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OFFICIAL FILE

1970  
SUPPLEMENTAL REPORT  
to  
PRELIMINARY GEOLOGY EVALUATION REPORT  
ANDERSON MINE(U<sub>3</sub>O<sub>8</sub>)  
Congress, Yavapai County, Arizona

**SUPPLEMENTAL REPORT  
(12/5/70)**

**to**

**PRELIMINARY GEOLOGICAL EVALUATION REPORT OF THE**

**ANDERSON MINE(uranium)**

**Yavapai County**

**Arizona**

**dated 31 August '70**

**by**

**Melvin H. Jones**

MELVIN H. JONES

Mining Geologist

Box 1, Montello, Nevada 89830

SUPPLEMENTAL REPORT TO "Preliminary Geological Evaluation Report;  
Anderson Mine(uranium), Yavapai County, Arizona, dated August 31, '70.

The following information supplements the economic considerations outlined in subject report and supercedes data and Conclusions previously outlined. These changes are a result of a re-study of the Getty Oil Company drill hole data, and an estimation of uranium ore reserves by statistical methods and a computer.(ABC, Grand Junction, Colo.).

Earlier drill hole data by Interstate Oil and Development Company action during 1957 and 1958 has been mostly disregarded for this current study, as it was found to be somewhat unreliable, surveys were inaccurate, and computations poorly accomplished. This was also found to be true of the few Gaither drill holes in the Cosmo claims area. In my basic report, much of this Interstate data was used. However, these data is useful on a correlation basis for the location of the various ore bodies, and confirms to a degree, the tonnage and uranium value figures outlined below.

The following information pertains to the Moonbeam group of claims, only. (Getty Oil drilled too few drill holes on the Cosmo and JacSar groups to justify a computerized study).((Note; all groups are part of the Anderson Mine area)).

1. CONSIDERING URANIUM VALUE AT \$4.50 PER POUND.  
the following information has been ascertained. There are three(3) small orebodies on the Moonbeam claims that can be worked profitably, with pertinent data, infra:

Ore body.	Grade of ore( $U_3O_8$ )	Tons of ore.	Cost to Mine.	G.value.	Net value.
1.	.17	9100	\$58,000.00	\$99,000.00	\$15,000.00
2.	.182	24200	\$153,000.00	\$270,000.00	48,000.00
3.	.159	51900	\$329,000.00	\$522,000.00	45,000.00
TOTALS	.173(Avg)	85200	\$540,000.00	\$900,000.00	\$108,000.00

(For more detailed mining and milling costs, tonnages, values, and ore body locations, see Exhibits A,B,C, and F, attached).

2. CONSIDERING URANIUM VALUE AT \$6.00 PER POUND,  
the following information has been ascertained. There are two (2) ore bodies on the Moonbeam claims that can be worked profitably:

Ore body.	Grade of Ore( $UO$ )	Tons of ore.	Cost to Mine.	Gr.value.	Net value.
4.	.132	107000	\$630,000.00	\$1,182,000.00	\$114,000.00
5.	.126	73900	435,000.00	780,000.00	175,000.00
TOTALS	.129 (avg)	180900	\$1,065,000.00	\$1,970,000.00	\$289,000.00

(For more detailed information on \$6.00 ore, See Exhibits D,E,& F.)

3. CONSIDERING URANIUM VALUE AT \$7.50 PER POUND.  
the following is applicable. There is one(1) orebody on the Moonbeam claims that can be worked profitably:

Ore body.	Grade of ore.	Tons of ore.	Cost to mine.	Gross V.	Net value.
6.	.10%	763100	\$4,418,000.00	\$8,010,000.00	\$1,177,000.00

(For detailed information and calculations, see Exhibits H & I. ).

The tonnages in the above computations are on the conservative side and the cost factors are on the high side. The cost figures are based on what a contractor would charge, and he, would have the objective of making a good profit on the work. This pertains to the stripping and mining, primarily. If I haven't made it clear before, all values are based on open pit mining.

As I have outlined in my basic report, there is an ore body at Flat Top on the Cosmo claims which is not included in the computer reports outlined, supra. This ore body cannot be seriously disputed as outcrops can be seen and some ore has been mined and stockpiled some years ago by Interstate (this stockpile is included in the stockpile datum covered below). By extrapolation of Interstate drilling information and estimates, and the two (2) drill holes made by Getty Oil at a later date (Nos. 152 and 154 -- 3.5 ft. -- .15%  $U_3O_8$ ) and 2 ft. -- .19%  $U_3O_8$ , respectively), and using the \$6.00 per pound value, results in the following estimate of additional ore:

Ore body.	Grade of ore ( $U_3O_8$ ).	Tons of ore.	Gross value.	Net V.
8.	.165%	40000	\$736,000.00	\$150,000.00

(See exhibit H of basic geology report, and exhibit I, attached. The Interstate and Gaither drill logs were never made available to me). ((But, I have seen the data in the AEC office, Grand Junction, Colo. pertaining to them)).

In addition to the foregoing ore, there are a minimum of 10,000 tons of ore stockpiled in the main pit area. Some conservative values on this ore, using the \$6.00 per pound of  $U_3O_8$  figure, would be:

Ore body.	Grade of ore ( $U_3O_8$ ).	Tons of ore.	Net value.
Stockpiles	.11%	10000 (plus)	\$50,000.00

Now, at this point, I would like to emphasize that there is a minimum of \$489,000.00 in \$6.00 per pound ore after deducting mining and milling costs, in areas that have been drilled.

This study again points out the need for further drilling in the Anderson Mine area, particularly in the Cosmo and JacSar areas, and also on the SharpKleck claims in the surrounding vicinity. It is quite probable that other mineable ore bodies will be found. Earlier studies by the AEC revealed that the ancient lake bed, on which the Anderson Mine occupies a very small part, is five (5) miles wide and forty (40) miles long, and there has been only a paucity of exploration drilling.

The writer attended the AEC sponsored work shop at Grand Junction, Colo. during the period 17-19, November, 1970. Various aspects of uranium mining and processing were gone into in some detail, including marketing of the ore and concentrates. While

uranium has been in a sort of a slump, it is predicted that the demand will expand at a greater rate in the future, with higher prices. The primary use is with the nuclear power industry and fossil fuel plants will become minor due to air pollution and depleted fuel sources. It is very probable that the prices for uranium will spiral in future years.

In my original report I outlined that the ore values are in the mineral carnotite ( $K(UO_2)(VO_4)_{1-3}H_2O$ ) in lacustrine mudstone. I now desire to amend this to say that the carnotite is in vitrified and silicified tuffs. Considering the new uranium leaching and ion exchange recovery procedures, the Anderson Mine ore should be amiable to low cost concentrating at the mine site. This greatly enhances the profit probabilities.

I have no reason to change my basic conclusions and recommendations, other than what is indicated in the concepts outlined above. The Anderson Mine property remains an excellent business and mining investment. The Getty drill logs and the original computer calculations on which information in paragraphs 1 to 3, above is based, are available for study in my office.

I also neglected to mention that should the price of uranium ( $U_3O_8$ ) go up to \$11.25 per pound, there is a great deal of additional ore that can be mined at a profit in the presently drilled area. This would have a net value of \$2,620,000.00. (See exhibits H and I, attached).

December 5, 1970.



MELVIN H. JONES  
Mining Geologist.

- I N D E X -

EXHIBITS

- A. Anderson Mine open pit study. Ore body #1.  $U_3O_8$  \$4.50
- B. Anderson Mine open pit study. Ore body #2. " "
- C. Anderson Mine open pit study. Ore body #3. " "
- D. Anderson Mine open pit study. Ore body #4  $U_3O_8$  \$6.00
- E. Anderson Mine open pit study. Ore body #5 " "
- F. Map showing locations of ore bodies #1 to #5, incl.
- G. Anderson Mine open pit study. Ore body #6  $U_3O_8$  \$7.50
- H. Anderson Mine open pit study. Ore body #7  $U_3O_8$  \$11.25
- I. Map showing locations of ore bodies #6 and #7.
- J. Map showing location of ore body #8 (Cosmo claims).

EXTRACT - ABC Computer run on Anderson mine drilling data 11/19/70

OPEN PIT study considering uranium at 4.50 per pound.

A ratio of .05 to 1 was used to calculate the backslope of pit.  
Tonnage factor used ---18.0 cubic feet per ton.

Costs used per ton -	Mining \$	<u>1.75</u>	<u>2.25</u>
	Milling	<u>3.00</u>	<u>2.80</u>
	Indirect	<u>.60</u>	<u>.75</u>
	haulage	<u>.50</u>	
	royalty	<u>0</u>	
	advalorem	<u>.04</u>	

Cost per ton to mine ore	<u>5.89</u>	\$ <u>6.34</u>
Average grade of ore	<u>.170</u>	Pit area in Sq. feet <u>41,000</u>
Percent recovery	<u>.700</u>	Cost per ton to mine ore <u>6.34</u>
Tons of ore	<u>9,100</u>	Total cost to mine ore <u>\$58,000.00</u>
Recoverable pounds $U_3O_8$	<u>22,000</u>	<u>\$41,000.00</u>
Gross value of deposit	<u>\$99,000.00</u>	Net value before stripping

Ratio of yards overburden to pounds $U_3O_8$	<u>3.4</u>
Ratio of tons overburden to pounds $U_3O_8$	<u>5.1</u>
Pounds $U_3O_8$ per square foot of area	<u>.5</u>
Pounds $U_3O_8$ discovered per hole drilled	<u>11,000</u>
Pounds $U_3O_8$ per foot drilled	<u>210.5</u>

Total cost of mining and stripping	\$ <u>84,000.00</u>
Profit per recoverable pound	\$ <u>.68</u>
Cost per recoverable pound	\$ <u>3.82</u>
Percent profit	<u>18</u>

Pit perimeter in feet	<u>850</u>
Stripping cost per yard	\$ <u>.35</u>
Total volume of overburden	<u>75,000</u>
Total cost of stripping	\$ <u>26,000.00</u>

Net value after mining and stripping \$ 15,000.00

EXHIBIT

A

EXTRACT - ABC Computer run on Anderson mine drilling data 11/19/70

OPEN PIT study considering uranium at \$4.50 per pound.

A ratio of .05 to 1 was used to calculate the backslope of pit.  
 Sennage factor used ---18.0 cubic feet per ton.

Costs used per ton -	Mining \$	<u>1.75</u>	2.25
	Milling	<u>3.00</u>	2.80
	Indirect	<u>.60</u>	.75
	haulage	<u>.50</u>	
	royalty	<u>0</u>	
	advalorem	<u>.04</u>	

Cost per ton to mine ore \$5.89 \$6.34

Average grade of ore .182

Percent recovery 700

Tons of ore 24,200

Recoverable pounds  $U_3O_8$  62,000

Gross value of deposit \$279,000.00

Pit area in Sq. feet 63000

Cost per ton to mine ore 6.34

Total cost to mine ore \$153,000.00

Net value before stripping 1

\$126,000.00

Ratio of yards overburden to pounds $U_3O_8$	<u>3.6</u>
Ratio of tons overburden to pounds $U_3O_8$	<u>5.4</u>
Pounds $U_3O_8$ per square foot of area	<u>1.0</u>
Pounds $U_3O_8$ discovered per hole drilled	<u>12,400</u>
Pounds $U_3O_8$ per foot drilled	<u>125.9</u>

Total cost of mining and stripping	<u>\$231,000.00</u>
Profit per recoverable pound	<u>\$ .77</u>
Cost per recoverable pound	<u>\$ 3.73</u>
Percent profit	<u>21</u>

Pit perimeter in feet	<u>1100</u>
Stripping cost per yard	<u>\$ .35</u>
Total volume of overburden	<u>224,000</u>
Total cost of stripping	<u>\$ 78,000.00</u>

Net value after mining and stripping \$48,000.00

EXTRACT - ABC Computer run on Anderson mine drilling data 11/19/70

OPEN PIT study considering uranium at 4.50 per pound.

A ratio of .05 to 1 was used to calculate the backslope of pit.  
Tonnage factor used --- 18.0 cubic feet per ton.

Costs used per ton -	Mining \$	<u>1.75</u>	<u>2.25</u>
	Milling	<u>3.00</u>	<u>2.80</u>
	indirect	<u>.60</u>	<u>.75</u>
	haulage	<u>.50</u>	
	royalty	<u>0</u>	
	advalorem	<u>.04</u>	

Cost per ton to mine ore	<u>5.89</u>	<u>\$6.34</u>
Average grade of ore	<u>.159</u>	Pit area in Sq. feet <u>283000</u>
Percent recovery	<u>.700</u>	Cost per ton to mine ore <u>6.34</u>
Tons of ore	<u>51900</u>	Total cost to mine ore <u>\$329,000.00</u>
Recoverable pounds U <sub>308</sub>	<u>116,000</u>	
Gross value of deposit	<u>\$ 522,000.00</u>	Net value before stripping <u>↓</u>
		<u>\$ 193,000.00</u>

Ratio of yards overburden to pounds U <sub>308</sub>	<u>3.6</u>
Ratio of tons overburden to pounds U <sub>308</sub>	<u>5.5</u>
Pounds U <sub>308</sub> per square foot of area	<u>.4</u>
Pounds U <sub>308</sub> discovered per hole drilled	<u>19.333</u>
Pounds U <sub>308</sub> per foot drilled	<u>447.0</u>

Total cost of mining and stripping	<u>\$ 477,000.00</u>
Profit per recoverable pound	<u>\$ .39</u>
Cost per recoverable pound	<u>\$ 4.11</u>
Percent profit	<u>9</u>

Pit perimeter in feet	<u>2550</u>
Stripping cost per yard	<u>\$ .354</u>
Total volume of overburden	<u>423,000</u>
Total cost of stripping	<u>\$ 148,000.00</u>

Net value after mining and stripping \$ 45,000.00

EXTRACT - ABC Computer run on Anderson mine drilling data 11/19/70

OPEN PIT study considering uranium at \$ 6.00 per pound.

A ratio of .05 to 1 was used to calculate the backslope of pit.

Tonnage factor used ---18.0 cubic feet per ton.

Costs used per ton -	Mining \$	<u>1.75</u>
	Milling	<u>3.00</u>
	Indirect	<u>.60</u>
	haulage	<u>.50</u>
	royalty	<u>0</u>
	advalorem	<u>.04</u>
	Cost per ton to mine ore	<u>\$5.89</u>

Average grade of ore	<u>13.2</u>	Pit area in Sq. feet	<u>232,000</u>
Percent recovery	<u>.700</u>	Cost per ton to mine ore	<u>5.89</u>
Tons of ore	<u>107,000</u>	Total cost to mine ore	<u>630,000.00</u>
Recoverable pounds U <sub>3</sub> O <sub>8</sub>	<u>197,000</u>		
Gross value of deposit	<u>\$1,182,000.00</u>	Net value before stripping	<u>\$552,000.00</u>

\$552,000.00

Ratio of yards overburden to pounds U <sub>3</sub> O <sub>8</sub>	<u>6.3</u>
Ratio of tons overburden to pounds U <sub>3</sub> O <sub>8</sub>	<u>9.5</u>
Pounds U <sub>3</sub> O <sub>8</sub> per square foot of area	<u>.8</u>
Pounds U <sub>3</sub> O <sub>8</sub> discovered per hole drilled	<u>15.154</u>
Pounds U <sub>3</sub> O <sub>8</sub> per foot drilled	<u>104.0</u>

Total cost of mining and stripping	<u>\$ 1,068,000.00</u>
Profit per recoverable pound	<u>\$ .58</u>
Cost per recoverable pound	<u>\$ 5.42</u>
Percent profit	<u>11</u>

Pit perimeter in feet	<u>3500</u>
Stripping cost per yard	<u>\$ .35</u>
Total volume of overburden	<u>1,250,000</u>
Total cost of stripping	<u>\$ 438,000.00</u>

Net value after mining and stripping \$ 114,000.00

EXTRACT - ABC Computer run on Anderson mine drilling data 11/19/70

OPEN PIT study considering uranium at \$ 6.00 per pound.

A ratio of .05 to 1 was used to calculate the backslope of pit.  
 Tonnage factor used ---18.0 cubic feet per ton.

Costs used per ton -

Mining \$	1.75
Milling	3.00
Indirect	.60
haulage	.50
royalty	0
advalorem	.04

Cost per ton to mine ore \$5.89

Average grade of ore .126

Percent recovery .700

Tons of ore 73,900

Recoverable pounds  $U_3O_8$  130,000

Gross value of deposit \$780,000.00

Pit area in Sq. feet 380,000

Cost per ton to mine ore 5.89

Total cost to mine ore 435,000.00

Net value before stripping \$345,000.00

\$345,000.00

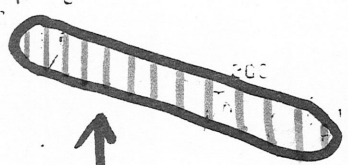
Ratio of yards overburden to pounds $U_3O_8$	<u>3.7</u>
Ratio of tons overburden to pounds $U_3O_8$	<u>3.6</u>
Pounds $U_3O_8$ per square foot of area	<u>.3</u>
Pounds $U_3O_8$ discovered per hole drilled	<u>14,444</u>
Pounds $U_3O_8$ per foot drilled	<u>381.8</u>

Total cost of mining and stripping	<u>\$ 605,000.</u>
Profit per recoverable pound	<u>\$ 1.35</u>
Cost per recoverable pound	<u>\$ 4.65</u>
Percent profit	<u>29</u>

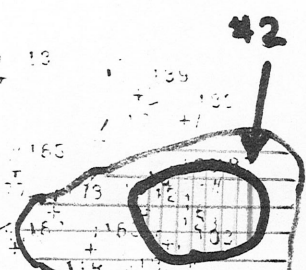
Pit perimeter in feet	<u>3050</u>
Stripping cost per yard	<u>\$ .35</u>
Total volume of overburden	<u>487,000</u>
Total cost of stripping	<u>\$ 170,000.00</u>

Net value after mining and stripping \$ 175,000.00

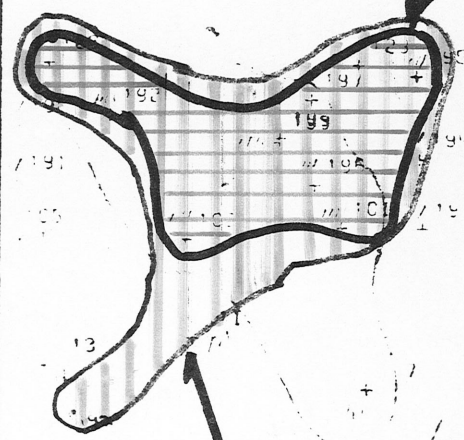
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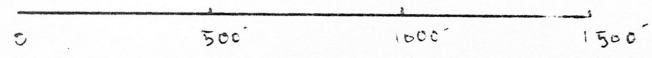
#1



#4



#5



1" = 500 ft.

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EXTRACT - ABC Computer run on Anderson mine drilling data 11/19/70

OPEN PIT study considering uranium at 7.50 per pound.

A ratio of .05 to 1 was used to calculate the backslope of pit.  
Tonnage factor used ---18.0 cubic feet per ton.

Costs used per ton - Mining \$ 1.75  
Milling 2.90  
indirect .60  
haulage .50  
royalty 0  
advalorem .04  
Cost per ton to mine ore \$5.79

Average grade of ore .100

Percent recovery .700

Tons of ore 763,100

Recoverable pounds  $U_3O_8$  1,068,000

Gross value of deposit \$ 3,010,000.

Pit area in Sq. feet 1,616,000

Cost per ton to mine ore 5.79

Total cost to mine ore 4,418,000.

Net value before stripping 4  
\$ 3,592,000.00

Ratio of yards overburden to pounds  $U_3O_8$  6.3  
Ratio of tons overburden to pounds  $U_3O_8$  9.7  
Pounds  $U_3O_8$  per square foot of area .7  
Pounds  $U_3O_8$  discovered per hole drilled 31,412  
Pounds  $U_3O_8$  per foot drilled 256.8

Total cost of mining and stripping \$ 6,833,000.00  
Profit per recoverable pound 1.10  
Cost per recoverable pound 6.40  
Percent profit 17

Pit perimeter in feet 6350  
Stripping cost per yard \$ 35.4  
Total volume of overburden 6,900,000  
Total cost of stripping \$ 2,415,000.00

Net value after mining and stripping \$ 1,177,000.00

EXTRACT - AEC Computer run on Anderson mine drilling data 11/19/70

OPEN PIT study considering uranium at 11.25 per pound.

A ratio of .05 to 1 was used to calculate the backslope of pit.  
 Tonnage factor used ---18.0 cubic feet per ton.

Costs used per ton -

Mining \$	1.75
Milling	3.00
indirect	.60
haulage	.50
Royalty	0
advalorem	.04

Cost per ton to mine ore 5.89

Average grade of ore .075

Percent recovery 150

Tons of ore 937,300

Recoverable pounds  $U_3O_8$  914,000

Gross value of deposit 10,283,000.

Pit area in Sq. feet 1654000

Cost per ton to mine ore 589

Total cost to mine ore 5,521,000.

Net value before stripping 4,762,000.00

Ratio of yards overburden to pounds $U_3O_8$	<u>8.2</u>
Ratio of tons overburden to pounds $U_3O_8$	<u>12.3</u>
Pounds $U_3O_8$ per square foot of area	<u>16.6</u>
Pounds $U_3O_8$ discovered per hole drilled	<u>16926</u>
Pounds $U_3O_8$ per foot drilled	<u>129.3</u>

Total cost of mining and stripping	<u>\$8,141,000.</u>
Profit per recoverable pound	<u>2.34</u>
Cost per recoverable pound	<u>8.91</u>
Percent profit	<u>26</u>

Pit perimeter in feet	<u>6350</u>
Stripping cost per yard	<u>135.4</u>
Total volume of overburden	<u>7,483,000.</u>
Total cost of stripping	<u>2,620,000.</u>

Net value after mining and stripping \$2,620,000.00

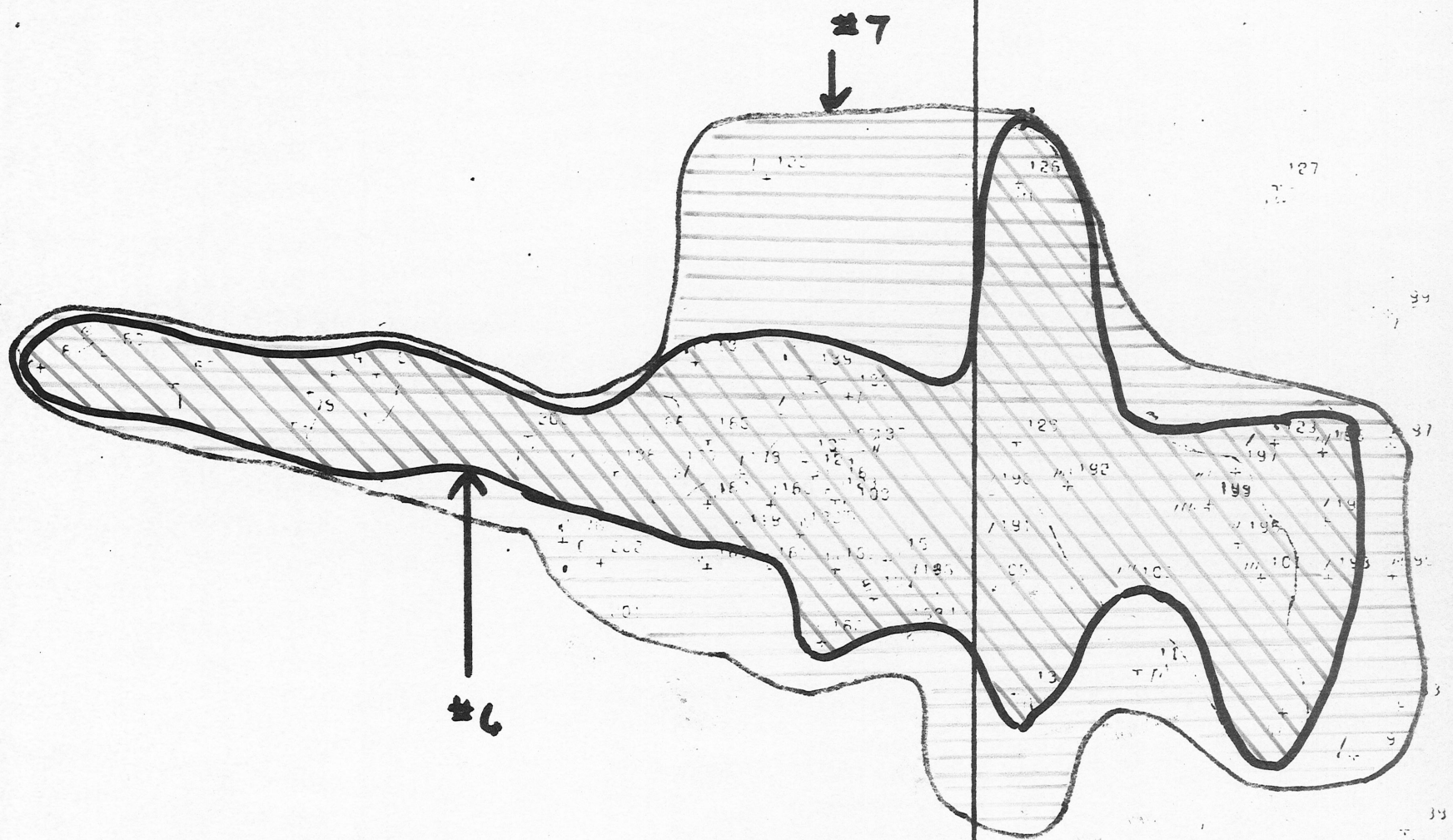
EXHIBIT H

\*10<sup>1</sup>  
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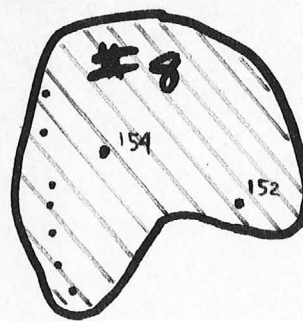
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FLAT TOP

Gather D.H.s

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ANDERSON MINE, ARIZ. | IN = 500 FEET

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## I N D E X

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## I INTRODUCTION

The Anderson Uranium Mine is located about 35 miles west of Congress, Arizona, near the Santa Maria River in Yavapai County (See Exhibit A). It is an open pit operation in an ancient lake bed formation (sedimentary). Although the property is surrounded by numerous mining claims (Kleck-Sharp and Osbourne group of claims), the Anderson Mine proper consists of the Moonbeam, Cosmo, and JacSar groups (See Exhibit B) presently owned by Daniel C. Jacobs, Melvin H. Jones, Lee Hammons, William Sargent and Charles E. Johnson. There are 31 Moonbeam, 13 Cosmo, and 26 JacSar claims, totaling 70.

These claims were located in 1964 by the present owners, with some additions from time to time since then. The Anderson Mine was originally the "Uranium Air" claims located by Anderson and Moore in the 1950s and a little ore was shipped by these individuals in 1955 and by Interstate Oil and Development Company from the open pit operation during 1957 and 1958. However, the claims were abandoned by the original locators and re-located by the present owners as outlined above. It appears that with the discovery of richer uranium deposits in the Grants, N. M. area and the Uravan belt, coupled with the necessity of shipping the unmilled ore to distant uranium plants, and the lower uranium prices in those days, caused the original owners and operators to give up the claims.

A visit to the Anderson Mine will reveal two areas where Carnotite ore is exposed on the surface. These are the main pit area (Moonbeam) and the Flat Top region (Cosmo). There are many stock-piles of ore that have been assayed to run between .11% and .26%  $U_3O_8$ . (See Exhibit C-1).

Getting back to the history of the mining property again, it is pointed out that the present owners of the mentioned claims entered into a lease agreement, with option to buy, with Getty Oil Company at the start of 1968. The Getty people (who were then new in the uranium business) spent in excess of \$100,000.00 in a drilling program and returned the property to the owners after a year with a remark indicating that ore bodies had been found, but the property was too small for the size of operation that Getty wanted to engage in. It is of course common knowledge that the Getty people moved to some more lucrative uranium fields in Wyoming where their operations are now extensive. The Getty drilling results are covered in detail later on in this report.

The main reason for this report is to consolidate information from a variety of piecemeal sources, as well as to reflect the study and research accomplished by the writer, in a period extending into more than a year. It is hoped the information will be easily comprehensive as a preliminary evaluation report for the owners, and others who may be interested. Acknowledgment is hereby made of assistance by Mr. Lee Hammons and Mr. Carl Homme, geologists, in portions of the report. The summary, conclusions and recommendations are exclusively mine.

Involved in making this report are many visits to the mine area, often in company with other Mining Engineers and Geologists who frequently had differing views and observations, examination and sampling of the lithographic facies and outcrops, search of the area for missing drill holes and the mapping of the same (some past drilling was poorly recorded and mapped), correlation of older data and studies, trips to Grand Junction, Colorado (and elsewhere), for research into old records and for the compilation of ore reserve quality and quantity data, consultations with metallurgists and processing experts, etc.

## II SUMMARY AND CONCLUSIONS

The Anderson Mine (uranium) was first discovered by Mr. T. R. Anderson in January 1955 with an airborne scintillation counter. Mr. Anderson and his associates located what was known as Uranium-Air claims and made some small shipments of ore to the Cutter buying station. Successor to Anderson was the Interstate Oil and Development Company, and they made some small ore shipments to the Cutter and Grants buying stations. IOD stockpiled 13,670 tons of ore and accomplished a small drilling program coming up with 225,209 tons of ore reserves averaging .22%  $U_3O_8$  according to their computations.

With the advent of the discovery of richer ores in the Uravan belt and Grants, N. M. the mentioned owners and operators abandoned the claims. They were then re-located by the present owners in 1964, with additional claims added from time to time since then. The claims comprising the Anderson Mine are now known as the Moonbeam, Cosmo, and JacSar groups, and the boundaries of the original Uranium-Air claims have been extended somewhat.

In 1968 Getty Oil Company took a lease, with option to buy, on the Anderson Mine properties and instituted a drilling program. It was Getty's first uranium venture, and the drilling was poorly and inadequately accomplished (in the opinion of the writer). The results were inconclusive. At about the same time, Getty entered into the apparently more lucrative uranium fields of Wyoming, where they are now in the uranium mining business. After a year Getty gave up the Anderson Mine claims with remarks indicating that it was not rich enough, nor large enough for a Getty operation.

The Anderson Mine property consists of 70 unpatented mining claims. It is in Tertiary lake sediments. The ore is Carnotite in a limy Mudstone that will average .18%  $U_3O_8$  in an estimated tonnage of 207,809. Water for ore processing can be obtained from the Santa Maria River, and there is a railhead at Congress, Arizona 35 miles from the mine.

The major reason that the mine has not been operated in recent years is that it is too far from an ore processing plant, and transportation costs would preclude the making of a suitable profit from the ore. The nearest mill is at Grants, N. M. (500 miles).

The AEC at Grand Junction is currently re-computing the ore reserves at the Anderson Mine, using the data from the Getty drilling program.

If, and when, the price of uranium goes up, the mine can be operated profitably. It is a valuable property and should be retained by the present owners, or their successors. Should a mill be established within a close proximity, the mine can be operated.

Ways and means of up-grading or concentrating the Anderson Mine ores at the mine should be examined into. A reliable firm of consultants in this field should be contacted. This may pave the way for early operation of the property.

A large company should consider the possibilities of uranium ore known to be at Blythe, California, also at Payson, Globe and Tonto-Roosevelt District, Arizona, as well as the Anderson Mine with a view to building a centrally located ore processing plant.

### III RECOMMENDATIONS

Unpatented mining claims known as the Moonbeam, Cosmo, and JacSar groups (ANDERSON MINE) are valuable properties and should be retained by the owners. The uranium (and vanadium) markets will show increasing demand for these metallics in the future. The drilling programs reveal that mineable ore bodies are present.

The feasibility of up-grading or concentrating the ore at the mine site should be examined into. The following person and firm are experts in this field, and one or the other should be contacted and retained to make laboratory tests and ascertain the best upgrading method that is amenable to the Anderson Mine Carnotite ores:

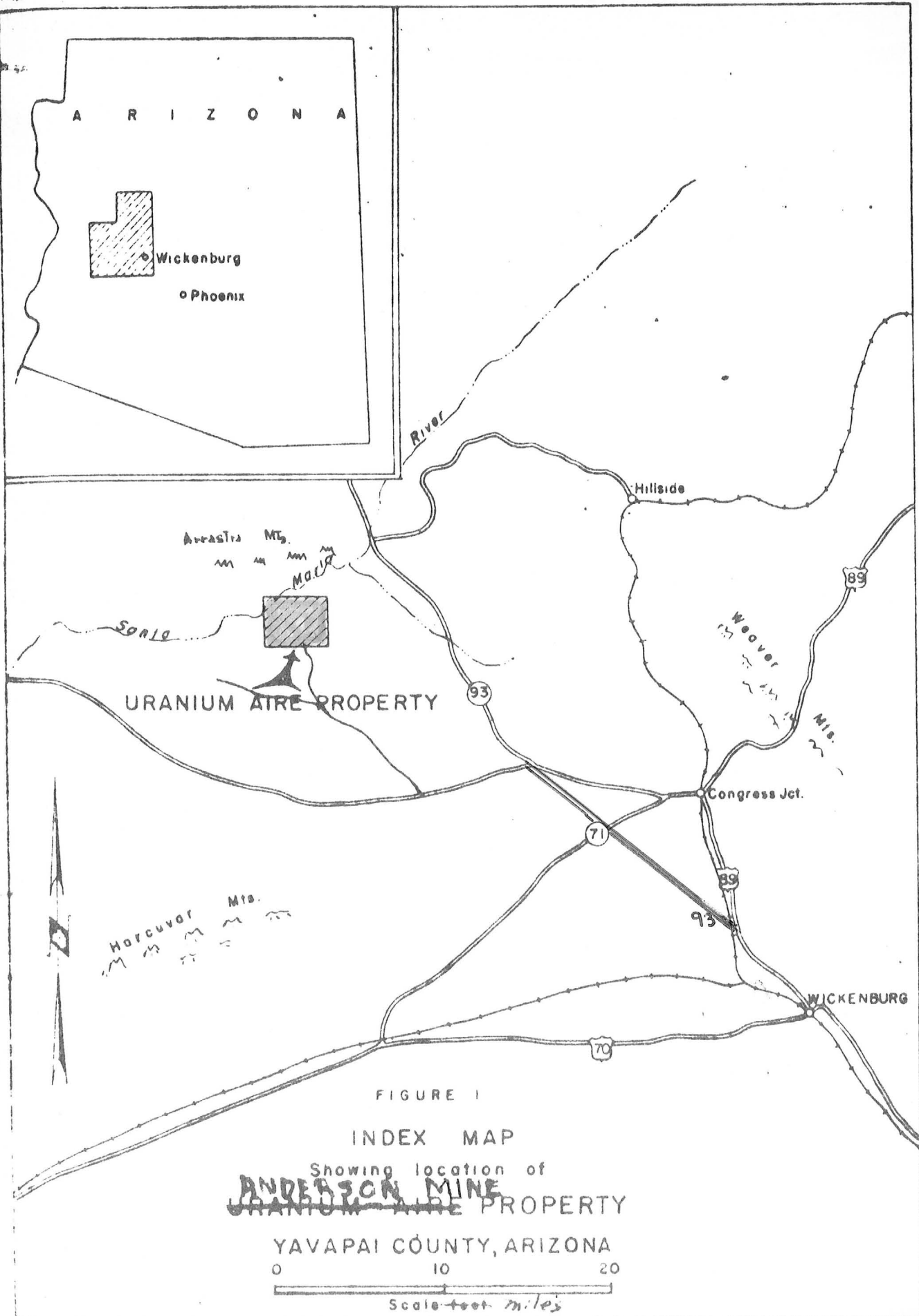
Robert Porter  
304 First Security Building  
Salt Lake City, Utah

— or —

Hazen Research  
4601 Indiana Street  
Golden, Colorado

If an economical mine concentrating process is found and suitable facilities are constructed in the mine area, the mine can be operated at a profit at present uranium prices. Should some large company erect a uranium processing plant in Arizona, it is quite probable that the raw ore can be shipped there and show a profit. The future should bring such a plant to the vicinity.

While some ore bodies have been blocked out as a result of past drilling programs, some areas that were "skipped" should be explored by future drilling (See Exhibit N).



3 | 2 T.N.M.  
10 | 11  
RHOW

JACSAR

The diagram shows a 3D coordinate system with three axes: COSMO, RION, and JACSAR. Each axis is represented by a grid of numbers. The COSMO axis has a 5x3 grid with values 16, 15, 9, 8, 7 in the first column and 12, 11, 1, 2, 3 in the second column. The RION axis has a 5x3 grid with values 5, 4, 3, 2, 1 in the first column, 10, 9, 8, 7, 6 in the second column, and 23, 14, 13, 12, 11 in the third column. The JACSAR axis has a 5x3 grid with values 28, 27, 26, 22, 21 in the first column, 30, 31, 8, 9, 10 in the second column, and 7, 6, 5, 4, 3 in the third column. The grid for JACSAR is tilted relative to the others.

**General Summary of Anderson File.**

Aug 31 1970



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