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The following file is part of the John E. Kinnison mining collection

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*What is really said is an additional statement following the end of 1st part. Assays for - that the ~~gold and silver~~ are not present in commercial amounts in the weakly*

AMERICAN SMELTING AND REFINING COMPANY  
Tucson Arizona

*all as such between the veins. Accordingly,*

November 1, 1967.

*no additional sampling is necessary, and the property should be dropped from consideration.* J. E. K.

NOV 01 1967

To: J. H. Courtright

From: J. D. Sell and R. B. Cummings

Harqua Hala Mine  
Little Harquahala Mountains  
Ellsworth Mining District  
Yuma County, Arizona

① On October 17, 1967, the area around the Harquahala Mine was sampled for gold-silver-copper values in a follow-up of the subject memorandum by J. E. Kinnison (October 12, 1967).

③ The area and sample sites are shown on Attachment A while the assays and short descriptions are on Attachment B.

Field observations and assay results indicate that the Mesozoic granite, which essentially follows the road area west of the Harquahala Mine, is overall only weakly altered although some areas along veinlet-shears contain strong sericite. High pyritic limonites are suggested and assay results show very low geochemical values for copper. The adjacent quartzite often contains abundant sericite but only low geochem copper and low gold-silver values were reported.

④ The only value of note was the 1.20 ounce silver (HJ-9) which was cut from a four-foot zone at the contact between the quartzite and a limestone. Another sample taken from the same contact zone but at a location to the north (HJ-18) returned only 0.10 ounces of silver.

⑤ Observations along road traverses outside the immediate Harquahala-Golden Eagle mine area failed to suggest any other area of higher values or alteration than was found during the sampling. [With these results no additional sampling is recommended.]

James D. Sell

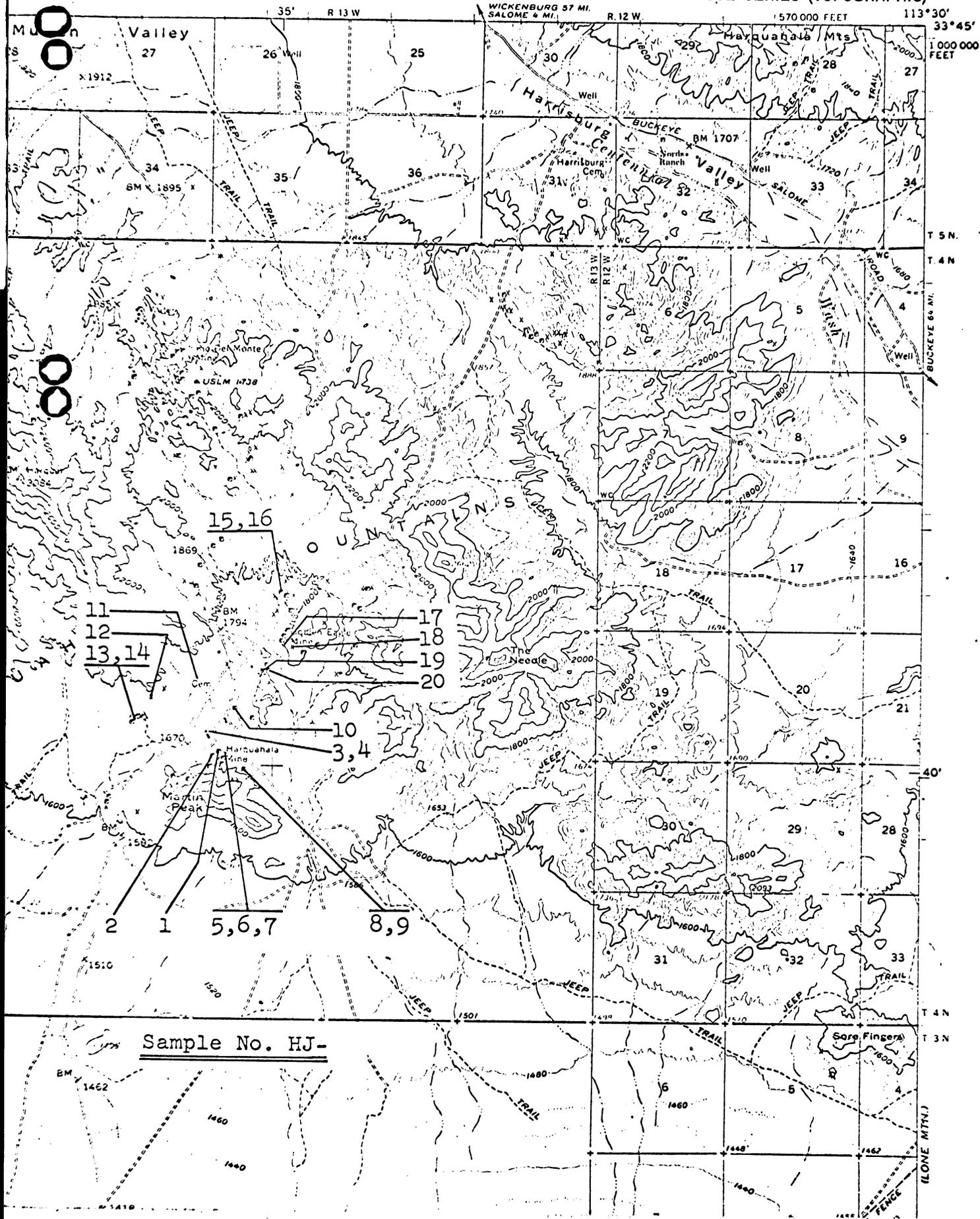
Robert B. Cummings

JDS:kc  
Attachments  
cc: JEKinnison ✓

*omit if proper under given*

HOPE QUADRANGLE  
ARIZONA-YUMA CO.  
15 MINUTE SERIES (TOPOGRAPHIC)

(GLADDEN)



Sample No. HJ-

(LONE MTN.)

*Jim Sell*



Registered Assayers

# HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD - TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

Branch Representatives at Buyer's Plants:  
Phelps Dodge Corp., Douglas, Arizona; ASARCO, El Paso, Amarillo, Texas and Hayden, Arizona

*K.V.D.S.*  
*UGT 25 1967*

IDENTIFICATION	Gold ozs.	Silver ozs.	Lead %	Copper %	Zinc %	Mo. %		
HJ-1 <i>qtzite</i>	None	None		22				
HJ-2 <i>qtzite/sericit</i>	0.110	0.07		28			<i>dump material from small shaft</i>	
HJ-3 <i>my granite</i>	None	None		14				
HJ-4 <i>my granite</i>	0.010	0.51		54			<i>dump material - unknown source.</i>	
HJ-5 <i>qtzite</i>	None	None		24			<i>west end of open pit.</i>	
HJ-6 <i>qtzite</i>	None	0.06		346			<i>central portion of open pit.</i>	
HJ-7 <i>qtzite</i>	None	None		98			<i>east end of open pit.</i>	
HJ-8 <i>qtzite</i>	None	None		40				
HJ-9 <i>contact zone</i>	0.100	1.20		640			<i>basal zone of lens overlying HJ-8.</i>	
HJ-10 <i>my granite</i>	None	None		30			<i>dump material from shaft.</i>	
HJ-11 <i>my granite</i>	None	None		18				
HJ-12 <i>my granite</i>	0.070	0.17	>	1000			<i>main copper - iron stain in shear zone.</i>	
HJ-13 <i>my granite</i>	None	None		24				
HJ-14 <i>my granite</i>	None	None		100			<i>Grab from "one much gales".</i>	
HJ-15 <i>my granite</i>	None	0.41		192			<i>North half of dump material</i>	
HJ-16 <i>my granite</i>	< 0.005	0.30		258			<i>South half of dump material</i>	
HJ-17 <i>qtzite</i>	None	None		28				
HJ-18 <i>contact zone</i>	None	0.10		56			<i>Basal zone of lens overlying HJ-8.</i>	
HJ-19 <i>qtzite</i>	None	0.34		155			<i>dump material</i>	
HJ-20 <i>qtzite</i>	< 0.005	0.08		52			<i>dump material</i>	

*Hargrave*  
*Little*  
*Harquahala*  
*Miller*  
*Wright*

20 Au & Ag, single @ \$3.50  
20 Cu, Geochem @ \$1.00  
20 sample preparations @ \$.85

\$ 70.00  
20.00  
17.00

cc: American Smelting & Refining Co.  
ADD: P. O. Box 5795  
CITY: Tucson, Arizona 85703  
ADD: Attn: Mr. Jim Sell  
CITY:

REMARKS: Analysis Cont. B  
*D. Creighton*

ACC: ASARCO - Tucson  
Date Spl. Received: 10/19/67  
Date Compl.: 10/24/67  
TUC 337151  
Preparation \$ 17.00  
Analysis \$ 90.00  
\$ 107.00

AMERICAN SMELTING AND REFINING COMPANY  
Tucson Arizona

October 12, 1967

TO: J. H. COURTRIGHT  
FROM: J. E. KINNISON

HARQUA HALA MINE  
HARQUA HALA MOUNTAINS  
ELLSWORTH MINING DISTRICT  
YUMA COUNTY, ARIZONA

I recommend a preliminary field examination of the subject mining property and adjacent area, to determine the points listed below. My attention was initially drawn to this property by a reference in a paper by Joralemon<sup>1</sup>, in which he states, "...the Harqua Hala in Arizona, the shattered quartzite is a far better host than the intensely altered granite." (Underline is mine.) An examination of the fragmentary data in our files shows that the Harqua Hala is an old gold producer with an output of four to six million dollars prior to 1910. Joralemon's reference to intensely altered granite and to shattered quartzite, coupled with assays and written comments in our files all go together to suggest a dissemination of values. The production to date appears to have been from higher grade veins within a larger area of mineralization.

The only examination by an Asarco geologist was in 1922 by Hatcher, who made no recommendations on it. I propose that a brief field check be made now to determine:

1. Is the Harqua Hala a porphyry copper deposit? If it is, the general nature of capping and limits of alteration can be determined within a few days.
2. If the Harqua Hala is found to be a large altered zone, not necessarily of a porphyry copper nature, then scattered surface samples for gold and silver would be in order.
3. The current property status is unknown at this time. If the property appears to be of interest, a preliminary valuation of claims and ownership may be noted during the examination.

Attached please find some miscellaneous notes abstracted from our files.

*John E. Kinnison*  
JOHN E. KINNISON

<sup>1</sup>The Fifth Dimension In Ore Search: Peter Joralemon, September 1967, AIME pre-print #67-1-302, page 8.

Oct. 12  
to examine, with help of  
R. Cummings. They will leave  
plans to stay a week

AMERICAN SMELTING AND REFINING COMPANY  
Tucson Arizona

ATTACHMENT

Introduction

The following notes were abstracted from our files or other sources as mentioned and do not necessarily proceed in order of date or any other system.

Notes:

1. The Harqua Hala is located 8 miles south of Salome in Yuma County, Arizona. A survey plat in our files shows it to be in Section 27, T4N-R13W, Gila and Salt Base Line and Meridian. It lies also on the NE flank of Martin Peak at an elevation of approximately 1800 feet. A map by Bancroft (Bulletin 451) shows a road leading directly from Salome through a notch in the mountain up to the Harqua Hala deposit.. The present road from Buckeye to Salome passes through a low divide a few miles NE of Martin Peak, and roads may lead from this access to the property.
2. The property has been named in different ways in the past. The name here used - Harqua Hala - appears to be the one in current use. Other names of the past derive from the Harqua Hala-Bonanza and Golden Eagle Mining and Milling Company. They held patented claims named: Gold Mountain, Gold Hill, Gold Star, Grand View, and Narrow Gage. This company also had two other claims known as the Wedge and North Pole, and an apparently separate company known as the Bonanza and Golden Eagle Mining Company held claims approximately 1/2 mile to the NW of the Harqua Hala group, said claims being named the Golden Ark and the Golden Eagle and the Golden Belt.
3. Two published references will be found in U.S.G.S. Bulletin 451, 1911, and Arizona Bureau of Mines Bulletin 137 by Eldred Wilson, 1934.
4. The property was examined by our Mr. Hatcher in 1922, who states that, "the main production of the Harquahala came from one immense ore body extending from the surface to about the 400 ft level." As described by Hatcher and also by Bancroft, this particular ore zone contains free-milling gold in a red iron-stained quartzite with some chrysocolla. It was worked by open stopes and ultimately resulted in one large glory hole.

5. The Harqua Hala was originally located in 1888 and has produced between 4 and 6 million dollars in gold. Three mills were built on the property, the last being a 40-stamp mill. The tailings reportedly have been cyanided twice since these plants were operated. G. M. Colvocoresses (consulting engineer) reports a production of 4 million dollars prior to 1910, coming from ore that averaged about 1 oz of gold per ton.

6. In 1941, Mr. Colvocoresses presented the property to Asarco's attention. It was owned at that time, or was leased and being promoted, by J. R. Byrd.

Colvocoresses had sent to us for examination various reports and assays and his own report on the mines, but no copies of these were retained for our files. Mr. F. M. Stevens abstracted the high points of some of the reports which Colvocoresses had shown us. The principal exploration aspect was the possibility of lower grade gold values extending between what were termed the "Bonanza and iron veins." I do not know where the Bonanza vein is, but the iron vein appears on a map dated 1894 along the west side of the Glory Hill hole from which most of the production had come.

7. Mr. Stevens reviewed the property without examining it on the ground and rejected it on the basis that it was not probable that there would be an extension of low-grade values between these two "veins". He states that the extension is purely supposition and an expensive drilling campaign would be necessary to prove or disprove the areas.

8. As described in Bulletin 137, the deposit occurs in sediments which are intruded by igneous rock and are worked from veins which trend northerly.

9. A Mr. Martin either owned or had an interest in the property in 1940.

10. On the claims of the Bonanza and Golden Eagle Mining Company, which lie north of the Harqua Hala, Mr. Stevens has a sketch in which he outlines a Golden Eagle ore zone, an elliptical area elongated north, with dimensions of 300 x 600 feet.

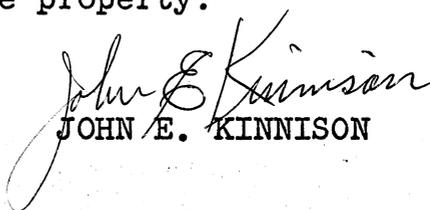
11. The maps showing assays which are in our files give the value in dollars rather than the assay in ounces of gold. I do not know whether this includes some value in silver or not. Various people have referred to sulfides which were encountered in the deeper workings and these are described as being pyritic with gold, silver and a little chalcopryite.

12. At the time of Mr. Hatcher's examination in 1922, the operators were then working on what they termed the "fault vein". Mr. Hatcher describes this as a light colored intrusive dike about 4 ft wide which under the binocular microscope shows finely disseminated chalcocite. A specimen from the dump at that time assayed "0.98 ozs Au, 13.7 ozs Ag, and 11.96% Cu."

13. Notes by Stevens on a report by R. N. Dickman, May 4, 1914; addressed to President and Directors of Yuma-Warrior Mining Company, in which the Bonanza Mine is discussed. It is stated that ore was found in a diabase footwall. This evidently was a vein and is listed as "having the northerly trend of other ore bodies."

14. In 1935, Elliott and Stratton are reported to have sampled an area 600 x 400 ft on the surface. Of 600 assays, 40 were higher than \$15; the other 560 averaged \$2.33. They also apparently made a mill test on the waste dump from the Glory Hole area, and this is reported to have averaged \$2.88.

15. The Cuff Prospect was examined in 1924 for Asarco by W. Leb. Jenney. He states that it is south of Salome and that it adjoins the "old Hargue Hala Mine" on the north. The country rock is described as granite porphyry. As to mineralization, Mr. Jenney states that it is slight, but "seems to be pretty well distributed over the area which I saw." He states that there are iron oxides and copper carbonates on the surface and pyrite with a little chalcocite in a 50 ft shaft. He recommended no further consideration of the property.

  
JOHN E. KINNISON

JEK/mg