



CONTACT INFORMATION
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James Doyle Sell Mining Collection

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JHE/OK

September 28, 1976

TO: F. T. Graybeal

FROM: H. G. Kreis

Olberg Project
 Monthly Progress Report
September 1976

The Olberg Project did 637' of rotary drilling during the month of September. Drill holes OL-5, OL-6, and OL-7 were completed and the rig was then released. The results of these holes are summarized:

<u>OL-5</u>			<u>Geology</u>
<u>From</u>	<u>To</u>	<u>Interval</u>	
0	40'	40'	Alluvium
40'	220' TD	180'	Sacaton Peak type Laramide intrusive. Unmineralized.

<u>OL-6</u>			<u>Geology</u>
<u>From</u>	<u>To</u>	<u>Interval</u>	
0	40'	40'	Alluvium
40'	80'	40'	Laramide porphyry. Unmineralized.
80'	220'	140'	p&gr. Unmineralized.
220'	232'	12'	Laramide porphyry. Unmineralized.
232'	259' TD	27'	p&gr. Unmineralized.

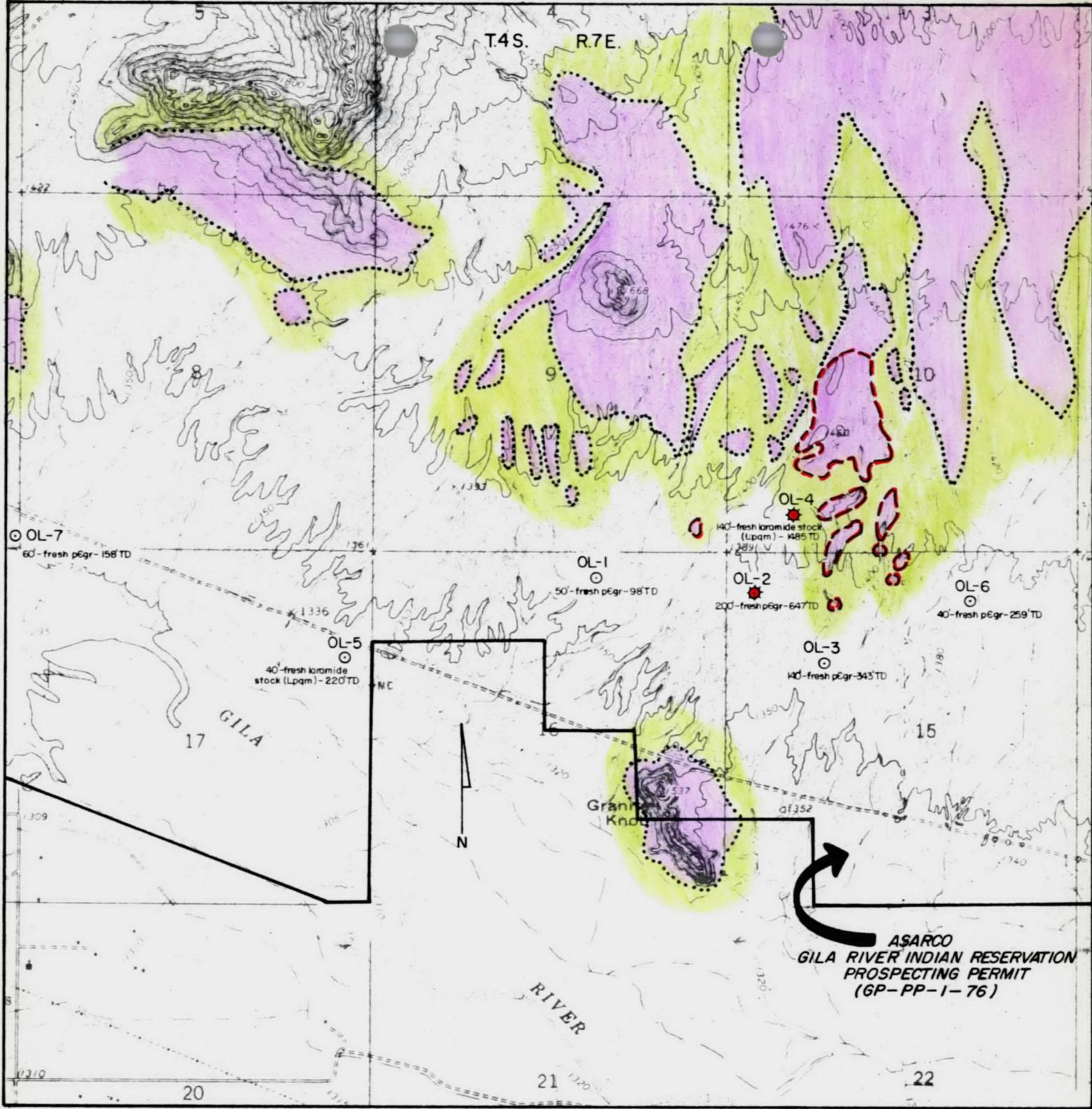
<u>OL-7</u>			<u>Geology</u>
<u>From</u>	<u>To</u>	<u>Interval</u>	
0	60'	60'	Alluvium
60'	158' TD	98'	p&gr. Unmineralized.

No more field work or drilling will be done. A close-out report will be prepared next month.

To date it is estimated that \$57,000 was spent on the Olberg Project and the estimated balance of the authorization is \$33,000.

H. G. Kreis
 H. G. Kreis

HGK:lb
 Att.



ASARCO
GILA RIVER INDIAN RESERVATION
PROSPECTING PERMIT
(GP-PP-1-76)

EXPLANATION

- ASARCO drill hole
- ⊙ Proposed drill hole
- ★ Intercepted alteration and mineralization above fresh rock

ASSAY DATA KEY

depth to post-min.cover — geology at total depth — total depth

GEOLOGIC LEGEND

- cp — chalcopyrite
- cc — chalcocite
- outline of altered rock outcrops
- post-pre pre-mineral, post-mineral contact

TO ACCOMPANY
<i>QUARTERLY REPORT</i>
DATED <i>9-28-76</i>
BY <i>DG KREIS</i>

DRILLING PROGRESS MAP
for the 3RD QUARTER of 1976

OLBERG PROJECT
Pinal County, Arizona
SCALE 1" = 2000'

AMERICAN SMELTING AND REFINING COMPANY
TUCSON ARIZONA

April 4, 1975

J. H. C.
APR 7 1975

Mr. T. C. Osborne
Assistant Director of Exploration
New York Office

file
Exploration Authorization
Request
Olberg Project
(Gila River Indian Reservation)
Pinal County, Arizona

Dear Sir:

The Blackwater Mining District was mapped fifteen years ago by Blucher and Kinnison. Recently I asked John King to reappraise this area paying especial attention to a small altered and mineralized outcrop area mapped as Laramide monzonite and Precambrian Apache Group by Blucher and Kinnison. Mr. King's excellent work has defined a shallow covered area worthy of testing for porphyry copper potential. His report is enclosed.

Mr. Courtright and I visited the Olberg outcrops and agree with King that though these outcrops have some unexplained structural complications they do exhibit porphyry copper type alteration and mineralization and do represent a direct exploration lead. The shallow alluvial covered area southwest and southeast of the Olberg outcrops should be tested by rotary drilling. A minimum of eight holes, totaling 8,000 feet of drilling, is necessary for an initial test.

The area is entirely within the Gila River Indian Reservation. 8800 acres will be put up for sealed, competitive bid. The winning bidder will obtain a two-year prospecting permit with a privilege to apply for lease.

I estimate costs to complete the initial test of the Olberg prospect as:

Land Bid	\$10,000
8,000 feet rotary drill and Project Costs @ \$10/ft.	<u>80,000</u>
Total:	\$90,000

If you approve, please request an Exploration Authorization in the above amount. Forms 302-E and 302-EA are attached.

Respectfully submitted,

W. L. Kurtz

W. L. Kurtz

WLK:lb
Enc: Report
Atts: Forms 302-E & 302-EA

cc: JHCourtright  NPWhaley
RBCrist WGKellogg
JRKing

AMERICAN SMELTING AND REFINING COMPANY
TUCSON ARIZONA

March 27, 1975

J.H.C.
MAR 31 1975

Mr. T. C. Osborne
Asst. Director of Exploration
New York Office

file: OLBERG PROSPECT

Gila River Indian Reservation
Exclusive Prospecting Permit
with PRIVILEGE to apply for Lease

Dear Sir:

Enclosed are:

- A. Example of Notice of Competitive Sale of Exclusive Mineral Prospecting Permit with Option to Lease on Gila River Indian Reservation, dated August 2, 1972
- B. Gila River Indian Reservation Mineral Prospecting Permit (Exclusive with Option)
- C. Mineral Prospecting Permit Environmental Section
NOTE: This is document that changes "right to lease" to "privilege to lease".
- D. Mining Lease - Indian Lands
- E. Code of Federal Regulations 25, Indians, revised as of Jan. 1, 1972, Chapter 1 - Bureau of Indian Affairs Part 177 - Surface Exploration, Mining, and Reclamation of Lands.

We have identified an area, which we have named Olberg Prospect, on the Gila River Indian Reservation that warrants exploration drilling for a possible open pit porphyry copper deposit. Since we were not able to obtain an exclusive prospecting permit without competitive bidding, we requested the area be put up for competitive bid. This competitive bidding will probably take place in mid to late April 1975.

In December we briefly reviewed with you the Prospecting Permit and Mining Lease on the Papago Reservation. The Gila River Indian Reservation Prospecting Permit and Mining Lease are very similar. On December 5, 1974, Mr. Crist sent you copies of Bureau of Indian Affairs Standard Form Prospecting Permit and Mineral Lease with notation, plus a letter containing Mr. Dolph's comments, for Mr. Hecox's review. For convenience I have enclosed another copy.

March 27, 1975

We must now make a decision whether to bid (i.e., can Asarco live with the terms of the Prospecting Permit and Mining Lease). My personal belief is that we should go ahead. It is doubtful that Environmental Assessments, Analyses, and/or Impact Statements would preclude mining (page 2 of Attachment C). The royalty schedule in the Mining Lease is much, I think, too high, but I believe this can be negotiated if and when we apply for a lease, along with any other changes you and Mr. Hecox deem necessary. Please inform me if we should proceed.

A report on the Olberg prospect will be sent next week. Approximately 8800 acres will be put up for sealed bid. I estimate one dollar per acre is the minimum bid the Indians will accept. Therefore, we should be prepared to bid \$8,800 as a minimum, with higher bids of \$15,000 or \$25,000 to be entered depending on competition present at bidding. A minimum exploration program would be eight rotary holes varying from 500 to 1500 feet and costing approximately \$80,000.

Very truly yours,



W. L. Kurtz

WLK:lb

Encs.

cc: JHCourtright - w/o encs. ✓

RBCrist - w/o encs.



THE PAPAGO TRIBE OF ARIZONA

P. O. Box 837 • Telephone (602) 383-2221
Sells, Arizona 85634

MINERAL PROSPECTING
PERMIT EXTENSION

Date: July 21, 1976

ASARCO Incorporated
P. O. Box 5747
Tucson, Arizona 85703

Gentlemen:

On the 27th day of April, 1966, you were issued a Prospecting Permit on the Gila Bend, San Xavier, and Papago Reservations for a period of four months.

This is to advise you that you are hereby granted an extension of this Permit under the terms and conditions contained therein for an additional period of four months at a fee of \$500.00 per month. This extension is effective as of the 12th day of August, 1976 and expires on the 11th day of December, 1976.

THE PAPAGO COUNCIL

Adrian A. Smith
Director of Mines
The Papago Tribe

Cecil Williams
Chairman
The Papago Council

Date : 7-27-76
[Signature]
Superintendent
The Papago Agency

BUSINESS PERMIT
GILA RIVER INDIAN COMMUNITY
P.O. BOX 97 SACATON, ARIZ. 85247

OWNER: ASARCO Incorporated

ADDRESS: P.O. Box 5747 Tucson, AZ 85703

BUSINESS CLASSIFICATION: Non-Exclusive Prospecting Permit

Sec. 12, T5S, R5E, and Sec. 7, T5S, R6E, Sec. 20, 21, ^{T5S, R6E} 28, & 29

FOR PERIOD: 1, June 1976 Thru 30, November 1976

FEE PAID: \$3,000.00

GILA RIVER INDIAN COMMUNITY

BY

Fred Carr
for Business Manager

OPERATOR AGREES TO ABIDE BY ALL REGULATIONS AND
ORDINANCES OF THE GILA RIVER INDIAN COMMUNITY.

Gila River Police - Sacaton 562-3361

Gila ^{Grossing} ~~Police~~ 276-5501



United States Department of the Interior
BUREAU OF INDIAN AFFAIRS
PIMA AGENCY
Sacaton, Arizona 85247

May 18, 1976

IN REPLY REFER TO:
Real Property Management

Mr. Robert R.B. Crist
Property Manager
ARSCO, Inc.
P. O. Box 5747
Tucson, Arizona 85703

OLBong

Dear Mr. Crist:

Your letter of May 3, requests approval of a supplemental drilling plan under Prospecting Permit No. GR-PP-1-76.

Subject to your plan being concurred in by the U.S. Geological Survey, this is your authority to enter into the supplemental drilling program as outlined in your letter with attachment.

A copy of this letter is being sent to the U.S. Geological Survey so that they may be aware of our tentative approval of your drilling plans.

Sincerely yours,

Marcus J. Sekayouma
Acting Superintendent





GILA RIVER INDIAN COMMUNITY

SACATON, AZ. 85247

ADMINISTRATIVE OFFICES
P. O. BOX 97 - (602) 562-3311

May 25, 1976

Mr. R. B. Crist, Property Manager
ASARCO Incorporated
P. O. Box 5747
Tucson, Arizona 85703

Dear Mr. Crist:

The Resource Development Standing Committee of the Gila River Indian Community reviewed and approved your request of May 3, 1976 for a supplemental drilling plan under Mineral Prospective Permit No. GR-PP-1-76. *026529*

The committee also approved your request of May 17, 1976 for a Non-Exclusive Prospective Permit with some modifications. The permit is limited to those tribal lands located in Section 12, T.5S,R.5E., and Section 7, T.5S.,R.6E., and Sections 20, 21, 28 and 29, T.4S,R.6E. Permission was granted to drill one, but not more than three, test holes on the condition that the geologic and hydrology information be made available to the Resource committee. It was agreed that the length of the permit time would be for a period of six months beginning June 1, 1976. The permit fee for that period would be \$3,000.

A tribal business permit is enclosed and it should be carried by your people in the field. It will also be necessary for you to obtain a Non-Exclusive Prospecting Permit from the Bureau of Indian Affairs, Realty Office in Sacaton.

Should you have any additional questions, please feel free to contact me at the above address.

Very truly yours,

GILA RIVER INDIAN COMMUNITY

R.M. Andrew Williams
Business Manager

cc. E. Enos, Law & Order Dept.
B. Jones, Treasurer
M. Sekayouma, BIA Realty
Committee file

OLBERG. Summary.

OL-1. 1900' S80°W of the SW corner of S10, T45, R7E.
Shelton Drilling Co., Rotary June 22-23, 1976
0-50 Gal
50-98 pe og, fresh.
T.D.

Spot Core at 93-98 ft.
Thin Section at 95 ft.

OL-2. 800' S31°E of the SW corner of S10, T45, R7E.
Shelton Drilling Co., Rotary June 23-29, 1976.
0-530 Gal & cgl.
530-600 Lspg (?), fresh biotite granodiorite.
600-647 pe og, fresh.
T.D.

Spot Cores at 140-148; 318-322; 455-463;
591-594; & 643-647.
Thin Section at 592 & 645.

OL-3. 2200' S43°E of the SW corner of Sec. 10, T45, R7E.
Shelton Drilling Co., Rotary June 29-July 2, 1976.
0-140 Gal
140-343 pe og, fresh, weathered, w/alt-min.
T.D.

Spot Cores at 177-181; 300-305; 332-337.
Thin Section at 334.

OL-4. 1200' N55°E of the SW corner of Sec. 10, T45, R7E.
Joy Mfg Co.; Rotary 0-163, core (NX) 163-1475.
0-70 Gal
70-120 T dacite

120-140 T whitetuff? cgl.
140-874 pe og, alt & min., br & fluidization; copper
stain 721-732; manganese-copper blke acid (neotectic)
732-742; copper oxide-sulfate(?) 873-874; FeOx throughout
874-929 Lgm, dark porphyry, w/alt, with
copper oxide-sulfate(?) 874-902, to below.
929-1135, pe og, brecciated & fluidized w/FeOx.

OL-4 (Continued).

Fault
Zone
of
Contact.
May
be
wall
of
fluidized
vent.

1135-1154½ Fault gouge & crushed material of pE09, pt. gr(?). dipping 45°-55°. May be flu wall zone?

1154½-1206 pE gr(?) & pE09, weath. altered with numerous slips & crushed zones at 45°. Key pin grained diabase dike at 1196-1198 with dip of 45°.

1206-1226 pE09 & Lgr(?) Crushed, faulted, slips & contacts at 60°.

1226-1238 Lgr(?), blockish breccia, esp. fresh, w/ calcite on fractures & slips.

1238-1259. pE09 bx. w/ Lgr(?) in cemented fault gouge breccia at 45°-60°.

1259-1280. Lgr(?) fresh, with numerous slips at 30°-60°.

1280-1475 Lgr(?) continuing decrease in slips & reddish sandy cemented material to base of hole. Essentially fresh.

Thin sections at 402; 601; 845; 900; 1004; 1301; and 1451.

FTG
JOS

4:20 PM

7/1/76

HGK collid:

OL-3

0-140 Gal. drilling 20'/hr.

140-305 prob. BR of fresh pt og with some variability in wh. alt. mineralization with some red stain. drilling 5'/hr from 140'-200' ±

Spot Cores: ① 177-181. recovered only a few cobbles (equiv to 1/6'-1/2') of fresh pt og.

② 300-305. recovered 2 ft. one foot solid of fresh pt og; rest as fragments of same.

Tony will come in with cuttings & core and we will get together & have an opinion.

Later tonight Hank will call after he get core #3 up and we'll compare notes.

Hank strongly feels the hole has been in bedrock since 140 ft as the sharp drilling break occurred there.

JOS

From HGK 6/25/76

OL-2

0-200 cgl.

200-318 possible blk w/ local capping frag.

318-322. 1st core, well fractured pc g. w/ly alt & mineralogy; poor recovery, small fragments. (possible cgl?).

322-455. do from 200-318

455-463. 2nd core. dirty brown orange muddy. few black specks.

FTG & JWS do not think it is BR. recommend continued drilling til drilling rate drops off (presently 25'/hr.).

6/30/76

463-530 cgl.

530-600 fresh & fractured pc granite

600-647 fresh pc quartzite

spot core 591-593 1/2

643-647

Copies to JDSell
Return to me

BUSINESS PERMIT
GILA RIVER INDIAN COMMUNITY
P.O. BOX 97 SACATON, ARIZ. 85247

OWNER: ASARCO Incorporated

ADDRESS: P.O. Box 5747 Tucson, AZ 85703

BUSINESS CLASSIFICATION: Non-Exclusive Prospecting Permit

Sec. 12, T5S, R5E, and Sec. 7, T5S, R6E, Sec. 20, 21, 28 & 29

FOR PERIOD: 1, June 1976 Thru 30, November 1976

FEE PAID: \$3,000.00

GILA RIVER INDIAN COMMUNITY

BY *Fred Carr*
Business Manager

OPERATOR AGREES TO ABIDE BY ALL REGULATIONS AND
ORDINANCES OF THE GILA RIVER INDIAN COMMUNITY.

Gila River Police - Sacaton 562-3361

Gila ^{Groving} 276-5501



GILA RIVER INDIAN COMMUNITY

SACATON, AZ. 85247

ADMINISTRATIVE OFFICES
P. O. BOX 97 - (602) 562-3311

May 25, 1976

Mr. R. B. Crist, Property Manager
ASARCO Incorporated
P. O. Box 5747
Tucson, Arizona 85703

Dear Mr. Crist:

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Very truly yours,

GILA RIVER INDIAN COMMUNITY

R.M. Andrew Williams
Business Manager

cc. E. Enos, Law & Order Dept.
B. Jones, Treasurer
M. Sekayouma, BIA Realty
Committee file



United States Department of the Interior
BUREAU OF INDIAN AFFAIRS
PIMA AGENCY
Sacaton, Arizona 85247

May 18, 1976

IN REPLY REFER TO:
Real Property Management

Mr. Robert R.B. Crist
Property Manager
ARSCO, Inc.
P. O. Box 5747
Tucson, Arizona 85703

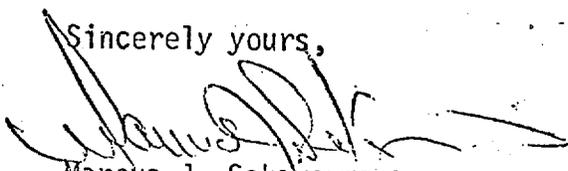
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A copy of this letter is being sent to the U.S. Geological Survey so that they may be aware of our tentative approval of your drilling plans.

Sincerely yours,


Marcus J. Sekayouma
Acting Superintendent



Paul Dull
File Olberg

WLK

more chips from drill hole south of
SACATON. If is bedrock then

have reasonable lead.

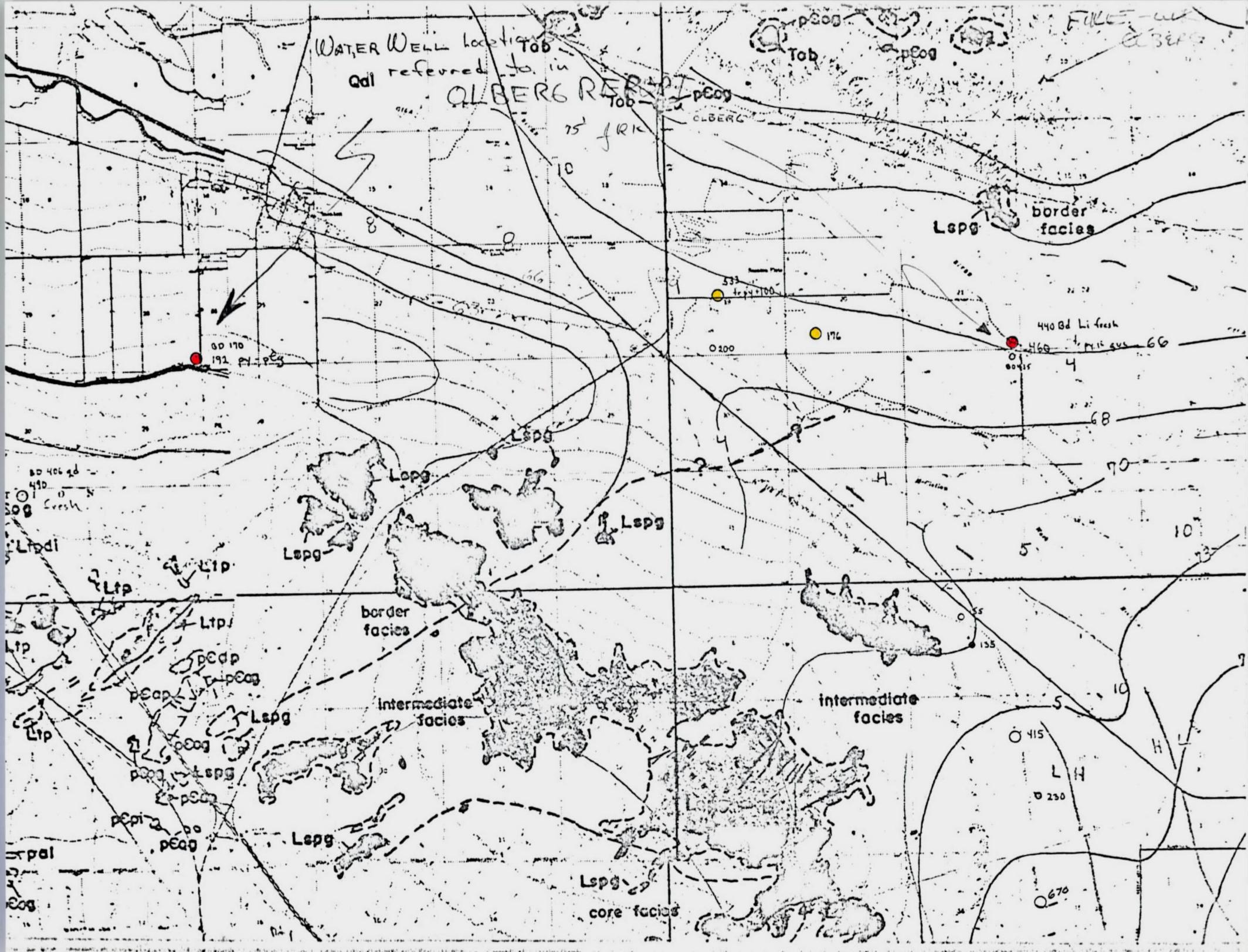
well 192' deep

tan gu	0-120'	mixed lithic frags & sizes w/ tr oxi py, epi	Li sp?
white gu?	120-170	single lith. frag - Li but <u>very</u> sandy nature -	no py
	170-180	mix zone	↑ above & below ↓
red pt guen.	180-192	some minor rounding of quartz grains tr. mixing of lithic frags - ?contamination	

not necessarily Bedrock

definite evict of py & poss. alter.

JRK



WATER WELL location
Qd1 referred to in
Qlberg Report

FILE - 111
Qlberg

Qlberg

75' FRK

border facies

Qd 170
191

533

176

440 Bd Li fresh

460

Mis gus 66

Lspg

Lspg

border facies

intermediate facies

intermediate facies

Lspg

core facies

415

LH

230

Q670

July 5, 1977

TO: F. T. Graybeal

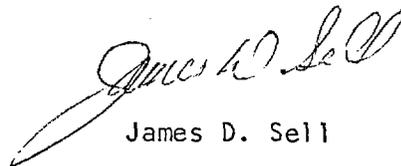
FROM: J. D. Sell

Comments on JRK Critique

Olberg Project, Pinal County, Arizona. I disagree that the features of "graded bedding" in the deep core are of sedimentary origin (Whitetail or equivalent), but believe it is a fluidized feature. However, his note that it is a porphyry copper environment is correct and the occurrence reinforces the continued investigation along the zone.

John's comments on volcanogenic deposit features at several places in western Arizona has validity and there is little doubt that our group has spent only minor time within that framework. However, others have spent considerable time for one reason or another and no real targets have been generated or accidentally intercepted in the work to date. The complexities of these deposits are well shown in the literature.

I have little to comment on his other critique comments other than to agree that much work remains throughout the exploration world in the quest for mineral resources.



James D. Sell

JDS:1b

OL-4

7/23/79

575-592 pt og, w/alt clay in place; minor bit to slt, it's a bit - some, good scath on fracture (0.25%) minor bx

592-599 as above increased bx of random fracture: with 10% to 15% of clay, clay through out. good scath on fracture, 10% to 15% bit -> semi clay

599-670 pCOg bx w/ Fe matrix, some floccules, through out. talc, some Fe silicate, bit of clay, some Lom 4% - 1% some sulf. minor bix. here 4% some Fe. Some arsenic but mostly on fracture & in bix matrix.

670-700 pCOg bx, partial visible zone, w/ slt. inc. Fe stain, some Fe, as well as fracture & matrix 0.5% of some sulf. bix in some bix matrix.

700-750 pCOg as above with downward flow, and of growth as fracture, small Fe silicate, Fe stain. Some goy. bx from 727 with Cu-Mn (reacted) cement in below goy. zone bix at 732. Clay - goy. bix rock, certain bix in goy. zone to bix, porous brown w/ fluid, Fe & Cu bix goy. at 450.

750 as above with less clay - goy. overall. Certain areas bix, Fe silicate up to 60% again with overall Fe stain & some bix or increased bix.

Split 682-696 LiFe

692-702 } Composite pulps

702-712 }

712-721 }

721-732 Cu

732-742 Mn-Cu

742-753 Fe

753-763 Hife

863-873 diste.

873-874 Levell

874-884 Chalk P

884-893 " "

893-902 " " Park

902-912 " " Fresh Park

12
17
20 100
81
20: 17:10

~~2 2/3~~ ~~1/2~~ ~~1/4~~ ~~1/8~~ ~~1/16~~ ~~1/32~~ ~~1/64~~ ~~1/128~~ ~~1/256~~ ~~1/512~~ ~~1/1024~~ ~~1/2048~~ ~~1/4096~~ ~~1/8192~~ ~~1/16384~~ ~~1/32768~~ ~~1/65536~~ ~~1/131072~~ ~~1/262144~~ ~~1/524288~~ ~~1/1048576~~ ~~1/2097152~~ ~~1/4194304~~ ~~1/8388608~~ ~~1/16777216~~ ~~1/33554432~~ ~~1/67108864~~ ~~1/134217728~~ ~~1/268435456~~ ~~1/536870912~~ ~~1/1073741824~~ ~~1/2147483648~~ ~~1/4294967296~~ ~~1/8589934592~~ ~~1/17179869184~~ ~~1/34359738368~~ ~~1/68719476736~~ ~~1/137438953472~~ ~~1/274877906944~~ ~~1/549755813888~~ ~~1/1099511627776~~ ~~1/2199023255552~~ ~~1/4398046511104~~ ~~1/8796093022208~~ ~~1/17592186044416~~ ~~1/35184372088832~~ ~~1/70368744177664~~ ~~1/140737488355328~~ ~~1/281474976710656~~ ~~1/562949953421312~~ ~~1/1125899906842624~~ ~~1/2251799813685248~~ ~~1/4503599627370496~~ ~~1/9007199254740992~~ ~~1/18014398509481984~~ ~~1/36028797018963968~~ ~~1/72057594037927936~~ ~~1/144115188075855872~~ ~~1/288230376151711744~~ ~~1/576460752303423488~~ 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Oldberg Project
Pinalco. Ariz
in area

2-6-75

Gila R. Indian Res.

Recon, N of Granite Knob - ~~SE~~ of Yellow Park
with WKK, JRK - 2-5-75.

numerous outcrops of iron stained breccia composed
of tightly wedged frags of pre-E granite, schist
and Apache group(?). Some sericitic alt, some
dark limonite - but geochem show 20-50 ppm
- one outcrop to west - 200 ppm - in soft alt block.

Breccia underlain - by intrusive Qtz por - biotite
rocks - mainly barren, but one outcrop on south
Keckel 1000 ppm - sparse Cu sil - limonite casts
- derived from epq - little or no py -

Breccia may be very extensive beneath cover -
~~derives~~ one big slide block, or ^{small} slide blocks
shed off slope and mingled with talus -
maybe derived from Min Butte (unlikely) - or from
covered areas to SE or SW - Cover shallow
- also Laramide por may contain ore
~~is~~ under cover -

2nd Visit incl FTG, JDS. - 4-22-76 -

Confirmed intrusive nature of porphyry, but contact
on NE is probable fault - min alt bx should
be tested (best geochem .02 Cu on west) but after
looking for better occurrences under surrounding
Cover by rotary drilling - JJK

PURCHASE ORDER

ASARCO Incorporated
American Smelting And Refining Co.

TUCSON OFFICE
P. O. BOX 5747

1150 NORTH 7TH AVENUE
TUCSON, ARIZONA 85703

DATE	July 6, 1976
ORDER NO.	T-76-256
REQUISITION NO.	

PLANT JOB NO.
APPROPRIATION NO.

To:
Joy Manufacturing Company
707 Boyd Boulevard
P. O. Drawer 489
La Porte, Indiana 46350

DATE REQUIRED AT DESTINATION:

SHIPPING INTERVAL PROMISED	SELLER WILL SHIP BEFORE:
POINT OF SHIPMENT	TERMS:
F.O.B. POINT	

FINAL DESTINATION — PLEASE NOTE CONSIGNMENT BELOW

CONSIGNMENT — SELLER WILL SHIP TO

— RENDER BILLS AS PER ATTACHED SHIPPING INSTRUCTIONS —

SHIP VIA

QUANTITY	UNIT	SPECIFICATIONS	ITEM NO.	UNIT PRICE
		<p>JOY MANUFACTURING COMPANY, hereinafter referred to as CONTRACTOR, will drill an exploration hole at ASARCO Incorporated's Olberg Project, Pinal County, Arizona, the location and depth of which will be specified by ASARCO's representative(s) at the jobsite. Payment for work performed will be in accordance with CONTRACTOR's letter of proposal dated June 29, 1976, a copy of which is attached hereto and made a part of this order.</p> <p>CONTRACTOR will provide a drill and water truck complete with crews and accessories.</p> <p>Mobilization of CONTRACTOR's equipment will commence on or about July 14, 1976.</p> <p>It is understood by both parties to this order that CONTRACTOR will perform all work in a diligent and workmanlike manner and in accordance with recognized standard drilling practices. ASARCO will not be charged for delays caused by failure of CONTRACTOR's equipment or personnel.</p> <p>CONTRACTOR's particular attention is called to Clause Eleven (11) on the reverse of this order. The insurance certificates filed in connection with our Purchase Order T-76-71 will suffice if still in force; otherwise, we will require new certificates.</p> <p>Orig: Joy Manufacturing Company cc: " " " , for acceptance TCB, FTG, W GK, HGK, JDS, NPW Accounting Department, File</p>		

ACCEPTED FOR JOY MANUFACTURING COMPANY

By: _____ Title _____

IMPORTANT

Attached Acknowledgment Card must be completed and returned promptly.

PLEASE ENTER OUR ORDER FOR THE ITEMS SPECIFIED ABOVE, SUBJECT TO ALL INSTRUCTIONS AND PROVISIONS ON REVERSE SIDE.

/s/ R. B. Crist
Property Manager



JOY MANUFACTURING COMPANY
707 BOYD BOULEVARD
P. O. DRAWER 489
LaPORTE, INDIANA 46350

7-2-76
NPW

June 29, 1976

Mr. N. P. Whaley
ASARCO Incorporated
P. O. Box 5747
Tucson, Arizona 85703

Dear Mr. Whaley:

Following up our phone call, I have listed below prices covering the drilling on your proposed program in the Coolidge area of Arizona. Our prices are based on drilling a minimum of 1,000 feet. I have, however, listed prices to 2,000 feet in the event you should wish to extend the hole to that depth.

The round-trip water haul may be as far as 17 miles; therefore, I have included the wages of a truck driver should it become necessary to hire a third man in the capacity of truck driver.

Please consider the following:

Mobilization \$600.00

Demobilization \$600.00

	<u>NX Wire Line</u>	<u>BX Wire Line</u>
0 to 500 feet	\$10.90/ft.	\$10.60/ft.
500 to 1000 feet	\$11.30/ft.	\$11.00/ft.
1000 to 1500 feet	\$11.90/ft.	\$11.60/ft.
1500 to 2000 feet	\$13.00/ft.	\$12.70/ft.
Diamond Bit Loss in excess of \$2.00 per foot		At Actual Cost
Standby Time for your convenience		\$18.00/hour
Water Truck Rental		\$360.00/month + 40¢ per mile
Water Truck Driver, if necessary		\$1,200/month
Cementing and/or Plugging Holes for Lost Circulation		\$24.00/hour + materials used

N. P. Whaley
ASARCO Incorporated

-2-

June 29, 1976

Reaming, if necessary	\$24.00/hour + materials used
Drilling Mud	\$3.00/50# bag
Drilling Mud Additives	At Jobsite Cost + 20%
NX Casing Ordered Left in Place	\$6.80/foot
BX Casing Ordered Left in Place	\$5.50/foot
Casing Lost	At 70% of above- listed prices
Setting and Pulling Casing	\$24.00/hour + materials used
Surveys	\$24.00/hour + survey instrument rental if required
Weather-treated boxes which hold 10 ft. of core	\$1.50 each

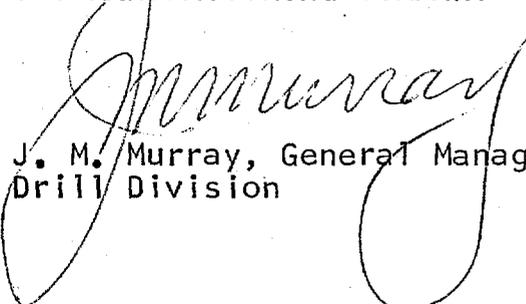
We will expect ASARCO to construct and maintain suitable access roads, dig mud pits, level the drill sites and furnish water on surface free of cost to JOY.

We have qualified crews available. Machinery can be dispatched from our Tucson facility to the jobsite area at a time to meet your starting schedule.

We hope that we may have the pleasure of performing this work for you.

Yours truly,

JOY MANUFACTURING COMPANY


J. M. Murray, General Manager
Drill Division

JMM:js

SAMPLERS, SAMPLING, SAMPLE PREPARATION, ASSAYING (Acct. 540-)

26 July thru
25 Aug 1974

Olberg Berg

Wages (Temporary Help)

<u>Name</u>	<u>No. of Straight Time Hours During Month</u>	<u>No. of Overtime Hours During Month</u>
_____	_____	_____
_____	_____	_____

Assaying

<u>Assayer</u>	<u>Charge or Estimated Expense for Assaying Performed During Month</u>
<i>AARL Division # 1397.3</i>	<i>\$98.50</i>
_____	_____

CLAIM STAKING, VALIDATION (Acct. 507-)

Invoiced during month covering current month's work

<u>Contractors' Services</u>	<u>Statement Amt.</u>
_____	_____
_____	_____

Estimated balance of contractors' charges covering work through end of current month

<u>Contractors' Services</u>	<u>Estimated Cost</u>
_____	_____
_____	_____

Wages

<u>Name</u>	<u>No. of Straight Time Hours During Month</u>	<u>No. of Overtime Hours During Month</u>
_____	_____	_____
_____	_____	_____

OTHER (Itemize any other major expenses not covered above or by invoice.)

<u>Item</u>	<u>Cost</u>
<i>Western Petrographic Div. # 76677</i>	<i>\$ 46.25</i>
_____	_____
_____	_____
_____	_____

3441 East Milber

INVOICE

Phone 889-5787

No. 13973

AMERICAN ANALYTICAL and RESEARCH LABORATORIES

ASSAYERS · CHEMISTS · METALLURGISTS

TUCSON, ARIZONA 85714

SAMPLE SUBMITTED BY ASARCO, Inc.

Tucson

DATE August 6, 1976

SAMPLE MARKED	ANALYSIS	CHARGES
014 682-696 --- 902-912	Cu, 12- Fe, 4- Mn	\$ 98.50
<i>OK for Payment</i> <i>James D. Lee</i> <i>Alberg Proj.</i> <i>EA-0084</i>		
IT IS OUR PLEASURE TO SERVE YOU...		

INVOICE

WESTERN PETROGRAPHIC

20 West Flores

Tucson, Arizona 85705

INVOICE NO.

76677

INVOICE DATE

August 10, 1976

SOLD TO

ASARCO
P. O. Box 5747
Tucson, Arizona 85703

SHIPPED TO

J. D. Sell

W. G. K.

AUG 11 1976

OUR ORDER NO. 76677	YOUR ORDER NO.	TERMS Net 30 days	SHIPPED VIA Personal delivery	SURPLUS MATERIAL Returned
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QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
11	ea	Standard petrographic thin sections	\$3.75	\$41.25
4	ea	K-feldspar stain	.75	3.00
2	ea	Impregnation with epoxy	.50	1.00
2	ea	Grinding in oil	.50	1.00
Total				\$46.25
<p>APPROVED FOR PAYMENT</p> <p>By: <i>James D. Sell</i> (Signature) <i>Olberg Project</i> EA-0084</p>				

ASARCO

Exploration Department
Southwestern United States Division
R. B. Crist
Property Manager

July 1, 1976

Mr. Harry Cruye
P.O. Box 1613
Coolidge, Arizona

Dear Mr. Cruye:

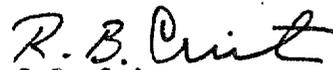
Enclosed please find two photos of a Bighorn Desert Ram taken at our Silverbell property on the NW side of Oxide Pit.

This ram drank regularly for about a month at a leak in a pipeline down in the pit.

As we discussed, I would like to firm up a date and tour your Blackwater District, at which time better answers could be given to the questions asked on the bus tour. At the same time we could check the drill working on Tribal Property.

If you have no objections I could pick you up in Coolidge on Saturday, July 10, or whenever you suggest.

Sincerely,


R. B. Crist

RBC:vh
Enclosure
cc: JDSell 

6/28

FROM: F. T. GRAYBEAL

To: HG Kreis

OLBERG

I believe we are in agreement as

follows:

- ① Complete OL-2; case if favorable
- ② Drill OL-3 (R-6); if favorable
case and drill OL-4 1500 ft. E or
SE of OL-3 in center of sec. 15.
Case OL-4 if we will want to diamond
drill.
After OL-4, stop rotary drilling and
pick best location to diamond drill -
start immediately.
- ③ If results of OL-3 are negative, release
rotary rig and immediately diamond
drill a site near mineralized outcrops.
In view of results of OL-1, I think
a diamond site near D-1 (map #)
would be preferable, but am open to
suggestions.
- ④ Don't hurry about revising our road
permits at this stage.

copy: JD Sell, NPichaley, RBCnst

Alberg

- 1-95 ~~peos~~ abundant T-1
- 2-592 peos. ^{unhydated} abundant cond. few F1, T-2??
- 2-645 peos ^{py Fung} mod. pleurotized, some petiole also; abundant T-1
- 3-334 peos pleas. ^{mod. pleurotized}; abundant v. dense T-1 & T-2
- 4-402 peos ^{pleurotized} stems att. abund. by F1, T-2, about 2 T-3 (Hem) ^{not}
- 4-601 peos mod. att. " " " " T-3 (Hem) ^{clear}
- 4-845 peos ^{flu?} ^{lined} ^{of} ^{bx} ⁶ ¹² ^{span} ^h ^{alt} mainly T-2, some T-3 (clear)
- 4-900, ^{wooded} ^{pop} ^{abund} ^{inter} ^{att}, ^{py} ^{Fung} mainly T-2, several T-3 (clear)
- 4-1004, bx, mod. strong, att. T-1 & T-2, ? T-3
- 4-1184, ^{lichen}, mod. att., ^{py} ^{Fung}, abund. cond. mainly T-1, some T-2
- 4-1301 ^{wooded} ^{pop} mod. strong, att., ^{py} ^{Fung}, abund. cond., mainly T-1, small
- 4-1451 ^{wooded} ^{pop} mod. strong, att., ^{py} ^{Fung}, abund. seen ^{near} ⁰ ^{feet} T-1.
- 66-4 peos? bx, woodl. abund. cond. mainly T-2?, w/T-1
- 7 pop? bx woodl. abund. mainly T-1, small
- 9 peos bx mod. att., ^{hi} ^{py} ^{Fung} ^{lichen} 'sheds' w/T-1
- 12 ^{off} ^{flu?} ^{lichen} ^{pop}, cond. few T-1
- K-5a-1 natural peos? woodl. att., small T-1

ASARCO

Southwestern Exploration Division

October 6, 1976

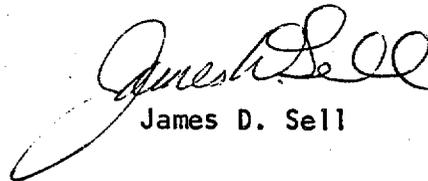
TO: F. T. Graybeal

FROM: J. D. Sell

Mineral Butte
Blackwater District
Pinal County, Arizona

At last night's AGS meeting, Bob Metz of Duval Exploration collared me and asked how our drilling went southwest of their prospect at Mineral Butte. He said, "...I guess you got teased along!" Further along he mentioned that they had retained Cooksley to run some gp and seismic over their oxide deposit area. Both Cooksley & Duval independently had arrived at the conclusion that the intense fracturing (linear?) was the localization cause for the oxide deposit. Thus gp and seismic should be able to extend the linear, well-fractured zone out under cover. Seismic results suggested bedrock at 120 feet, though Bob was not so sure. The drill hole set up over the target was taken to 450 feet and still in gravels when the money ran out. Bob moaned about the lack of exploration monies.

He stated that they would be interested in a partner on the oxide area. Bob thought that Sharpe was to discuss the project with Kurtz on a possible joint venture.



James D. Sell

JDS:1b

cc: WLKurtz