



CONTACT INFORMATION  
Mining Records Curator  
Arizona Geological Survey  
3550 N. Central Ave, 2nd floor  
Phoenix, AZ, 85012  
602-771-1601  
<http://www.azgs.az.gov>  
[inquiries@azgs.az.gov](mailto:inquiries@azgs.az.gov)

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

#### **ACCESS STATEMENT**

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

#### **CONSTRAINTS STATEMENT**

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

#### **QUALITY STATEMENT**

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

**KAISER**  
**EXPLORATION & MINING**  
**COMPANY**

April 19, 1973

Mr. Craig Savela  
Casa Grande Mines Company  
702 West 11th Street  
Casa Grande, Arizona 85222

Blind subject: VEKOL SILVER MINE,  
Pinal County, Arizona

Dear Mr. Savela:

I have reviewed your recent letter regarding the potential value of the old tailings from the Vekol mine west of Casa Grande. I am sorry to advise that this company is not in a position at this time to undertake a milling operation of this sort.

However, I appreciate the fact that we were allowed to consider the proposal, and certainly wish you luck in your efforts to find a suitable contractor to handle these tailings.

Sincerely,

John E. Kinnison  
Regional Geologist

JEK/fn

7 April 1973

Casa Grande Mines Company  
Attn: Mr. Craig Savela  
702 West 11th St.  
Casa Grande, Arizona 85222

Kaiser Exploration & Mining Co.  
5938 N. Oracle Rd.  
Tucson, Arizona 85704

Gentlemen,

Casa Grande Mines Co. has recently obtained a lease on six patented claims known as the Vekol silver mine. We have reason to believe that these particular claims consist of great potential value. I would like to introduce to you an offer on one particular phase of our operation. This phase concerns the tailings that have developed over the years since the Vekol silver mine was in operation. Allow me to acquaint you with the incidences that have occurred over these years.

Between 1885 and 1894, production figures from the U.S. mint and smelter settlement sheets showed that a little over one million ounces of silver had been extracted from the workings. Since then, no mining has been done. In 1968, Gunnex Limited, a Canadian based firm, wanted to purchase the six patented claims. In addition to a substantial price for these claims they offered an additional price for the tailings. On the reports prepared for Gunnex, which I have obtained, these tailings were estimated to contain approximately one-half million dollars in silver ore. Taking this into consideration they offered \$200,000.00 dollars for these tailings. But, due to other stipulations in the contract that the owners could not fulfill, and through the unexpected death of the corporations chief geologist handling the project, an agreement was never reached.

To acquaint you with our offer and the potential value of these tailings,

I would like to quote information from the reports and assays that I have accumulated.

First of all I would like to state that these tailings consist of approximately 120,000 tons of ore. Through extensive laboratory tests, Gunnex concluded that they would concentrate this ore on the site. Their calculations show that for every 100 tons of ore, through screening and various gravity concentration methods, they could produce 1.6 tons of concentrate. Their figures also show that this concentrate would contain the following:

(1) Ag = 104 Oz/Ton

(2) Cu = 0.2%/Ton

(3) Pb = 13.8%/Ton

(4) Zn = 9.6%/Ton

The conclusions that were stated in the report said:

"... a simple gravity concentration flowsheet could yield about 64% recovery of the total silver content in a concentrate weight of 1.6% of the original ore sample."

I hope that this brief preliminary review has brought about interest in this matter. Casa Grande Mines Co. is willing to contract out the concentration of these tailings to you for a straight price of the original ore or a percentage of the price received for the concentrate. I will state right now, whatever the conditions, the contract will heavily favor the contractor. I hope that this will stir an incentive to do business together. I will be more than willing to negotiate on any terms that you desire if the possibilities I have previously mentioned seem economical and profitable to you. Please feel free to contact me at the above address or call 1-602-836-9514 evenings only. I will look forward to hearing from you.

**RECEIVED**  
 APR 10 1973  
 TUCSON  
 KAISER EXPLORATION & MINING CO.

Very truly yours,

*Craig E. Savelle*  
 Craig E. Savelle

From Savelle letter  
Gunnep data

Tailings -

120,000 tons

Con Ratio <sup>62.5</sup> 62:1	<u>Conc.</u>
Total Conc produced 1,920 tons	Ag 104 oz
	Cu .2%
	Pb 13.8%
	Zn 9.6%

$$\text{Recor. Ag Content of Tails} = \frac{104}{62.5} = 1.66 \text{ oz / ton}$$

$$(120) \frac{1.66 \text{ oz}}{64\%} = \frac{2.59}{2.62} \text{ oz / ton Ag contained in tails.}$$

Total tailings by calculation

$$\text{contain } 120,000 \times 2.59 = 311,250 \text{ g Ag}$$

Note - This is more tailings than is indicated by J.B. Tenney History.

$$\begin{aligned} 10 \text{ stamps operating July 8 1885 to April 1889, } 470 \text{ t per month approx.} \\ = 3 \text{ yr } \times 10 \text{ mo approx } \quad (= 2 \text{ tons/stamp/24 hours}) \\ = 3.8 \text{ yrs } \times 470 \times 12 = 21,432 \text{ tons total} \\ \text{3 stamp mill prod.} \end{aligned}$$

1915 ~~and~~ milling operation

30,000 oz Ag - grade unknown

lets say they tried to work 20 oz/ton ore

then prod. might be 1500 tons of ore milled.

Assuming that an "open" smelter contract were available at ASARCO - El Paso, ~~the~~ and adjusting out-of-date "open" contracts for inflation, I arrive at the following conditions, calculating Pb and Ag only.

Ag - Forecast \$2<sup>10</sup> / tray Oz.  
 Pb - " 15<sup>¢</sup> / lb

Smelter Pays: 2<sup>00</sup> on Ag (90%) = \$208 / ton  
 9<sup>¢</sup> on Pb (15<sup>¢</sup> - 4<sup>¢</sup> in deductions) = \$23 / ton  
 -----  
 \$231

	Total Pay	
Base chg	\$12	
Freight	<u>6</u>	23
	<del>18</del>	<u>48</u>
	23	\$ <del>215</del> NSR
		208

100 tons tailings = 1.6 tons Conc; Conc Ratio = 62:1.

$$\frac{208}{62} = \$3.50 \text{ per ton of tailing.}$$

A 100 tpd gravity mill, No crushing but with facility for regrinding, would cost, new construction, - \$60,000

Operated 300 days/year - Annual Capacity: 30,000 tons  
 (x 4 yr = 120,000 tons of fuel) (x 4 yr = 120,000 tons of fuel)

Other facilities; approx \$20,000

Total Capital \$80,000

Amortization (without interest calculations) = \$20,000/year  
 4 yrs (120,000 tons total)

Amort. Cost/Ton of fueling handled = 65¢/ton

Allowance for Maintenance & Interest 15¢

Total Amortiz: 80¢/ton

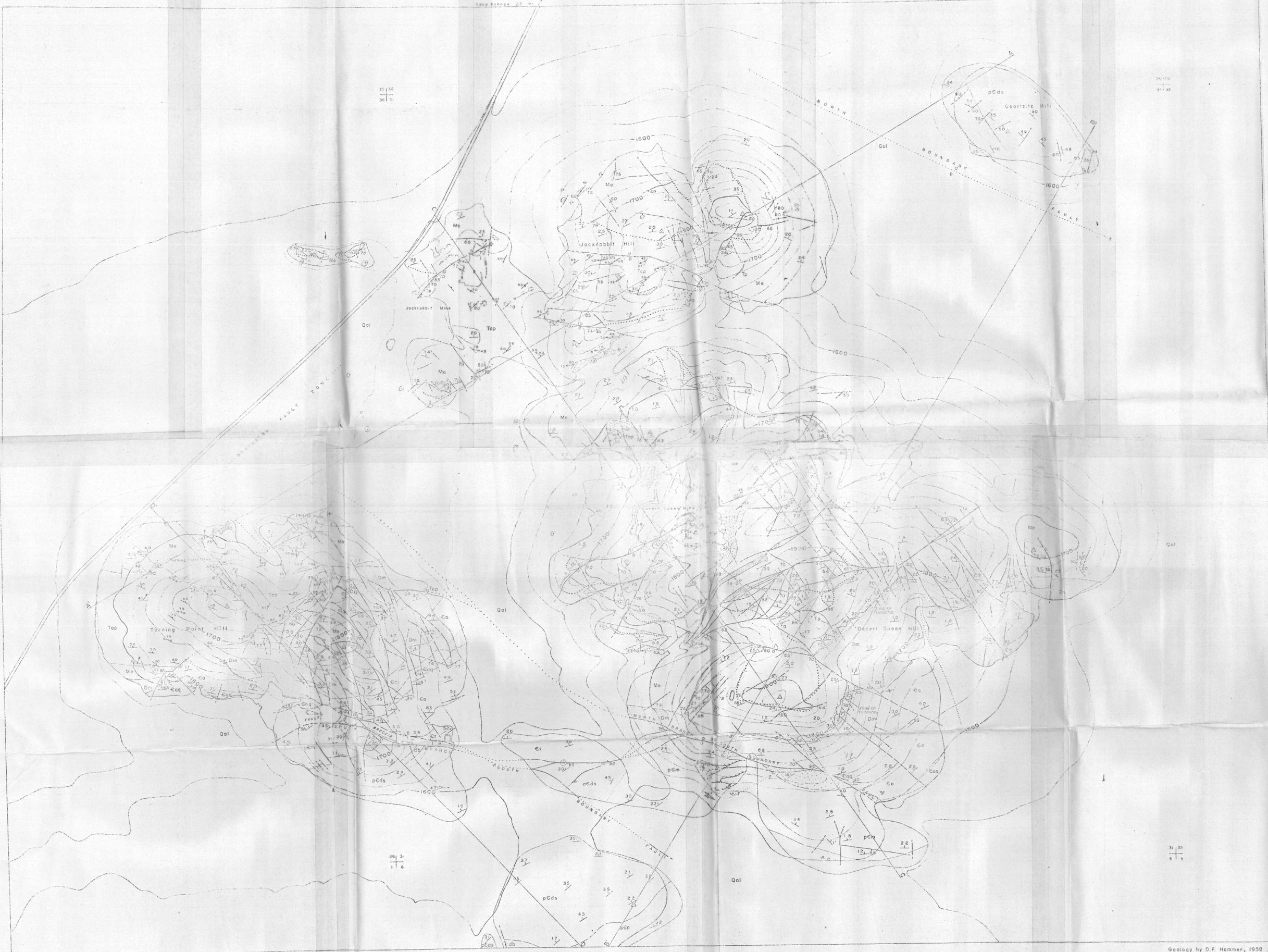
Cost of handling fuelings: 15¢/ton.  
 Gross at Water development & lost: 50¢/ton  
 65¢

Amortization -	.80
Handling	.15
Water	.65
	\$ 1.60 / ton of fuelings

350 NSR  
 - 160

Thus, \$1.90 May milling operating cost & break even.

Conclusion: Not possible for Kaiser.



EXPLANATION

- Qol Alluvium
- UNCONFORMITY
- Tp Pebble dows
- Me Andesite porphyry
- Me Escabroso limestone
- Dm Morita formation
- DISCONFORMITY
- et Abrigo formation (unrestricted)
- et Troy quartzite
- DISCONFORMITY
- db Diabase
- pCm Mescal limestone
- pCds Drapping Spring quartzite
- pCp Pioneer shale
- PRODUCTS OF ALTERATION AND METALLIZATION
- Silicification
- Mineralized structure

- High angle faults showing dip
- Strike and dip of beds
- Strike and dip of foliation
- Strike of vertical foliation
- Bearing and plunge of lineation
- Horizontal lineation
- Axis of anticline, showing plunge
- Axis of syncline, showing plunge
- Trambed shaft, showing dump
- Excavation, showing dump
- Triangulation station
- Section corner

APPROXIMATE MEAN DECLINATION 1958

T 95, R. 4852, G&S.R.M

GEOLOGIC MAP OF THE JACKRABBIT AREA, PINAL COUNTY, ARIZONA



Geology by D.F. Hammer, 1958



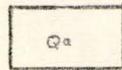
# EXPLANATION

## IGNEOUS ROCKS

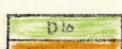
 ANDESITE PORPHYRY } POST-ESCABROSA

 DIABASE } POST-TROY

## SEDIMENTARY ROCKS

 ALLUVIUM AND CALICHE } RE

 ESCABROSA LIMESTONE } LO MISSI

 LOWER OURAY FORMATION } U  
 MARTIN LIMESTONE } DE'

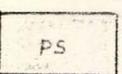
 ABRIGO FORMATION } U CAM

 SOUTHERN BELLE QUARTZITE AND SANTA CATALINA FORMATION } M CAM

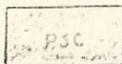
 TROY QUARTZITE } M CAM

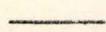
 MESCAL LIMESTONE } M CAM

 DRIPPING SPRING QUARTZITE } PROT

 BARNES CONGLOMERATE AND PIONEER SHALE } M CAM

## METAMORPHIC ROCKS

 PINAL SCHIST } ARCH

 FAULT

