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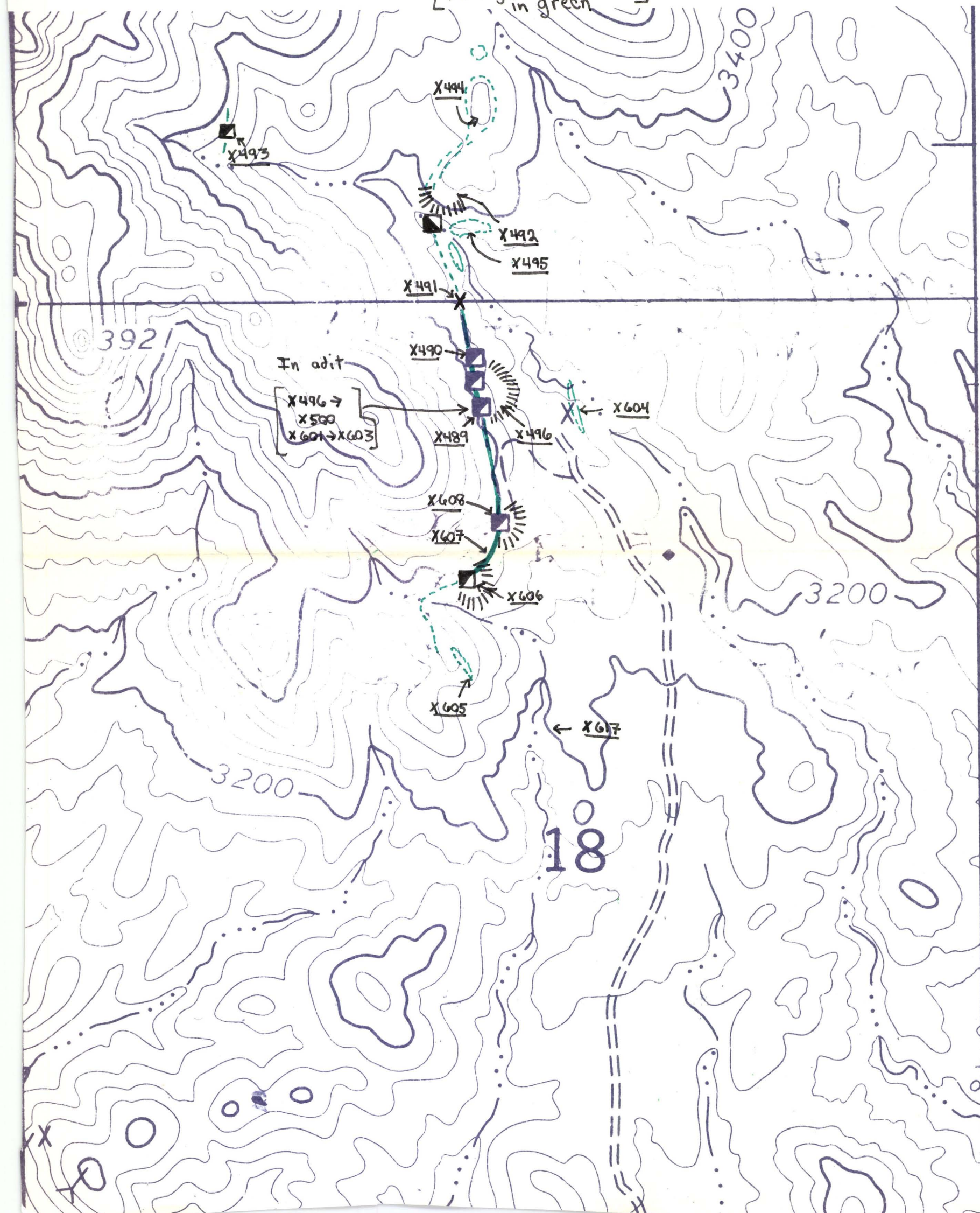
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Golden Slipper Vein
White Picacho District
Yavapai Co, Ariz

Sample Index Map
Sec 18 T7N R2W
Red Picacho 7.5'

1" = 500'

[Veining & silicification
in green]



T 7N, R 2W

Heligate Mountain

(BALDY MTN)
3551 IV SE

GARFIAS WASH AREA - Showing
outline of mineralization (Karvinen)

ROAD CLASSIFICATION

and rock chip sample locations. (Perry)
Refer to attached anal. sheets for values

Approximate
boundary
of saltide system

Garfias

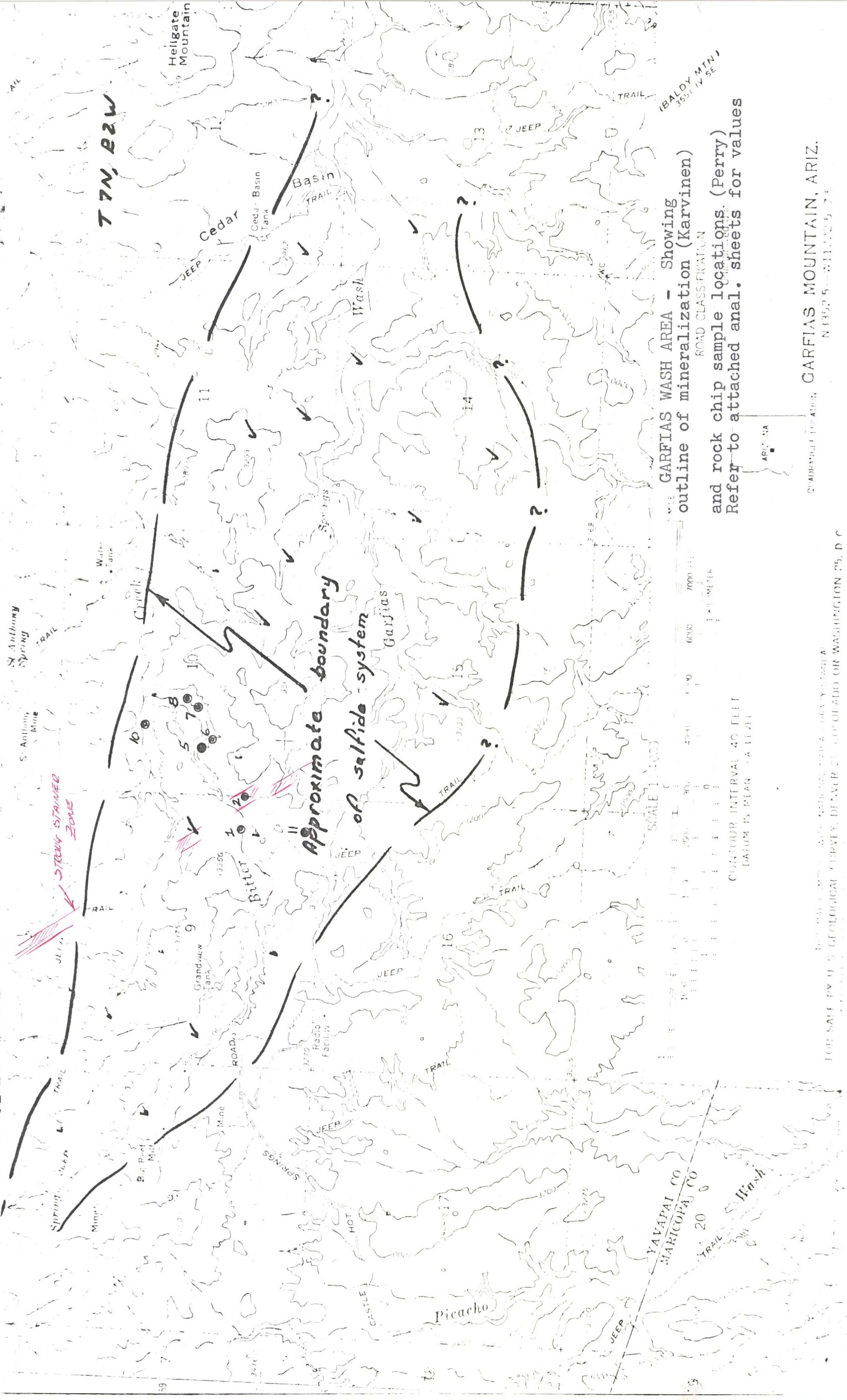
SCALE 1:50,000

CONTOUR INTERVAL 40 FEET
DAUM IS BEAN 1:50,000

GARFIAS MOUNTAIN, ARIZ.

N 35° 5' - 311.025 74

FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER CO. COLORADO OR WASHINGTON 25, D. C.



Tucson, Arizona
August 10, 1974

To: Mr. J. B. Imswiler
International Minerals & Chem. Corp.

From: A. J. Perry- Perry, Knox, Kaufman, Inc.

Subject: ARIZONA (IMC) PORPHYRY COPPER PROJECT
Monthly Report- July 1974

Project work commenced during July, on a one-half time basis as was agreed. PKK files pertaining to Arizona prospects were re-examined and critical Arizona literature reviewed. Plans were made to field check several areas, in the past thought to have exploration potential.

A large mineralized area located east of Wickenburg was briefly examined (Koch Copper-Gold Property-IMC-Az-1). Discussions were held with Towne Mines Exploration Co's local representative re: their properties in the Safford Mining District.

The meeting between IMC and PKK for purposes of review of likely looking target areas in Arizona would best be held at about the end of the second week in August, from PKK's standpoint.

We have not yet received IMC's draft of proposed agreement covering Arizona exploration.


A. J. Perry

Examined 7/15-16/74
A.J. Perry

IMC-ARIZONA-1 KOCH (COUSINS) COPPER-GOLD PROPERTY,
Bitter Creek - Garfias Wash Area (White Picacho
Mining District); ~~Maricopa~~ Co.

Yavapai

Summary

The Koch property covers one of several large altered and pyritized areas in volcanics associated with porphyritic Laramide intrusives, in the region between Morristown and Castle Hot Springs. Although the sulfide system carries some copper and gold it is thought that any large target, if present, is probably buried at depths exceeding those of current economic interest (+5000' from surface). The absence of any known orebodies in the area bears on this decision.

Recommendation

IMC-PKK should take no interest now - but future activities in the area should be monitored.

Location

The Koch (Cousins) copper property consists of about 3000 acres, all held by unpatented lode location, reportedly covering most of a broad WNW trending altered and mineralized belt extending thru portions of Secs. 8 thru 16, T7N - R2W, Yavapai County (Garfias Mountain Quad - 7 $\frac{1}{2}$ min Series, Arizona). See Figures 1 and 2. Access to the area is by the Castle Hot Springs Road from Morristown (on US 60) located about 12 miles to the west.

Background

Bear Creek Mining Company reportedly drilled 3 holes in the Cousins claims area in 1947-48 -- possibly not to depths exceeding 350'. Work was said to have been restricted to S2/4 - N2/9. One Bear Creek hole was located during the brief PKK examination. The site is in the center of the line common to Secs. 4 and 9. A Mr. Harold Ferron is said to have held 12 claims in the same vicinity prior to Bear Creek -- and supposedly intersected interesting gold in one shallow drill hole. The owners say Cyprus Mines once conducted an IP survey of the area -- results unknown. There has been no known mineral production from the claims area.

Mrs. Del Koch, 34 Colonia Miramonte, Camelback Inn Estates, Paradise Valley, Arizona, has a 20% interest in the Cousins properties and an option on the whole.

General Geology

Reference to the Geology Map of Yavapai County, scale 1/375,000 shows the Cousins lands are covered by Cretaceous andesites intruded by two NW trending Laramide dikes -- part of a group of five Laramide masses (the others being at least plus one section in size).

The intrusive group appears to be situated about three townships NE of the intersection of the Southwest Arizona, Copper Cities and Iron King Linements of (Mayo, Schmitt and Lacy).

No detail is available from the Arizona Bureau of Mines even in the form of rough field sheet geology. There is apparently no other source of geologic data available

We are certain, from our very cursory examination that on smaller scale the geology is complex.

PKK Examination

The author examined the Cousins' property the afternoon of July 15 in the company of Mr. Ronald Karvinen, consulting geologist and representative of Mrs. Koch and the following morning without Karvinen's guidance. The entire claims area was not covered but only the "highlights" as pointed out by Karvinen.

Bitter Creek was carefully traversed in the E/2-9 and W/2-10 (see attached portion of Garfias Mtn. Quad). Several rock chip samples were collected -- assays and sample descriptions are attached. A gold prospect was visited in SW-10 (spile 11) and oxide copper showings in S2/4 - N/2-9.

Examination Observations

Rocks traversed in Bitter Creek are far more varied than can be shown on the county geologic map. Substantial areas of foliate Pre-Cambrian rock are exposed in the Creek bottom. These older rocks are altered and pyritized and are jarositically stained. The overlying volcanics are also altered, mineralized and stained a brick red (presumably from the substantial amounts contained hematite). Rocks of all types are well brecciated and/or crackled.

The volcanics are probably andesitic but locally they defy identification due to the intense alteration. The volcanics are silicified and propylitized at the west end of the Bitter Creek traverse. Volcanics near the junction of Bitter Creek with the Castle Hot Springs road (in center Sec. 10) are silicified and contain abundant sericite. In E/2-9 a N30W striking more intensely colored red zone (200-300+ in width), marks the presence of one of the Laramide porphyry dikes shown on the County map. Sample 2 was collected along the dikes East side. The dike is well silicified and sericitized. The immediately adjacent volcanics are especially well broken and brecciated. The dike can be observed to extend + 1 mile NW of Sample Site 2 and at least $\frac{1}{4}$ mile to the SE.

In S2/4 - N/2 - 9 the same dike zone has been prospected by dozer cuts. One Bear Creek hole is reported to have been drilled in one of the cuts. Low grade oxide copper ore (40-50 tons est.) stacked in NW9 is assumed to have come from the cuts area. Much of the ore is andesite porphyry with a good development of former sulfide stockworks and some barite. Another pile is composed of principally mineralized felsic volcanic material. Fracture coatings on both rock types include minor chalcocite. Most of the mineral is copper oxide and chrysocolla. In the cuts area at least one N40E structure was noted. The mineralization may be localized due to structural intersections.

Evaluation

We are certainly dealing with a substantial sulfide system, as represented by Karvinen. There are only minor indications of copper and gold -- principally in the N30W dike area, along faults and in the few veins -- mostly of the same trend.

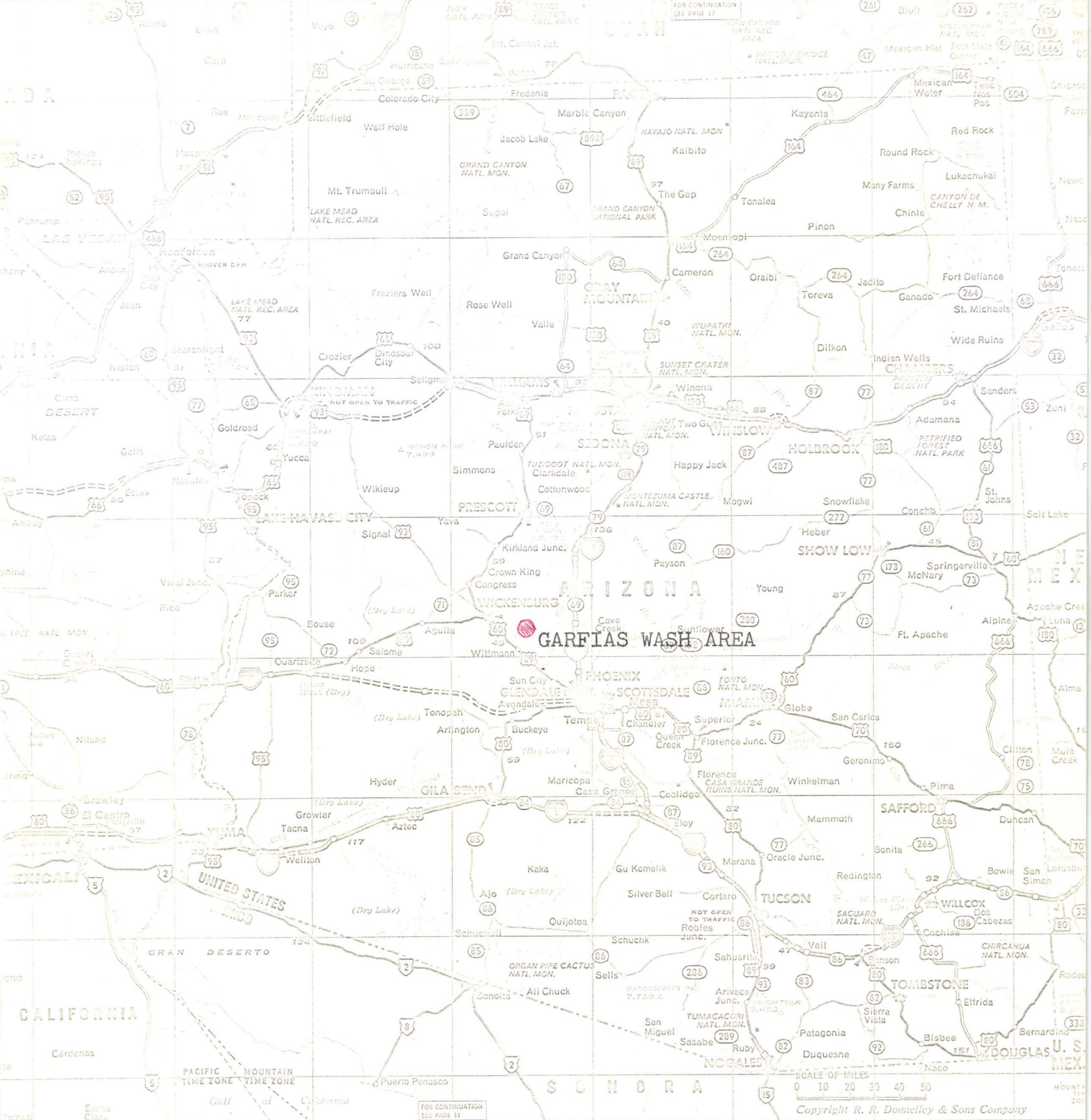
We are looking at protore with no apparent chance for enrichment. There is the possibility that we are high up in the pyrite halo around a copper zone with "peek-thrus" of copper only along major breaks. If this is the case we might expect some buildup of copper with depth -- but a gradual buildup. Geochem analyses of samples collected apparently at random by Quintana over a $2\frac{1}{2}$ section area (without sample descriptions) show generally 50-205 ppm Cu - where there is any copper present. These are indeed weak indications in a generally unleached copper zone.

If there is a target it is very deep - say +5000'. One might make a judgement to undertake some work in the area

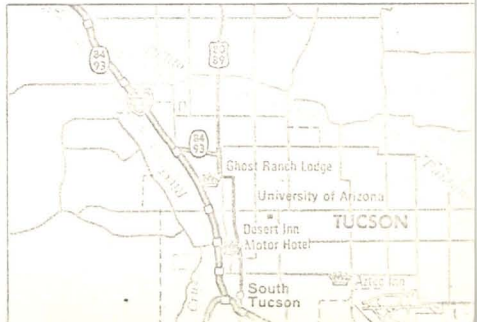
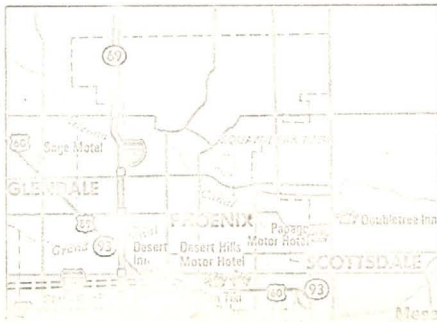
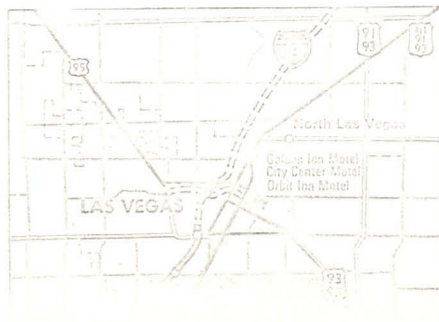
if there were substantial nearby production but there is none.

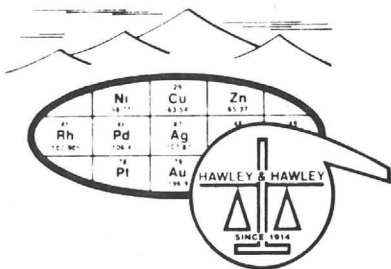
The Bitter Creek-Garfias Wash Area will eventually be drilled to depth. This is not the type target IMC should undertake to test at this time. Better opportunities will certainly become available.

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CERTIFICATE OF ANALYSIS

ITEM NO.	SAMPLE IDENTIFICATION	Au oz/ton	Ag oz/ton	Cu %	Mo ppm					
1	CHS - 1	<0.005	0.05	<0.01	2					
2	2	<0.005	<0.01	<0.01	20					
3	5	<0.005	<0.01	<0.01	2					
4	6	<0.005	<0.01	<0.01	< 2					
5	7	<0.005	<0.01	<0.01	< 2					
6	8	0.010	0.13	<0.01	< 2					
7	10	<0.005	<0.01	<0.01	< 2					
8	CHS - 11	0.110	0.06	0.13	4					
9	PRL - 2	0.010	0.01							

GARDENAS WASH AREA

TO
Perry, Knox, Kaufman, Inc.
P.O. Box 12754
Tucson, Arizona 85732

Attn.: Mr. A. J. Perry

REMARKS:

CERTIFIED BY:

DATE REC'D: 7/22/74	DATE COMPL.: 7/29/74	JOB NUMBER: 741374
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