



CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
520-770-3500
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

The following file is part of the
James Doyle Sell Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

WLK
105 ✓

M. F. DIBBLE, P. E. (Penna)
CONSULTING MINERALS ENGINEER

8537 EAST SAN MIGUEL

602-945-6023

SCOTTSDALE, ARIZONA 85253

February 12, 1973

Copper Camp Creek Prospect- Mad Claims

The Mad group of 22 claims is located in the Mazatzal Wilderness area 50 miles N. E. of Phoenix, Arizona. Mr. R. B. Rodney and I staked these claims in late 1970. The property was originally discovered in the 1890's by an English company who conducted surface exploration work until about 1919. They sank a series of shallow shafts and dug several crosscuts.

The mineralization is associated with a felsic rhyolite intrusion into a portion of the precambrian pinal-yavapai schist. The rhyolite has in turn been intruded by an andesite dike. The zone of alteration appears to cover an area of 2,000 by 8,000 feet, and appears to extend under some flat lying, recent volcanics to the northwest. The dip of the contact of the rhyolite schist on the southeast, and a brecciated portion of the rhyolite on the northwest, indicates the intrusive mass increases in width in depth. Isolated islands of schist are found surrounded in some portions of the rhyolite.

Substantial copper oxides are present on the surface. Dump material from the old workings also show appreciable oxides. Rock brought to the surface from one of the old shafts is highly silicified and has a monzonite porphyry texture.

Although the property is in the wilderness area it has been examined by a forest service mineral examiner in October, 1967. The brief of his recommendations to the forest service is as follows; "It is my opinion, as a Mining Engineer, the mineralization exposed on the subject claims (formerly called Copper Cliff) warrants exploration drilling to investigate the possible existence of underlying secondary enriched ore. Such exploratory drilling can be accomplished with a minimum of soil disturbance".

We have submitted a proposal to the forest service requesting permission to construct a jeep road into the property and to use power equipment for an exploration program. We proposed a program involving geological mapping, geochemical sample taking, and geophysical surveying using induced polarization. A drilling program was also proposed with a minimum of 3,000 feet of drilling in three holes.

We feel that with the above surface indications a well conceived exploration program could possibly lead to economic concentrations of copper ore.

ASARCO

Maricopa Co

Exploration Department
Southwestern United States Division

February 2, 1978

Mr. Paul L. Rupard
Sr. Vice President
MH of AMM, Inc.
216 West Cody Drive, #C-103
Phoenix, Arizona 85041

Dear Sir:

Your note with assays concerning the Sleepy Hollow #1 claim and mine area has been reviewed. I find that several of our people reviewed your property in 1972 and found similar geochemical samples in the narrow mineralized shear then exposed. The narrow zone is not of sufficient interest to our group.

I would appreciate further information on additional work that has been expended on the area exposing additional values if such work has been done.

Sincerely,


James D. Sell

JDS:1b

JDSell

Any interest?

Will you please
handle the reply.

FTG

9/1/77



A. SYNDBAD.

P.O. Box: 746

APACHE-JET,

ARIZ. 85220

Dear Sir:

The herein described mineral claims are for immediate sale or a lease with an option to buy. They consist of 8 unpatented, contiguous claims. (A total of 160 acres). And they are located alongside Route 88, (a surfaced highway), in Township 1 N, R. 8 E., in Sections 10 and 11 in Pinal County of Arizona, about 4 miles N. E. of Apache Junction. Every part of said claims is traverseable by a Jeep, and all existent dirt roads upon them by any type of car ! There has been no prior production of minerals from these claims. I hold them upon annual assessment labors since 1958. The water level, according to the topography, lies between 30 to 150 feet. A volcanic dyke traverses the entire length (3,000) of the claims, which itself was intruded again during the Laramide period. The silver veins occur in consolidated alluvial material, which overlies a quartz monsonite, (or similar) granitic rock formation. This overburden varies in thickness from zero to an estimated depth of 200 feet.

The property is in need of further exploratory drilling in order to ascertain the quantum of available ore at lower levels than have so far been reached by shafts and percussion drilling. Fine pyrites occur widely throughout the alluvial, from about 40 feet on downward ! Numerous veins, criss-crossing the claims, indicate a strong intrusive zone in the underlying baserock. (Which, to my estimation, is merely indicative of an apex which leads downward into a large copper sulphide ore-body at a depth of approximately 1000 to 1500 feet). I base these conjectures upon my close familiarity with the general geology of the surrounding district, the claims proximity to now idle, but once productive mines, their ores, and the numerous mineral outcrops in prospects along a 6 mile strike. The idle mines referred to were: The Mammoth, the Black Queen, the Palmer, and the Bulldog.

Hoping to have the pleasure of your reply, I am

Respectfully yours,

A. Syndbad.

A. Syndbad

P.O. Box 746,
Apache Junction,
Arizona. 85220

RECEIVED
SEP 1 1977
S. W. U. S. EXPL. DIV.

REED ENGINEERING
 2166 COLLEGE AVENUE
 COSTA MESA, CALIF. 92627

CERTIFICATE OF ANALYSIS

A. Syndbad
 P.O. Box 746
 Apache, Az 85220

APR 26 1977

DATE _____ 19__

Sample No: 2 *from Vein on No 2 Claim*
" No 3.
 Assay

	Oz/ton	Oz/cu yd	Val/ton	Val/cu yd	
Gold	0.005	0.008	\$0.75	\$1.19	@\$149/oz
Silver	20.16	35.19	\$95.76	\$167.15	@\$4.75/oz
Platinum	Less than 0.005				

This sample was diluted with at least 4 times its volume with waste material! It represents the cuttings from an down the hole rock drill bit. (Not a core sample!) Values in Zinc are shown on separate Assay report. The vein was intersected at 47' below the surface.

*not tested
 **not available

ASSAYER

P. Reed

742602

IRON KING ASSAY OFFICE
ASSAY CERTIFICATE

BOX 14 - PHONE 632-7410
 HUMBOLDT, ARIZONA 86329



ASSAY
 MADE
 FOR

A. Syndbad
 P.O. Box 746
 Apache Jct., Ariz. 85220

May 18, 1977

Ref No	DESCRIPTION	oz/ton Au	oz/ton Ag	% Fe	% Pb	% Zn	% Cu
75-11-3							
75-11-3	B-2	1.784					
75-11-4	Small sample		11.19				
75-14-1	A-1	1.826					
<i>This is the Assay from the # 9 vein at 64' depth.</i>							
<i>B-2 and A-1 are samples from the # 1406 pit.</i>							
<i>It is the vein which assayed \$6,- per ton on the surface.</i>							
<i>Vein is on Ruth No 2 Claim, (a diluted sample!)</i>							

CHARGES \$12.00 paid

ASSAYER _____

REED ENGINEERING
2166 COLLEGE AVENUE
COSTA MESA, CALIF. 92627

CERTIFICATE OF ANALYSIS

A. Syndbad
P.O. Box 746
Apache, Az 85220

DATE APR 28 1977 19

Assay

<u>Sample No:</u>	<u>Zinc</u>	<u>Lbs/ton</u>	<u>Lbs/cu.yd.</u>
#2	7.55%	151.0	263.6

FROM VEIN No 3 ON THE
RUTH No 2 CLAIM.
47 feet below the surface.

P. Reed
ASSAYER

JDS + WAK

I think The mystery is solved.
WIK + GWP looked at The
"GOLDEN HILLSIDE" property of
S + S Minerals. Buchella is
The one who talked w/SAA.

Golden Hillside is in T2N,
R8E, Sec. 25 + 26 - Maricopa
Co.

Mammoth Mine is in
T1N, R8E, Sec. 1 - Pinal Co.

Both in Superstition Mining Dist.

August 19, 1982

MEMORANDUM TO: W. L. Kurtz

Re: S & S Minerals
Gold Prospect near Apache
Junction, Arizona

While attending a recent meeting with B.S.&K. Mining Company representatives and their consultant, Frank Buchella, Buchella mentioned that he was currently supervising a drilling project for S & S Minerals in the Apache Junction area of Arizona. S & S Minerals is a "consortium of Washington, D.C. money".

Buchella indicated that the prospect lies near the old "Golden Slope" (?) vein deposits. He casually described the prospect as an accumulation of conglomerate, graywacke and arkosic material that has been silicified and altered by solutions, probably introduced along faults that host the old vein structures that were mined in years past. He believes there might be in excess of 1,000,000 tons of open-pit material averaging ± 0.12 oz. Au and $+10$ oz. Ag per ton. The Au/Ag values are "disseminated throughout the conglomeritic arkosic mass". He said the limits of the deposit have not been determined.

Buchella is a registered professional mining engineer in Arizona who worked for Union Oil's Minerals Exploration Department in years past. He is not, however, familiar with the subtleties of epithermal precious metal deposits. When asked if some of the silica in the deposit was banded or opalescent, he said without hesitation that it was.

From Buchella's comments, and the amount of drilling completed, this does not sound like just another Superstition Mountains gold mine promotion. You may already be familiar with this deposit, but if not, perhaps it might be worthwhile having one of your people look into it.


S. A. Anzalone

SAA: jm

cc: ~~JDSEH~~

*See report by GWP & WLC
ASARCO sampling did not confirm the highest assays reported
all were very low.*

ASARCO

Exploration Department
Southwestern United States Division
James D. Sell
Manager

March 16, 1984

Mr. Scott Hazen, Jr.
9605 Campana Drive
Sun City, AZ 85351

MPH Lode Claims
Woolsey Peak Mining District
Maricopa County, AZ

Dear Mr. Hazen:

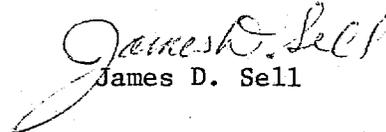
Attached is a certified copy of the gold-silver values from the five samples collected with you on February 13, 1984. The sample numbers correspond to the sites where you had also previously collected a sample.

As noted, Skyline used the sensitive fire assay plus atomic absorption with the 0.002 ppm Au and 0.2 ppm Ag sensitivity.

With these low values Asarco would not be doing additional sampling of this area unless the forthcoming Pt-Pd values for MPH 4 would justify such work. The Pt-Pd work is being done in Denver and the results will be mailed to you upon receipt.

Mr. Kurtz and I thank you for your guidance and information on this area and look forward to meeting you again.

Sincerely,


James D. Sell

JDS/cg

Attachment

cc: WLKurtz
TCOsborne

March 20, 1984

T. C. Osborne
New York Office

Scott Hazen, Jr. Submittal
MPH Lode Claims
Woolsey Peak Mining District
Maricopa County, AZ

Attached is my letter to Mr. Scott Hazen concerning his claim block in central Arizona west of Phoenix. This submittal had originally been sent to the New York Office and was forwarded to W. L. Kurtz.

Mr. Kurtz and I visited the area and collected the samples as noted. The area is mapped on the county maps as Precambrian Granite and that is what ASARCO geologists would also call it, though it is recognized that it is made up of other materials which were converted to a granitoid texture in the dim past. Some resurgent cases of the Tertiary calderas here in Arizona, such as down in the Chiricahua National Monument, also become "granitoid" in texture but can be shown to be part of the ash flow sheet sequence.

The platinum-palladium values will be sent to Hazen upon their receipt.

James D. Sell
James D. Sell /g

JDS/cg
Attachments
cc: WLKurtz

ORDER FOR ANALYTICAL SERVICES

T.A.J 334

Samples Sent to:

SKYLINE LABS, INC.

P.O. BOX 50106 • 1700 WEST GRANT ROAD
TUCSON, ARIZONA 85703
(602) 622-4836

(Report and invoice in duplicate will be sent to address below unless otherwise instructed)

Address Report To:

JAMES D. SELL
SWEED, ARIZONA INC.
PO Box 5747
TUCSON, AZ 85703

Tel. 792-3010

P.O. NO.: _____
SHIPMENT NO.: 2/21/84
DATE SHIPPED: _____
SHIPPED VIA: hand
NO. OF CARTONS: _____
NO. OF SAMPLES: 5
(Information above helps us trace lost shipments)

Send Invoice To: _____

Send Copy of Report To: W. Kuntz
San - Gold - Pgs

LIST SAMPLE NOS.	DESCRIBE MATERIAL	LIST ELEMENTS TO BE DETERMINED (Give anticipated range of values, if possible) Describe any special sample preparation procedures desired.	INDICATE METHOD OF ANALYSIS*	✓ IF 31 - ELEMENT EMISSION SPEC SCAN DESIRED
<u>MPH-Semi</u>	<u>Au Rock Ag</u>	<u>Au-Ag by Fire-AA method</u>		
<u>- 4</u>	<u>0008 chip 40.2</u>	<u>< 0.002</u>		
<u>- 5</u>	<u>20.002</u>			
<u>- 9</u>	"			
<u>- 14</u>	"			
<u>- 117</u>	"			
<p style="font-size: 1.5em; font-family: cursive;">Take highest Au results and see for Pt - Pb</p> <p style="font-size: 1.5em; font-family: cursive;">Thanks</p>				

PAYMENT FOR SERVICES REQUESTED MUST ACCOMPANY ORDER UNLESS CREDIT ARRANGED

Signature of person authorizing work: James D. Sell

(Use Continuation Sheet If Necessary)

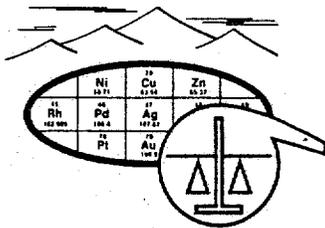
INSTRUCTIONS

*METHOD OF ANALYSIS: G-Geochem, Q-Quantitative or Routine Assay
W-Wet Assay, F-Fire Assay

†SAMPLE STORAGE: Pulps stored 90 days pending instructions, bulk rejects stored 30 days pending instructions.

Enclose yellow original with samples, send white copy by mail, retain pink copy. White copy will be returned to shipper as an acknowledgement that shipment has been received.

INDICATE DESIRED DISPOSITION OF SAMPLES AFTER ANALYSIS	Bulk Rejects	Pulp
Return at customer's expense via:		
Store temporarily pending instructions†	<u>collect with pulp</u>	
Discard immediately		



SKYLINE LABS, INC.
 1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

INVOICE
 NET 30 DAYS

JOB NO. TAJ 336
 March 15, 1984
 MPH 4 TO MPH 117

ASARCO INCORPORATED
 Attn: Mr. James D. Sell
 Southwestern Exploration
 P.O. Box 5747
 Tucson, Arizona 85703

Analysis of 5 Rock Chip Samples

5 Au (ppm)	@ \$ 9.00**\$	45.00
5 Ag (ppm)	@ \$ 2.48**\$	12.40
5 Samples crushed, split and pulverized	@ \$ 2.40\$	12.00
TOTAL \$			69.40

** Quantity discount

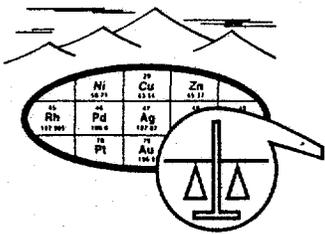
RECEIVED
 MAR 16 1984
 S. W. U. S. EXPL. DIV.

APPROVED FOR PAYMENT
 By: James D. Sell
 (Signature)
 Gen. Exp.

Charles E. Thompson
 Arizona Registered Assayer No. 9427

William L. Lehbeck
 Arizona Registered Assayer No. 9425

James A. Martin
 Arizona Registered Assayer No. 11122



SKYLINE LABS, INC.
1775 W. Sahuaro Dr. • P.O. Box 50106
Tucson, Arizona 85703
(602) 622-4836

INVOICE
NET 30 DAYS

JOB NO. TAJ 336
March 15, 1984
MPH 4 TO MPH 117

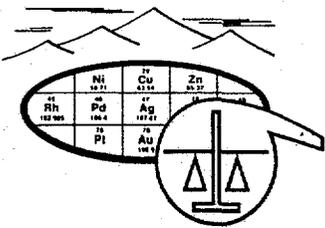
ASARCO INCORPORATED
Attn: Mr. James D. Sell
Southwestern Exploration
P.O. Box 5747
Tucson, Arizona 85703

Analysis of 5 Rock Chip Samples

5 Au(ppm)	@ \$ 9.00**.....\$	45.00
5 Ag(ppm)	@ \$ 2.48**.....\$	12.40
5 Samples crushed, split and pulverized	@ \$ 2.40.\$	12.00
TOTAL \$		69.40

** Quantity discount

DUPLICATE INVOICE



SKYLINE LABS, INC.
 1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

REPORT OF ANALYSIS

JOB NO. TAJ 336
 March 15, 1984
 MPH 4 TO MPH 117
 PAGE 1 OF 1

ASARCO INCORPORATED
 Attn: Mr. James D. Sell
 Southwestern Exploration
 P.O. Box 5747
 Tucson, Arizona 85703

S. Hezen
Hilltop Mine
Morongo Co.

Analysis of 5 Rock Chip Samples

ITEM	SAMPLE NUMBER	Au* (ppm)	Ag (ppm)
1	MPH 4	.008	<.2
2	MPH 5	<.002	<.2
3	MPH 9	<.002	<.2
4	MPH 14	<.002	<.2
5	MPH 117	<.002	<.2

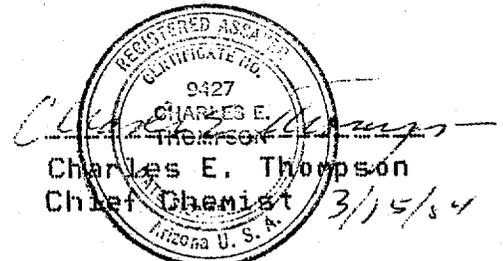
*NOTE: Method of analysis by combination
 fire assay and atomic absorption.

cc: Asarco Incorporated
 Attn.: Mr. W.L. Kurtz
 Southwestern Exploration
 P.O. Box 5747
 Tucson, Arizona 85703

RECEIVED

MAR 16 1984

S. W. U. S. EXPL. DIV.



Charles E. Thompson
 Arizona Registered Assayer No. 9427

William L. Lehmbeck
 Arizona Registered Assayer No. 9425

James A. Martin
 Arizona Registered Assayer No. 11122

FROM: J. D. SELL

12/13/83

TO: Fleetwood

What do the NOR 5 & 6
Samples represent?

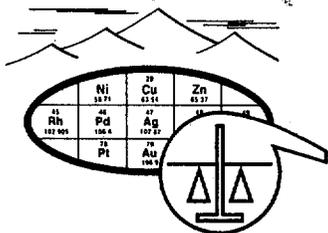
- vein/mineralized material

From Dumps. - not high graded
But not repres. of Dumps volume
Either.

NOR 5 - T Py, wk silicif
Local MnOx + malachite

NOR 6 B/E to the calc. - box - late
~~calc~~ Calcite - calcedonic
coverings

Next follows



SKYLINE LABS, INC.
 1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

REPORT OF ANALYSIS

JOB NO. TAJ 328
 December 8, 1983
 SHIPMENT NO. 1
 NOR 1-8

ASARCO INCORPORATED
 Attn: Mr. Fleetwood R. Koutz
 Southwestern Exploration
 P.O. Box 5747
 Tucson, Arizona 85703

*Ruth Claims
 Goldfield, AZ*

Analysis of 7 Rock Chips and 1 Drill Cutting Sample

ITEM	SAMPLE NO.	Au (ppm)	Ag (ppm)
1	NOR 1	<.02	.2
2	NOR 2	<.02	<.2
3	NOR 3	<.02	<.2
4	NOR 4	<.02	<.2
5	NOR 5	<.02	30.0
6	NOR 6	<.02	40.0
7	NOR 7	<.02	1.2
8	NOR 8	<.02	.6

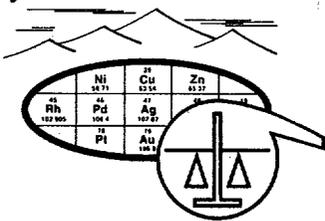
cc: Asarco Incorporated
 Southwestern Exploration
 P.O. Box 5747
 Tucson, Arizona 85703
 Attn.: Mr. James D. Sell

RECEIVED

DEC 12 1983

S. W. U. S. EXPL. DIV.





SKYLINE LABS, INC.
1775 W. Sahuaro Dr. • P.O. Box 50106
Tucson, Arizona 85703
(602) 622-4836

REPORT OF SPECTROGRAPHIC ANALYSIS

JOB NO. TAJ 328
December 8, 1983
SHIPMENT NO. 1
NOR 1-8

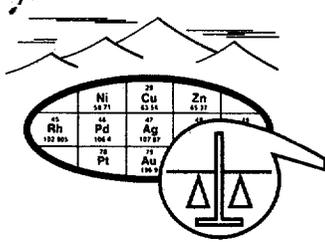
ASARCO INCORPORATED
Attn: Mr. Fleetwood R. Koutz
Southwestern Exploration
P.O. Box 5747
Tucson, Arizona 85703

Analysis of 6 Samples

The attached pages comprise this report of analysis. Values are reported in parts per million (ppm), except where otherwise noted, to the nearest number in the series 1, 1.5, 2, 3, 5, 7, 10, etc. within each order of magnitude. These numbers represent the approximate boundaries and midpoints of arbitrary ranges of concentration differing by the reciprocal of the cube root of ten. The 'accepted' value is considered to be within + or - 1 step of the range reported at the 68 % confidence level and within + or - 2 steps at the 95 % confidence level.

[Handwritten Signature]
WILLIAM L. LEHMBECK
Manager
REGISTERED ASSAYER
CERTIFICATE NO. 9425
AZ. SIGNED
Arizona U.S.A.

RECEIVED
DEC 12 1983
S. W. U. S. EXPL. DIV.



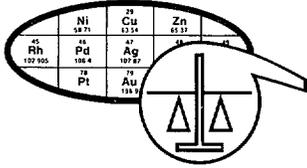
SKYLINE LABS, INC.

1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. TAJ 328
 PAGE 2

ITEM NO. SAMPLE NO.
 1 = NOR 1
 2 = NOR 2
 5 = NOR 5
 6 = NOR 6
 7 = NOR 7
 8 = NOR 8

ITEM	1	2	5	6	7	8
ELEMENT						
Fe	7%	10%	2%	.2%	3%	2%
Ca	>20%	5%	3%	>20%	7%	3%
Mg	3%	5%	.7%	.2%	1%	.5%
Ag	<1	<1	30	50	<1	<1
As	<500	<500	<500	<500	<500	<500
B	<10	<10	<10	<10	<10	<10
Ba	700	700	300	200	500	500
Be	<2	<2	<2	<2	<2	2
Bi	<10	<10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	20	50	<5	<5	<5	<5
Cr	200	500	150	<10	150	150
Cu	30	100	1000	10	10	10
Ga	<10	15	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20
La	50	20	<20	<20	<20	<20
Mn	3000	700	1000	>10000	1000	700
Mo	<2	<2	<2	<2	<2	<2
Nb	<20	20	<20	<20	<20	<20
Ni	150	500	<5	<5	<5	<5
Pb	10	<10	20	700	15	15
Sb	<100	<100	<100	<100	<100	<100
Sc	15	30	<10	<10	<10	<10
Sn	<10	<10	<10	<10	<10	<10
Sr	300	500	<100	<100	<100	<100
Ti	5000	10000	2000	150	3000	2000
V	100	200	50	50	30	30
W	<50	<50	<50	<50	<50	<50
Y	15	15	10	10	<10	<10
Zn	<200	<200	200	1000	<200	200
Zr	50	100	100	<20	70	100



SKYLINE LABS, INC.
 1775 W. Sahuaro • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

REPORT OF ANALYSIS

JOB NO. TAJ 291
 July 26, 1983
 H.G. KREIS
 GF-1 THRU GF-C-15
 Page 1 of 3

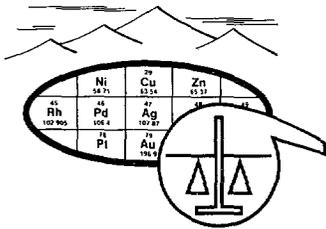
ASARCO INCORPORATED
 Attn: Mr. H.G. Kreis
 Southwestern Exploration
 P.O. Box 5747
 Tucson, Arizona 85703

Goldfield, Maricopa Co. AZ
Mammoth Mine

Analysis of 50 Rock Chips and 12 Drill Cutting Samples

ITEM	SAMPLE NO.	Au (ppm)
1	GF-1	.07
2	GF-2	.15
3	GF-3	.28
4	GF-4	.23
5	GF-5	.97
6	GF-6	.23
7	GF-7	.04
8	GF-8	.18
9	GF-9	.40
10	GF-10	.28
11	GF-11	.10
12	GF-12	<.02
13	GF-13	<.02
14	GF-14	.09
15	GF-15	<.02
16	GF-16	<.02
17	GF-17	<.02
18	GF-18	.12
19	GF-19	.03
20	GF-20	.09
21	GF-21	.04
22	GF-22	<.02
23	GF-23	.04
24	GF-24	.26
25	GF-25	.04

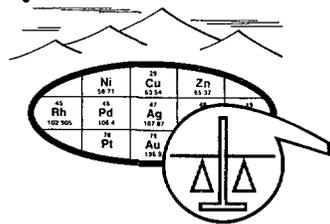
RECEIVED
 JUL 28 1983
 S. W. U. S. EXPL. DIV.



SKYLINE LABS, INC.
1775 W. Sahuaro • P.O. Box 50106
Tucson, Arizona 85703
(602) 622-4836

JOB NO. TAJ 291
July 26, 1983
PAGE 2

ITEM	SAMPLE NO.	Au (ppm)
26	GF-26	1.90
27	GF-27	.08
28	GF-28	.47
29	GF-29	<.02
30	GF-30	.12
31	GF-31	<.02
32	GF-32	.82
33	GF-33	.15
34	GF-34	.52
35	GF-35	.12
36	GF-36	<.02
37	GF-37	<.02
38	GF-38	.31
39	GF-39	1.20
40	GF-40	<.02
41	GF-41	<.02
42	GF-42	<.02
43	GF-43	<.02
44	GF-44	<.02
45	GF-45	.03
46	GF-46	<.02
47	GF-47	<.02
48	GF-48	<.02
49	GF-49	<.02
50	GF-50	1.20

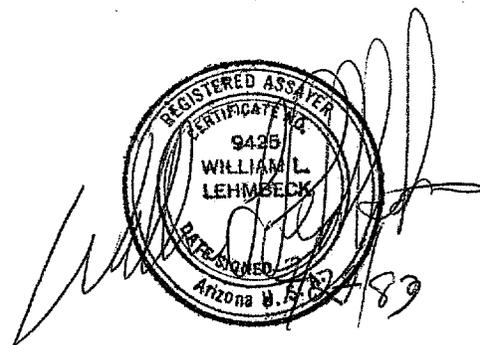


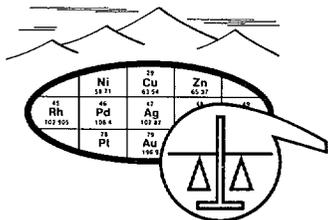
SKYLINE LABS, INC.
 1775 W. Sahuaro • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. TAJ 291
 July 26, 1983
 PAGE 3

ITEM	SAMPLE NO.	Au (ppm)
51	GF-A-12	1.60
52	GF-A-23	1.20
53	GF-A-24	.60
54	GF-A-25	.49
55	GF-A-26	1.10
56	GF-A-27	.10
57	GF-A-28	.05
58	GF-B-5	1.80
59	GF-B-6	1.30
60	GF-C-13	.40
61	GF-C-14	1.40
62	GF-C-15	.20

cc: Asarco Incorporated
 Southwestern Exploration
 P.O. Box 5747
 Tucson, Arizona 85703
 Attn.: Mr. James D. Sell





SKYLINE LABS, INC.
1775 W. Sahuaro • P.O. Box 50106
Tucson, Arizona 85703
(602) 622-4836

REPORT OF SPECTROGRAPHIC ANALYSIS

JOB NO. TAJ 291
July 26, 1983
H.G. KREIS
GF--1 THRU GF-C-15

ASARCO INCORPORATED
Attn: Mr. H.G. Kreis
Southwestern Exploration
P.O. Box 5747
Tucson, Arizona 85703

Analysis of 6 Composite Samples

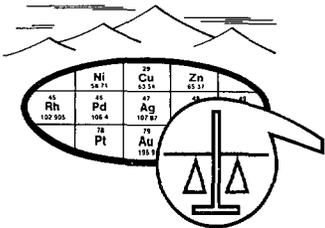
The attached pages comprise this report of analysis. Values are reported in parts per million (ppm), except where otherwise noted, to the nearest number in the series 1, 1.5, 2, 3, 5, 7, 10, etc. within each order of magnitude. These numbers represent the approximate boundaries and midpoints of arbitrary ranges of concentration differing by the reciprocal of the cube root of ten. The 'accepted' value is considered to be within + or - 1 step of the range reported at the 68 % confidence level and within + or - 2 steps at the 95 % confidence level.

William L. Lehmbeck
Manager
Arizona

RECEIVED

JUL 28 1983

S. W. U. S. EXPL. DIV.

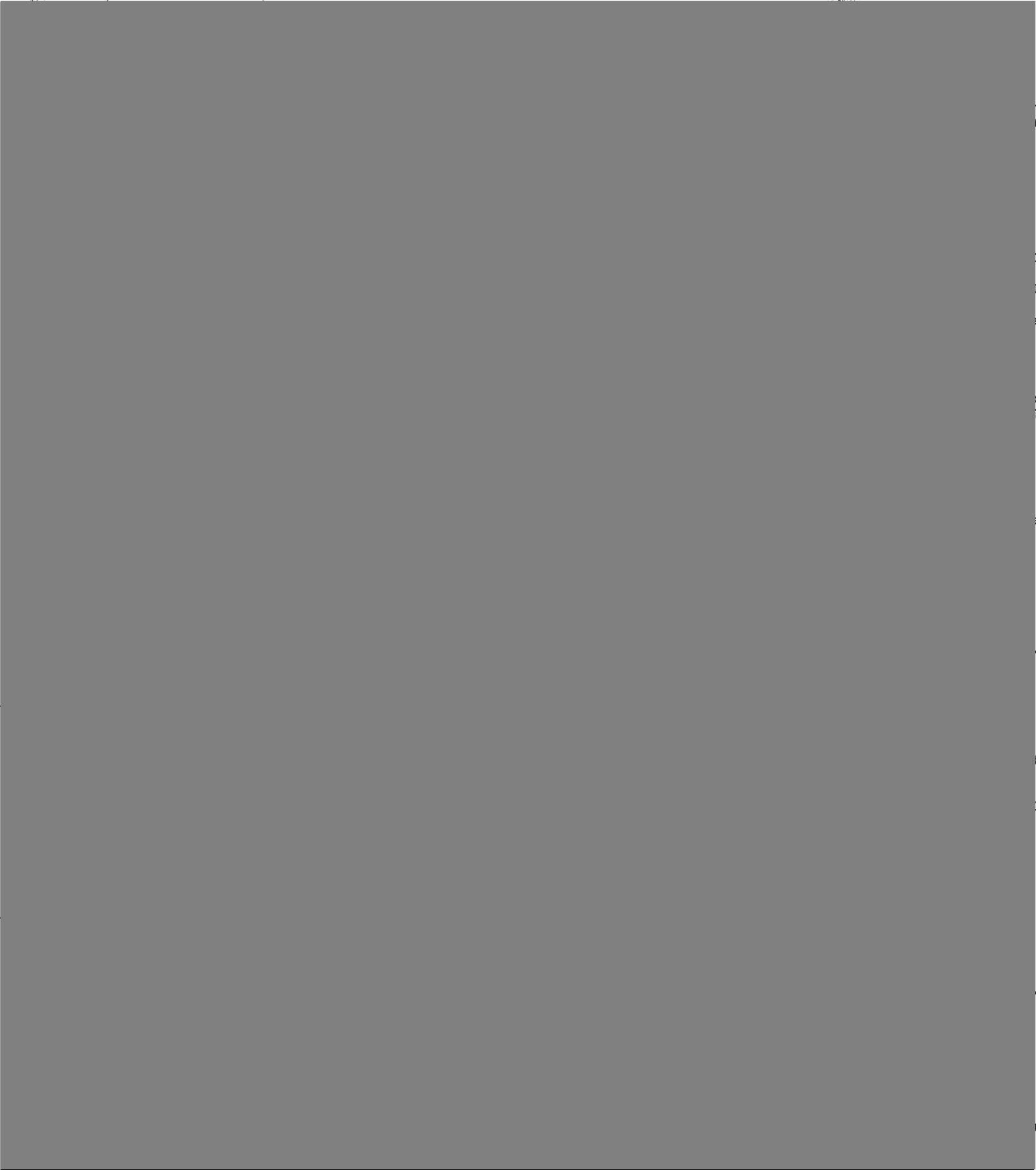


SKYLINE LABS, INC.
 1775 W. Sahuaro • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. TAJ 291
 PAGE 2

ITEM NO. SAMPLE NO.
 63 = COMP (GF-1, 2)
 64 = COMP (GF-3, 4, 38, 39, 40)
 65 = COMP (GF-21, 22, 46, 47)
 66 = COMP (GF-33, 34, 35, 36, 37)
 67 = COMP (GF-28, 29, 30)
 68 = COMP (GF-23, 24, 25)

ITEM	63	64	65	66	67	68
ELEMENT						
Fe	2%	3%	3%	3%	3%	3%
Ca	.15%	1%	3%	.7%	2%	2%
Mg	1%	1.5%	3%	1%	1.5%	.7%
Ag	1.5	3	5	<1	1.5	5
As	<500	<500	<500	<500	<500	<500
B	<10	<10	<10	<10	<10	10
Ba	500	500	500	500	500	500
Be	<2	<2	<2	<2	<2	<2
Bi	<10	<10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	<5	15	15	5	10	7
Cr	50	70	150	50	50	100
Cu	70	70	20	70	30	70
Ga	<10	<10	10	10	10	10
Ge	<20	<20	<20	<20	<20	<20
La	<20	30	20	<20	<20	<20
Mn	2000	3000	2000	2000	2000	700
Mo	7	2	<2	<2	<2	<2
Nb	<20	20	20	20	20	20
Ni	20	200	300	30	50	50
Pb	3000	2000	50	1500	200	3000
Sb	<100	<100	<100	<100	<100	<100
Sc	<10	10	10	10	<10	<10
Sn	<10	<10	<10	<10	<10	<10
Sr	<100	300	150	150	150	200
Ti	3000	3000	3000	3000	3000	3000
V	70	70	70	100	70	100
W	<50	<50	<50	<50	<50	<50
Y	15	10	10	20	10	10
Zn	3000	1500	200	1000	500	1000
Zr	100	70	100	100	100	100



n
y

D
It
ed

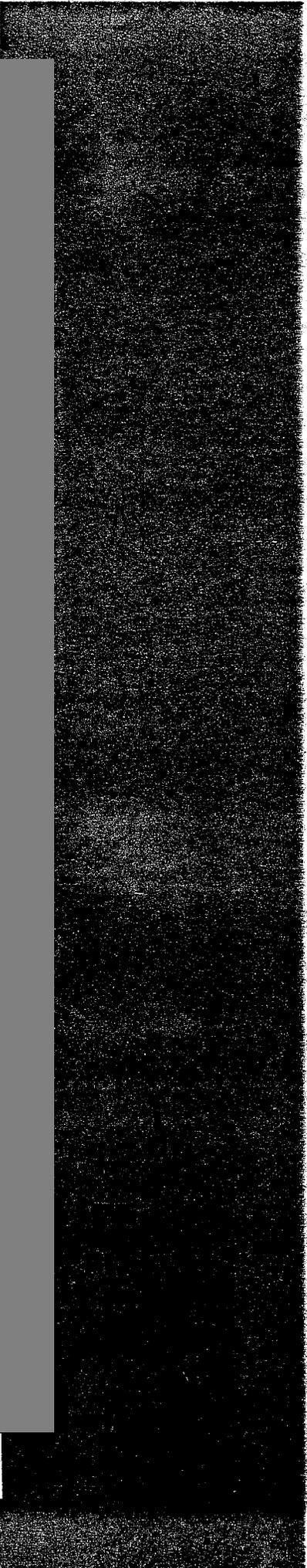
on
ly

en.

fr
00

n

7105



0617



ASARCO

Exploration Department
Southwestern United States Division
James D. Sell
Manager

August 21, 1984

Mr. Ben Dickerson 602-945-4630
President, DMEA
4203 North Brown Avenue
Suite F
Scottsdale, AZ 85251

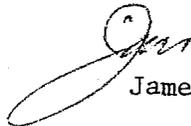
Dear Ben:

In reply to your request for data on the Portland Mine Area, Mohave County, Arizona, I submit the Asarco drilling map and the assay sheets for the holes.

The drilling was by rotary and the wet conditions caused abundant caving, hang-up, etc. so the assays should be treated as such. The apparent low grade and high stripping ratio are factors in the evaluation.

Stop by when you get down this way.

Sincerely,



James D. Sell

JDS/cg

Attachments

To J. D. Sell

ASARCO

DeCrowell
Comment

January 31, 1984

JDS

Exploration Department
Great Basin Division
Peter G. Vikre
Manager

Mr. Tom Fisher
4802 North 19th Avenue
Number A-154
Phoenix, AZ 85015

Dear Mr. Fisher:

Data on a precious metal deposit near Phoenix, AZ was forwarded to me by Dave Taylor of Omega Research in Reno, NV. In turn, I am forwarding the data to Mr. James D. Sell who is the manager of ASARCO's Southwestern Exploration Division in Tucson, AZ. Mr. Sell will contact you directly if he has further interest in your property.

Thank you for bringing this property to the attention of ASARCO.

Yours truly,

Peter Vikre
Peter G. Vikre

PGV/jn

cc: Mr. J. D. Sell/encl.

RECEIVED

FEB - 6 1984

S. W. U. S. EXPL. DIV.

DAVE & STEFFIE TAYLOR
Industrial Research
Mineralogy

Omega Research

P. O. Box 12936
Reno, NV 89510
(708) 329-0773

January 25, 1984

Mr. Peter Vickre
c/o Asarco Incorporated
Great Basin Exploration Division
510 East Plumb Lane
Reno, NV 89502

Dear Mr. Vickre:

Enclosed you will find information upon a very large area of desert sands in Arizona for your review and consideration. At this time as high as eleven (11) sections are open and of course this is subject to what occurs with other interested parties.

In the event this is of interest to your firm please contact:

Mr. Tom Fisher
4802 North 19th Avenue
Number A-154
Phoenix, AZ 85015 Telephone (602) 242-6315

I have known Tom Fisher for several years and can certainly recommend him as an astute person of the highest character and reliability.

I extend my best wishes for your success.

Yours Truly

Dave Taylor
Dave Taylor

Enclosures
DET/STT

p.c. Tom Fisher
File

JERRY L. KIRWAN B.Sc., P.E.

CONSULTING GEOLOGIST

12640 N. 70th St.
Scottsdale, Arizona 85254
(602) 991-0856

CONSULTING
EXPLORATION
ENGINEERING



SALIENT FEATURES OF KIRWAN PRECIOUS METALS OREBODY

1. THE KIRWAN OREBODY CONSISTS OF GOLD, SILVER, AND PLATINATE GROUP METALS CONTAINED IN FLAT MONOTONOUS DESERT SANDS ISOLATED IN NEWLY ACQUIRED BUREAU OF LAND MANAGEMENT MINERAL RIGHTS, ALL LOCATED NEAR THE CITY OF PHOENIX, ARIZONA, WITH EASY ACCESS THROUGHOUT.

2. ORE GRADE THROUGHOUT THIS MASSIVE PRECIOUS METALS OREBODY IS GREATER THAN 1/5 OUNCE GOLD PER TON OF SAND ALONG WITH 3-7 OUNCES SILVER PER TON PLUS MUCH PLATINATE METAL. (by comparison, E&MJ June '83 shows average of large open pit Nevada deposits to be 0.08 gold per ton with minor silver contribution. Newmont's famous Carlin deposit being only 0.044 gold per ton)

3. ORE GRADE HAS CHIEFLY BEEN DETERMINED BY NUMEROUS 100 POUND, RANDOMLY TAKEN, COMPOSITE ORE SAMPLES, SMELTED WITH NORMAL FLUXES DERIVING PRECIOUS METALS IN HAND. MORE RECENTLY, ORE GRADE DETERMINATIONS HAVE BEEN THROUGH STANDARDIZED BEAMISH WET CHEMICAL ASSAYS (W. Luegge, Lancaster, Ca.), SCORIFICATION ASSAY WITH SILVER INQUART, (Jerry Henderson, Chandler, Az.,) AND SOLVENT SOLUTIONS ASSAY METHODS (Fred Kircher, Medford, Ore.). ALL METHODS PRODUCE GOLD AND SILVER BEADS ATTACHED TO ASSAY CERTIFICATES. (Note: refractory elements in ore prevent normal fire assaying, atomic absorption methods, likely neutron activation methods from functioning properly)

4. USING STANDARD, WELL PROVEN METHODS, MILL FLOW SHEET FOR PRODUCTION OF THESE PRECIOUS METALS ORES HAS BEEN DETERMINED AND PRE-PRODUCTION TESTING PERFORMED. ALL-INCLUSIVE COST OF PROCESSING A TON OF HEAD CRUDE ORE SHOULD NOT EXCEED \$20.00 ON PRODUCTION OF 200 TONS PER DAY.

5. INITIAL STUDIES INDICATE GEOLOGICAL CONTROL TO BE HYDROGEO THERMAL, OR SUPERHEATED STEAM, ORIGINATING FROM PLUTON AT DEPTH. PRECIOUS METALS VALUES PERSIST TO SURFACE, THERE BEING NIL WASTE TO REMOVE ON PRODUCTION. EACH QUARTER SECTION OF OREBODY TO DEPTH 100 FT. CONTAINS OVER 40 MILLION TONS AND EMPLOYING ABOVE GOLD GRADE WOULD THUS CONTAIN 8 MILLION OUNCES GOLD.

6. TERMS PER QUARTER SECTION: 40 DAYS FREE EXAMINATION, THEREAFTER \$25,000 PER 90 DAYS WHICH CEASES ON PRODUCTION. 15% GROSS OVERRIDE ROYALTY FROM PRODUCTION.

JERRY L. KIRWAN B.Sc., P.E.
CONSULTING GEOLOGIST

12640 N. 70th St.
Scottsdale, Arizona 85254
(602) 991-0856



Nov. 16, 1983

RE: KIRWAN OREBODY GOLD

COKE REEVES OF COLORADO GOLD & SILVER, INC. TOOK THE FOLLOWING SAMPLES FROM SW QUADRANT OF SECTION 10, FROM A) 0-1.5 FT., B) 1.5 FT. TO 3 FT. WITH ASSAYS CHEMICAL DETERMINATIONS BY MR. FRED KIRCHER OF KIRCHER ORE AND REFINING CO., 4750 ANDREWS RD., MEDFORD, OREGON, 97501, 505/773-5775, REPUTED TO BE ONE OF BEST OF NORTH AMERICA'S METALURGISTS. (see Aug. 16/82 assays samples submitted by Geologist Michael Skopos) MR. KIRCHER IS CURRENTLY WORKING OUT MILL FLOW SHEET DEVELOPMENT. ALL ORE SAMPLES WERE SIEVED TO -10 HOUSE SCREEN SIZE:

ASSAY RESULTS: 0-1.5 ft. over 1.5-3 ft.

		GOLD	PT.	PAL.	RHOD.	CU.	MANGAN.
0-1.5 ft. Ke 41	0.69	1.99	0.33	0.053	0.003	0.0171	
1.5-3 ft.	0.68	1.66	0.29	0.052	0.003	0.0161	
42	0.70	1.47	0.24	0.044	0.005	0.0221	
	0.35	0.71	0.13	0.026	0.112	0.0209	
44	0.68	1.4	0.23	0.026	0.007	0.0123	
	0.47	1.05	0.22	0.035	0.006	0.0132	
43	0.88	1.86	0.29	0.048			
45							

All low silver
The above are in line with
W. Luegge's original assays

45	44
43	
KE41	42

BY TELEPHONE

ASSAY CERTIFICATE WITH
GOLD-SILVER BEARS TO
FOLLOW.

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

October 25, 1983

Mr. Reeves
Colorado Gold & Silver, Inc.
Brooks Tower, Suite 8K
1020 - 15th St.
Denver, CO 80202

* Note GRINDING WAS NOT SIEVED TO - 150 MESH - THUS CON FROM PAN OR TABLE LOWER THAN EXPECTED (SHOULD BE 200 AU. 200 OF 25) CON. RATIO IS NORMALLY

SUBJECT: Two (2) Samples - KE-1 & K-0 - Submitted By Mr. Reeves

28:1 -
not 30:1

Samples run by scorefire; assay with silver in-quart. Results:

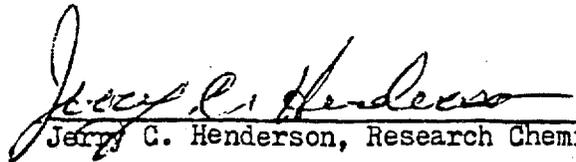
	Au Oz./Ton	Ag Oz./Ton
KE-1 Scorefire	0.40	14.70
K-0 Scorefire	0.35	16.83

Roasted 100 grams; grind and pan. Concentrate 3.3 grams. Assay results:

	Au Oz./Ton	Ag Oz./Ton
Cons	* 7.07	100.39
Raw Ore	0.23	3.01

30:1 con

Concentration - 33.33 to 1.


Jerry C. Henderson, Research Chemist

TOTAL CHARGE: \$100.00

PAID IN FULL



JERRY L. KIRWAN B.Sc., P.E.

CONSULTING GEOLOGIST

12640 N. 70th St.
Scottsdale, Arizona 85254
(602) 991-0856



Nov. 16, 1983

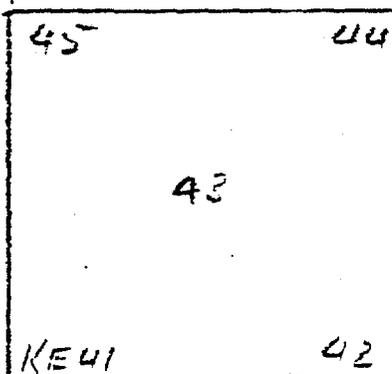
RE: KIRWAN OREBODY GOLD

COKE REEVES OF COLORADO GOLD & SILVER, INC. TOOK THE FOLLOWING SAMPLES FROM SW QUADRANT OF SECTION 10, FROM A) 0-1.5 FT., B) 1.5 FT. TO 3 FT. WITH ASSAYS CHEMICAL DETERMINATIONS BY MR. FRED KIRCHER OF KIRCHER ORE AND REFINING CO., 4750 ANDREWS RD., MEDFORD, OREGON, 97501, 505/773-5775, REPUTED TO BE ONE OF BEST OF NORTH AMERICA'S METALURGISTS. (see Aug. 16/82 assays samples submitted by Geologist Michael Skopos) MR. KIRCHER IS CURRENTLY WORKING OUT MILL FLOW SHEET DEVELOPMENT. ALL ORE SAMPLES WERE SIEVED TO -10 HOUSE SCREEN SIZE:

ASSAY RESULTS: 0-1.5 ft. over 1.5-3 ft.

		GOLD	PT.	PAL.	RHOD.	CU.	MANGAN.
0-1.5 ft. Ke 41	0.69	1.99	0.33	0.053	0.003	0.0171	
1.5-3 ft.	0.68	1.66	0.29	0.052	0.003	0.0161	
42	0.70	1.41	0.24	0.044	0.005	0.0221	
	0.35	0.71	0.13	0.026	0.112	0.0209	
44	0.68	1.4	0.23	0.026	0.007	0.0123	
	0.47	1.05	0.22	0.035	0.006	0.0132	
43	0.88	1.86	0.29	0.048			
45							

All low silver
The above are in line w
W. Luegge's original as.



BY TELEPHONE

ASSAY BEARING WITH
GOLD-SILVER BEARS TO
FOLLOW.

We specialize in the separation, analysis and refining of precious metals

Kircher Ore & Refining Co.

ORE ANALYSES & CONSULTING
P.O. BOX D • PHOENIX, OREGON 97535
PHONE (503) 773-8773

F. L. KIRCHER, President
B. S., Mich. S. U. 1946

J. R. KIRCHER, Vice-Pres.
Jmy. Ore Analyst
1975-1980

S. J. KIRCHER, Sec.-Treas.
B. S., Mich. S. U. 1970

Date: August 16, 1982

ASSAY REPORT

Submitted by : Michael Skopos

Address 5901 Moss Creek Circle

Fair Oaks, California 95628

I hereby certify that the samples described below assay as follows:

Owner's Mark and Sample No.	#8	# 10	#11	
Gold, oz./ton	.21	.21	.38	
Platinum, oz/ton	.315	.35	.565	
Palladium, oz.ton	.074	.063	.101	
Rhodium, oz/ton	.0041	.042	.038	
Iridium, oz/ton	trace	trace	trace	
Silver, oz/ton	.028	.042	.045	
Copper, %	.0041	.0051	.0031	
Manganese, %	.0274	.0314	.0324	
Sulfur,%	.1	.1	.1	
Iron, % (acid sol.)	3.27	3.85	3.75	
Magnetics, %	tr/0	3/0	1/0	
Worth/ton	243	267	427	

All elements are determined by total wet-chemistry analysis.

Fee: \$300, Paid

Au = \$325/ton
Pt = \$475/ton
Pd = \$100/ton
Rh = \$500/ton

Fred L. Kircher
Fred L. Kircher, Metallurgical Chemist

January 30, 1985

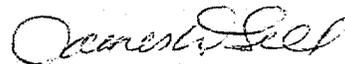
FILE MEMORANDUM

Age Dates
Sand Tank Mtns. Area
Maricopa County, AZ

I submit two age date papers applicable to the Sand Tank area--Ajo area, as well as the Table Top--Casa Grande area, Pinal County.

The first: New K-Ar Ages of Volcanic Rocks Near Ajo, Pima and Maricopa Counties, Southwestern Arizona, by F. Gray and R.J. Miller. Isochron/West No. 41, p. 3-6, December 1984. There is a discrepancy between the map numbers and two of the sample description numbers, but the locations seem to be in order.

The second: Cenozoic Stratigraphy and Geologic History of Southwestern Arizona, by L.D. Eberly and T.B. Stanley, Jr., GSA Bulletin, vol. 89, no. 6, p. 921-940, June 1978. This article covers most of the southwestern portion of Arizona (excluding the Papago Indian Reservation) and includes Balla's data in west-central Arizona as well as other workers in the area.



James D. Sell

JDS:mek
Atts.

No. 41, December 1984

George D. Sell



ISOCHRON/WEST

The Bulletin of Isotopic Geochronology

NEW MEXICO BUREAU OF MINES & MINERAL RESOURCES

and

NEVADA BUREAU OF MINES AND GEOLOGY

NEW K-Ar AGES OF VOLCANIC ROCKS NEAR AJO, PIMA, AND MARICOPA COUNTIES, SOUTHWESTERN ARIZONA

FLOYD GRAY
ROBERT J. MILLER

U.S. Geological Survey, Menlo Park, CA

The volcanic field near Ajo, Arizona (fig. 1), is a tripartite constructional volcanic field composed predominantly of Tertiary lavas that include the entire compositional range between basalt and rhyolite. These rocks outcrop over an area of approximately 5000 km² extending from the Mexican border to just north of U.S. Interstate Highway 8 and from the Growler and Aguila Mountains on the west to the Vekol-San Simon valleys on the east. Scattered Tertiary volcanic rocks farther east (Dockter and Keith, 1977; Rytuba and others, 1978; Briskey and others, 1979); are considered older than and apparently not related to those described here. Previous mapping in the area is of reconnaissance nature and is summarized on the Geologic Map of Arizona (Wilson and others, 1969). Much of the area lies within restricted access areas of Luke Air Force Range. A limited number of K-Ar ages of Tertiary rocks in the area have been published by Shafiquallah, et.al. (1980), Eberly and Stanley (1978), Jones (1974), and Tosdal (1979).

We report here 13 new K-Ar ages from volcanic rocks of the Ajo volcanic field samples as part of the USGS Ajo 2°x1° CUSMAP project. The dates are used in the study of the volcanic stratigraphy of the area and were selected because they define the age range of units within each of the tripartite sections. A more detailed compilation of isotopic age dates for the volcanic field is currently in progress (Miller and others, in preparation).

Geological Discussion

The Tertiary rocks of the Ajo volcanic field rest upon an extensive erosional unconformity cut on granitic and metamorphic rocks ranging in age from Proterozoic to early Tertiary (Haxel, et.al. 1980). Tertiary volcanic rocks in the area are divided into 3 sequences separated by angular unconformities: (1) the oldest sequence is late Oligocene to early Miocene in age and consists of red fanglomerate and coarse arkosic sandstone intercalated with andesite, rhyolite, rhyodacite, and local pyroclastic rocks; (2) a complex middle sequence consists of early and middle Miocene basalt, latite, silicic flows, and associated pyroclastic rocks; and (3) the youngest sequence, of middle Miocene age, is composed of basaltic andesite and andesite.

The oldest group is exposed in scattered areas along the western edge of the field, mainly northwest and southwest of the Saucedo Mountains. The unit is characterized by steeply tilted volcanic rocks intercalated with coarse clastic sedimentary strata. Initiation of volcanism was contemporaneous with local uplift and unroofing of crystalline basement rocks. In the Ajo area (Gilluly, 1946) and Growler Mountains (Gray and others, 1984) massively bedded coarse fanglomerate consists mostly of locally derived Proterozoic granite and gneiss. The coarse fanglomerate grades upward into coarse arkosic sandstone. Volcanic interbeds are increasingly abundant in the upper part of the unit. An age of 23.8 ± 0.8 m.y. was obtained on the volcanic rocks near Ajo Peak (fig. 1, no. 81AM176). These flows are in the upper part of the tilted fanglomerate-andesite sequence and thus represent a minimum age for the accumulation of the fanglomerates. A tuff stratigraph-

ically above the tilted andesite-fanglomerate sequence yielded an age of 22.0 ± 0.7 m.y. (fig. 1, no. 81AM96).

The middle unit is the most widespread of the three and forms a heterogeneous assemblage of basalt, andesite and rhyolitic rocks. The oldest rocks in the unit are rhyolitic to rhyodacitic flows and pyroclastic tuffs. Following eruption of these, volcanism progressed westward, then southward. An eroded rhyodacite dome in a composite volcano in the Sand Tank Mountains stands approximately 300 m high. A dacite flow from the flank of the dome yields a K-Ar age of 21.8 ± 0.7 m.y. (no. AA1128). A lava flow in the vicinity of Hat Mountain and the adjacent Saucedo Mountains is dated at 20.7 ± 0.6 m.y. (no. 81AG206). Silicic volcanism migrated southward into the Sikort Chuapo Mountains and the Ajo Range, eventually forming the tuffaceous rocks and rhyolitic flows of the Mt. Ajo area at around 15.4 m.y. (Tosdal, unpub. data; Jones, 1974; May and others, 1981).

Contemporaneous with silicic volcanism approximately 21 m.y. ago basalt, olivine basalt, and basaltic andesite were extruded in the region from the northern Saucedo Mountains to the southern Sand Tank Mountains. An age of 18.4 ± 0.9 m.y. (no. 82AM61) obtained on plagioclase from that sequence is considered to be too young based on geological evidence. The basalt flows occur in a composite volcano at Cimarron Peak and in fissure eruptions elsewhere. These basalts form prominent cliffs and plateaus throughout the eastern part of the volcanic field. The most distinctive rock type of the middle sequence is a coarsely porphyritic Childs Latite in the Ajo area (Gilluly, 1946). Its stratigraphic continuity makes it useful as a marker unit. The K-Ar age from the Childs Latite is 18.3 ± 0.6 m.y. (no. 81AM57; see also Eberly and Stanley, 1978, no. 107).

Basaltic andesite extrusive rocks dated between 16 and 14 m.y. were the next materials to be erupted. The major source for flows in the western part of the Ajo volcanic field was Batamote Mountain, a dissected shield volcano. Minor vents and oxidized cinder-cone deposits are present in the Cipriano Hills and the Growler and Bates Mountains farther west.

The Sentinel and Pinacate basalt flows located adjacent to the northern and southwestern parts respectively, of the volcanic field, postdate most Basin and Range block faulting. These basalts range in age from 5 m.y. to recent and are not considered here as part of the Ajo Volcanic Field Tertiary sequence (Eberly and Stanley, 1978, no. 1-6).

Sample preparation and argon and potassium analyses were carried out in the U.S. Geological Survey laboratories at Menlo Park, California. Mineral concentrates were obtained using magnetic and heavy-liquid separation techniques after crushing rock samples to either the 60 to 100 or 60 to 140 mesh fraction. Potassium analyses were performed by a lithium metaborate flux fusion-flame photometry method using lithium as an internal standard (Ingamells, 1970). Argon extraction and purification techniques are similar to those described by Dalrymple and Lanphere (1969). Argon composition was determined by standard isotope-dilution procedures using a 60° sector, 15.2 cm radius, Neir-type mass spectrometer. The precision of the

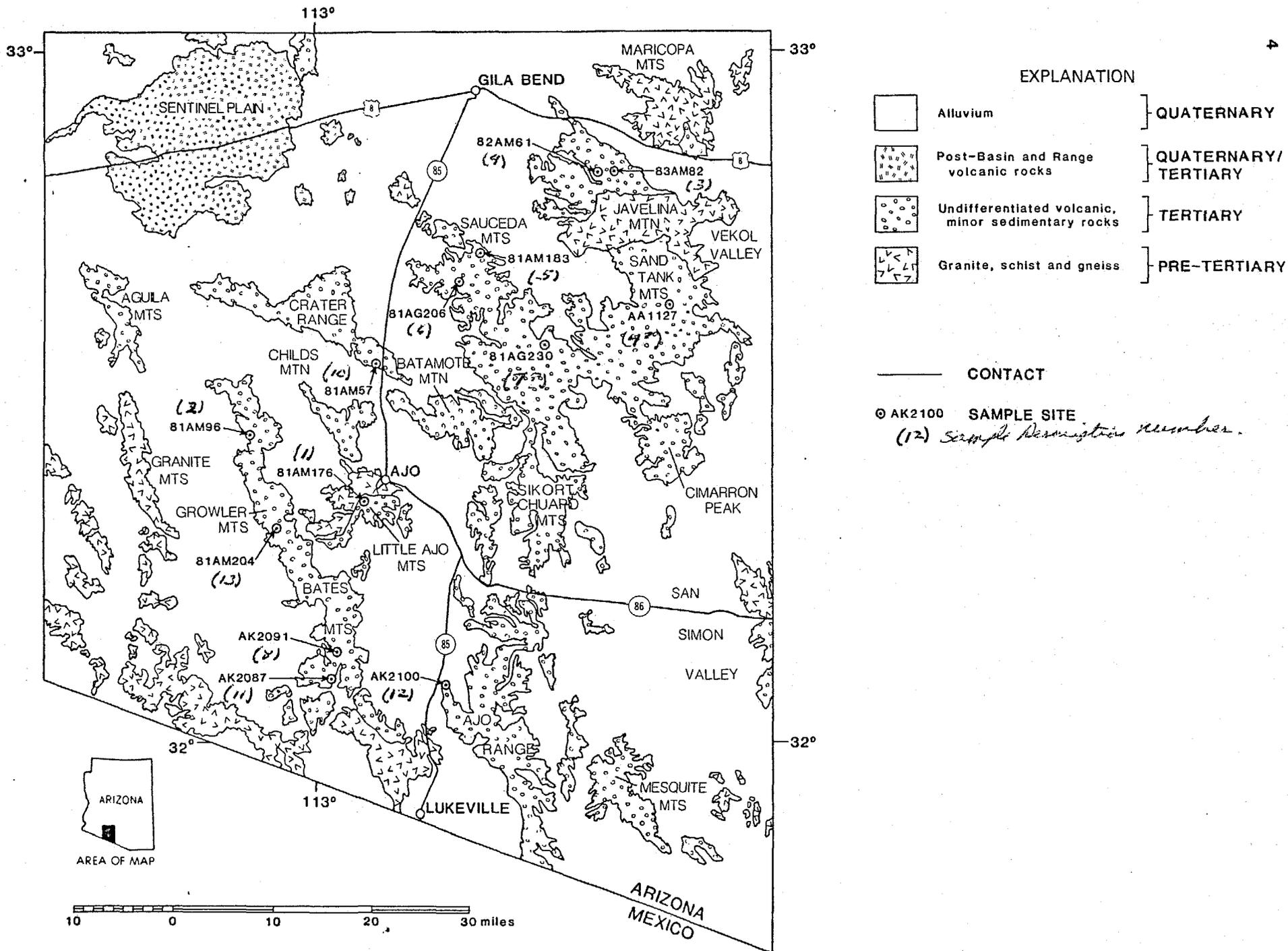


FIGURE 1. GENERALIZED GEOLOGIC MAP OF THE AJO AREA SHOWING SAMPLE LOCALITIES.

date is the estimated analytical uncertainty at one standard deviation and is based on experience with replicated analyses in the Menlo Park laboratories. The decay constants used in the age calculations are: $\lambda_e = 0.581 \times 10^{-10} \text{ yr}^{-1}$; $\lambda_\beta = 4.962 \times 10^{-10} \text{ yr}^{-1}$; and $^{40}\text{K}/\text{K}_{\text{tot}} = 1.167 \times 10^{-4}$.

SAMPLE DESCRIPTIONS

1. **81AM176** K-Ar
Agglomeratic andesite flow breccia (32°21'05"N, 112°55'00"W; near Ajo Mine, AZ) porphyritic medium- to light-gray rock with abundant phenocrysts of biotite and plagioclase, lesser amounts of hornblende; biotite is incipiently replaced by calcite. *Analytical data:* $\text{K}_2\text{O} = 8.23\%$; $^{40}\text{Ar}^{\text{rad}} = 2.861 \times 10^{-10} \text{ mole/g}$; $^{40}\text{Ar}^{\text{atm}}/^{40}\text{Ar}^{\text{ToT}} = 45\%$. *Comment:* Steeply tilted volcanic unit interbedded with the top of the Locomotive Fonglomerate (see Gilluly, 1946); these volcanic rocks and equivalent age units throughout the study area were affected by precursory Basin and Range tilting.
(biotite)23.8 ± 0.8 m.y.
2. **81AM96** K-Ar
Rhyodacitic crystalline tuff (32°26'40"N, 113°06'30"W; located on W face of Growler Mountains at 360 m [1200 ft] elevation, 5 km N of Growler Peak, AZ) pink, densely welded, partially devitrified tuff containing abundant biotite up to 3 mm in diameter, sparse plagioclase, clinopyroxene, occasional flattened pumice lapilli and rock fragments; lithic fragments are dominantly porphyritic basalt. *Analytical data:* $\text{K}_2\text{O} = 8.11\%$; $^{40}\text{Ar}^{\text{rad}} = 2.587 \times 10^{-10} \text{ mole/g}$; $^{40}\text{Ar}^{\text{atm}}/^{40}\text{Ar}^{\text{ToT}} = 46\%$. *Comment:* Underlies flows equivalent to the Childs Latite and overlies the Sneed Andesite; puts a minimum age on the Sneed Andesite and equivalent flows.
(biotite)22.0 ± 0.7 m.y.
3. **83AM82** K-Ar
Crystal-rich rhyolitic tuff (32°49'48"N, 112°29'10"W; at the N end of the Sand Tank Mountains, AZ) reddish-brown, partially welded airfall tuff containing biotite and plagioclase phenocrysts, partial vapor phase recrystallization of the glass. *Analytical data:* $\text{K}_2\text{O} = 8.24\%$; $^{40}\text{Ar}^{\text{rad}} = 2.61 \times 10^{-10} \text{ mole/g}$; $^{40}\text{Ar}^{\text{atm}}/^{40}\text{Ar}^{\text{ToT}} = 19.7\%$. *Comment:* Tuff is interbedded with olivine basalt flows.
(biotite)21.9 ± 0.7 m.y.
4. **AA1128** ~~AA 1127~~ K-Ar
Dacite flow (32°37'50"N, 112°23'35"W; lies in the central Sand Tank Mountains at approximately 850 m [2800 ft] elevation, AZ) biotite-hornblende dacite consists of abundant phenocrysts of biotite, hornblende, and plagioclase in an aphanitic brown flow banded groundmass. *Analytical data:* $\text{K}_2\text{O} = .777\%$; $^{40}\text{Ar}^{\text{rad}} = 0.246 \times 10^{-10} \text{ mole/g}$; $^{40}\text{Ar}^{\text{atm}}/^{40}\text{Ar}^{\text{ToT}} = 62.5\%$. *Comment:* Overlain by porphyritic basalt flows; earliest flows of middle volcanic sequence associated with large dacite dome.
(hornblende)21.8 ± 0.7 m.y.
5. **81AM183** K-Ar
Ash flow tuff (32°42'10"N, 112°42'30"W; northern Saucedo Mountains, AZ) pink to white welded vitric tuff containing abundant plagioclase with quartz, biotite, and hornblende phenocrysts. *Analytical data:* $\text{K}_2\text{O} = 8.14$; $^{40}\text{Ar}^{\text{rad}} = 2.555 \times 10^{-10} \text{ mole/g}$; $^{40}\text{Ar}^{\text{atm}}/^{40}\text{Ar}^{\text{ToT}} = 46\%$. *Comment:* Unit overlain by capping porphyritic basalts.
(biotite)21.7 ± 0.7 m.y.
6. **81AG206** K-Ar
Rhyolite vitrophyre (32°39'30"N, 112°44'20"W; located in the Saucedo Mountains, AZ) consists of biotite, plagioclase, and sanidine phenocrysts in an unaltered glass matrix. *Analytical data:* $\text{K}_2\text{O} = 8.51\%$; $^{40}\text{Ar}^{\text{rad}} = 2.556 \times 10^{-10} \text{ mole/g}$; $^{40}\text{Ar}^{\text{atm}}/^{40}\text{Ar}^{\text{ToT}} = 58\%$. *Comment:* Rhyolite flows overlie porphyritic basalt in the area. Sample represents dike from large northwest-southeast-trending rhyolitic vent complex.
(biotite)20.7 ± 0.6 m.y.
7. **81AG239** ~~81AG 230~~ K-Ar
Porphyritic rhyolite (32°34'10"N, 112°35'50"W; approx. 700 m [2300 ft] elevation, AZ) abundant phenocrysts of reddish-brown biotite, and sanidine in quartz, K-feldspar, felsitic groundmass. *Analytical data:* $\text{K}_2\text{O} = 8.78$; $^{40}\text{Ar}^{\text{rad}} = 2.474 \times 10^{-10} \text{ mole/g}$; $^{40}\text{Ar}^{\text{atm}}/^{40}\text{Ar}^{\text{ToT}} = 29\%$. *Comment:* Rhyolite flows overlie porphyritic basalt. Source region is in southern Saucedo Mountains.
(biotite)19.5 ± 0.6 m.y.
8. **AK2091** K-Ar
Porphyritic rhyolite (32°07'05"N, 112°58'00"W; in southern Growler Mountains, AZ) consists of K-feldspar, quartz, and scattered biotite phenocrysts in a felsitic quartz, K-feldspar groundmass. *Analytical data:* $\text{K}_2\text{O} = 5.70$; $^{40}\text{Ar}^{\text{rad}} = 1.539 \times 10^{-10} \text{ mole/g}$; $^{40}\text{Ar}^{\text{atm}}/^{40}\text{Ar}^{\text{ToT}} = 27\%$. *Comment:* Overlain by the Childs Latite.
(sanidine)18.7 ± 0.5 m.y.
9. **82AM61** K-Ar
Porphyritic basalt (32°49'30"N, 112°31'00"W; uppermost unit approx. 700 m [2300 ft] elevation, in plateau area in northern Sand Tank Mountains, AZ) flows consist of andesine plagioclase, partially idding-site-altered olivine, and two-pyroxene phenocrysts in an aphanitic glassy groundmass. *Analytical data:* $\text{K}_2\text{O} = 0.891\%$; $^{40}\text{Ar}^{\text{rad}} = 0.236 \times 10^{-10} \text{ mole/g}$; $^{40}\text{Ar}^{\text{atm}}/^{40}\text{Ar}^{\text{ToT}} = 50\%$. *Comment:* Forms a thick sequence of flows in northern part of area; may be a minimum age based on geologic consideration.
(plagioclase)18.4 ± 0.9 m.y.
10. **81AM57** K-Ar
Porphyritic andesite (32°32'45"N, 112°53'30"W; mesa capping unit, elevation approx. 500 m [1700 ft] 1.2 km W of Arizona highway 85, AZ) reddish-brown to maroon, coarsely porphyritic rock composed of andesine phenocrysts up to 2 cm across in a groundmass of plagioclase, K-feldspar, Fe oxides, clinopyroxene, scattered altered olivine, and minor glass. *Analytical data:* $\text{K}_2\text{O} = 1.194\%$; $^{40}\text{Ar}^{\text{rad}} = 0.318 \times 10^{-10} \text{ mole/g}$; $^{40}\text{Ar}^{\text{atm}}/^{40}\text{Ar}^{\text{ToT}} = 62\%$. *Comment:* Named the Childs Latite (Gilluly, 1946). Age similar to that reported by Shafiquallah, et.al. (1980); flows used as a widespread index unit.
(plagioclase)18.3 ± 0.6 m.y.
11. **AK2087** K-Ar
Andesite (32°04'45"N, 112°58'00"W; collected

at 500 m [1700 ft] elevation in Bates Mountains, AZ) plagioclase, with less abundant orthopyroxene and clinopyroxene phenocrysts; sparse hornblende up to 2 mm across, generally partially resorbed and rimmed by opaque oxides. *Analytical data:* $K_2O = 0.519\%$; $^{40}Ar^{rad} = 0.125 \times 10^{-10}$ mole/g; $^{40}Ar^{atm}/^{40}Ar^{ToT} = 80.4\%$. *Comment:* Overlies the Childs Latite.

(hornblende) 16.7 ± 0.8 m.y.

12. AK2100

K-Ar

Andesite ($32^{\circ}04'30''N, 112^{\circ}46'00''W$; 800 m [2600 ft] elevation, in western Ajo Range, AZ) plagioclase phenocrysts most abundant with lesser amounts of orthopyroxene, clinopyroxene, and hornblende set in a trachytic textured groundmass of plagioclase microlites, scattered pyroxene, and iron-rich glass. *Analytical data:* $K_2O = 2.890$; $^{40}Ar^{rad} = 0.672 \times 10^{-10}$ mole/g; $^{40}Ar^{atm}/^{40}Ar^{ToT} = 45\%$. *Comment:* Young capping sequences in the Ajo Range, SE Kino Peak quadrangle.

(whole rock) 16.1 ± 0.7 m.y.

13. 81AM204

K-Ar

Basalt ($32^{\circ}18'10''N, 113^{\circ}03'30''W$; plateau-forming unit, 3 km N of Temporal Pass, Growler Mountains, AZ) phenocrysts of partially iddingsitized olivine in a groundmass of plagioclase, pyroxene, and opaque oxides, slightly vesicular. *Analytical data:* $K_2O = 0.603\%$; $^{40}Ar^{rad} = 0.125 \times 10^{-10}$ mole/g; $^{40}Ar^{atm}/^{40}Ar^{ToT} = 86\%$. *Comment:* Youngest volcanism before Basin and Range deformation extruded locally from small cinder cones.

(whole rock) $14.4 \pm .7$ m.y.

REFERENCES

- Dockter, R. D., and Keith, W. J. (1977) Reconnaissance geologic map of the Vekol Mountains quadrangle, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF 931.
- Eberly, L. D., and Stanley, T. B., Jr. (1978) Cenozoic stratigraphy and geologic history of southwestern Arizona: Geological Society of America Bulletin, v. 89, p. 921-940.
- Gilluly, James (1946) The Ajo mining district, Arizona: U.S. Geological Survey Professional Paper 209.
- Gray, Floyd, et.al. (1984) Geologic map of the Growler Mountains, Pima and Maricopa Counties, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1681.
- Haxel, Gordon, Wright, J. C., May, D. J., and Tosdal, R. M. (1980) Reconnaissance geology of the Mesozoic and lower Cenozoic rocks of the southern Papago Indian Reservation, Arizona: Geological Society Digest, v. 12, p. 17-29.
- Jones, W. C. (1974) General geology of the northern portion of the Ajo Range, Pima County, Arizona: University of Arizona, M.S. thesis.
- Rytuba, J. J., Till, A. B., Blair, Will, and Haxel, Gordon (1978) Reconnaissance geologic map of the Quijotea Mountains quadrangle, Pima County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-937.
- Shafiquallah, M., et.al. (1980) K-Ar geochronology and geologic history of southwestern Arizona and adjacent areas: Arizona Geological Society Digest, v. 12, p. 201-260.
- Wilson, E. D., Moore, R. T., and Cooper, J. R. (1969) Geologic map of Arizona: Arizona Bureau of Mines and U.S. Geological Survey.
- Tosdal, R. M. (1979) Preliminary compilation of isotopic ages within the Ajo $1^{\circ} \times 2^{\circ}$ quadrangle, Arizona: U.S. Geological Survey open-file report 79-399.



J. D. SELL

GEOLOGICAL SOCIETY OF AMERICA BULLETIN

*Published
each month
in Colorado
by the Society*

June 1978 volume 89 number 6

BUGMAF 89 (6) 801-960
US ISSN 0016-7606

Cenozoic stratigraphy and geologic history of southwestern Arizona



nd
na
A.
ng
nic
ed
of
tic
d,
of
es

U
S
G
E
O
L
O
G
I
C
A
L
S
U
R
V
E
Y
O
F
A
R
I
Z
O
N
A

Crown King Dist
near West Falls

Crown King 742'

London Sec. 1, TION, RIW
West East Sec. 10, TION RIW

Report by F.R. Kouty

See

144

8/85

JDS

RECEIVED

SEP 3 1985

EXPLORATION DEPARTMENT

COPYRIGHT
ALL REPRODUCTION
RIGHT RESERVED
PUBLISHED DAILY
SUBSCRIPTION RATE
\$300.00 PER YEAR

1710-600 GRANVILLE ST.
P.O. Box 10363 STOCK EXCHANGE TOWER
VANCOUVER, B.C.
V7Y 1G8
683-7265
(AREA CODE 604)

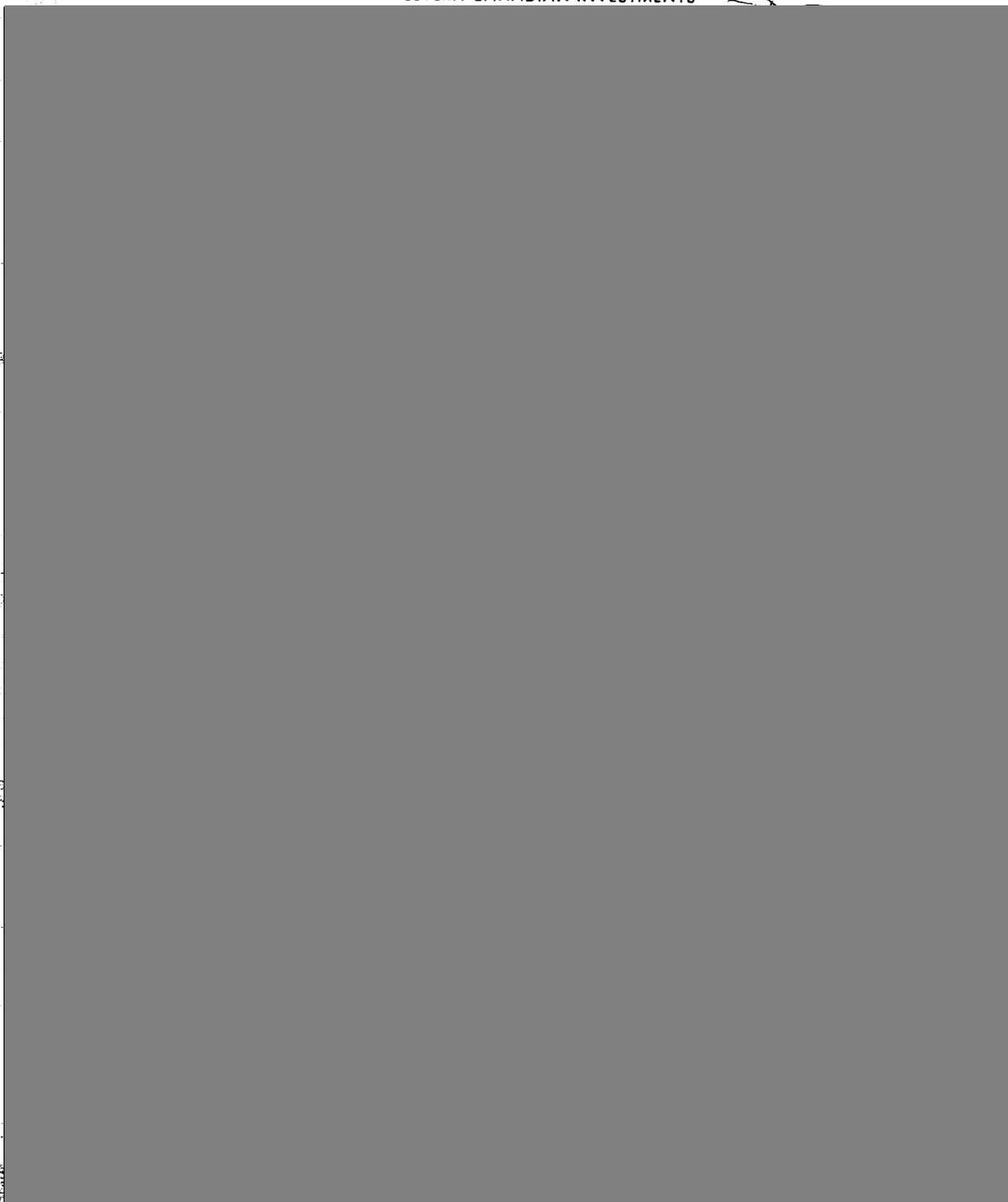
George Cross News Letter

Reliable Reporting

NO. 164(1985)
AUGUST 26, 1985

NO. 164(1985)
AUGUST 26, 1985

WESTERN CANADIAN INVESTMENTS



149

S/S

JDS



ASARCO

JDS

Exploration Department
Southwestern United States Division
James D. Sell
Manager

February 15, 1984

Mr. Dale F. Sweet
Chandler Industries
298 E. Galveston St.
P.O. Box 757
Chandler, AZ 85224

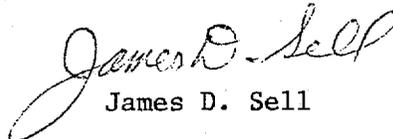
Dear Mr. Sweet:

Your letter has been passed on to me by Mr. Stringham concerning your claims north of Morrystown, Sec. 23-24, T7N, R3W.

We should have an examining geologist up your way in the near future and I will have him contact you when he will be in the area.

Thank you for bringing this property to our attention.

Sincerely,


James D. Sell

JDS/cg

cc: FRKoutz (w/letter & report)

February 15, 1984

To: W. L. Kurtz

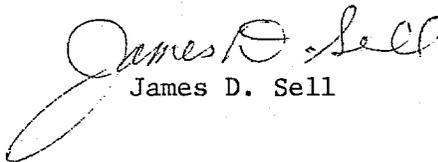
From: J. D. Sell

G. Bremer
A.S.T. Labs, Inc.

I talked with Bremer of Scottsdale on February 14 and he stated that he uses an assay ton (29.2 grams) of material and collects the noble metals in, as nearly as possible, an assay ton (29.2 grams) of lead button. He then assays the lead button by atomic spectroscopy (Emission Spec) to find the ppm value. Multiplying ppm by 0.0292 factor gives Troy ounces per ton.

In talking with Tom Henderson, he says this is valid as long as the initial "ore" weight is 29.2 grams, but in not taking the lead button on down (as is normally done in Fire Assaying) to collect the noble metals in a discrete mass, he feels the values may be in error. The noble metals are probably not dispersed homogeneously within the large 29.2 gram lead button and thus, unless the entire button is vaporized and the value lines averaged, any particular part of the button is probably different than any other part of the button.

Bremer did say that if his lead button did not weigh 29.2 grams then he calculates back to the correct weight to arrive at the proper ppm value (TDH agrees).


James D. Sell

JDS/cg

Mr. Robert Lawson

1/18/89

PO Box 223

Mesa, NV 89422 (winter)

or

418-30 1/2 Road

Grand Junction, CO 81504 (summer)

can call sister-in-law in GJ & she'll
relay message as he calls in even so often.

Grand Junction, CO

303 / 434 - 4852.

1. Hidden Treasures Claim, Wallopai Mtns, West, Mohave Co, AZ
2. Combs Claims, Agulic West, Yavapai Co, AZ
3. Gold Bullion Group (S of an ex) Big Horn Mtn, Mohave Co, AZ
4. W.P. Claim Group, E of Hualata, Luna Co, NM
5. Polaris Claims, Victoria Mtn, Luna Co, NM.

ASARCO

Exploration Department
Southwestern United States Division

December 21, 1988

Mr. Randy Karry
Golden Fleece Enterprize
3007 E. St. John
Phoenix, AZ 85032

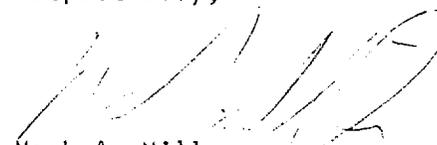
Gazelle Mine

Dear Mr. Karry:

Thank you for your submittal letter on the Gazelle Mine. We would be interested in reviewing your data; particularly Don White's report. Our main interest is open pittable ore and Mr. White's work suggests this might be the case. Could you please send us any available data so that we can evaluate it prior to deciding on a site visit?

Thank you for your time and consideration.

Respectfully,



Mark A. Miller

MAM:mek

cc: J.D. Sell

MAM - you might want
to review this when
you go north -
but remember: *asarco*
& high grade. *JDS*

Not his company name:
Golden Fleece Enterprise

RECEIVED

NOV 1 1988

Asarco Incorporated
Tucson Office

EXPLORATION DEPARTMENT

~~Attention W.L. Kurtz~~

Dear Sir,

Enclosed is pertinent information relating to an epigenetic ore deposit called the Gazelle. The Gazelle mine is located in Township 10 North, Range 1 West, Section 34 of the G&SRBM, Yavapai County, Arizona.

The oldest records obtained discloses the Gazelle mine shaft to be 350 feet in depth and a drift 500 feet in length. The mineral commodities are zinc and gold with values at 30%/ton and 0.25 to 0.4 oz/ton respectively.

Recently, Don White a registered geologist had visited the Gazelle Group of Patented and unpatented mineral properties. He mapped the geology and sampled surface outcrops and determined surface values at \$140.00/ton and approximated at least 100,000 tons of ore. But, diamond core drilling would be required to best evaluate this highly siliceous precious/base metal deposit.

Non-Active mines that are on strike of the Gazelle Group is the Lower and Upper Tiger mine and the Crown King mine which enhances ore reserves 5-fold (approximately 5 miles of similiar epigenetic ore deposition). Non-Active mines that are juxtaposition to strike of the Gazelle-Tiger-Crown King system are the Wildflower Group and the Ore Belle Group with similiar mineral commodities and values and epigenetic origin (Enhances ore reserves 2-fold).

Active mines with operating mills are the McCabe and the Gladiator. Both Canadian owned/operatored mines performed diamond core drilling exploration programs and proved profitable ore reserves during the early 1980'S.

I have a collection of data, geological and engineering reports on the non-active mineral property mentioned above. Hopefully, Asarco Incorporated will be interested in these highly siliceous precious and base metal deposits.

Please feel free to contact me at 482-6848 and/or 3007 E. St. John, Phoenix, Arizona 85032.

RANDY KARRY
GOLDEN FLEECE ENTERPRISE
3007 E. ST. JOHN
PHOENIX, ARIZONA
85032

Sincerely Yours,
Randy Karry
Randy Karry
Applied Geologist
October 27th, 1988

ASARCO

JDS

Exploration Department
Southwestern United States Division
James D. Sell
Manager

May 16, 1989

Mr. Don Jenkins, President
Gold River Exploration Co.
P.O. Box 4106
Prescott, AZ 86302

Various Properties
Maricopa & Yavapai Counties, AZ

Dear Mr. Jenkins:

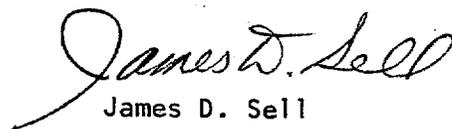
Your list of exploration prospects sent to Mr. Kurtz has been received. The list is impressive as to the number and style of mineralization capable of hosting a deposit.

Mr. Miller is our staff geologist for the area. I will pass on a copy of the list to him. At present he is very busy, but will contact you as time is available.

Asarco does not pay finder fees on properties, and expects such fees to be negotiated with the property owner, if such is needed.

Keep in touch.

Sincerely,


James D. Sell

JDS:mek

cc: W.L. Kurtz (letter only)
M.A. Miller (w/property list)

FROM: W. L. KURTZ

To:

JDS
Yours!

Not clear about Jenkin's
participation in. Most make
clear we do not pay
finder's fee ~~if~~ if Jenkin's
Jenkin's company does not
own or have position in
the properties



GOLD RIVER EXPLORATION CO.

RECEIVED
MAY 15 1989
EXPLORATION DEPARTMENT

I. COMBINATION VEIN/SURFACE MINEABLE DEPOSITS

- (a) This property lies adjacent to the 500 T/D McCabe Mine currently in production by Stan West Mining Corp. A host of sub-parallel veins lay within an intrusive host. A rhyolite porphyry dike and a zone of intense brecciation parallels and is adjacent to the northernmost and primary vein structure. The property consists of 21 unpatented mining claims and an option on 4 nearby patented claims. Underground mine potential is hosted by the many vein structures; whereas, surface potential may exist in the breccia zone and several wide shear zones. Some ore reserves exist and include over 100,000 tons of dumps, averaging in excess of .06 opt. gold, and base metal credits.
- (b) This property lies 10 miles west of Wickenburg, Arizona and is partially developed. Leach pads and ponds are 75% complete, surface ore is readily available, with significant underground potential also available. A 20' zone of shearing hosts stringers and veins of gray to jaspery quartz containing gold that is often visible. The ore is amenable to cyanide leach and a bromide or thiourea leach; also flotation is highly effective on this particular ore. Five drillholes have been completed, indicating potential reserves at depth.
- (c) A volcanogenic hosted gold deposit consisting of a wide shear zone/stockwork within a quartz latite. A 2 to 3 mile circular volcanic epicenter host numerous vein/shear zones with widths in excess of 50'. The smaller vein structures will assay over one ounce per ton gold in many locations. The wider low-grade portions are of immediate interest. Other geologists have made statements to the effect that this property may be a "sleeper"

II. SURFACE BULK TONNAGE DEPOSITS

- (d) This property consists of a series of parallel shear zones enveloped by highly altered andesites. Near the bottom of a tectonic plate (as exposed) a wide zone of approximately 100' is strongly sheared and brecciated; a stockwork texture is in places quite evident. Above this zone lies a rib of chalcedonic quartz roughly 30' wide, somewhat fractured with iron and manganese staining along the fractures. Recent sampling suggests not only that gold is present in the system but that ore grade values exist at or near the surface. The property comprises 28 unpatented mining claims.



GOLD RIVER EXPLORATION CO.

II.. continued

- (e) 42 claims comprise this property consisting of massive alteration of rhyolite and rhyolite porphyry. Wide bands of chalcidonic quartz associated with shearing are prevalent throughout the property. Alteration envelopes consist of kaolinite, sericite, illite, and occasional prophyllite. Sampling is incomplete, but anomalous detectable gold occurs within the epithermal system. A drilling program is necessary to test the deposit's gold potential.
- (f) A wide shear zone near Prescott, AZ has been located and preliminary sampling across a zone of 58' is thus far averaging .041 opt gold. This is a very promising property that needs a trenching/drilling program to determine its potential.
- (g) A massive volcanic hosted breccia has recently been discovered, and surface sampling is being continued. Preliminary assay data is very encouraging. If further surface sampling continues to be positive a trenching/drilling program will be required to further evaluate the deposit.
- (h) A broad shear zone enveloping a vein several feet wide comprises this very interesting property. The shear zone is in excess of 100' with samples ranging from .008 to over .08 opt gold. Strong kaolinitic alteration surrounds the shear zone; manganese oxides are associated with the quartz vein itself. Extensive alteration throughout the area suggests additional targets may be present. This is a virgin property in need of a systematic exploration program.
- (i) A very large tactite/skarn zone located near a large gold play by a major company has been acquired. The zone is nearly 3/4 mile by 1/2 mile and consists of a series of flat lying shear zones and random occurring breccia pipes. Anomalous gold values have been detected indicating a gold bearing system. The host is a PreCambrian aged granite with fine grained dikes cutting the host. Epidote and other skarn mineralization is prevalent.

GREC is working on several other properties but the above outline provides a cross-section of the type of deposits being "looked at" and acquired.



GOLD RIVER EXPLORATION CO.

ADDENDUM: Additional Properties Available

1. IRON SPRINGS COPPER/GOLD DEPOSIT

- * a broad shear zone up to 1000' wide and over 2 miles long
- * oxide copper mineralization at surface with an iron gossan capping overlying portions of the deposit
- * extensive propylitic and potassic alteration is evident
- * sulfides encountered at 100' to 150' with gold values associated with pyrite/chalcopyrite
- * a quartz monzonite host with breccia/stockwork zones exposed
- * located near the Copper Basin Mine under development by Phelps Dodge Corp.
- * numerous surface cuts and old workings but overall exposure is limited due to soil and vegetative cover
- * geochemistry, geophysics, and drilling needed

2. GENERAL GRANT MINE

- * located approximately ten miles south of the Vulture Mine and south of Wickenburg, Arizona
- * deposit consists of a large breccia/stockwork hosted by andesite/rhyolite and highly altered basalt
- * gold associated with iron/silica filled fractures and epidote
- * propylitic alteration is strong
- * surface exposure is approximately 180' by 650' indicating the possibility of a potential bulk tonnage deposit

MINERAL EXPLORATION AND PROPERTY DEVELOPMENT SERVICES

Providing Services To: Exploration and Mining Companies
Claim Owners
Consulting Firms
Government Agencies

Professional Experience

Economic Geology - Underground and Surface Sampling
Mine Surveying - Claim Staking - Geochemical Surveys
Detailed and Reconnaissance Geologic Mapping
Trenching - Drillsite Preparation - Road Construction
Mine Rehabilitation and Reclamation - Core Logging
Placer Testing and Evaluation - Contract Mining

Professional Services

MINERAL EXPLORATION PROGRAMS

Project Design - Target Selection and Mineral Property
Appraisal

Individual Mineral Property Evaluation

Assessment Work - Trenching - Sampling - Mapping

Road Construction - Leach Pad Design and Construction -
Ponds

Claim Staking - Title Research - Ore Reserve Calculations

Budgeting and Cash Flow Analysis - Geochemical Surveys

Mine Rehabilitation and Reclamation - Landscaping - Land
Clearing

Contract Mining

**1385 Iron Springs Road • Suite 234 • Prescott, Arizona 86301
(602) 772-0056**

GOLD LECH ENGINEERING CO.

ASARCO

JDS

Exploration Department
Southwestern United States Division
James D. Sell
Manager

July 5, 1989

Mr. Albert Reguly
2947 North 18th Street
Phoenix, AZ 85016

Critic, et al Mines
Cunningham Pass District
Harcuvar Mountains
La Paz County, AZ

Dear Mr. Reguly:

Your letter to Mr. Richard deJ. Osborne has been returned to the Southwestern Exploration office in which the Cunningham Pass District is located.

Your assays are of interest. Can you supply any maps, sample locations, etc.?

Our files suggest that most of the gold-copper mineralization (0.1 to 0.2 oz. Au with 2-4% Cu) which was mined in the past was from rather small pods within steep vein structures. The mineralization being mainly gold-bearing chalcopyrite, chalcocite, and pyrite, in a gangue with high alumina which the smelters disliked.

The George Cross News Letter in 1985 reported that "Rococco Resources" had spent considerable time sampling the Critic Mine area. Do you have this data?

I look forward to receiving additional information on your various claim blocks.

Sincerely,


James D. Sell

JDS:mek

cc: T.C. Osborne
W.L. Kurtz

Sec 5-6-7-8, T7N R12W

Albert Reguly

2947 N. 18th Street

Secs 1-24, T7N R13W

Phoenix AZ 85016

Harcuvar Mountains Area: FILE

Solene 15' Quad

Phoenix AMS

Bonanza Mining Co. (July 11, 1952)

Bonanza group of 33 claims) Sec. 15, 22, 23, 24, 27
Bonanza Central group of 26 claims) of T7N, R13W

→ "Citra" mine lies about 1/2 mile to the North

→ "Centroid" mine, Comanche properties is 1 mile East.

"The diabase dikes, with which the ore is associated, are not continuous for any appreciable distances and values within them are localized at areas of cross fracturing. — Turnover possibilities are lacking."

348 tons of 0.18 Au, 0.16 Ag, 1.87 Cu etc from ^{1000 to 1100} 1100' level

Header - 22 tons 43.5 tons @ 0.26 Au 0.16 Ag, 2.38% Cu

1951/ 45.5 0.12 0.10 1.63

/52 32.0 0.55 0.40 4.98

31.0 0.23 0.12 3.82

BUNKER Property 8 miles NW of Chandler

CRAIG Mine or AZ Big Chukcher Property

(1955) 0.01-0.02 Au, 2.0 Cu

P. 85
MAR 1989

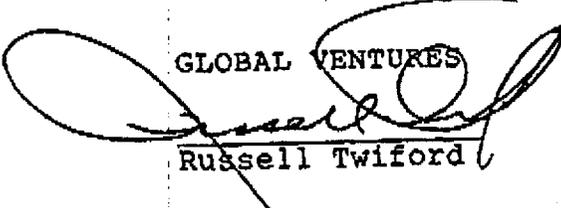
GLOBAL VENTURES
P. O. BOX 1442
GILBERT, ARIZONA 85234

SAMPLE RESULTS

<u>Sample No:</u>	<u>Wt:</u>	<u>Method:</u>	<u>Au: opt</u>	<u>Ag: opt</u>
Black Dump	30 g	Pre-treat/Aqua Regia	.07	.07
Hole 2/5'-10'	30 g	As above:	.09	.22
Hole 2/0'-5'	30 g	As above:	.04	.14
Hole 2/10'-12'	30 g	As above:	.09	.22
Hole 1/0'-5'	30 g	As above:	.07	.17
Horse Whim shaft	30 g	As above:	.08	.47
Tall black dump	30 g	As above:	.03	.32
Hole 1/5'-10'	30a g	As above:	.09	nd
Hole 5 Surface	30 g	As above:	.13	.05
Jubilee Dump	30 g	As above:	.08	.13
Jubilee Dump	30 g	removed iron with HCL then into Aqua regia:	nd	1.18
Jubilee Dump:	30 g	Special method:	.136	Pt:
.11opt				

Note: Hole 5 surface is where the chicken coop was. I have run many more samples on your ore and using samples from the surface of the schist area have dropped .2 opt of gold several times using the pre-treatment and then an aqua regia approach.

CHARGES: \$200.00 Pd.

GLOBAL VENTURES

Russell Twiford

GLOBAL VENTURES
P. O. BOX 1442
GILBERT, ARIZONA 85234

AL REGULY

ASSAY RESULTS

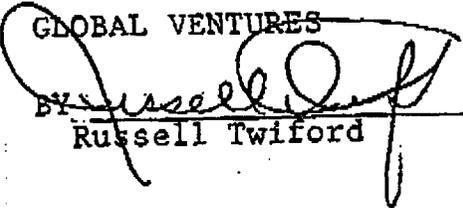
10/20/88

<u>Sample No.</u>	<u>wt</u>	<u>Method</u>	<u>Au: opt</u>	<u>Pt: opt</u>
Black Reef schist up the hill	30 g	pre-treat/20% regia/ heat/dilute from 100 ml to 1000 ml	.32	.15 (Iseman AA)
Black Reef schist	30 g	as above	.34	
Black Reef schist	30 g	Pre-treat/proprietary leach over nite/ambient temp/no agitation	.225 (au recovered)	
Black Reef schist up the hill		Aa above	.12 (au recovered)	

Note: The optics from the AA on the last two samples were quite high and could have been because of interference in the AA work. Therefore they will not be reported. Only the actual gold recovery is reported.

The above analyses are based on materials supplied by the client to whom and for whose exclusive and confidential use this report is made. Global Ventures assumes no responsibility and makes no representations as to the productivity or profitability of any mineral deposit in connection with which this report is made. However, in this case Global Ventures selected the samples that were assayed.

GLOBAL VENTURES

BY 
Russell Twiford

CONGRADULATIONS, 6-24-89
 YESTERDAY & read your FIRST QTR.
 and ANNUAL MEETING REPORT with
 great satisfaction

I have been a stockholder of
 AR since the latter part of Dec. 1979,
 almost 10 years ago at a price of 34 1/8.
 However, the prevailing cost is much
 lower with a P/E ratio of 5. Have you
 tried to stimulate the price by declaring
 a stock dividend of 10% or 50? This would
 reward those people who have held on all
 these years

You have accomplished a lot over the last
 four years which you mentioned in the report
 you mentioned that "We would like a greater
 stake in gold, and were focusing most of our
 exploration efforts on that metal."
 Consequently I would like to bring to
 your attention some mining claims located
 in La Paz County, AZ. which might prove

I am enclosing some recent assay
 reports together with a general map
 of La Paz County showing the location
 of various properties which have been
 producers of precious metals.

I invite your exploration group or division
 to inspect the property at their convenience
 and take whatever samples they need
 I will be glad to furnish them with
 additional data if they are interested.
 Enclosed is my business card with some
 additional information.

Sincerely,
 Albert M. Reguly

ALBERT M. REGULY
 PRESIDENT
 16 PATENTED LOBE MINING CLAIMS
 CENTROID CONSOLIDATED MINES
 GOLD-PLATINUM-COPPER-SILVER
 33 UNPATENTED LOBE MINING CLAIMS
 2947 NORTH 18TH ST.
 CUNNINGHAM PASS DISTRICT PHOENIX, ARIZ. 85016
 WENDEN, ARIZONA (602) 266-8331
 49 TOTAL - ALL CONTIGUOUS

TELECOMMUNICATION LETTER

DATE: June 29, 1989

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: JIM SELL

COMPANY: ASARCO SW EXPL. TUCSON.

TOTAL NUMBER OF PAGES: 6 INCLUDING COVER PAGE

IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL BACK AS SOON AS POSSIBLE.

FROM: TOM OSBORNE

TELEPHONE: (212) 510 - 7012

ASARCO Incorporated

JUN 29 1989

SW Exploration

TELECOPIER NUMBER: (212) 510 - 1855

SHARP AUTOMATIC - MODEL #FO-620

Jim: Here's your big chance. Would you please check your files, & let me know promptly whether or not you think it worthwhile to follow up. The individual is a shareholder & I need to acknowledge his letter & tell him something.

*Regard
TCO.*

Richard de J. Osborne

6/27/89

ASARCO Incorporated

JUN 29 1989

SW Exploration

TCC

If interested please
follow-up. If not
please acknowledge

RJO

Mr. Albert Reguly
2947 N. 18TH St.
Phoenix, AZ 85018



MR. RICHARD de J. OSBORNE
CHAIRMAN
ASARCO INC.
180 MAIDEN LANE
NEW YORK
N.Y. 10038

JDS

March 9, 1990

File Note

Epithermal Precious Metal Deposits
Caribbean Basin

Carl E. Nelson presented a paper at the AIME Annual Meeting in Salt Lake City on the above subject.

His most interesting thoughts were that the bulk of the mineralization (micron bulk mining) was in the tuffaceous ring moat deposit sediments, which also contain the landslide masses, etc. (i.e. Maar deposits), at the Pueblo Viejo deposit.

He mentioned that most of the earlier production from the Caribbean Basin was from vein and stockwork, hi-grade mineralization, in the upper level, or lateral, ring and dike fractures in the andesite/rhyolite volcanics and the adjacent micron gold was not found.

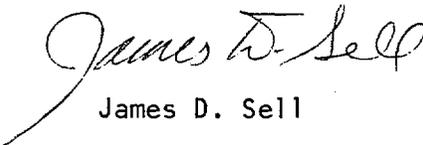
Nelson also believes the Freeport discovery in Panama (Santa Rosa?) is also a Maar deposit type.

Don White (the geologist that worked out the Vulture Mine geology - mineralization at Wickenburg) has spent the past year down in Costa Rica consulting for a Canadian group and believes the same thing. But his group is so busy drilling the high-grade for stock purposes that they won't look at the "fringe."

Nelson passed out a sheet on his geochemical data base.

Should you be looking for Central American type go-getters, both Nelson and White might be good candidates.

JDS:mek
Att.


James D. Sell

cc: F.T. Graybeal
W.L. Kurtz

A Geochemical Database for
Epithermal Precious Metal Deposits of the Caribbean Basin

prepared by:

Carl E. Nelson

Costa Rica address:
Apartado 2155-1000
San Jose, Costa Rica
(506) 53-3920

Colorado address:
693 South Ogden Street
Denver, Colorado 80209
(303) 722-8431

This report provides sorted geochemical data for 670 samples collected from 19 precious metal deposits of the Caribbean Basin. Brief geologic descriptions and sample location maps are included for each deposit. Analytical data is provided for 28 major and minor elements. The deposits are:

Saint Bartholomew	Pueblo Viejo, Dominican Republic
Abangares District, Costa Rica	Remance, Panama
Aruba, Dutch West Indies	Restauracion, Dominican Republic
Bellavista, Costa Rica	Rio Chiquito, Costa Rica
Divisadero, El Salvador	San Andres, Honduras
Guacimal, Costa Rica	San Juancito (Rosario), Honduras
Minillas, Puerto Rico	San Pantaleon, Guatemala
Moncada, Costa Rica	Santa Clara, Costa Rica
Moramulca, Honduras	Santa Rosa, Panama
a 3 ppm Au standard	Yuscaran, Honduras

Analytical data for each deposit is tabulated as follows:

Sample Description (sample site number, rock description, notes)
Analyses for Au, Ag, As, Hg, Sb
Analyses for Cu, Pb, Zn, Mo, W, Cd
Analyses for Co, Ni, Cr, Ba, Mn, Sr
Analyses for P, V, Bi, Be, Total iron oxide
Analyses for Ca, Mg, K, Al, Na, Ti

Analytical costs for the database are being shared by companies and organizations with an interest in the Caribbean Basin. Each participant contributes US \$5276.25, sufficient to add several elements to the list already completed. All of the participants receive a complete copy of the data and deposit descriptions as described above.

P.S. Don White also worked on these in Costa Rica.

ASARCO

JDS

EXPLORATION DEPARTMENT
SOUTHWESTERN UNITED STATES DIVISION

JAMES D. SELL
MANAGER

April 27, 1990

Mr. Charles O. Spielman, Jr.
Manager of Exploration
Alma American Mining Corp.
13701 W. Jewell Avenue, Suite 208
Lakewood, Colorado 80228

Cortez Peak Data
Maricopa County, AZ

Dear Charlie:

As you have instructed by telephone, I have transferred the Cortez Peak Data, which you sent Asarco on 12/28/89 (copy of contents attached), to Battle Mountain Gold, c/o Bob Helming, Tucson, AZ, phone 602/741-2811.

I thank you for bringing the property to our attention.

Sincerely,


James D. Sell

JDS:mek
att.

cc: Battle Mtn. Gold

Cortez Peak Data Transmitted to Battle Mtn. Gold 4-27-90

1. Detailed claim map on topo base, 1"=500'
2. Property outline on topo base, 1"=500'
3. Excerpts from a report by J. R. Poloni (1985) describing results of a geochemical survey on claims (the Golden West group) which were later replaced by the claims which Alma American now holds as the Cortez Peak property. Individual anomalous values are not discernible; of primary interest is the Cu-Au anomaly in the northwest-central portion of Section 7, T2S, R7W, which we have not studied further.
4. Summary report (1986) by the owners of the property covering geology and results of drilling by Phelps Dodge.
5. Memo from G. Allen to C. Spielman, 4/6/89 discussing alternate interpretation of geology and potential of the property; includes section and map showing alternate geologic interpretation and location of proposed Alma American drill hole and CSAMT survey lines.
6. CSAMT pseudo sections and geologic interpretation of one of the sections, March, 1989.
7. Memo from G. Allen to C. Spielman, 5/13/89 regarding CSAMT interpretation and drilling recommendations.
8. Lithologic/sample log and columnar log of Alma American drill hole.
9. Assay results of grab samples taken by C. Spielman, November, 1989, around the Dixie and Jackpot mine areas. The good silver values from Cu-stained specimens from the Jackpot area are noteworthy.

AAM



Charles O. Spielman, Jr.
Manager of Exploration

13701 W. Jewell Ave.
Suite 208
Lakewood, CO 80228

P.O. Box 479
500 Front Street
Fairplay, CO 80440-0479

**Alma American
Mining Corporation**

Lakewood: (303) 989-8993
Fairplay: (719) 836-2737

± 375 claims

R 7 W Sects 7-8-17-18
R 8 W Comm. T2S

SUMMARY REPORT

CORTEZ PROSPECT MARICOPA COUNTY, ARIZONA

LOCATION The Cortez prospect is located in Maricopa County, Arizona, on the northeastern flank of the Gila Bend Mountains. Access from Gila Bend is north via Old US 85 to the Agua Caliente road, then west 20 miles to the prospect.

GENERAL GEOLOGY The area is one of low hilly country with Quaternary basalt flows capping higher elevations. They overlie Tertiary volcanics, Mesozoic sediments, and a Precambrian basement of granite, gneiss, and schist.

STRATIGRAPHY The stratigraphic succession is difficult to ascertain because most contacts are structural in nature and units are often repeated or truncated by faulting. The geologic section includes the following units:

1) Precambrian. The Precambrian includes foliated metasediments that belong to the Pinal Schist, meta-tonalite (plagioclase-muscovite-quartz), and two other rock types whose assignment to the Precambrian is more uncertain. These include diabase which is usually metamorphosed to prehnite-clinozoisite, and meta-rhyodacite vitrophyre and breccia which are metamorphosed at higher grade (biotite-stable).

2) Mesozoic (?). *In TERTIARY NOT M₃* The Mesozoic section is a package of sediments including conglomerate, sandstone and arkose, siltstone, and claystone. These sediments are well indurated, but are not metamorphosed. Some of them are quite carbonate-rich and approach limestone in character. They have clearly been deposited upon a Precambrian surface, and they contain recognizable clasts representing all of the rock types assigned to the Precambrian above.

3) Tertiary. The Tertiary section consists predominantly of basalt lava flows and intercalated sediment (reworked basalt), tuffaceous sandstone, water-laid tuff that was syndepositionally silicified, and felsic crystal-vitric tuff. Andesite dikes are also present in the section. Other units that may be of Tertiary age but cannot be placed in the sequence with certainty include porphyritic dacite vitrophyre (most likely hypabyssal), fan-glomerate(?), coarse grained and poorly sorted pebbly sandstone or arkose, and degassing breccia which we have seen only cross-cutting fan-glomerate(?) thus far.

STRUCTURE The dominant structural feature is a N60W trending antiform which has been penetratively faulted. The antiform, as defined by outcrop pattern, reflects the spatial distribution of low to moderate angle faults that strike northwest and dip predominantly to the southwest, though some northeast-dipping faults are recognized. The core of the antiform exposes Mesozoic

DRILLING

sediments and varied Precambrian rock types flanked by the Tertiary section. This pattern of faulting and juxtaposed lithologies suggests a decollement structure with attendant folding and faulting.

The allochthonous plate, which represents most of the area of interest, is comprised of large blocks, hundreds of feet in size, representing a chaos of all of the rocks in the section. Each block appears to be internally coherent, whether it be Precambrian, Mesozoic, or Tertiary in age, with attitudes of beds that may vary markedly from those shown by adjoining blocks. The blocks are separated along their northeastern and southwestern sides by structures thought to be ancillary and/or coplanar to the decollement surface. They are separated along their northwestern and southeastern boundaries by left-lateral strike-slip faults near which beds often show drag flexure.

The Tertiary section appears to represent an upper plate of the decollement. The Mesozoic and Precambrian sections represent a middle plate above lower plate rocks which are not exposed. The large domains (blocks) of varied Precambrian rock types in the hanging wall suggest some distance of transport along the flat structures, for it is most unlikely that so many diverse rock types, representing some difference of metamorphic regime, can represent only the local basement.

The exposed mineralization is restricted to two moderately dipping conjugate fault systems and related synthetic and antithetic gash veins and fault breccias that appear to extend for some distance along their strike projection. These fault zones, at least in the Dixie mine area, have been used to localize a degassing breccia.

MINERALIZATION Mineralization is dominantly copper and gold with a paucity of other anomalous elements in the central part of the area. Primary sulfides are chalcopyrite, galena, and sphalerite. Gold was, and still is after oxidation, in native form.

Alteration associated with primary ores consists of quartz, Fe-rich chlorite, and calcite. Quartz has grown in the rocks (i.e. they have been silicified) as matted slender prisms to which chlorite is interstitial. Smectite and illite are accessory minerals in more acid host rocks and they occur in structures that have been particularly strongly altered.

Calcite and barite are of the same age as mineralization and are clearly younger as well. Typically the calcite is of a dirty brown color, for it is heavily charged with iron oxides. However, these two minerals appear to have continued to form after metallization was complete, and they may be found in veins devoid of sulfide which extend well outside the central area. In this sense they seem to display an outward zonation from mineralized ground.

DRILLING

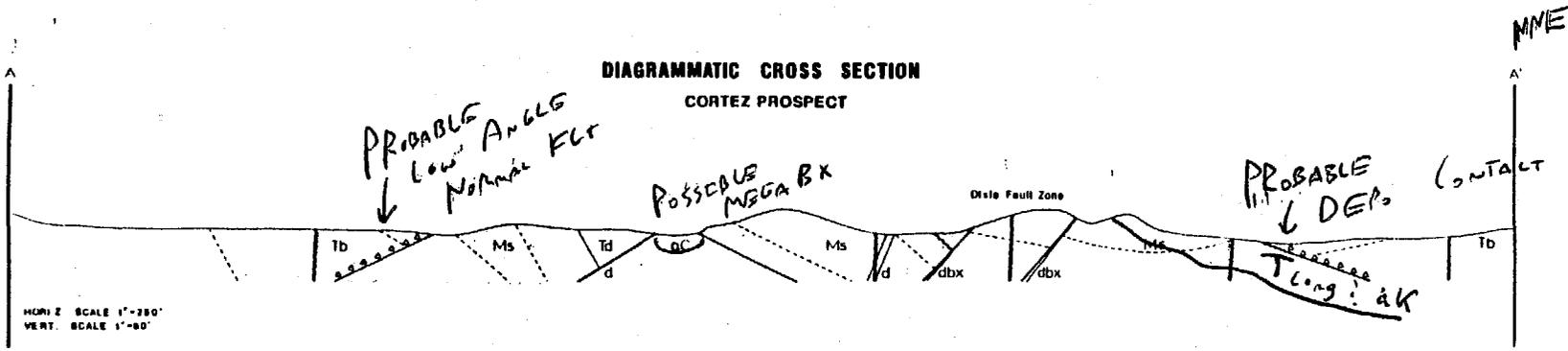
Veins of these minerals may occur between domain boundaries in the upper and middle plates, usually following northwest striking structures. Calcite also cements and replaces breccia zones along block boundaries.

The mineralized structural zone at the Dixie mine is covered in its southeast extension. The fault zone inferred to parallel it which passes through the Jackpot mine is covered in its western extension in this same area. The soil geochemical sampling program shows a pronounced gold anomaly in the area, suggesting continuation of one or both structures, with mineralization, under the cover.

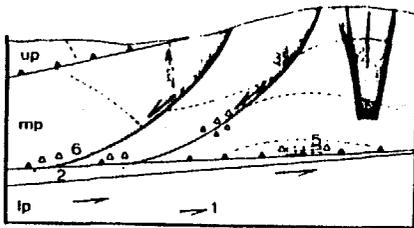
Steep-dipping veins that course along the southwestern margin of the area may carry bismuth. Microprobe study of one such sample revealed that tiny beads of eichbergite, neyite, and bismuthinite may coexist within a few microns of each other. This violation of phase rule may indicate that these veins have formed with unusual rapidity, perhaps due to boiling, and that they did so because they lead directly from mineralization that proceeded at a slower pace in gently dipping structures below.

CONCLUSIONS The simple geochemical signature and alteration assemblage are typical of numerous gold prospects that lie along the Colorado River in Arizona and California. At the Cortez prospect, it seems likely that mineralization continues down dip to the southwest or south within the middle and lower plate rocks and in the decollement itself.

DIAGRAMMATIC CROSS SECTION
CORTEZ PROSPECT

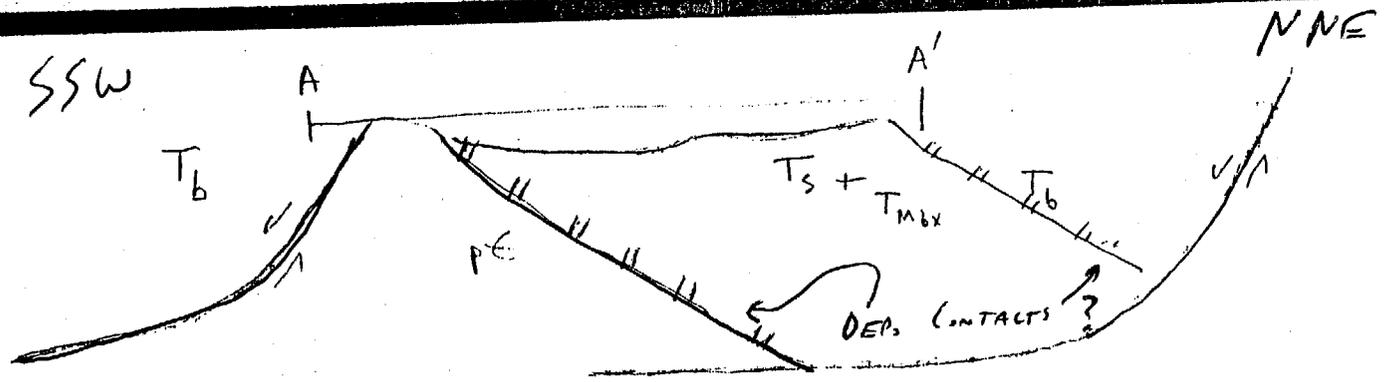


HORIZ. SCALE 1"=350'
VERT. SCALE 1"=80'

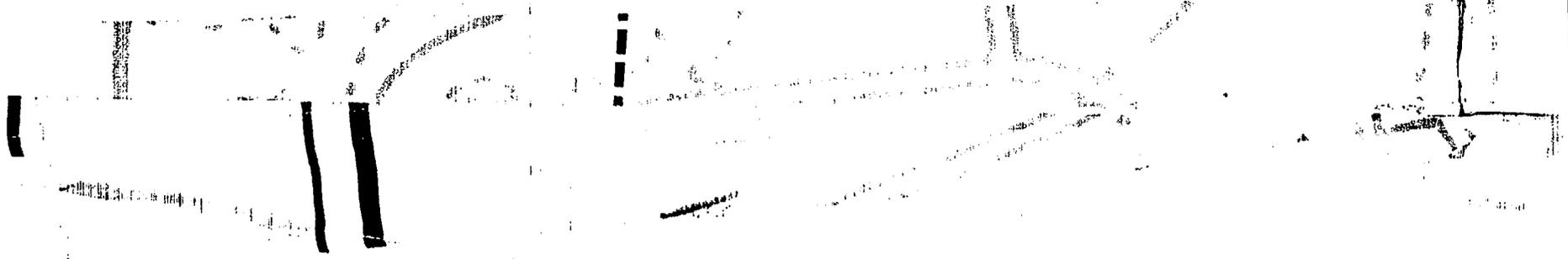


EXPLORATION MODEL

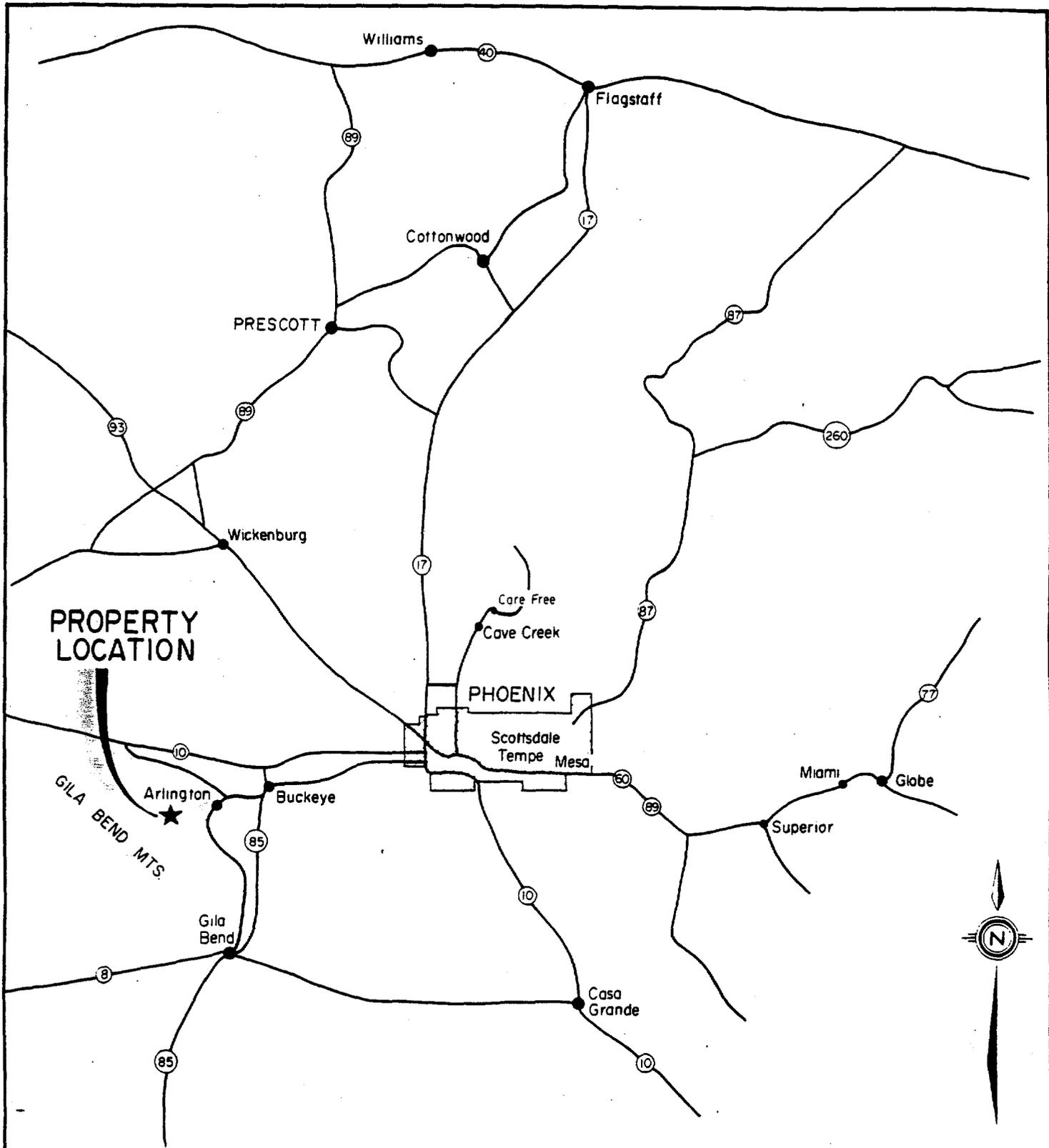
018
CARTWRIGHT



scale: 1"=500'

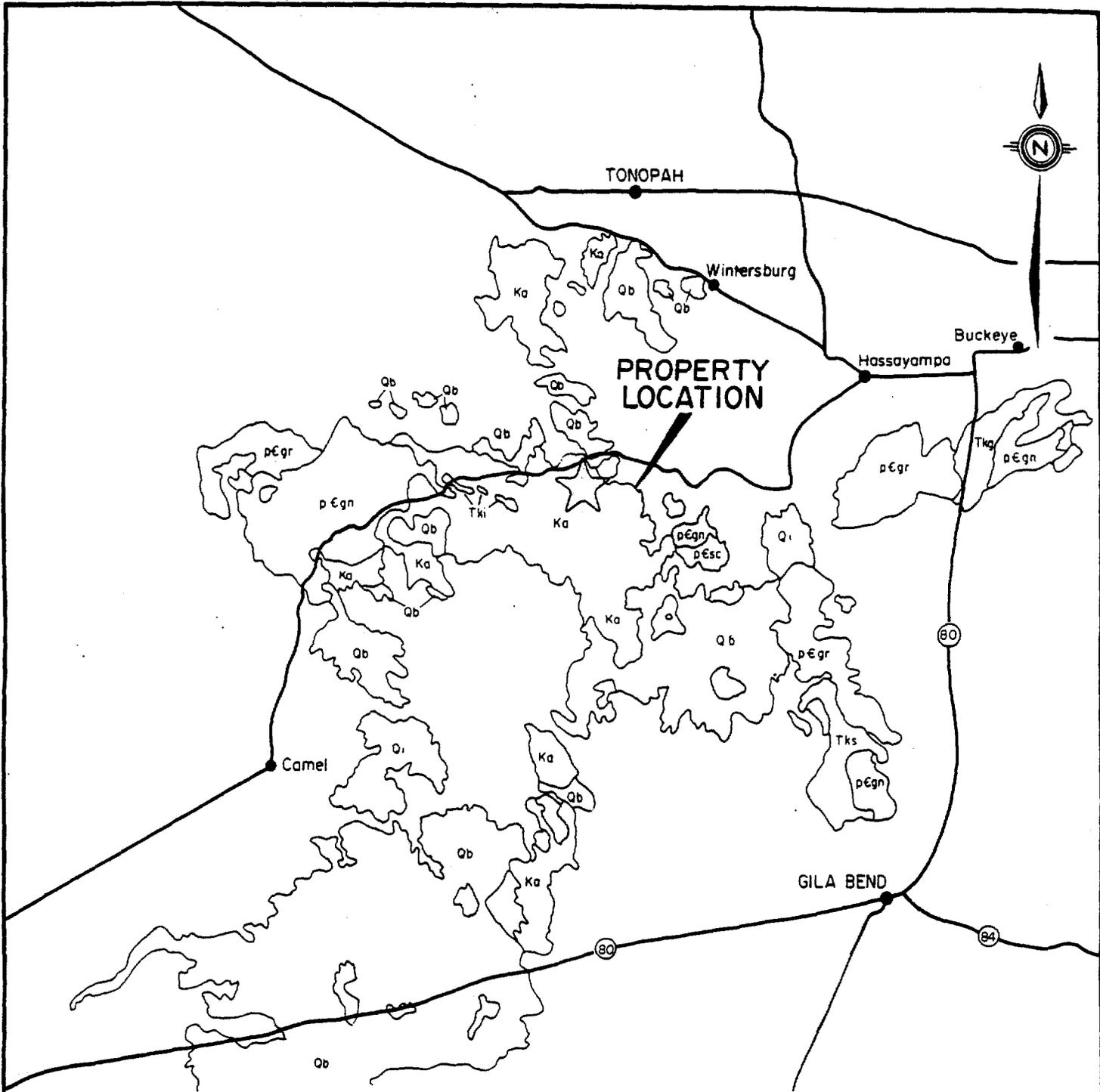


Assessment work.
30K due Oct 1, 1990



PROPERTY LOCATION MAP
 MARICOPA COUNTY
 ARIZONA, U.S.A.

DRAWN	CHECKED	PLAN No.
SCALE 1" = 23.4 miles	DATE	1



LEGEND

PLEISTOCENE

- Qs SEDIMENTARY DEPOSITS-ALLUVIAL
- Qb BASALT
- Qi DIKES

UPPER CRETACEOUS

- Tki GRANITE, RHYOLITE
- Tkg GRANITE
- Tks SEDIMENTARY

LOWER CRETACEOUS

- Ka ANDESITE FLOWS & TUFFS

PRECAMBRIAN

- pεgr GRANITE
- pεgn GNEISS
- pεsc SCHIST

DATA U.S.G.S. MAP ARIZONA

GEOLOGY
MARICOPA COUNTY
ARIZONA

Drawn :	Checked :	Plan No.
Scale : 1 : 50,000	Date :	3

ASARCO

JDS
Southwestern Exploration Division

April 22, 1991

M.A. Miller

GF Claim Group
Maricopa County, AZ

Mr. Daniel P. Laux has a group of claims in Copper Valley, NW of Gila Bend, Arizona.

Although Laux thought a Copperstone-type deposit might be in the low-angled fault structure with abundant hematite additions, his sample results show very low gold.

Check the files to see what Asarco has done.

SWED should visit the area at some time to see if any further interest can be generated.

Return file copy to Mary when you have reviewed the submitted material. Note that Laux wants a copy of any new data generated by Asarco.

JDS:mek
Atts.


James D. Sell

cc: W.L. Kurtz (w/o atts.)

~~FILE~~

GF Claim Group
Sec. 10, T2S, R 10W
Copper Valley
Maricopa Co, AZ

Daniel P. Laux
South Branch Resources
2244 E. Monterey Way
Phoenix, AZ 85016

602-954-6887

602-893-1434

April 19, 1991

ASARCO Incorporated

APR 22 1991

SW Exploration

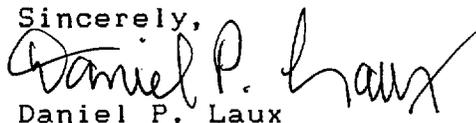
James D. Sell
ASARCO Inc.
1150 N. 7th Ave.
Tucson, AZ 85703

Dear Jim:

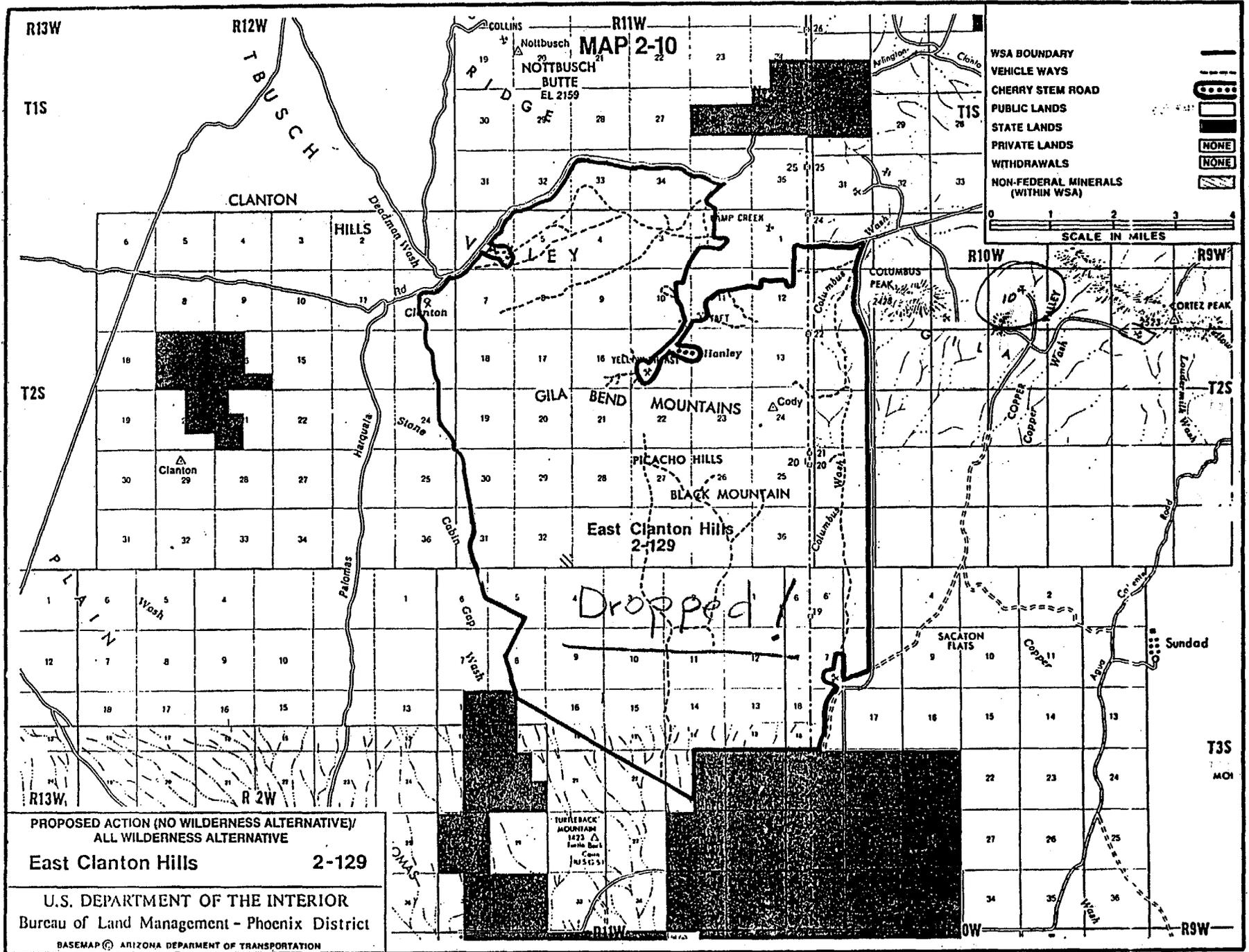
Enclosed is information on my GF claim group (15 claims). Mineralization is of mid-Tertiary age, and consists of strong hematitic alteration and widespread copper oxides. Although I have not been able to produce good Au values (highest is 260 ppb), the style of mineralization looks very similar to that found at the Copperstone Mine. Given the size of the system (hematitic/limonitic alteration occurs in the hangingwall of a N55W-trending fault for over 12000 feet), good potential exists for a large low-grade copper oxide deposit. There are abundant, narrow (1-3' thick), high-grade (~5% Cu) structures on the claim group but these were typically not sampled. Instead, samples were usually collected from hematitic zones which are not associated with visible copper oxides. These zones often strike E-W to WNW, and dip shallowly to the south.

As stated in our telephone conversation, I would be happy to accompany you out in the field, or you are welcome to look at the property on your own. In either case, if you decide you have no further interest in the property, I would appreciate a copy of any data you generate.

Sincerely,



Daniel P. Laux



Dropped!





Malicope Co. ?



07/15/92

09:52

7023561413

AMERICAN ASSAY

001

PRELIMINARY REPORT

NA

RENO: 1500 Glendale Ave, SPARKS 89431
P.O. Box 71060, RENO 89570
Ph (702)356 0606 Fax 3561413

ASARCO, INC.

REPORT : SP 017864 1 Page(s) Date : 07/15/92

Client reference : MNZ-1/7 Project : MNZ

Cost code :

Copies to : MARK MILLER (I)

J.D. SELL (R)

Samples : Type Preparation code
Received : 07/08/92

Analysis	Code	Quality Parameter	Detection	Units
AU	FA30	Acc. 15 %	5	ppb
Au(R)	FA30	Acc. 15 %	5	ppb
Ag	D210	Prec.10 %	0.5	ppm
As	D210	Prec.10 %	2	ppm
Sb	D210	Prec.10 %	1	ppm

Signatory : Jorge Ugarte

PRELIMINARY REPORT

REPORT : SP 017864

Page 1 of 1

Sample	Au ppb	Au(R) ppb	Ag ppm	As ppm	Sb ppm
MNZ-1	278		<0.5	25	2
MNZ-2	<5		<0.5	66	<1
MNZ-3	142	152	<0.5	230	4
MNZ-4	800		<0.5	114	2
MNZ-5	573		<0.5	257	2
MNZ-6	365		--	--	--
MNZ-7	1036	1109	--	--	--

Please refer to the cover sheet for further analysis details.

Mark Miller
J. D. Sell

1500 GLENDALE AVE. SPARKS
NEVADA 89431
TELEPHONE (702) 356 0606
FACSIMILE (702) 356 1413

AF 7/14 ✓

CLIENT: ASARCO INC.
CLIENT REF: MTR
ANL REF: SMO 1868
METHOD: ANAL 01-D

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Co	Cd	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Nb	Ni	P	Pb	Sb	Sr	Th	Ti	Tl	V	W	Zn
SAMPLES	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MNZ-6	0.1	2.97	198	11	24	2	0.51	0.2	23	33	110	15.9	6	0.11	6	1.07	2352	1	0.01	30	0.105	9	2	56	2	0.01	5	71	1	129
MNZ-7	0.1	0.6	594	13	9	2	0.13	0.2	10	20	488	20.4	2	0.02	4	0.08	1016	1	0.01	12	0.153	3	2	169	2	0.01	5	78	1	62

DETECTION LIMIT 0.2 0.01 2 2 2 2 0.01 0.2 1 1 1 0.01 1 0.01 2 0.01 1 1 0.01 1 0.01 2 2 1 2 0.01 5 2 1 1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR AL K AND Na



T.E.S.

JUL 27 1992

S.W. MINING DEPT.

JUN 22 1992

TUCSON

Mr. T. E. Scartaccini, General Manager
ASARCO INC.

Dear Mr. Scartaccini:

I have eight unpatented mining claims for sale or lease, in the Rich Hill area near Stanton, Arizona. These claims are contiguous, free and clear, and neighboring claims are also available. I lived on these claims for eleven years, until 1990 when BLM forced me to move off. Now I live in Yarnell and drive to the claims almost daily. I have a couple caretaking there now.

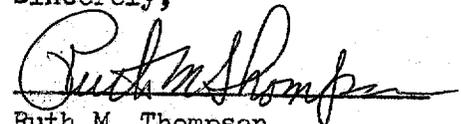
My reason for writing this letter is to inform you of the availability of this property, give you a little information about it, and to invite you to come visit and take any and all tests you wish.

There are two old mines here, and many gold bearing quartz veins which run in both E. W. and N.S. directions. This is a highly mineralized area with 30% iron ore and varying amounts of copper, gold and silver, plus many other metals and minerals. I am able to pan gold from a number of veins and dikes which I locate by dowsing.

My property is located in Township 10, N., Range 5 W., sections 25 and 26, at the confluence of Indian and Antelope creeks. The Yarnell Mine, the Rincon and the Liviathon are located within approximately a one mile range. I have reason to believe that there are two large ore bodies present in the area. The county road from Stanton to Yarnell runs through my claims. I have electricity, phone and a domestic well. There is water for mining in the shaft of the Red Metals Mine..which flooded out in the early 40s. I also have a water permit for 2.6 acre feet annually from Antelope Creek.

If you are interested, please come and let me show you around.

Sincerely,



Ruth M. Thompson
Box 218
Yarnell, AZ 85362

(602) 427-3568

ASARCO

JUL 27 1992

SW - AP-1000

W/M

PRELIMINARY REPORT

RENO: 1500 Glendale Ave, SPARKS 89431
P.O. Box 71060, RENO 89570
Ph (702)356 0606 Fax 3561413

ASARCO, INC.

REPORT : SP 015779 1 Page(s) Date : 02/21/92

Client reference : WI-30/32 Project : WILKINS

Cost code :

Copies to : MARK MILLER (I)

J.D. SELL

Samples : Type Preparation code
Received : 02/13/92 -----

Analysis	Code	Quality Parameter	Detection	Units
Au	FA30	Acc. 15 %	5	ppb
Au(R)	FA30	Acc. 15 %	5	ppb
Ag	D210	Prec. 10 %	0.5	ppm

ASARCO Inc. corporate

FEB 24 1992

SW EXP. 02/21/92

Signatory : Jorge Ugarte

PRELIMINARY REPORT

REPORT : SP 015779

Page 1 of 1

Sample	Au ppb	Au(R) ppb	Ag ppm
WI-30 0-8(COMP)	<5	<5	5.0
WI-31 15-30(HORIZ)	8		--
WI-32 0-15(HORIZ)	<5		<0.5

Please refer to the cover sheet for further analysis details.

ASARCO Inc.

FEB 24 1992

SW

Mark Miller
J. D. Self

1500 GLENDALE AVE. SPARKS
NEVADA 89431
TELEPHONE (702) 356 0606
FACSIMILE (702) 356 1413

St 2/21

CLIENT: ASARCO
CLIENT REF: WILKINS
NAL REF: SP015779
METHOD: NAL 01-0

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Tl	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	
WI-31 15-30(HORIZ)	0.3	0.51	9	4	19	5	0.1	0.2	4	17	78	2.36	2	0.24	15	0.04	209	20	0.01	8	0.017	42	2	21	7	0.01	10	7	1	56

DETECTION LIMIT: 0.2 0.01 2 2 2 2 0.01 0.2 1 1 1 0.01 1 0.01 2 0.01 1 1 0.01 1 0.01 2 2 1 2 0.01 5 2 1 1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Tl AND W
DIGEST IS LIMITED FOR AL K AND Na

ASARCO Incorporated

FEB 24 1992

SW EXP-100000



FEB-21-1992 16:21 FROM HIRER, HOSHI LABS-TENBU

YW

PRELIMINARY REPORT

RENO: 1500 Glendale Ave, SPARKS 89431
P.O. Box 71060, RENO 89570
Ph (702)356 0606 Fax 3561413

ASARCO, INC.

REPORT : SP 015779 1 Page(s) Date : 02/14/92

Client reference : WI-30/32 Project : WILKINS

Cost code :

Copies to : MARK MILLER (I)

J.D. SELL

Samples : Type Preparation code

Received : 02/13/92 -----

Analysis	Code	Quality Parameter	Detection	Units
Au	FA30	Acc. 15 %	5	ppb
Au(R)	FA30	Acc. 15 %	5	ppb

Signatory : Jorge Ugarte

PRELIMINARY REPORT

REPORT : SP 015779

Page 1 of 1

Sample	Au ppb	Au(R) ppb
WI-30 0-8(COMP)	<5	<5
WI-31 15-30(HORIZ)	8	
WI-32 0-15(HORIZ)	<5	

Please refer to the cover sheet for further analysis details.



2/9/94





MA Miller

JW Sell

A Mr. Jade Culp, Congress, ph 427-3984,
has a pile of maps, reports on gold-copper
property not worked since 1908.

He will allow reviewing of the data
at his house on the right hand side
of the highway from Wanchenbury to Garnett.
is at the curve where Hwy 89 and 71
intersect.

Go see the data.

James to See

cc: W. Kent

JDS

ASARCO

Exploration Department
Southwestern United States Division

James D. Sell
Manager

February 4, 1988

Mr. Larry Chantler
357 Park Avenue
Prescott, AZ 86303

Mammoth Area
Sec. 25, 26, T7N, R5W
Maricopa County, AZ

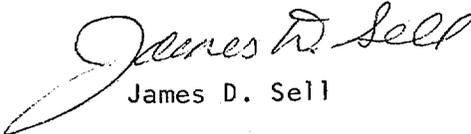
Dear Larry:

The nine drill holes were finally located. Also a few samples collected on the surface. Locations are shown on the attached map along with the assay data.

If you find more gold out there, then please get in contact with us.

In the remembrance of the good days of Mexico!

Sincerely,


James D. Sell

JDS:mek
Atts.