11-15-56

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED NOV 15 1956 D.M.E.A.

November 14, 1956

Re: DMEA 4394
Mernab Mines Co.
Dead Horse Point Claims
Grand and San Juan Counties, Utah
$107,990.00 - Uranium

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Examination Report. (Engineer only)

The applicant requested assistance in exploring, by drilling and underground work, a property on which extensive non-core drilling and underground work had been done.

After filing the request, the applicant, without notifying representatives of D.M.E.A., abandoned the project. An examination was made and the subject report is submitted for the record.

As would be inferred from the history of the project, the engineer examiner considers the chances of finding significant uranium ore bodies poor and recommends denial of any future application.

The conclusion appears apt and I concur with the recommendation of the engineer examiner.

N. E. Nelson

N. E. Nelson

11-9-56

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Washington 25, D. C.

RECEIVED NOV 9 1956

Date 11/8/56

DMEA Docket No. 4394
DMEA Contract No.
Commodity Uranium
Name of applicant Mernab Mines
Name of property Dead Horse Point Project
Location of property Grand & San Juan Co., Utah
Estimated cost of project $107,990.00

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Review of Report of Examination
(Application, Field Team Report, etc.)

1. Date of subject document: _____. 2. Date received by reviewer: 11/7.

3. Prior reports on this property known to reviewer: Yes ☐ No ☐

4. Prior reports on nearby properties known to reviewer: Yes ☐ No ☐

5. Information available on past production: Yes ☐ No ☐

6. Other pertinent factors known to reviewer: Yes ☐ No ☐

7. Explain items marked yes above:

8. Factors needing special consideration:
   a. Location ☐
   b. Ownership ☐
   c. Evidence of mineralization ☐
   d. Geology ☐
   e. Proposed exploration method ☐
   f. Alternate exploration method ☐
   g. Costs ☐
   h. _____ ☐

9. Action advised:
   a. Obtain information from applicant ☐
   b. Refer to Field Team ☐
   c. Denial [x]
   d. Agree with Field Team [x]
      i. Consult with Mr. _____ at _____ AEC office.
   e. Disagree with Field Team ☐
   f. Suggest alternate plan ☐
   g. Request another examination ☐
   h. Approval ☐

10. Remarks: (Use back of page if necessary)
Considered withdrawn as of October 10, 1956. Mr. J. O. Hosted, Washington representative of the Atomic Energy Commission, assisted in the review.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
NOV 5 1956
D.M.E.A.

224 New Customhouse
Denver 2, Colorado

November 1, 1956

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Engineering Report of Examination Docket DMEA 4394 (Uranium) Dead Horse Point Project (Mernab Mines) Grand and San Juan Counties, Utah

Enclosed, for record purposes only, are the original and three copies of an Engineering Report of Examination on the subject property. The Geological Survey participated in the examination, but did not submit a report.

This application was considered as having been withdrawn by the Administrator's letter, dated October 10, 1956.

DMEA Field Team, Region III

By W. M. Traver
Executive Officer

Reviewed by
DMEA OPERATING COMMITTEE

11-7-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
October 31, 1956

DMEA
DEPARTMENT OF THE INTERIOR
OCT 31 1956
REGION III
DENVER, COLORADO

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw

Subject: Engineering Report, Docket DMEA 4394 (Uranium) Dead Horse Point Project (Mernab Mines) Grand and San Juan Counties, Utah.

Enclosed are the original and nine copies of the Engineering Report on the subject project, by Carl Belser, Mining Engineer, U. S. Bureau of Mines.

Application was made for Government assistance in an exploration program contemplating 3,000 feet of underground work, 10,350 feet of drilling and 3,000 feet of road construction. The cost of the program was estimated to be $107,990.00.

The property was visited for examination on August 30, 1956, but no activity was noted and it appeared that work had been suspended at least one month prior to that time. A copy of a letter from the Administrator to Mernab Mines, received here October 10, states that the application for aid in the proposed exploration project is considered as having been withdrawn and the records closed. Consequently no geological report was prepared.

The engineer considered chances of finding significant uranium ore bodies to be poor and recommended denial, should aid be sought at some future date.

A. L. Crosthwaite for
John F. Shaw
Supervising Mining Engineer

JFS:sh

Enc.

cc: 9
DMEA 4394
Chron

Reviewed by
DMEA OPERATING COMMITTEE
11-7-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY EXAMINING ENGINEER
REGION III

DMEA 4394

DEAD HORSE POINT PROJECT

MERNAB MINES

GRAND AND SAN JUAN COUNTIES, UTAH

Uranium

Engineering Report

By

Carl Belser
Mining Engineer
Bureau of Mines

October 29, 1956

Reviewed by
DMEA OPERATING COMMITTEE
11-7-56
(date)

DMEA 4394

DEAD HORSE POINT PROJECT
MERNAB MINES
GRAND AND SAN JUAN COUNTIES, UTAH

RECEIVED
NOV 5 1956
D.M.E.A.

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1. Location map, Dead Horse Point project, Mernab Mines, Grand and San Juan Counties, Utah, DMEA 4394....9

2. Claim map, Dead Horse Point project, Mernab Mines, Grand and San Juan Counties, Utah, DMEA 4394....9

DMEA 4394

DEAD HORSE POINT PROJECT
MERNAB MINES
GRAND AND SAN JUAN COUNTY, UTAH

INTRODUCTION AND SUMMARY

Mernab Mines, P. O. Box 729, Moab, Utah, on July 15, 1956 applied to the Defense Minerals Exploration Administration for aid in an exploration project on its Dead Horse Point group of mining claims in Grand and San Juan Counties, Utah. The application, DMEA 4394, requested aid in completing 3,000 feet of crosscutting and drifting, 10,350 feet of drilling, and 3,000 feet of access roads to cost an estimated $107,990.00.

The property was examined on August 30, 1956, by an examining team of the Geological Survey and the Bureau of Mines. The property consists of 95 unpatented mining claims in Grand and San Juan Counties, Utah. Development consists of 21,633 feet of drilling and 175 feet of crosscutting and drifting. Total production was 66.2 tons of ore that contained 0.17 percent WO_3.

The claims lie in the area between the Green and Colorado Rivers. Exposed rocks are beds of Permian, Triassic, and Jurassic ages. The potential ore-bearing stratum is in the basal part of the Triassic Chinle formation, which is underlain unconformably by the Triassic Moenkopi formation and overlain by the Jurassic Wingate sandstone.

The known uranium deposits in the area are small and scattered, and the rugged topography makes exploration costly.

Mernab mines had apparently suspended all operations a month before the examination was made. However the claims are in an area geologically

unfavorable for significant uranium deposits. In case operations on the property are resumed, it is recommended that the application be denied.

ACKNOWLEDGMENTS

The AEC was consulted before the examination was made.

Memorandums made by W. P. Williams and John E. Crawford were carefully noted.

LOCATION, TOPOGRAPHY, AND CLIMATE

The 95 unpatented claims are in secs. 30 and 31, T. 26 S., R. 20 E., and secs. 5, 6, 7, and 8, T. 27 S., R. 20 E., SLM, Grand and San Juan Counties, Utah (figs. 1 and 2). The property extends from the top of the mesa down over the south rim to the Moenkopi and Cutler outcrops below. Altitudes range from 4,800 to 6,000 feet.

There is no water or timber on the property. A poor access road, 7 miles in length, leads to Fletcher trail, an all-weather road which, 27 miles to the northeast, connects with U. S. Highway 160 at a point 9 miles north of Moab, Utah and 30 miles south of the Denver & Rio Grande Western railroad at Thompson, Utah.

Labor, materials, and supplies can be obtained in Moab, and uranium ores can be shipped to the Moab mill.

HISTORY AND PRODUCTION

The claims were located during the period 1951-54. Trace Elements Corporation leased the claims to Mernab Mines in February 1955. Some drilling and drifting was done by Mernab and 66.2 tons of ore averaging 0.17 percent U_3O_8 was shipped. The extensive work of the AEC in the area between the Green and Colorado Rivers has resulted in an inferred ore estimate of only 8,000 tons.

OWNERSHIP AND EXTENT

The property consists of 95 unpatented claims in secs. 30 and 31, T. 26 S., R. 20 E., and secs. 5, 6, 7, and 8, T. 27 S., R. 20 E., SLM, Grand and San Juan Counties, Utah. The claims are recorded in the offices of the respective County Recorders as follows:

San Juan County

Claim	Book	Page	Date Located	Locator
Highlander #1	233	128	11/13/54	Arrowhead Uranium Company
Highlander #2	233	129	"	" " "
Highlander #3	233	130	"	" " "
Highlander #4	233	131	"	" " "
Highlander #5	233	132	"	" " "
Highlander #6	233	133	"	" " "
Highlander #7	233	134	"	" " "
Highlander #8	233	135	"	" " "
Highlander #9	233	136	"	" " "
Snowball #1	11	19	4/25/52	" " "
Discovery #1	43	115	11/12/54	Kenneth Allred
Discovery #2	43	116	"	" "
Discovery #3	43	116	"	" "
Flatlander	43	114	11/12/54	Arrowhead Uranium Company
Lunch Spot	R-4	112	8/3/51	Kenneth Allred, and Omar Secrest
One Down	R-4	112	"	Kenneth Allred, Omar and Art Secrest
No Count	R-4	112	"	" " " " " "
Hot Spot	R-4	113	9/5/51	" " " " " "
Arts Joy	R-4	113	"	" " " " " "
Dead Horse #1	R-4	113	"	" " " " " "
Dead Horse #2	R-4	114	"	" " " " " "
Little Spring	R-4	114	"	" " " " " "
Blue Jay #1	R-4	115	9/7/54	Omar Secrest
Blue Jay #2	R-4	114	"	" "
Blue Jay #3	R-4	115	"	" "
Blue Jay #4	R-4	115	"	" "

The lease on the Blue Jay claims are recorded in Book 271, Page 232.

Grand County

Highlander #1	51	73	11/13/54	Arrowhead Uranium Company
Highlander #2	51	74	"	" " "
Highlander #3	51	75	"	" " "
Highlander #4	51	76	"	" " "
Highlander #5	51	77	"	" " "
Highlander #6	51	78	"	" " "

Claim	Book	Page	Date Located	Locator			
Highlander #7	51	79	11/13/54	Arrowhead	Uranium	Company	
Highlander #8	51	89	"	"	"	"	
Highlander #9	51	81	"	"	"	"	
Helen #1	51	44	11/12/54	"	"	"	
Helen #2	51	45	"	"	"	"	
Helen #3	51	46	"	"	"	"	
Helen #4	51	47	"	"	"	"	
Helen #5	51	48	"	"	"	"	
Helen #6	51	49	"	"	"	"	
Helen #7	51	50	"	"	"	"	
Helen #8	51	51	"	"	"	"	
Helen #9	51	52	11/13/54	"	"	"	
Helen #10	51	52	"	"	"	"	
Ann #1	51	53	"	"	"	"	
Ann #2	51	54	"	"	"	"	
Ann #3	51	55	"	"	"	"	
Ann #4	51	56	"	"	"	"	
Ann #5	51	57	"	"	"	"	
Ann #6	51	58	"	"	"	"	
Ann #7	51	59	"	"	"	"	
Ann #8	51	60	"	"	"	"	
Ann #9	51	61	"	"	"	"	
Ann #10	51	62	"	"	"	"	
Nat #1	51	63	"	"	"	"	
Nat #2	51	64	"	"	"	"	
Nat #3	51	65	"	"	"	"	
Nat #4	51	66	"	"	"	"	
Nat #5	51	67	"	"	"	"	
Nat #6	51	68	"	"	"	"	
Nat #7	51	69	11/12/54	"	"	"	
Nat #8	51	70	"	"	"	"	
Nat #9	51	71	"	"	"	"	
Nat #10	51	72	"	"	"	"	
Big 4 #1	9-L	376	"	"	"	"	
Big 4 #2	9-L	377	"	"	"	"	
No Pants #1	51	37	"	"	"	"	
No Pants #2	51	38	"	"	"	"	
No Pants #3	51	39	"	"	"	"	
Smoothbore #1	51	41	"	"	"	"	
Smoothbore #2	51	42	"	"	"	"	
Smoothbore #3	51	43	"	"	"	"	
Calculator #1	51	29	"	"	"	"	
Calculator #2	51	30	"	"	"	"	
Calculator #3	51	31	"	"	"	"	
Calculator #4	51	32	"	"	"	"	
Calculator #6	51	33	"	"	"	"	
Leagle Eagle #1	51	34	"	"	"	"	
Leagle Eagle #2	51	35	"	"	"	"	
Leagle Eagle #3	51	36	"	"	"	"	

Claim	Book	Page	Date Located	Locator
Discovery #1	9-L	372	4/5/52	Kenneth Allred
Discovery #2	9-L	373	"	" "
Discovery #3	9-L	374	"	" "
Flatlander	9-L	490	4/27/52	Arrowhead Uranium Company
Big Tree	9-L	367	9/30/51	Kenneth Allred and Omar Secrest
Good Camp	9-L	368	"	" " " " "
Shade Tree #1	9-L	220	8/4/51	Kenneth Allred, Art and Omar Secrest
Big Chance #1	9-L	221	8/3/51	" " " " " "
Bad Trail #1	9-L	222	"	" " " " " "
Bad Trail #2	9-L	223	"	" " " " " "
Bad Trail #3	9-L	224	"	" " " " " "
Bad Trail #4	9-L	225	"	" " " " " "
Bad Trail #5	9-L	226	"	" " " " " "
Bad Trail #6	9-L	227	"	" " " " " "
Last Chance #1	9-L	228	8/4/51	" " " " " "
Last Chance #2	9-L	229	"	" " " " " "
Last Chance #3	9-L	230	"	" " " " " "
Rough Going #1	9-L	240	8/10/51	" " " " " "
Rough Going #2	9-6	241	"	" " " " " "
Rough Going #3	9-6	242	"	" " " " " "
Twin Monument #1	9-K	243	"	" " " " " "
Twin Monument #2	9-K	244	"	" " " " " "
Rainy Day #1	9-K	245	8/28/51	" " " " " "
Rainy Day #2	9-K	246	"	" " " " " "
7 Up	9-K	247	"	" " " " " "

A lease on the Discovery and Flatlander claims is recorded in Book 57, pages 521-2. A lease on the Big Tree and Good Camp claims is recorded in Book 57, pages 513-6. A lease on the Shade Tree No. 1, Big Chance No. 1, Bad Trail Nos. 1 through 6, Last Chance Nos. 1 through 3, Lunch Spot, One Down, No Count, Hot Spot, Arts Joy, Dead Horse No. 1, Dead Horse No. 2, and Little Spring claims are recorded in Book 57, pages 509-512.

A lease on the Rough Going Nos. 1 through 3, Twin Monument Nos. 1 and 2, Rainy Day Nos. 1 and 2, and 7 Up claims are recorded in Book 57, pages 505-508.

A lease was granted on all 95 claims by Trace Elements Corporation in February, 1955 to Mernab Mines, a joint venture of Merger Mines Corporation, Nabob Silver-Lead Company, and the Bismark Mining Company. The lease was for 10 years with the option of extension for two successive

10-year periods. It will be noted that, although 54 of the claims were located by Arrowhead Uranium Company, their is no record of their transfer to Trace Elements Corporation.

PRESENT STATUS

Exploration and Development

The property has been partly explored by 21,633 feet of drilling and 175 feet of crosscutting and drifting.

Mining and Milling Equipment and Other Facilities

There is no mining or milling equipment on the property. Other facilities consist of a frame building near the tunnel portal and a number of access roads. The 315 c.f.i. Gardner-Denver compressor, cars, track, etc. were removed about August 1, and were sold to various operators by August 15, 1956.

DESCRIPTION OF MINERAL DEPOSITS

(taken in part from a memorandum by William B. Gasdik, geologist, U.S.G.S.)

The claims are in the inter-river area between the Green and Colorado Rivers. Exposed rocks are Permian, Triassic, and Jurassic beds. The potential ore-bearing stratum is in the basal part of the Triassic Chinle formation which is underlain unconformably by the Triassic Moenkopi formation and overlain by the Jurassic Wingate sandstone.

The Chinle formation underlying the area is about 200 feet thick, and consists of siltstones, shale, and sandstone with lesser amounts of predominantly limestone conglomerate beds. Silicified and carbonized logs are scattered through the lower part of the formation. Some woody material is richly replaced by uranium minerals.

The one explored deposit is localized in medium- to coarse-grained sandstone and conglomerate that fills a channel about 10 feet deep and 40 feet wide in the top of the Moenkopi formation. Small amounts of secondary copper minerals are associated with the uranium minerals. The uranium mineralization, where exposed in the channel, is erratic, thin, and low-grade.

ORE RESERVES

There are no known ore reserves on the property. A channel 800 feet long by 40 feet wide and 30 inches thick was indicated by drilling to contain 4,000 tons of ore. Subsequent work in the tunnel indicates that the results from the noncore drilling were high and, although the channel contains uranium mineralization, it is not of ore grade.

PROPOSED EXPLORATION AND COSTS

The applicant has submitted the following estimated costs:

Independent Contractors		
Bulldozing 250 hours at $12.00/hr.	$3,000.00	
9,450 feet noncore drilling at $2.00/ft.	18,900.00	
900 feet core drilling at $4.00/ft.	3,600.00	
Total Independent Contractors		$25,500.00
Labor and Supervision		
Labor for 3,000 feet of crosscutting	$20,640.00	
Shift boss for 3,000 feet of crosscutting	6,250.00	
Geologist-engineer	9,375.00	
Total Labor and Supervision		$36,265.00
Operating Materials and Supplies		
Explosives	$6,000.00	
Fuel, oil, and gas	3,000.00	
Drill steel	3,000.00	

Track (used)	$1,500.00	
Vent pipe	2,000.00	
Miscellaneous	2,500.00	
Total Operating Materials and Supplies		$18,000.00

Operating Equipment

Compressor unit (use allowance)	$3,600.00	
Drills " "	1,200.00	
Slusher " "	600.00	
Trammer (new purchase)	2,000.00	
Fans " "	800.00	
Generator unit (new purchase)	1,000.00	
Lab. crusher " "	475.00	
Total Operating Equipment		$9,675.00

Rehabilitation and Repairs

None

New Buildings, Improvements, Installations

None

Miscellaneous

Maintenance	$1,000.00	
Analytical work	100.00	
Accounting	2,400.00	
Cook	3,600.00	
Boarding house supplies	5,000.00	
Workman's compensation	1,200.00	
Insurance	1,950.00	
Taxes	800.00	
Total Miscellaneous		$16,050.00
Contingencies		$2,500.00
Total Estimated Cost of Project		$107,990.00

Time for completion -- 13 months

Several of the items listed are somewhat out of line with normal costs.

CONCLUSIONS AND RECOMMENDATIONS

The few known uranium deposits in the area are small and scattered. The Atomic Energy Commission conducted a geologic reconnaissance in the inter-river area and concluded that the district was not worthy of further investigations for uranium deposits. The chances of finding a significant uranium deposit are considered poor, and the examining team recommended that the application be denied.

11/5/56

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED 5 1956 DMEA

224 New Customhouse
Denver 2, Colorado

November 1, 1956

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Engineering Report of Examination Docket DMEA 4394 (Uranium) Dead Horse Point Project (Mernab Mines) Grand and San Juan Counties, Utah

Enclosed, for record purposes only, are the original and three copies of an Engineering Report of Examination on the subject property. The Geological Survey participated in the examination, but did not submit a report.

This application was considered as having been withdrawn by the Administrator's letter, dated October 10, 1956.

DMEA Field Team, Region III

Original signed by
W. M. TRAVER

By W. M. Traver
Executive Officer

Reviewed by
DMEA OPERATING COMMITTEE

(date)

REGION III

Memorandum

Building 20
Denver Federal Center
Denver 2, Colorado
October 31, 1956

RECEIVED
NOV 5 1956
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DEPARTMENT OF THE INTERIOR
OCT 31 1956
REGION III
DENVER, COLORADO

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Application was made for Government assistance in an exploration program contemplating 3,000 feet of underground work, 10,350 feet of drilling and 3,000 feet of road construction. The cost of the program was estimated to be $107,990.00.

The property was visited for examination on August 30, 1956, but no activity was noted and it appeared that work had been suspended at least one month prior to that time. A copy of a letter from the Administrator to Mernab Mines, received here October 10, states that the application for aid in the proposed exploration project is considered as having been withdrawn and the records closed. Consequently no geological report was prepared.

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A A Moscelman for
John F. Shaw
Supervising Mining Engineer

JFS:sh

Enc.

cc: 9
DMEA 4394
Chron

Reviewed by
DMEA OPERATING COMMITTEE

(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY EXAMINING ENGINEER
REGION III

RECEIVED NOV 5 1956 D.M.E.A.

DMEA 439A

DEAD HORSE POINT PROJECT

MERRAB MINES

GRAND AND SAN JUAN COUNTIES, UTAH

Uranium

Engineering Report

By

Carl Bolser
Mining Engineer
Bureau of Mines

October 29, 1956

Reviewed by
DMEA OPERATING COMMITTEE

(date)

RECEIVED
NOV 5 1956
D.M.E.A.

DMEA 4394

DEAD HORSE POINT PROJECT
MERNAB MINES
GRAND AND SAN JUAN COUNTIES, UTAH

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ILLUSTRATIONS

Figure — Follows page

1. Location map, Dead Horse Point project, Mernab Mines, Grand and San Juan Counties, Utah, DMEA 4394.....9

2. Claim map, Dead Horse Point project, Mernab Mines, Grand and San Juan Counties, Utah, DMEA 4394.....9

DMEA 4394

DEAD HORSE POINT PROJECT
MERNAB MINES
GRAND AND SAN JUAN COUNTY, UTAH

INTRODUCTION AND SUMMARY

Mernab Mines, P. O. Box 729, Moab, Utah, on July 15, 1956 applied to the Defense Minerals Exploration Administration for aid in an exploration project on its Dead Horse Point group of mining claims in Grand and San Juan Counties, Utah. The application, DMEA 4394, requested aid in completing 3,000 feet of crosscutting and drifting, 10,350 feet of drilling, and 3,000 feet of access roads to cost an estimated $107,990.00.

The property was examined on August 30, 1956, by an examining team of the Geological Survey and the Bureau of Mines. The property consists of 95 unpatented mining claims in Grand and San Juan Counties, Utah. Development consists of 21,633 feet of drilling and 175 feet of crosscutting and drifting. Total production was 66.2 tons of ore that contained 0.17 percent WO_3.

The claims lie in the area between the Green and Colorado Rivers. Exposed rocks are beds of Permian, Triassic, and Jurassic ages. The potential ore-bearing stratum is in the basal part of the Triassic Chinle formation, which is underlain unconformably by the Triassic Moenkopi formation and overlain by the Jurassic Wingate Sandstone.

The known uranium deposits in the area are small and scattered, and the rugged topography makes exploration costly.

Mernab mines had apparently suspended all operations a month before the examination was made. However the claims are in an area geologically

unfavorable for significant uranium deposits. In case operations on the property are resumed, it is recommended that the application be denied.

ACKNOWLEDGMENTS

The AEC was consulted before the examination was made.

Memorandums made by W. P. Williams and John E. Crawford were carefully noted.

LOCATION, TOPOGRAPHY, AND CLIMATE

The 95 unpatented claims are in secs. 30 and 31, T. 26 S., R. 20 E., and secs. 5, 6, 7, and 8, T. 27 S., R. 20 E., SLM, Grand and San Juan Counties, Utah (figs. 1 and 2). The property extends from the top of the mesa down over the south rim to the Moenkopi and Cutler outcrops below. Altitudes range from 4,800 to 6,000 feet.

There is no water or timber on the property. A poor access road, 7 miles in length, leads to Fletcher trail, an all-weather road which, 27 miles to the northeast, connects with U. S. Highway 160 at a point 9 miles north of Moab, Utah and 30 miles south of the Denver & Rio Grande Western railroad at Thompson, Utah.

Labor, materials, and supplies can be obtained in Moab, and uranium ores can be shipped to the Moab mill.

HISTORY AND PRODUCTION

The claims were located during the period 1951-54. Trace Elements Corporation leased the claims to Mernab Mines in February 1955. Some drilling and drifting was done by Mernab and 66.2 tons of ore averaging 0.17 percent U_3O_8 was shipped. The extensive work of the AEC in the area between the Green and Colorado Rivers has resulted in an inferred ore estimate of only 8,000 tons.

OWNERSHIP AND EXTENT

The property consists of 95 unpatented claims in secs. 30 and 31, T. 26 S., R. 20 E., and secs. 5, 6, 7, and 8, T. 27 S., R. 20 E., SLM, Grand and San Juan Counties, Utah. The claims are recorded in the offices of the respective County Recorders as follows:

San Juan County

Claim	Book	Page	Date Located	Locator
Highlander #1	233	128	11/13/54	Arrowhead Uranium Company
Highlander #2	233	129	"	" " "
Highlander #3	233	130	"	" " "
Highlander #4	233	131	"	" " "
Highlander #5	233	132	"	" " "
Highlander #6	233	133	"	" " "
Highlander #7	233	134	"	" " "
Highlander #8	233	135	"	" " "
Highlander #9	233	136	"	" " "
Snowball #1	11	19	4/25/52	" " "
Discovery #1	43	115	11/12/54	Kenneth Allred
Discovery #2	43	116	"	" "
Discovery #3	43	116	"	" "
Flatlander	43	114	11/12/54	Arrowhead Uranium Company
Lunch Spot	R-4	112	8/3/51	Kenneth Allred, and Omar Secrest
One Down	R-4	112	"	Kenneth Allred, Omar and Art Secrest
No Count	R-4	112	"	" " " " " "
Hot Spot	R-4	113	9/5/51	" " " " " "
Arts Jay	R-4	113	"	" " " " " "
Dead Horse #1	R-4	113	"	" " " " " "
Dead Horse #2	R-4	114	"	" " " " " "
Little Spring	R-4	114	"	" " " " " "
Blue Jay #1	R-4	115	9/7/54	Omar Secrest
Blue Jay #2	R-4	114	"	" "
Blue Jay #3	R-4	115	"	" "
Blue Jay #4	R-4	115	"	" "

The lease on the Blue Jay claims are recorded in Book 271, Page 232.

Grand County

Highlander #1	51	73	11/13/54	Arrowhead Uranium Company
Highlander #2	51	74	"	" " "
Highlander #3	51	75	"	" " "
Highlander #4	51	76	"	" " "
Highlander #5	51	77	"	" " "
Highlander #6	51	78	"	" " "

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Claim	Book	Page	Date Located	Locator		
Highlander #7	51	79	11/13/54	Arrowhead	Uranium	Company
Highlander #8	51	89	"	"	"	"
Highlander #9	51	81	"	"	"	"
Helen #1	51	44	11/12/54	"	"	"
Helen #2	51	45	"	"	"	"
Helen #3	51	46	"	"	"	"
Helen #4	51	47	"	"	"	"
Helen #5	51	48	"	"	"	"
Helen #6	51	49	"	"	"	"
Helen #7	51	50	"	"	"	"
Helen #8	51	51	"	"	"	"
Helen #9	51	52	11/13/54	"	"	"
Helen #10	51	52	"	"	"	"
Ann #1	51	53	"	"	"	"
Ann #2	51	54	"	"	"	"
Ann #3	51	55	"	"	"	"
Ann #4	51	56	"	"	"	"
Ann #5	51	57	"	"	"	"
Ann #6	51	58	"	"	"	"
Ann #7	51	59	"	"	"	"
Ann #8	51	60	"	"	"	"
Ann #9	51	61	"	"	"	"
Ann #10	51	62	"	"	"	"
Nat #1	51	63	"	"	"	"
Nat #2	51	64	"	"	"	"
Nat #3	51	65	"	"	"	"
Nat #4	51	66	"	"	"	"
Nat #5	51	67	"	"	"	"
Nat #6	51	68	"	"	"	"
Nat #7	51	69	11/12/54	"	"	"
Nat #8	51	70	"	"	"	"
Nat #9	51	71	"	"	"	"
Nat #10	51	72	"	"	"	"
Big 4 #1	9-L	376	"	"	"	"
Big 4 #2	9-L	377	"	"	"	"
No Pants #1	51	37	"	"	"	"
No Pants #2	51	38	"	"	"	"
No Pants #3	51	39	"	"	"	"
Smoothbore #1	51	41	"	"	"	"
Smoothbore #2	51	42	"	"	"	"
Smoothbore #3	51	43	"	"	"	"
Calculator #1	51	29	"	"	"	"
Calculator #2	51	30	"	"	"	"
Calculator #3	51	31	"	"	"	"
Calculator #4	51	32	"	"	"	"
Calculator #6	51	33	"	"	"	"
Leagle Eagle #1	51	34	"	"	"	"
Leagle Eagle #2	51	35	"	"	"	"
Leagle Eagle #3	51	36	"	"	"	"

Claim	Book	Page	Date Located	Locator
Discovery #1	9-L	372	4/5/52	Kenneth Allred
Discovery #2	9-L	373	"	" "
Discovery #3	9-L	374	"	" "
Flatlander	9-L	490	4/27/52	Arrowhead Uranium Company
Big Tree	9-L	367	9/30/51	Kenneth Allred and Omar Secrest
Good Camp	9-L	368	"	" " " " "
Shade Tree #1	9-L	220	8/4/51	Kenneth Allred, Art and Omar Secrest
Big Chance #1	9-L	221	8/3/51	" " " " " "
Bad Trail #1	9-L	222	"	" " " " " "
Bad Trail #2	9-L	223	"	" " " " " "
Bad Trail #3	9-L	224	"	" " " " " "
Bad Trail #4	9-L	225	"	" " " " " "
Bad Trail #5	9-L	226	"	" " " " " "
Bad Trail #6	9-L	227	"	" " " " " "
Last Chance #1	9-L	228	8/4/51	" " " " " "
Last Chance #2	9-L	229	"	" " " " " "
Last Chance #3	9-L	230	"	" " " " " "
Rough Going #1	9-L	240	8/10/51	" " " " " "
Rough Going #2	9-6	241	"	" " " " " "
Rough Going #3	9-6	242	"	" " " " " "
Twin Monument #1	9-K	243	"	" " " " " "
Twin Monument #2	9-K	244	"	" " " " " "
Rainy Day #1	9-K	245	8/28/51	" " " " " "
Rainy Day #2	9-K	246	"	" " " " " "
7 Up	9-K	247	"	" " " " " "

A lease on the Discovery and Flatlander claims is recorded in Book 57, pages 521-2. A lease on the Big Tree and Good Camp claims is recorded in Book 57, pages 513-6. A lease on the Shade Tree No. 1, Big Chance No. 1, Bad Trail Nos. 1 through 6, Last Chance Nos. 1 through 3, Lunch Spot, One Down, No Count, Hot Spot, Arts Joy, Dead Horse No. 1, Dead Horse No. 2, and Little Spring claims are recorded in Book 57, pages 509-512.

A lease on the Rough Going Nos. 1 through 3, Twin Monument Nos. 1 and 2, Rainy Day Nos. 1 and 2, and 7 Up claims are recorded in Book 57, pages 505-508.

A lease was granted on all 95 claims by Trace Elements Corporation in February, 1955 to Mornab Mines, a joint venture of Merger Mines Corporation, Nabob Silver-Lead Company, and the Bismark Mining Company. The lease was for 10 years with the option of extension for two successive

10-year periods. It will be noted that, although 54 of the claims were located by Arrowhead Uranium Company, their is no record of their transfer to Trace Elements Corporation.

PRESENT STATUS

Exploration and Development

The property has been partly explored by 21,633 feet of drilling and 175 feet of crosscutting and drifting.

Mining and Milling Equipment and Other Facilities

There is no mining or milling equipment on the property. Other facilities consist of a frame building near the tunnel portal and a number of access roads. The 315 c.f.i. Gardner-Denver compressor, cars, track, etc. were removed about August 1, and were sold to various operators by August 15, 1956.

DESCRIPTION OF MINERAL DEPOSITS

(taken in part from a memorandum by William E. Gasdik, geologist, U.S.G.S.)

The claims are in the inter-river area between the Green and Colorado Rivers. Exposed rocks are Permian, Triassic, and Jurassic beds. The potential ore-bearing stratum is in the basal part of the Triassic Chinle formation which is underlain unconformably by the Triassic Moenkopi formation and overlain by the Jurassic Wingate sandstone.

The Chinle formation underlying the area is about 200 feet thick, and consists of siltstones, shale, and sandstone with lesser amounts of predominantly limestone conglomerate beds. Silicified and carbonized logs are scattered through the lower part of the formation. Some woody material is richly replaced by uranium minerals.

The one explored deposit is localized in medium- to coarse-grained sandstone and conglomerate that fills a channel about 10 feet deep and 40 feet wide in the top of the Moenkopi formation. Small amounts of secondary copper minerals are associated with the uranium minerals. The uranium mineralization, where exposed in the channel, is erratic, thin, and low-grade.

ORE RESERVES

There are no known ore reserves on the property. A channel 800 feet long by 40 feet wide and 30 inches thick was indicated by drilling to contain 4,000 tons of ore. Subsequent work in the tunnel indicates that the results from the noncore drilling were high and, although the channel contains uranium mineralization, it is not of ore grade.

PROPOSED EXPLORATION AND COSTS

The applicant has submitted the following estimated costs:

Independent Contractors		
Bulldozing 250 hours at $12.00/hr.	$3,000.00	
9,450 feet noncore drilling at $2.00/ft.	18,900.00	
900 feet core drilling at $4.00/ft.	3,600.00	
Total Independent Contractors		$25,500.00
Labor and Supervision		
Labor for 3,000 feet of crosscutting	$20,640.00	
Shift boss for 3,000 feet of crosscutting	6,850.00	
Geologist-engineer	9,375.00	
Total Labor and Supervision		$36,865.00
Operating Materials and Supplies		
Explosives	$6,000.00	
Fuel, oil, and gas	3,000.00	
Drill steel	3,000.00	

Track (used)	$1,500.00	
Vent pipe	2,000.00	
Miscellaneous	2,500.00	
Total Operating Materials and Supplies		$18,000.00

Operating Equipment

Compressor unit (use allowance)	$3,600.00	
Drills " "	1,200.00	
Slusher " "	600.00	
Trammer (new purchase)	2,000.00	
Fans " "	800.00	
Generator unit (new purchase)	1,000.00	
Lab. crusher " "	475.00	
Total Operating Equipment		$9,675.00

Rehabilitation and Repairs

None

New Buildings, Improvements, Installations

None

Miscellaneous

Maintenance	$1,000.00	
Analytical work	100.00	
Accounting	2,400.00	
Cook	3,600.00	
Boarding house supplies	5,000.00	
Workman's compensation	1,200.00	
Insurance	1,950.00	
Taxes	800.00	
Total Miscellaneous		$16,050.00

Contingencies	$2,500.00
Total Estimated Cost of Project	$107,990.00

Time for completion — 13 months

Several of the items listed are somewhat out of line with normal costs.

CONCLUSIONS AND RECOMMENDATIONS

The few known uranium deposits in the area are small and scattered. The Atomic Energy Commission conducted a geologic reconnaissance in the inter-river area and concluded that the district was not worthy of further investigations for uranium deposits. The chances of finding a significant uranium deposit are considered poor, and the examining team recommended that the application be denied.

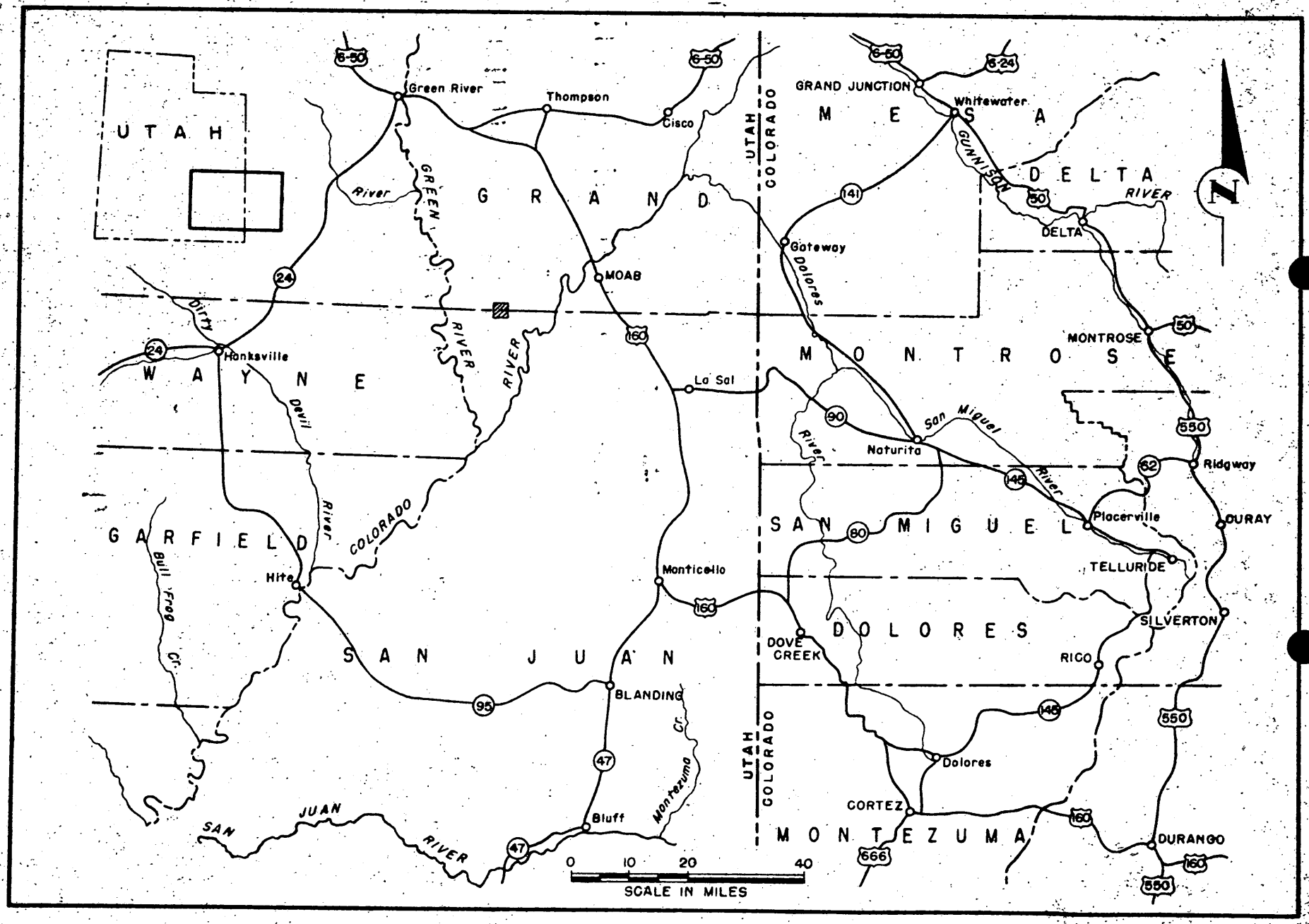

FIGURE 1 - LOCATION MAP, DEAD HORSE POINT PROJECT, MERNAB MINES, GRAND AND SAN JUAN, COUNTIES, UTAH
DMEA 4394

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1956

Surname copy

700

Ching
Ellis

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

OCT 10 1956

Mernab Mines
c/o Mr. H. J. Hull, President
Nabob Silver-Lead Company
Box 899
Kellogg, Idaho

Re: Docket No. DMEA-4394 (Uranium)
Dead Horse Point Project
Grand and San Juan Counties, Utah

Gentlemen:

This will acknowledge your letter of September 26, 1956, advising that Mernab Mines has abandoned the subject project and surrendered its lease to the owner.

Accordingly, we are considering your application for aid in the proposed exploration project as having been withdrawn as of September 26, 1956, and are closing our records on this case.

Sincerely yours,

C. O. Mittendorf

Administrator

MChing/gla
10-9-56
cc to: Admr.'s Reading File
Docket
Messrs. JECrawford, 3643
THKiilsgaard, 5224
JOHosted, 3210, GSA
Code 700, Mr. Ching
DMEA Field Team, Region III (2)

OCT 11 1956
gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Washington 25, D. C.

RECEIVED
OCT 11 1956

Date 10/10/56

DMEA Docket No. 4394
DMEA Contract No.
Commodity Uranium
Name of applicant Mernab Mines
Name of property Dead Horse Point Project
Location of property Grand & San Juan Co., Utah
Estimated cost of project

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee
From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee
Subject: Review of Field Team Report
(Application, Field Team Report, etc.)

1. Date of subject document: 10/1/56. 2. Date received by reviewer: 10/5/56.

3. Prior reports on this property known to reviewer: Yes ☐, No ☐.

4. Prior reports on nearby properties known to reviewer: Yes ☐, No ☐.

5. Information available on past production: Yes ☐, No ☐.

6. Other pertinent factors known to reviewer: Yes ☐, No ☐.

7. Explain items marked yes above:

8. Factors needing special consideration:
a. Location ☐
b. Ownership ☐
c. Evidence of mineralization ☐
d. Geology ☐
e. Proposed exploration method ☐
f. Alternate exploration method ☐
g. Costs ☐
h. ☐

9. Action advised:
a. Obtain information from applicant ☐
b. Refer to Field Team ☐
c. Denial ☒
d. Agree with Field Team ☒
e. Disagree with Field Team ☐
f. Suggest alternate plan ☐
g. Request another examination ☐
h. Approval ☐
i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary)
Project abandoned by applicant. Mr. J. O. Hosted, Washington representative of the Atomic Energy Commission, assisted in the review.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Washington 25, D. C.

RECEIVED
OCT 11 1956

Date 10/10/56

DMEA Docket No. 4394
DMEA Contract No.
Commodity Uranium
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Name of property Dead Horse Point Project
Location of property Grand & San Juan Co., Utah
Estimated cost of project

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Uranium Commodity Committee

From: John E. Crawford, Bureau of Mines Member
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   f. Alternate exploration method ☐
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   h. Approval ☐
   i. Consult with Mr. ____ at ____ AEC office.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
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10/5/56 gla

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
OCT - 5 1956

October 4, 1956

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: T. H. Kiilsgaard, U. S. Geological Survey

Subject: Review of Field Team memorandum, DMEA Docket 4394 (uranium), Mernab Mines, Grand and San Juan Counties, Utah.

Mr. Gazdik's memo of September 24, 1956 informs that a Field Team examination of the subject property was made on August 30, 1956. The applicant's representatives did not meet the field examiners, and upon arrival at the property, it was found to be abandoned. Nevertheless, an examination was made, the conclusions of which were that the application should be denied. A subsequent letter from Mr. H. J. Hull, President, Nabob Silver-Lead Company, points out that the three companies comprising the "Mernab" Corp. had withdrawn participation in the venture and relinquished their lease.

On the basis of the foregoing data, it is recommended that:

1. DMEA advise the applicant that the application is considered as withdrawn and that it will receive no further consideration.

2. If exploration of the property should be requested of DMEA at a future date, the applicant should immediately be advised that unless he can present substantial supporting evidence, in addition to what is now known, the application will be denied because present evidence indicates the improbability of making a significant discovery.

T. H. Kiilsgaard

T. H. Kiilsgaard

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UNITED STATES
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GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

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T. H. Kiilsgaard

Copy to: Director's Reading 4212
Branch Reading 4212
DMEA (3)
Docket File
Chron File
J. E. Crawford, 3641
J. O. Hosted, 3210

Kiilsgaard:baf
G: 10/4/56

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DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

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Kiilsgaard:baf
G: 10/4/56

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WASHINGTON 25, D. C.

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T. H. Kiilsgaard

Copy to: Director's Reading 4212
Branch Reading 4212
DMEA (3)
Docket File
Chron File
J. E. Crawford, 3641
J. O. Hosted, 3210

Kiilsgaard:baf
G: 10/4/56

10/9/56 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

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OCT - 3 1956

224 New Customhouse
Denver 2, Colorado

October 1, 1956

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: DMEA Docket 4394 (Uranium) Mernab Mines (Dead Horse Point Project) Grand and San Juan Counties, Utah

Enclosed are the original and three copies of a joint memorandum from the field examiners, which is submitted as a matter of record in lieu of a formal denial report.

Also enclosed are two copies of a letter dated September 26, 1956, from the Applicant, stating that the subject project has been abandoned. We are therefore considering the docket as having been withdrawn as of September 26, 1956.

W. M. Traver

By W. M. Traver
Executive Officer

Reviewed by
DMEA OPERATING COMMITTEE
10-5-56
(date)

MINERAL DEPOSITS
DMEA
IN REPLY REFER TO:
RECEIVED
SEP 25 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 360
Grand Junction, Colorado

DMEA
DEPARTMENT OF THE INTERIOR
SEP 27 1956
REGION III
DENVER, COLORADO

September 24, 1956

Memorandum

RECEIVED
OCT - 3 1956

To: Executive Officer, DMEA Field Team, Region III

Through: J. William Hasler
E. N. Harshman
J. F. Shaw

From: W. B. Gazdik

Subject: DMEA docket 4394 (Uranium), Mernab Mines (Dead Horse Point Project), Grand and San Juan Counties, Utah.

Mernab Mines applied to the Defense Minerals Administration for aid in exploring sections 30 and 31, T. 26 S., R. 20 E., Grand and San Juan Counties, Utah; sections 25, 26, 35 and 36, T. 26 S., R. 19 E., Grand and San Juan Counties, Utah; sections 5, 6, 7 and 8, T. 27 S., R. 20 E., San Juan County, Utah.

An attempt to contact the applicant's representative by telephone in Moab, in order to arrange a field examination, was unsuccessful. A letter dated August 24, 1956 was, therefore, sent to Mr. W. N. Campbell, the company's geologist, informing him that a DMEA examining team would meet him at the Swiss Restaurant in Moab at 8:00 a.m., August 30, 1956. The field team, consisting of Carl Belser, U. S. Bureau of Mines, and W.B. Gazdik, U. S. Geological Survey, was present at the scheduled rendezvous at the prescribed time. Neither Mr. Campbell nor any other company representative met the examining team. Inquiries regarding the company's plans disclosed that Mernab Mines had terminated their Dead Horse Point project. Personnel of the Plateau Hardware Company, Moab, Utah, stated that Mernab Mines had been disbanded as such and company equipment was being sold by Mr. Campbell through the Plateau Hardware Company.

Since no official word cancelling the subject application had been received, the examining team decided to make the field examination without a company representative being present. The subject property was located without too much difficulty. The project area was found deserted. All operating equipment, including the ore bin and mine rails, had been removed except for one building which was left on the property.

The Mernab claims lie in the inter-river area between the Green and Colorado Rivers. Rocks exposed in the vicinity are sedimentary beds of Permian Triassic and Jurassic ages. The potential ore-bearing horizon is in the basal part of the Triassic Chinle formation. The Chinle in the

Reviewed by
DMEA OPERATING COMMITTEE
10-5-56
(date)

area is underlain unconformably by the Triassic Moenkopi formation and overlain by the Jurassic Wingate sandstone. The Chinle formation crops out as a steep slope. The overlying Wingate sandstone forms a vertical cliff several hundred feet high. Because of excessive topographic development in the area, preparation of drill sites and access roads is costly. The subject claims lie partly on the Chinle formation and partly on the Wingate sandstone. Drilling depths behind the Wingate cliff would be rather deep.

The Chinle formation on the property is about 200 feet thick. It consists of siltstone, shale and sandstone with lesser amounts of predominantly limestone pebble conglomerate beds. Silicified and carbonized logs are scattered through the lower part of the formation. Some woody material is richly replaced by uranium minerals.

The few known uranium deposits in the area are small and scattered. They consist of seams and blebs of mineralized material restricted to the basal sandstone and conglomeratic lenses in the Chinle. These lenticular sandstone and conglomeratic beds are probably equivalent stratigraphically to the Chinle Shinarump member which elsewhere contains significant uranium deposits.

The applicant carried out a rather extensive drilling and development project consisting of 175 feet of drifting and cross-cutting, and 21,633 feet of drilling. The project failed to disclose significant uranium deposits. The small deposit opened up by drifting appears to be mined out. Up to the present time the property produced 66 tons of uranium ore that averaged 0.17 percent U_3O_8. The deposit is localized in sandstone (Chinle) that fills a channel scoured about 10 feet into the top of the Moenkopi surface. The sandstone is medium to coarse grained and contains conglomeratic stringers at the base. Small amounts of secondary copper minerals are associated with uranium minerals.

In summary, the subject property is located in an area geologically unfavorable for significant uranium deposits. Mernab Mines carried out an extensive drilling and development program with discouraging results. The Atomic Energy Commission conducted a geologic reconnaissance in the inter-river area and concluded that the district was not worthy of further investigation for uranium deposits. In view of the foregoing reasons the examining team decided to recommend that the subject application be denied. It appears, however, that Mernab Mines intends to cancel the application, although official confirmation has not been received by this office. This memorandum report is submitted, therefore, as a matter of record in lieu of a formal denial report.

W. B. Gazdik

W. B. Gazdik,
Geologist

WBG/mlr

C O P Y

NABOB SILVER-LEAD COMPANY
Box 899
Kellogg, Idaho
September 26, 1956

RECEIVED
OCT - 8 1956

Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Attn: Mr. W.M. Traver
Executive Officer, DMEA
Field Team, Region III

Re: Docket DMEA 4394 (Uranium)
(Dead Horse Point Project)
Grand and San Juan Counties, Utah

Gentlemen:

We have your letter of September 18, 1956, advising that your field examiners found no Mernab personnel at the mine when they reported to make their field examination.

The three companies that were participating in the joint venture on the above captioned property, under the name of "Mernab", have abandoned the project and have surrendered their lease to the owner, Trace Elements Corporation.

We had assumed, of course, that you had been notified of the abandonment and regret that you have been put to this inconvenience.

Very truly yours,

NABOB SILVER-LEAD COMPANY

By /s/
H.J. Hull, President.

HJH:lwc
(ytl)

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

COPY

224 New Customhouse
Denver 2, Colorado

October 1, 1956

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: DMEA Docket 4394 (Uranium) Mernab Mines (Dead Horse Point Project) Grand and San Juan Counties, Utah

Enclosed are the original and three copies of a joint memorandum from the field examiners, which is submitted as a matter of record in lieu of a formal denial report.

Also enclosed are two copies of a letter dated September 26, 1956, from the Applicant, stating that the subject project has been abandoned. We are therefore considering the docket as having been withdrawn as of September 26, 1956.

W. M. TRAVER

By W. M. Traver
Executive Officer

Reviewed by
DMEA OPERATING COMMITTEE
10-5-56
(date)

MINERAL DEPOSITS
IN REPLY REFER TO:
DMEA
RECEIVED
SEP 25 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 963
Grand Junction, Colorado

September 24, 1956

Memorandum

RECEIVED
OCT - 3 1956

To: Executive Officer, DMEA Field Team, Region III

Through: J. William Ba[illegible]
[illegible] W. Har[illegible]
J. [illegible] Shaw

From: W. B. Gazdik

Subject: DMEA docket 4394 (Uranium), Mernau Mines (Dead Horse Point Project), Grand and San Juan Counties, Utah.

Mernau Mines applied to the Defense Mineral Administration for aid in exploring sections 30 and 31, T. 26 S., R. 2[illegible] E., Grand and San Juan Counties, Utah, sections 29, 20, 35 and 36, T. 2[illegible] S., R. 19 E., Grand and San Juan Counties, Utah, sections 5, 6, 7 and 8, T. 27 S., R. 20 E., San Juan County, Utah.

An attempt to contact the applicant's representative by telephone in Moab, in order to arrange a field examination, was unsuccessful. A letter dated August 24, 1956 was, therefore, sent to Mr. W. H. Campbell, the company's geologist, informing him that a DMEA examining team would meet him at the Swiss Restaurant in Moab at 8:00 a.m., August 30, 1956. The field team, consisting of Carl Belser, U. S. Bureau of Mines, and W.B. Gazdik, U. S. Geological Survey, was present at the scheduled rendezvous at the prescribed time. Neither Mr. Campbell nor any other company representative met the examining team. Inquiries regarding the company's plans disclosed that Mernau Mines had terminated their Dead Horse Point project. Personnel of the Plateau Hardware Company, Moab, Utah, stated that Mernau Mines had been disbanded as such and company equipment was being sold by Mr. Campbell through the Plateau Hardware Company.

Since no official word cancelling the subject application had been received, the examining team decided to make the field examination without a company representative being present. The subject property was located without too much difficulty. The project area was found deserted. All operating equipment, including the ore bin and mine rails, had been removed except for one building which was left on the property.

The Mernau claims lie in the interriver area between the Green and Colorado Rivers. Rocks exposed in the vicinity are sedimentary beds of Permian Triassic and Jurassic ages. The potential ore-bearing horizon is in the basal part of the Triassic Chinle formation. The Chinle in the

Reviewed by
DMEA OPERATING COMMITTEE
10-5-56
(date)

area is underlain unconformably by the Triassic Moenkopi formation and overlain by the Jurassic Wingate sandstone. The Chinle formation crops out as a steep slope. The overlying Wingate sandstone forms a vertical cliff several hundred feet high. Because of excessive topographic development in the area, preparation of drill sites and access roads is costly. The subject claims lie partly on the Chinle formation and partly on the Wingate sandstone. Drilling depths behind the Wingate cliff would be rather deep.

The Chinle formation on the property is about 200 feet thick. It consists of siltstone, shale and sandstone with lesser amounts of predominantly limestone pebble conglomerate beds. Silicified and carbonized logs are scattered through the lower part of the formation. Some woody material is richly replaced by uranium minerals.

The few known uranium deposits in the area are small and scattered. They consist of seams and blebs of mineralized material restricted to the basal sandstone and conglomeratic lenses in the Chinle. These lenticular sandstone and conglomeratic beds are probably equivalent stratigraphically to the Chinle Shinarump member which elsewhere contains significant uranium deposits.

The applicant carried out a rather extensive drilling and development project consisting of 175 feet of drifting and cross-cutting, and 21,633 feet of drilling. The project failed to disclose significant uranium deposits. The small deposit opened up by drifting appears to be mined out. Up to the present time the property produced 66 tons of uranium ore that averaged 0.17 percent U_3O_8. The deposit is localized in sandstone (Chinle) that fills a channel scoured about 10 feet into the top of the Moenkopi surface. The sandstone is medium to coarse grained and contains conglomeratic stringers at the base. Small amounts of secondary copper minerals are associated with uranium minerals.

In summary, the subject property is located in an area geologically unfavorable for significant uranium deposits. Mernab Mines carried out an extensive drilling and development program with discouraging results. The Atomic Energy Commission conducted a geologic reconnaissance in the inter-river area and concluded that the district was not worthy of further investigation for uranium deposits. In view of the foregoing reasons the examining team decided to recommend that the subject application be denied. It appears, however, that Mernab Mines intends to cancel the application, although official confirmation has not been received by this office. This memorandum report is submitted, therefore, as a matter of record in lieu of a formal denial report.

W. B. Gazdik

W. B. Gazdik,
Geologist

WBG/mlr

C O P Y

NABOB SILVER LEAD COMPANY
Box 899
Kellogg, Idaho
September 26, 1956

Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Attn: Mr. W. M. Traver
Executive Officer, DMEA
Field Team, Region III

Re: Docket DMEA 4394 (Uranium)
(Dead Horse Point Project)
Grand and San Juan Counties, Utah

Gentlemen:

We have your letter of September 18, 1956, advising that your field examiners found no Mernab personnel at the mine when they reported to make their field examination.

The three companies that were participating in the joint venture on the above captioned property, under the name of "Mernab", have abandoned the project and have surrendered their lease to the owner, Trace Elements Corporation.

We had assumed, of course, that you had been notified of the abandonment and regret that you have been put to this inconvenience.

Very truly yours,

NABOB SILVER-LEAD COMPANY

By /s/
H.J.Hull, President.

HJH:lwc
(ytl)

9/21/56 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

September 18, 1956

Wernab Mines
P. O. Box 729
Moab, Utah

Re: Docket DMEA 4394 (Uranium)
(Dead Horse Point Project)
Grand and San Juan Counties,
Utah.

Gentlemen:

Our field examiners wrote to Mr. Walter N. Campbell and attempted to contact him to arrange for a field examination on the captioned property, but neither Mr. Campbell nor any other representative of your company met the examining team.

The field examiners found no Wernab Mines personnel at the mine and they wondered if the property had been abandoned.

In view of these circumstances, will you please advise by return mail if you are still interested in the proposed exploration project.

Very truly yours,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

HMC:prl

cc: Sec. to Oper. Comm. (2)
Harshman
Shaw (2)
Hasler
Docket
Chron.

HWC

MINERAL DEPOSITS
IN REPLY REFER TO:
DMEA
RECEIVED
SEP 14 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 360
Grand Junction, Colorado

DMEA
DEPARTMENT OF THE INTERIOR
SEP 17 1956
REGION III
DENVER, COLORADO

September 13, 1956

Memorandum

RECEIVED
SEP 21 1956

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman
John F. Shaw

From: J. William Hasler

Subject: DMEA docket 4394 (Uranium), Mernab Mines (Dead Horse Point Project), Grand and San Juan Counties, Utah

The Mernab Mines applied to the Defense Minerals Exploration Administration for aid in exploring sections 30 and 31, T. 26 S., R. 20 E., Grand and San Juan Counties, Utah; sections 25, 26, 35 and 36, T. 26 S., R. 19 E., Grand and San Juan Counties, Utah; sections 5, 6, 7 and 8, T. 27 S., R. 20 E., San Juan County, Utah. The property was designated as the Dead Horse Point Project of the Mernab Mines.

The application was referred to the field on August 22 and an attempt was made to arrange the time and date for a field examination, but the applicant could not be contacted by telephone in Moab. A letter dated August 24 was addressed to Mr. Walter N. Campbell, the applicant's representative at Moab, arranging a field examination for August 30, 1956. An examining team consisting of W. B. Gazdik, U. S. Geological Survey, and Carl Belser, U. S. Bureau of Mines, made an attempt to contact Mr. Campbell on the scheduled date; however, neither Mr. Campbell nor any other representative of the company met the examining team.

The examining team made a field examination and found that the Mernab Mines' personnel had left the property and had dismanteled all of the equipment at the mine. They also found that the Dead Horse Point Project was considered closed after the company had done considerable diamond drilling and underground exploration work.

It may be assumed that the Mernab Mines intends to cancel the DMEA application on the subject property, but to date we have received no confirmation. The applicant should be contacted to ascertain his desire regarding the project relative to DMEA aid.

In view of these circumstances it seems pertinent that a report of examination need not be prepared. The examining team, upon their return, indicated that the application would be denied. We will await your advice regarding this docket.

J. William Hasler
J. William Hasler,
Geologist

JWH/mlr

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

September 18, 1956

Hernab Mines
P. O. Box 729
Moab, Utah

Re: Docket DMEA 4394 (Uranium)
(Dead Horse Point Project)
Grand and San Juan Counties,
Utah.

Gentlemen:

Our field examiners wrote to Mr. Walter H. Campbell and attempted to contact him to arrange for a field examination on the captioned property, but neither Mr. Campbell nor any other representative of your company met the examining team.

The field examiners found no Hernab Mines personnel at the mine and they wondered if the property had been abandoned.

In view of these circumstances, will you please advise by return mail if you are still interested in the proposed exploration project.

Very truly yours,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

HMC:prl

cc: Sec. to Oper. Comm. (2)
Harshman
Shaw (2)
Hasler
Docket
Charon.

MINERAL DEPOSITS
IN REPLY REFER TO:
DMEA
RECEIVED
SEP 14 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DMEA DEPARTMENT OF THE INTERIOR
DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY
P. O. Box 360
Grand Junction, Colorado

SEP 17 1956
REGION III
DENVER, COLORADO

September 13, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman
John F. Shaw

From: J. William Hasler

Subject: DMEA docket 4394 (Uranium), Mernab Mines (Dead Horse Point Project), Grand and San Juan Counties, Utah

The Mernab Mines applied to the Defense Minerals Exploration Administration for aid in exploring sections 30 and 31, T. 26 S., R. 20 E., Grand and San Juan Counties, Utah; sections 25, 26, 35 and 36, T. 26 S., R. 19 E., Grand and San Juan Counties, Utah; sections 5, 6, 7 and 8, T. 27 S., R. 20 E., San Juan County, Utah. The property was designated as the Dead Horse Point Project of the Mernab Mines.

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In view of these circumstances it seems pertinent that a report of examination need not be prepared. The examining team, upon their return, indicated that the application would be denied. We will await your advice regarding this docket.

J. William Hasler
J. William Hasler,
Geologist

JWH/mlr

8/29/56

DMEA
Date Rec'd.

AUG 23 1956

BUREAU OF MINES
Denver, Colorado

August 22, 1956

Memorandum

To: W. M. Traver, Executive Officer, DMEA Field Team, Reg. III

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4394 (Uranium) Marnab Mines, (Dead Horse Point Project) Grand and San Juan Counties, Utah

The application for Marnab Mines, Docket DMEA 4394, in the amount of $107,990.00 was received in this office on August 22.

A field examination will be made and suitable report prepared by an engineer from the Denver or Grand Junction office.

W. H. KING

W. H. King

cc: W. M. Traver (2)
E. H. Marshman
J. W. Hasler
M. H. Salisbury
J. F. Shaw
Sec. Geo. Commn (2)

DMEA
Date Rec'd.

AUG 23 1956

BUREAU OF MINES
Denver, Colorado

August 22, 1956

Memorandum

To: W. M. Traver, Executive Officer, DMEA Field Team, Reg. III

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4394 (Uranium) Mernab Mines, (Dead Horse Point Project) Grand and San Juan Counties, Utah

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W. H. KING

W. H. King

cc: W. M. Traver (2)
E. N. Barshman
J. W. Hasler
M. H. Salsbury
J. F. Shaw
Sec, Op. Com. (2)

8/23/56

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

August 21, 1956

224 New Customhouse
Denver 2, Colorado

RECEIVED
AUG 23 1956

Memorandum

To: J. F. Shaw (2) (With brochure)
J. W. Hasler

From: Field Team, Region III

Subject: Docket DMEA 4394 (Uranium) Mernab Mines, (Dead Horse Point Project) Grand and San Juan Counties, Utah

Enclosed are the subject application in the amount of $107,990.00, copy of the field referral letter from the Chairman of the Operating Committee, and memoranda of review by W. P. Williams, USGS, and John E. Crawford, USBM. The memorandum from W. P. Williams appears to be especially pertinent.

Your attention is directed to the requirements set forth in the Chairman's letter. If the examiners decide that an exploration project is warranted and will so advise at as early a date as possible, this office will immediately undertake to obtain the required MF-205 forms.

It is requested that you return the brochure with your Report of Examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

WMT:ab

cc: Chair. Op. Comm. (2)
Docket 4394 (w/encls.
Harshman ("

Connors
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

August 21, 1956

224 New Customhouse
Denver 2, Colorado

RECEIVED
AUG 28 1956

Memorandum

To: J. F. Shaw (2) (With brochure)
J. W. Easler

From: Field Team, Region III

Subject: Docket DMEA 4394 (Uranium) Marnab Mines, (Dead Horse Point Project) Grand and San Juan Counties, Utah

Enclosed are the subject application in the amount of $107,990.00, copy of the field referral letter from the Chairman of the Operating Committee, and memoranda of review by W. P. Williams, USGS, and John E. Crawford, USBM. The memorandum from W. P. Williams appears to be especially pertinent.

Your attention is directed to the requirements set forth in the Chairman's letter. If the examiners decide that an exploration project is warranted and will so advise at as early a date as possible, this office will immediately undertake to obtain the required MF-205 forms.

It is requested that you return the brochure with your Report of Examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

WMT:ab

cc: Chair. Op. Comm. (2)
Docket 4394 (w/encls.
Harshman ("

Connors
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

700

FILE COPY
Surname:
Ellis
Nelson
Selfridge

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

AUG 16 1956

Re: Docket No. DMEA-4394 (Uranium)
Mernab Mines
Dead Horse Point Project
Grand and San Juan Counties, Utah

Dear Mr. Traver:

The captioned application is referred to Region III Field Team for a field examination and recommendation.

Copies of memorandums, dated August 3 and 10, 1956, from W. P. Williams, USGS, and John E. Crawford, USBM, respectively, relating to the subject application, are enclosed for your information.

You will note from the application, that the Applicant holds a lease from the Trace Elements Corporation; hereinafter referred to as the Lessor. Furthermore, you will note that the Lessor refers to certain blocks of claims as Group Nos 1 to 5 inclusive. The lease states that the Lessor owns the claims in Group No. 1; holds an undivided interest in parts of Groups 2, 3, and 4 and a lease upon the remaining portions of each group; and leases outright all of Group 5.

In the event the Field Team believes that a contract is warranted, it should advise the Applicant that we will require the necessary six copies each of the "Consent to Lien and Subordination Agreement" (Form MF-205) signed in each case by all parties concerned. Furthermore, the Trace Elements Corporation should be requested to furnish copies of each lease which it holds from the other interests owning parts of Groups 2, 3, and 4; and also the lease on Group 5.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JLB)

Enclosures

EWEllis/ai 8-14-56
cc to: Docket
Admr. Reading File
Operating Committee
Code 700
Mr. Ellis
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

APPROVED:

FRANK D. LAMB (JLB)
Member, Bureau of Mines

N. E. Nelson (JLB)
Member, Geological Survey

Docket

Ellis
Nilson
Lamb
Selfridge
Hyman

700

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mernab Mines
P. O. Box 729
Moab, Utah

Re: Docket No. DMEA-4394 (Uranium)
Dead Horse Point Project
Grand and San Juan Counties, Utah

Gentlemen:

The application for assistance in exploring your property, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred for a field examination to:

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado.

The Regional Office will contact you at the earliest opportunity in regard to your project.

Sincerely yours,

C. O. Mittendorf

Administrator

EWEllis/ai 8-14-56
cc to: Docket
Admr.'s Reading File
Code 700
Mr. Ellis
DMEA Field Team, Region III (2)

8/13/56 gl

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED
AUG 13 1956

August 10, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Application for Assistance, DMEA Docket 4394 (Uranium)
Mernab Mines, (Dead Horse Point Project), Grand and San Juan Counties, Utah

I have reviewed the attached application, DMEA Docket 4394, Mernab Mines, (Dead Horse Point Project), Grand and San Juan Counties, Utah, dated July 15 and received in this office August 2, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The subject property has produced 66.2 tons of ore that averaged 0.17 percent U_3O_8; the field examiners are of the opinion that the property should be examined, inasmuch as a possibility exists that the production was from an uninvestigated channel.

We concur in the recommendation that a field examination be made.

John E. Crawford
John E. Crawford

Attachment

8-7-56

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
AUG 6 1956

August 3, 1956

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of application, DMEA 4394 (uranium), Mernab Mines, Dead Horse Point claims, San Juan County, Utah.

The applicant proposes to explore for uranium deposits on a large block of claims in the inter-river area of San Juan County, Utah. The proposed work would consist of 10,350 feet of drilling and 3,000 feet of drifting and crosscutting. The applicant estimates the total cost of the project, including 3,000 feet of access road, at $107,990.

To date the property has produced only 66 tons of ore that averaged 0.17 percent U_3O_8. One hundred seventy-five feet of drifting and crosscuting and 21,633 feet of drilling, previously completed by the applicant, failed to disclose new ore reserves. As pointed out by Grand Junction personnel, extensive work by the Atomic Energy Commission indicates that potentialities of the general vicinity of the property do not seem to be good.

I doubt that DMEA participation in exploration on the subject property is warranted at this time. The applicant's large, expensive proposed project in particular appears inadvisable.

Because the applicant has performed a considerable amount of work on his own account, that work as well as the geologic conditions on the property should be further evaluated in the field. If hitherto unknown geologic conditions appear quite promising then, perhaps, a modest, staged program of core drilling would be appropriate.

W P Williams

W. P. Williams

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
AUG 6 1956

August 3, 1956

Memorandum

To: L. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of application, DMEA 4394 (uranium), Mermab Mines, Red Horse Point claims, San Juan County, Utah.

The applicant proposes to explore for uranium deposits on a large block of claims in the inter-river area of San Juan County, Utah. The proposed work would consist of 10,350 feet of drilling and 3,000 feet of drifting and crosscutting. The applicant estimates the total cost of the project, including 3,000 feet of access road, at $107,990.

To date the property has produced only 66 tons of ore that averaged 0.1[illegible] percent U_3O_8. One hundred seventy-five feet of drifting and crosscutting and 21,633 feet of drilling, previously completed by the applicant, failed to disclose new ore reserves. As pointed out by Grand Junction personnel, extensive work by the Atomic Energy Commission indicates that potentialities of the general vicinity of the property do not seem to be good.

I doubt that DMEA participation in exploration on the subject property is warranted at this time. The applicant's large, expensive proposed project in particular appears inadvisable.

Because the applicant has performed a considerable amount of work on his own account, that work as well as the geologic conditions on the property should be further evaluated in the field. If hitherto unknown geologic conditions appear quite promising then, perhaps, a modest, staged program of core drilling would be appropriate.

W. P. Williams

WPWilliams:btr
G 8/3/56

cc: J. E. Crawford, 3641
J. O. Hosted, 3210
Director's reading file (4212)
Branch reading file (4212)
DMEA (3)
Chron. file
Docket file

8/1/56

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
AUG - 1 1956

July 30, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Docket DMEA 4394 (Uranium) Mernab Mines, (Dead Horse Point Project), Grand and San Juan Counties, Utah

Enclosed are the original and three copies of a joint review of the subject application by members of the Grand Junction office, DMEA.

Because of the small production of uranium from this property, they recommend that a field examination be made. We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

4394

Hilp

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 360
Grand Junction, Colorado

MINERAL DEPOSITS
DMEA
RECEIVED
JUL 27 1956

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AUG - 1 1956

U. S.
GEOLOGICAL SURVEY
DENVER, Colorado

July 26, 1956

JUL 30 1956

BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

From: Howard F. Albee
M. H. Salsbury

Subject: Application for DMEA aid (Uranium), Mernab Mines (Dead Horse Point Project), Grand and San Juan Counties, Utah.

Mernab Mines, a joint venture, P. O. Box 729, Moab, Utah, has applied to the Defense Minerals Exploration Administration for aid in exploring for uranium in the Chinle formation in the Dead Horse Point area, Utah. The application is in the amount of $107,990.00.

The Atomic Energy Commission was consulted concerning the applicant's claims. The entire area of Chinle formation outcrop in Grand County lying between the Green and Colorado rivers has been mapped by AEC geologists. The area is one of the most dissected in the Colorado Plateau and as such it has hundreds of miles of potentially ore-bearing outcrops of the Chinle formation. The extensive work by the AEC, however, has resulted in an inferred reserve estimate of only about 8,000 tons for the entire district. The AEC has written the district off as not worthy of continued investigation.

On the other hand, the applicant has made three shipments totalling 66.2 tons of ore that averaged 0.17 percent U_3O_8. This production is relatively small and low grade when compared to the exploratory work both expended and proposed by the company. The property, however, probably should be examined in the field on the basis of the production and the possibility that the production was from a hitherto unknown channel.

Howard F. Albee
Howard F. Albee
U. S. Geological Survey

M. H. Salsbury
M. H. Salsbury
U. S. Bureau of Mines

HFA/mlr

8/2/56

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
AUG - 1 1956

July 30, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Docket DMEA 439 (Uranium) Mernab Mines, (Dead Horse Point Project), Grand and San Juan Counties, Utah

Enclosed are the original and three copies of a joint review of the subject application by members of the Grand Junction office, DMEA.

Because of the small production of uranium from this property, they recommend that a field examination be made. We concur in this recommendation.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

MINERAL DEPOSITS
DMEA
RECEIVED
JUL 27 1956

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 360
Grand Junction, Colorado

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U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO
Date Rec'd.

July 25, 1956

JUL 30 1956
BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

From: Howard F. Albee
M. H. Salsbury

Subject: Application for DMEA aid (Uranium), Mernab Mines (Dead Horse Point Project), Grand and San Juan Counties, Utah.

Mernab Mines, a joint venture, P. O. Box 72, Moab, Utah, has applied to the Defense Minerals Exploration Administration for aid in exploring for uranium in the Chinle formation in the Dead Horse Point area, Utah. The application is in the amount of $107,990.00.

The Atomic Energy Commission was consulted concerning the applicant's claims. The entire area of Chinle formation outcrop in Grand County lying between the Green and Colorado rivers has been mapped by AEC geologists. The area is one of the most dissected in the Colorado Plateau and as such it has hundreds of miles of potentially ore-bearing outcrops of the Chinle formation. The extensive work by the AEC, however, has resulted in an inferred reserve estimate of only about 8,000 tons for the entire district. The AEC has written the district off as not worthy of continued investigation.

On the other hand, the applicant has made three shipments totalling 66.2 tons of ore that averaged 0.17 percent U_3O_8. This production is relatively small and low grade when compared to the exploratory work both expended and proposed by the company. The property, however, probably should be examined in the field on the basis of the production and the possibility that the production was from a hitherto unknown channel.

Howard F. Albee
Howard F. Albee
U. S. Geological Survey

M. H. Salsbury
M. H. Salsbury
U. S. Bureau of Mines

HFA/mlr

MINERAL DEPOSITS
DMEA
RECEIVED
JUL 27 1956

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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AUG - 1 1956

U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO
DMEA
Date Rec'd.

P. O. Box 300
Grand Junction, Colorado

July 25, 1956

JUL 30 1956
BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

From: Howard F. Albee
M. H. Salsbury

Subject: Application for DMEA aid (Uranium), Mexcal Mines (Dead Horse Point Project), Grand and San Juan Counties, Utah.

Mexcal Mines, a joint venture, P. O. Box 723, Moab, Utah, has applied to the Defense Mineral Exploration Administration for aid in exploring for uranium in the Chinle formation at the Dead Horse Point area, Utah. The application is in the amount of $107,000.00.

The Atomic Energy Commission was consulted concerning the applicant's claims. The entire area of Chinle formation outcrop in Grand County lying between the Green and Colorado rivers has been mapped by AEC geologists. The area is one of the most dissected in the Colorado Plateau and as such it has hundreds of miles of potentially ore-bearing outcrops of the Chinle formation. The extensive work by the AEC, however, has reduced to an inferred reserve estimate of only about 3,000 tons for the entire district. The AEC has written the district off as not worthy of continued investigation.

On the other hand, the applicant has made three shipments totalling 36.2 tons of ore that averaged 0.17 percent U_3O_8. This production is relatively small and low grade when compared to the exploratory work both expended and proposed by the company. The property, however, probably should be examined in the field on the basis of the production and the possibility that the production was from a hitherto unknown channel.

Howard F. Albee
Howard F. Albee
U. S. Geological Survey

M. H. Salsbury
M. H. Salsbury
U. S. Bureau of Mines

HFA/alr

July 25, 1956

Mernab Mines
P. O. Box 729
Moab, Utah

Subject: DMEA-4394
Re: Exploration Assistance
Dead Horse Point Project

Gentlemen

The receipt of your application dated July 15, 1956 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4394 and referred to the Rare & Misc. Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

July 25, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region III.

DMEA -4394 Hernab Mines
Dead Horse Point Project

Robert E. Adams
Chief, Operation's Control
and Statistics Division

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
JUL 25 1956

July 23, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium) Mernab Mines, a joint venture, (Dead Horse Point Project) Grand and San Juan Counties, Utah

Enclosed are two copies of the subject application in the amount of $107,990.00. Only two drilling bids were submitted with the application.

One copy of the application is being retained in our files, and one copy is being forwarded to the Grand Junction office, DMEA, for their comments and recommendations regarding the advisability of making a field examination.

DMEA Field Team, Region III

By W. M. Traver
Executive Officer

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
JUL 25 1956

July 23, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium) Mernab Mines, a joint venture, (Dead Horse Point Project) Grand and San Juan Counties, Utah

Enclosed are two copies of the subject application in the amount of $107,990.00. Only two drilling bids were submitted with the application.

One copy of the application is being retained in our files, and one copy is being forwarded to the Grand Junction office, DMEA, for their comments and recommendations regarding the advisability of making a field examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
JUL 25 1956

July 23, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. W. Hasler

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium) Hernab Mines, a joint venture, (Dead Horse Point Project) Grand and San Juan Counties, Utah

Enclosed is the subject application in the amount of $107,990.00.

Please discuss this application with the Bureau of Mines representative in the Grand Junction office and the AEC and forward this office nine copies of your recommendations concerning the advisability of making a field examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

WMT:ab

cc: Sec. Op. Comm. (2)
Docket
Marshman
Shaw (2)
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

July 23, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. W. Haeler

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium) Mormab Mines, a joint venture, (Dead Horse Point Project) Grand and San Juan Counties, Utah

Enclosed is the subject application in the amount of $107,990.00.

Please discuss this application with the Bureau of Mines representative in the Grand Junction office and the AEC and forward this office nine copies of your recommendations concerning the advisability of making a field examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

DMC:ab

cc: Sec. Op. Comm. (2)
Bookst
Hartshorn
Shaw (2)
Chron.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED
JUL 18 1956
DMEA

Date Rec'd. JUL 20 1956
BUREAU OF MINES
Denver, Colorado

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 4394
Metal or Mineral Uranium
Date Received 7-25-56
Estimated Cost $107,990
Participation (Government %)

RECEIVED
JUL 25 1956

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Mernab Mines, P.O. Box 729, Moab, Utah - a joint venture among Bismark Mining Co., P.O. Box 1788, Spokane, Washington; Merger Mines Corporation, Wiggett Bldg., Coeur d'Alene, Idaho; and Nabob Silver-Lead Company, P.O. Box 899, Kellogg, Idaho.

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Sections 30 and 31, T 26 S., R 20 E., Grand and San Juan Juan Counties, Utah; Sections 25, 26, 35 and 36, T 26 S, R 19 E, Grand and San Juan Counties, Utah; Sections 5, 6, 7, and 8, T 27 S, R 20 E, San Juan County, Utah

(*b*) State any mine name by which the property is known. Mernab, Dead Horse Point Project

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. enclosure

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. included in lease

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes. enclosure

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. enclosure

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you. enclosure

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. enclosure

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. enclosure

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Uranium

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 15 days and be completed within 13 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations. enclosure

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project: enclosure

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes

(*b*) How do you propose to furnish your share of the costs?

[X] Money [X] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper. enclosure

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated July 15, 1956

MERNAB MINES
(Applicant)

By Walter M. Campbell
Walter M. Campbell, Representative.

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

RECEIVED
JUL 25 1955

Ref: Paragraph 4 a. of Application

Since May of 1955, Mernab has completed the following amount of exploratory drilling from the surface:

RECEIVED
JUL 25 1955

517 feet of wagon drilling
21,116 feet of rotary non-core drilling

A total of 175 feet of drifting and crosscutting has been completed.

All the above and following listed operations have been wholly in and for the interest of Mernab subject to the lease.

The property is located 43 miles by road from Moab, Utah, as follows:

Proceed north from Moab along Highway 160, nine miles to the intersection of Dead Horse Point road, thence westerly 23 miles to the head of Shafer Trail. Approximately 1/2 mile from the bottom of Shafer Trail the access road to Mernab property is posted. Proceed easterly a distance of 7 miles to the mine workings.

The mine is equipped with standard rails and ore cars with a loading bin constructed at the portal of the adit. A Gardner Denver 315 cfm compressor supplies the air to operate drills and slusher.

All mine workings are accessible.

Ref: Paragraph 4 b. of Application

Past production consisted of 3 small shipments totalling 66.2 tons of ore of average grade .17% U_3O_8.

At present, underground exploratory work is in progress, but as yet there has been no further production.

Ref: Paragraph 4 c. of Application

The deposit is of the bedded type confined to a paleo-stream channel at the top of the Moenkopi formation which has been filled with the Shinarump conglomerate. Mineralization is confined to the channel and consists of fine-grained uraninite associated with minor amounts of copper minerals predominantly chalcocite. A considerable amount of carboniferous trash material is present some of which is radioactive.

Earlier non-core drilling on the Discovery No. 3 portion had indicated an area of mineralization that possibly contained a maximum of 4000 tons of mineable ore determined by application of an arithmetical average of the radiometric readings obtained by probing the drill holes to a volume figure obtained by projection, between drill hole sites, of an arithmetical average thickness. The mineralized portion of the channel delineated by the non-core drilling is 300 feet long and averages 40 feet in width and 30 inches in thickness.

Ref: Paragraph 4 c. of Application (Continued)

A tunnel was driven along the channel to an intersection with drill hole M-13. At the point of intersection a streak of mineralization from 1 to 3 inches wide was found in place of the 3 feet of .42% U_3O_8 indicated by radiometric readings obtained by probing the drill hole from the surface. Virtually identical results were obtained from a crosscut in the vicinity of drill holes M-14 and M-15. It appears that surface drilling delineated a mineralized channel but that no conclusions can be made relative to the volume or value of the mineralization in the channel.

Another portion of the property known as the Rainy Day Group is also the same type of deposit as mentioned above.

A limited amount, 2,572 feet, of rotary non-core drilling has been done at this location and the drilling has indicated two (2) separate structural channels, one of which showed mineralization in three (3) drill holes. Surface anomalies as checked with a scintillator are in evidence over both indicated channels.

It is the desire of Mernab to further explore this property and to determine the volume and the grade of mineralization indicated by radiometric probing of non-core drill holes and if commercial ore is found to proceed with a development and mining program.

Enclosure:

Drill hole maps (Discovery & Rainy Day)
Underground maps
Dr. Wagner's report

Ref: Paragraph 4 d. of Application

The property is accessible by road from Moab, Utah, as described previously.

All ore shipments will be handled by truck and under the present ore purchasing contract, AT (05-1)-851, will be shipped to the Lucius Pitkin, Inc., mill at Monticello, Utah, a distance of 97 miles.

The nearest supply center is at Moab, Utah.

A boarding house has been constructed at the mine where the present five (5) employees reside during the working week.

Ref: Paragraph 4 e. of Application

Labor is readily available through the Employment Security Office in Moab.

Materials, supplies and equipment are likewise available at various equipment houses in Moab.

There is no water available at the property and must be trucked either from a

Ref: Paragraph 4 e. of Application

small spring about 7 miles distant or from Moab, if for culinary purposes.

Electric power is not available but it is planned to install a diesel electric power plant.

Ref: Paragraph 5 b. of Application

Should this loan be approved, Mernab proposes to drive an exploratory drift, 6' x 8' in cross section, 2,000 feet along the center of the channel and crosscut every 100 feet for a distance of 50 feet to both sides of the channel. The size of the crosscuts are to be 5' x 5' in cross section.
?

The drift and crosscuts on the Discovery No. 3 portion are planned to run just underneath the mineralized zone.

Drilling on the Rainy Day portion of the property is planned in two stages. Stage 1 is estimated to comprise 30 holes averaging 210 feet in depth and Stage 2 will be the offsetting of holes from Stage 1 which will indicate mineralization. It is suggested that Stage 2 drill holes be cored for 20 feet in the mineralized zones. An estimate of the number of Stage 2 holes is 15.

Enclosure:
Claim map.

Ref: Paragraph 5 d. of Application

The operating experience and background of the applicant is as follows:

Nabob Silver-Lead Company is a well-established mining company in the Coeur d'Alene Mining District of Idaho and has been mining lead-zinc ore at its Pine Creek property since 1925. Nabob at present is deepening its shaft preparatory to developing lower levels.

Merger Mines Corporation is also a well-established mining company of the Coeur d'Alenes and have operated intermittently since 1929.

Bismark Mining Company likewise is an established mining company of the Coeur d'Alenes and have operated intermittently since about 1946.

As mentioned in paragraph 1 of the application, the above-listed three (3) companies undertook as a joint venture the exploration and development of the Mernab uranium project. Said operation is under the supervision of Walter N. Campbell, a graduate Geological Engineer from the Montana School of Mines, class of 1942.

Ref: Paragraph 6 of Application

See cost sheet.

ESTIMATE OF COSTS

ed costs with regard to that portion of the underground exploration program are based on a two-shift operation with verage advance in drifting and crosscutting will be five (5) feet per shift or ten (10) feet per day.

		Drifting & Crosscutting 3000 ft.	Bulldozing for Drill sites	Rotary Drilling Stage 1 100' centers	Rotary Drilling Stage 2 offsetting	Core Drilling	Remarks
Independent Contracts			$12.00 per hr $3,000.00	30 holes $2/ft.ave. 210' ave. 12,600	15 holes $2/ft.ave. 210' ave. 6,300	Coring bottom 20 ft of holes. 900' of coring * @ $4.00 per ft $3,600	Estimate 3000 ft of drill site access roads on Rainy Day Group. 30 day road construction.
Labor		$20,640.00					Underground exploration: 4 miners @ 17.20/man shift; 1200 man shifts
Supervision:							
Shift boss		6,250.00					Shift boss @ 500/mo. for 12.5 mos. Drilling time est = 2 mos. Geol. eng. to supervise both drilling & underground exploration.
Geological Engineer		7,875.00		1,500.00			
Boarding house:							
Cooks' wages		3,600.00					
Supplies		5,000.00					
Consultants							
Operating Materials & Supplies	Explosives	6,000.00					
	Fuel, oils, gas	3,000.00					
	Drill steel	3,000.00					
	Track (used)	1,500.00					
	Vent pipe	2,000.00					
	Miscellaneous	2,500.00					
Operating	Compressor unit	3,600.00 (use allowance)					All equipment with exception of an air rammer, generator plant, laboratory crusher, and 2
	Drills	1,200.00 " "					
	Slusher	600.00 " "					
	Trammer (air)	2,000.00 (new purchase)					

* See drillers' quotations. High figure, probably closer to $3.00 per ft.

ESTIMATE OF COST (Continued)

		Drifting & Crosscutting 3000 ft.	Bulldozing for Drill sites	Rotary Drilling Stage 1 100' centers	Rotary Drilling Stage 2 offsetting	Core Drilling	Remarks
Operating Equipment (continued)	Fans	800.00	(new purchase)				ventilating fans which are to be purchased are owned by Mernab.
	Generator unit	1,000.00	" "				
	Lab. crusher	475.00	" "				
Rehabilitation & repairs		None					
New buildings, improvements & installations		None					
Miscellaneous:							Purchase of mucking machine.
Maintenance		1,000.00					
Analytical work		100.00					
Accounting		2,400.00					
Workmen's compensation		1,200.00					
Insurance		1,950.00					
Taxes		800.00					
Contingencies		2,500.00					
TOTAL		$80,990.00	$3,000.00	$14,100.00	$6,300.00	GRAND TOTAL =	$107,990.00

C
O
P
Y

SEXTON BROS. CORE DRILLING CO.
P. O. Box 263
Norwood, Colorado.

Phone E74459
Res. Phone E74414

June 22, 1956

RECEIVED
JUL 25 1956

W. N. Campbell
Mernab Mines
Box 729
Moab, Utah

Dear Mr. Campbell,

We are sending you a bid on the drilling you invited us to bid on, in Grand County, Utah. The way we understand the drilling program, there is to be approximately Ten Thousand feet of drilling, both plugging and coring. That the holes would bottom approximately at 250 feet each. The size of the drill holes would be, NX, BX, Or AX.

We wish to submit our bid price on the drilling as follows:

1. Plugging price $1.50 per foot.
2. Coring price $2.70 per foot.

Hoping we hear from you real soon, we are very,

Truly yours,

(signed)

Sezton Bros.

C
O
P
Y

C O P Y

MINERALS ENGINEERING COMPANY
P. O. Box 1951
Grand Junction, Colorado.

C O P Y

June 7, 1956

Mernab Mines
P. O. Box 729
Moab, Utah

Attention Mr. Walter N. Campbell

Dear Walter:

I am very sorry to be so late in replying to our conversation of May 20; but if it isn't too late, please accept the following quotations as our bid for drilling a minimum of 10,000 feet to a maximum depth of 1,000 feet per hole on your Dead Horse Point property leased from Trace Elements Corporation, in San Juan County, Utah:

Depth	Price per Foot Air Rotary Plug Bit	BX Core
0-200 feet	$1.60	$4.00
200-400 feet	1.95	5.00
400-600 feet	2.45	6.00
600-800 feet	2.95	7.50
800-1000 feet	3.50	9.00

Standby time will be at the rate of $12.00 per hour.

It was my understanding that you would furnish all access and drill roads suitable for our drilling equipment.

Very truly yours,

MINERALS ENGINEERING COMPANY,

(signed)

Edson Foster
Assistant Drill Superintendent

C O P Y

EF/k

Mernab Mines
Box 729
Moab, Utah

THIS AGREEMENT, made and entered into this _____ day of February, 1955, by and between TRACE ELEMENTS CORPORATION, a Colorado corporation, hereinafter called the "LESSOR", and MERGER MINES CORPORATION and NABOB SILVER-LEAD COMPANY, of Coeur d'Alene and Kellogg, Idaho, respectively, and BISMARK MINING COMPANY, of Spokane, Washington, hereinafter called the "LESSEES":

W I T N E S S E T H:

The Lessor is the owner of certain lode mining claims located in Sections 30 and 31, Township 26 South, Range 20 East, SLM, and Sections 25, 36, 26, 35, Township 26 South, Range 19 East, SLM, and hereinafter referred to as Group No. 1, to-wit:

NAME OF CLAIM	RECORDED SAN JUAN COUNTY	RECORDED GRAND COUNTY
Highlander #1	Book 233 at page 128	Book 51 at page 73
Highlander #2	Book 233 at page 129	Book 51 at page 74
Highlander #3	Book 233 at page 130	Book 51 at page 75
Highlander #4	Book 233 at page 131	Book 51 at page 76
Highlander #5	Book 233 at page 132	Book 51 at page 77
Highlander #6	Book 233 at page 133	Book 51 at page 78
Highlander #7	Book 233 at page 134	Book 51 at page 79
Highlander #8	Book 233 at page 135	Book 51 at page 80
Highlander #9	Book 233 at page 136	Book 51 at page 81
Helen #1		Book 51 at page 44
Helen #2		Book 51 at page 45
Helen #3		Book 51 at page 46
Helen #4		Book 51 at page 47
Helen #5		Book 51 at page 48
Helen #6		Book 51 at page 49
Helen #7		Book 51 at page 50
Helen #9		Book 51 at page 51
Helen #10		Book 51 at page 52
Ann #1		Book 51 at page 53
Ann #2		Book 51 at page 54
Ann #3		Book 51 at page 55
Ann #4		Book 51 at page 56
Ann #5		Book 51 at page 57
Ann #6		Book 51 at page 58
Ann #7		Book 51 at page 59

NAME OF CLAIM	RECORDED SAN JUAN COUNTY	RECORDED GRAND COUNTY
Ann #8		Book 51 at page 60
Ann #9		Book 51 at page 61
Ann #10		Book 51 at page 62
Nat #1		Book 51 at page 63
Nat #2		Book 51 at page 65
Nat #3		Book 51 at page 65
Nat #4		Book 51 at page 66
Nat #5		Book 51 at page 67
Nat #6		Book 51 at page 68
Nat #7		Book 51 at page 69
Nat #8		Book 51 at page 70
Nat #9		Book 51 at page 71
Nat #10		Book 51 at page 72
Big 4 #1		Book 9-L at page 376
Big 4 #2		Book 9-L at page 377
No Pants #1		Book 51 at page 37
Not Pants #2		Book 51 at page 38
No Pants #3		Book 51 at page 39
Smoothbore #1		Book 51 at page 41
Smoothbore #2		Book 51 at page 42
Smoothbore #3		Book 51 at page 43
Calculator #1		Book 51 at page 29
Calculator #2		Book 51 at page 30
Calculator #3		Book 51 at page 31
Calculator #4		Book 51 at page 32
Calculator #6		Book 51 at page 33
Legal Eagle (also known as Leagle Eagle) #1		Book 51 at page 34
Legal Eagle (also known as Leagle Eagle) #2		Book 51 at page 35
Legal Eagle (also known as Leagle Eagle) #3		Book 51 at page 36
Snowball #1	Book 11 at page 19	

The Lessor owns a 2/3rds undivided interest and holds a lease upon the remaining 1/3rd undivided interest in the following claims, located in Sections 30 and 31, Township 26 South, Range 20 East, SLM, and Section 36, Township 26 South, Range 19 East, SLM, and hereinafter referred to as Group 2, to-wit:

NAME OF CLAIM	RECORDED SAN JUAN COUNTY	RECORDED GRAND COUNTY
Discovery #1	Book 43 at page 115	Book 9-L at page 372
Discovery #2	Book 43 at page 116	Book 9-L at page 373
Discovery #3	Book 43 at page 116	Book 9-L at page 374
Flatlander	Book 43 at page 114	Book 9-L at page 490

Lease to Discovery and Flatlander claims recorded in Book 57 at pages 521-522, records of Grand County, Utah.

The Lessor owns a 1/2 undivided interest in the following claims and holds a ten (10) year lease upon the remaining undivided 1/2 interest, and hereinafter referred to as Group 3, to-wit:

NAME OF CLAIM	RECORDED SAN JUAN COUNTY	RECORDED GRAND COUNTY
Big Tree		Book 9-K at page 367
Good Camp		Book 9-K at page 368

Lease to Big Tree and Good Camp claims recorded in Book 57 at pages 513-516, records of Grand County, Utah.

The Lessor owns a 1/3rd undivided interest in the following claims and holds a ten (10) year lease upon the remaining undivided 2/3rds interest, and hereinafter referred to as Group 4, to-wit:

NAME OF CLAIM	RECORDED SAN JUAN COUNTY	RECORDED GRAND COUNTY
Shade Tree #1		Book 9-K at page 220
Big Chance #1		Book 9-K at page 221
Bad Trail #1		Book 9-K at page 222
Bad Trail #2		Book 9-K at page 223
Bad Trail #3		Book 9-K at page 224
Bad Trail #4		Book 9-K at page 225
Bad Trail #5		Book 9-K at page 226
Bad Trail #6		Book 9-K at page 227
Last Chance #1		Book 9-K at page 228
Last Chance #2		Book 9-K at page 229
Last Chance #3		Book 9-K at page 230

NAME OF CLAIM	RECORDED SAN JUAN COUNTY	RECORDED GRAND COUNTY
Lunch Spot	Book R-4 of L. C. at page 112	
One Down	Book R-4 of L. C. at page 112	
No Count	Book R-4 of L.C. at page 112	
Hot Spot	Book R-4 of L. C. at page 113	
Arts Joy	Book R-4 of L. C. at page 113	
Dead Horse #1	Book R-4 of L. C. at page 113	
Dead Horse #2	Book R-4 of L. C. at page 114	
Little Spring	Book R-4 of L. C. at page 114	

Lease to the Group 4 claims is recorded in Book 57 at pages 509-512, records of Grand County, Utah.

The Lessor has a lease for ten (10) years upon the following lode mining claims, hereinafter referred to as Group 5, to-wit:

NAME OF CLAIM	RECORDED SAN JUAN COUNTY	RECORDED GRAND COUNTY
Rough Going #1		Book 9-K at page 240
Rough Going #2		Book 9-K at page 241
Rough Going #3		Book 9-K at page 242
Twin Monument #1		Book 9-K at page 243
Twin Monument #2		Book 9-K at page 244
Rainy Day #1		Book 9-K at page 245
Rainy Day #2		Book 9-K at page 246
7 Up		Book 9-K at page 247

Lease to the Rough Going, Twin Monument, Rainy Day and 7 Up claims is recorded in Book 57 at pages 505-508, records of Grand County, Utah.

NAME OF CLAIMS	RECORDED SAN JUAN COUNTY	RECORDED GRAND COUNTY
Blue Jay #1	Book R-4 of L.C. at page 115	
Blue Jay #2	Book R-4 of L.C. at page 114	
Blue Jay #3	Book R-4 of L.C. at page 115	
Blue Jay #4	Book R-4 of L.C. at page 115	

Lease to the Blue Jay claims is recorded in Book 271 at page 232, records of San Juan County, Utah.

The Lessor desires to let, and the Lessees desire to take, a lease upon the foregoing claims upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the mutual covenants herein undertaken, and the rents herein reserved, IT IS HEREBY AGREED as follows:

1. The Lessor hereby leases, demises and lets unto Lessees, and the Lessees take from the Lessor, the claims described in Group No. 1, and the entire right, title and interest of the Lessor in the claims described in Group No. 2, Group No. 3 and Group No. 4 for a period of ten years from the date of this contract, provided that the lessees may, at their option, renew said lease for two (2) successive periods of ten (10) years.

2. The Lessor hereby subleases, demises and sublets unto the Lessees, and the Lessees hereby take from the Lessor, the undivided 1/3rd interest in the claims described in Group No. 2, and undivided 1/2 interest in the claims described in Group No. 3, an undivided 2/3rds interest in the claims described in Group No. 4, and the claims described in Group No. 5 in their entirety for a term of years terminating upon October 31, 1962, provided that if commercial ore shall remain upon any of said claims enumerated in this paragraph at the end of said term, or upon request of Lessees at any time during said term, Lessor will use its best efforts to secure an additional term or extension of said term which shall accrue to the benefit of Lessees; subject, however, to the provisions of this agreement.

3. The rent reserved upon said lease shall be a royalty payable to the Lessor computed upon the proceeds received from the sale of all ores recovered from said property, excluding, however, any bonus payments and any development and haulage allowance computed as follows:

BASE SALES PRICE PER TON OF ORE	PERCENT
Up to $10.00	12%
$10.00 to $15.00	13%
$15.00 to $20.00	14%
$20.00 to $25.00	15%
$25.00 to $30.00	16%
$30.00 to $35.00	17%
$35.00 to $40.00	18%
$40.00 to $45.00	19%
$45.00 to $50.00	20%
$50.00 to $55.00	21%
$55.00 and up	22%

In addition to the foregoing a royalty of 15% shall be paid upon any bonus payments which may be received by Lessees, exclusive of development and haulage allowances.

The foregoing royalty shall constitute the entire payment to be made by the Lessees, it being understood and agreed that the Lessor shall pay all royalties or rents due to other persons owning an interest in any of said claims. The purchaser of said ores shall pay the royalty reserved herein to the First National Bank in Grand Junction, Colorado, for the benefit of the Lessor, and those persons in privy with Lessor. Lessor shall furnish to Lessees and said Bank a schedule of royalty payments to which it and said persons in privy with it are entitled to receive. The Lessees shall maintain such records as shall be necessary to clearly record the amount and grade of ore removed from each of the foregoing groups of claims, and shall furnish said information to the Lessor and said Bank at least quarterly. Upon

being furnished the foregoing information, said Bank shall distribute the royalty funds received by it as the interests of the various owners shall appear. The cost of such distribution shall be borne by the Lessor.

4. Lessees shall have immediate possession of said claims for the purpose of exploring, developing and mining the same. Lessees shall have complete control and direction of all work to be done upon said claims, provided, however, that Lessees shall perform not less than $10,000.00 worth of exploration work per month upon said claims for each of the three (3) months following the date of this agreement. Such work may include road construction, preparation of drilling sites, costs of surveying claims, drilling, drifting or cross-cutting necessary to explore said claims and any and all other exploration work. Costs of geological studies where necessary to supplement that heretofore done by Lessor in an amount not to exceed $800.00 per month shall be considered exploratory work.

IT IS UNDERSTOOD that the Lessees may commence developing and mining said claims at any time, but that no costs of mining or development, as distinguished from exploration, shall be credited against the expenditures herein undertaken by Lessees.

5. Lessees shall have the privilege of terminating this agreement within thirty (30) days following the end of said three (3) months period should they so desire, upon written notice to the Lessor, provided that the Lessees shall do no mining during said thirty (30) day period unless they shall have first elected to continue operations hereunder.

6. If Lessees shall not so terminate this agreement at the end of said three (3) month period as aforesaid, then they shall continue said exploration program upon the basis outlined in paragraph 4, at the rate of substantially $10,000.00 per month until an additional total expenditure of not less than $70,000.00 shall have been made thereunder, subject to the right to terminate as provided in paragraph 17. IT IS UNDERSTOOD, however, that said sum is a maximum figure only and that if, in the opinion of the Lessor, sound mining practice does not warrant the expenditure of said sum in full, Lessor agrees to so advise the Lessees, whereupon the requirement to make the expenditures required in this paragraph shall terminate.

7. Commencing with the second year of this agreement the Lessees shall perform at least 100-man shifts of exploration, development or mining work per month, averaged over any two consecutive months, or in lieu thereof pay to Lessor the penalty sum of $3,000.00 per month. Lessees agree to do and perform upon all claims subject to this lease the annual labor provided by law, and to file proof of the performance of such labor as required by Utah law, and furnish Lessor recorded copies thereof; provided, however, that Lessor shall make the necessary filing for the year ending June 30, 1955, applying thereto work performed by Lessor and Lessees during said assessment year.

8. Lessees shall pay any production tax which may be levied and assessed against said mining claims or any other tax, which may be assessed by reason of Lessees'

operations of said claims, such taxes to be paid promptly when they become due and payable.

9. Lessees shall keep accurate account of its expenditures so allocated as to distinguish between exploration costs and costs of development and mining. Lessees shall also keep accurate work records of the nature and extent of the work it shall perform so allocated as to distinguish between exploration work and development and mining. During the first three (3) month period of this contract, Lessees shall furnish to Lessor, on or before the 10th day of each month, summaries of its accounts and work records for the past month, so far as the same shall pertain to exploration work required of them by this contract, in such detail as shall accurately reveal their expenditures on account of such exploration work performed and the nature of that work. The Lessor shall, within ten (10) days after receipt of such summaries, indicate to Lessees in writing its objections thereto, if any, which shall then be subject to adjustment between the parties. If no objection shall be made as specified said accounts shall be considered closed for all purposes of this contract. Lessees shall have a reasonable period of time to make any adjustments which may be required by reason of objections raised by Lessor. In the event that this agreement shall be extended beyond the original three (3) month period, the reports above referred to shall be made by Lessees to Lessor at least quarterly.

10. Lessees shall comply with all laws and regulations pertaining to the mining operation to be carried on hereunder by Lessees, including the payment of all Federal and

State taxes and exaction; carry adequate Workmen's Compensation insurances; protect, pay and discharge all claims and accounts incurred by Lessees hereunder, and shall save and keep Lessor harmless of any and all claims, demands, or liabilities, arising out of or in connection with their operations or activities hereunder.

11. The L ssor shall have the right, at any reasonable time, to inspect the work of the Lessees, and Lessees agree to supply Lessor with a log of all drill holes, provided, however, that the results thereof shall be strictly confidential, and shall not, during the terms of this agreement, be revealed to any persons except with the prior written permission of the Lessees.

12. In the event that adverse claims shall be asserted against any of the claims herein leased, the Lessor, if requested to do so by the Lessees, shall undertake, at its sole cost and expense, to defend its title to said claims. If it fails to do so, Lessees may do so and charge the cost and expense thereof to that portion of their exploration costs which are in excess of the original commitment of $30,000.00, or deduct such costs from royalties. If neither the Lessor nor the Lessees desire to defend said titles, then the claims involved shall be released from this agreement and all the parties shall be released from any further liability in respect thereto.

13. Conflicts between groups of claims subject to this lease shall be reconciled by reference to the date of original location, or original AEC lease application, and without regard to the doctrine of extralateral rights.

14. If requested by Lessees, the Lessor agrees to supervise the road construction program and bulldozing necessary to commence a drilling program upon the Discovery No. 3 claim until the 15th day of April, 1955. The terms and conditions of such work shall be determined by a separate contract between the parties. Lessor also agrees to advise Lessees concerning the contemplated exploration program, and to make available to Lessees all information in its possession, or which may hereafter become available, concerning said claims. Lessees agree to consult with George E. Morehouse prior to making any application for a bonus payment as to the method and form of making such application.

15. The Lessor agrees to subordinate its interest in said claims as may be required by the Federal Government for the securing of a DMEA loan, and agrees to use its best efforts to secure a similar subordination of interest from those persons owning an interest in said claims, or any of them. Lessor agrees that it, and its officers, directors or stockholders, will execute such documents of further assurances as may be required to perfect the title of Lessor to said claims.

16. The Lessees shall not assign their interest herein except with the written consent of the Lessor first had and obtained, which consent shall not be unreasonably withheld.

17. The Lessees shall have the right, at any time after three months from date, to terminate this lease upon thirty (30) days' written notice to Lessor, provided that upon the

day of termination all claims incurred by Lessees in the exploration, development or mining of said claims, which, if not paid, would be a lien upon said claims, shall have been paid, and provided Lessees shall have complied with the terms of this lease to that date.

18. The Lessor shall have the right to terminate this lease upon violation by the Lessees of any of the terms, covenants or conditions herein contained, by giving Lessees thirty (30) days' written notice by registered mail of such violation or violations, specifying them, and if Lessees do not correct such violations set forth in said notice within said thirty (30) day period, then this lease shall become null and void and shall become forfeited to the Lessor.

19. Upon the expiration of this agreement or its earlier termination, the Lessees shall have the right, within thirty (30) days thereafter, to remove all their machinery, equipment and supplies except improvements of a permanent nature, provided that Lessees shall, at the time of termination, have been in full and substantial compliance with the terms of this agreement.

20. The claims contained in Groups 3, 4 and Blue Jay 1 to 4, inclusive, claims contained in Group 5, are not contiguous to the remaining claims, and IT IS UNDERSTOOD AND AGREED that if the Lessees shall determine that such claims, or any thereof, are of no substantial value to them, they may eliminate said claims from this agreement upon thirty (30) days' written notice to the Lessor, and shall thereafter have no responsibility hereunder concerning such claims as may be eliminated.

21. Any new locations which Lessees or Lessor may make within 500 feet of leased ground shall be located in the name of the Lessor, and shall be subject to the terms of this agreement.

22. As evidence of their good faith, Lessees shall, upon the signing of this agreement, deposit with said First National Bank in Grand Junction, Colorado, the sum of $10,000.00, which sum shall be held by said bank in escrow until such time as Lessees shall have substantially performed $20,000.00 worth of exploration work upon said property within approximately two (2) months from the date of this agreement, at which time said sum shall be returned to Lessees. In the event Lessees shall fail to substantially perform such exploration work, said sum shall be payable to Lessor unless the failure of Lessees to perform shall be the result of Lessor's failure or refusal to cooperate with Lessees.

IT IS UNDERSTOOD AND AGREED that the minimum exploration requirements imposed upon Lessees hereunder are for the purpose of insuring adequate and prompt exploration of the areas involved, and shall be met in good faith by the Lessees. However, if by reason of delays incidental to setting up an operating organization and assembling crews and equipment upon the ground, Lessees are unable to properly expend the entire sum of $10,000.00 called for in the first month following the signing of this agreement, no breach of this agreement or forfeiture hereunder shall result provided Lessees have been and shall continue to diligently pursue such exploration work to its completion.

23. If any controversy or dispute shall arise at any time between the parties to this contract with respect to

any matter or thing covered by or pertaining to this contract which cannot be settled by the manager of Lessees and Lessor (or the manager of the corporation to which said contract may be assigned), then and in such event the parties agree to immediately submit the question to arbitration, each party to select one arbitrator and these two to select a third, and the decision of a majority of the arbitrators to be conclusive upon the parties, except as otherwise provided by law. Each party shall pay one-half the cost of such arbitration.

24. All notices required hereunder shall be deemed to be complete when made in writing and deposited in the United States Mail, with first-class postage prepaid thereon, addressed:

If to Lessor: -

To: TRACE ELEMENTS CORPORATION,
P. O. Box 1135,
Grand Junction, Colorado.

If to Lessees:

To: NABOB SILVER-LEAD COMPANY,
P. O. Box 899,
Kellogg, Idaho.

AND

To: MERGER MINES CORPORATION,
Wiggett Building,
Coeur d'Alene, Idaho.

AND

To: BISMARK MINING COMPANY,
P. O. Box 1788,
Spokane, Washington.

25. The failure or inability of Lessees to perform any or all of the covenants which it has assumed hereunder because of strikes, insurrections, acts of God, governmental regula-

tions, including a cessation or termination of the government program to purchase uranium ores, or national emergencies adversely affecting said operations, shall not be considered a default hereunder. If the operation is delayed or suspended for any of the foregoing reasons, Lessees shall give written notice thereof to Lessor and this contract shall remain in full force and effect during such suspension, but Lessees shall resume operations as soon as practical after termination of such cause and shall give Lessor written notice of such resumption. During such period Lessees shall not be liable to Lessor for penalty payments hereunder.

26. The Lessor shall supply the Lessees with a claim map showing locations of all claims and, if necessary, to indicate the location of each of said claims upon the ground.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their respective authorized officers and have caused their respective seals to be hereunto affixed the day and year first above written.

TRACE ELEMENTS CORPORATION,

By_____
President.

ATTEST:

_____
Secretary.

LESSOR.

MERGER MINES CORPORATION,

By_____
President.

ATTEST:

_____
Secretary.

NABOB SILVER-LEAD COMPANY,

By_____ President.

ATTEST:

_____ Secretary.

BISMARK MINING COMPANY,

By_____ President.

ATTEST:

_____ Secretary.

STATE OF COLORADO)
) ss
County of Mesa)

On this _____ day of _____, 1955, before me, the undersigned, a Notary Public for the State of Colorado, personally appeared B. A. KELLOGG and LOWELL M. LONG, known to me to be the President and Secretary, Respectively, of TRACE ELEMENTS CORPORATION, the corporation whose name is subscribed to the foregoing instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate first above written.

_____
Notary Public in and for the State of Colorado, residing at Grand Junction, Colorado.

STATE OF IDAHO)
) ss
County of Kootenai)

On this ____ day of _____, 1955, before me, the undersigned, a Notary Public for the State of I aho, personally appeared C. H. HUNTER and JOHN B. NELSON, known to me to be the President and Secretary, respectively, of MERGER MINES CORPORATION, the corporation whose name is subscribed to the foregoing instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate first above written.

_____
Notary Public in and for the State of Idaho, residing at Coeur d'Alene, Idaho.

STATE OF IDAHO)
) ss
County of Shoshone)

On this _____ day of _____, 1955, before me, the undersigned, a Notary Public for the State of Idaho, personally appeared H. J. HULL and JUNE H. OLSEN, known to me to be the President and Secretary, respectively, of NABOB SILVER-LEAD COMPANY, the corporation whose name is subscribed to the foregoing instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate first above written.

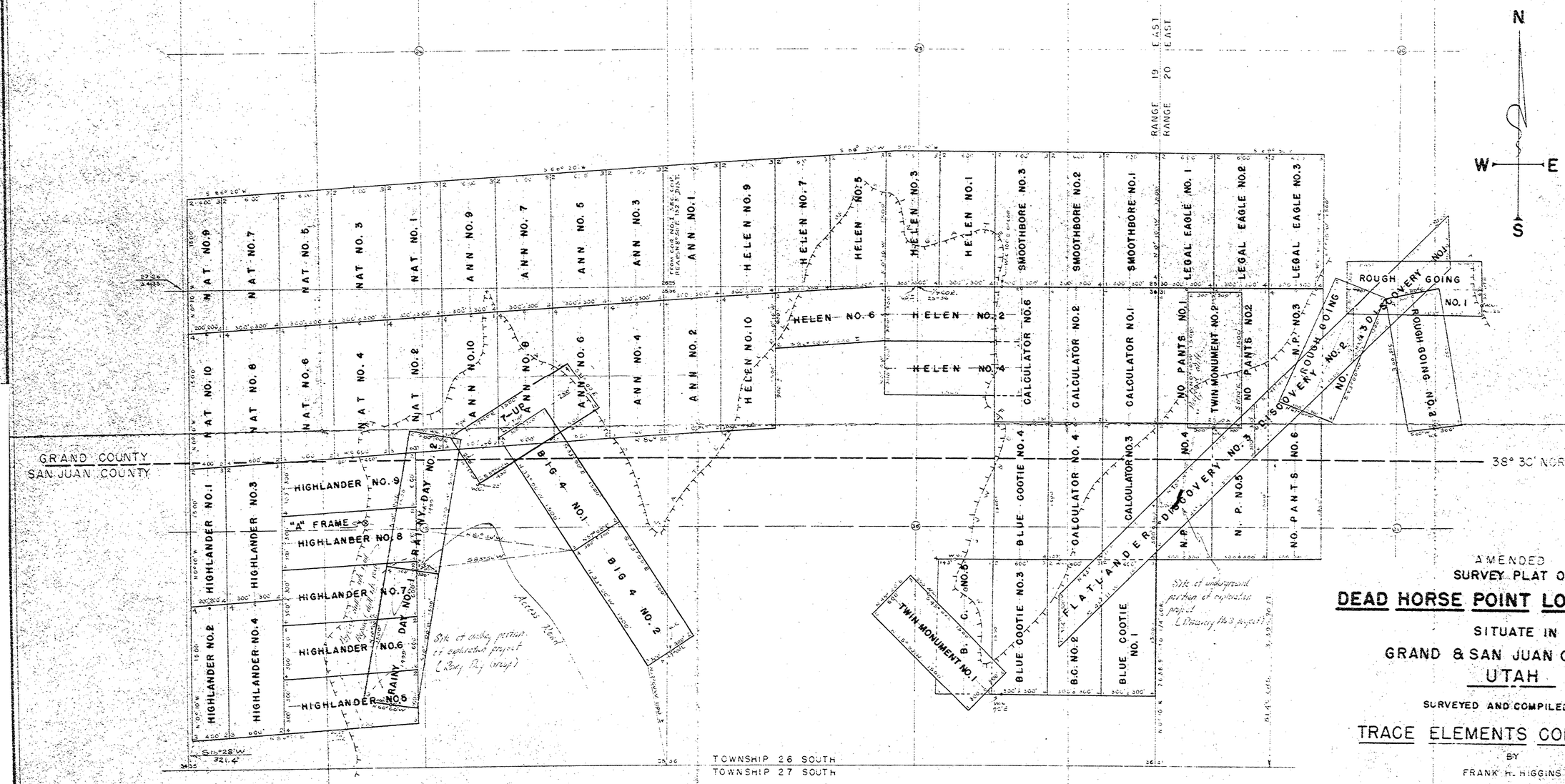
_____
Notary Public in and for the State of Idaho, residing at Wallace, Idaho.

STATE OF WASHINGTON)
) ss
County of Spokane)

On this _____ day of _____, 1955, before me, the undersigned, a Notary Public for the State of Washington, personally appeared PAUL SANDBERG and _____, known to me to be the President and Secretary, respectively, of BISMARK MINING COMPANY, the corporation whose name is subscribed to the foregoing instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my N tarial Seal the day and year in this certificate first above written.

_____
Notary Public in and for the State of Washington, residing at Spokane, Washington.



AMENDED
SURVEY PLAT OF
DEAD HORSE POINT LODE CLAIMS
SITUATE IN
GRAND & SAN JUAN COUNTIES
UTAH

SURVEYED AND COMPILED FOR

TRACE ELEMENTS CORPORATION

BY

FRANK H. HIGGINS
U. S. Mineral Surveyor

SCALE 1" = 500'

MAY 1955

Frank H. Higgins
GRAND JUNCTION, COLORADO

Moab Mines
Box 729
Moab, Utah

SITUATE IN SECS. 25,26,35&36, T. 26 S., R. 19 E., & SECS. 30 & 31, T 26 S, R. 20 E.

NOTES

Discovery Points, as indicated by small circles, are all located 10' from end lines, unless otherwise indicated.

In general, all claims lying wholly above the Wingate Rim, are surveyed with a probable tolerance of less than one part per thousand.

Claims lying wholly, or in part, below the Wingate Rim were surveyed by direct and indirect stadia, or triangulation methods.

All monuments are 4"X4" posts or substantial mounds of stones, properly marked in the field, and correctly described in the Amended Descriptions for Record, which were compiled from this plat.

FIGURE 2 - CLAIM MAP, DEAD HORSE POINT PROJECT, GRAND AND SAN JUAN COUNTIES, COLO. DMEA 4394

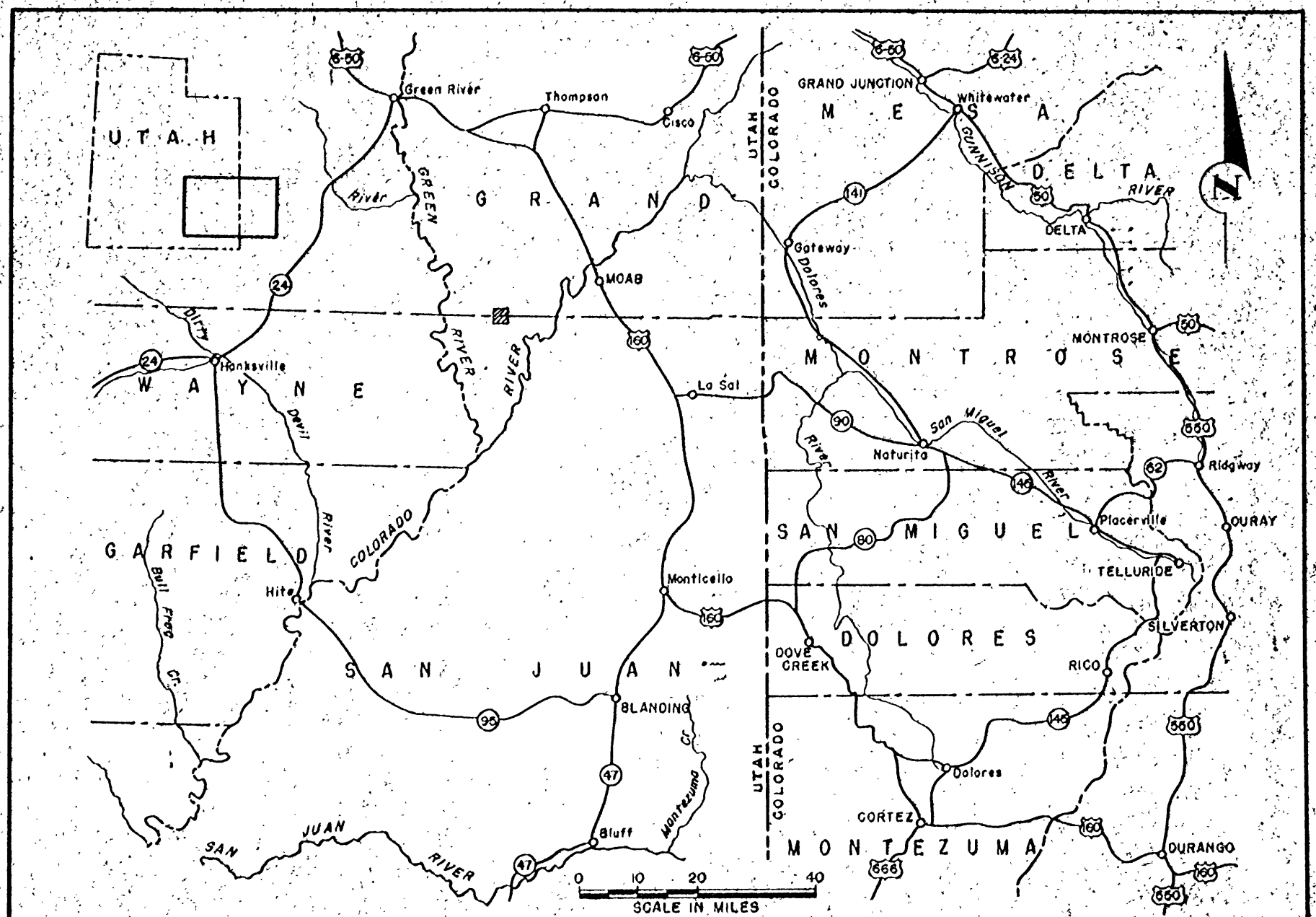
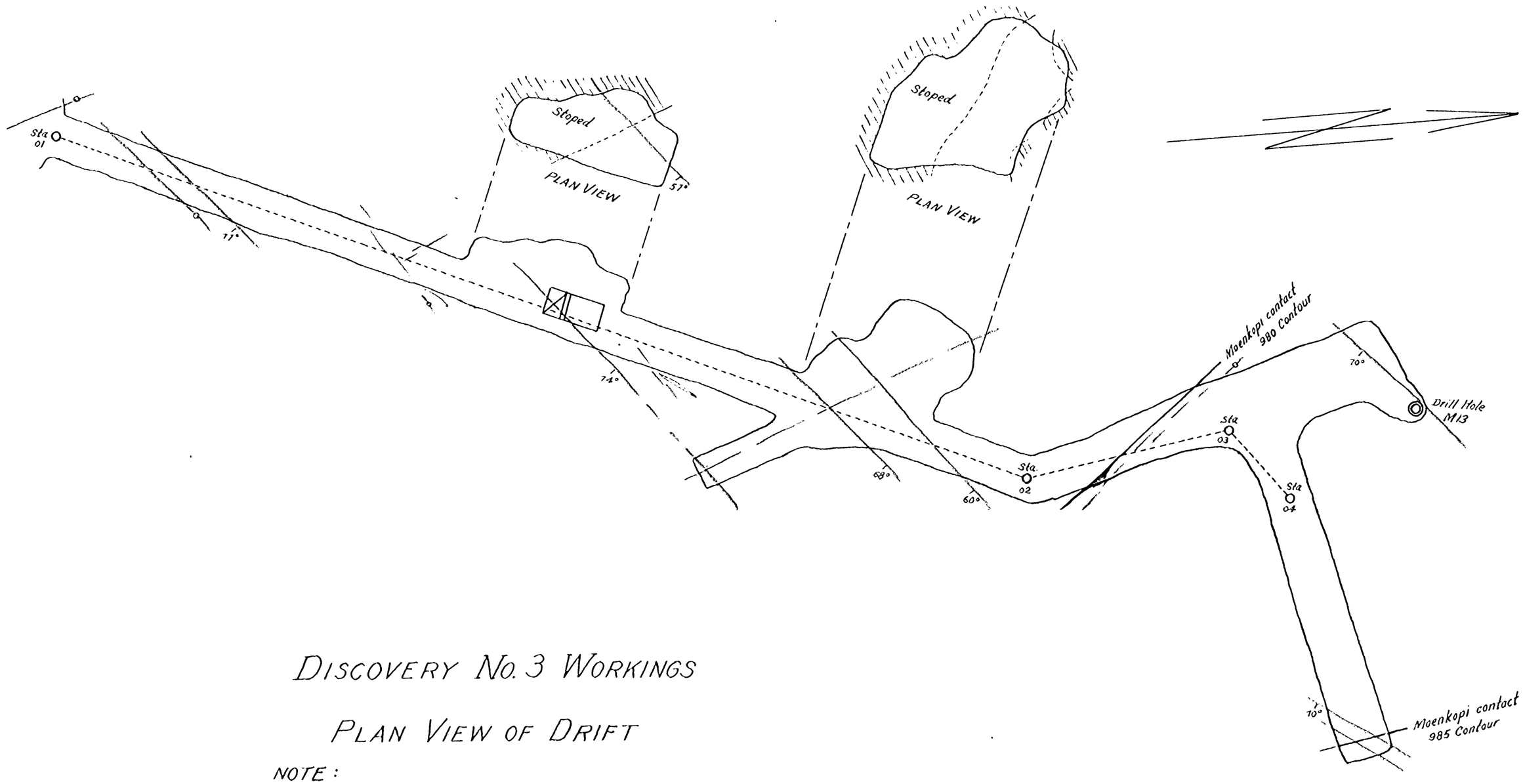


FIGURE 1 - LOCATION MAP, DEAD HORSE POINT PROJECT, MERNAB MINES, GRAND AND SAN JUAN, COUNTIES, UTAH
DMEA 4394



DISCOVERY No. 3 WORKINGS

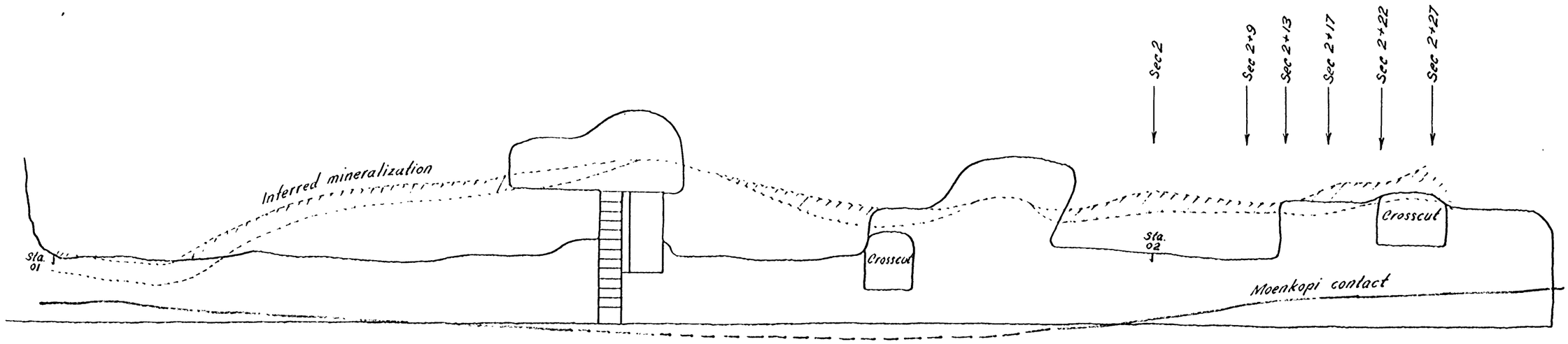
PLAN VIEW OF DRIFT

NOTE:
Geology mapped at waist elevation
Mineralized zone lies above drift elevation

Scale ~ 1" = 10'

by
Walter N. Campbell

MERNAB MINES
Box 729
Moab, Utah

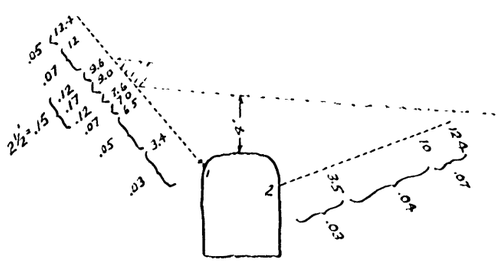


LONGITUDINAL SECTION OF DRIFT

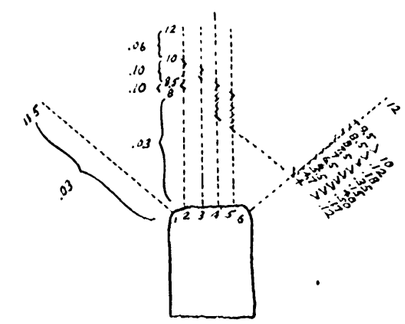
Scale ~ 1" = 10'

by

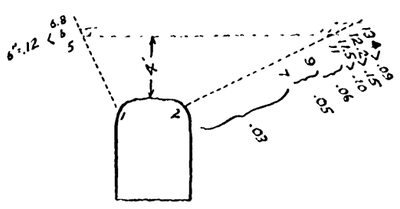
Walter N. Campbell



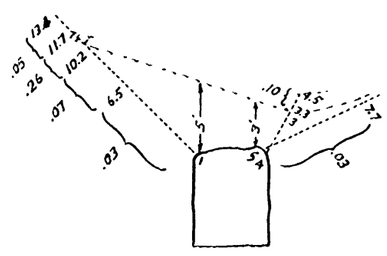
Sec 2



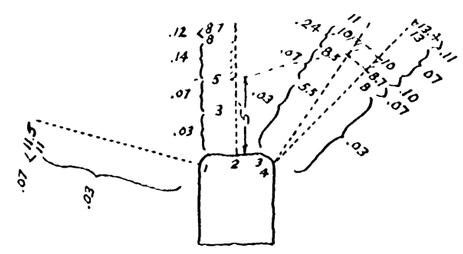
Sec 2+27



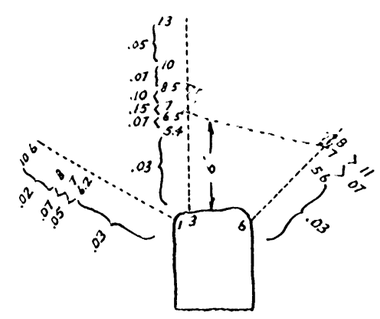
Sec 2+9



Sec 2+13



Sec 2+17



Sec 2+22

DRILL HOLE SECTIONS

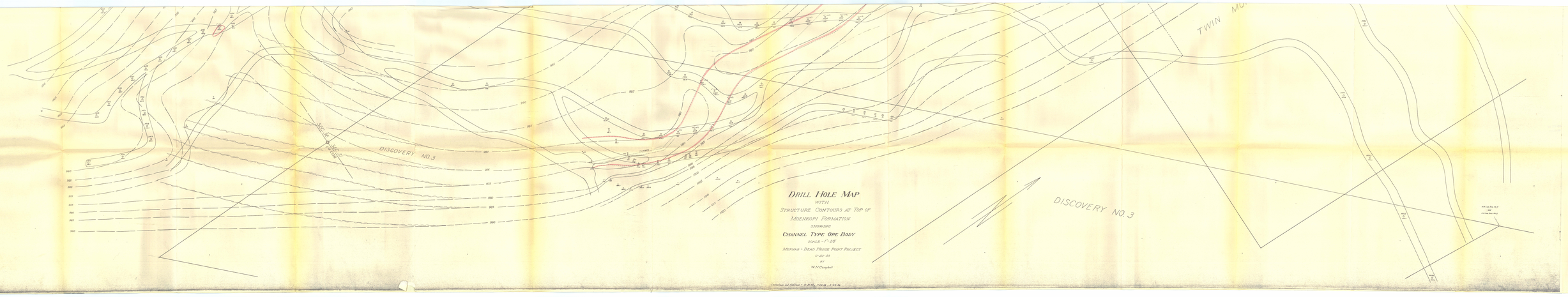
NOTE:

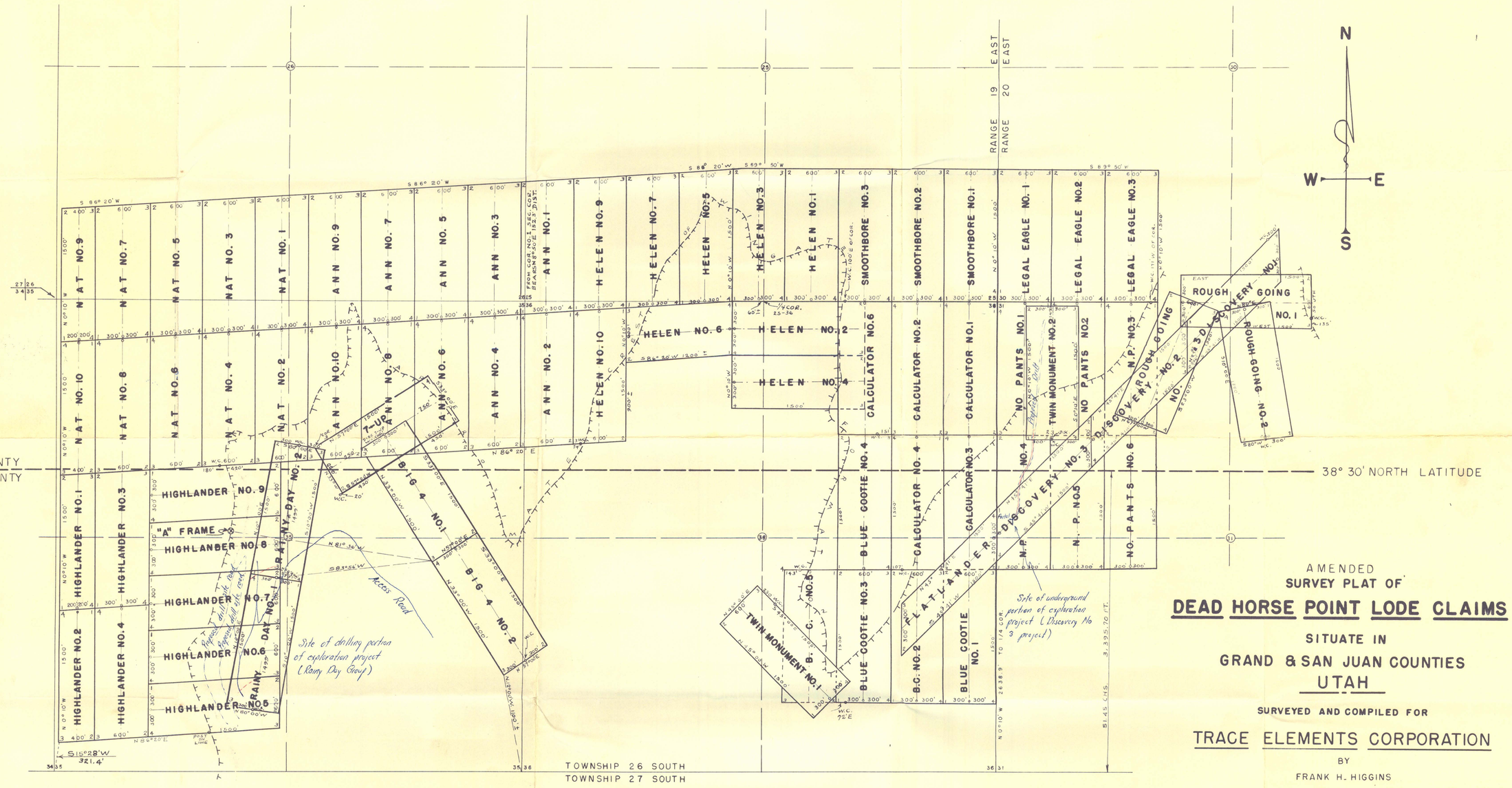
Values obtained by radiometric probing

MERNAB MINES

Box 729
Moab, Utah

NO PANTS NO. 4
NULMENT NO 2
WINGATE


DISCOVERY NO. 3
SEC. 16 SEC. 21
TUNNEL
DISCOVERY NO. 3
TWIN MO
DRILL HOLE MAP
WITH
STRUCTURE CONTOURS AT TOP OF
MOENKOPI FORMATION
SHOWING
CHANNEL TYPE ORE BODY
SCALE = 1" = 20'
MERRIAM - DEAD HORSE POINT PROJECT
11-23-55
BY
W.H. Campbell



AMENDED
SURVEY PLAT OF

DEAD HORSE POINT LODE CLAIMS

SITUATE IN
GRAND & SAN JUAN COUNTIES
UTAH

SURVEYED AND COMPILED FOR

TRACE ELEMENTS CORPORATION

BY
FRANK H. HIGGINS
U. S. Mineral Surveyor

SCALE 1" = 500'

MAY 1955

SITUATE IN SECS. 25,26,35 & 36, T. 26 S., R. 19 E., & SECS. 30 & 31, T 26 S, R. 20 E.

NOTES

Discovery Points, as indicated by small circles, are all located 10' from end lines, unless otherwise indicated.

In general, all claims lying wholly above the Wingate Rim, are surveyed with a probable tolerance of less than one part per thousand.

Claims lying wholly, or in part, below the Wingate Rim were surveyed by direct and indirect stadia, or triangulation methods.

All monuments are 4"x4" posts or substantial mounds of stones, properly marked in the field, and correctly described in the Amended Descriptions for Record, which were compiled from this plat.

Frank H. Higgins
GRAND JUNCTION, COLORADO

Mernab Mines
Box 729
Moab, Utah

Drill Hole Map
Rainy Day Claim Group
Structure Contours at Top of Moenkopi Formation
Scale - 1" = 20'
by
Walter N. Campbell
6-7-56
HIGHLANDER NO. 8
HIGHLANDER NO. 7
HIGHLANDER NO. 6
RAINY DAY NO. 2
RAINY DAY NO. 1
Mineralization
Secrest Outcrop
Outcrop of top of Moenkopi
Proposed drilling area
Proposed drilling area
M150
M129
M128
M125
M126
M127
M124
M140
M139
M138
M137
M136
M135
M134
M133
M132
M149
M130
M131
M141
M142
M148
M143
M144
M145
M146
M147
M123
475
470
465
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455
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490
495