



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

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J. H. C.

OCT 24 1969

AMERICAN SMELTING AND REFINING COMPANY
Tucson Arizona

October 24, 1969

FILE MEMORANDUM

San Juan Property
Graham Co., Arizona

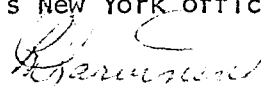
Reports suggesting the possible availability of the San Juan property were disproved in a personal communication with Mr. Clement Chase, recently hired as property manager by Producers Chemicals, Inc., the present lessees.

P.C. plans to operate a leaching operation on the property's outcropping oxide copper ores. Mr. Chase declined to state details and was reluctant to show the cores from three diamond drill holes, each nearly 1500 feet deep. He did mention that sulfides had been encountered but would not state depths or grades.


Mr. Chase commented that, "Anaconda had offered P.C. a sizeable spot of cash for the San Juan but that P.C. had declined the offer", preferring to operate the property themselves. When asked if P.C. would solely finance the venture, Mr. Chase advised it to be possible but that they did have an interested party with "substantial funds". In a personal communication with Mr. Guy Anderson, owner and lessor of the San Juan, General Electric was mentioned as having an interest in the property.

Mr. Chase stated that P.C. had hired several consultants to evaluate the potential of the property. Not all reports were favorable according to Mr. Chase, but sufficient promise was shown P.C. that the property had merit and that it could be operated profitably.

Should ASARCO retain a continued interest in securing the San Juan, Mr. Chase recommended that Mr. Reuben Molds, President of Producers Chemicals, Inc., be contacted at his New York office.


R. D. Karvinen

RDK/kvs

cc: JHC 
WES
ADV
RFW
AJK

AMERICAN SMELTING AND REFINING COMPANY
Tucson Arizona

October 10, 1969

FILE MEMORANDUM

Reed Welch called our attention to the fact that the San Juan Property (near Safford), under lease to Producers Chemical Inc., was recently evaluated as a possible leaching operation, and had been turned down by a consultant. Thus, the property might be available.

Apparently a Mr. Scruggs leased the property from Guy Anderson of Safford and later Producers Chemical acquired the lease.

I have today talked to Guy Anderson by phone and learned that the leasee is up to date in payments of \$1,500 per month. The lease calls for 25% of net profits to Anderson. I asked Anderson if we could review the data in case the property became open for negotiation and he replied that Barber of Anaconda had done considerable work there and he felt that they should have preference. However, he would be willing to allow us to review their data even though it might be a waste of our time. I agreed to get in touch with him as soon as we could arrange for one or more members of our staff to go to Safford.

Considerable diamond drilling has been carried out at the San Juan and with some holes as deep as 1000 feet. We do not have the results but understand that, in general, the mineralization was mainly primary (copper, pyrite) in grades running from a few hundredths up to 4/10 or 5/10 of ~~0.1%~~ copper.

1.02

J. H. Courtright
J. H. Courtright

JHC/kvs

cc: WESaegart

Location: N.E. of Safford

Property San Juan & Phelps
 Area Dodge
 District
 Mt. Range Gila Mountains
 State Arizona

Field Check by:

J. H. Courtright, J. E. Kinnison

Date April 17, 1961

 Recommended Company
 Interest Classification:

- ☐ Active
☐ Inactive
☐ None
☒ Scientific

Conclusion: The andesitic rock which overlies the sulphide Cu mineralization appears fresh and unaltered, and without visible Cu. However, Cu is retained in unknown minerals in this capping, and reflects Cu sulphide at depth.

Notes on Reconnaissance: The San Juan property lies between Kennecott's holdings (Lone Star) and Phelps Dodge's ground; see Aa-7A.19.12. Mr. Kay Foote guided us over San Juan and PD ground, and showed us Rare Metals and Bear Creek drill cores. A recent report and map by Lacy is filed Aa-7A.19.19.

These cores show that andesite, unaltered in appearance, contains small amounts of thin films and fine specks of red to brown hematite, all of which appears transported. No cavities or boxwork are present. This capping gives way through a transitional zone to chalcopyrite and minor pyrite contained as thin seams and tiny grains in black andesite. No chalcocite was seen.

On the PD property fragmental textures of the Silver Bell formation (andesite) are clearly visible in the surface exposures, and other than faint brown to red films or scattered specks of limonite, there is no appearance of alteration. Locally there are shear zones which show weak alteration but these are of limited width.

Assays which follow show that copper is retained in this "barren" capping.

PD property; taken in area of close-spaced drilling, proceeding east to west across property:

	(1)	.10% Cu, .1 Oz Ag, Tr Au
	(2)	.10 " .1 " Tr "
No. 4 shows Cu staining	(3)	.06 " .2 " .005 Au
No. 4a selected from No. 4	(4)	.50 " .2 " .005 "
4 sample -- pieces	(4a)	.27 " .1 " Tr Au

with no Cu staining.

Assay of sulphide core piece from San Juan: .16% Cu, .1 Oz Ag, Tr Au

We were shown 2 small breccia pipes on the San Juan claims, about 200' diameter each. They are a coarse open-textured angular rubble with sharp vertical contacts. Cu silicates and Cu "pitch" are found throughout, principally in the open vugs. There is very little limonite present. Grade of original primary might have been 1% Cu, with a low pyrite content.

Strong biotization

Turney, Irvin & Associates
P.O.B. 393
Sahuarita, Arizona

May 13, 1960

San Juan

San Juan - Tuab Claim Group
Lone Star Mining District
Safford, Arizona

Mr. Guy Anderson
Safford, Arizona

Dear Guy:

On May 6th I spent the day, assisted by Clyde Levin, making a preliminary survey of the diamond drill core from the holes drilled of the San Juan or Tuab mining claims by the Rare Metals Corp. and by Bear Creek Mining Company. This was supplemented by reconnaissance examination of the mineralized area. None of the assay results from the drilling program were available so that all references to potential grade of the mineralization are based upon estimates based upon visual determination.

The San Juan claims are bounded on the east by the deposit developed by Bear Creek Mining Company, on the north and west by claims belonging to the Phelps Dodge Corporation, and on the northeast by claims optioned to the Duval Sulphur Company. The Rare Metals Corporation drilled twelve shallow holes in the central portion of the claim group in and adjacent to a quartz-monzonite stock, and the Bear Creek Mining Company drilled sight holes around the fringe of the group to a maximum depth of slightly over two thousand feet. The cores for most of these holes were accessible for examination.

The claim group is divided by a northwest trending normal fault which dips at approximately 45° to the southwest. There has been a considerable displacement along the fault - measured in thousands of feet - and the rock in the hanging wall has been brecciated along a zone nearly 1000 feet wide.?* The hanging wall block is composed of basalt, post-mineralization in age. This crops out in the area southwest of the Butte Fault. The dip of the fault was determined from one of the drill holes, T-7, which seemingly penetrated the fault.

Northeast of the Butte Fault, in the footwall block the country rock is composed of altered andesite which has been intruded by dikes and small stocks which range in composition from diorite to quartz-monzonite in composition. Mineralization appears to be related to the quartz-monzonite stocks occurring within them and in the peripheral zone adjacent to them. There appear to be two loci of mineralization: one,

* Underline and (?) = pencil notation on file copy

in the north central portion of the claim group; two, in the northwest corner of the claims - see the attached map. The better grade material appears to occur in the same peripheral to the intrusive where the andesite has been strongly altered and brecciated. This contact zone appears to be approximately 1000 feet wide and contains considerable areas estimated to contain approximately 0.5% copper as chalcopyrite with appreciable quantities of molybdenum as molybdenite. In hole T-1 which tests the peripheral zone approximately 1000 feet east of the central stock mineralization extended to the bottom of the hole (1033 ft) with the best showings of copper between 500 feet and the bottom of the hole. There is little secondary enrichment and oxidation is shallow, 40 to 150 feet.

Alteration of the andesite adjacent to mineralized areas consists of feldspathization, sericitization, chloritization, and kaolinization.

COMMENTS:

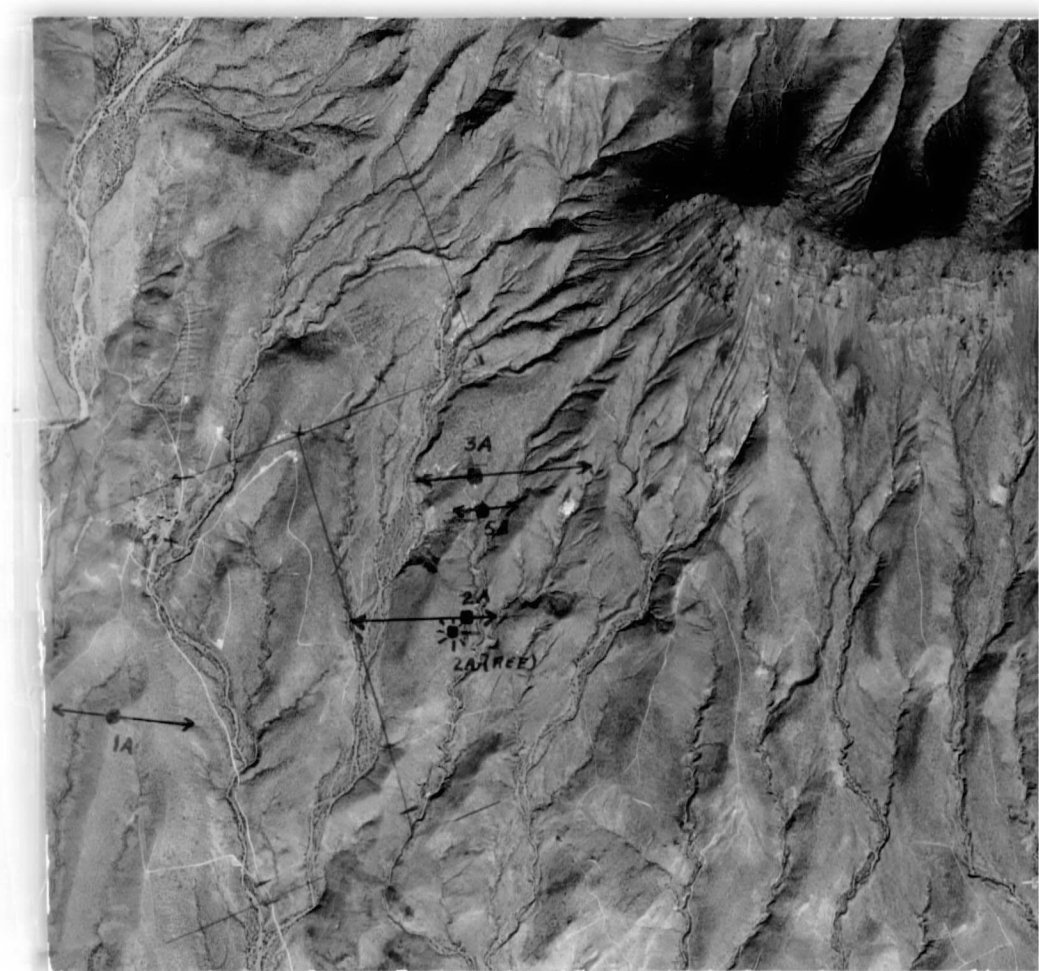
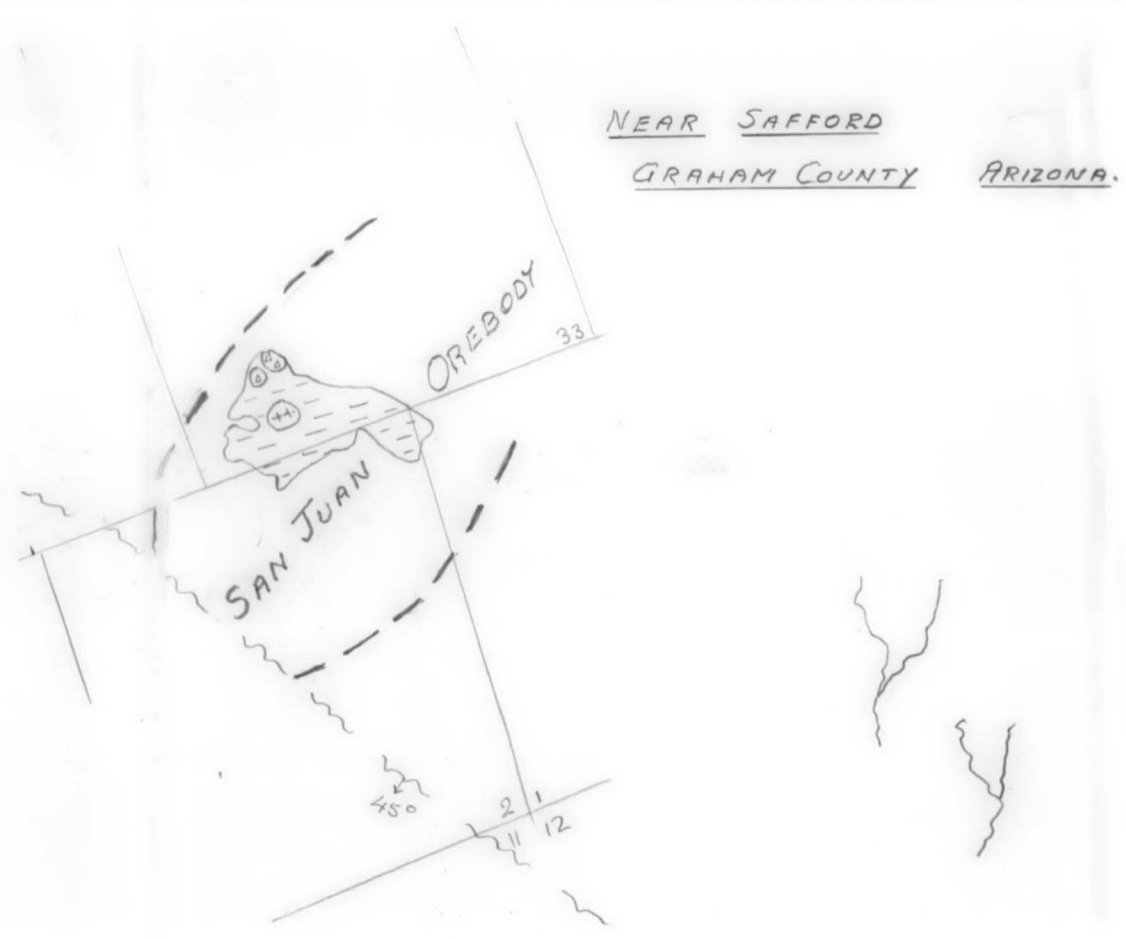
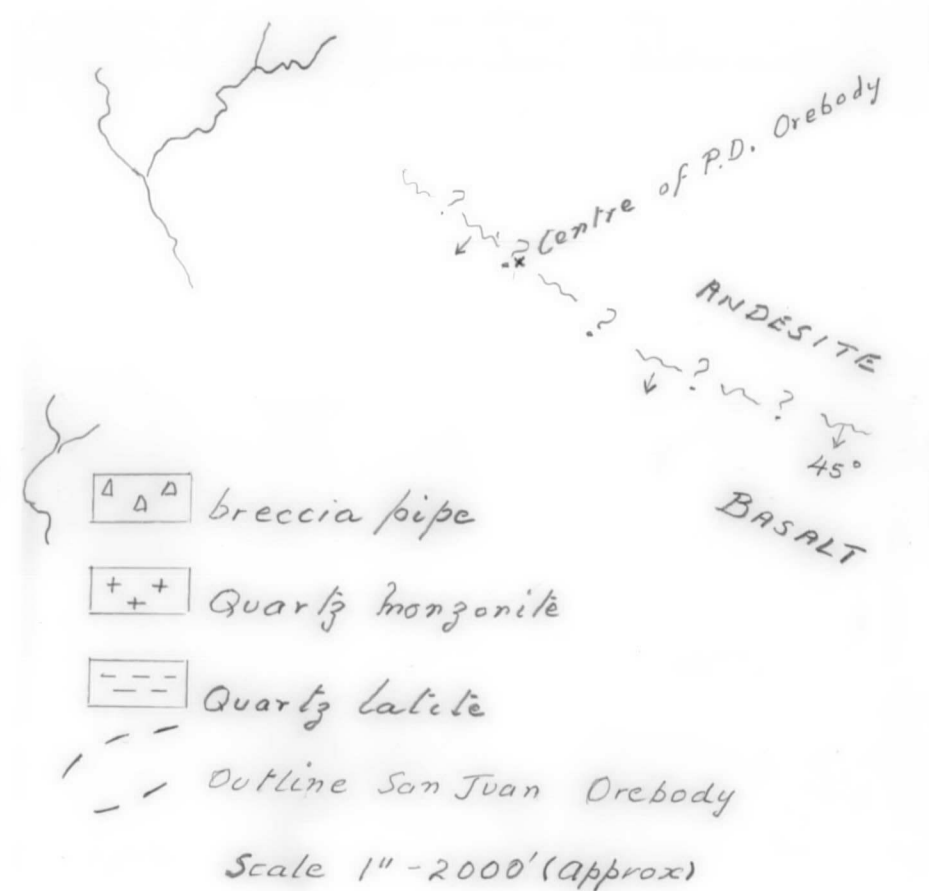
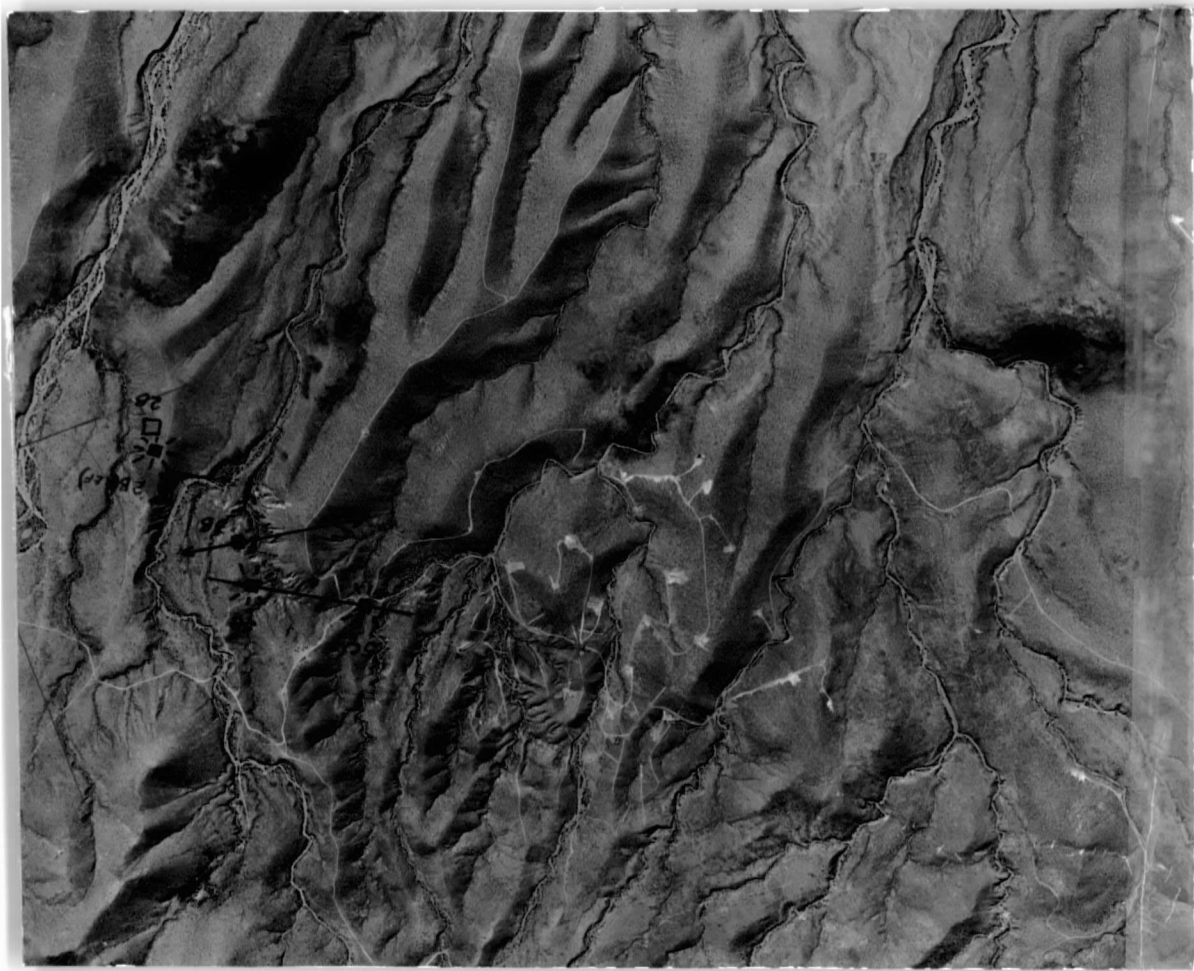
1. The San Juan Group of claims enclose an area approximately 3090 feet in diameter located in the central area, and another zone nearly 1000 feet in diameter in the northwest corner of the claims adjacent to Phelps Dodge's holdings. All of the drill holes within these areas showed appreciable copper mineralization - approximately 30% of the intercept - estimated to assay between 0.4% and 0.5% copper with supplemental values in molybdenum. There is thus an unproven potential of approximately 400,000 tons per vertical foot which may average between 0.4-0.5% copper.
2. The breccia pipes located in the center of the quartz-monzonite plug have not been tested by drilling. Examination of these breccia pipes indicates a good possibility that they may yield higher copper values than either the quartz-monzonite or the altered andesite, and, as a consequence of the greater permeability, there is a better chance that they may contain enriched copper values due to supergene activity. The writer believes there is a reasonable chance that drilling in the vicinity of the breccia pipes might outline an area with copper values about 1% with sufficient tonnage for a small open pit operation. It is recommended that any drilling done for assessment work be concentrated in the area of the breccia pipes, on a 200 foot grid.
3. Although material containing 0.4 to 0.5% copper is not attractive at the present time, it will not be many years before this situation will change and ores of this grade will be mined. This possibility is particularly strong where, as is true in the San Juan claims, the material can be mined by open pit methods with a minimum stripping.

4. It is not recommended that any drilling be carried out southwest of the Butte Fault. The broken character of the hanging wall block would make the drilling very expensive. And the weak alteration and mineralization shown in the bottom of hole T-7 (the only hole to get through the fault) is not encouraging as to the possibilities in this direction.

5. There is little doubt in my mind that the San Juan group of claims will some day become a profitable copper operation on a large-scale open pit basis. It will become much more attractive when the adjacent Phelps Dodge and Bear Creek mining operations are in production and all facilities have been installed. This may entail holding the claims for a couple of decades. In the meantime, well directed drilling may outline relatively small higher-grade blocks that may warrant smaller-scale pit operations.

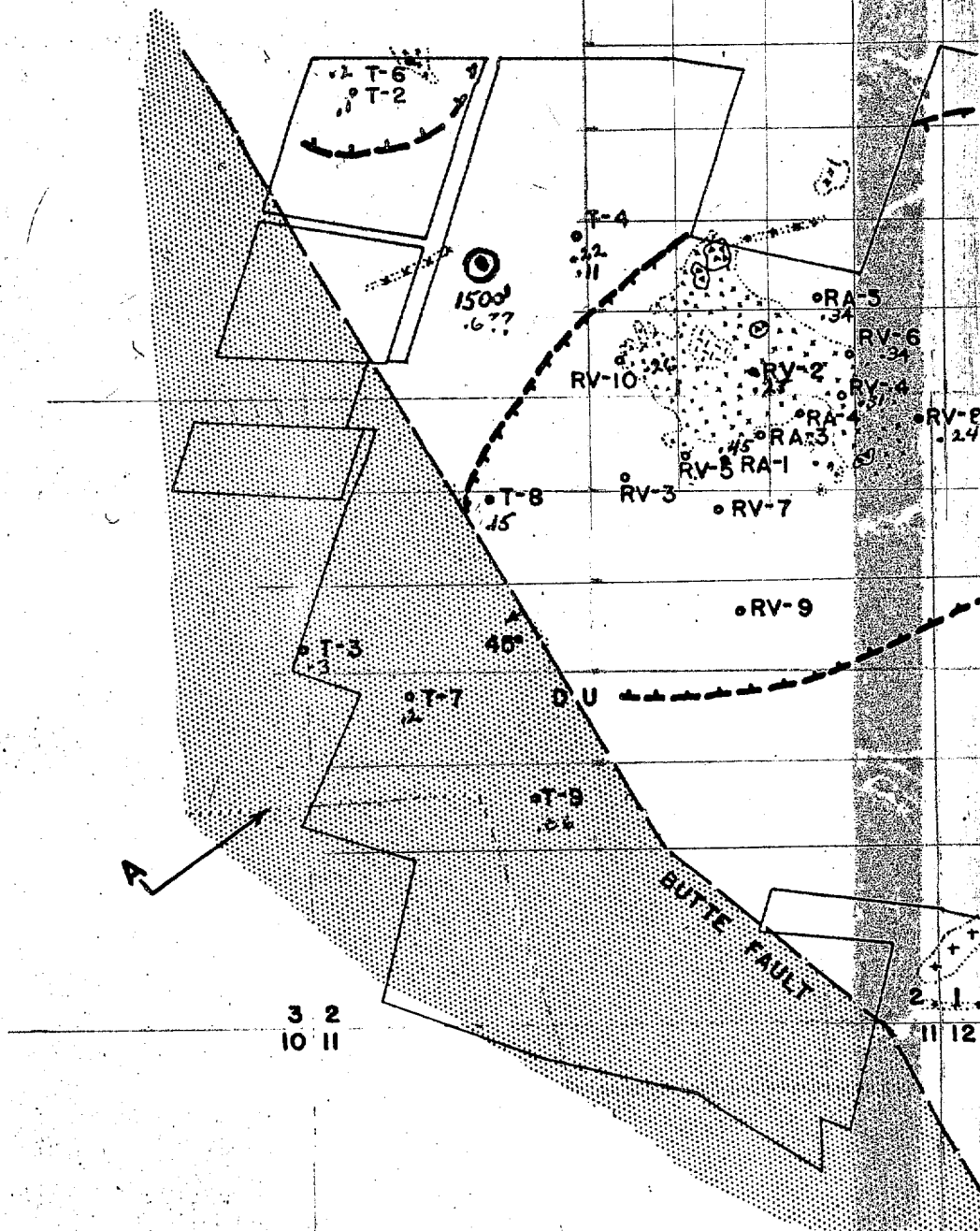
Respectfully submitted,

Willard C. Lacy
Consulting Geologist



27 26
34 35

PHELPS DODGE CLAIMS



To Top of sulphide 200'
Total sulphide > 5%

0 1000 2000 FEET

1" = 1508'

TUAB GROUP — SAFFORD, ARIZ.
LONE STAR MINING DISTRICT

MODIFIED AFTER: BEAR CREEK MIN CO

San Juan

JHC file

DUVAL SULFUR CLAIMS

(STATE LAND)

35 36

T5S R26E

T68 R26E

BEAR CREEK CLAIMS

AREA OF POTENTIAL LOW-GRADE COPPER MINERALIZATION

BASALT

ANDESITE

QTZ. MONZONITE

QTZ. LATITE

BRECCIA PIPES.

QTZ. DIORITE

DRILL HOLES

T = BEAR CREEK

R = RARE METALS

