



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

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JRW & JDS

BEF

{ please contact
Wes Pierce and
arrange to look at

USBM AMERICAN SMELTING AND REFINING COMPANY
Tucson Arizona
core when convenient

I agree. Would one of
you volunteer to make the
arrangements w/ Spade.

January 15, 1971

W.E.S.
JAN 15 1971

W.E.S.
JAN 15 1971

Memo to: W. E. Saegart
From: J. R. Wojcik

CASA GRANDE VALLEY
GEOLOGY

Dear Bill:

During a luncheon conversation with Jim Sell and myself,
Mr. M. E. "Spade" Cooley inquired as to whether information
in the deep holes we drilled east of Stanfield (Santa Cruz
Project) pertaining to the conglomerates might be available.
At the same time he told us that the cores from the USBM
holes are here in Tucson and are available for inspection.

I feel that we could make the core boards and geograph
logs of SC-5, 6 and 17 available to Spade without compro-
mising our position in the valley. At the same time, some-
one should contact Wes Pierce and examine the core from the
USBM hole just southeast of the Santa Cruz mineralized zone.
I am sure that Spade will treat all information on bedrock
as highly confidential. He has always been very helpful in
sharing information with Jim Sell and myself, and I would
like to see him granted this courtesy.

Very truly yours,

J.R. Wojcik
J. R. Wojcik

JRW:mt

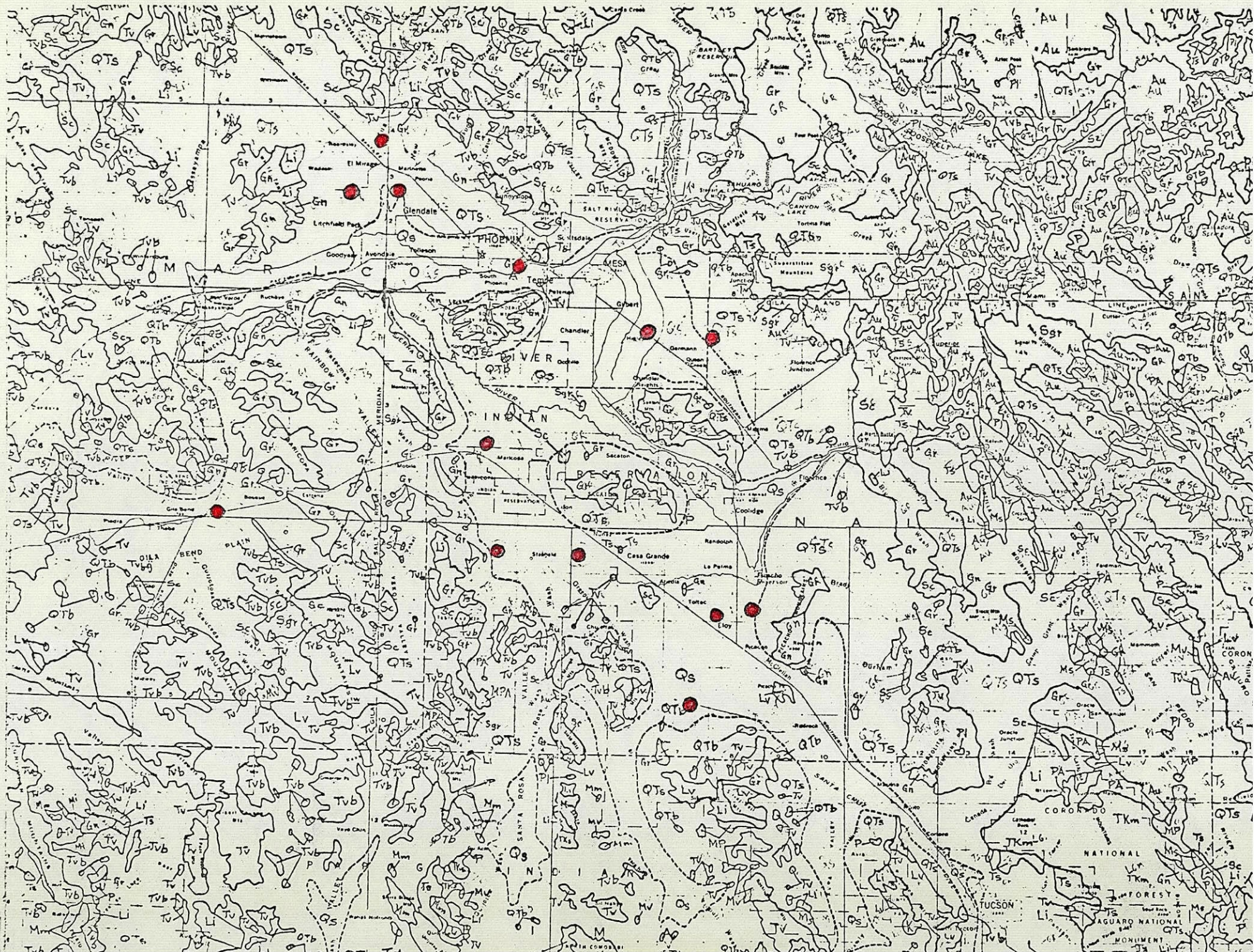
cc: J.W.Sell w/att

Att.

~~USBM~~
~~792-6286~~
~~7 Pisco Redondo~~
884-1943

Holes drilled by Bureau of Reclamation (1966-77)

See ABM Bull 185



AMERICAN SMELTING AND REFINING COMPANY
Tucson Arizona

January 15, 1971

Memo to: W. E. Saegart

From: J. R. Wojcik

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GEOLOGY

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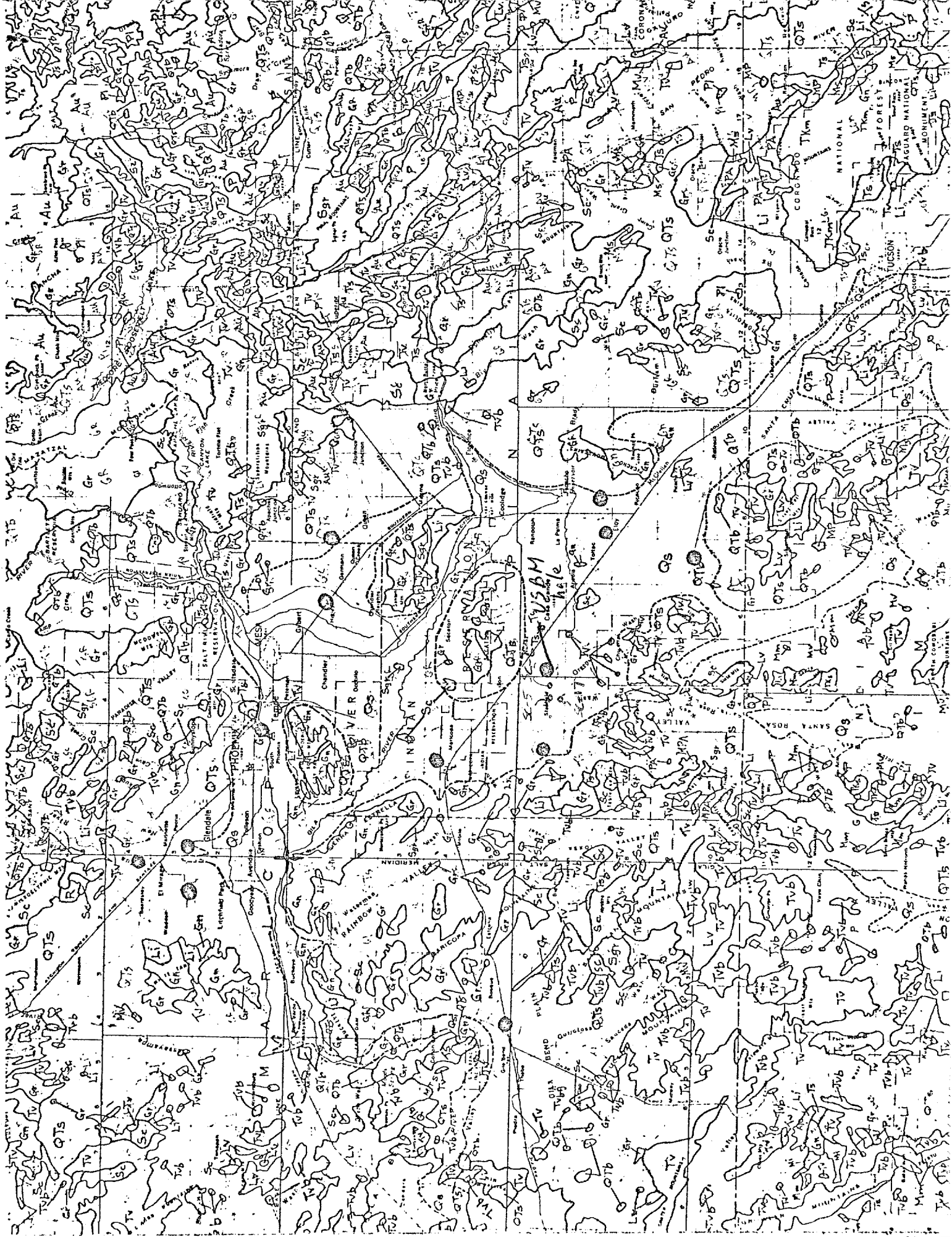
Very truly yours,

J. R. Wojcik

JRW:mt

cc: J.W.Sell w/att 

Att.



2/26/75
4:05 p.m.

To: Bob

From: Norm Whaley

Bob, if you are in contact with
Bill K., Hank K. called and SC 19
bottomed at 2,826 feet.

Verna

*Home Sign
Waiting*

AMERICAN SMELTING AND REFINING COMPANY
TUCSON ARIZONA

March 12, 1975

FILE MEMORANDUM

FLORENCE PROJECT
CONTINENTAL OIL COMPANY
MINERALS DIVISION
PINAL COUNTY, ARIZONA

At the February 18, 1975 meeting of the Pinal Mountain Subsection, AIME, Mr. Frank Buchalla, Jr. was the guest speaker.

Some items:

Present estimated reserves at 0.47% copper plus by-products of Ag-Au and Moly is + 1/2 billion tons.

Open-pit methods to be employed
Average 350 feet of alluvial cover
Oxide copper zone 300 feet thick
Sulfide down to 2800 foot depth (i.e., 2150 feet thick)

Five drill rigs running at present on fill-in holes
Some 450 diamond drill holes completed up to present time

Stripping to commence pre-1976 with 12 shovels. Anticipated pre-mine stripping of 150 million tons completed by mid-1978.
Expect to have an overall 2 to 1 stripping ratio.

Orebody: 1/3 oxide and 2/3 sulfide
Oxide has 23 years life (= 250,000,000 tons)
Sulfide has 42 years life (=750,000,000 tons)

Expect to mine 30 thousand tons oxide per day by end of 1978.
Expect to mine 50 thousand tons sulfide per day by 1983.
Ultimate pit diameter of 7,000 feet
Overall pit slope of 1.2 to 1
Operating life to year 2025

Have 2 "drilled" shafts (one 700 feet deep, drilled in 81 days, at cost of \$ 3/4 million). 42" escape shaft, 96" production shaft.

Will secure bulk samples for pilot plants of ± 100 tons/day by year end.

Preliminary tests on oxide-solvent extraction-electrowining suggests 70% recovery of oxide in a vat-agitation leach unit.

March 12, 1975

Florence Project
Continental Oil Company

Twenty-one water wells will ring the ultimate pit area to create cone-of-depression and keep pit area dry.

Water will be given to farmers for draw-down loss.


J.D. Sell


R.B. Crist

JDS:RBC:vmh

cc: J.H. Courtright
W.L. Kurtz

ASARCO Incorporated
Tucson Arizona

July 24, 1975

TO: R. B. Crist

FROM: J. D. Sell

Frieda J. I. Matthewman
944 Prospect Street
Honolulu, Hawaii

A few notes on Mrs. Matthewman were learned this past Tuesday in Casa Grande. The information was obtained from Mrs. Gladys Albright, a retired teacher, who was my second grade teacher and who still resides in Casa Grande.

Mrs. M. taught the first grade in Casa Grande many years ago and in the afternoons taught Latin at the High School. Mrs. Albright took her course as a freshman. Mrs. Albright's maiden name is Wilson and she and her brother, "Blinky" Wilson, are well acquainted with Mrs. M. and have corresponded with her throughout the years. Blinky owns the Mercury dealership located in the big shop just past five points on the Gila Bend Highway in Casa Grande.

Blinky's son, Jay Wilson, recently received a letter from Mrs. Matthewman. Mrs. Albright apparently read the letter, but would make no further comment. Jay is the star salesman in real estate for the firm of "Orm Ellis Company" in Casa Grande.

Mrs. M. apparently has land holdings in the Casa Grande Valley and in Hawaii. Mrs. M.'s brother is very well to do and is retired in the San Diego area. Her nephew, Bill (and Pat) Isom, farms a large block of ground west of Casa Grande and is apparently one of the more successful farmers. The Isom children, Tom and Pam, attend the Casa Grande schools.

(Jay Wilson tried farming in the Stanfield area, but was unsuccessful and hence ended up in real estate and, being a home-grown lad, has done quite well.)


James D. Sell

JDS:lb

cc: WLKurtz

ASARCO

Southwestern Exploration Division

October 6, 1975

TO: W. L. Kurtz

FROM: J. D. Sell

Frieda J. I. Matthewman
Jay Wilson
(Santa Cruz Area)
Pinal County, Arizona



JAY WILSON
Broker Associate



REALTORS

836-2136

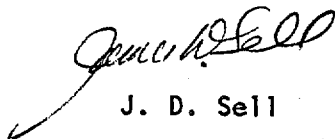
218 E. Florence Blvd.
Casa Grande, Ariz. 85222

Residence: 836-5684

The above card was submitted by Jay Wilson of Casa Grande whom I met during lunch at the Francisco Grande on October 1, 1975.

Jay mentioned that he was aware that Asarco was in contact with Mrs. Matthewman of Hawaii and Jay thought he could be of service in the negotiations. I said that I would pass this on to our land department.

Jay also said that he had numerous land status maps of the Casa Grande Valley and would be glad to show them to us at no initial cost.


J. D. Sell

JDS:1b

cc: RBCrist

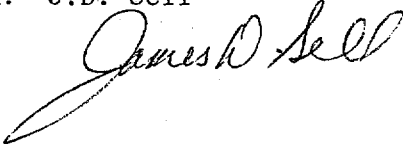
ASARCO

Southwestern Exploration Division

December 2, 1981

TO: W.D. Payne

FROM: J.D. Sell



SME preprints
Denver Meeting

Two preprints for the library are attached which may be related to projects now underway by the Company.

- (1) 81-375. Seismic geophysical exploration of pyrometasomatic zones, by J.W. Cooksley. (Although depth may be a factor, it may also be valid that a few lines over the Trench drill hole area would be appropriate to help determine the extent of the tactite mineralization, and offsets?)
- (2) 81-392. Geochemistry of waters from deep irrigation wells in the vicinity of a deeply buried porphyry copper deposit near Casa Grande, Arizona, by G.A. Nowlan and others.

(Although they do not clearly make their point, it is of interest to see the high copper-moly-Factor 2 maps pointing to an anomolous zone south of the Sacaton pit.)

JDS/mlm



NEWS

ASARCO Incorporated
180 Maiden Lane
New York, N.Y. 10038-4991

FOR IMMEDIATE RELEASE

SANTA CRUZ IN SITU COPPER MINING RESEARCH PROJECT AWARDED ARIZONA AQUIFER PROTECTION PERMIT

TUCSON, AZ, November 15, 1994 -- The Santa Cruz In Situ Copper Mining Research Project, located seven miles west of Casa Grande, has been awarded a critical environmental permit allowing the project to move forward to the actual test of in situ mining of copper. The test will consist of: injecting a dilute solution of sulfuric acid 1600 feet below land surface into undisturbed granitic bedrock containing soluble copper oxide minerals, pumping copper-bearing solution to land surface, and recovering copper in a solvent extraction-electrowinning plant.

Awarding of this permit, called an Aquifer Protection Permit, marks the successful completion of five years of data collection, research, and analysis to show that the project will be environmentally safe. The permit, which ensures that the proposed facility will protect groundwater, was issued by the Arizona Department of Environmental Quality.

Another major environmental clearance, the United States Bureau of Mines' Environmental Assessment, which is required by the National Environmental Policy Act, is near completion. The Bureau of Mines expects to release its findings and the final document in early December.

The \$22-million research project, now in its sixth year, is a cooperative program between the United States Bureau of Mines and a joint venture of wholly owned subsidiaries of ASARCO Incorporated and Freeport-McMoRan Inc.

(more)

The next step in the project is construction of a pilot scale solvent extraction-electrowinning plant. Construction and commissioning of this plant is expected to take about a year. ASARCO Santa Cruz, Inc., the manager of the project, hopes to be able to begin the actual test of in situ mining of copper by the end of 1995. This test will last between 18 months and four years.

Success in this landmark research project may open the door to mining some copper resources without excavation of rock or disturbance of the land surface. In addition to minimizing the impacts to the land and the immediate environment, the new technology holds the promise of producing copper of very high quality at low cost from deposits that are too deeply buried and too low grade to be mined by conventional methods.

The project is designed to test the environmental, technical, and economic feasibility of this promising new technology on a copper deposit that has not been previously mined or disturbed. Results of years of testing at the site and laboratory research by the Bureau of Mines have demonstrated that the in situ mining test will be environmentally safe. The actual in situ mining test will demonstrate the economic and technical feasibility of the process.

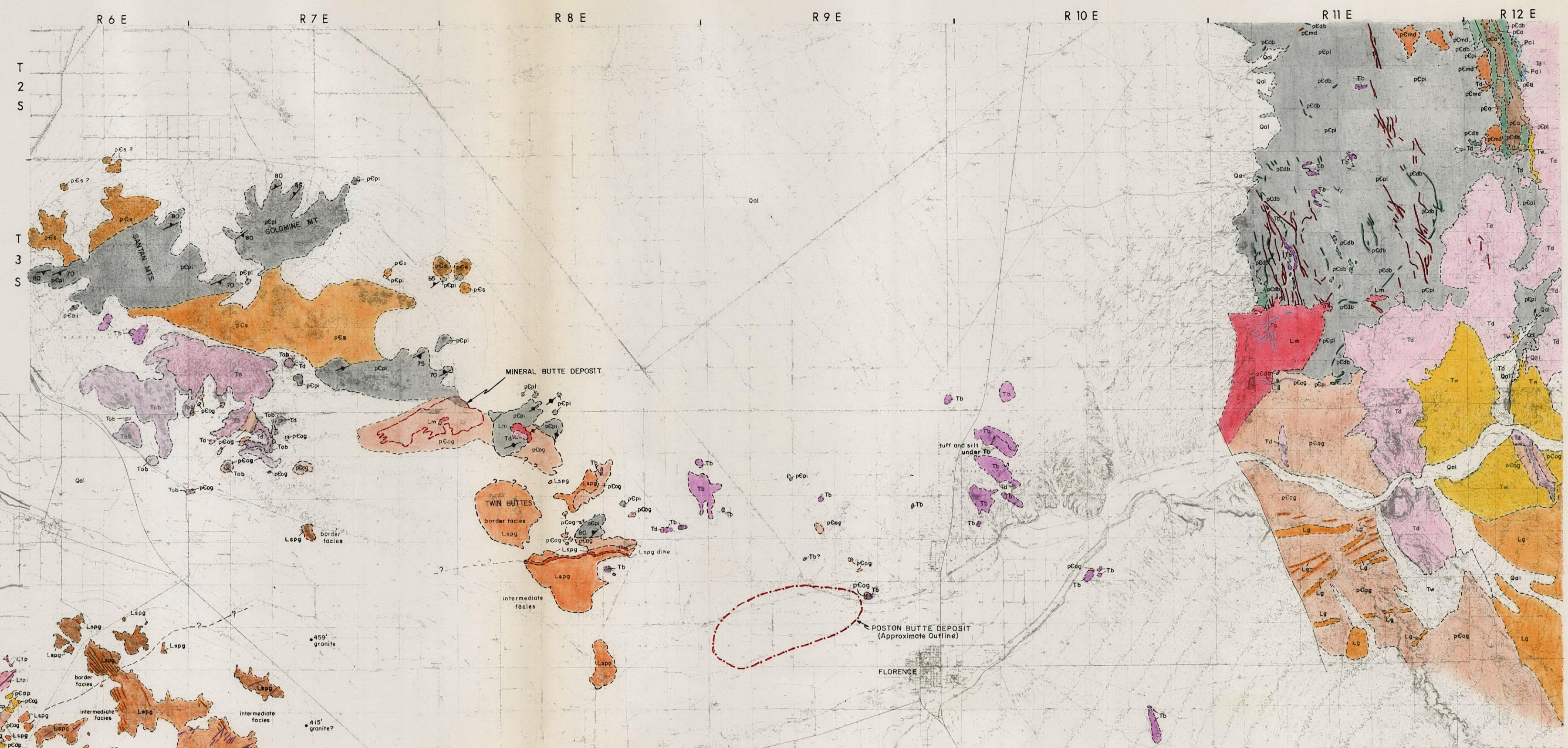
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The N. Muses, v. 80, N. 39, p. 11, Nov. 28, 1994

EXPLANATION
for
HALEY HILLS, TABLE TOP MOUNTAINS, VAIVA HILLS

- | | | |
|---------------------|------|---|
| Quaternary | Qal | Alluvium. Includes possible Gila Conglomerate |
| | Tb | Basalt |
| Tertiary | Tov | Older Volcanics |
| | Ts | Sediments |
| Laramide | Li | Lalite |
| Paleozoic | Pal | Limestones, undifferentiated |
| Younger Precambrian | db | Diabase |
| | pCa | Apache Group sediments undifferentiated |
| Older Precambrian | pCag | Oracle Granite |
| | pCa | Quartz monzonite (K-Ar age 1,329 m.y.) |
| | pCpl | Pinal Schist or gneiss |

Geology By - J.D. Sell, R.H. Luning & J.C. Balla



EXPLANATION
for
SAN TAN MOUNTAINS

- | | | |
|-------------------|------|--|
| Quaternary | Qal | Alluvium |
| | Tb | Basalt. May include some Quaternary basalt. |
| Tertiary | Td | Superstition Tuff (K-Ar age: 25.4 m.y.) |
| | Tob | Older Basalt |
| Laramide | Lspg | Sacaton Peak Granite (K-Ar age: 62.2 m.y.) |
| | Lm | Mineral Butte Quartz Monzonite (K-Ar age: 70.3 m.y.) |
| Older Precambrian | pCag | Oracle Granite |
| | pCs | San Tan Quartz Monzonite (K-Ar age 1,341 m.y.) |
| | pCpl | Pinal Schist |

Geology By - J.C. Balla

EXPLANATION
for
MINERAL MOUNTAIN AREA

- | | | |
|---------------------|------|---|
| Quaternary | Qal | Alluvium |
| | Tb | Basalt. May include some Quaternary basalt. |
| Tertiary | Td | Dacite. Includes ashflow and Caldera volcanic units |
| | Tw | Whitetail Conglomerate |
| | To | Andesite |
| Laramide | Lg | Grayback Granodiorite (K-Ar age: 63 m.y.) |
| | Lm | Mineral Mountain Quartz Monzonite |
| Paleozoic | Pal | Limestones, undifferentiated |
| Younger Precambrian | pCdb | Diabase |
| | pCa | Apache Group sediments, undifferentiated |
| Older Precambrian | pCag | Oracle Granite |
| | pCnd | Madera Diorite |
| | pCpl | Pinal Schist |

Geology By - E.A. Schmidt (1967), J.C. Balla

EXPLANATION
for
SACATON MOUNTAINS

- | | | |
|---------------------|------|---|
| Quaternary | Qal | Alluvium |
| Tertiary | Tab | Andesite-Basalt |
| | | Sacaton Peak pegmatites/aplite dikes |
| Laramide | Lspg | Sacaton Peak Granite (K-Ar age: 61.2 m.y.) |
| | Lspg | Three Peaks diorite outer facies/inner facies |
| | Lip | Three Peaks Monzonite (K-Ar age: 71.3 m.y.) |
| Paleozoic | Pal | Quartzite and limestone, undifferentiated |
| Younger Precambrian | db | Diabase (K-Ar age: 841 m.y.) |
| | pCs | Sacaton Granite (K-Ar age: 857 m.y.) |
| Older Precambrian | pCap | Aplite |
| | pCag | Oracle Granite (K-Ar age: 1240 m.y.) |
| | pCpl | Pinal Schist |

Geology By - J.C. Balla

- Approximate trend of major lineament
- Epithermal vein
- Approximate outline of sulfide deposit
- Well location, 90 feet deep bottomed in granite.

FIGURE 2

GEOLOGY
of the
CASA GRANDE - FLORENCE AREA
PINAL COUNTY, ARIZONA

SCALE: 1" = 2 MILES