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GEOLOGY REPORT
ANDERSON URANIUM MINE
Congress, Arizona
By F. Carl Houme. ~69-1970
18

DONATED BY MEL JONES ESTATE

February 25, 1970

Mr. Melvin Jones
P.O. Box 406
Wickenburg, Arizona

Dear Mel:

As per agreement with you, Dan Jacobs, and Lee Hammons, the following is a letter summarizing my work progress and conclusions I have made to date on that part of the Uranium Aire (Anderson Mine) property located in Yavapai County, Arizona, which is under your ownership.

One day has been spent in reconnaissance of the property and a thorough study has been made of the 102 gamma logs which you obtained from Getty Oil Company.

Tabulated data was abstracted from each log showing the hole depth, approximate thickness and depth of beds showing gamma ray anomalies, and a calculated estimate of the gross value of radioactive mineral content of potential ore beds. (Only values of .03 of 1% or more were taken as ore potential. The K-factor of .00027 was used in calculating gross values.) This data is included and made a part of this progress report.

This study showed that all but 17 of the gamma logs indicated thin interbedded uranium bearing layers of mudstone, (from 1 to 5" thick having a gross gamma ray count of 100 cps to 1500 cps) indicating .03 to .40 of one percent radio active material from surface level to about 340' deep. Sixteen of the gamma logs indicated one or more layers ranging from 6' to 26' in thickness with a calculated gross radioactive mineral content from .01 to .09 of one percent. One log (hole #203) indicates the highest value of .9 of one percent at -160.5' to -162'; however, this was one of about 40 holes probed by Getty Oil Company which were not located on the drill hole location maps. It was also noted that there were numbered holes located on the Getty Maps for which there were no logs.

An attempt was made to correlate the gamma logs with the drill hole location maps supplied to you by Getty. The A.E.C. topographic contour map of the area was used as a base map on which the holes located on the Getty maps were plotted. These logs of holes that were located on the Getty maps were analyzed and several cross sections were drawn up in an effort to correlate and block out sufficient tonnage of potential uranium ore of a higher grade (.20 to .40) in near surface layers that would be readily accessible for shipping. One near surface bed was found that would bear further investigation in the field. This area is in and near holes 107, 123, 124, and 16 which indicate a 3' bed 30' to 55' below the surface with a calculated composite value of .28 of one percent radioactive mineral content. A composite assay should be taken on the marker bed outcropping to the Northeast, assays should be taken of the drill cuttings for these mineralized layers and if possible several shallow holes drilled and assays made of cuttings from said marker bed to varify and delineate tonnage and continuity of this

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potential ore body.

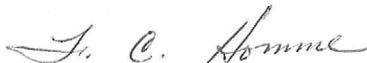
In general it was found that an accurate corrolation of the uranium bearing layers at varied depths through out this area is not possible using only gamma log data from holes drilled by Getty Oil Company. Further examination and assays of drill cuttings, and a thorough systematic field investigation and mapping of local structures and lithology on surface outcroppings should be done.

Also, it would be well for someone to study carefully the report you received from the A.E.C. recently.

Regarding the possibility of shipping the higher grade potential ore to Homestake Mining Company in Grants, which we discussed earlier this week: I found that, after talking personally with Mr. Roeber last week and again today by phone, and having received a copy of result of the mill run on the dump material and copy of letter sent you May, 1969, Homestake Mining Co. will not accept shipment of any of the potential ore from this area due to the high mud content. The copy of the letter from Mr. Roeber and the results of the mill run are included and made a part of this report.

My conclusion at the present time is that, unless a uranium mill with a leaching plant that can appropriately handle the mudstone content of ore from your property is available, there is no market for any potential ore of a grade that is evident from information which has thus far been made available to me.

Respectfully submitted,



F. C. Homme
Geologist

CC: Dan Jacobs
Lee Hammons

HOMESTAKE MINING COMPANY

P.O. BOX 77

GRANTS, NEW MEXICO 87020

February 17, 1970

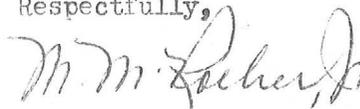
Mr. Carl Homme
4630 West Osborn
Phoenix, Arizona 85031

Dear Mr. Homme:

Per our telecon on February 17, 1970, I am enclosing herewith copies of a letter I sent to Mr. Jacobs concerning the sample he and Mr. Jones brought to our offices last spring. Also enclosed is the amenability report concerning the sample. Both are self explanatory.

I hope this information is useful to you.

Respectfully,



M. M. Roeber, Jr.
Manager of Exploration, N.M.

MMR:dp

May 27, 1969

Mr. Don Jacobs
Congress, Arizona 85332

Dear Mr. Jacobs:

We received the results of the amenability test on the sample you brought to our office on May 17, 1969 from a stockpile on the Anderson open-pit uranium property, Yavapai County, Arizona.

The sample tested very poorly. Grade was 0.089 percent U_3O_8 ; extraction was only 40 percent; and filterability was very low. The tests indicate that the material would present major milling problems in our mill circuit. For these reasons, we are not interested in pursuing the matter of purchasing the stockpiled material.

Thank you for considering Homestake in this matter.

Respectfully,

M. M. Roeber Jr.
Manager of Exploration, H.M.

MHR:rjs
cc: N. Jones
E.J. Stoehr

AMENABILITY TEST REPORT

TO: J. J. [unclear]
 FROM: [unclear]

ORE: J. J. #1
 DATE: _____

REMARKS:
Very fine [unclear] in oil tests

SAMPLE DESCRIPTION

1. Geological High clay ore - 15%
2. Ore Location _____
3. Supplier Alcoa - Cochise
4. Sampler & Amount 10 lbs
5. Date Sample Rec'd 16 Nov 1951
6. Date Testing Completed 10/19

TEST RESULTS

I. LEACH TESTS

	<u>Head</u>	<u>Pressure Residue</u>	<u>Atmospheric Residue</u>	<u>Extraction</u>	<u>Special Treatment</u>
1.					
a. U ₃ O ₈ -%	<u>0.089</u>	<u>0.075</u>	<u>0.054</u>	<u>37.33</u>	<u>None</u>
b. V ₂ O ₅ -%	<u>0.102</u>	<u>0.082</u>	<u>0.076</u>		
(Average of _____ tests: Soda Ash Consumption				<u>44.2</u> lb/ton ore)	
2.					
a. U ₃ O ₈ -%	_____	_____	_____	_____	_____
b. V ₂ O ₅ -%	_____	_____	_____	_____	_____
(Average of _____ tests: Soda Ash Consumption _____ lb/ton ore)					
3.					
a. U ₃ O ₈ -%	_____	_____	_____	_____	_____
b. V ₂ O ₅ -%	_____	_____	_____	_____	_____
(Average of _____ tests: Soda Ash Consumption _____ lb/ton ore)					

over 90% is necessary

Screen Analysis - No roasting or special oxidants

Mesh	Heads			Residue		
	Wt. %	U ₃ O ₈ %	U ₃ O ₈ Dist.-%	Wt. %	U ₃ O ₈ %	U ₃ O ₈ Dist.-%
+ 48	<u>4.9</u>	<u>0.372</u>	<u>2.45</u>	<u>5.0</u>	<u>1.042</u>	<u>4.38</u>
+ 65	<u>7.4</u>	<u>0.373</u>	<u>7.62</u>	<u>9.9</u>	<u>1.048</u>	<u>9.92</u>
+100	<u>9.3</u>	<u>0.375</u>	<u>6.82</u>	<u>9.4</u>	<u>1.040</u>	<u>7.83</u>
+150	<u>7.5</u>	<u>0.375</u>	<u>5.57</u>	<u>7.4</u>	<u>1.041</u>	<u>6.79</u>
+200	<u>5.1</u>	<u>0.377</u>	<u>4.12</u>	<u>6.4</u>	<u>1.040</u>	<u>5.33</u>
-200	<u>62.8</u>	<u>0.112</u>	<u>72.42</u>	<u>61.9</u>	<u>1.051</u>	<u>65.27</u>

Sample Assay 0.089 % U₃O₈
 Calculated Assay 0.062 % U₃O₈

1.054 % U₃O₈
0.048 % U₃O₈

Standard Leach Conditions:

- 50% Solids
- 4.5-hr pressure leach
 - 200°F
 - 60 psi
 - 300 SCFM air/ton ore
- 18-hr atmospheric leach
 - 170°F
 - 550 SCFM air/ton ore
- Mill solution - not less than 30 g Na₂CO₃ and 8.0 g NaHCO₃ per liter.

II. SETTLING TEST

1. Time-Minutes Inches Settled

1	<u>0.172</u>
2	<u>0.312</u>
3	<u>0.522</u>
4	<u>0.738</u>
5	<u>1.062</u>
6	<u>1.375</u>
7	<u>1.522</u>
8	<u>1.712</u>
9	<u>2.052</u>
10	<u>2.250</u>
60	<u>5.938</u>
120	<u>6.252</u>
24 hours	<u>8.000</u>

(Standard = not less than 0.75 inches in the first minute)

2. Terminal Density after 24 hours: 1.38 g/cc
52.5 % Solids

3. Standard conditions:
- unleached ore slurried in mill solution
 - 18 - 20% Solids
 - 0.03 lb flocculant (Separan) per ton of ore

III. FILTRATION TEST

1. Rate 500 lb/sq ft/24 hr; Cake Moisture 11.5 %.
(Standard: not less than 1,100 lb/sq ft/24 hr)
2. Standard conditions:
 - a. 170°F
 - b. 52-54% Solids (2 pulps; 3 cakes each)
 - c. vacuum of 18-20 inches of mercury
 - d. cycle time 150 seconds with 20% submergence

500

Box 406
Wickenburg, Ariz 85358
27 February 1970

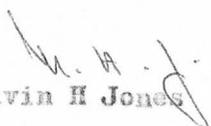
Mr. F. C. Homme
4630 W/ ~~Dobson~~
Phoenix, Arizona.

Dear Carl:

Your report dated February 25, 1970 has been received. Same has been re-viewed. My major comment would be that you have emphasized the point that Homestake Mining Company found that a sample tested by them to be unamenable to the circuits in their plant. Further checking would reveal that no serious difficulties were encountered at another processing mill, Atlas. A mill sample was delivered up there several years ago.

My associates agree with me that no further geological work will be undertaken on the Anderson mine, by you, unless specifically authorized by us in the future.

Yours sincerely,


Melvin H Jones

cc
Jacobs
Hammons

PROMISSORY NOTE

It is hereby understood and agreed that we the undersigned having One Hundred (100%) Per Cent interest in the Uranium property known as the Cosmo and Moonbeam Mining Claims, (also known as the Anderson Mine property), located in Yavapai County, Arizona, ~~unwittingly~~, do promise to pay to F. Carl Homme the sum of Five Hundred (\$500.00) dollars for consulting services rendered in January and February, 1970.

This note is due and payable within thirty (30) days of the lease, sale, or operation of the above described uranium property by the owners.

It is also understood and agreed that we the undersigned will be liable for all court costs, attorney fees or any other costs which may occur in pursuing collection of this note, should this agreement not be upheld as per the terms and conditions of this promissory note.

It is also understood that F. Carl Homme will upon receipt of this note furnish the undersigned with a geological progress reports covering his opinions and conclusions to date, including his data and findings derived from interpretation of the Getty drill logs.

Dated: February 20, 1970

Handwritten initials: JOP and P

Agreed to: ^{Sgd.} Daniel C. Jacobs
Owner

Melvin H. Jones
Owner

Owner

STATE OF ARIZONA }
COUNTY OF YAVAPAI } ss.

On this the 21 day of Feb, 1970, before me Jessie M. Shobe a Notary Public on and for the County of ~~YAVAPAI~~ YAVAPAI, State of Arizona, on this day personally appeared Daniel C. Jacobs/~~known to me to be the person~~ whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have set my hand and official seal

Aug 14 1970
My Commission Expires

^{Sgd.} Jessie M. Shobe
Notary Public

Seal