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PRELIMINARY GEOLOGICAL EVALUATION REPORT

ANDERSON MINE (Uranium)

YAVAPAI COUNTY

ARIZONA

by

Melvin H Jones

I N D E X

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).

IV GEOGRAPHY

The Anderson Mine is located in T-11-N, R-10-W, Gila and Salt River Meridian, and is in the southwest corner of Yavapai County (County seat is Prescott, Arizona). It is in what is known as the Sonoran Desert that extends down into Mexico, and is just south of the Transition Zone in the Mountain region of the Basin and Range Physiographic Province.

It is west of U. S. Highway 93, and is south of the Santa Maria River. In fact, the northwest corner of the Cosmo claims is on this river. It is 35 miles west of Congress, Arizona. Congress, Arizona is on the Santa Fe Railroad, and this place could be used for shipping ore or concentrates, if desired. Access to the mine is by a county unimproved road that is usually in good condition, and that leaves paved U. S. Highway 93 and ultimately goes to the Palmerita Ranch.

The climate is typical desert, meaning that rainfall is under 10 inches a year. There are only infrequent rains, but they sometimes reach cloud burst intensities for a short period of time. Winters are pleasant and summers are extremely hot. Vegetation is scarce and small with typical desert cacti and brush (Saguaro, Octillo, Cholla, Mesquite).

To the north and east of the mine are volcanic mountains (Arrastra Mtns.) that rise several hundred feet above the alluvial basins. To the south are the typical desert flat lands. The mine is in a depression that has been cut by intermittent streams, which drain into the Santa Maria River. The elevation there ranges from about 2,500 feet down to 1,700 feet above sea level.

Water is scarce and the only close water source would be the Santa Maria River, where it is understood there is an under-surface flow, even when the surface is dry. Wells could be placed adjoining the river to tap this flow. A few miles to the west is the Almo Dam, understood to be a flood control project under the Corps of Engineers and this is being built up as a recreation area. The following table is taken from a Water Resources study /[1]:

SANTA MARIA RIVER NEAR ALMO

10 year period:	Momentary Max. cfs:	Minimum cfs:	Mean cfs:
	33,600	.3	28.9

V STRATIGRAPHY AND PETROGRAPHY (and Mineralology)

Apparently, no one has accomplished a comprehensive stratigraphic study of the formations in the immediate area of the mine. Thusly, the formations are not named (nor age dated) to any significant extent. No correlation has been made of the formations there with other known formations in Arizona. However, farther to the west

during a Manganese boom during the 1940s, a limited geologic study of the Artillery Mountains was made /[2]. They came up with the Martin and Redwall limestones in the vicinity of Almo, and the Chapin Wash formation of the Gila Conglomerates (early Pliocene). The ore bearing Mudstones of the Anderson Mine are probably of similar age to the Chapin Wash formation (others date the Ms as Miocene, however). The bulk of the mountains in the mine vicinity are Tertiary Andesites, and QT Basalts /[3].

The State of Arizona Bureau of Mines publishes Geologic Maps by counties of Arizona, and they are available for a small fee. But, they are rather vague on formations and can be used as a very general guide only. Anyone wishing to research further into the Stratigraphy should examine Eldred Wilson's Geology of Arizona /[4].

Ore values at the Anderson mine are in the mineral Carnotite of which the standard formula is $K_2(UO_2)_2V_2O_5 \cdot 2H_2O$, thusly it is a Potassium Uranium Vanadate /[5]. Normal carnotite contains 10% K_2O, 63% UO_3, 20% V_2O_8 and 6% water. Chrystal system is monoclinic-prismatic and the mineral can be considered as a uranium mica. This uranium ore is the result of secondary mineralization, and at the Anderson Mine it is in a matrix of Grey to Greenish Mudstone. At some lower levels, the Carnotite is in a black carbonaceous matrix, probably organic material akin to Lignite. Other carnotite in the upper bedding is in a quartoze rock (opal and/or agate) resulting from subsequent supergene silicious waters. Small amounts of Tyuyaminite, with a greenish luster, has also been observed by the writer. This is the uranium vanadates with a calcium fraction.

The uranium present is believed to be approximately in equalibrium with its daughter products. Most geologists who have spent some time on the property agree with this. Thusly a good scintillation meter can be used for ore evaluation. Generally, the radio-activity meters are found to give slightly lower value readings than chemical tests reveal, on the Anderson ores. The Uranium to Vanadium values are about 1 to 1. (See Exhibit C-1).

As the ore values are basically carried in Mudstone formations, it is believed well to go into a discussion of this rock. Mudstone is understood to be a sedimentary rock of combinations of clay, silt and sand (size, grade and composition have a bearing), and it is without laminations or fissility /[6]. It is considered to be a transported and indurated mud which slakes upon wetting. This mudstone grades to marl in places at the Anderson Mine. I have gone into a discussion on this, for the reason that some experienced geologists disagree on the "eyeballed" material.

Obviously this mudstone and its uranium-vanadium contents will be a matter of serious consideration relative to processing and milling this ore, and the costs thereof. The writer has made a study of this mudstone and has arrived at some findings:

a The mudstone is composed of mostly fine detrital rocks with a portion of Bentonitic clays (volcanic ash) deposited by fluvial action from an allogenic source.

b The paragenesis of the uranium in the mudstone is that it arrived supergenetically after the formation of the mudstone, entering into the same through seams, cracks, and fractures, and it became enplaced where it had an ionic affinity for the detrital material already there. The source of the uranium was elevated igneous and granitic formations that have weathered away in the distant past, and the uranium was water borne to its present situ. It is noted that the granitic rocks in Arizona have a high uranium content.

c A sample of the mudstone from the main pit area gives the following results from sizing with Tyler sieves: (See Exhibit D)

18.47%	250 Mesh	Silt (includes clay -400 Mesh)
42.60%	115+ Mesh	Very fine sand
28.88%	60+ Mesh	Fine sand
9.50%	32+ Mesh	Medium sand
.55%	16+ Mesh	Sand (or larger particles)

d The mudstone is calcareous (contains Calcium Carbonate). Tests show that the bulk of the mudstone is about 2% $CaCO_3$, but some goes as high as 10% (See Exhibit C-3-4). However, as I have mentioned earlier, all of the ore values are not mudstone; neither the opalized nor carbonaceous beds are calcareous.

Note: I would like to go into some definitions here. Some writers of past papers on the Anderson Mine have used the word "carbonaceous" when I'm sure they meant "calcareous", and this has resulted in some confusion. A dictionary of Geological terms /7 defines "Carbonaceous" as (1) Coaly (2) Pertaining to and largely composed of carbon. "Calcareous" is defined as (1) containing calcium carbonate.

VI GEOLOGIC STRUCTURE

The Anderson Mine is in ancient lake bed sediments estimated to be 5 miles wide and 40 miles long. The mudstone beds dip about 15 degrees to the south. There are two major faults in the main pit area that trend about north 45 degrees west /1. Smaller linking faults trend between north 20 degrees west and west.

The general geologic column is as follows /1:

Quaternary	-	Alluvium
Angular unconformity		
Upper Pliocene	-	Capping conglomerate group.
Lower Pliocene	-	Upper conglomerate.
(Included lake sediments and lava flows) (also erosional unconformities)	-	Mudstone (calcareous). (includes uranium, mollusks, agate, petrified wood).
Lower Pliocene	-	Interbedded Andesite flow. Lower conglomerate.

Angular unconformity

Miocene	-	Vitrophyric Andesite flows. Tuffs and Basalt flows.

Angular unconformity

Pre-cambrian	-	Basement complex. Biotite granite, schist, Meta quartzites, Basalt, and Pegmatic dykes.

The Uranium-Vanadium ore is in beds of varying thickness, lengths, and concentration in the Mudstone unit. It is in a series of lens, parallel to each other, and possibly overlapping (See Exhibit E-1-2). In the main pit area the lake bed sediments have been warped into a series of minor folds. There is also minor faulting.

An example of the bedding might be Getty drill hole No. 165 (See Exhibit G-2). There is ore at the surface that does not show on the gamma reading drill log; then at 43 to 45 feet there is a 2-foot bed of .12% U_3O_8; then at 121 to 122.5 feet there is a 1.5 footbed of .20% ore; then from 124 to 125 feet there is .04% ore; then from 128 to 129 there is .05% ore; then from 135 to 136.5 feet there is .13% ore; then again from 206 to 208 feet there is 10% U_3O_8. This totals up to 9 feet of ore averaging .11% U_3O_8. The richest drill hole bed (No. 203) shows .91% U_3O_8 at the 161 foot level.

From the drilling program accomplished on the Anderson Mine by Getty Oil Company (See Exhibit G), and the previous drilling during the 1950s by Interstate Oil and Development Company and John Gaither (See Exhibit H), several areas of uraniferous ore have been blocked out (See Exhibit B-2). Irrespective of the mentioned drilling in the past, in the opinion of the writer, much of the Anderson Mine and adjoining claims, remains unexplored as far as sub-surface examinations are involved. A large potential remains.

VII GEOLOGIC HISTORY

This subject is well covered in the AEC RME 2057 /1, and for the purposes of this study, it is not particularly pertinent. Suffice it to say that the ore values (Uranium and Vanadium) are in late Cenozoic formations. Age dating has resulted from Palentology studies of both vertibrate and invertibrate fossils found in the lucustrine beds /1. It might be of interest that a jaw bone of a miocene Diceratherum (rhinoceros) has been found in the Mudstone, and the writer has found bones of a protohippus and Camelops. The mine area is not a lucrative fossil field, as the fossils are not profuse by any means. I found three fossil bones in a period of 5 years.

The concept that the Anderson mine is an ancient lake bed needs some elucidation. Most people think this is a rare incidence

here in this desert state. Actually Wickenburg is an ancient lake bed, as is Kingman, Arizona, and a great many other places. The lucustrine Mudstones are found in Wickieup and on towards Bagdad. (It is not believed that these areas have been explored for uranium to any extent.) The classification of the Anderson Mine as a lake bed deposit, puts it in the same category as many deposits in California and elsewhere in the West.

VIII ECONOMIC CONSIDERATIONS

As has been covered elsewhere in this report, there have been two drilling programs and one minor one on the Anderson Mine property. The Getty Oil Company drilling program of 1968 gamma ray logs are in the possession of the writer and have been studied thoroughly by several geologists (including the writer) and computations have been made converting the factors on these logs to U_3O_8 values (See Exhibit G). This in itself involved a great deal of time consuming work. At this point I would like to make it very clear that the Getty Oil people gave us none of their interpretative data. When we started to correlate the logs with the drill hole map given us by Getty, we found that we had logs for which there were no drill holes on the map, and there were some drill holes shown on the map for which we had no logs. When we quiried Getty about this, we received no satisfactory answer (See Exhibit I). Also on some logs, drill hole collar elevations were missing, and this is of course very important in making up an ore Isopach map or a structural profile. This situation was corrected to a large degree by making a field examination of drill holes (and elevations) and making up a new map in correlation with the Getty Map. Fortunately, many of the drill holes had stakes near them giving numbers. This situation is mentioned to indicate our problem in computing ore reserves. The Getty drilling map is Exhibit O. It is important to mention here that copies of the Getty logs, Getty maps, and our own data concerning same have been sent to the AEC at Grand Junction, Colorado, and they have indicated that they will run this information through their computers and will have the indicated ore reserves finished sometime in September 1970. At that time the owners of the Anderson Mine will go to Grand Junction and compare ore reserve data. For the information of those not familiar with AEC procedure, the AEC will not give ore reserve data to anyone, except the owners, as this is considered as confidential and privy information.

Relative to the Interstate Oil and Development Company's drilling program during 1956-58, we do not have complete information on this. The present location of the original logs, maps, and interpretative data is unknown to the present Anderson Mine owners. The former owners and operators have departed from Arizona some years ago, according to what little information we have been able to glean from some of their former associates. However, the writer, as a representative of the present mine owners, was permitted to examine the records that are on file at the AEC at Grand Junction.

While not permitted to copy the records, I made notes and remembered enough of the data to make a memorandum covering some of the high points (See Exhibit H). From information stated on the old "Uranium Air" mining claims on file with the County Recorder, Yavapai County, Arizona, I was able to make up a map showing the old claim locations (See Exhibit B-3).

The John Gaiter drilling activity consists of 8 drill holes on the west side of Flat Top, that is now part of the Cosmo group of claims. The writer has no information concerning the results of this drilling, although further perusal of the AEC records may reveal something. However, there is an outcrop of uraniferous ore at this location.

To sum up the mentioned drilling programs, and in particular the Getty one, a lot of money has been spent in the past to garner a small amount of inconclusive information, and the programs failed to encompass promising areas that were left untouched.

For the present (and until we learn of the AEC computations), the undersigned agrees with an earlier Interstate Oil and Development Company estimate of ore reserve bodies (with some modifications) as a conservative figure (See Exhibit H):

Main pit area	-	Pit #1	-	57,457 tons	containing	.20% U_3O_8
Main pit area	-	Pit #2	-	70,832 "	"	.17% "
West Main pit	-	Pit #2 West	-	21,720 "	"	.20% "
Further W. pit	-	Pit #7 West	-	2,000 "	"	.20% "
Flat Top	-	Cosmo	-	42,200 "	"	.19% "
Stockpiles	-		-	13,600 "	"	.11%*"
		Totals		207,809 Tons		.18% U_3O_8

*Two of the larger stockpiles were assayed at .26% and 11% respectively by Getty (See Exhibit C-1).

Excluding the cost of mining and processing, the uraniferous ore would in theory produce 748,112 lbs. of U_3O_8 valued at $5,984,896.00 (figured at the often quoted $8.00 per pound). If vanadium is also recovered on a one-to-one basis, then an additional $1,496,224.00 would be received (figuring Vanadium pentoxide at $2.00 per pound - EM/J Aug. 1970).

In going into the basic economics of producing uranium at a profit at the Anderson Mine, brings to light many factors that have to be seriously considered. To start off the consideration of the problems involved, it should be understood that .10% ore is the cut-off point for many mines, and ores below this figure are uneconomical to mine at present uranium prices. Then, transportation becomes a factor, especially if raw ore is to be shipped long distances. The nearest uranium mills to the Anderson Mine are at Grants, N. M. a distance of slightly over 500 miles, and the best offer we received to transport the ore to that point was $5.00 per ton. The matter of mining and loading the ore is, of course, most important. Considering that this report is a preliminary

evaluation of the Anderson Mine (and not a feasibility or viability study), I am primarily outlining discovery work that has been accomplished and values ascertained both below and above the ground. Thusly, I do not want to get involved in metallurgical problems, mining engineering costs and marketing data (at this stage), and only some generalities can be given.

For open pit mining at the Anderson Mine, an initial purchase of new heavy equipment could be costly. Involved would be stripping the overburden down to orebedding and a cost of $.35 per cubic yard could be used, at the present time, for these computations. Due to the inflationary trends these days, the costs could go upwards. Haulage costs of approximately $.05 per ton mile from mine stockpiles to the mill are involved /8. At this point it should be stated that one (1) cubic yard of natural ore material at the Anderson Mine will weigh one and one-half (1-1/2) short tons. It will cost about $2.75 per ton to mine the ore. These mining costs include labor, supplies, maintenance, supervision, insurance, taxes, and administrative charges at the mine /8.

As some readers may not know, uranium buyers at the processing plants usually make a contract with a producing mine, and this outlines the prices that will be paid for given grades of ore. This may vary from mine to mine. Several months ago, I had the opportunity to look at such a contract made at the Moab, Utah mill. The price paid for delivery of ore at the mill was as follows:

Percentage of U_3O_8	Price paid per Ton
.10%	$ 4.39
.15%	9.98
.20%	15.79
.30%	26.48
.40%	36.78
.50%	46.05

For uranium ore values in between the percentages given, the price varied arithmatically from the indicated prices. After .50% U_3O_8 is reached, then for each additional .01% $1.00 is paid per ton on ad infinitum (plus the $46.05). Moab does not pay for the Vanadium content. However, at the Vanadium Corporation mills they pay about $.40 per pound for V_2O_5 content, in addition to the monies paid for uranium. It should be understood by all that uranium prices can fluctuate, and at the present time, the uranium market is in a slump.

From the factors above given, the writer is not going the arithmatically compute the feasibility of mining and shipping the Anderson Mine ore at the present time. However, anyone can make a rough estimate. Suffice it to say that the transportation factor in shipping raw ore, alone, will not permit an adequate profit to be made. If a mill is close to the mine, a good profit could be made. Also the new ore reserve data should be on hand to ascertain the economics involved.

But the future of uranium mining appears to be bright. It has been predicted that the uranium prices will double or triple. It seems that some of the contemplated nuclear fuel plants were not constructed, as soon as anticipated by some authorities, and as a result the demand for uranium did not rapidly increase. But it is generally conceded that fossil fuels are on the way out and nuclear fuels will replace them, largely due to air pollution.

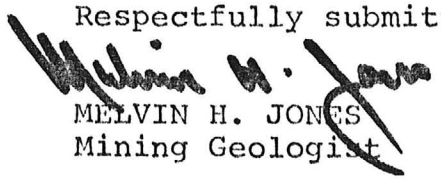
Most of the information outlined in this report so far has been relative to direct shipping ore from the Anderson Mine. Now let us consider the possibilities of upgrading, beneficiation or concentrating the ore at the mine site. First off, let me say that this is in the fields of Chemical Engineering and Metallurgy (ore dressing) and this is beyond the expertese of the average mining geologist. The shipping of concentrates from the mine should greatly enhance profits. The writer has no information on the cost of building a suitable plant and the expense of processing the ore in such an operation.

However, uranium ore can be concentrated by leaching in situ (when rock stratigraphy is suitable), heap leaching, bulk precipation, solvent processing and/or ion exchange. When the ore is not too limy, sulfuric acid can be used to place the uranium in solution, and it is then precipitated by adding ammonia, MgO, or other bases, and the concentrates can then be shipped to a processing plant "as is", for example. In the case of the Anderson ore with a high calcium carbonate content (See Exhibit C-3-4), it may prove too expensive to use sulfuric acid. In this case, it may be preferable to use the alkaline carbonate solutions for leaching. It is to be pointed out that ore having a 2% $CaCO_3$ content will require 60 lbs. of acid to neutralize a ton of ore, plus additional acid to a ph 1.0 or 1.5 to place the uranium in solution. Sulfuric acid can be purchased in large bulk amounts at from 1 to 2 cents a pound. I have outlined this information to give the reader some idea of what is involved in up-grading uranium ore. Needless to say, the Anderson Mine owners, or other interested individuals, should have the ore tested by a competent research laboratory to determine an inexpensive and feasible way of up-grading the same. Also the cost of building and operating a proper processing plant should be ascertained.

Certain other information concerning the Anderson Mine is in the attached Exhibits and is pertinent to the overall "picture". One of these is a structural profile map of one section of the pit area, that was made from Getty log data, by the writer (See Exhibit E-1-2).

It is the intention of the undersigned to make a supplement to this report as soon as AEC computations are completed and a study is made of the results.

Respectfully submitted,



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August 31, 1970
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E X H I B I T S

A	Map showing location of Anderson Mine property.
B-1	Map showing Cosmo, moonbeam and JacSar Claims(Anderson Mine).
2	Map with Approximate locations of present known ore bodies.
3	Map of the former Uranium-Aire claims.
C-1	Getty oil Company chemical assays of U_3O_8 and V_2O_5.
2	Atlas Minerals, Ore lot assay Certificate- Jan.,5,1967.
3	Atlas Minerals, Ore sample work sheet, Oct.,11,1966.
4	Atlas Minerals, Ore sample work sheet, Sept.,30, 1966.
5	Assay Certificate, Iron King Assay Office, Sept.,15,1970
D	Laboratory Analysis, Dr. Mont M. Warner, ASU, Jan.,31,1967.
D-1	Laboratory Test, ASU, Oct.,27, 1966.
E-1	Structural Profile, Line A-B, Main Pit area.
2	Structural Profile, Line C-D, Main Pit area.
3	Map of Drill holes, Lines A-B,C-D, Main Pit area.
F-1	Estimates of U_3O_8 mineralization in drill holes line A-B.
2	Estimates of U_3O_8 mineralization in drill holes line C-D.
G-1	Tabulated data showing calculated U_3O_8 in probed drill holes #1.
2	Tabulated data showing calculated U_3O_8 in probed drill holes #2.
H	Memorandum for the Record - Jones - Mar.,17, 1970.
I	Letter, Getty Oil Company, Feb.,24, 1969.
J	Extract, Engineer's report, Bur. of Mineral Res.,Ariz.9/25/58.
K	Drill Log information, Osbourne claims, July 5, 1967.
L	Geological Survey, Moonbeam claims, July 5, 1967(Lee Hammons).
M	Letter, AEC, Grand Junction, Colo., April 7, 1970.
N	Letter, AEC, Grand Junction, Colo.,June 26, 1970.
O	Map, Getty Oil Company drilling program (1968), Drill holes.
P	Photographs - Anderson Mine.

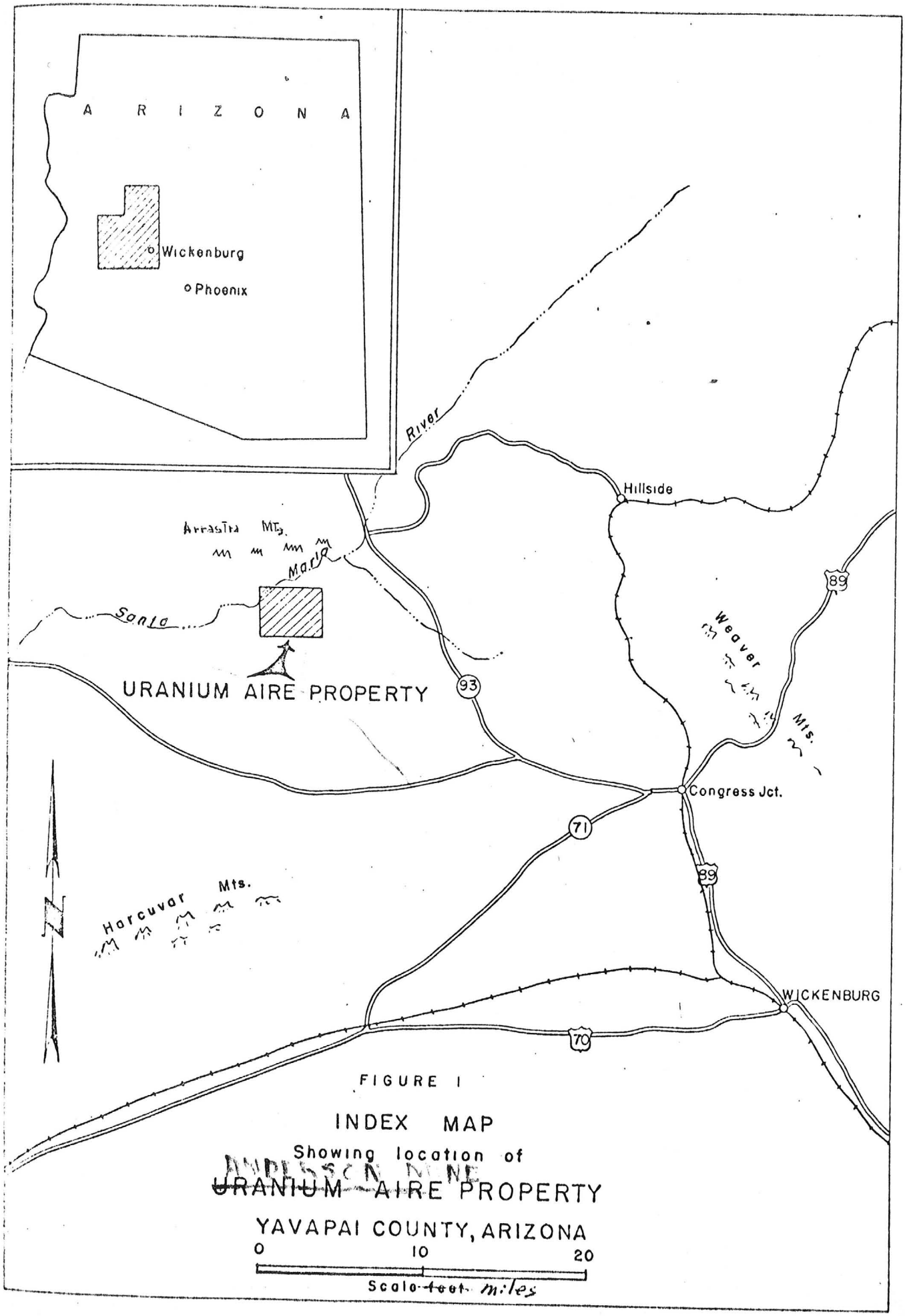


FIGURE 1

INDEX MAP

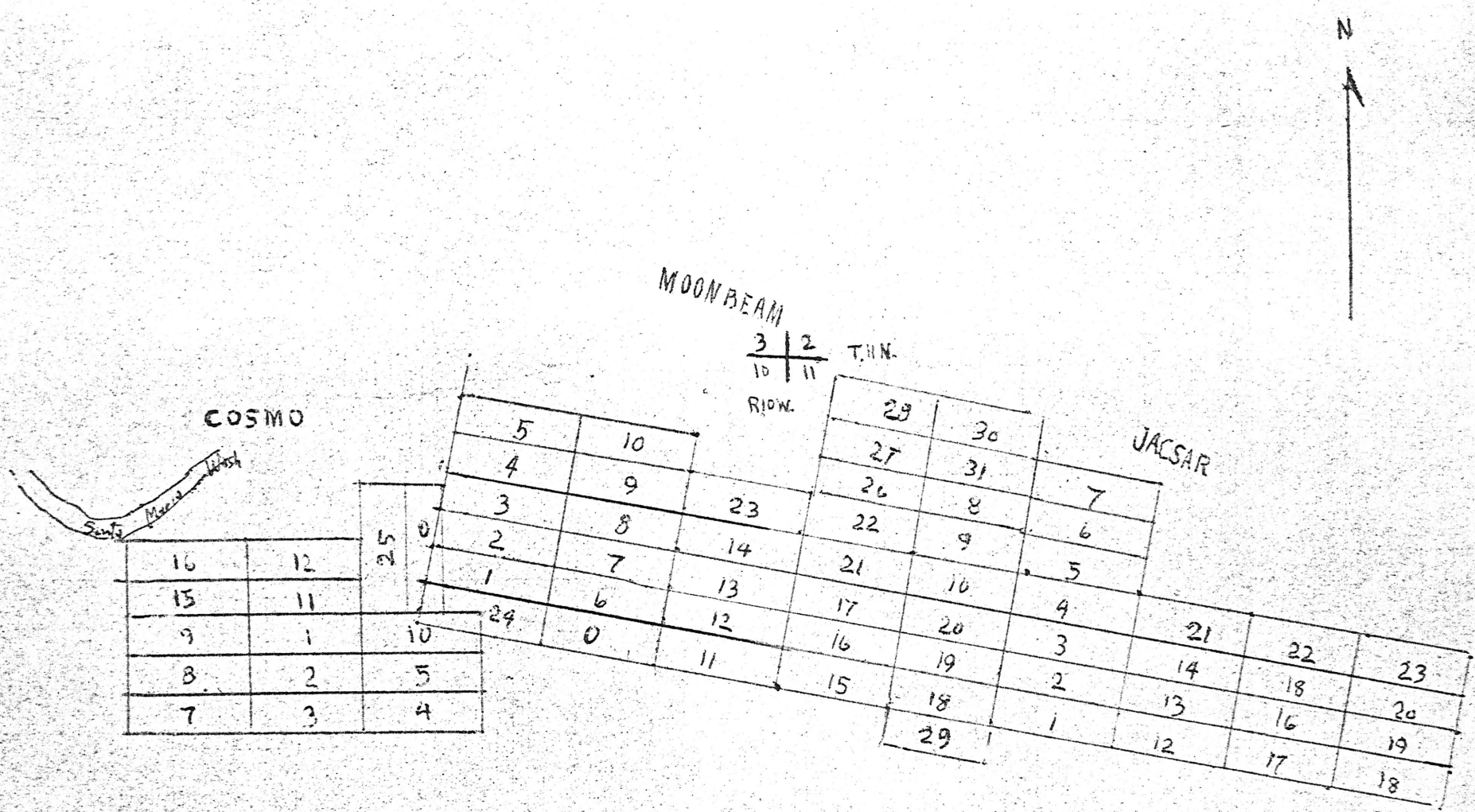
Showing location of

~~URANIUM AIRE PROPERTY~~

YAVAPAI COUNTY, ARIZONA

0 10 20

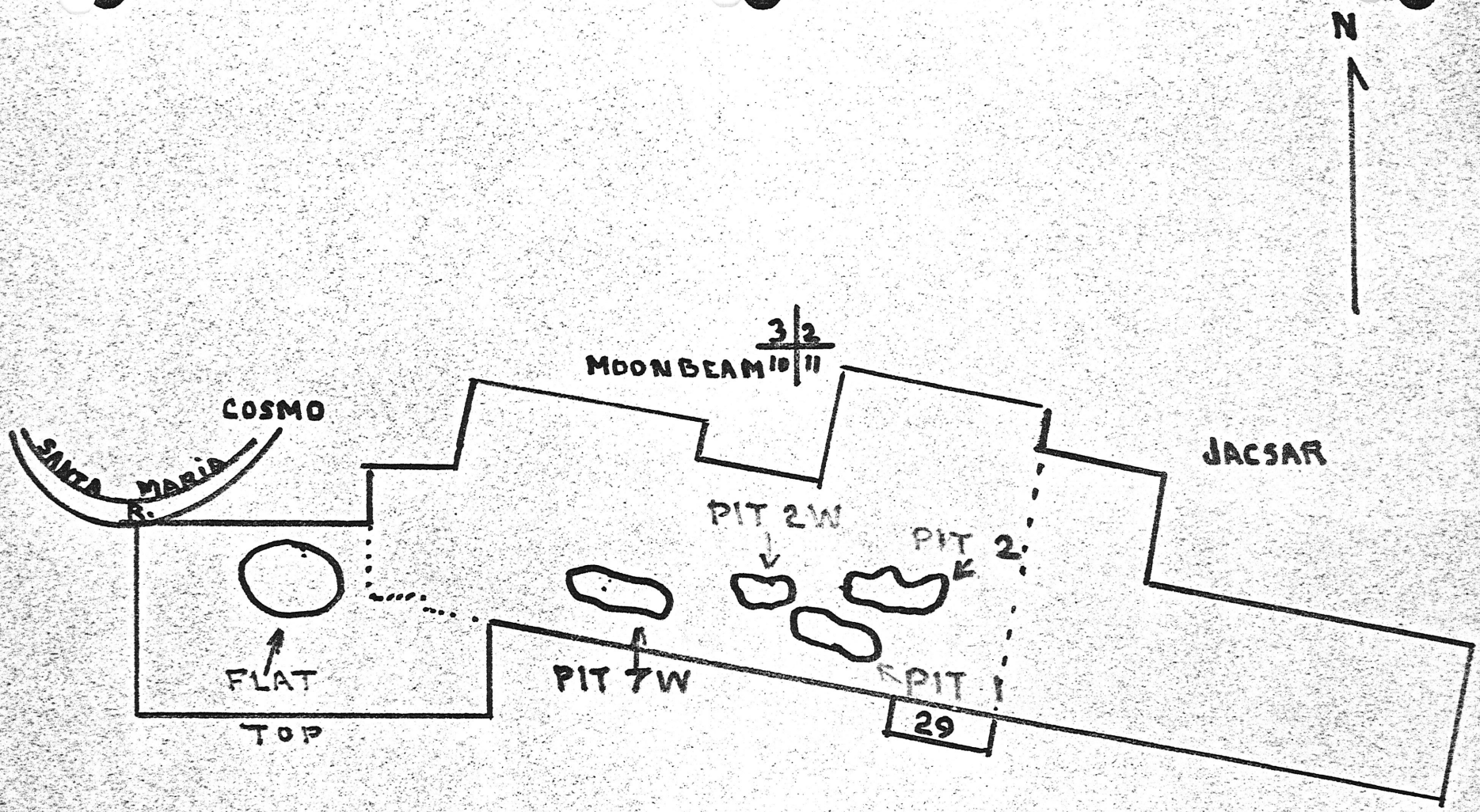
Scale ~~feet~~ miles



Present Ownership of Anderson Mine.

Aug 31 1970

B

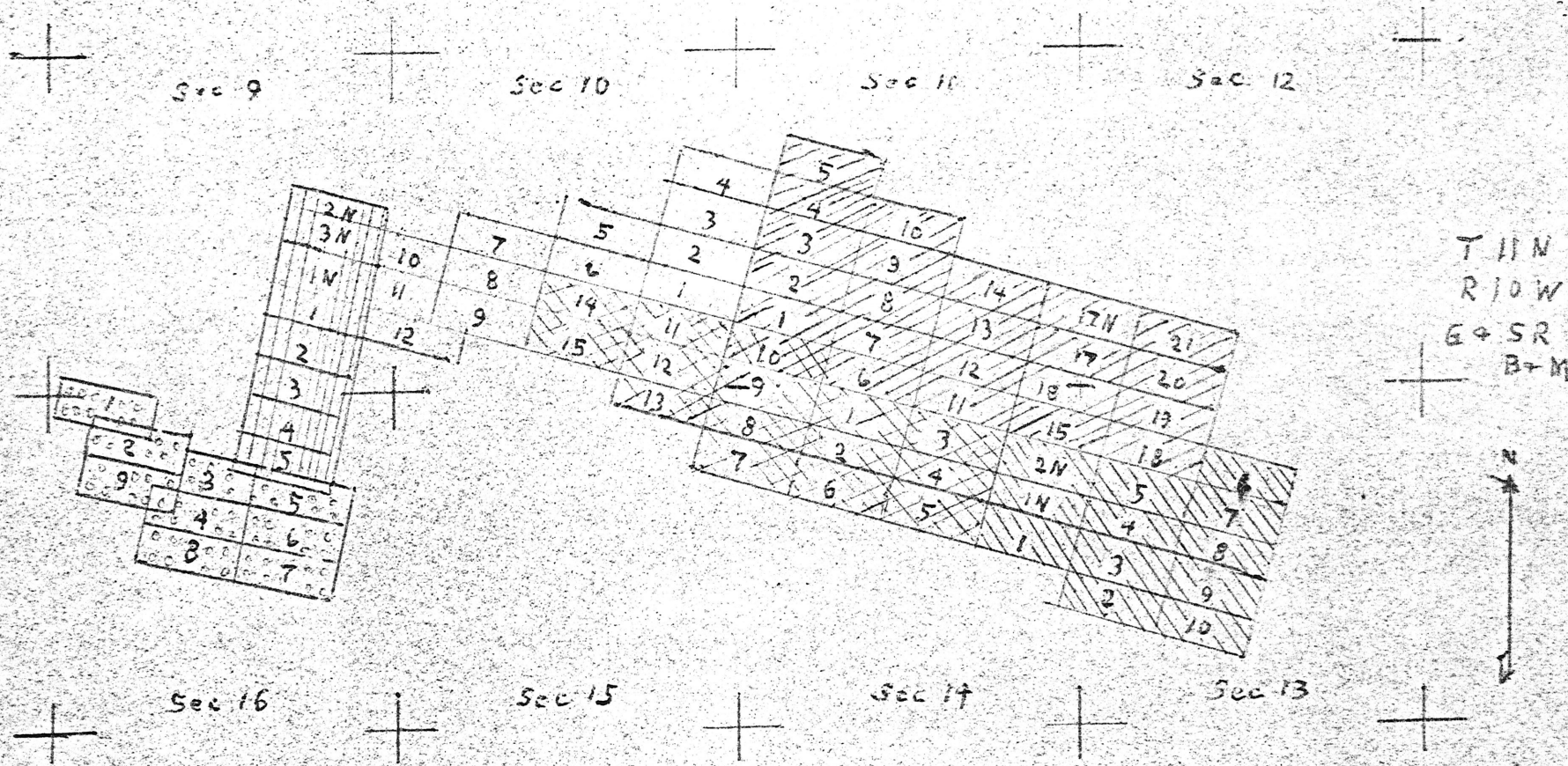


APPROX. LOCATION OF PRESENTLY KNOWN ORE BODIES

B-2

B-2

Exhibit #1



URANIUM AIRE 1-21 17N CLAIMS

URANIUM AIRE East End 1-10 1N, 2N CLAIMS

URANIUM AIRE 1-15 South CLAIMS

URANIUM AIRE 1-12 West CLAIMS

URANIUM AIRE Flat Top 1-5, 1-3 N CLAIMS

URANIUM AIRE FLAT TOP GP2 1-9 CLAIMS

URANIUM AIRE GROUP

YAVAPAI COUNTY ARIZONA

Scale: 2" = 1 MILE

1956

B-3

B-3

Sample No.	Type	Interval From	Interval To	Hole No.	Location and Description	Chemical % U_3O_8	Chemical % V_2O_5		Lab e U_3O_8	G.O. e U_3O_8
1	R.H.	36	38	16	GRN F. SDY SILTST	.450				.40
2	"	122	148	16	SDY SILTST + LIGNITIC SH	.021				.10
3	"	54	56	17	SDY SILTST					
4	"	44	46	8		.005	.06			
5	"	46	48	8		.002	.08			
6	"	122	124	8		.025	.07			
7	"	124	126	8		.020	.06			
8	"	140	142	8		.002	.06			
9	"	142	144	8		.040	.14			
10	"	144	146	8		.13	.13			
11	"	150	152	8		.07	.35			
12	"	44	46	12		.005	.05			
13	"	[illegible]	[illegible]	12		.017	.03			
14		[illegible]	[illegible]	12		.002	.04			
15		[illegible]	[illegible]	12		.04	.02			
16		[illegible]	[illegible]	12		.035	.03			

C-1

Sample No.	Type	Interval From	Interval To	Hole No.	Location and Description	Chemical % U_3O_8	Chemical % V_2O_5	Chemical	Lab e U_3O_8	G.O. e U_3O_8
17	D.H.	133	140	12		.030	.08			
18	"	146	148	12		.005	.03			
19	"	148	150	12		.035	.10			
20	"	25	30	13		.002	.03			
21	"	30	32	13		.030	.06			
22	"	126	128	13		.002	.05			
23	"	128	130	13		.18	.20			
24	"	140	142	13		.020	.07			
25	"	142	144	13		.015	.03			
26	"	144	146	13		.002	.08			
27	"	146	148	13		.020	.03			
28	"	160	165	13		.015	.16			
29	"	165	170	13		.002	.07			
30	"	70	75	13		.001	.03			
31	"	85	90	13		.010	.05			
32		54	90	13		.03	0.10			

Sample No.	Type	Interval From	Interval To	Hole No.	Location and Description	Chemical % U_3O_8	Chemical % V_2O_5	Chemical	Lab e U_3O_8	G.O. e U_3O_8
33	D.H.	100	102	18		.020	.03			
34	"	102	104	18		.06	.17			
35	"	104	106	18		.012	.03			
36	"	106	108	18		.07	.05			
37	"	52	54	17		.15	.15			
38	"	105	110	15		.015	.05			
39	"	110	115	15		.020	.07			
40	"	126	128	15		.010	.06			
41	"	128	130	15		.027	.07			
42	"	130	132	15		.020	.06			
43	"	132	134	15		.027	.07			
44	"	134	136	15		.025	.06			
45	"	136	138	15		.06	.08			
46	"	95	100	3		.007				
47		100	104	3		.05				
48		110	115	3		.002				

2D

Sample No.	Type	Interval From	Interval To	Hole No.	Location and Description	Chemical % U_3O_8	Chemical % V_2O_5	Chemical	Lab e U_3O_8	G.O. e U_3O_8
49	D.H.	124	126	3 -		.005				
50	"	126	128	3		.017				
51	"	230	235	3		.002				
52	"	250	255	3		.004				
53	"	255	260	3		.002				
54	"	42	44	11 →		.002				
55	"	104	108	11		.005				
56	"	126	128			.002				
57	"	110	112	78 -		.004				
58	"	112	114	78		.002				
59	"	114	116	78		.002				
60	"	18	20	5 -		.001				
61	"	74	76	5		.015				
62	"	100	102	5		.030				
63	"	102	104	5		.014				
64	"	78	79	5		.003				

PHR

Sample No.	Type	Interval From	Interval To	Hole No.	Location and Description	Chemical % U_3O_8	Chemical % V_2O_5	Chemical	Lab e U_3O_8	G.O. e U_3O_8
65	P.H.	52	54	9 -		.04				
66	"	54	56	9		.034				
67	"	56	60	9		.006				
68	"	105	110	9		.007				
69	"	110	115	9		.017				
70	"	134	136	9		.08				
71	"	70	75	62 -		NIL				
72	"	84	86	62		.002				
73	"	72	74	63 +		.001				
74	"	74	76	63		.05				
75	"	52	54	7 -		.005				
76	"	54	56	7		.010				
77	"	126	128	7		.012				
78	"	128	130	7		.015				
79	"	130	132	7		.007				
80	"	132	134	7		.002				

PHR

Sample No.	Type	Interval From	Interval To	Hole No.	Location and Description	Chemical % U_3O_8	Chemical % V_2O_5	Chemical	Lab e U_3O_8	G.O. e U_3O_8
S1	R.H.	117	118	108		.067				
S2	"	118	119	108		.07				
S3	"	119	120	108		.13				
S4	"	120	121	108		.37				
S5	"	121	122	108		.12				
S6	"	122	123	108		.69				
S7	"	123	124	108		.16				
S8	"	124	125	108		nil				
S9	"	125	126	108		nil				
S0	"	126	127	108		nil				
S1	"	127	128	108		.012				
S2	"	128	129	108		.16				
S3	"	129	130	108		.015				
S4	"	130	131	108		.032				
S5	"	131	132	108		.04				
S6	"	132	133	108		.06				

Sample No.	Type	Interval From	Interval To	Hole No.	Location and Description	Chemical % U_3O_8	Chemical % V_2O_5	Chemical	Lab e U_3O_8	G.O. e U_3O_8
97	"	133	134	108		.015				
98	"	134	135	108		Tr				
99	"	135	136	108		.09				
100	"	136	137	108		.012				
101	— Tail end of —									
102		130	131	123		.19				
103		121	122	123		.04				
104		122	123	123		.05				
105		123	124	123		.20				
106		124	125	123		.06				
107		125	126	123		.10				
108		126	127	123		.023				
109		127	128	123		Tr				
[illegible]		128	129	123		Tr				
[illegible]		129	130	123		Tr				
[illegible]		130	131	123		Tr				

Sample No.	Type	Interval From	Interval To	Hole No.	Location and Description	Chemical % U_3O_8	Chemical % V_2O_5	Chemical	Lab e U_3O_8	G.O. e U_3O_8
113		131	132	123		.020				
114		132	133	123		.002				
115		133	134	123		.05				
116		134	135	123		.030				
117		135	136	123		.05				
118		136	137	123		.05				
119		137	138	123		.04				
120		138	139	123		.11				
121		139	140	123		.037				
122		140	141	123		.035				
123		141	142	123		.030				
124		142	143	123		.012				
125		143	144	123		.210				
126		144	145	123		.007				
127		30	35	123		.015				
128		35	40	123		.55	.31			

JBS + F.P.

GETTY OIL CO.

Sample No.	Type	Interval From	Interval To	Hole No.	Location and Description	Chemical % U_3O_8	Chemical % V_2O_5		Lab e U_3O_8	G.O. e U_3O_8
129		40	45	123		.012				
130		45	50	124		.002				
131		45	50	124	not used					
132		50	55	124		.28	.16			
133		55	60	124		.005				
D-1	GRAB				STOCKPILES } SAMPLED FOR MILL RUN	.26				
D-2	GRAB				STOCKPILES }	.11				
136		110	112	88		0.03	0.06			
137		34	36	103		0.15	0.14			
138		70	75	101		0.022	0.04			
139		60	65	101		0.02	0.04			
140		65	70	101		0.06	0.03			
141		94	96	134		0.08	0.02			
142		60	62	128		0.03	0.12			
143		112	114	93		0.09	0.06			
144		92	94	93		0.017	0.04			

0.22 0.11

Sample No.	Type	Interval From	Interval To	Hole No.	Location and Description	Chemical % U_3O_8	Chemical % V_2O_5	Chemical	Lab e U_3O_8	G.O. e U_3O_8
145		62	67	128		0.22	0.11			
146		10	15	66		0.06				
147		305	310	152		0.08		240.5 3[illegible]-242 3[illegible]-3[illegible]		07 .12
148		185	190	153		0.05		186-188		.20
149		220	225	162		0,06				
150		150	155	169		0.11				
151		50	55	183		0.06		49-52 137-138		.084 .16
152		150	155	183		0.08		146-147 151-157		.028 .20
	←	(No	Gamma	log)						

FORM M-8

ATLAS MINERALS
DIVISION OF ATLAS CORPORATION
MOAB, UTAH

Lot No. 990

Ore Lot Assay Certificate

Jan 5, 1967
(Date)

Shipper Moon Beam

Claim

PER CENT

U_3O_8	V_2O_5	$CaCO_3$		
.102				

Chief Chemist

C-2

C-1 G-2

Atlas Mining Co

FORM M-177

ORE SAMPLE WORK SHEET Moab, Utah

Date Sample Received 11 Oct 66.

SAMPLE IDENTIFICATION:
Moonbeam (Griz)

Submitted by:
Jack Day

Date Desired

Assay For:
U_3O_8 Fl
V_2O_5
$CaCO_3$

AMENABILITY

Acid	Head	Residue	Extraction
Carbonate	Head	Residue	Extraction

OTHER TEST WORK REQUIRED:

Save Rejects

RESULTS TO BE SUBMITTED TO:

Newman

R-7437 Sample	U_3O_8	$CaCO_3$	V_2O_5
	.032	1.8	.068
38 ✓ #2 Small Stockpile	.11	7.4	.092
39 ✓ #3 Large ✓	.091	2.0	.092

Note: Requested rerun on sample #1 – it gave .07 % U_3O_8.

C-3

Atlas Minerals
Moab, Utah

FORM M-177

ORE SAMPLE WORK SHEET

Date Sample Received Sept. 30, 1966

SAMPLE IDENTIFICATION: Arizona Sample - Anderson M.

Submitted by: Jack Day (~~Stock Pile~~) Date Desired Soon - !
John Adams

Assay For: U_3O_8, $CaCO_3$, V

AMENABILITY

Acid	Head	Residue	Extraction
Carbonate	Head	Residue	Extraction

OTHER TEST WORK REQUIRED: Save rejects

RESULTS TO BE SUBMITTED TO: DEARTH or Newmont

R7198 U_3O_8 0.49 V_2O_5 0.21 $CaCO_3$ 10.5

C-4

IRON KING ASSAY OFFICE

ASSAY CERTIFICATE

BOX 14
HUMBOLDT, ARIZONA 86329

Walt's 2 Stake 1970

SUBMITTED BY: MELVIN JONES

Sept. 15, 1970

DESCRIPTION	oz/ton Au	oz/ton Ag	CaO	% Fe	% Ti	% Zn	% Cu
# 1 Stockpile(Anderson Mine)			0.30				
# 2 Beach sand				8.45	0.16		

From large stockpile main pit area

Smith J.

$15.50

CHARGES _____

ASSAYER _____

C-5

ARIZONA STATE
UNIVERSITY Mont M. Warner, Geology Department, Jan. 31, 1967 TEMPE, ARIZONA

Colonel Melvin Jones
3721 West Tonto
Phoenix, Arizona

Dear Colonel Jones:

The enclosed report contains the results of my laboratory analysis of the outcropping lithologies of your uranium property, The Anderson Mine. I hope the results are favorable and will be beneficial to your mining venture.

Sincerely,

Mont M. Warner
Ass't. Professor of Geology
Arizona State University

MMW/kw

D

LABORATORY ANALYSIS OF THE ANDERSON MINE LITHOLOGIES

Location - The Anderson uranium mine is located in Section 11, Township 11 North, Range 10 West, Yavapai County, Arizona.

Field Description of Lithologies Analyzed

Unit #1 is the basal unit of the outcropping formations in the mine's open pit. It was measured and described at the south bank of the pit. Only 3½ feet of the unit's uppermost layers are exposed. These upper layers consist of light greenish gray mudstone. It is semi-consolidated for the most part, and laminated. It is fissil in part, and stained with patches of carnotite, and in a few places with limonite. It contains fossilized palm fragments, and at least one mammalian skull has been taken from it. Unit #1 is capped by a ten inch bed of dense, light gray chert, which is uniform in thickness and weathers white. It is also stained with patches of carnotite.

Unit #2 is an 11 foot layer of light greenish gray mudstone, which overlays the 10 inch chert cap of Unit #1. It is very much like Unit #1 in every respect, with the exception of the carnotite content. It is not stained with the yellow patches of carnotite. This unit is capped with 19 inches of dense, well consolidated cherty mudstone.

Unit #3 - 10 to 30 feet of white argillaceous limestone, containing three distinct layers of red chert, each of which is 4 to 6 inches thick. Unit #3 is the top layer forming the surface around the mine pit. It contains no carnotite. Most of this bed is semi-consolidated, but does contain a few layers of dense, indurated mudstone, in addition to the dense chert beds.

Laboratory Analysis

Each of the three units were analyzed for grain size, calcium carbonate content and water content, with the following results:

Unit #1 -

Fine Sand	Silt	Clay	Calcium Carbonate	Water
21 - 51% Avg. - 26%	43 - 70% Avg.- 67%	6 - 8% Avg. - 7%	12.1%	6.4%

This unit could be called a calcareous sandy mudstone. It contains considerable mica(muscovite and biotite) and many of the sand size particles consist of these two minerals.

Unit #2 -

Fine Sand	Silt	Clay	Calcium Carbonate	Water
21 - 70% Avg. 26%	30 - 70% Avg. - 67%	2 - 8% Avg. - 7%	17.8%	5%

This unit is essentially the same as Unit #1, a calcareous, sandy mudstone.

Unit #3 -

Fine Sand	Silt	Clay	Calcium Carbonate	Water
?	?	?	75.4%	2.2%

The high lime content of this unit prevented an accurate grain size analysis. It does contain much mica, as do the other units, and is probably an argillaceous or muddy limestone.

decreases ??

The lime content increases from top to bottom of the measured stratigraphic section as the figures indicate, so it is very likely that most of the bottom portion of Unit #1, which is beneath the present surface, will contain very little or no lime. Unit #3, which is the surface layer, is mainly a limestone, and it is very probable that the lime content of Units 1 and 2 was derived from Unit 3 by leaching and downward filtration of ground water. The lime content of Units 1 and 2 is patchy and many parts of these two units do not contain any lime.

Note -

Comments on Dr. Varner's findings. It would appear that his $CaCO_3$ readings are too high. It is not questionable that these are deposits are from fresh water lakes, and therefore are not Marine Limestones, nor chalk(or coral) formations made by forminifers (or coelenterates), all of which could have 75% or more $CaCO_3$. He missed the boat in not finding volcanic tuffs in the Mudstone rock, in fact a lot of them border on being Bentonite. What he broadly calls chert could be more correctly called agate, opal and silicious mudstones. In fact all three are present in the lithologies as-well-as Montronite and Sepiolite.

JONES

ARIZONA STATE UNIVERSITY
Tempe, Arizona

October 27, 1966.

Sample of uranium ore from the Anderson Mine, S.W. Yavapai County, Arizona for identification of type of rock.

Sizing with Tyler sieves:

250	Mesh	18.47 *%	(silt)
115	Mesh	42.60 %	(very fine sand)
60	Mesh	28.88 %	(fine sand)
32	Mesh	9.50 %	(medium sand)
16	Mesh	.55 %	

*this includes clay - minus 400 mesh. The sieve for this was not used as it was in poor condition.

This definately puts this material into the definition of mudstone.

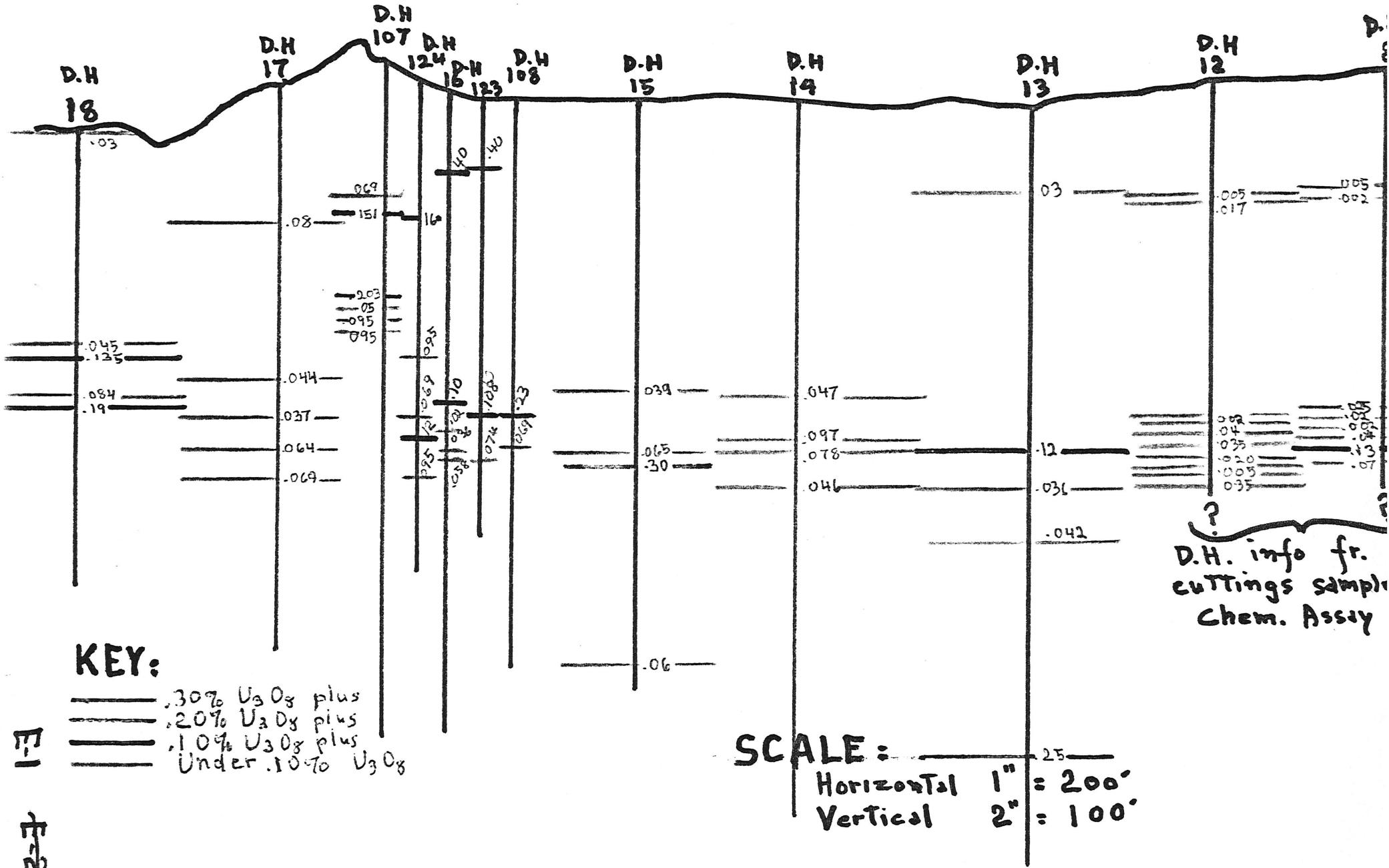
BL

D-1

MINERALIZATION PROFILE

Line 2000'

A



KEY:

- .30% U_3O_8 plus
- .20% U_3O_8 plus
- .10% U_3O_8 plus
- Under .10% U_3O_8

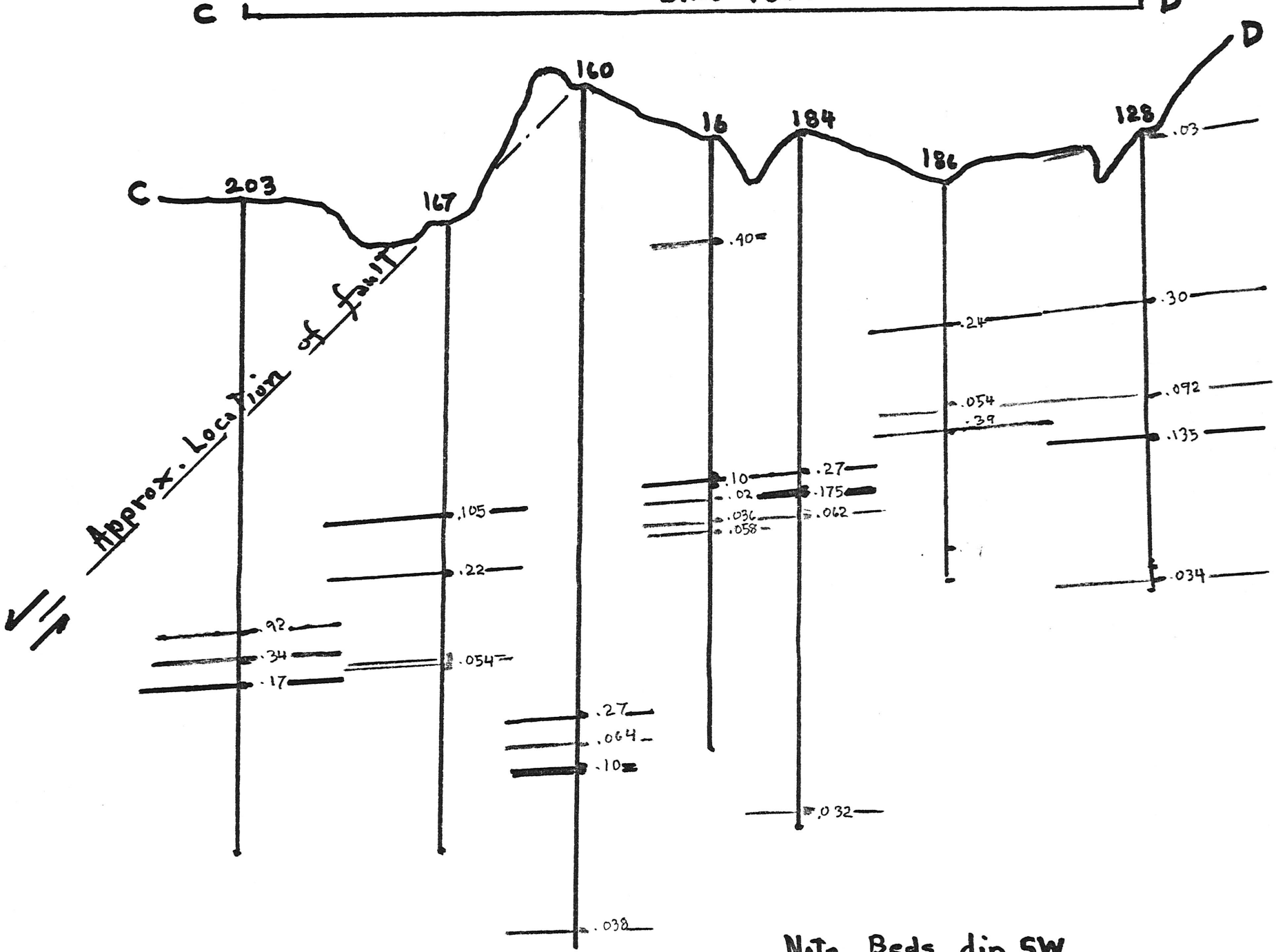
SCALE:

Horizontal 1" = 200'
Vertical 2" = 100'

Jones E-1

MINERALIZATION PROFILE (Aprox. only)

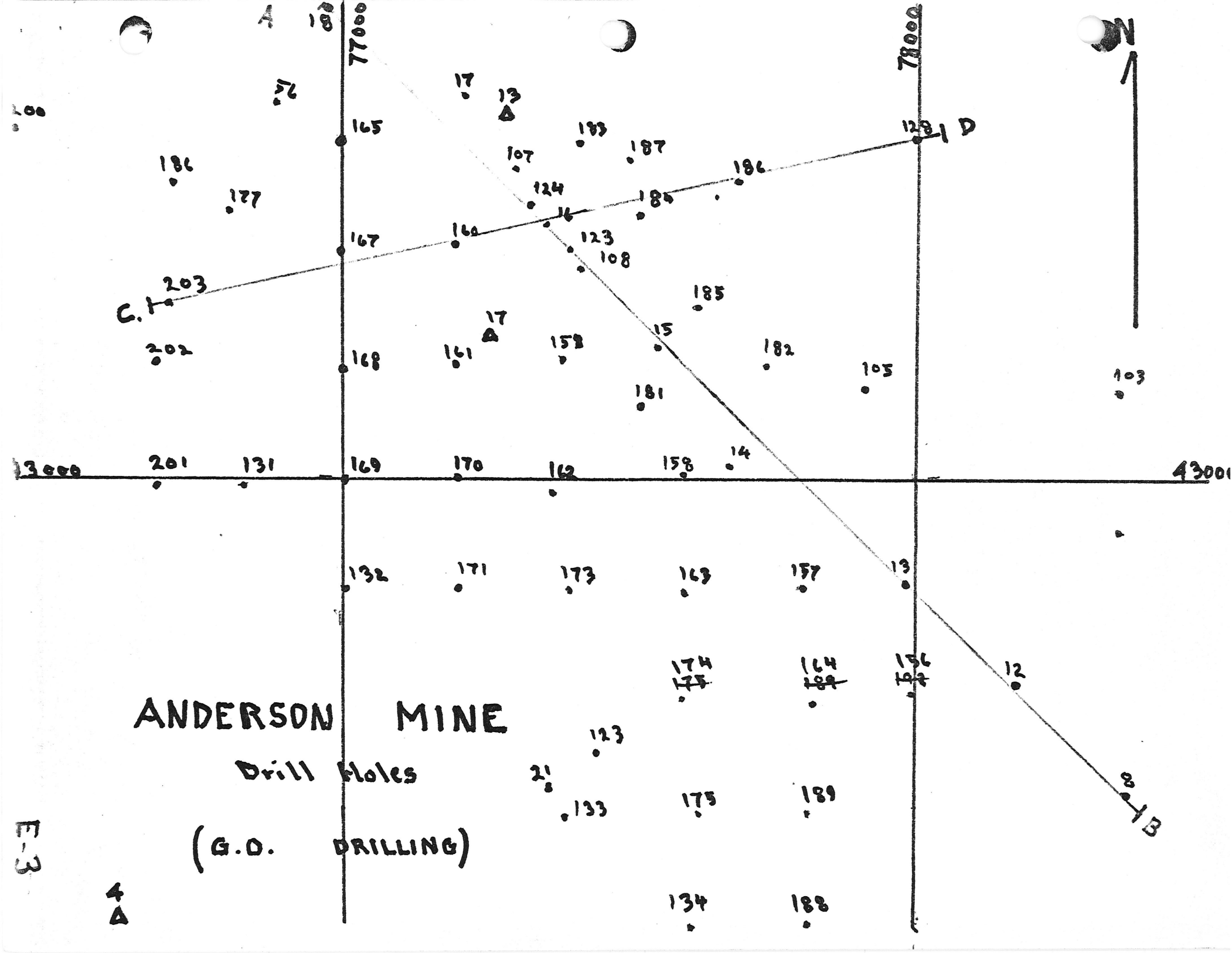
Line 1330'



Note. Beds dip SW

E-2

E-2


77000
78000
N
A
D
C.L
B
13000
43000
ANDERSON MINE
Drill Holes
(G.O. DRILLING)
E-3

ESTIMATES OF RADIOACTIVE MINERALIZATION IN DRILL HOLES APPROX. TO LINE "A"-"B".

(K factor=.00027)

Hole No.	Hole depth	c.p.s.	Bed thickness(and depth)		Calc.value
18	175'		0'-1'	1'	.03%U_3O_8
		165	76'-78'	1'	.045 "
		500	87'-88'	1'	.135 "
		310	100'-103'	3'	.084 "
		700	105'-107.5	2 1/2'	.19 "
		165	154'-155'	1'	.045 "
17	241'	300	49'-54'	5'	.08 "
		180	111'-115'	4'	.044 "
		140	125'-130'	5'	.037 "
		235	139'-143'	4'	.064 "
107	257'	250	50'-51'	1'	.069 "
		560	55'-58'	3'	.151 "
		840	139'-140.5'	1 1/2'	.203 "
		200	143'-144.5'	1'	.054 "
		350	146'-147.5'	1 1/2'	.095 "
		350	151.5'-152.5'	1'	.095 "
		550	157'-158'	1'	.15 "
124	190'	600	50'-54'	3 1/2'	.16 "
		350	108'-109.5'	1 1/2'	.095 "
		250	133.5-136'	2 1/2'	.069 "
		470	138.5'-140.5'	2'	.127 "
		150	143'-144'	1'	.04 "
		350	147.5'-150'	2 1/2'	.095 "
		350	153.5-154.5'	1'	.095 "
16	250'	1500	36'-38'	2'	.40 "
		375	123'-127.5'	4 1/2'	.10 "
		75	130.5'-132'	1 1/2'	.02 "
		135	135.5'-137'	1 1/2'	.036 "
		215	141'-143'	2'	.058 "
123	170'	1500	30'-33'	3'	.40 "
		400	120'-126'	6'	.108 "
		275	133'-140'	7'	.074 "
108	220'	840	119.0-123.5'	4 1/2'	.23 "
		250	128'-136'	8'	.069 "
15	280'	145	108'-112'	4'	.039 "
		240	127'-133'	6'	.065 "
		1100	135'-137'	2'	.30 "
		220	217.5'-218.5'	1'	.06 "
14	27 5'	175	111'-112.5'	1 1/2'	.047 "
		360	125.5'-128'	2 1/2'	.097 "
		290	132'-136'	4'	.078 "
		170	143'-151'	8'	.046 "
13	289'	110	29'-32'	3'	.03 "
		440	128'-131'	3'	.12 "
		135	141'-147'	6'	.036 "
		155	162'-166'	4'	.042 "
		930	250'-251'	1'	.25 "

INFORMATION TAKEN FROM GETTY OIL CHEMICAL ASSAYS ON CUTTINGS(no gamma logs)

					% U_3O_8	V_2O_5
12	?		44'-46'	2'	.005	.05
			46'-48'	2'	.017	.03

F-1

INFORMATION TAKEN FROM GETTY OIL CHEMICAL ASSAYS ON CUTTINGS

Hole No.	Hole depth	c.p.s.	Bed thickness (and depth)		Assay U_3O_8	Assay V_2O_5
12 (continued)			132'-134'	2'	.002%	.04%
			134'-136'	2'	.04	.02
			136'-138'	2'	.035	.03
			138'-140'	2'	.020	.03
			146'-148'	2'	.005	.03
			148'-150'	2'	.035	.10
8	?		44'-46'	2'	.005	.06
			46'-48'	2'	.002	.08
			122'-124'	2'	.025	.07
			124'-126'	2'	.020	.06
			140'-142'	2'	.002	.06
			142'-144'	2'	.040	.14
			144'-146'	2'	.13	.13
			150'-152'	2'	.07	.35

ESTIMATES OF RADIOACTIVE MINERALIZATION IN DRILL HOLES-LINE "C"-"D".

Hole No.	Hole depth	c.p.s.	Bed thickness(and depth)		Calc.value
203	279'	3400	160.5-162'	1 1/2	.92% $U_{3_8}O$
		1250	169.5'-171'	1 1/2	.34 "
		625	177'-174'	2	.17 "
167	265'	390	103.5-105'	1 1/2	.105 "
		800	125'-128.5'	3 1/2	.22 "
		200	207'-212'	5	.054 "
160	340'	1000	239'-240.5	1 1/2	.27 "
		250	244'-245.5'	1 1/2	.064 "
		380	253'-256'	3	.10 "
		140	336.5'-338'	1 1/2	.038 "
16	250'	1500	36'-38'	2	.40 "
		375	123'-127.5'	4 1/2	.10 "
		75	130.5-132'	1 1/2	.02 "
		135	135.5'-137	1 1/2	.036 "
		215	141'-143'	2	.058 "
184	260'	1000	124'-126.5'	2 1/2	.27 "
		650	132'-134.5'	2 1/2	.175 "
		230	138.5'- 143'	5 1/2	.062 "
		120	250.5'-253'	2 1/2	.032 "
186	153'	900	51'-52'	1	.24 "
		200	81'-84'	3	.054 "
		1450	88'-89.5'	1 1/2	.39 "
128	160'	110	0'-2'	2	.03 "
		1100	61.5-62.5'	1	.30 "
		340	96!-97.5	1 1/2	.092 "
	✓	500	109.5-112'	2 1/2	.135 "
		125	116.5'-118	1 1/2	.034 "

CALCULATED DATA SHOWING CALCULATED ESTIMATES OF B^2g IN HOLES FROM
BY GETTY OIL COMPANY AT ANDERSON MINE.

~~MINE PROPERTY IN~~ MONTMORENCY COUNTY, MICHIGAN

(K-factor = .00027)

Hole No.	Hole Depth	C.P.S. (≈)	Bed thickness and depth	Calc. % (Gross value) (≈)
1	296'	265	27.7-28.8	.07
		198	107-106'	.05
		135	108-110'	.036
3(?)	285'	160	99'-100'	.04
		100	125-127.5'	.03
5(?)	273'	130	19-20'	.03
		120	74'-78'	.03
		230	100-103'	.06
7(?)	300'	600	42-49'	.16
	[illegible]	105	117-128'	.03
9	310'	250	53.5-55.5'	.07
		100	106.5-107.5'	.03
		230	111-112'	.06
		275	134'-136'	.07
10	270'	95	13-21'	.026
		90	95'-100'	.024
11	320'	300	53-56'	.08
		115	130-133'	.03
13	289'	110	29-32'	.03
		440	128-131'	.12
		135	141-147'	.036
		155	162-166'	.042
		930	250'-251'	.25
14	275'	175	111-112.5'	.047
		360	125.5-128'	.097
		290	132'-136'	.078
		170	143'-151'	.046
15	280'	145	108'-112'	.039
		240	127'-133'	.065
		1100	135'-137'	.30
		220	217.5'-218.5'	.06
16	250'	1500	36'-38'	.40
		375	123-127.5'	.10
		75	130.5-132'	.02
		135	135.5'-137'	.036

Hole No	Hole Depth	CPS (≈)	Bed Thickness & depth	Calc. % (gross va (≈)
76	240'	125	125-128'	.03
78	139'	<55	0-134'	<.015
79	261'	100	69-97'	.027
82	220'	75	35.5-37'	.021
84	241'	125	0-4'	.034
		70	66'-74'	.02
		215	87'-80'	.058
88	255'	125	5-9.5'	.034
		470	97.5'-99'	.127
		450	100.5-102'	.121
		350	109.5-111'	.095
		400	113-114'	.108
93	255'	225	21.5-23.5'	.061
		340	92.5'-93.5'	.092
		310	111.5-112.5'	.084
95	220'	90	3'-8'	.024
		225	95.5'-97'	.061
97	240'	<55	0-240'	<.015
98	260'	180	123-125'	.049
99	238'	250	161-162.5'	.069
101	220'	250	48-50'	.069
		850	56-61.5'	.23
103	284'	960	34.5-36'	.26
		140	97-98'	.038
		110	120-121'	.03
		130	173-174'	.035
105	254'	290	10-11'	.078
		360	71-72.5'	.10
		150	105'-112'	.04
		340	147-150.5'	.10
		215	196-197'	.058
107	257'	250	50-51'	.069
		560	55-58'	.151
		840	134-140.5'	.203
		200	143.5-144.5'	.054

		115	111 – 112.5'	.047				190	97 – 98'	.038
		360	125.5 – 128'	.07				110	120 – 121'	.03
		290	132' – 136'	.018				130	173' – 174'	.035
		170	143' – 151'	.046	105	254'		290	10 – 11'	.078
15	280'	145	108' – 112'	.039				360	71' – 72.5'	.10
		240	127' – 133'	.065				150	10.5' – 112'	.04
		1100	135' – 137'	.30				340	147' – 150.5'	.10
		220	217.5' – 218.5'	.06				215	196' – 197'	.058
16	250'	1500	36' – 38'	.40	107	257'		250	50' – 51'	.069
		375	123' – 127.5'	.10				560	55' – 58'	.151
		75	130.5 – 132'	.02				840	139' – 140.5'	.203
		135	135.5' – 137'	.036				200	143.5' – 144.5'	.054
		215	141' – 143'	.058				350	146' – 147.5'	.095
17	241'	300	49' – 54'	.08				350	151.5 – 152.5	.095
		180	111' – 115'	.049				550	157' – 158'	.15
		140	125' – 130'	.037	108	220'		840	119 – 123.5'	.23
		235	139' – 143'	.064				250	128 – 136'	.069
18	175'	?	0 – 1'	.03	123	170'		1500	30 – 33'	.40
		165	76' – 78'	.045				400	120' – 126'	.108
		500	87' – 88'	.135				275	133 – 140'	.074
		310	100' – 103'	.084	124	190'		600	50.5' – 54'	.16
		700	105' – 107.5'	.19				350	108 – 109.5'	.095
		165	154' – 155'	.045				250	133.5' – 136'	.069
23	265'	<40	61' – 79'	<.01				470	138.5' – 140.5'	.127
24	280'	110	58 – 59'	.03				150	143 – 144'	.04
		105	71.5' – 73'	.028				350	147.5' – 150'	.095
59-A	281'	750	90.5 – 93'	.20				350	153.5' – 154.5'	.095
		780	113' – 114'	.21	125	85' ~~150~~		<30	0' – 85'	<.01
62	93'	500	75' – 76.5'	.135	126	130' ~~260'~~		<35	0 – 130'	<.01
63	86'	500	72' – 75'	.135	127	264'		200	130' – 135'	.054
64	129'	<30	0 – 129'	<.01				110	210' – 214'	.03
66	225'	720	10.5' 13.5'	.195	128	160'		110	0' – 2'	.03
		105	82' – 85'	.03				1100	61.5 – 62.5	.30
		475	95' – 96.5'	.128				340	96' – 97.5'	.092
		195	105' – 106'	.053				500	109.5 – 112'	.135
		410	112' – 114'	.11				125	116.5' – 118'	.034
		150	159.5' – 161'	.04	129	200'		300	88.5' – 90'	.081
		195	185 – 189'	.053	130	192'		<32	0' – 192'	<.01
		100	200' – 202'	.027	134	325'		600	94' – 95'	.16
67	260'	250	120' – 122'	.069				125	152' – 154'	.034
		460	198' – 200'	.124	137	85'		<20	0' – 85'	<.01
68	260'	640	133' – 139'	.173	137			<30	0' – 85'	<.01

CONT.

Hole No.	Hole Depth	Cps	Bed Thick Formation	Calc % (Mass Units)	Hole No.	Hole Depth	Cps	Bed Thick	Calc %
139	320'	<50	0-320'	<.01	180	320'	800	295-298'	.22
140	400'	150	0-400'	.04			440	257-261'	.12
141	390'	275	233-284'	.074	181	340'	410	237.5-239'	.11
142	327'	700	65-66'	.19			215	309-311'	.058
		150	123-128'	.04	182	220'	300	90-93.5'	.081
		125	144.5-146'	.034			550	103-105'	.149
		250	150-151'	.069			400	132-134'	.11
		125	163.5-164.5'	.034			270	136-137.5'	.073
144	152'	<60	0-152'	<.016			350	139-141.5'	.094
145	113'	<40	0-113'	<.011			200	146-147'	.054
146	300'	500	187-189'	.135	183	270'	310	49-52'	.084
147	220'	<60	0-220'	<.016			590	137-138'	.016
148	176'	<35	0-176'	<.01			330	151-157'	.089
149	295'	<40	0-295'	<.01	184	260'	1000	124-126.5'	.27
150	400'	175	302-303'	.047			650	132-134.5'	.175
151	240	<40	0-240'	<.011			230	138.5-143'	.062
152	332'	300	240.5-242'	.081			120	250.5-253'	.032
		550	302.5-305'	.15	185	280	120	99-102'	.03
153	208	950	186-188'	.12			380	118-121'	.10
154	260	700	191.5-193'	.19			250	126-129'	.069
		200	231-233'	.054			310	136.5-138'	.084
155	295'	300	215-216'	.081			140	192-193'	.038
		230	279-284'	.062			195	252.5-255'	.053
158	320'	<30	0-320'	<.01	186	153'	900	51-52'	0.24
159	337'	175	259.5-260.5	.047			200	61-64'	.054
		700	264-265'	.19			1450	88-89.5	.39
		1400	267.5-268.5'	.38	187	200'	195	0-2.5'	.053
		175	319-322'	.047			100	35-36'	.027
160	340'	1000	239-240.5	.27			115	33-39'	.031
		250	244-246.5'	.069			260	47.5-49'	.07
		380	253-256'	.10			460	78-79.5'	.124
		140	336.5-338'	.038			760	84-85.5	.21
161	290'	125'	215-229'	.034			430	88-89'	.036
162	330'	600	221-229'	.16			800	164-165'	.22
		160	227.5-229.5'	.043	188	240'	220	48-53'	.059
		220	235-238'	.06			190	59-63'	.052
		700	301-304'	.19			300	66.5-68.5'	.081
		260	308-309'	.07			170	72-73'	.046

		250	244-246.5'	.069
		380	253-256'	.10
		140	336.5-338'	.038
161	290'	125'	215-229'	.034
162	330'	600	221-229'	.16
		160	227.5-229.5'	.043
		220	235-238'	.06
		700	301-304'	.19
		260	308-309'	.07
165	260	425	43-45'	.115
		750	121-122.5'	.21
		150	124-126'	.04
		185	123-124'	.05
		485	135-136.5'	.131
		370	206-208'	.10
167	265'	390	103.5-105'	.105
		800	125'-128.5	.22
		200	207-212'	.054
168	290'	470	130'-131.5'	.127
		250	134-136'	.07
		125	142'-143'	.034
		100	147-152	.027
		145	228-232	.039
		500	262.5-263.5	.135
177	260'	430	40'-41'	.116
		95	110-115'	.026
		350	118.5-120'	.095
		200	121.5-123'	.054
		220	125-130'	.059
		150	148.5-149.5'	.04
		190	208-212.5'	.052
		145	222-224'	.038
178	280'	600	136-137.5'	.16
		250	139-140'	.069
		460	152'-154'	.124
		145	216.5-217.5'	.039
179	280'	265	124.5-125.5'	.072
		920	142.5-144'	.25
		175	152-153.5'	.047
		280	158.5-160'	.076
		320	227-230'	.086
		230	258.5-260.5'	.062

		260	47.5-49'	.07
		460	78-79.5'	.124
		760	84-85.5	.21
		430	88-89'	.1035
		800	164-165'	.22
188	240'	220	48-53'	.059
		190	59-62'	.052
		300	66.5-68.5'	.081
		170	72-73'	.046
		200	88-90'	.054
		550	95-97'	.15
189	190'	300	60-64'	.081
		500	92-94.5'	.135
		160	101-102'	.043
		230	110-112.5'	.062
190	240	7100	0-1.5'	7.03
		210	58-73'	.057
		320	95.5-97'	.086
		150	101-102.5'	.04
		120	110-113'	.032
191	220'	7100	0-3'	7.03
		310	50-51'	.084
		200	54.5-57'	.054
		170	60.5-64.5'	.046
		225	92.5-97'	.061
		120	98.5-100'	.032
192	280'	195	104-107'	.053
		1050	47-48.5'	.28
		260	146-153'	.07
		195	102-104'	.053
		100	181.5-186'	.027
		120	189.5'-191'	.032
193	80'	110	0'-2'	.03
		140	58-61'	.038
		200	65-73'	.054
194	80'	195	47.5-49.5'	.053
		445	53'-55'	.12
		160	55-57'	.043
195	140	320	21-26'	.086
		350	86-87'	.095
		295	99-102'	.080
		125	103-105'	.034
196	140'	400	22'-24'	.11
		145	67-69.5'	.039
		175	26'-27'	.047
197	66'	950	20-21.5'	.26
198	65'	600	22.5-25.5'	.16
199	65'	435	24.5-26.5'	.12
200	200'	430	127'-128.5'	.12
201	250'	150	106'-112'	.04
		125	131'-133'	.034
		130	191-193.5'	.035
		105	210.5-212'	.028
		125	104.5-107'	.034
202C	260'	275	129-130.5'	.074
		125	210.5-214.5'	.034
		100	222-223.5'	.027
		145	245-246.5'	.034
203		270	134-136.5'	.073
		*3400	160.5-162	.92
		1250	164.5'-171'	.34
		625		.17

MEMORANDUM FOR THE RECORD

March 17,1970

1. The following information is applicable to the Anderson Mine (uranium) located 35 miles West of Congress,Arizona, and in particular to the Moonbeam,Cosmo, and JacSar claims that now cover this mine. The data outlined below has been obtained from various old reports, basically records dated 1956-58 covering the Uranium Aire group of claims (Original locators of the Anderson Mine, now superceded by the Cosmo,Moonbeam and JacSar groups).

a Data used to compute ore tonnages:

Natural ore material - 18 Cu.Ft. per short ton.
Dry ore material - 21 Cu.Ft. " " "
Stockpiles - 26 Cu.Ft. " " "

The ore is Mudstone and Siltstone, composed of tuffaceous material, largely, and some chert.

b Ore shipped in 1958:

3,145 tons to AEC, Cutter, Arizona.
1,163 Tons to Grants, N.M. buying station.
Total 4,308 Tons averaging .21% U_3O_8.

c Interstate Oil and Development Co.'s estimate of ore bodies:

	Thickness(ore bed)	Overburden
Pit #1	4.65'	42'
Pit #2	3.75'	
Pit #2W	3.50'	32'
Flat Top	3.75'	70'
Claim 7W	4.00'	10'

d Ore estimates: (IOD)

Pit #1	57,457	tons containing	.20%	U_3O_8
Pit #2	70,832	" "	.20%	"
Pit #2W	21,720	" "	.20%	"
Flat Top	42,200	" "	.35%	"
Claim 7W	2,000	" "	.20%	"
Stockpiles	31,000	" "	.15%	"
Total	225,209	tons averaging	.22%	U_3O_8

M. H. J.

Melvin H Jones

Note: The mentioned ore bodies are now part of what are now the Cosmo and Moonbeam claims. Stockpiles are also on the Cosmo and Moonbeam groups, but there remains only about half the mentioned tonnage, and the grade will probably average .11% (maybe they shipped some in the meantime?)

H

Getty Oil Company 2330 So. Main St., Salt Lake City, Utah 84115 | (801) 487-0851

Minerals Exploration & Mining Department
District Uranium Exploration Office

February 24, 1969

Mr. Melvin Jones
Box 406
Wickenburg, Arizona 85358

Dear Mel:

Enclosed please find gamma logs from Anderson Mine drill holes, No's 1, 3, 5, 142 and 203. I'm sorry that I didn't give these five logs to you when you were here. It was an oversight on my part.

Although log numbers go to 208, we did not drill that many holes. We drilled 126 holes, 25 on KS Claims and 101 on your land. The change in geologists last May (when I came back to Salt Lake) coincides with the time that we began skipping numbers. I'm sorry that I neglected to give you these five additional gamma logs.

Hope to see you again soon.

Sincerely yours,

Bob

Robert H. Dickey
Geologist

RHD:alr
Encls.

I

Bureau of Mineral Resources
State of Arizona

Engineer's report. Travis P.Lane Sept 25, 1958

E X T R A C T

Anderson Mine - 34 miles West of Congress, Arizona.
U_3O_8

Owner and Operator - Interstate Oil and Development Co.
Wickenburg, Arizona (Reno, Nevada).

420 claims - long axis for 3 miles in NW-SE direction.

Main mineralization, principally carnetite occurs in strata in carbonaceous lake sediments of late tertiary age. Host material is calcareous mudstone with varying amounts of tuff. Fragments and chunks of petrified palm roots, trunks, and fronds are abundant in beds.

The workings are of 4 major pits and a great many cuts and trenches and some 30,000 feet of drilling has been done. Drilling depth averaged 30' with a maximum of 500' and a minimum of 20'. The work has indicated a limit of mineralization on the SE end, more or less continuous mineralization from there in a NW trend to the NW end of property. Width of zone is less clearly indicated. In the mining area it is at least 600' width with indicated further lateral extent. The main ore bed, where pit mined, is overlain with about 18' of overburden, and was 3 to 4' thick. Drilling on floor of largest pit encountered other ore beds at 20', 35', 78' and 160'. Thickness and grade is comparable to main bed, except at 78' where thickness of more than 20' of U_3O_8 was penetrated, with lower U_3O_8 content.

Major production was from 4 closely spaced pits along the NW trend of mineralization. Total production was said to have been around 25,000 tons with average grade of 0.30 % U_3O_8. The largest pit in the SE end has been fairly well mined out, although some ore remains in the floor and in places the ore bed dips (at about 10°) under the overburden on the SW side of pit. The other pits are only partially mined out. The operators estimate that ore in stockpiles amounts to 40,000 to 50,000 tons with grade under .2% U_3O_8. Some ore was shipped to the globe ore buying station, but most was sent to AEC stations at Bluewater and Grants, N.M.

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Engineer's report. Travis P.Lane Sept 25, 1958

E X T R A C T

50 tons shipped to the Tuba City plant of Rare Metals Corp for ore testing. Material obtained from number of holes on floor, stripped area in pits, and from stockpiles. Three lots were run with reported assays of 0.11, 0.12 and 0.23 %.

- -

Engineer's report. B.J. Squire March 27, 1957

E X T R A C T

Production about 150 tons per week. Has 4 trucks. Average grade 0.3 to 0.4 % U_3O_8.

B. J.

For info. only.
Is on Osbourne claims
South of Jac Sar. Is hard
To believe ? Mwd

1715 No. 19th Place
Phoenix, Arizona 85006
July 5, 1967

This is a partial report on the only hole out of nine drilled on my claims that showed any promise:

Hole #5 N.W. 1/4 S.W.1/2 Sec. 24, T-11-N R-10-W, Ocho Como Mining District, Yavapai County, Arizona.

Drilled by Geo. McCoy Contractor.
Geohole Geophysical, Dallas, Texas
Total depth 1720'
Hole probed Dec. 24, 1957, through the drill stem.

Depth feet	Formation		%
800 plus	Valley fill		
860	Mudstone-limestone		.12
861	" "		.10
863	" "		.15
Core 870-871	agate-ash-mudstone		.10
907 to 979	mudstone interbedded with sandstone		.10
1003	" " " "		.15
1008	" " " "		.09
1028	" " " "		.05
Core 1068-1080	Agate-mudstone-sandstone		.10
Core 1080-1245	" " "		
		1224'	.60--
		1228	.15
		1233	.15
		1238	.08
		1243	.15
Core 1245-1246 1/2	mudstone-carbon-ash		.15
Core 1246 1/2-1260	" " "		.15
1260-1365	mudstone-interbedded with sandstone-limonite-carbon agate,ash		.15
1365-1372	agate		.15
1372-1430	mudstone-clay-interbedded sandstone-agate-ash	1375'	.10
1430-1470	agate-mudstone-basalt interbedded ash		.05
1470-1503	sand consolidated	1473'	.08
		1500	.15

K

Depth feet	Formation		%
1503-1513	Agate some carbon		
		1506'	.05
		1507	1.1
		1508	.30
		1509	.20
		1510	.10
1513-1710	Mudstone-clay interb bedded withsandstone		
		1528	.15
		1529	.10
		1546	.05
		1548	.10
		1550	1.00
		1552	1.1
		1554	1.9
		1557	1.15
		1559	1.15
		1560	.63
		1562	.50
		1563	.10
		1565	.35
		1567	.30
		1568	.16
		1572	.12
		1578	.20
		1581	.15
		1582	.12
		1585	.12
		1587	.11
1591, 1600, and 1628			.11

very interesting. hvy

LEE HAMMONS, GEOLOGIST
6243 West Missouri Avenue Glendale, Arizona YE 7-6008

August 25, 1966

A REPORT OF GEOLOGICAL SURVEY WORK ON THE MOONBEAM CLAIMS, YAVAPAI COUNTY, ARIZONA

The Moonbeam group of 20 unpatented mining claims cover the open pit mine formerly known as the Anderson Mine, the Uraniumaire Mine, etc, together with some of the surrounding area. They are located approximately 40 miles northwest of Congress, Arizona, adjoining the Santa Maria River.

A geological survey was conducted by Lee Hammons, Registered Geologist No. 4665, State of Arizona, 6243 West Missouri Ave., Glendale, Arizona, assisted by other professional and non-professional people under his supervision. The survey was divided into 2 parts, general and specific.

Part one consisted of determination of general structural and stratigraphic relationships, identification of rock types, collection and identification of fossils, and the correlation and interpretation of such data. This work was distributed over all 20 claims.

Part two consisted of detailed measurements of stratigraphic sections, the measurement of dips and strikes, radiometric determinations, sampling for assays, mineral identification, and the correlation and interpretation of such data. This work was performed on the numerous cuts, pit walls, and natural outcrops which occur on claims No's. 1, 2, 6, 7, 11, 18, 19, and 20. The work tends to benefit the whole group of claims.

The basic findings of the survey are:

1. Potential ore-bearing formations are wide-spread and not confined to the immediate area of the open pits.
2. There are ore reserves not removed by former mining operations, both in place and stockpiled.
3. Additional geological work is needed and would be beneficial.

The cost of the geological survey was at least five hundred dollars.

Respectfully submitted,

L

UNITED STATES
ATOMIC ENERGY COMMISSION
GRAND JUNCTION OFFICE
GRAND JUNCTION, COLORADO 81501

April 7, 1970

Mr. Melvin H. Jones
Post Office Box 406
Wickenburg, Arizona 85358

Dear Mr. Jones:

The package of maps and logs that were sent to our office is being returned to you via separate cover. We have made copies of all of the contents and are now in the process of reducing the data. Ore reserve computations will be completed at a later date. We will notify you when we can compare results.

Thank you again for taking the time to help us update our information on the Anderson Mine.

Sincerely,

Carl W. Appelin

Carl W. Appelin, Chief
Ore Reserves Branch
Mining Division

MOR:JBP

Enclosures:
Package of maps & logs
(via sep. cover)

M

UNITED STATES
ATOMIC ENERGY COMMISSION
GRAND JUNCTION OFFICE
GRAND JUNCTION, COLORADO 81501

June 26, 1970

Mr. Melvin H. Jones
P. O. Box 406
Wickenburg, Arizona 85358

Dear Mr. Jones:

Enclosed you will find the map showing the location of the holes that we have received, and general outlines drawn around areas that show the likelihood of good ore. As you will note from our talk over the telephone, the block of probable ore to the east is questionable because of the widespaced centers of drilling. If you can acquire additional information for this block to the east, an ore reserve can be computed; otherwise, because of the nature of the Tertiary lake bed geology in this area (probably greater than average for spotty mineralized uranium), an ore reserve can only be calculated for the middle block where the sample control is adequate.

This map only represents preliminary work that will ultimately lead to a calculated ore reserve and should be noted as such. Thank you for your patience in this matter, and we would appreciate the return of this map.

Sincerely,

J. Bruce Parker

J. Bruce Parker
Geological Engineer
Computation Section
Ore Reserves Branch
Mining Division

Enclosure:
1 Map

N

Melvin H Jones (geologist)
Co-owner of Anderson Mine
Box 406, Wickenburg, Arizona 85358
8 July 1970

Mr. J. Bruce Parker
Geological Engineer, AEC
Ore Reserves Br.,Mining Div
Grand Junction, Colo.

Dear sir:

Reference is made to your letter of June 26, 1970(and the enclosed draft map of the Anderson Mine) and our telephone remarks of a few days ago.

Concerning the block of probable ore to the East, that you mention, I am afraid we cannot help much there as a result of the erratic drilling program of the Getty Oil Company. However, the mudstone ore bearing formation is continuous and we are of the opinion that there is some good ore in the whole area mentioned and that it extends further to the East (including DHs 103,197, 198,199,101, 194, 195). See inclosure #2. This is from our study and interpretation of the pertinent drill logs.

It was also noted that DH 203 (43330-76700) has been inadvertantly left off your map. We remember this DH as our computations showed .92% U_3O_8 at 160.5'. Also missing is DH 66(43630-75790),DHs 123,188,189,191, 192,193 all these latter in the vicinity of DH 134(42200-77600). Also missing are DHs 21,131,132,133,169,170,173,171,175 but I guess it doesn't make much difference as there are no logs for these holes. I suspect the holes were drilled but Getty failed to have Century log them(we found the holes by ground search).

In order to really ascertain the overall ore reserves on the Anderson Mine, it is believed absolutely necessary to use the1956-1958 drilling data of Interstate Oil and Development Company, and others, in correlation with the Getty information. This Interstate data (and other drilling info) is in your files at Grand Junction. I have heard that back in the 50s, a controversy between Interstate and AEC on the Anderson Mine tonnages was settled by conference. None of the present owners of the Anderson mine were connected with Interstate (nor the original locators -Anderson and Moore), so we do not have this original drilling data.

Several of the Getty Oil geologists(in particular Robert H Dickey) informed me that they obtained the old Interstate drill logs and used them in correlation with the Getty drilling program. Thusly, Getty didn't drill holes where they had logs from Interstate. Getty obtained the Interstate logs and maps from attorney Hale Tagnoni of Phoenix for a price, and they (Getty) would never give this data to us (and we never had the money to "buy" them from Tagnoni). I might add that all of the old Interstate and original Anderson Mine people are long gone, and no one knows where to contact them. We re-located the claims (the Anderson Mine) in 1964.

In addition, the John Gaither, et al, claims drilling data should also be included in computing the overall reserves (we understand this info is in your office, also). The drill holes are just North of 43,300N and extend Northerly along about 70700E . They are part of our Cosmo group of claims(near Getty DH 154).

Now, here is some more information that probably should be included in your overall ore reserves picture. There is 40,000 tons (plus) of

ore in the old Anderson Mine pit area. This ore is in stock piles and Getty took mill samples and came up with figures of .26% U_3O_8 and .11% U_3O_8 (See Incl #3). For an overall average on this ore, we will accept a .19% figure. From all of the information we have learned, not more than four (4) RR cars of ore were ever shipped from the Anderson Mine. We estimate that the most that was hauled away could not be more than 400 tons. (See incl #4). Thusly, the vast bulk of the ore reported as "mined" is still on the claims in stockpiles. The AEC probably has all of the shipping and milling data in the GJ office.

In order to understand the overall picture of the Anderson Mine, with its confused drilling picture, I will endeavor to outline some of the past history. In early 1968, Getty started to get in the uranium business, and made a contract with us to drill and provisionally purchase the Anderson Mine. One might say it was their first immature U_3O_8 venture. They had several young geologists who just got out of school, as project geologists and they were learning. They failed to follow a grid pattern so that ore tonnages could be easily computed, put drill holes on the map that never were drilled in some cases, drilled holes that they failed to map in other cases, made errors in drill collar elevation in several instances, were erractic in serial use of DH numbers, failed to ask anyone familiar with the claims and ore bodies for advise, etc. So, the net result in our opinion, was a poorly planned and messed up drilling program.

However, we know the drill logs are accurate and we have checked the drill holes on the ground with those on the map and we think this data can be used to compute ore reserves in correlation with the Interstate and other previous drilling data. Getty dropped the Anderson Mine during the first part of 1969 and moved to Wyoming and other areas, that they considered more lucrative. Their parting remarks to us were that there is ore in the Anderson Mine, but it is not big enough for them. Under our contract we were to get the drill logs and maps, and we received these and a paucity of interpretative information. We wrote them for more data (including what we tho't was missing drill logs) and received the attached letter (Incl #5).

I have taken the liberty of marking some Section corner coordinates on your draft map which may help if someone wants to use some overlays of previous drilling data (Interstate, etc.) to compute ore body tonnages. These sections are in T11-N, R-10-W, Sit b&M.

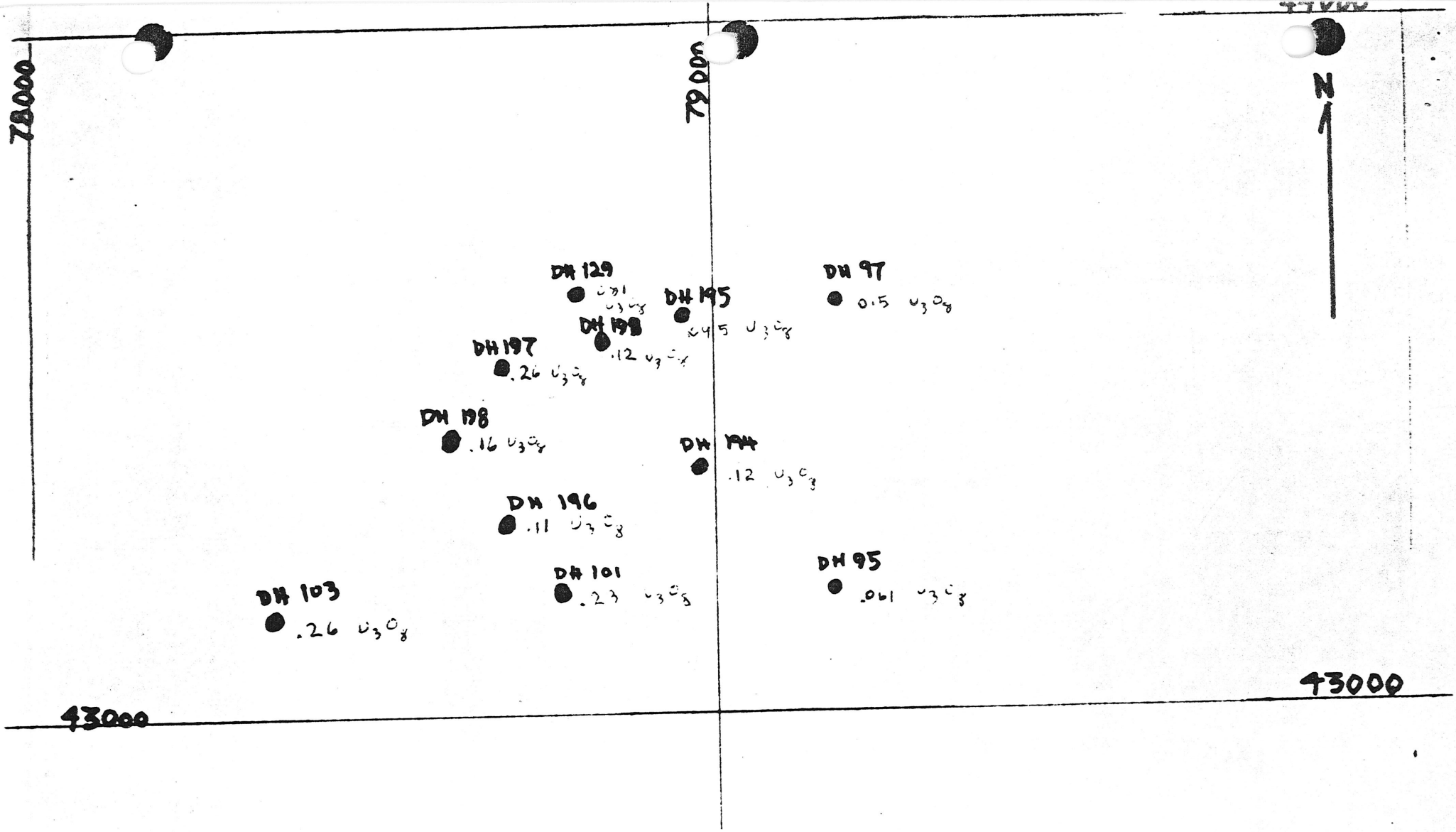
If we can be of any further help, please contact us. Next week, I am leaving for Guatemala for a month or six weeks. However, my associate, Dan Jacobs will be glad to be of assistance - his phone number is 427-9906, Congress, Arizona.

Yours sincerely,

Melvin H Jones

5 incls.

#1 AEC draft map
#2 Map Dhs coordinates 43000-79000
#3 Getty stock assay
#4 Extract- Bur.of Min.Resourses.State of Ariz.
#5 Letter- Getty Oil Co.

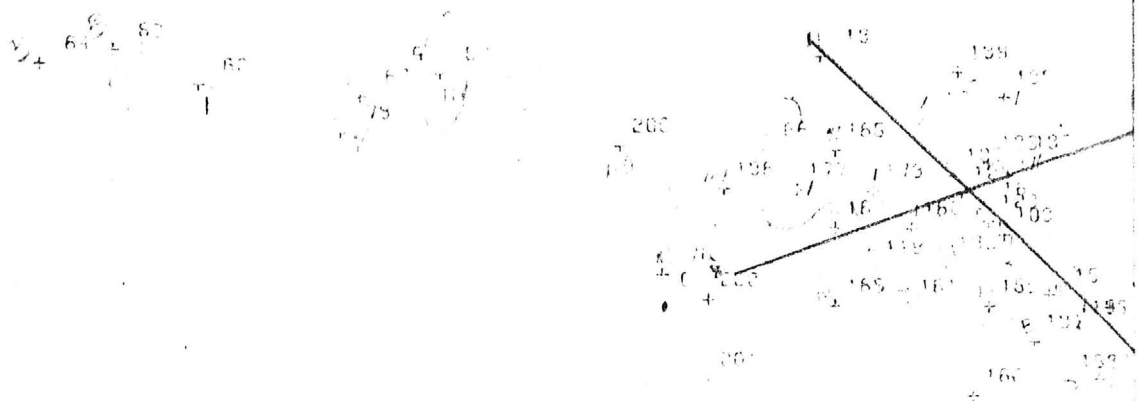


Reference Getty Oil Co.
Drill Map.

5" = 1000 ft.

7400.00 7450.00 7500.00 7550.00 7600.00 7650.00 7700.00 7750.00

MOONBE

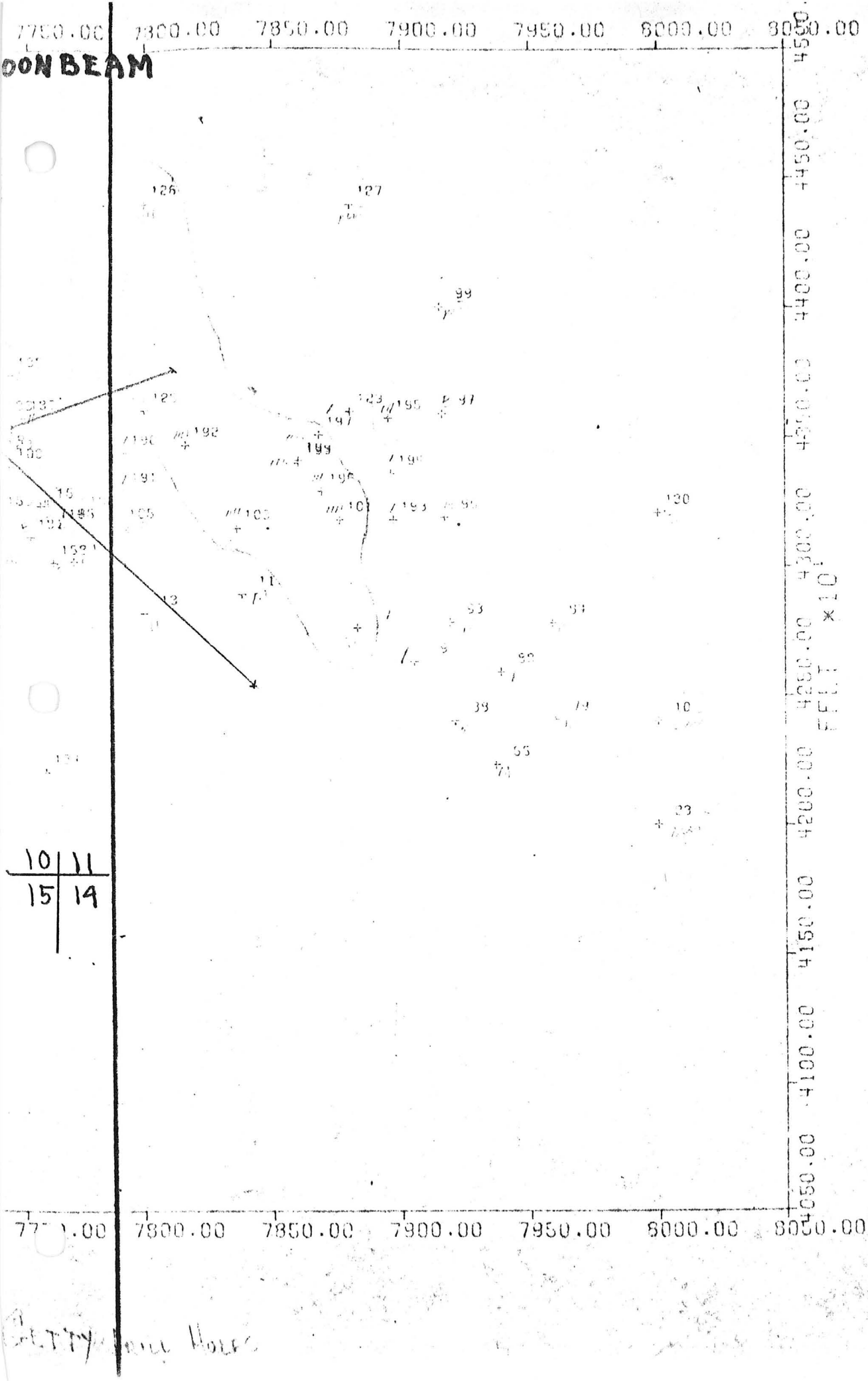


10	11
15	19

7400.00 7450.00 7500.00 7550.00 7600.00 7650.00 7700.00 7750.00

*10¹

CITY



OON BEAM

CITY Well Holes

ANDERSON MINE, ARIZ. 1

7150.00 7200.00 7250.00 7300.00 7350.00

COSMO

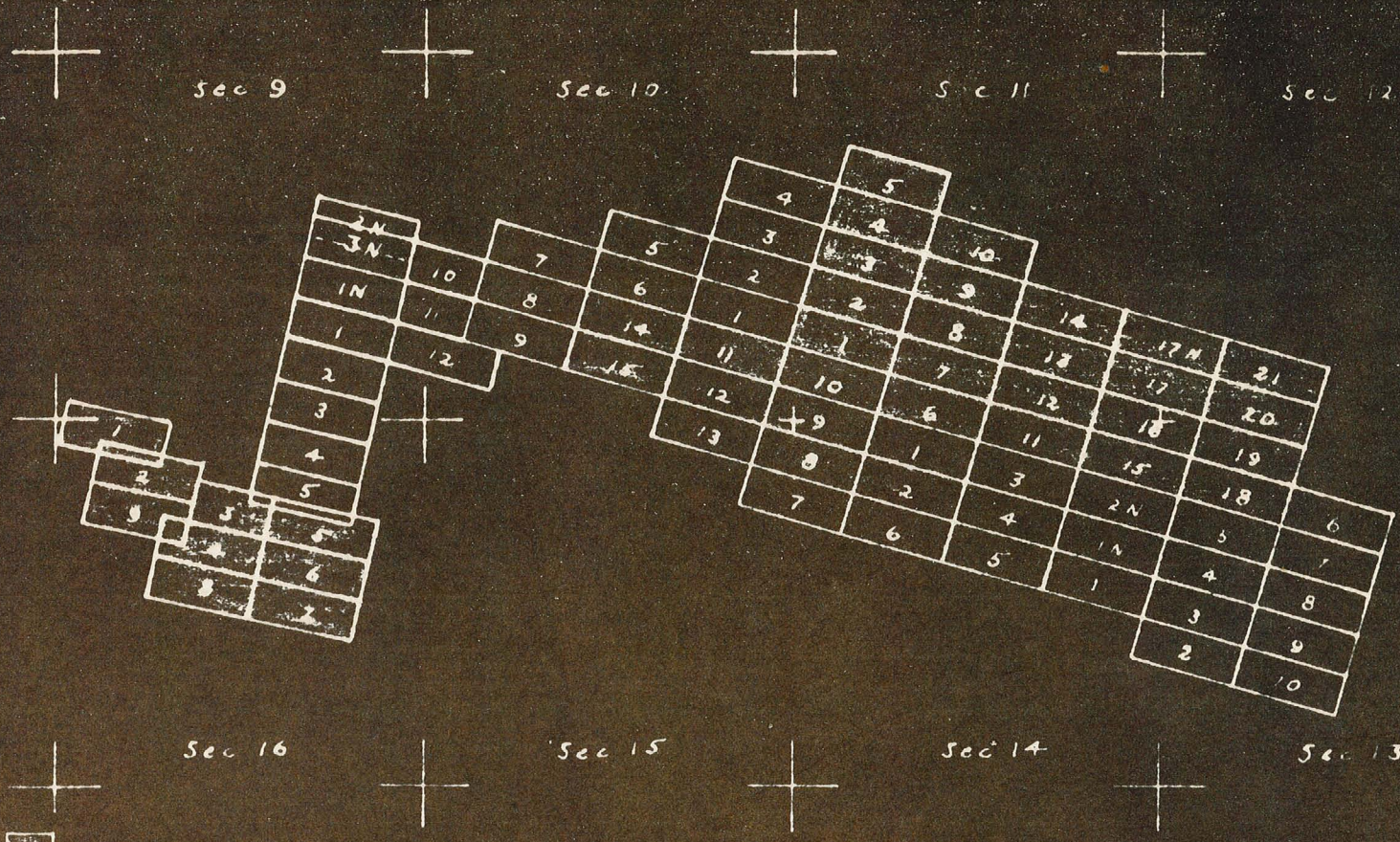
9	10
16	15

7100.00 7150.00 7200.00 7250.00 7300.00 7350.00 7400.00

FEET

FEET

BY J.F.B DATE 2/26/66 SUBJECT Uranium Aire Group SHEET NO. 1 OF 1
CHKD BY DATE Yavapai Co - Arizona JOB NO.



URANIUM AIRE 1-21, 17N, CLAIMS

URANIUM AIRE East End 1-10, 1N, 2N, CLAIMS

URANIUM AIRE 1-15 South CLAIMS

URANIUM AIRE 1-12 West CLAIMS

URANIUM AIRE FLAT TOP 1-5, 1-3N CLAIMS

URANIUM AIRE FLAT TOP GP. 2 1-9 CLAIMS

URANIUM AIRE GROUP

YAVAPAI COUNTY ARIZONA

Scale 2" = 1 Mile 2/25/66