from 3' to 30', averaging 12'(Figure 6b). There is no halo of disseminated mineralization such as is seen at the Dick Mine. Although it was speculated that Copper Queen mine was in a separate stratigraphic horizon from the Bruce and Old Dick deposits, an alternative explanation would suggest that both deposits are the same stratigraphic horizon, separated by a syncline. This interpretation is supported by a lack of any alteration pipe under the Copper Queen deposit to the northwest.

Further evidence of folding southeast of the Copper Queen is suggested by andesite and dacite flows with minor felsic tuffs and sediments (Valero 1974). The rocks at the Rudkin and Red Cloud mine appear to be a repetition of the Copper Queen stratigraphy.

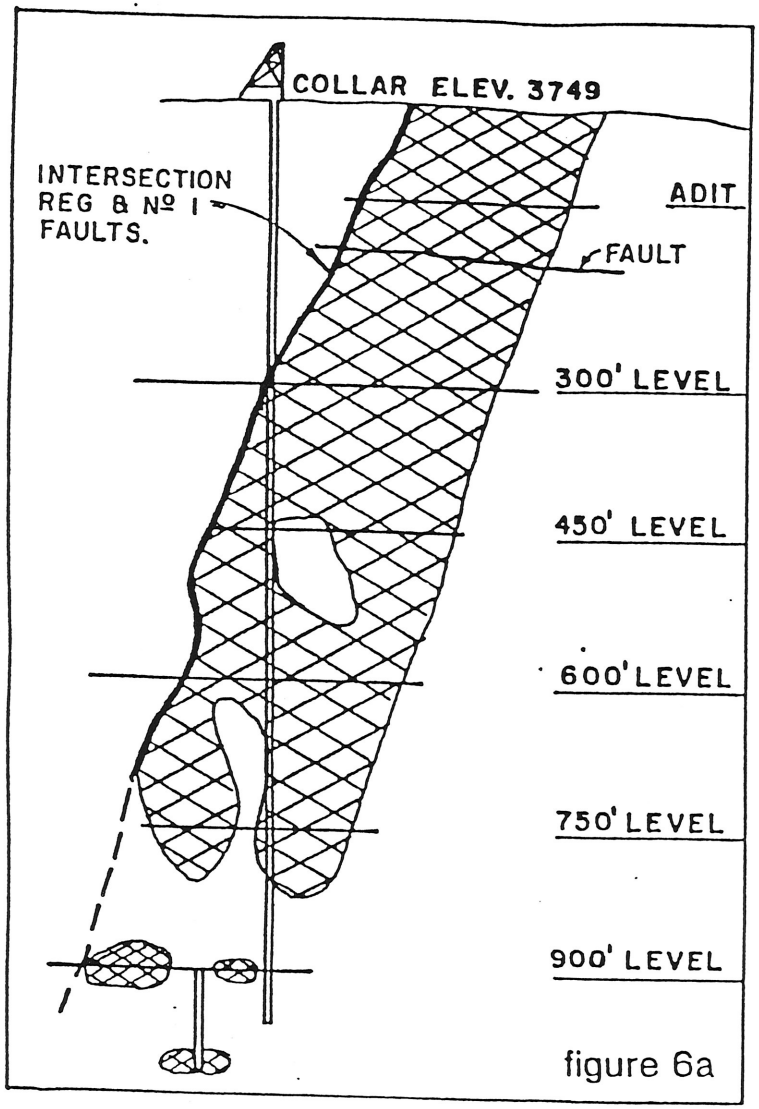
5.0.2 Local Geology

The local geology is presented on Map 173-33-1 at a scale of 1" = 200' in the back pocket of this report. The map area is centered on the Eureka Claim and includes a large enough area to assess the regional setting of the Eureka Claim. Three key elements are discussed in this report including the stratigraphy, structure and wall rock alteration within the volcanic succession.

Bridle Formation

Map Units 1 and 1A

The oldest rock unit exposed in the map area is the Bridle Formation (Figure 7). The Bridle Formation occurs in two discrete areas; one immediately adjacent to the Pinafore Property and another directly north of this area (Map 273-33-1). It should be noted that a large fault termed the "Footwall Fault" (FWF) offsets these two pieces of the

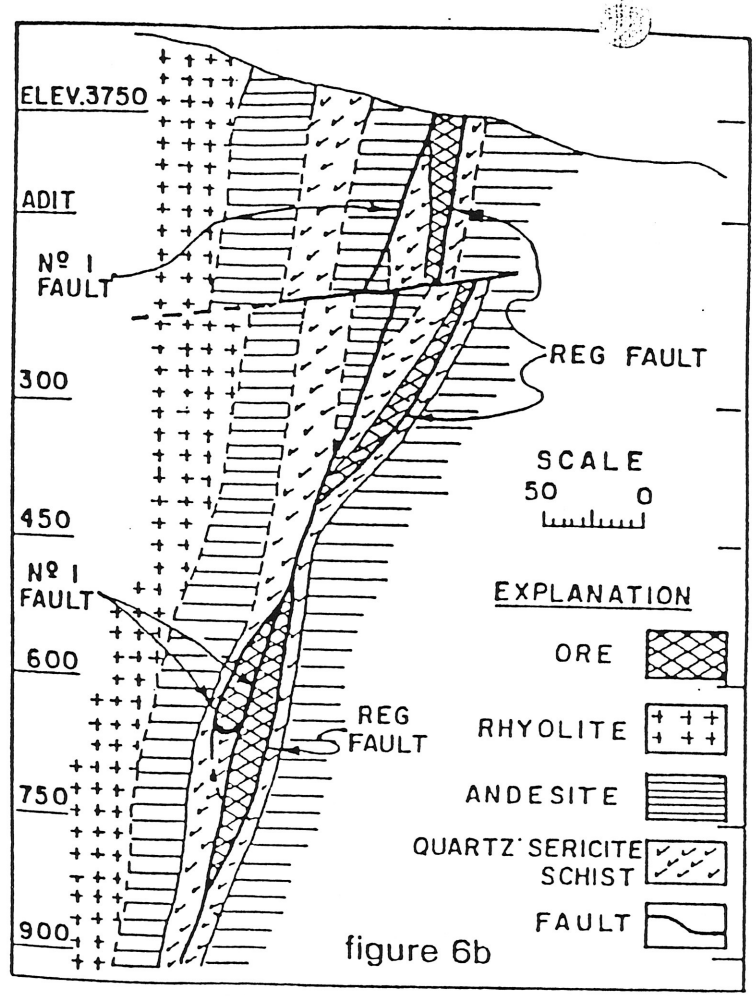


100 0 400

SCALE IN FEET

COPPER QUEEN OREBODY
LONGITUDINAL PROJECTION, LOOKING NORTHWEST

after Clayton & Baker (1968)



COPPER QUEEN OREBODY
CROSS SECTION, LOOKING NORTHEAST

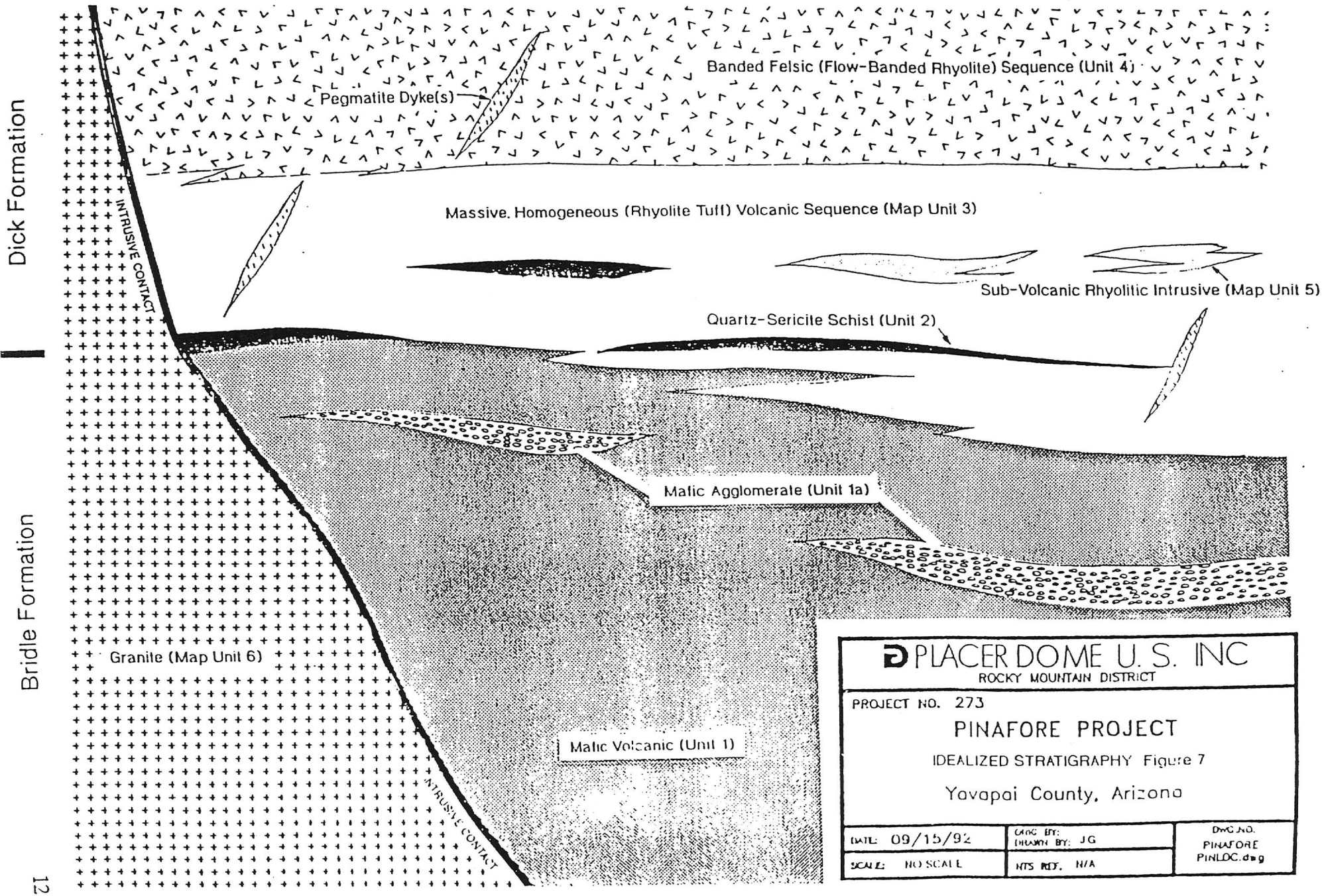
PLACER DOME U. S. INC
ROCKY MOUNTAIN DISTRICT

PROJECT NO. 273

PINAFORE PROJECT
figure 6

Yavapai County, Arizona

DATE: 09/15/92	CHKD BY: DRAWN BY: JG	DWG NO. PINAFORE PINLOC.dwg
SCALE: NO SCALE	NTS REF. N/A	


Dick Formation
Bridle Formation
Banded Felsic (Flow-Banded Rhyolite) Sequence (Unit 4)
Pegmatite Dyke(s)
Massive, Homogeneous (Rhyolite Tuff) Volcanic Sequence (Map Unit 3)
Sub-Volcanic Rhyolitic Intrusive (Map Unit 5)
Quartz-Sericite Schist (Unit 2)
INTRUSIVE CONTACT
Mafic Agglomerate (Unit 1a)
Granite (Map Unit 6)
Mafic Volcanic (Unit 1)
INTRUSIVE CONTACT
PLACER DOME U. S. INC
ROCKY MOUNTAIN DISTRICT
PROJECT NO. 273
PINAFORE PROJECT
IDEALIZED STRATIGRAPHY Figure 7
Yavapai County, Arizona
DATE: 09/15/92
CHKD BY:
DRAWN BY: JG
DWG NO.
PINAFORE
PINLOC.dwg
SCALE: NO SCALE
NTS REF. N/A

Bridle Formation. Movement along the FWF is sinistral with a displacement of 2,000'.

In outcrop, the Bridle Formation is recognized by its mafic character. Chlorite and biotite are common mineralogical constituents. In areas that are pervasively altered, large garnets (0.5 to 1") are common. Mafic agglomerate (Map Unit 1A) is present in both Bridle Formation exposures. These occur as lenticular stratiform beds typically 50 to 80' thick situated 500' below the top of the Bridle Formation. Fragments are 1" to 2' in size and are felsic to mafic in composition (Plate 1). The top of the Bridle Formation is folded and undulatory in plan view, but is abrupt and is marked by pronounced sericitization.

Dick Rhyolite

The Dick Rhyolite (Figure 7) is the next unit and hosts the mineralized quartz-sericite schist on the Pinafore Property. The Dick Rhyolite is exposed in a belt at least 3,000 wide across the map area, and dips steeply ESE. Much of the base of the Dick Rhyolite in the area is intruded by granite or disrupted by faulting; however, it is exposed in the northwest corner of the map area and is conformable with the Bridle Formation.

Anderson (1991) considers the Dick Rhyolite to be intrusive, however, others have considered the Dick Rhyolite extrusive (Baker & Clayton, 1968). In close proximity to the Eureka Claim, both extrusive (Map Units 2,3 & 4) and sub-volcanic intrusive (Map Unit 5) were documented. Intrusive rocks (sub-volcanic sills) comprise less than 5% of the Dick Rhyolite.

The Dick Rhyolite can be subdivided into four mappable units (Map 273-33-1). Moving from west to east, these include:

Map Unit 2 - Quartz-Sericite Schist

The quartz-sericite schist is the immediate host of Cu, Zn, Pb, Ag and Au mineralization on the Pinafore Property. The unit is typified by its light grey, bleached appearance. In hand specimen, the unit is composed of 60-70% sericite and the balance is made of fine-grained quartz. Typically, the unit is foliated and displays intense drag folding (Plates 2 & 3). The quartz-sericite schist unit is interpreted as a hydrothermally altered felsic volcanic (Dick Rhyolite) unit on the Eureka Claim.

Supergene enrichment is common in the upper portions of the Pinafore workings; Cu and Zinc-oxide minerals being the main forms of mineralization. In the portions of mineralized quartz-sericite schist encountered in this drilling program, copper, lead and zinc-sulfides were the only base metal minerals encountered.

Map Unit 3 - Massive, Homogeneous (Rhyolite Tuff) Volcanic Sequence

This unit is approximately 1500' wide and lies directly over the Bridle Formation. In close vicinity to the Pinafore Property, it lies in both the stratigraphic footwall and

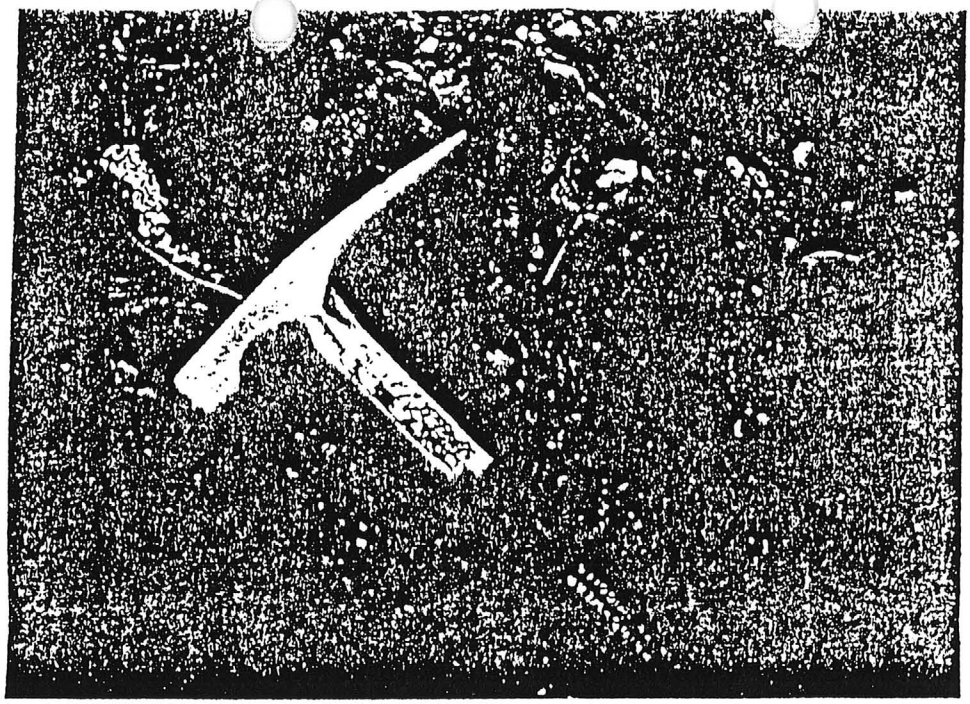


Plate 1: Mafic Agglomerate
Location: 4+00E, 1+00S

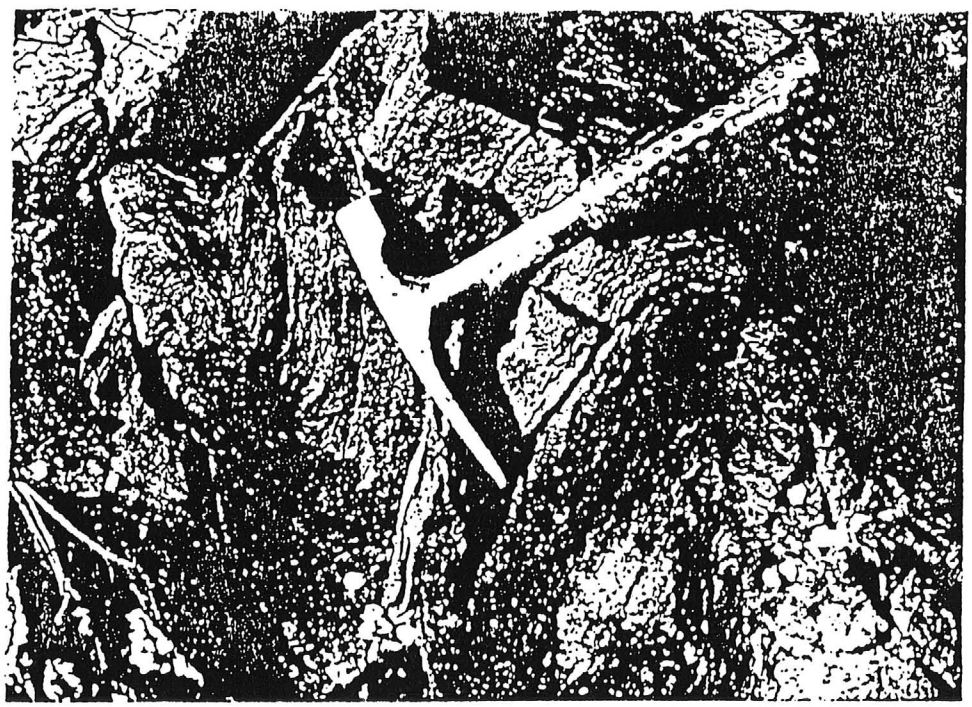


Plate 2: Barren Quartz-Sericite Schist
Location: 4+00S, 2+00E

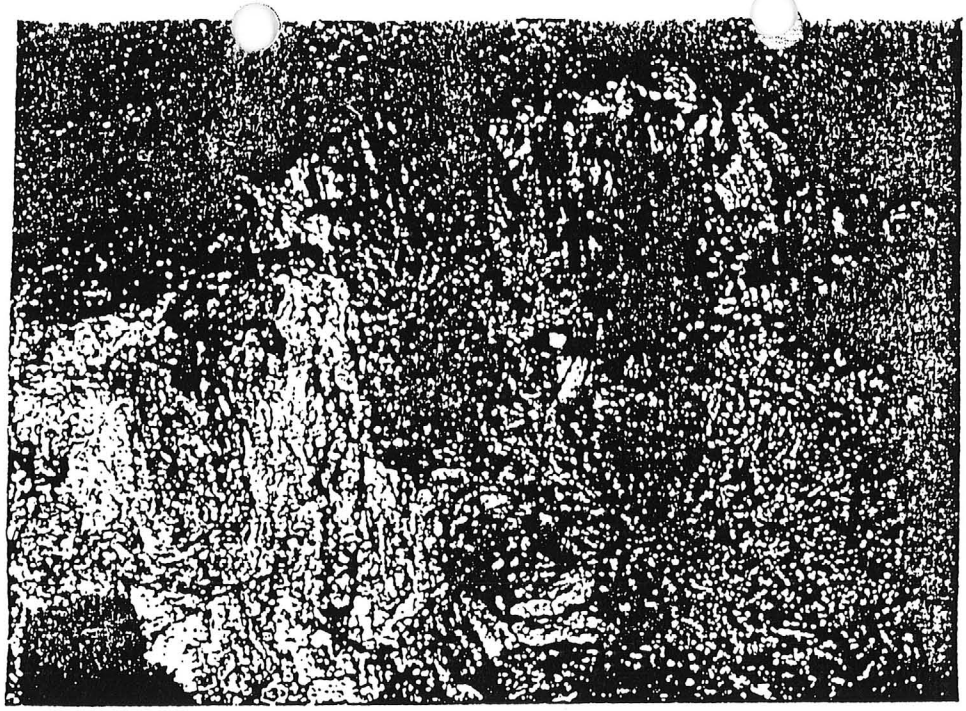


Plate 3: Mineralized Quartz Sericite Schist near Pinafore Shaft
Location: 5+00S, 1+75 W

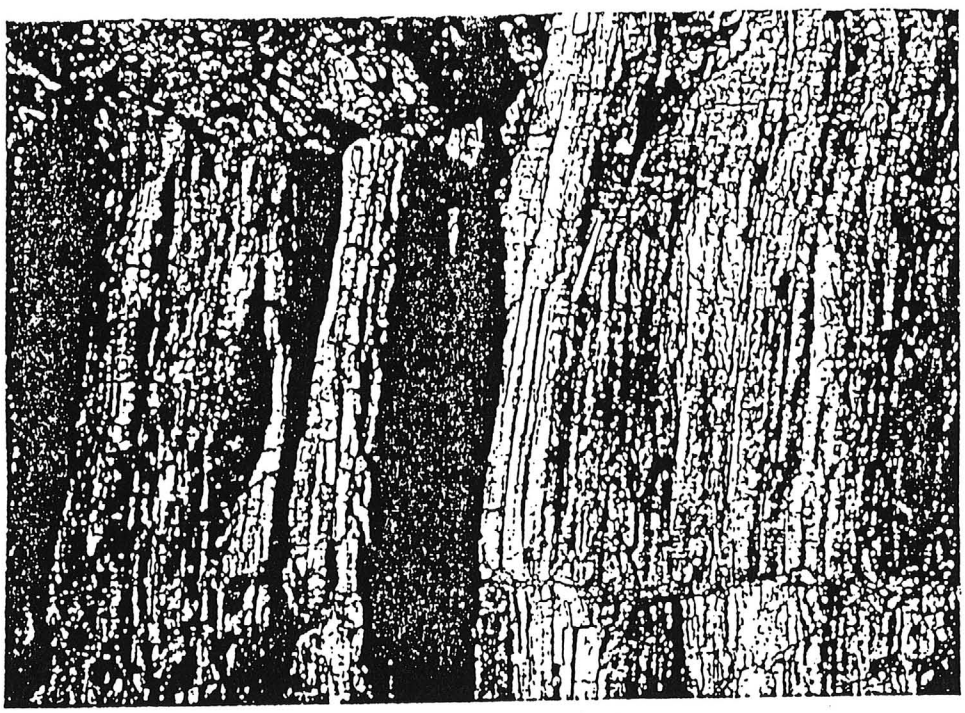


Plate 4: Massive, Homogenous (Rhyolite-Tuff) Volcanic Sequence.
Note steeply-plunging lineation ($So \wedge Si$)

hanging wall of the quartz-sericite schist unit which hosts mineralization. In outcrop, this unit is massive, homogeneous and displays a pronounced sub-vertical lineation (Plate 4). Quartz-sericite schist lenses are common throughout the unit.

Map Unit 4 - Banded Felsic (Flow-Banded Rhyolite) Sequence

This unit is exposed in two belts and stratigraphically overlies Map Unit 3. The unit demonstrates lateral interfingering in the northeast corner of the map area. It is recognizable in outcrop by its prevalent banding and gray-white color (Plate 5).

Map Unit 5 - Sub-Volcanic Rhyolitic Intrusive

Volumetrically, this unit composes the smallest portion of the volcanic pile, and is confined to an area between the Pinafore Shaft and the southern part of the map area, solely within the Map Unit 3. The largest of these bodies is 1200' in length, 180' wide and is slightly discordant to the stratigraphy. This unit is recognizable by its high FeOx content, discordant attitude with banding in extrusive volcanic rocks, and its marginal flow banding.

Proterozoic Granite

Map Unit 6 - Granite (and Associated Pegmatite Dykes)

Granite occurs throughout the western part of the map area. Typically it is composed of quartz, plagioclase and biotite (Plate 6). The unit is intrusive into the Bagdad Volcanic Belt. Numerous pegmatite dykes have intruded the volcanic successions (particularly near the edges of the volcanic belt) and crosscut the volcanics. Unit 6 is considerably younger than the volcanic rocks as evidenced by its lack of foliation.

5.0.3 Structure

The volcanic rocks dip steeply to the ESE and strike 020°. Stratigraphic tops in the Pinafore area is to the ESE. Top indicators include a silicified volcanic caprock overlying the quartz-sericite schist unit, and the presence of a chlorite alteration zone underlying the quartz-sericite schist. No small scale top indicators were observed in the mapping of the area. Rocks are characterized by an intense foliation (S_1) usually parallel to bedding (So). In areas where the bedding is divergent from the foliation, an intense lineation is formed. This lineation has plunges which range from subvertical to 70° SSW. The lineation is best developed in Map Units 2 and 3.

The quartz-sericite schist (Map Unit 2) which hosts the Pinafore mineralization is drag folded into a series of folds which dip ESE, and plunge vertical on surface. This folding vergence is compatible with sinistral motion along the FWF. Other folds in the area

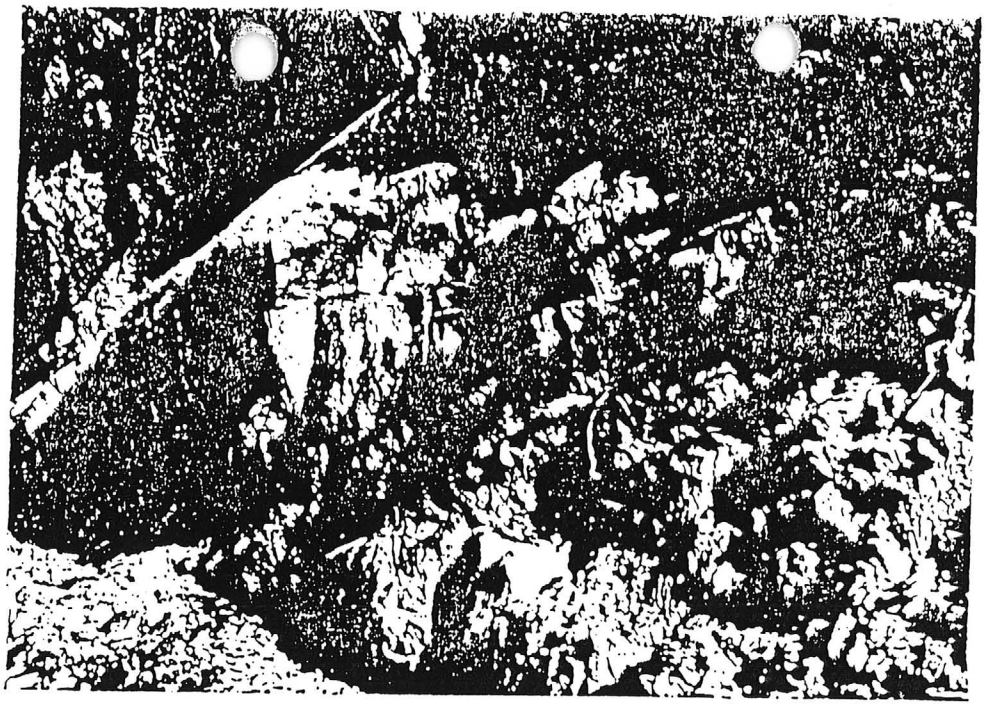


Plate 5: Banded (Flow-banded Rhyolite) Felsic Sequence
Location: 30+00S, 14+00 W

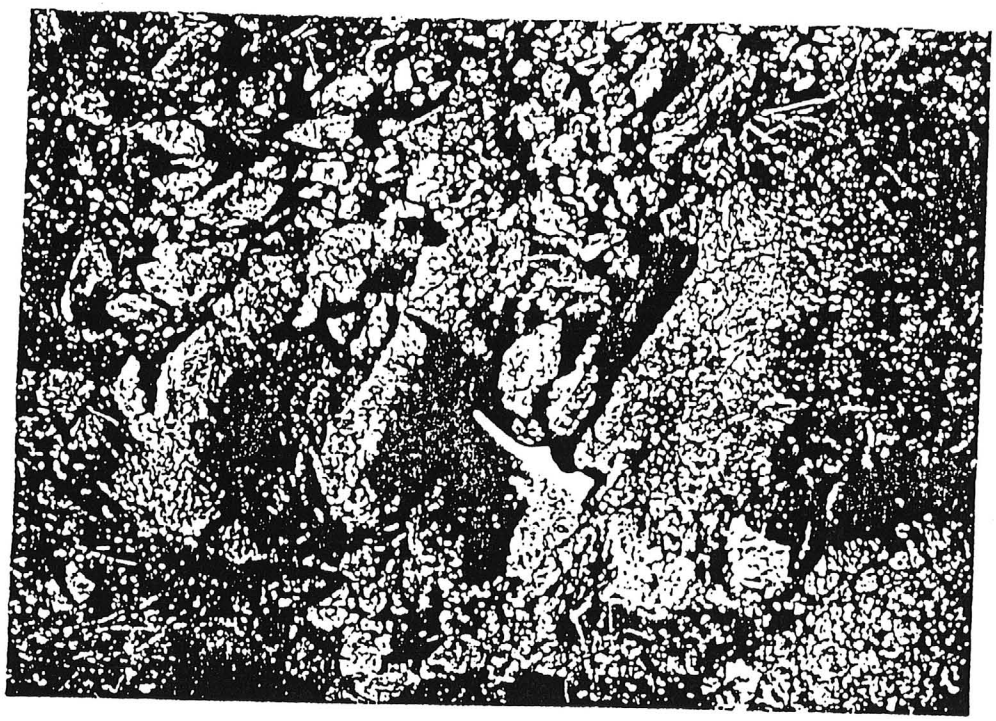


Plate 6: Pegmatite Dyke
Location - 4+00S, 0+50W

include a large synclinal nose centered at 0+00 N & 22+00 E and another co-axial to the most easterly mafic flow sequence (Map Unit 1). These two folds appear to cause large amplitude replications of the stratigraphy in the area. Their interpretation, however, is made difficult by the abrupt interfingering of volcanic flows.

The "Footwall Fault" (FWF) extends from the northwest corner of the map area toward the Pinafore shaft. To a large extent, the fault has been obliterated by Map Unit 6; however, its presence can be documented by the offset portion of the Bridle Formation (Map Units 1 and 1a).

Several other faults exist in the area, including the "Hanging Wall Fault" (HWF). The HWF is traceable along topographic depressions throughout the northern portion of the map area. Unlike the FWF, the HWF does not appear to have a significant offset.

5.0.4 Hydrothermal Wall-Rock Alteration

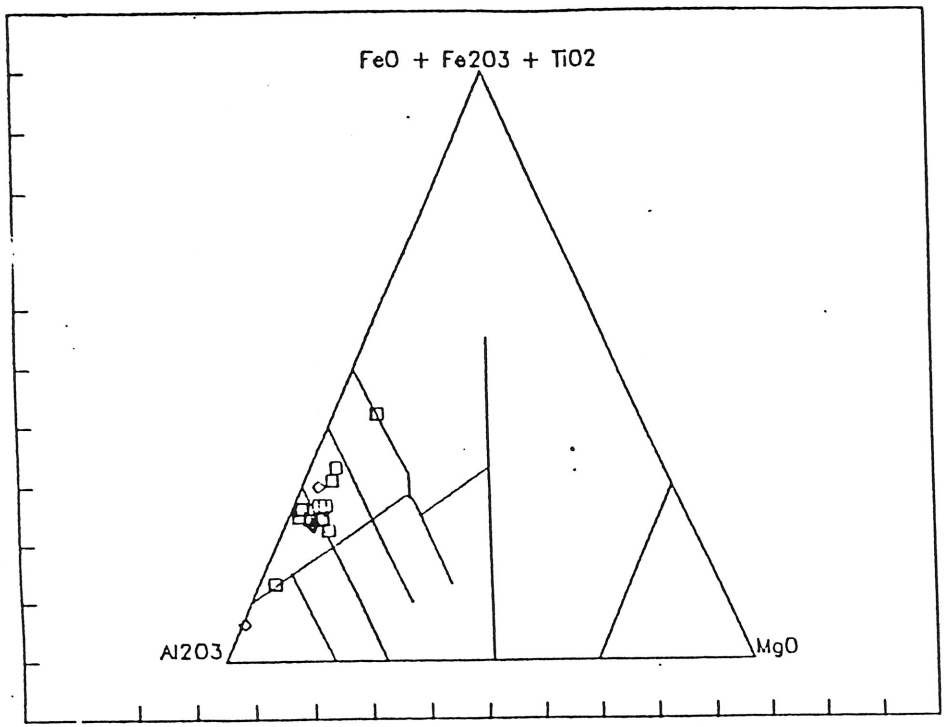
Three areas of significant hydrothermal wallrock alteration occur in the area. The most important of these is centered on the Pinafore Property and extends for over 3,000' in length (Map 273-33-1). The alteration is mappable in the hanging wall of the quartz-sericite unit as pronounced sericitization and lesser amounts of silicification and FeOx. The alteration terminates to the south against an intrusive contact and terminates to the north in a large synclinal structure.

The second largest area of hydrothermal alteration occurs in the northwest corner of the map area. It differs in that the alteration straddles the Bridle/Dick Formation contact. Hydrothermal alteration manifests itself as sericitization in the Dick Rhyolite and as garnet+sericite+chlorite-bearing assemblages in the Bridle Formation.

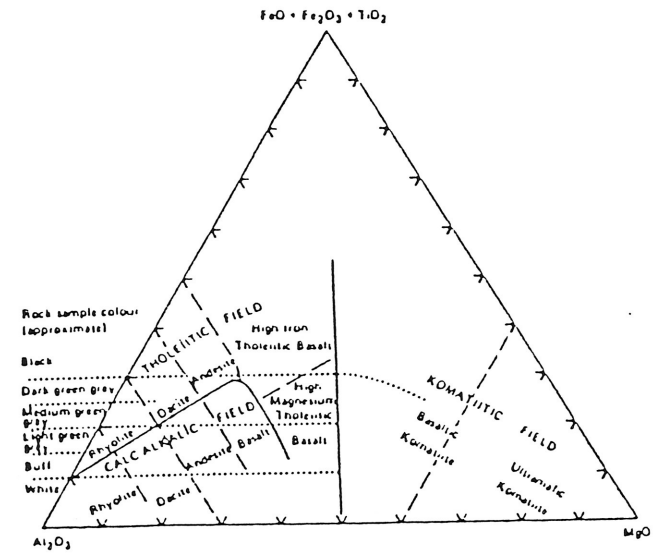
The third, and areally less extensive zone of hydrothermal alteration, occurs at 24+00 S&10+00 W. Although not as impressive as the former two areas, it is important because it may be the folded equivalent of the Pinafore mineralization. Further evidence of this is suggested by the link between the only two areas of outcropping Cu-Zn mineralization in the map area and a hypothetical structure tentatively named the "Pinafore Syncline" separating the two mineral occurrences. This area is typified by intense sericitization in Map Units 3 & 4.

5.0.3 - Detailed Geology of the Eureka Claim

Map 273-33-2 illustrates the detailed geology of the Eureka Claim at a scale of 1"=50'. The map demonstrates that the immediate footwall and hanging wall (Map Unit 3) of the quartz-sericite schist unit are identical in composition contradictory to that shown in the drill hole geochemistry. A Jensen Cation Plot (Figure 7) demonstrates the similar nature of the hanging wall and footwall volcanic rocks. Compositionally, the majority of the



After Jensen, 1976



Explanation

◊ Footwall to quartz-sericite schist unit

□ Hanging wall to quartz-sericite schist unit

PLACER DOME U. S. INC
ROCKY MOUNTAIN DISTRICT

PROJECT NO. 273

PINAFORE PROJECT

Jensen Plot figure 8

Yavapai County, Arizona

DATE: 09/15/92	DWG BY: J.G. DRAWN BY:	DWG NO. PINAFORE PINLOC.dwg
SCALE: NO SCALE	NTS REF. N/A	

rocks are rhyolitic to rhyodacite and plot in the tholeiitic field. Location of the samples is shown on Map 273-33-2 and data appears in Appendix II of this report.

The quartz-sericite schist unit (Map Unit 2) is intensely drag-folded adjacent to the FWF. The Pinafore Shaft is located on the largest amplitude fold, which plunges vertically on surface. Intense sericite, lesser silicification and FeOx alteration extend into the hanging wall of Map Unit 2. This alteration appears in all the subsurface drill holes, but is not mineralized. Throughout the hanging wall sequence (Map Unit 3) So (primary banding) can be mapped and mimics folding in the quartz-sericite schist (Map Unit 2).

The quartz-sericite schist unit pinches out to the NE on the Eureka Claim but continues south. It should be noted that Drill Hole PIN-07 appears to have overshot the quartz-sericite schist unit. No drill holes have tested the quartz-sericite schist south of the Pinafore shaft.