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HAZEN RESEARCH, INC.

4601 INDIANA STREET
GOLDEN, COLORADO • 80401
TELEPHONE 303/279-4501

June 16, 1975

Mr. G. E. Marrall
Minerals Exploration Company
P. O. Box 2674
Casper, Wyoming 82601

Re: HRI Project 1757
Uranium Amenability Studies

Dear Mr. Marrall:

The two samples submitted by you on May 16, 1975, for uranium amenability studies were subjected to a semi-quantitative X-ray fluorescence analysis for minor elements. The results are as follows:

Element, %	AM-16c-1	AM-16c-2
Copper	0.009	0.010
Zinc	0.025	0.019
Lead	0.004	0.006
Arsenic	0.013	0.014
Iron	2.9	1.8
Cobalt	0.003	nd
Nickel	0.008	nd
Rubidium	0.025	0.016
Barium	0.070	0.035
Strontium	0.078	0.20
Titanium	0.15	0.068
Zirconium	0.029	0.046

Element, %	AM-16c-1	AM-16c-2
Vanadium	0.054	0.033
Molybdenum	0.010	0.021
Manganese	0.044	0.043
Yttrium	0.006	0.004

The above analyses indicate that the only element of value in the samples is the uranium, 0.101% U_3O_8 in Am-16c-1 and 0.052% U_3O_8 in AM-16c-2.

Yours truly,

John E. Litz
Project Manager

JEL:mgp

CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794
Casper, Wyoming 82601

ANALYTICAL REPORT

Company Minerals Exploration Co. Type of sample Mineral crude
Address P.O. Box 2674 Date April 16, 1975 Lab. No. 15895
Other Pertinent Data
Save plup for pick up

Analytical method Analytical classification Quantitative

AM-1C

Sample AM-1C	β-γ average	U_3O_8	eU_3O_8	V_2O_5			
1 60½-61	.0413	0.056		0.076			
2 64½-65	.017	0.021		0.036			
3 65-65½	.011	0.029		0.044			
4 65½-66	—	0.017		0.043			
5 66-66½	.007	0.019		0.025			
6 66½-67	.0610	0.102		0.061			
7 67-67½	.0075	0.021		0.020			
8 67½-68	.0503	0.051		0.030			
9 68-68½	—	0.012		0.009			
10 68½-69	.004	0.020		0.014			
11 94½-95	—	0.004		0.029			
12 95-95½	.0466	0.084		0.025			
13 95½-96	.0456	0.031	—	0.037			
14 96-96½	.0480	0.054		0.068			
15 96½-97	.0193	0.043		0.008			
16 97-97½	—	0.005		0.005			
17 97½-98	.0185	0.015		0.021			
18 98-98½	—	0.004		0.005			
19 98½-99	—	0.007		0.020			
20 99-99½	—	0.013		0.021			
21 99½-100	.005	0.021		0.036			
22 100-100½	.2333	0.214	—	0.133			
23 100½-101	.1260	0.121	—	0.110			
24 101-101½	.004	0.012		0.050			
25 101½-102	—	0.009		0.049			
26 103½-104	—	0.016		0.125			
27 104-104½	.0890	0.098		0.168			
28 104½-105	.0223	0.040		0.023			
29 105-105½	.0283	0.028		0.062			
30 105½-106	.0340	0.051		0.169			
Threshold							

ND - Not detected

Remarks

CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794
Casper, Wyoming 82601

Page 2

ANALYTICAL REPORT

Company Minerals Exploration Co. Type of sample Mineral - crude
Address P.O. Box 2674 Casper, Wy Date Lab. No. 15895
Other Pertinent Data

Analytical method Analytical classification Quantitative

AM-1c (cont.)

Sample		U_3O_8	eU_3O_8	V_2O_5			
AM-1C							
1 106-106½	.002	0.015		0.026			
2 106½-107	.0150	0.013		0.020			
3 109½-110	.0443	0.037		0.026			
4 110-110½	.004	0.023		0.025			
5 110½-111	.0236	0.028		0.026			
6 111-111½	.0316	0.048		0.071			
7 111½-112	.0203	0.029		0.039			
8 112-112½	.0876	0.106		0.035			
9 112½-113	.0383	0.048		0.041			
10 113-113½	.019	0.016		0.034			
11 113½-114	.003	0.017		0.088			
12 114-114½	—	0.008		0.053			
13 114½-115	.1353	0.152		0.110			
14 115-115½	.1320	0.129		0.028			
15 115½-116	.0566	0.060		0.020			
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
Threshold							

ND - Not detected

Remarks

AM #	COORDINATES	ELEVATIONS
1	1203782.5N-642726.1E	1830
2	1204191.6N-642758.7E	1818
3	1203808.7N-643051.1E	1848
4	1203876.1N-641982.6E	1812
5	1202320.4N-637545.9E	1918
6	1203848.8N-640949.7E	1790
7	1203799.1N-643830.4E	1926
8	1204112.2N-640086.1E	1830
9	1203736.7N-644569.3E	1994
10	1203908N-636372E	1929
11	1202976.7N-644571.3E	1958
12	1202836.1N-645384.6E	1931
13	1203020.9N-643852.9E	1936
14	1202863.7N-643167.6E	1903
15	1202000N-639600E	1826
16	1202600N-639650E	1772
17	1203009N-636753E	1714
18	1202892N-641554E	1864
19	1203303N-642110E	1798
20	1203011N-639055E	1919
21	1202901N-638134E	1929
11-10-16-1	1200510N-634854E	1747
11-10-16-2 1199,472N-635,633E	~~1197562N-635636E~~	1838
11-10-19-1	1203303N-642110E	1798
11-11-21-1	1195534N-601841E	1426
11-11-22-1	1195245N-607555E	1548
	1202,029N-640,823E	
22	~~1195156N-606785E~~	1954
23	1203080N-640601E	1988
24	1202014N-641460E	2008
25 1202958N-637434E	~~1203958N-638096E~~	1930
26	1201879N-642347E	2027
27	1201300N-636842E	1965

TO: W. R. Moran

DATE: November 27, 1974

FROM: G. E. Marrall

SUBJECT: Uranium Exploration Prospect Yavapai County, Arizona

The following is a summary of the information given to you by telephone on November 26, 1974 with regard to the Yavapai County uranium prospect.

I. Land: 77 claims (approximately 1600 acres) owned by Melvin H. Jones and Dan Jacobs of Wickenburg, Arizona and located in T. 11 N., R. 10 W. Yavapai County, Arizona. Mr. Jones address is Box 406, Wickenburg, Arizona 85358; telephone (602) 684-2767.

II. Proposal: Payment of $20,000 for a 12 month option to further explore claims. Outright sale of claims for $300,000 with possibility of option price being applied to purchase price.

III. Geology and Economics: Uranium mineralization occurs within carbonaceous, calcareous mudstones interbedded with limestones and minor tuffs of Tertiary age. The sediments are part of a lake bed sequence which also includes some conglomerates and basalt flows. Tertiary faulting is common in the area. The basin in which the lake bed sediments were deposited trends east-west and is approximately five miles wide and forty miles long. A schematic cross-section and a generalized geologic column are included as attachments to this memorandum.

The uranium - bearing mudstone - limestone sequence crops out on the claims group (see attached geologic map). A number of holes have been drilled and some excavating with a bull dozer has been done. The results of the bull dozer work has been the creation of stock piles containing a total of 20,000 to 30,000 tons of ore at an average grade of .11% U_3O_8. These stockpiles would be an excellent source to acquire bulk samples for metaluggical purposes.

Logs from all drill holes are not available, but using those which are, a calculation of gross geologic reserves was made using a grade cutoff of .02% U_3O_8 and a grade - thickness cutoff of .50. This admittedly rough calculation indicates known gross geologic reserves of over 3,000,000 pounds of U_3O_8 at an average grade of .10% U_3O_8 and an average thickness of 13 feet. Extension of known mineralized areas seems likely. It might be noted that an AEC program was run on the property in 1968 and using a $7.50/lb cost and an average grade of .10% U_3O_8 they calculated recoverable reserves of 1,680,000 pounds of U_3O_8. Calculations of both the AEC and in-house were on mineralized beds no deeper than 200 feet.

Based on our present knowledge the mineralized area trends northeast-southwest. Geological conditions limit the favorable area to the north, northwest and northeast. Urangashelshaft holds the ground to the south and southeast. Land to the southwest appears open and should be staked if this land in acquired. At present it appears we could add 500 claims in this direction.

Besides ourselves, we know that United Nuclear is appraising these claims and suspect that Urangashelshaft is also having a look.

We have done no cash flow sheets but bhere appears to be sufficient indicated reserves at present to run a 500 ton/day mill for ten years at an excellent rate of return.

IV. Favorable features

1. Known uranium mineralization on claim group.
2. Mineralization is shallow (less than 200 feet)
3. Very reasonable terms (less than $.20/lb. for reserves in the gpoudd if one uses the out-of-date AEC figure for reserves
4. Good access to area by gravel roads
5. Good climate; compliments climate of other areas we work so that active exploration work can be carried out in winter
6. Some exploration work already completed
7. Area can be extended and land acquired by staking to the southwest
8. No partner involvement; land would be wholly-owned
9. Possibility of other deposits w/in the 40 x 5 mile basin ie. Artillery Mt. Region and between

V. Unfavorable features

1. Limited amount of land (1600 acres) to be acquired under present agreement
2. Tertiary faulting in area may or may not complicate pit design
3. Area is rather remote

GEM:pc
Enclosures 3

May 6, 1975

Mr. Steve Paviak
3721 #7 Country Club Dr.
Long Beach, Calif.

Dear Steve:

Enclosed are some copies of recent articles pertaining to concepts of uranium mineralization and a sketchy account of the Anderson Mine area, Ariz. Jack thought these articles would be of interest. More detailed information on the stratigraphy of the area can be found on:

Lasky, S. G. and Webber, B. N., 1949, Manganese resources of the Artillery Mountains region, Mohave Co., Ariz.: U.S.G.S. Bull. 961, 86 p.

If you have any questions or need anything feel free to call us collect at our Casper office. If you can give us a couple of weeks lead time we should be able to send someone down to Arizona and show you around our Anderson Mine property. I'll be taking a field trip sometime in June, to look at some prospects, and would be more than happy to swing down to Wickenburg.

Good luck with school. Hope to be hearing from you soon.

Sincerely,

Terry S. Hellinger
Geologist

TSH:ct
Encl.

ASSESSMENT EXPENSE

July, 1975

ARIZONA - WICKENBURG PROJECT		Amount
Exploratory Drilling		$3,793
CASPER OFFICE		
Salaries & Expenses	$1,659	
Miscellaneous Services	866	$2,525
Assessment- July 1975		$6,318
Assessment to date		$192,134
Claims (Subject to Assessment)		79

LWW:ct
8/19/75

AFE EXPENDITURE RECAP

Project: Wickenburg (Anderson Mine)

Month: July 1975

AFE No.: 115707

Authorized Amt: $155,000.—

		Account Code	Current Month	Expenditures To Date	Unexpended AFE Bal.
July	31	1-17-125005-339-115707	3992.97	150,040.18	4,959.82

DATE APPROVED 1-15-75

COST ACCOUNTING SHEET

AMOUNT AUTHORIZED $155,000.—

DATE COMPLETED

AFE NO. 115707

1-17-125005-339-115707

PROJECT Wickenburg Ariz "Anderson Mine

DATE	TRANSFER NUMBER	INVOICE NUMBER	COMPANY	DISCRIPTION OF MATERIAL OR SERVICE	CASH OUTLAY AMOUNT	CURRENT MONTH AMOUNT	CUMULATIVE AMOUNT
1-31-75		190572	Casper Lumber	Drill Site Stakes	47.70		
"			Keith Flynn	Surveying + Stake Locations	2865.25		
"			Hazen Research	Uran. Amenability Study	1582.77	4496.22	4496.22
2-21-75			Jones et Al	Option on Claims - Fee 25.30	20025.30		
2-28-75			Daryl Ballew	Dozer Work	2096.00		
"			Keith Flynn	Surveying - Claims Loc. Staking	4840.71		
"			Wickenburg Lumber	Stakes	449.61	27406.62	31,902.84
3-31-75			Keith Flynn	Survey Locations	3955.14		
"			Daryl Ballew	Dozer Work	656.00	4,611.14	36,513.98
4-23-75			Universal Drilling	Exploratory Drilling	94,115.50		
4-23-75			Daryl Ballew	Dozer Work	288.00		
4-30-75			Keith Flynn	Locations + Elevations	1,850.29		
4-30-75			C.R. Beeman Expl. Drilling	Exploratory Drilling	4,918.50		
4-30-75		6876	Chem + Geolog Lab.	Sample Analysis	855.00		138,541.27
4-30-75		7049	Chem + Geolog Lab	" "	1767.00	103,794.29	140,308.27
5-30-75		851	Digitgraph	Computer Services	2246.94		142,555.21
5-30-75		MAY Inv	Hazen Research	Analytical Charges	822.43	3074.37	145,629.58
6-30-75			"	"	40.00		
6-30-75			Digitgraph Comp. Systems	Processing	577.63	617.63	146,247.21
July			Jim Williams Well	Drilling	3792.97	3792.97	150,040.18

ASSESSMENT EXPENSE
August 31, 1975

ARIZONA - WICKENBURG PROJECT	AMOUNT
Casper Office	
Salaries & Expenses	$1,216
Miscellaneous Services	538
Assessment August, 1975	$1,754
Assessment to date	$193,888
Claims (Subject to assessment)	79

LWW:ct
9/22/75

AFE EXPENDITURE RECAP

Project: Wickenburg (Anderson Mine)

AFE No.: 115707

Month: August 1975

Authorized Amt: 155,000.—

		Account Code	Current Month	Expenditures To Date	Unexpended AFE Bal.
Aug	31	1-17-125005-339-115707	—	150,040.18	4,959.82

Uranium Projects - August 1975

			100 % Red Desert	JV Red Desert	Total Red Desert	C-H.	SRD	Wickenburg	
114727	Insitu Leach-Operations			14,402	14,402				VARIOUS
115717	Test Pit -Operations			106,234	106,234				"
115721	Environmental Baseline Study			4,843	4,843				
Insitu	30 KW Generator Rental			500	500				100% owned.
114727	Research Dept - Insitu			3,505	3,505				JE08-4089
115717	Research Dept - P.T.			393	393				" "
—	Surveyor - Establish R.D. Claims Boundary			3,368	3,368				Keith Flynn
	Los Angeles Personnel			—	—	—			
	Casper Office								
	Salaries + Expenses	25,235							
	Trans. + Travel	2,214							
	Supplies + Services	1,395							
	Utilities 78%	238							
	Other	15							
	Rent 78%	1,535							
	Contract - Office	2,162							
	Depreciation	1352							
		34,146		15267	15267	517	299	1754	
	Assessment August 1975		—	148,512	148,512	517	299	1754	
	Assessment to Date		14341	654,577	668,918	49782	18073	193888	
	Claims (Subj to 1975 Assessment)				2539	415	—	79	
	Recorded Claims.				2701	415	1177	79	

Aug. Exp Accts	
Bradley	71
DeWitt	310
Dahm	65
Hellinger	324
Hudson	69
Living	283
Marrain	27
Miller	49
Moore	187
Sperborne	9
Victor	2
Wilson	28
	1424

9/22/75

HAZEN RESEARCH, INC.

4601 INDIANA STREET
GOLDEN, COLORADO • 80401
TELEPHONE 303/279-4501

September 25, 1975

Mr. G. E. Marrall
Minerals Exploration Company
P. O. Box 2674
Casper, Wyoming 82601

Re: HRI Project 1833
Uranium Amenability Studies, Anderson Mine

Dear Mr. Marrall:

The sample of split core, "AM-16-c," delivered by you on September 4, 1975, was crushed through 6-mesh and blended to form our sample HRI 8630. An analytical pulp taken from the composite contained 0.107% U_3O_8.

Agitation leaches were performed on portions of the composite ground to 28-mesh. A carbonate leach at 80°C and 33% solids, for 24 hours with 160 lb/ton Na_2CO_3, 80 lb/ton $NaHCO_3$, and 8 lb/ton $KMnO_4$ added, solubilized 86% of the uranium. The resulting leach pulp was very slow filtering. A sulfuric acid leach at 80°C and 33% solids, for 24 hours required the addition of 472 lb/ton sulfuric acid and 36 lb/ton sodium chlorate to solubilize 87% of the uranium into a 1.5 pH leach solution. Data sheets and material balances for these two tests are attached. It would appear that this particular sample is more suited to carbonate leaching.

Two simulations each were made of both the UKAEA and Holmes and Narver acid-bake/cure processes. In the first series, only 200 lb/ton of sulfuric acid was used, whereas, the second series used 400 lb/ton. The UKAEA procedure was to pug 28-mesh ore with the acid and chlorate at 80% solids and hold it at 100°C for three hours. The moist ore was then pulped at 25% solids for 30 minutes, filtered, washed, and dried. Only 7% of the uranium was solubilized in the test with 200 lb/ton sulfuric acid and 2 lb/ton sodium chlorate. Increasing the reagent additions to 400 lb/ton and 4 lb/ton sodium chlorate raised the uranium extraction to 67%.

The Holmes and Narver simulation consisted of wetting 6-mesh ore in a flask with about 13% water. Concentrated sulfuric acid, 96%, was added and the mixture was pugged. The temperature rose to a maximum of 60°C upon the addition of the acid. The flask was then loosely stoppered and was placed in a 60°C oven for 48 hours. The cured ore was then pulped at 25% solids for 30 minutes, filtered, washed, and dried. About 9% of the uranium was solubilized in the test with 200 lb/ton sulfuric acid and only 32% was solubilized in the test with 400 lb/ton sulfuric acid.

It would appear that the shale and clay in the ore are too reactive with the acid to allow good uranium extractions when using low acid addition techniques. The Holmes and Narver technique is also limited by the coarse ore size. Assuming that this sample is representative, it is my opinion that additional tests be made to attempt optimization of the carbonate leaching technique. The poor filterability of the carbonate-leached ore indicates that the uranium recovery from the leach solution would be by a resin-in-pulp technique.

Unless I hear to the contrary, we shall do further carbonate leaches next week.

Yours truly,

John

John E. Litz
Project Manager

JEL:nd
Encls.

Uranium Carbonate Leach Amenability, 472-71
HRI-8630, 0.107% U_3O_8

160 lb/ton Na_2CO_3
80 lb/ton $NaHCO_3$

Elapsed Time Hours	Temp °C	pH Read/Adjust	emf mv	$KMnO_4$ Cum lb/ton
0	45	9.7	-130	8
1	78	9.2	-170	
2	80	9.1	-180	
3	80	9.2	-190	
4	81	9.2	-190	
6	82	9.3	-190	
12	80	9.4	-180	
24	81	9.6	-200	
	25	10.1	-40	

Metallurgical Balance

Sample Time Hours	Filtrate + Wash			Residue			U_3O_8 Extraction %
	Volume ml	U_3O_8 g/l	U_3O_8 g	Weight g	U_3O_8 %	U_3O_8 g	
6				17.5	0.019	0.003	82
12				14.5	0.014	0.002	87
24	1260	0.197	0.248	214	0.015	0.032	86

Overall calculated head, 0.114% U_3O_8

Uranium Acid Leach Amenability, 472-72
HRI-8630, 0.107% U_3O_8

Elapsed Time Hours	Temp °C	pH Read/Adjust	emf mv	H_2SO_4 Cum lb/ton	$NaClO_3$ Cum lb/ton
0	72	6.2 / 1.3	340	384	9.6
1	78	1.2	460		13.6
2	80	1.35	450		21.6
3	80	1.6 / 1.3	470	440	25.6
4	81	1.3	480		29.6
6	82	1.5 / 1.3	440	472	36.0
12	80	1.4	430		
24	80	1.8	380		
	25	1.5	310		

Metallurgical Balance

Sample Time Hours	Filtrate + Wash			Residue			U_3O_8 Extraction %
	Volume ml	U_3O_8 g/l	U_3O_8 g	Weight g	U_3O_8 %	U_3O_8 g	
6				17	0.018	0.003	83
12				14	0.017	0.002	84
24	1270	0.197	0.250	217	0.015	0.003	87

Overall calculated head, 0.115% U_3O_8

Berg Hedinger

ASSESSMENT EXPENSE
January, 1976

		Amount
ARIZONA - ANDERSON MINE PROJECT AFE 115719		
Exploration Drilling & Surveying		$153,303
Contract Field Labor - K. Moore		1,040
Well Logging - Unit #29 (Nov. 1975 thru Jan. 1976)		14,800
Los Angeles Personnel		-
CASPER OFFICE		
Salaries & Expenses	$10,862	
Miscellaneous Services	6,371	$17,179
Assessment - January, 1976		$186,322
Assessment to Date		434,068
Claims (Subject to 1976 assessment)		79
Assessment thru January 31, 1976		$434,068
Land Acquisition thru Jan. 31, 1976		$365,700
AFE 115719 Expenditures:		
Assessment work		$338,339
Land Acquisition		365,700
TOTAL AFE 115719 thru Jan. 1976		$704,039

LWW:ct
2/13/76

AFE EXPENDITURE RECAP

Project: Anderson Mine
AFE No.: 115719 + 115719 S

Expl. work - 344,000
Land Acq - 349,000
693,000

Month: JAN. 1976
Authorized Amt: $693,000.—

	Account Code	Current Month	Expenditures To Date	Unexpended AFE Bal.
	Exploration-Assessment $380,000			
1976 JAN 31	1-17-125005-339-115719	153,302.78	338,338.73	5,661.27
	Land Acquisition $313,000—			
2/21/75	Jones et Al Option Agreement Chk# 148230	20,000—		
7/8/75	JAC-SAR Claims 1-23 Acq. Chk# 8086635	22,000—		
7/14/75	Walter R. Holder-Option Ext. Chk# 162102	8,000—		
12/14/75	Jones et Al Option Agreement Chk# 176464	130,000—		
1/6/76	Jones et Al Option Agreement Chk# 178900	150,000—		
1/9/76	W.R. Holder Expl. + Option Agreement Chk# 179401	35,700—	365,700—	<16,700>

"Wait-Check out Land Costs with L.A. Records + Advise"
L.W.W.

CURRENT MONTH AMOUNT	CUMULATIVE AMOUNT
12.50	
6.58	
3.92	
1.04	
28.86	
30.24	
17.34	
25.90	153,302.78
	338,338.73

Anderson Mine

AUTHORIZED $693,000—

Uranium Projects – January 1976

7116A

	AFE	Project	100% Red Desert	Jr. Red Desert	Total Red Desert	Clarkson Hill	S.R.D.	Moroni Slope	Anderson Mine	Fall River	
1	114727	Insitu Leach	–	3,214	3,214						
2	115717	Test Pit	–	7,218	7,218						
3	115719	Anderson Mine - Assessment work							153,303		
4	115719	Anderson Mine - Land Acq. thru 1/31/76							365,700		Memo Entry - Not incl. in Assessment Totals
5	116703	Red Desert - Feasibility Study	–	7,569	7,569						
6	115719	Contract Field - K. Moore - And. Mine							1,010		
7	115719	Logging Unit #29 Nov. 1975 thru Jan. 1976							14,800		Nov. #3263; Dec. #6160 + Jan. #6377
8											
9		Los Angeles Personnel - Dec. 1975		73	73						
10		- Jan. 1976		6,070	6,070						
11											
12		Casper Office									
13		Salaries + Expenses 30,896									
14		Transportation + Travel 3,201									
15		Contract - Office 127									
16		Supplies + Services 1,635									
17		Utilities - 79% 867									
18		Other 116									
19		Rent - 79% 1,554									
20		Depreciation 1,580									
21											
22		$39,976		12,235	12,235	1,160	418	1,415	17,179	–	
23											
24		Assessment Jan. 1976		36,379	36,379	1,160	418	1,415	186,322	–	
25											
26		Assessment to Date		250,149	250,149	2799	418	1,415	434,068	4,459	(Exp. % Not Turned in)
27											
28		Claims (Subj. to 1976 Assessment)			2810	415	1177	430	79	–	
29											
30		Recorded Claims			2967	415	1177	430	79	115	
31											
32											
33											

Exp. Accounts	
Arrieta	389
Bares	36
Bradley	311
DeWitt	668
Dohm	792
Hellinger	314
Hudson	337
Living	292
Marlatt	–
Marrai	489
Moore	811
Parlak	373
Pedry	355
Sherborne	317
Wilson	79
	$5563.

Jerry

ASSESSMENT EXPENSE
January, 1976

UTAH - MORONI SLOPE PROJECT AFE -		Amount
CASPER OFFICE		
Salaries & Expenses	$841	
Miscellaneous Services	574	$1,415
Assessment January, 1976		$1,415
Assessment to Date		$1,415
Claims (Subject to 1976 Assessment)		430

LWW:ct
2/13/76

Chase Date	Ser. #	Type	Grade	Diamond Wt			
/70	D-4621	6018.9	11/3	64.80	Ret'd For Cr. Prior to 12/18/70		
6/70	D-4622	110899	A/10	59.28	Ret'd For SALVAGE	7-18-71	
			< Cr. due	$590.58	= Chk Rec'd 8/71 >		
5/70	F3804 (used) $929.45	110899	A/10	60.09			
8/71	G 434 (NEW) $937.18	110899	A/10	59.47			
11/74	3537622 (used) ~~$1662.29~~ $1911	114302	4 7/8" x 3"	125.17			
1/14/76	55-	114302	4 7/8" x 3"	124.4			

Authority for Expenditure
Union Oil Company of California

A.F.E. No. 115719

union 76

TERRY

DEPARTMENT NO.	DEPARTMENT	LOCATION	DATE
	Minerals Exploration Co.	Casper, Wyoming	June 12, 1975

PURPOSE
☐ PROGRAMMED EXPANSION, COST REDUCTION, AND OPTIONAL REPLACEMENTS AND ADDITIONS SUBJECT TO MINIMUM RETURN ON INVESTMENT.
☒ NECESSARY REPLACEMENTS, AND "OTHER" EXPENDITURES NOT SUBJECT TO RETURN ON INVESTMENT.

BUDGETED ☐ YES ☒ NO

RETURN ON INVESTMENT	REQUIRED	THIS PROPOSAL	CALCULATED BY	AMOUNT REQUESTED (TOTAL COST)
	%	%		$ 583,000

EXPENDITURE DESCRIPTION

Funds are requested to continue exploration in the Anderson Mine area, Yavapai County, Arizona. At the present time the area of main interest is drilled on an 800 ft. grid. It is proposed to take a bulk sample from mineralized outcrop for mill amenability testing. It is further proposed to drill the area of best mineralization on a 400 ft. grid. This will entail the drilling of approximately 95 holes to an average depth of 450 feet. The cost of this project is as follows:

? water well
10,000 dozer

EXPLORATION

1. Obtain bulk sample from outcrop w/bulldozer	$ 1,000	
2. Shipping, assaying, etc. (cores & bulk sample)	9,000	
3. Mill Amenability Studies (dozer)	10,000	
4. Drill 95 holes to an average depth of 450' (50,000')	192,375	~~39,000~~
5. Drill and core 15 holes 1200' × 50¢/hr // 2 ft/hr	47,625	
6. Surveying	10,000	
TOTAL EXPLORATION	$270,000	~~293,000~~

PAYMENTS FOR LAND

1. Payment to purchase claims in Anderson Mine area	
a. December 31, 1975 payment	$130,000
b. January 15, 1976 payment	150,000
2. Extend option period on Section 16 to February 3, 1976	8,000
3. Acquisition of Jacsar claims (23)	24,000
4. Title Review	1,000
TOTAL EXPLORATION AND LAND ACQUISITION	$583,000

RIBUTION:
. Acctg.
1. Office
ect File
. Eakland
. Garza
File

CHARGE ☐ EXPENSE ☒ CAPITAL

	COST CENTER GRP.	COST CENTER NUMBER	ACCOUNT G/L	ACCOUNT DETAIL	ACCOUNT SUB-DETAIL	CAP. BUDG. CATG.	AUTHORITY	ADDITIONAL INFORMATION
	17	125 005	339					

ESTIMATE BY	A.F.E. MADE BY	CHECKED BY
GEM	WCG	WHG HMR

APPROVED
APPROVED
APPROVED
APPROVED
SENIOR VICE PRESIDENT

Material Transferred $_____
Cash Outlay _____ $ 583,000
Contingencies ___% _____
TOTAL COST 583,000
Salvage (Pres. Value) (_____)
Chargeable to Others ___%(_____) (_____)
NET COST $ 583,000

COMPTROLLER OR DIVISION COMPTROLLER

EXECUTIVE COMMITTEE – (SECRETARY OR ASS'T SECRETARY | DATE APPROVED 10/1/75

FORM 1-2H04 (NEW 7-74) PRINTED IN U.S.A.

CL1-12A (REV. 1964)

CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794
Casper, Wyoming

WATER ANALYSIS REPORT

OPERATOR Minerals Exploration Co. DATE January 9, 1976 LAB NO. 18543
WELL NO. AM - 1W LOCATION
FIELD FORMATION
COUNTY INTERVAL
STATE Wyoming SAMPLE FROM AM - 1W

REMARKS & CONCLUSIONS:

Uranium, U_3O_8, mg/l	0.006
Vanadium, V_2O_5, mg/l	ND(0.05)
Manganese, Mn, mg/l	ND(0.01)

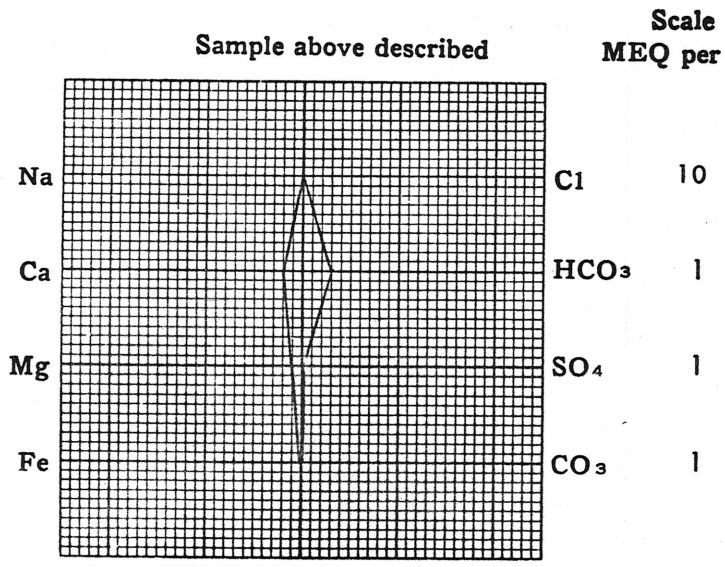
Cations	mg/1	meq/1	Anions	mg/1	meq/1
Sodium	17	0.76	Sulfate	4	0.08
Potassium	3	0.08	Chloride	20	0.56
Lithium			Carbonate	0	
Calcium	38	1.90	Bicarbonate	183	3.00
Magnesium	11	0.90	Hydroxide		
Iron	-		Hydrogen sulfide	-	
Total Cations		3.64	Total Anions		3.64

Total dissolved solids, mg/1 183
NaCl equivalent, mg/1 150
Observed pH 7.2

Specific resistance @ 68°F.:
Observed 33.0 ohm-meters
Calculated 38.0 ohm-meters

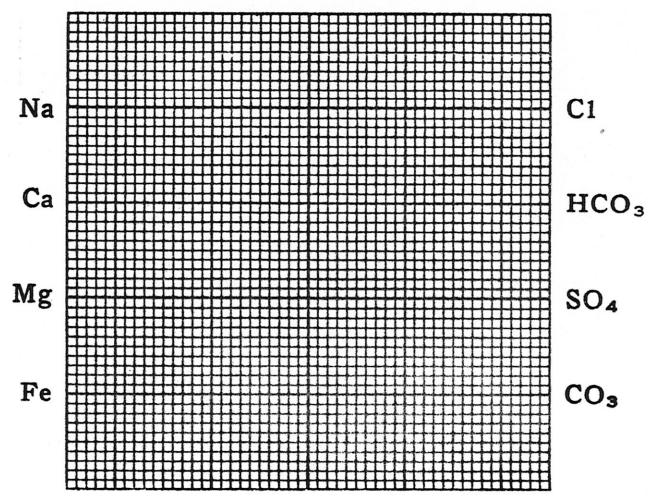
WATER ANALYSIS PATTERN

Sample above described



Scale
MEQ per Unit

10
1
1
1



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/1=Milligrams per liter Meq/1= Milligram equivalents per liter
Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components

Loc	Coordinates	Elev.
AM-17C	1,202,998N-636,759E	1718
7M-79C	1,202,392N-645,201E	1905
9M-13C	1,203,043N-643,862E	1940
9M-7C	1,203,803N-643,852E	1931
105	1,202,832 N-642,922 E	1892
106	1,203,637 N-642,432 E	1922
107	1,203,181N-642,698E	1924
108	1,203,187N-643,203E	1868
109	1,203,994N-642,814E	1812
110	1,203,589N-642,807E	1845
111	1,203,193N-643,599E	1921
112	1,203,999N-642,401E	1869
113	1,202,812N-643,716E	1832
114	1,203,181N-641,204E	1891
115	1,203,605N-642,004E	1799
116	1,202,814N-644,123E	1874
117	1,203,201N-641,609E	1837
118	1,203,608N-641,600E	1810
119	1,204,050N-642,033E	1823
120	1,203,205N-642,005E	1844
121	1,203,884N-641,726E	1796
122	1,202,806N-641,177E	1924
123	1,200,814N-644,505 E	1868
124	1,203,198N-642,475 E	1863
125	1,204,408N-642,401 E	1809
126	1,204,003N-641,204E	1792
127	1,204,808N-642,412E	1867
128	1,204,395N-641,595E	1749
AM-18C	1,202,890N-641,570 E	1870

Loc.	Coordinates	Elev.
AM-70	1,202,399 N - 636,401 E	1741
71	1,203,206N - 636,408 E	1699
72	1,201,999N - 636,397 E	1787
73	1,201,991N - 636,801E	1833
74	1,202,419N - 636,761E	1864
75	1,202,794N - 636,804E	1750
76	1,203,200N - 637,129E	1764
77	1,202,790 N - 637,221E	1844
78	1,201,998 N - 645,203 E	1944
79	1,202,397 N - 645,201 E	1904
80	1,201,996N - 644,797 E	1984
81	1,202,401N - 644,802E	1929
82	1,202,000N - 644,405E	1981
83	1,202,400N - 644,393E	1956
84	1,203,600N - 644,001E	1937
85	1,202,795N - 645,192 E	1946
86	1,201,995N - 644,003E	2109
87	1,203,192 N - 644,807E	1945
88	1,202,807N - 644,787E	1952
89	1,203,595N - 644,794E	1960
90	1,203,601 N - 644,402E	1973
91	1,204,001N - 644,400E	1997
92	1,202,803N - 644,392E	1962
93	1,201,996 N - 645,598 E	1960
94	1,204,003N - 644,003 E	1933
95	1,204,003N - 643,607E	1889
96	1,203,204N - 644,391 E	1937
97	1,202,415N - 645,599E	1881
98	1,203,211N - 643,996E	1913
99	1,203,599 N - 643,603E	1874
100	1,203,599 N - 643,203 E	1861
101	1,203,997N - 643,197E	1854
102	1,199,010 N - 637,222E	2045
103	1,204,412N - 642,778E	1819
104	1,204,376N - 643,180E	1825