700

FILE COPY
Surname:
Ching
Ellis
Crawford
Hudson
Martin
Stephens

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

JUN 13 1956

N & N Minerals
P. O. Box 299
El Paso, Texas

Re: Docket No. DMEA-4066 (Uranium)
Blackwater Claim
Apache County, Arizona, and
San Juan County, Utah

Gentlemen:

Your application for aid in an exploration project and other information available to us in Washington concerning the above-named property have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information, although noting some uranium mineralization on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you that, under these circumstances, your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention.

Sincerely yours,

G. O. Mittendorf

Administrator

MChing/izm 6-12-56
cc to: Docket
Code 700
Mr. Ching
Admr.'s Reading File
Operating Committee
DMEA field Team, Region III (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

Docket Copy

700

Ching Ellis

Summary of Proposed Project

Object: Denial of application for an exploration project.

Docket No.: DMEA-4066

Commodity: Uranium

Applicant: H & H Minerals, a Partnership
P. O. Box 299
El Paso, Texas

Property: A 78 acre block of land located within the Harvey Blackwater claim. Latter claim consists of 529 acres which were covered by a drilling and exploration permit for 120 days, from the Navajo Tribal Council. The 78 acres ~~is~~ are held by Applicant through assignment of a lease issued to Harvey Blackwater. The land is situated in an unsurveyed area in sec. 32 or 33, T. 43 S., R. 19 E., S.L.B. & M., San Juan County, Utah.

Date of Application: November 8, 1955

Amount of Application: $37,635.00

Work Proposed: Explore a Shinarump channel on the property by wagon drilling and a 50-foot, 2 compartment, 4 feet by 8 feet shaft.

Estimated Costs:

8,000 ft. wagon drilling @ $1/ft.	$8,000.00	
50 ft. shaft sinking @ $164.17/ft.	8,208.50	
Supervision and consultants	3,400.00	
Auxillary equipment and miscellaneous	18,026.50	
Estimated Total Cost		$37,635.00
Government Participation @ 75%		$28,226.25

Field Team Report: May 2, 1956, F. M. Byers, Jr., USGS & M. H. Salsbury, USBM:

The formations in the vicinity of the property are the Lower Triassic Moenkopi and the Upper Triassic Chinle. The potential ore-bearing unit is the Shinarump member of the Chinle formation.

The known uranium deposits to the south occur in channel scours. The largest occurs at the Monument No. 2 mine, 5 miles southwest of the subject property. Northeastward from the Monument No. 2 mine the channels and associated deposits become generally smaller and lower grade, pinching out in the vicinity of the H & H property or slightly northeast. As exposed in an open pit a few hundred yards south of

the property, the Shinarump is 10 feet thick. About 200 tons of 0.13% U_3O_8 ore were taken from the pit. Bulldozer trenches just west of the property showed the Shinarump as only a few feet thick.

Applicant drilled 42 holes at various points on the 529 acre Harvey Blackwater claim. Twelve holes on the 78 acre lease area were reported by the Applicant as showing evidence of low-grade mineralization and a channel scour, but the latter was not substantiated by the data presented. Results from the drilling were quite incomplete.

The regional pinchout northeastward of the Shinarump conglomerate and the general decrease in size of the ore deposits in the direction of the subject property, indicate that ore bodies, if they exist at all on the property, are likely to be low-grade and less than 100 tons.

It is recommended that the application be denied.

Commodity Group Comments:

USBM, John E. Crawford, May 21, 1956:

Discussed Field Team report with the AEC representative. Concurs in the recommendation for denial inasmuch as the proposed work is of a prospecting nature and it is unlikely that exploration will result in an significant discovery.

USGS, N. E. Nelson, May 28, 1956:

Concurs in the recommendation for denial as there is no known target and the proposed work would be considered of a prospecting nature.

Rare and Miscellaneous Metals Div., Michael Ching, June 12, 1956:

Work on adjoining properties to the south and west indicate that the Shinarump conglomerate host rock is too thin for significant ore deposits on this property. Twelve holes drilled by Applicant on the 78 acre lease area were not encouraging.

Conclusions and Recommendations:

The chances of making a significant discovery on this property are poor. It is recommended that the application be denied.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

5/29/56 gla

IN REPLY REFER TO:

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

RECEIVED
MAY 28 1956

May 28, 1956

Re: DMEA 4066
H & H Minerals
Harvey Blackwater block
Apache County, Arizona
$37,635.00 - Uranium

Memorandum

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

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

Subject: Review of Field Team report.

The applicant requested assistance in further work on a lease (Indian) underlain by Chinle and Moenkopi beds and probably in part by the Shinarump member of the Chinle formation. Work on ground adjoining the lease had shown signs of radioactive minerals but no discovery has been made on the lease and due to a pinchout in the Shinarump the likelihood of finding a worthwhile ore body is considered small by the examiners.

As no target is known the work would be prospective; therefore, the examiners and the Field Team recommend denial of the application.

I concur with the recommendation.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
MAY 28 1956

May 28, 1956

Re: DMEA 4066
E & E Minerals
Harvey Blackwater block
Apache County, Arizona
$37,635.00 - Uranium

Memorandum

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

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

Subject: Review of Field Team report.

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As no target is known the work would be prospective; therefore, the examiners and the Field Team recommend denial of the application.

I concur with the recommendation.

N. E. Nelson

N. E. Nelson

NENelson:iml
G-5/28/56

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

5-22-56

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

RECEIVED
MAY 22 1956

May 21, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

Subject: Report of Examination, DMEA Docket 4066, H & H Minerals (Harvey Blackwater claim), San Juan County, Utah, and Apache County, Arizona

I have reviewed the report of examination, DMEA Docket 4066, H & H Minerals (Harvey Blackwater claim), San Juan County, Utah, and Apache County, Arizona, dated May 10 and received in this office May 17, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The field examiners recommend that the application for Federal assistance be denied because the potential ore-bearing formation of the area is thin or non-existent on the subject property and the ore bodies that may be found on it are likely to be less than 100 tons.

We concur in the recommendation of the field examiners that the application be denied inasmuch as the proposed work is of a prospecting nature and it is unlikely that exploration of the property will result in a significant discovery of uranium.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E Crawford
John E. Crawford

RECEIVED
MAY 22 1956

May 21, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

Subject: Report of Examination, DMEA Docket 4066, H & H Minerals (Harvey Blackwater claim), San Juan County, Utah, and Apache County, Arizona

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The field examiners recommend that the application for Federal assistance be denied because the potential ore-bearing formation of the area is thin or non-existent on the subject property and the ore bodies that may be found on it are likely to be less than 100 tons.

We concur in the recommendation of the field examiners that the application be denied inasmuch as the proposed work is of a prospecting nature and it is unlikely that exploration of the property will result in a significant discovery of uranium.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E. Crawford

5-21-56

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

RECEIVED
MAY 14 1956

May 10, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, DMEA Docket 4066 (Uranium) H & H Minerals (Harvey Blackwater claim) San Juan County, Utah, and Apache County, Arizona

Enclosed are the original and three copies of a joint engineering and geologic report on the subject property.

The field examiners concluded that a significant amount of uranium would not be found as a result of the Applicant's proposed exploration and any alternate proposal would be of a prospecting nature.

They recommend that the application be denied. We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
5-18-56
(date)

DMEA
Data Rec'd

MAY 9 1956

RECEIVED

MAY 14 1956

REGION III

BUREAU OF MINES
Denver, Colorado

Building 20
Denver Federal Center
Denver 2, Colorado
May 8, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

TRANSMITTED

MAY 10 1956

From: E. N. Harshman
John F. Shaw

Subject: DMEA 4066 (Uranium) H & H Minerals (Harvey Blackwater claim) San Juan County, Utah, and Apache County, Arizona

Enclosed are the original and 9 copies of a Joint Engineering and Geologic Report by M. H. Salsbury, mining engineer, and F. M. Byers, Jr., geologist, covering Docket DMEA 4066.

H & H Minerals applied for exploration assistance to explore their leased property on the Navajo Indian Reservation in San Juan County, Utah and Apache County, Arizona. The proposed work consisted of 8000 feet of wagon drilling and 50 feet of shaft sinking at an estimated cost of $37,635.00.

The property was examined on March 10, 1956 by M. H. Salsbury and F. M. Byers, Jr. The examining team concluded that the applicant's proposal is still in the prospecting stage. The regional geology indicates that the Shinarump formation is thin or non-existant on the property.

It is recommended that the application be denied.

E. N. Harshman

E. N. Harshman
Member Field Team

John F. Shaw

John F. Shaw
Supervising Mining Engineer

JFS/mw
cc: 9
EHarshman
DMEA 4066
Chron

Reviewed by
DMEA OPERATING COMMITTEE
5-18-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
MAY 14 1956

MINERAL DEPOSITS
DMEA
RECEIVED
MAY 1 1956
GEOLOGICAL SURVEY
COLORADO

P. O. Box 360
Grand Junction, Colorado

April 26, 1956

Memorandum

To: E. N. Harshman, DMEA Field Team, Region III

TRANSMITTED
MAY 10 1956

From: H. F. Albee

Subject: DMEA docket 4066 (Uranium), Harvey Blackwater claim, H and H Minerals, San Juan County, Utah, and Apache County, Arizona.

H and H Minerals applied for Government assistance to explore for uranium ore in the Shinarump member of the Triassic Chinle formation in the northern part of the Navajo Indian Reservation. The application was referred to the field and an examination was made March 10, 1956, by F. M. Byers, Jr., U. S. Geological Survey, and M. H. Salsbury, U. S. Bureau of Mines. Transmitted herewith is a joint geologic and engineering report covering the field examination and the conclusions derived therefrom.

The Harvey Blackwater claim is on the southeast dipping flank of the Monument upwarp at the boundary between the states of Utah and Arizona. The formations in the vicinity of the property are the Lower Triassic Moenkopi and the Upper Triassic Chinle. The potential ore-bearing unit is the Shinarump member of the Chinle formation.

The known uranium deposits of the area are in channel scours, the largest and most productive of which is the Monument No. 2 channel. From the Monument No. 2 the Shinarump thins northeastward and pinches out in the vicinity of the H and H Minerals mining lease on the Harvey Blackwater claim. As the Shinarump thins the channels become shallower and the associated uranium deposits become smaller and lower grade.

Because of the thin or non-existent Shinarump on the property it is inferred that if the ore bodies exist on it, they are likely to be less than 100 tons. The examining team recommends that the application for Government assistance be denied. I concur with the conclusions and recommendations of the examining team.

The Atomic Energy Commission was consulted relative to the evaluation of the property.

Howard F. Albee
Howard F. Albee,
Geologist

HFA/mlr
Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
5-18-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

RECEIVED
MAY 14 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT REPORT OF EXAMINATION BY EXAMINING TEAM
REGION III

TRANSMITTED
MAY 10 1956

DMEA 4066

H & H MINERALS
Navajo Indian Reservation
Harvey Blackwater claim

San Juan County, Utah and Apache County, Arizona

Uranium

Joint Engineering and Geologic Report

By

F. M. Byers, Jr., Geologist
Geological Survey

M. H. Salsbury, Mining Engineer
Bureau of Mines

May 2, 1956

Reviewed by
DMEA OPERATING COMMITTEE
5-18-56
(date)

DMEA 4066

Harvey Blackwater claim
H & H Minerals
San Juan County, Utah and Apache County, Arizona

RECEIVED
MAY 14 1956

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ILLUSTRATIONS

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2. Geologic map showing H & H Mining company lease on part of Harvey Blackwater claim, and adjacent area, Apache County, Arizona, and San Juan County, Utah....13

DMEA 4066

Harvey Blackwater claim
H & H Minerals
San Juan County, Utah and Apache County, Arizona

INTRODUCTION AND SUMMARY

H & H Minerals, P. O. Box 299, El Paso, Texas, has applied for Defense Minerals Exploration assistance in drilling and underground exploration for uranium at their leased property in the Navajo Indian Reservation, on the boundary between San Juan County, Utah and Apache County, Arizona.

The applicant requests 8,000 feet of wagon drilling, and 50 feet of shaft sinking at an estimated cost of $37,635.00. Government participation at 75 percent would be $28,226.25.

The property was examined on March 10, 1956 by a DMEA examining team. The applicant was represented by an agent, Ralph Schevene.

The property consists of a block of 78 acres on which H & H Minerals holds a mining permit granted by the Navajo Tribal Council. It is part of a larger tract of approximately 529.6 acres on which the applicant had prospecting rights. Both prospecting and mining permits were obtained through Harvey Blackwater, a Navajo Indian, who would receive an over-riding royalty on any ore production. After an initial period of investigation, the applicant designated an area of 78 acres for further exploration. The Mining permit and sublease appear to be in order.

The property is on the southeast dipping flank of the Monument upwarp. The formations found in the vicinity of the property are, in ascending order, the Lower Triassic Moenkopi formation, and the Upper Triassic Chinle formation. These formations have a strike of about

N. 35° east and a dip of 6° SE. The potential ore-bearing unit of the area is the Shinarump member of the Chinle formation.

The Shinarump member pinches out northeastward in the vicinity of the H & H Minerals lease. The known uranium deposits to the south occur in channel scours, of which the largest occurs at the Monument No. 2 mine, 5 miles southwest of the H & H Minerals lease. Northeastward from the Monument No. 2 mine toward the Shinarump pinchout at the H & H property the channels and associated uranium deposits become generally smaller and lower grade. As exposed in an open pit, a few hundred yards south of the H & H property, the Shinarump is 10 feet thick. About 200 tons containing 0.13 percent of U_3O_8 were removed from the pit; the deposit appears essentially exhausted.

The Shinarump member is only a few feet thick as exposed in bulldozer trenches just west of the H & H Minerals lease. It is inferred that ore bodies of commercial grade beneath the applicant's property are likely to be small - less than 100 tons - because of the thin or non-existent Shinarump on the property.

The applicant's original proposal called for drilling holes in a series of northeast-southwest fences for the purpose of determining if any scours exist on the property. It was essentially a prospecting project. Some drilling at locations which appear to have been picked at random has since been done, and it is claimed that a channel scour has been found in which there is low-grade mineralization as shown by probing and by a chemical analyses of the cutting samples. The data presented by the applicant indicates only that Shinarump conglomerate with slight mineralization was encountered in the drill holes, but there is no evidence of the presence of a channel scour. The applicant's representative, Mr. Schevene, stated that all records of drilling results had been removed by a former employee. However, Mr.

Schevene was employed in the drilling project, and, from his account of the procedures, it appears that suitable hole-logs were not made, and no elevation control was established.

It is concluded that the applicant's project is still in the prospecting stage. The regional geology suggests that the Shinarump host rock for uranium deposits is thin or non-existent under the property. There is no justification, on the basis of accomplishments to date, for shaft sinking, or for further exploration by drilling, inasmuch as potential uranium-bearing channel scours on the mining block have not been demonstrated and probably do not exist. Supervision on the project appears to have been inadequate, information obtained unsatisfactory, and drilling done to date has been largely wasted.

It is recommended that the application for exploration assistance under DMEA 4066 be denied.

ACKNOWLEDGEMENTS

The applicant furnished copies of the Navajo Tribal Council prospecting permit, maps showing locations in reference to another lease block, one geologic report by Silas C. Brown of Durango, Colorado, and a report by Ralph Schevene. Two drilling plans and a shaft sinking proposal were presented with cost estimates.

Personnel of the Atomic Energy Commission and the Geological Survey were consulted. Atomic Energy Commission production records and data on claim locations were utilitzed.

LOCATION, TOPOGRAPHY AND CLIMATE

The Harvey Blackwater claim which was originally under the lease to H & H Minerals lies partly in San Juan County, Utah, T. 43 S., R. 19 E., Salt Lake Meridian, and partly in Apache County, Arizona, T. 41 N., R. 23 E., Gila and Salt River Meridian. It is within the Navajo Indian reservation 20.0 miles by road south of the San Juan river bridge at Mexican Hat, Utah. There are uranium mills at Monticello, Utah, 101 miles north of the property and at Shiprock, New Mexico, 87 miles east. "Stone Cabin" camp, adjoining the property, is 266 miles from Grand Junction, Colorado, the nearest major source of supplies. The road to Shiprock has been gravelled. The roads north of Mexican Hat are either gravelled or hard-surfaced. The access road from Mexican Hat southward is unimproved. (See Fig. 1).

The claims are at an altitude of about 5000 feet on a low, easily accessible ridge. The Comb Ridge escarpment lies to the southeast, and Monument Valley proper to the southwest.

The climate is arid, with occasional violent dust and rain storms in any season. Temperatures are moderate in winter, and extremely high in summer. Late fall and winter are the preferred times for surface exploration.

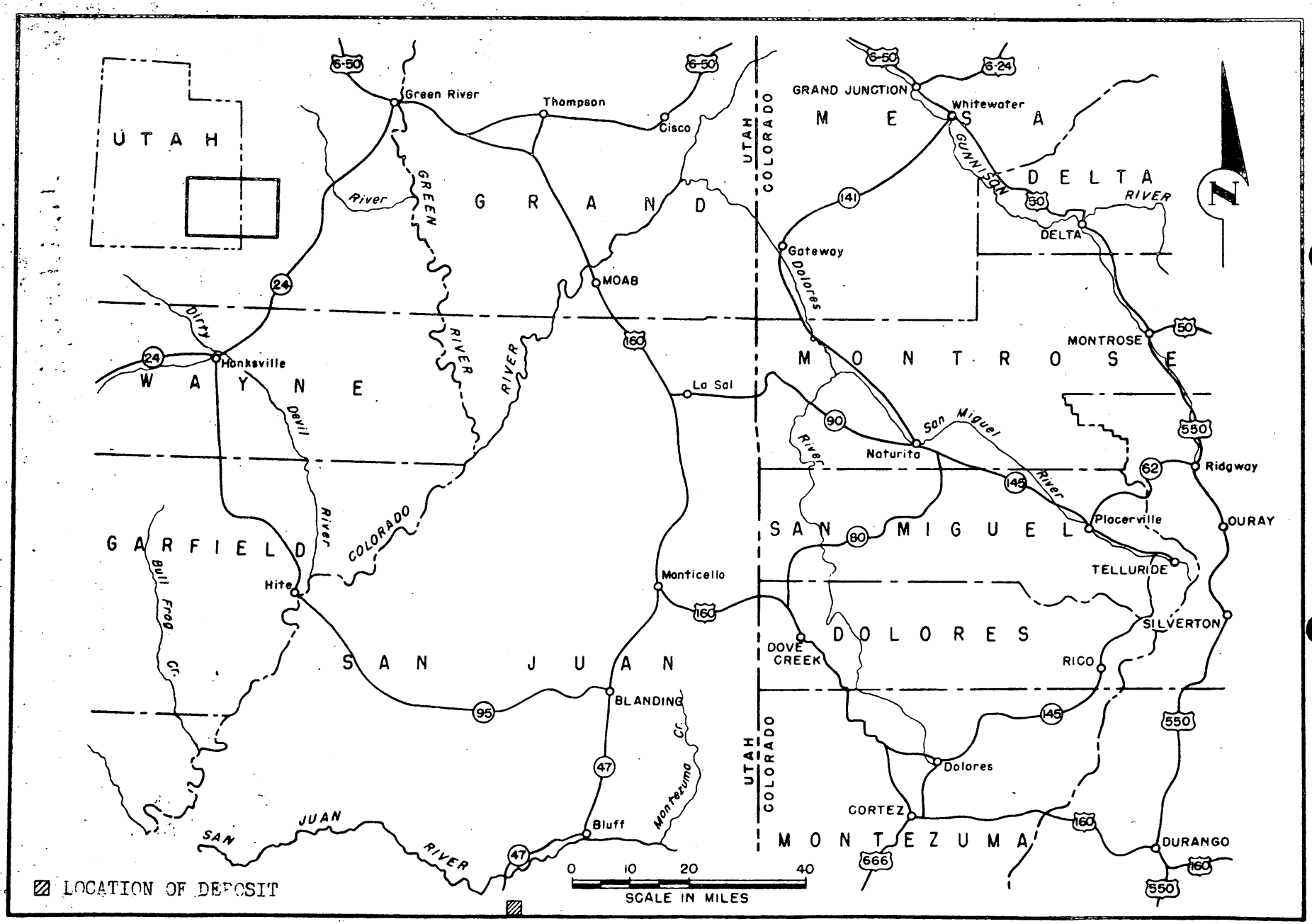

FIGURE 1 - LOCATION MAP, HARVEY BLACKWATER CLAIM, H & H MINERALS NAVAHO INDIAN RESERVATION, SAN JUAN COUNTY, UTAH AND APACHE COUNTY, ARIZONA. DMEA 4066

There are no unusual problems of supply, labor, or power to be met. Domestic and mine water supplies are limited, and water may have to be hauled as far as 20 miles in certain seasons. Transportation costs in this remote area are high, and housing accommodations for personnel must be brought in. Most operators utilize Indian labor where ever possible. In fact, there is a clause in the standard lease form which gives the Indians through whom the lease is obtained preference in hiring labor. The standard rate for this class of labor is $1.50 per hour.

HISTORY PRODUCTION AND OWNERSHIP

The first uranium discoveries in Monument Valley of any importance were on Vanadium Corporation of America's Monument No. 2 claim. This mine, 5 miles southwest of the applicant's ground is the closest major producer, with shipments totaling hundreds of thousands of tons of ore averaging around 0.25 percent U_3O_8 and over 1.00 percent V_2O_5. There are several smaller producing mines closely grouped around the Monument No. 2 operation.

Small operations on several of the Harvey Blackwater claims, have been carried on since 1952. These include one open pit on the Harvey Blackwater No. 3 claim, an underground mine on the Harvey Blackwater No. 4 claim and a surface operation on the Harvey Blackwater No. 1 claim.

The production from Harvey Blackwater claims for the period January 1954 through January 1956 is as follows:

CLAIM	SHIPPER	Dry Tons	Percent U_3O_8	Percent V_2O_5
Harvey Blackwater No. 1	Mex-Air Uranium Co.	129.26	0.14	0.29
" No. 3	"	204.59	0.13	0.05
" No. 4	(through Dec. '55)	146.21	0.10	0.23
" No. 4	(January '56)	28.87	0.26	0.42

The examining team saw the operations on the Harvey Blackwater Nos. 3 and 4 claims. The operation on Harvey Blackwater No. 1 claim was

not visited. Judging from the production records and field observations, none of the deposits could be considered significant. There has been no production from the lease block held by H & H Minerals.

H & H Minerals, P. O. Box 299, El Paso, Texas, is a partnership of Robert Haynsworth and Claude Huckleberry of that city.

The mining lease granted by the Navajo Tribal Council to H & H Minerals through Harvey Blackwater is a block 1320 by 2574 feet within the original prospecting lease. The block has been located by tying it to the southeast corner of the Harvey Blackwater No. 1 claim (Fig. 2). The Blackwater claim is shown on figure 2 in relation to several other Harvey Blackwater claims, according to survey plots in Atomic Energy Commission records made in connection with certifications for bonus. It is believed that the locations are substantially correct although the AEC calls attention to the fact that the ties from the claims to the northeast corner of the Monument No. 2 claim, 4 miles to the south, which is used as a common reference point in the area, appear to be in error. However, the relation of the claims to each other is probably correctly shown.

Mr. Schevene stated that the Utah-Arizona state line runs through the H & H Minerals mining lease block. Plotting it according to the AEC records places it all in Utah, in section 32 or 33, T. 43 S., R. 19 E., Salt Lake Meridian. Plotting the claim in accordance with W. I. Finch's map "Preliminary Geologic Map of the Colorado Plateau" places it in section 33.

H & H Minerals originally had a drilling and exploration permit from the Navajo Tribal Council dated July 21, 1955, on the larger block shown in figure 2. This permit carried no rights to mine. Within 120 days the permit holder was required to apply for a mining permit on a definite

portion of the land covered by the prospecting permit. According to the applicant's representative a mining permit on the 78 acre block shown in figure 2 was issued on February 14, 1956. A copy of this document has not been furnished to the examining team. Believing that the best part of the prospecting block had been located by the preliminary drilling project, the applicant limited the mining permit application to a small area which requires a payment of $500.00 per year to the Navajo Tribe. Each 80 acres, or fraction thereof, leased requires a $500.00 payment.

In effect, the Navajo Tribal Council did not lease the Blackwater claim directly to H & H Minerals but to Harvey Blackwater, a member of the Navajo Tribe. Blackwater has a separate agreement with H & H Minerals whereby he is entitled to an over-riding royalty of from 2 to 5 percent on all production. The royalty payable to the Navajo Tribal Council was not stated in the documents furnished with the DMEA application.

So far as could be ascertained from all records available to the examining team, the applicant's right to mine on the 78 acre block is valid.

PRESENT STATUS

Exploration and Development

The applicant reports that a total of 42 wagon-drill and dry rotary holes have been drilled on the Harvey Blackwater claim. These holes averaged 41 feet deep and all are reported to have penetrated to the base of the Shinarump conglomerate. The holes were drilled at various points in the 529 acre prospecting block. The applicant did not furnish data on drilling results or hole locations. Mr. Schevene stated that all data had been in the possession of a former supervisor and was not turned over to

the company. However, Schevene was on the ground when the drilling was done and, from his account of the project, it appears probable that no hole logs were kept, and no control of hole depths was exercised. Consequently, hole bottoming elevations and Shinarump thicknesses are not known. Mr. Schevene states that evidence of low-grade mineralization and a channel scour was found in the area covered by the mining permit. This area was visited by the examining team. It is shown on the map as determined by a Brunton and pace survey from corner No. 1 of the Harvey Blackwater claim. Twelve holes were drilled on 5 to 18 foot centers. Mr. Schevene indicated from memory which holes had shown radiometric count and three holes which had produced mineralized cuttings which contained from 0.076 to 0.10 percent U_3O_8 as analyzed chemically. No thickness was reported. An attempt to reprobe the holes during the field examination was unsuccessful because the applicant's probing equipment was out of order. Piles of drill cuttings mixed with blow sand were examined radiometrically and showed count up to twice back ground in some cases. Cuttings and holes could not be correlated. The occurrence of a channel scour in the drilled area was not substantiated by any data which was furnished to the examining team.

Mining and Milling Equipment and other Facilities

The applicant owns both wagon drilling and rotary drilling rigs, auxiliary equipment, and tools. Everything required for a drilling project or shaft sinking is available except a suitable jackhammer for shaft work. There is a 6 foot by 15 foot portable building belonging to the applicant in which Mr. Schevene is living. Other living accommodations would be required for an exploration project.

GEOLOGY AND URANIUM DEPOSITS

The property under lease to H & H Minerals is on the southeasterly dipping flank of the Monument Upwarp. The DeChelly sandstone, the uppermost member of the Permian Cutler formation, forms a prominent hogback ridge about one mile west of the property (fig. 2). The DeChelly member is overlain by the Lower Triassic Moenkopi formation. The Shinarump member of the Upper Triassic Chinle formation lies unconformably on the Moenkopi and forms a discontinuous low hogback ridge. In the vininity of the H & H Minerals lease, or slightly northeast, the Shinarump member pinches out. During the field examination, thin Shinarump, not more than a few feet thick, was observed in bulldozer trenches within 1,000 feet northeast of the last Shinarump outcrop to the northeast (fig. 2). Northeast of this pinchout, which is of regional significance, only scattered discontinuous lenses of Shinarump are known for many miles to the north.

In a general way, the known uranium deposits become smaller with decreasing total thickness and channel scours of the Shinarump northeasterly along its outcrop from the Monument No. 2 mine, which is about three miles south of the area shown in figure 2. At the Monument No. 2 mine, the maximum thickness of the Shinarump is in excess of 100 feet; the width of the Monument No. 2 channel ranges from 400 to 700 feet and is scoured as much as 50 feet in the underlying Moenkopi (Witkind, July 1954, U. S. Geol. Survey TEIR 340, fig. 6). The uranium deposit at the Monument No. 2 mine is one of the largest deposits on the Colorado Plateau and has produced several hundred thousand tons of uranium ore.

The deposit at the Mex-Air mine (Harvey Blackwater No. 4 claim) is 3 miles northeast of the Monument No. 2 and within the area shown on figure 2. This deposit lies in a Shinarump channel only about 100 feet

wide and only 3 to 4 feet deep into the underlying Moenkopi. The mineralized sandstone is about 50 feet wide in the bottom of the channel and averages about 1 foot or slightly less in thickness. The average grade across this is estimated to be about 0.15 eU_3O_8, sparse "logs" of higher grade within this interval may assay as high as 0.50 percent of eU_3O_8. This estimate accords with the production records to date (see History, Production, and Ownership). Some ore, largely marginal redundant is exposed in an oblique crosscut across the channel, but the reserves are probably small.

Northward along the Shinarump outcrop, a small deposit has been worked on the Harvey Blackwater No. 1 claim (see table under Production, History, and Ownership) but was not visited by the examining team.

North of the Utah-Arizona line, an open pit in the small outlier of Shinarump (fig. 2) was examined on the Harvey Blackwater No. 3 claim. The pit is about 75 feet wide and 150 feet long. The Shinarump sandstone totals 10 feet thick. No ore was observed in the walls of the pit, but a moderate radiometric background (0.10 eU_3O_8) was observed with Geiger Counter inside the pit. Just northeast of the pit a 1-ton ore pile was estimated at .20 eU_3O_8, and a three-ton ore pile, at .10 eU_3O_8. Actual production has consisted of about 200 tons containing .13 U_3O_8. No channel scour could be observed, owing to limited poor exposures outside the pit. It is the opinion of the examining team that this deposit is essentially worked out, as no ore-grade sandstone was observed in the walls of the pit.

No Shinarump is exposed on the H & H Minerals Mining lease and drilling to date by representatives of the applicant has yielded no information that could be used by the examining team (See Present Status). The drill cuttings that might possibly be correlated with certain drill holes in the intensely drilled area (fig. 2) consisted of medium to fine

grained light gray sandstone. The few piles of mineralized cuttings consist of yellowish-gray very coarse sandstone that could not be correlated with any drill holes in the closely drilled area (fig. 2). It appears quite possible that these cuttings may have come from holes drilled outside the intensely drilled area.

The Shinarump sandstone ledge just west of the H & H lease is largely covered with bulldozer trenches. Within 1000 feet northeast of the outcrop exposure (fig. 2) the Shinarump is only a few feet thick. The Shinarump apparently pinches out northeast in the vicinity of the H & H lease.

ORE RESERVES

The regional pinchout northeastward of the Shinarump member of the Chinle formation at the applicant's property would, in itself, be regarded as unfavorable for the occurrence of any uranium ore bodies of significant tonnage. A parallel evidence of unfavorablility is also indicated by the general decrease in size of the uranium deposits in the direction of the Shinarump pinch-out at the applicant's property. These two lines of evidence indicate to the examining team that uranium ore bodies, if they exist at all on the H & H lease, are likely to be low-grade and less than 100 tons.

PROPOSED EXPLORATION

The applicant originally proposed 50 feet of shaft sinking and 8000 feet of wagon drilling, to be done on the original Harvey Blackwater Claim of 529.6 acres. The drilling was to be in northeast-southwest fences starting near the Shinarump outcrop along the northwest boundary. The object was to locate evidence of channel scours and mineralization. The

estimated cost was $37,635.00, in which Government participation at 75 percent would be $28,226.25.

The report by Ralph Schevene presents a revised proposal confined to the 78 acres covered by the mining permit. Based on the belief that a channel scour has been located by previous drilling, a pattern of holes at the corners of 100 foot squares is proposed along the supposed channel trend. Another hole is located at the center of each square. In a final stage, holes on 25 foot centers were to be drilled to delimit any significant mineralization found. Sketches showing hole patterns were furnished but no definite hole locations were shown on maps. Consequently, locations of revised drill holes are not shown in figure 2. An estimate of drilling footages and costs under the revised program was not presented.

An alternate exploration plan is not being suggested by the examining team.

CONCLUSION AND RECOMMENDATIONS

It is concluded that the ore deposits found and mined to date in the vicinity of the H & H Minerals lease are too low-grade and too small to be of any significance. There is no evidence to show that mineralization on the applicant's ground is likely to be better.

Based on field observations and the very poor records of previous drilling by H & H Minerals, no channel scours have been located so far, and further drilling to locate any which may be present is in the nature of prospecting rather than exploration.

Supervision of any future exploration project would have to be better than in the past if worthwhile information were to be obtained.

It is recommended that the application for exploration assistance

under DMEA 4066 be denied.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
APRIL 1956 DOCKET 8066

RECEIVED
MAY 14 1956

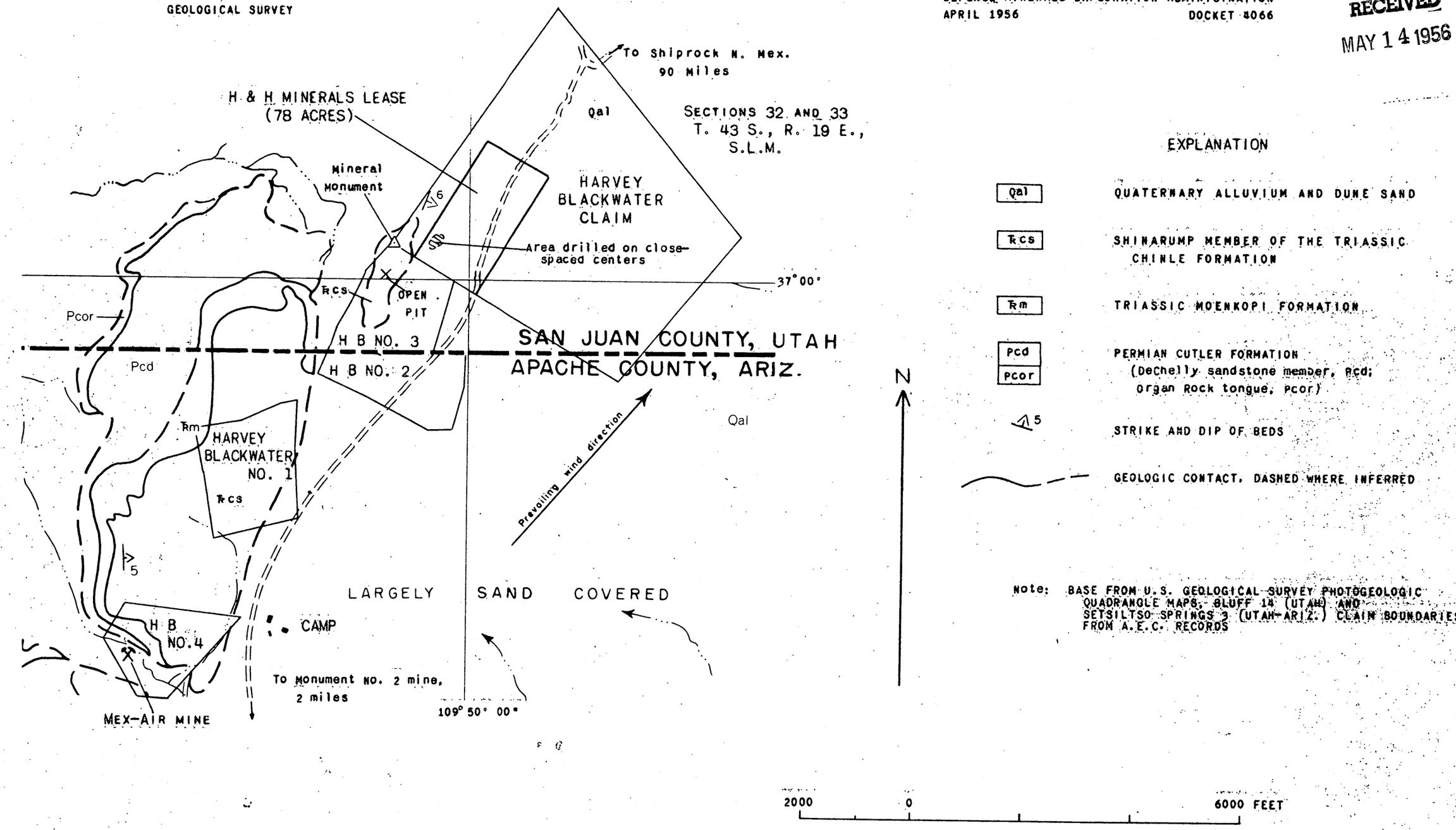

FIGURE 2. GEOLOGIC MAP SHOWING H AND H MINING COMPANY LEASE ON PART OF HARVEY BLACKWATER CLAIM, AND ADJACENT AREA, APACHE COUNTY, ARIZONA, AND SAN JUAN COUNTY, UATH

5/15/56

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

RECEIVED MAY 14 1956

May 10, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, DMEA Docket 4066 (Uranium) H & H Minerals (Harvey Blackwater claim) San Juan County, Utah, and Apache County, Arizona

Enclosed are the original and three copies of a joint engineering and geologic report on the subject property.

The field examiners concluded that a significant amount of uranium would not be found as a result of the Applicant's proposed exploration and any alternate proposal would be of a prospecting nature.

They recommend that the application be denied. We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE

5-18-56
(date)

DMEA
Date Rec'd.

MAY 9 1956

BUREAU OF MINES
Denver, Colorado

RECEIVED
MAY 14 1956

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
May 8, 1956

Memorandum

TRANSMITTED
MAY 10 1956

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman
John F. Shaw

Subject: DMEA 4066 (Uranium) K & K Minerals (Harvey Blackwater claim) San Juan County, Utah, and Apache County, Arizona

Enclosed are the original and 9 copies of a Joint Engineering and Geologic Report by M. K. Salsbury, mining engineer, and F. M. Byers, Jr., geologist, covering Docket DMEA 4066.

K & K Minerals applied for exploration assistance to explore their leased property on the Navajo Indian Reservation in San Juan County, Utah and Apache County, Arizona. The proposed work consisted of 5000 feet of wagon drilling and 50 feet of shaft sinking at an estimated cost of $37,635.00.

The property was examined on March 10, 1956 by M. K. Salsbury and F. M. Byers, Jr. The examining team concluded that the applicant's proposal is still in the prospecting stage. The regional geology indicates that the Shinarump formation is thin or non-existent on the property.

It is recommended that the application be denied.

E. N. Harshman

E. N. Harshman
Member Field Team

John F. Shaw

John F. Shaw
Supervising Mining Engineer

JFS/mr
cc: 9
ENHarshman
DMEA 4066
Chron

Reviewed by
DMEA OPERATIONS SECTION

5-18-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
MAY 14 1958

P. O. Box 360
Grand Junction, Colorado

April 26, 1956

Memorandum

TRANSMITTED

MAY 10 1956

To: E. N. Harshman, DMEA Field Team, Region III

From: H. F. Albee

Subject: DMEA docket 4066 (Uranium), Harvey Blackwater claim, H and H Minerals, San Juan County, Utah, and Apache County, Arizona.

H and H Minerals applied for Government assistance to explore for uranium ore in the Shinarump member of the Triassic Chinle formation in the northern part of the Navajo Indian Reservation. The application was referred to the field and an examination was made March 19, 1956, by F. M. Byers, Jr., U. S. Geological Survey, and M. H. Salsbury, U. S. Bureau of Mines. Transmitted herewith is a joint geologic and engineering report covering the field examination and the conclusions derived therefrom.

The Harvey Blackwater claim is on the southeast dipping flank of the Monument upwarp at the boundary between the states of Utah and Arizona. The formations in the vicinity of the property are the Lower Triassic Moenkopi and the Upper Triassic Chinle. The potential ore-bearing unit is the Shinarump member of the Chinle formation.

The known uranium deposits of the area are in channel scours, the largest and most productive of which is the Monument No. 2 channel. From the Monument No. 2 the Shinarump thins northeastward and pinches out in the vicinity of the H and H Minerals mining lease on the Harvey Blackwater claim. As the Shinarump thins the channels become shallower and the associated uranium deposits become smaller and lower grade.

Because of the thin or non-existent Shinarump on the property it is inferred that if the ore bodies exist on it, they are likely to be less than 100 tons. The examining team recommends that the application for Government assistance be denied. I concur with the conclusions and recommendations of the examining team.

The Atomic Energy Commission was consulted relative to the evaluation of the property.

Howard F. Albee
Howard F. Albee,
Geologist

HFA/mlr
Enclosures

DMEA OPERATIONS

5-18-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

RECEIVED
MAY 14 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT REPORT OF EXAMINATION BY SEARCHING TEAM
REGION XIX

TRANSMITTED
MAY 10 1956

DMEA 4066

K & K MINERALS
Navajo Indian Reservation
Harvey Blackwater claim

San Juan County, Utah and Apache County, Arizona

Uranium

Joint Engineering and Geologic Report

By

F. M. Byers, Jr., Geologist
Geological Survey

M. M. Salisbury, Mining Engineer
Bureau of Mines

May 2, 1956

DMEA 6

DMRA 4066

RECEIVED
14 1959

Harvey Blackwater claim
X & X Minerals
San Juan County, Utah and Apache County, Arizona

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2. Geologic map showing X & X Mining company lease on part of Harvey Blackwater claim, and adjacent area, Apache County, Arizona, and San Juan County, Utah.....13

DMEA 4066

Harvey Manchester claim
K & K Minerals
San Juan County, Utah and Apache County, Arizona

INTRODUCTION AND SUMMARY

K & K Minerals, P. O. Box 899, El Paso, Texas, has applied for Defense Minerals Exploration assistance in drilling and underground exploration for uranium at their leased property in the Navajo Indian Reservation, on the boundary between San Juan County, Utah and Apache County, Arizona.

The applicant requests 8,000 feet of vugar drilling, and 50 feet of shaft sinking at an estimated cost of $37,633.00. Government participation at 75 percent would be $28,225.25.

The property was examined on March 18, 1956 by a DMEA examining team. The applicant was represented by an agent, Ralph Sabrvane.

The property consists of a block of 78 acres on which K & K Minerals holds a mining permit granted by the Navajo Tribal Council. It is part of a larger tract of approximately 589.6 acres on which the applicant had prospecting rights. Both prospecting and mining permits were obtained through Harvey Manchester, a Navajo Indian, who would receive an over-riding royalty on any ore production. After an initial period of investigation, the applicant designated an area of 78 acres for further exploration. The Mining permit and prospecting appear to be in order.

The property is on the southeast dipping flank of the Monument syncline. The formations found in the vicinity of the property are, in ascending order, the Lower Triassic Moenkopi formation, and the Upper Triassic Shinle formation. These formations have a strike of about

N. 35° east and a dip of 6° SE. The potential ore-bearing unit of the area is the Shinarump member of the Chinle formation.

The Shinarump member pinches out northeastward in the vicinity of the H & H Minerals lease. The known uranium deposits to the south occur in channel secure, of which the largest occurs at the Monument No. 2 mine, 5 miles southwest of the H & H Minerals lease. Northeastward from the Monument No. 2 mine toward the Shinarump pinchout at the H & H property the channels and associated uranium deposits become generally smaller and lower grade. As exposed in an open pit, a few hundred yards south of the H & H property, the Shinarump is 10 feet thick. About 800 tons containing 0.13 percent of U_3O_8 were removed from the pit; the deposit appears essentially exhausted.

The Shinarump member is only a few feet thick as exposed in bulldozer trenches just west of the H & H Minerals lease. It is inferred that ore bodies of commercial grade beneath the applicant's property are likely to be small - less than 100 tons - because of the thin or non-existent Shinarump on the property.

The applicant's original proposal called for drilling holes in a series of northeast-southwest fences for the purpose of determining if any secure exist on the property. It was essentially a prospecting project. Some drilling at locations which appear to have been picked at random has since been done, and it is claimed that a channel secur has been found in which there is low-grade mineralization as shown by probing and by a chemical analyses of the cutting samples. The data presented by the applicant indicates only that Shinarump conglomerate with slight mineralization was encountered in the drill holes, but there is no evidence of the presence of a channel secur. The applicant's representative, Mr. Schevens, stated that all records of drilling results had been removed by a former employee. However, Mr.

Scherrum was employed in the drilling project, and, from his account of the procedures, it appears that suitable hole-logs were not made, and no elevation control was established.

It is concluded that the applicant's project is still in the prospecting stage. The regional geology suggests that the Shinarump host rock for uranium deposits is thin or non-existent under the property. There is no justification, on the basis of accomplishments to date, for shaft sinking, or for further exploration by drilling, inasmuch as potential uranium-bearing channel systems on the mining block have not been demonstrated and probably do not exist. Supervision on the project appears to have been inadequate, information obtained unsatisfactory, and drilling done to date has been largely wasted.

It is recommended that the application for exploration assistance under DMEA 4065 be denied.

ACKNOWLEDGEMENTS

The applicant furnished copies of the Navajo Tribal Council prospecting permit, maps showing locations in reference to another lease block, one geologic report by Silas C. Brown of Durango, Colorado, and a report by Ralph Schevene. Two drilling plans and a shaft sinking proposal were presented with cost estimates.

Personnel of the Atomic Energy Commission and the Geological Survey were consulted. Atomic Energy Commission production records and data on claim locations were utilitzed.

LOCATION, TOPOGRAPHY AND CLIMATE

The Harvey Blackwater claim which was originally under the lease to H & H Minerals lies partly in San Juan County, Utah, T. 43 S., R. 19 E., Salt Lake Meridian, and partly in Apache County, Arizona, T. 41 N., R. 23 E., Gila and Salt River Meridian. It is within the Navajo Indian reservation 20.0 miles by road south of the San Juan river bridge at Mexican Hat, Utah. There are uranium mills at Monticello, Utah, 101 miles north of the property and at Shiprock, New Mexico, 87 miles east. "Stone Cabin" camp, adjoining the property, is 266 miles from Grand Junction, Colorado, the nearest major source of supplies. The road to Shiprock has been gravelled. The roads north of Mexicam Hat are either gravelled or hard-surfaced. The access road from Mexicam Hat southward is unimproved. (See Fig. 1).

The claims are at an altitude of about 5000 feet on a low, easily accessible ridge. The Comb Ridge escarpment lies to the southeast, and Monument Valley proper to the southwest.

The climate is arid, with occasional violent dust and rain storms in any season. Temperatures are moderate in winter, and extremely high in summer. Late fall and winter are the preferred times for surface exploration.

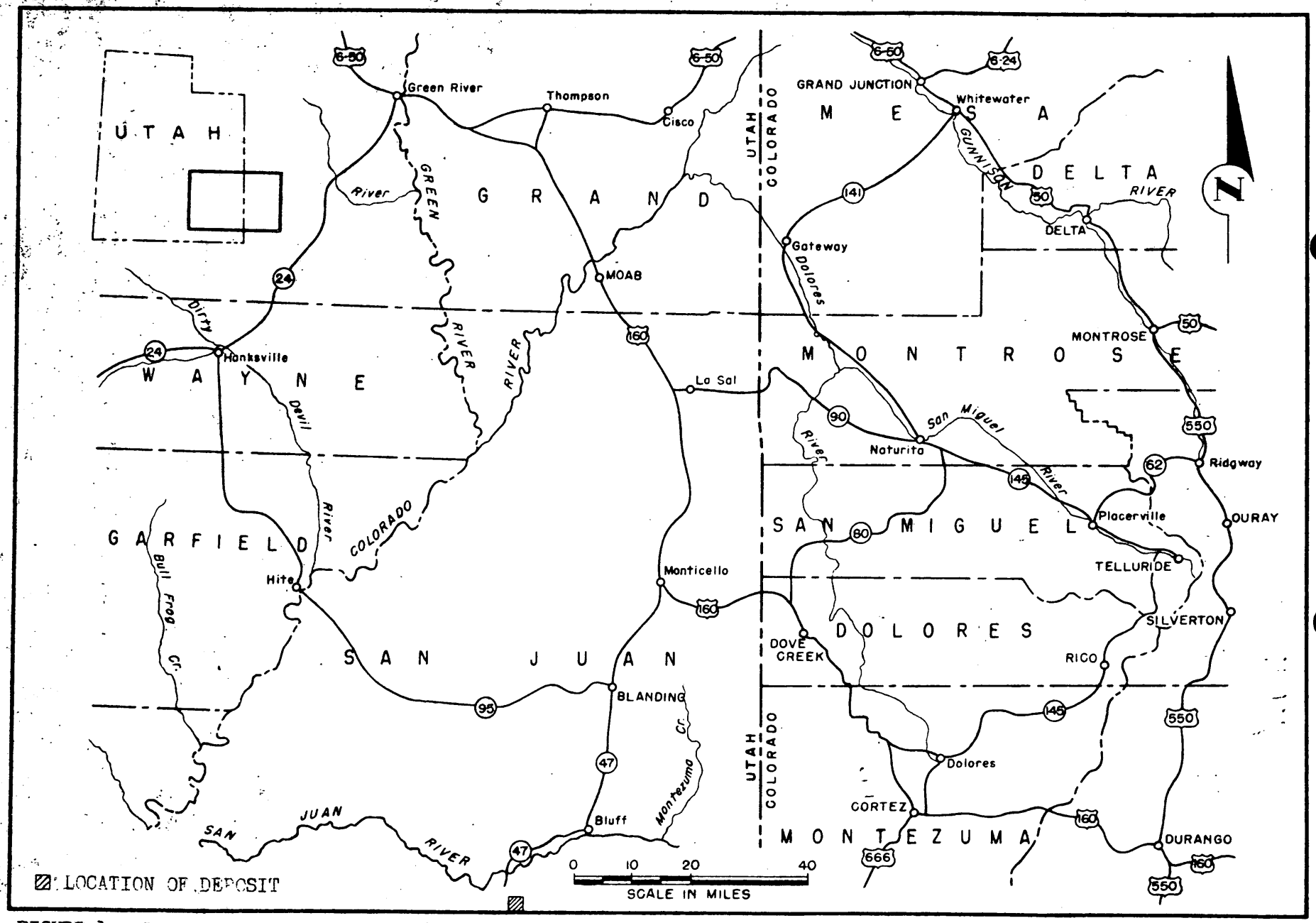

FIGURE 1 - LOCATION MAP, HARVEY BLACKWATER CLAIM, H & H MINERALS NAVAHO INDIAN RESERVATION, SAN JUAN COUNTY, UTAH AND APACHE COUNTY, ARIZONA. DMEA 4066

There are no unusual problems of supply, labor, or power to be met. Domestic and mine water supplies are limited, and water may have to be hauled as far as 20 miles in certain seasons. Transportation costs in this remote area are high, and housing accommodations for personnel must be brought in. Most operators utilize Indian labor where ever possible. In fact, there is a change in the standard lease form which gives the Indians through whom the lease is obtained preference in hiring labor. The standard rate for this class of labor is $1.50 per hour.

HISTORY PRODUCTION AND OWNERSHIP

The first uranium discoveries in Monument Valley of any importance were on Vanadium Corporation of America's Monument No. 2 claim. This mine, 5 miles southwest of the applicant's ground is the closest major producer, with shipments totaling hundreds of thousands of tons of ore averaging around 0.25 percent U_3O_8 and over 1.00 percent V_2O_5. There are several smaller producing mines closely grouped around the Monument No. 2 operation.

Small operations on several of the Harvey Blackwater claims, have been carried on since 1952. These include one open pit on the Harvey Blackwater No. 3 claim, an underground mine on the Harvey Blackwater No. 4 claim and a surface operation on the Harvey Blackwater No. 1 claim.

The production from Harvey Blackwater claims for the period January 1954 through January 1956 is as follows:

CLAIM	SHIPPER	Dry Tons	Percent U_3O_8	Percent V_2O_5
Harvey Blackwater No. 1	Max-Air Uranium Co.	189.86	0.14	0.89
" No. 3	"	204.39	0.13	0.05
" No. 4	(through Dec. '55)	146.21	0.10	0.23
" No. 4	(January '56)	26.87	0.26	0.42

The examining team saw the operations on the Harvey Blackwater Nos. 3 and 4 claims. The operation on Harvey Blackwater No. 1 claim was

not visited. Judging from the production records and field observations, none of the deposits could be considered significant. There has been no production from the lease block held by K & K Minerals.

K & K Minerals, P. O. Box 899, El Paso, Texas, is a partnership of Robert Kegneworth and Claude Kashlehenry of that city.

The mining lease granted by the Navajo Tribal Council to K & K Minerals through Harvey Blackwater is a block 1320 by 2574 feet within the original prospecting lease. The block has been located by tying it to the southwest corner of the Harvey Blackwater No. 1 claim (Fig. 2). The Blackwater claim is shown on figure 2 in relation to several other Harvey Blackwater claims, according to survey plats in Atomic Energy Commission records made in connection with certifications for bonus. It is believed that the locations are substantially correct although the AEC calls attention to the fact that the ties from the claims to the northwest corner of the Monument No. 2 claim, 4 miles to the south, which is used as a common reference point in the area, appear to be in error. However, the relation of the claims to each other is probably correctly shown.

Mr. Schreven stated that the Utah-Arizona state line runs through the K & K Minerals mining lease block. Plotting it according to the AEC records places it all in Utah, in section 32 or 33, T. 43 S., R. 19 E., Salt Lake Meridian. Plotting the claim in accordance with N. I. Finch's map "Preliminary Geologic Map of the Colorado Plateau" places it in section 33.

K & K Minerals originally had a drilling and exploration permit from the Navajo Tribal Council dated July 21, 1955, on the larger block shown in figure 2. This permit carried no rights to mine. Within 180 days the permit holder was required to apply for a mining permit on a definite

portion of the land covered by the prospecting permit. According to the applicant's representative a mining permit on the 78 acre block shown in figure 2 was issued on February 14, 1956. A copy of this document has not been furnished to the examining team. Believing that the best part of the prospecting block had been located by the preliminary drilling project, the applicant limited the mining permit application to a small area which requires a payment of $300.00 per year to the Navajo Tribe. Each 80 acres, or fraction thereof, leased requires a $300.00 payment.

In effect, the Navajo Tribal Council did not lease the Blackwater claim directly to K & K Minerals but to Harvey Blackwater, a member of the Navajo Tribe. Blackwater has a separate agreement with K & K Minerals whereby he is entitled to an over-riding royalty of from 2 to 5 percent on all production. The royalty payable to the Navajo Tribal Council was not stated in the documents furnished with the NMMA application.

So far as could be ascertained from all records available to the examining team, the applicant's right to mine on the 78 acre block is valid.

PRESENT STATUS

Exploration and Development

The applicant reports that a total of 42 wagon-drill and dry rotary holes have been drilled on the Harvey Blackwater claim. These holes averaged 41 feet deep and all are reported to have penetrated to the base of the Shinarump conglomerate. The holes were drilled at various points in the 539 acre prospecting block. The applicant did not furnish data on drilling results or hole locations. Mr. Scheuren stated that all data had been in the possession of a former supervisor and was not turned over to

the company. However, Schevens was on the ground when the drilling was done and, from his account of the project, it appears probable that no hole logs were kept, and no control of hole depths was exercised. Consequently, hole bottoming elevations and Shinarump thicknesses are not known. Mr. Schevens stated that evidence of low-grade mineralization and a channel scour was found in the area covered by the mining permit. This area was visited by the examining team. It is shown on the map as determined by a Brunton and pace survey from corner No. 1 of the Harvey Rinehart claim. Twelve holes were drilled on 5 to 18 foot centers. Mr. Schevens indicated from memory which holes had shown radiometric count and three holes which had produced mineralized cuttings which contained from 0.076 to 0.18 percent U_3O_8 as analyzed chemically. No thickness was reported. An attempt to reprobe the holes during the field examination was unsuccessful because the applicant's probing equipment was out of order. Piles of drill cuttings mixed with blow sand were examined radiometrically and showed count up to twice back ground in some cases. Cuttings and holes could not be correlated. The occurrence of a channel scour in the drilled area was not substantiated by any data which was furnished to the examining team.

Mining and Milling Equipment and other Facilities

The applicant owns both wagon drilling and rotary drilling rigs, auxiliary equipment, and tools. Everything required for a drilling project or shaft sinking is available except a suitable jackhammer for shaft work. There is a 6 foot by 15 feet portable building belonging to the applicant in which Mr. Schevens is living. Other living accommodations would be required for an exploration project.

GEOLOGY AND URANIUM DEPOSITS

The property under lease to K & K Minerals is on the southeasterly dipping flank of the Monument Upwarp. The DeChelly sandstone, the uppermost member of the Permian Cutler formation, forms a prominent hogback ridge about one mile west of the property (fig. 2). The DeChelly member is overlain by the Lower Triassic Moenkopi formation. The Shinarump member of the Upper Triassic Chinle formation lies unconformably on the Moenkopi and forms a discontinuous low hogback ridge. In the vicinity of the K & K Minerals lease, or slightly northeast, the Shinarump member pinches out. During the field examination, thin Shinarump, not more than a few feet thick, was observed in bulldozer trenches within 1,000 feet northeast of the last Shinarump outcrop to the northwest (fig. 2). Northeast of this pinchout, which is of regional significance, only scattered discontinuous lenses of Shinarump are known for many miles to the north.

In a general way, the known uranium deposits become smaller with decreasing total thickness and channel secure of the Shinarump northwesterly along its outcrop from the Monument No. 2 mine, which is about three miles south of the area shown in figure 2. At the Monument No. 2 mine, the maximum thickness of the Shinarump is in excess of 100 feet; the width of the Monument No. 2 channel ranges from 400 to 700 feet and is scoured as much as 50 feet in the underlying Moenkopi (Withind, July 1954, U. S. Geol. Survey TEM 340, fig. 6). The uranium deposit at the Monument No. 2 mine is one of the largest deposits on the Colorado Plateau and has produced several hundred thousand tons of uranium ore.

The deposit at the Mar-Air mine (Harvey Blackwater No. 4 claim) is 3 miles northeast of the Monument No. 2 and within the area shown on figure 2. This deposit lies in a Shinarump channel only about 100 feet

wide and only 3 to 4 feet deep into the underlying Moenkopi. The mineralized sandstone is about 50 feet wide in the bottom of the channel and averages about 1 foot or slightly less in thickness. The average grade across this is estimated to be about 0.15 eU_3O_8, sparse "logs" of higher grade within this interval may assay as high as 0.50 percent of eU_3O_8. This estimate accords with the production records to date (see History, Production, and Ownership). Some ore, largely marginal redundant is exposed in an oblique crosscut across the channel, but the reserves are probably small.

Northward along the Shinarump outcrop, a small deposit has been worked on the Harvey Blackwater No. 1 claim (see Table under Production, History, and Ownership) but was not visited by the examining team.

North of the Wash-Arizona line, an open pit in the small outlier of Shinarump (fig. 2) was examined on the Harvey Blackwater No. 3 claim. The pit is about 75 feet wide and 150 feet long. The Shinarump sandstone totals 10 feet thick. No ore was observed in the walls of the pit, but a moderate radiometric background (0.10 eU_3O_8) was observed with Geiger Counter inside the pit. Just northeast of the pit a 1-ton ore pile was estimated at .20 eU_3O_8, and a three-ton ore pile, at .10 eU_3O_8. Actual production has consisted of about 200 tons containing .13 U_3O_8. No channel seams could be observed, owing to limited poor exposures outside the pit. It is the opinion of the examining team that this deposit is essentially worked out, as no ore-grade sandstone was observed in the walls of the pit.

No Shinarump is exposed on the K & K Minerals Mining lease and drilling to date by representatives of the applicant has yielded no information that could be used by the examining team (See Present Status). The drill cuttings that might potentially be correlated with certain drill holes in the intensely drilled area (fig. 2) consisted of medium to fine

grained light gray sandstone. The few piles of mineralized cuttings consist of yellowish-gray very coarse sandstone that could not be correlated with any drill holes in the closely drilled area (Fig. 2). It appears quite possible that these cuttings may have come from holes drilled outside the intensely drilled area.

The Shinarump sandstone ledge just west of the K & K lease is largely covered with bulldozer trenches. Within 1000 feet northeast of the outcrop sequence (Fig. 2) the Shinarump is only a few feet thick. The Shinarump apparently pinches out northeast in the vicinity of the K & K lease.

ORE RESERVES

The regional pinchout northeastward of the Shinarump member of the Chinle formation at the applicant's property would, in itself, be regarded as unfavorable for the occurrence of any uranium ore bodies of significant tonnage. A parallel evidence of unfavorability is also indicated by the general decrease in size of the uranium deposits in the direction of the Shinarump pinch-out at the applicant's property. These two lines of evidence indicate to the examining team that uranium ore bodies, if they exist at all on the K & K lease, are likely to be low-grade and less than 100 tons.

PROPOSED EXPLORATION

The applicant originally proposed 30 feet of shaft sinking and 5000 feet of vacuum drilling, to be done on the original Harvey Blackwater Claim of 320.6 acres. The drilling was to be in northeast-southwest fences starting near the Shinarump outcrop along the northwest boundary. The object was to locate evidence of channel scours and mineralization. The

estimated cost was $37,633.00, in which Government participation at 75 percent would be $28,224.75.

The report by Ralph Schevene presents a revised proposal confined to the 78 acres covered by the mining permit. Based on the belief that a channel zone has been located by previous drilling, a pattern of holes at the coverage of 100 foot squares is proposed along the supposed channel trend. Another hole is located at the center of each square. In a final stage, holes on 25 foot centers were to be drilled to delineate any significant mineralization found. Sketches showing hole patterns were furnished but no definite hole locations were shown on maps. Consequently, locations of revised drill holes are not shown in figure 2. An estimate of drilling footages and costs under the revised program was not presented.

An alternate exploration plan is not being suggested by the examining team.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that the ore deposits found and mined to date in the vicinity of the K & K Minerals lease are too low-grade and too small to be of any significance. There is no evidence to show that mineralization on the applicant's ground is likely to be better.

Based on field observations and the very poor results of previous drilling by K & K Minerals, no channel zones have been located so far, and further drilling to locate any which may be present is in the nature of prospecting rather than exploration.

Supervision of any future exploration project would have to be better than in the past if worthwhile information were to be obtained.

It is recommended that the application for exploration assistance

under ESEA 4066 be denied.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
APRIL 1956 DOCKET 8066

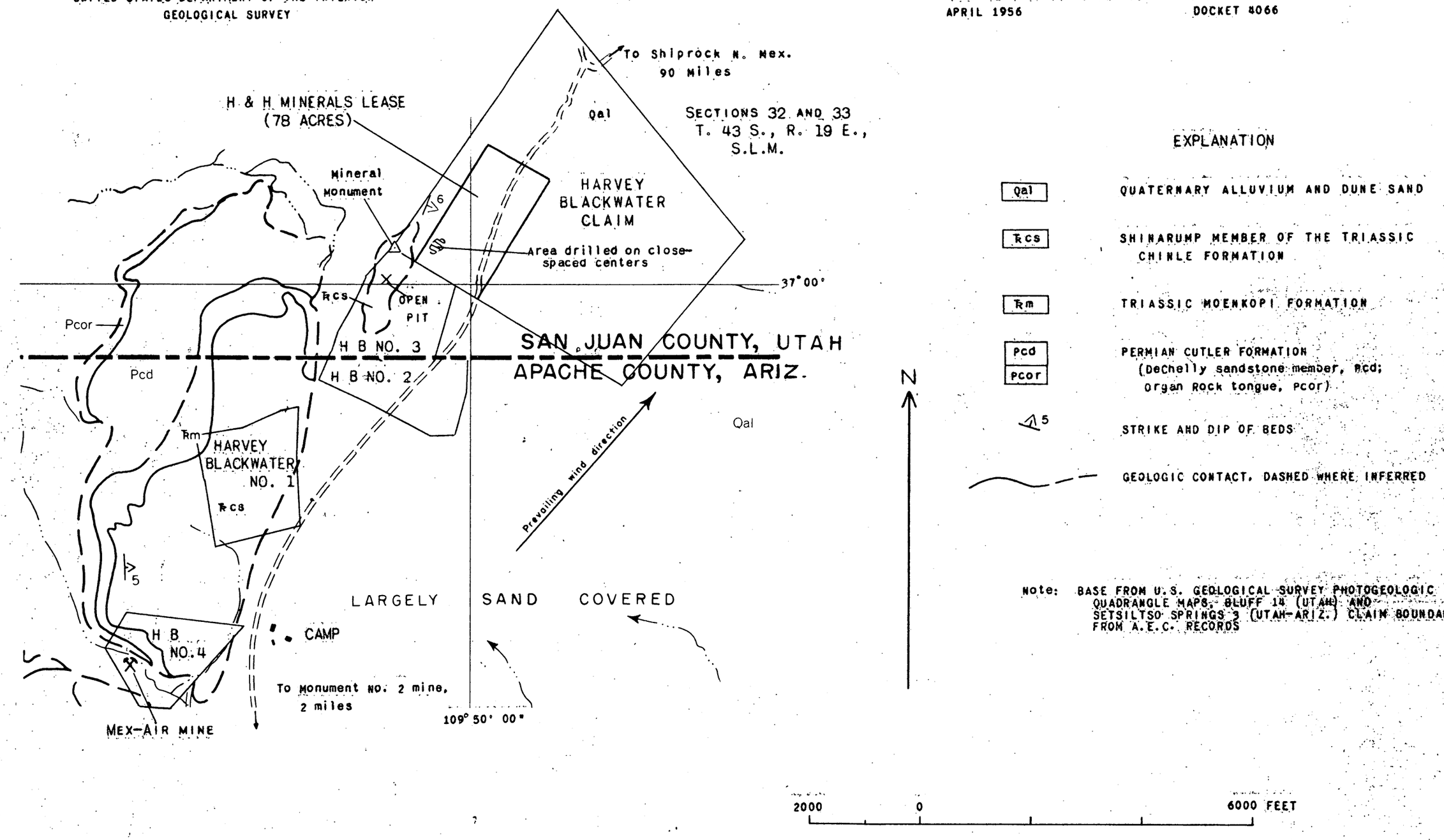

FIGURE 2. GEOLOGIC MAP SHOWING H AND H MINING COMPANY LEASE ON PART OF HARVEY BLACKWATER CLAIM, AND ADJACENT AREA, APACHE COUNTY, ARIZONA, AND SAN JUAN COUNTY, UATH

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

February 2, 1956

224 New Customhouse
Denver 2, Colorado

Mr. R. F. Haynsworth
H & H Minerals
P. O. Box 299
El Paso, Texas

Re: Docket DMEA 4066 (Uranium), Blackwater Claim, Apache County, Arizona and San Juan County, Utah

Dear Mr. Haynsworth:

This will acknowledge receipt of your letter dated January 31, 1956 requesting that you be notified prior to the date of the field examination on your property.

Copies of your letter have been forwarded the field, and you will be notified prior to the date of the field examination so that you or your representative may accompany the field examiners.

Very truly yours,

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

HMC:ab

cc: Sec. Op. Comm. (2)
Shaw (2)
Harshman
Hasler
Docket 4066
Chron.

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

RECEIVED
FEB - 3 1956

February 2, 1956

224 New Customhouse
Denver 2, Colorado

Mr. R. F. Haynsworth
H & H Minerals
P. O. Box 299
El Paso, Texas

Re: Docket DMEA 4066 (Uranium), Blackwater Claim, Apache County, Arizona and San Juan County, Utah

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Very truly yours,

W. M. TRAVER,

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

HMC:ab

cc: Sec. Op. Comm. (2)
Shaw (2)
Harshman
Hasler
Docket 4066
Chron.

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

RECEIVED
FEB - 3 1956

January 31, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw
J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 4066 (Uranium), H & H Minerals, Blackwater Claim, Apache County, Arizona and San Juan County, Utah

Enclosed for your information is a copy of a letter from the Chairman of the Operating Committee dated January 27, 1956 on the subject docket. Also enclosed is a copy of a letter from the applicant to the Administrator, DMEA, regarding the acreage held under their mining permit and a copy of a letter to the applicant from the Navajo Tribal Mining Department.

Since the examination of this property has not already been made, the location of the 78 acres in question should be determined and the scope of the examination regulated accordingly.

W. M. TRAVER,

W. M. Traver

Enclosures

HMC:ab

cc: Chair. Op. Comm. (2)
Harshman
Docket 4066
Chron.

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

RECEIVED
FEB - 3 1956

January 31, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw
J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 4066 (Uranium), H & H Minerals, Blackwater Claim, Apache County, Arizona and San Juan County, Utah

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Since the examination of this property has not already been made, the location of the 78 acres in question should be determined and the scope of the examination regulated accordingly.

W. M. TRAVER,

W. M. Traver

Enclosures

HMC:ab

cc: Chair. Op. Comm. (2)
Harshman
Docket 4066
Chron.

700

FILE COPY
Surname:
Ching
Gilbert
Kiesgand
Selbridge
Johnson

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

JAN 27 1956

Mr. R. F. Haynsworth
H & H Minerals
Post Office Box 299
El Paso, Texas

Re: Docket No. DMEA-4066 (Uranium)
Blackwater Claim
Apache County, Arizona and
San Juan County, Utah

Dear Mr. Haynsworth:

This will acknowledge your letter of January 21, 1956, explaining your rights in connection with the subject property.

The DMEA Field Team, Region III, Mr. W. M. Traver, Executive Officer, 224 New Customhouse Building, Denver 2, Colorado, will schedule a field examination of your claim in the near future, if it has not already done so.

Any assistance you may give the members of the Field Team during the examination will be appreciated.

Sincerely yours,

C. O. Mittenhof

Administrator

MChing/izm 1-25-56
cc to: Docket
Code 700
Mr. Ching
Admr.'s Reading File
DMEA Field Team, Region III (2)

R.C.S.

700

FILE COPY
Surname: Ching

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

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

JAN 27 1956

Re: Docket No. DMEA-4066 (Uranium)
H & H Minerals
Blackwater Claim
Apache County, Arizona and
San Juan County, Utah

Dear Mr. Traver:

In our letter of January 9, in connection with the subject application, we enclosed copies of a letter to the Applicant from the Administrator requesting supplemental information regarding property rights.

In a letter dated January 21, 1956, the Applicant explained that a mining lease covering approximately 78 of the 529 acres included in his application has been applied for in the name of Harvey Blackwater. An accompanying letter from K. N. Garrard, Tribal Mining Engineer, to H & H Minerals anticipates the granting of the lease on or before February 14, and the subsequent approval of an assignment of the lease to H & H Minerals, by the Tribal Council.

We note that the subject docket was forwarded to the field for examination on November 29, 1955. If the examination has not already been made, the location of the 78 acres in question should be determined and the scope of the examination regulated accordingly. On the other hand, if the examination has already been made, we trust that the report of examination will adequately cover the smaller acreage.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GCS)

P. S. Enclosed are two copies each of the above-mentioned letters.

APPROVED:

/s/ Robert W. Geehan (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

MChing/izm 1-25-56
cc to: Docket
Code 700
Admr.'s Reading File
Operating Committee
Mr. Ching
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

P.C.L.

2-2418

1-23-56 dgm

Telephone 5-5605

H&H Development Co.

5032 ~~TIMBERWOLF DRIVE~~ P.O.Box 299
EL PASO, TEXAS

January 21, 1956

RECEIVED
JAN 23 1956

U.S. Department of the Interior
Defense Minerals Exploration Adm.
Washington 25, D. C.

Attn: Administrator

Re: Docket No. DMEA-4066 (Uranium)
Blackwater Claim
Apache County, Arizona, and
San Juan County, Utah

Gentlemen:

With reference to my DMEA request for aid, I would like for you to consult the attached letter from Mr. K. N. Garard, the Mining Engineer of the Navajo Tribe. Mr. Garard's letter is explanatory I believe, and I might add that in his capacity Mr. Garard has recommended to the Tribal Council an acceptance of request by H & H Minerals.

Attempting to do business on a Navajo Reservation is very difficult and is involved with much red tape. For your information, it is necessary to first obtain a "Prospecting Permit Non-Navajo" and at such time as a prospective claim is located, a "Drilling and Exploration Permit" is issued, but only for a period of 4 months. Obtaining this permit requires a bond, credit references and a financial statement evidencing sufficient capital to properly explore the claims. Step 3 is the obtaining of a mining permit by the Indian involved (Harvey Blackwater) who in turn signs this permit over to the H & H Minerals. We have in our possession at present the above document signed by Harvey Blackwater to H & H Minerals but of course this document is not legal until the Tribal Council grants Blackwater a mining permit. The instrument which is already assigned by Blackwater to H & H Minerals is solely for the protection of H & H Minerals. As Mr. Garard says, there is little doubt that this permit will be granted to Harvey Blackwater.

In explaining the difference between the 529 acres in the drilling exploration permit and the 78 acres under request for the mining permit, let me say that this is customary procedure and the balance of the 529 acres is more or less on an option basis at the discretion of the Navajo Tribal Council. Since the Tribal Council receives a royalty on a sliding scale basis, they have never denied, to my knowledge, the request for additional acreage if evidence can be shown that the lessee is willing to invest capital in future exploration.

It is requested that your office proceed to process the documents that you have in your possession for the DMEA request by H & H Minerals rather than waiting until February 14, 1956 meeting of the Navajo Tribal Council. There has been very much delay involved with the Tribal Council and if a similar delay is impossed on us by your of-

fice, the economy of this small business will be in a disastrous position. We have a Mining Engineer in our employment (Mr. Ralph Schevene) who is standing by on a salary basis awaiting contact by your field crew. He is prepared to put down test holes and go into detail with your field crew at their disposal and request.

The complete legality of this enterprise is not authenticated until February 14, 1956 but Mr. K. N. Garard as a valued advisor of the Tribal Council thinks there is no reason why this accompanying letter from him cannot help expedite procedure on your part. By the time your field engineers inspect the properties I am sure we will have a favorable report from the Navajo Tribal Council.

Asking for your continuous cooperation, I remain,

Yours very truly,

R. F. Haynsworth
H & H MINERALS

enc

RFH/mev

THE NAVAJO TRIBE

WINDOW ROCK, ARIZONA

PAUL JONES, CHAIRMAN
NAVAJO TRIBAL COUNCIL

SCOTT PRESTON
VICE-CHAIRMAN

J. MAURICE McCABE
SECRETARY-TREASURER

19 January 1956

H & H Minerals
P. O. Box 299
El Paso, Texas

Dear Sirs:

Referring to your letter of January 13 concerning the DMEA negotiations with the Federal Government and your rights at this time requesting the acreage of 78 acres more or less contained in a drilling and exploration permit, totalling 529 acres. This drilling and exploration permit was taken subject to a mining permit to be issued to Harvey Blackwater and at this time is in a process of being turned into an assignment from the permittee to the H & H Minerals. The original drilling permit as noted consisted of 529 acres and has been cut to 78 acres more or less based on the drilling results, which no doubt placed the 78 acres on a potential production basis. The granting of an assignment is almost assured, but will not be completely consumated until after the next Advisory Committee meeting which will be on or before 14 February 1956, which is the second Tuesday of the month.

This office sees no reason for any slip in this matter, therefore, with better reasonable amount of doubt, the H & H Minerals will receive the assignment from Harvey Blackwater.

Sincerely yours,

NAVAJO TRIBAL MINING DEPARTMENT

K. N. Garard

K. N. GARARD
Tribal Mining Engineer

KNG/lod

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

RECEIVED
JAN 16 1956

January 13, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw
J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 4066 (Uranium), H & H Minerals, Blackwater claim, Apache County, Arizona and San Juan County, Utah

Enclosed is a copy of a letter from the Chairman of the Operating Committee and attached memoranda of review by John E. Crawford and N. E. Nelson on the subject application. The brochure was forwarded you November 29, 1955.

W. M. TRAVER,

W. M. Traver

Enclosures

HMC:ab

cc: Sec. Op. Comm. (2)
Harshman
Docket 4066
Chron.

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

RECEIVED
JAN 16 1956

January 13, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw
J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 4066 (Uranium), H & H Minerals, Blackwater claim, Apache County, Arizona and San Juan County, Utah

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W. M. TRAVER,

W. M. Traver

Enclosures

HMC:ab

cc: Sec. Op. Comm. (2)
Harshman
Docket 4066
Chron.

700

FILE COPY
Surname:
Ching
Selfridge
Mitchenry

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

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

JAN 9 1956

Re: Docket No. DMEA-4066 (Uranium)
N & N Minerals
Blackwater Claim
Apache County, Arizona, and
San Juan County, Utah

Dear Mr. Traver:

This is with reference to your memorandum of November 29, 1955 and enclosures, relating to the subject application.

Enclosed are two copies each of memoranda, dated December 9 and December 15, 1955, from John K. Crawford, USBM, and R. E. Nelson, USGS, respectively. Also enclosed are two copies of a letter to the Applicant from the Administrator requesting supplemental information regarding property rights.

The subject property is on Navajo tribal lands. In the event a contract is recommended, the Applicant should be advised that the Government usually requires a Performance Bond or third-party guarantee when a Consent to Lease is not obtainable from the owners.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

MChing/izm 1-6-56
cc to: Admr.'s Reading File
Operating Committee
Docket
Code 700
Mr. Ching
Messrs, JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

APPROVED:

/s/ Robert W. Gecham (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

Surname copy

700

Ching
Lis
Selfridge
Hyslop

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

Mr. E. H. Harshman
Acting Executive Officer,
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-4066 (Uranium)
R & H Minerals
Blackwater Claim
Apache County, Arizona, and
San Juan County, Utah

Dear Mr. Harshman:

This is with reference to your memorandum of November 29 and enclosures, relating to the subject application.

Enclosed are two copies each of memoranda, dated December 9 and December 15, 1955, from John E. Crawford, USGS, and N. E. Nelson, USGS, respectively.

The subject property is on Navajo tribal lands. In the event a contract is recommended, the Applicant should be advised that the Government usually requires a Performance Bond or third-party guarantee when a Consent to Lien is not obtainable from the owners.

It is noted that a Drilling and Exploration Permit, approved July 25, 1955, has expired. A Prospecting Permit, dated April 20, 1955, is good until April 20, 1956. The latter document covers Districts Nos. 8, 9, 10, 11, and 12 of the Navajo Reservation, but we are unable to determine whether or not the subject Blackwater claim is within one of these districts. A further question arises as to whether this Prospecting Permit is sufficient for the purposes of an exploration project. Furthermore, the time remaining under the permit would be insufficient for carrying out an exploration project if one were recommended.

MChing/gla 12-20-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700 Mr. Ching

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (S/G)

Enclosures

APPROVED:

/s/ Robert W. Geehan (S/G)
Member, Bureau of Mines

Thor H. Kiilsgaard (S/G)
Member, Geological Survey

...ve into the matter of prospecting permits, drilling and exploration permits, and mining ...s with the Superintendent of the Indian Agency at Window Rock, New Mexico, with regard to ...ype of work allowed, time limits and extensions, permitee's rights and follow-up rights under each, etc. We understand permits have some flexibility.

Ching
Ellis
Geehan
Selfridge
Johnson

Rewritten by Butler Sawyer Ching Ellis Geehan Selfridge Kilgoard Johnson

140

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

H & H Minerals
P. O. Box 299
El Paso, Texas

JAN 9 1956

Re: Docket No. DMEA-4066 (Uranium)
Blackwater Claim
Apache County, Arizona, and
San Juan County, Utah

Gentlemen:

In connection with your application for exploration aid we have reviewed your interests in the land, as demonstrated by the documents submitted with the application.

The land involved is the "Blackwater Claim" on the Navajo Reservation, consisting of about 529 acres. A prospectus attached to the application states that this claim and other land (a total of 5,000 odd acres) have been officially assigned to H & H Minerals through the Navajo Indian Tribal Council . . . The claims are held by a Harvey Blackwater (Navajo Indian) who has signed legal papers assigning prospecting rights to H & H Minerals. A drilling permit has been issued by the Indian Council and this part of the program has been carried out to completion."

Three documents granting rights to H & H Minerals were submitted with your application as follows:

1. A "Prospecting Permit Non-Navajo" dated April 20, 1955, covering Districts Nos. 8 through 12 of the Navajo Reservation, running for a period of one year, but revocable at the discretion of the General Superintendent and the Chairman of the Tribal Council.

2. A "Drilling and Exploration Permit" approved July 25, 1955, covering an area of land described by metes and bounds, apparently the Blackwater Claim, and granting certain drilling and exploration rights for a period of 120 days, which period has expired. The permit was not renewable, and the period it covered has elapsed, but under this instrument an exclusive right to apply for a mining lease was also granted.

3. A "Memorandum Agreement" dated October 30, 1955, between H & H Minerals and Harvey Blackwater, granting certain exploration rights and also the right to an

assignment of a lease if later obtained by Harvey Blackwater. The land involved in this agreement is not identified.

In view of the foregoing, we are not clear as to your present rights in the Blackwater Claim for the purposes of an exploration project contract. Accordingly, we request that you supplement the information in your application concerning your interest in this land by furnishing us with a narrative statement as to your present rights therein, and with copies of any new documents supporting these rights, such as a lease.

Sincerely yours,

C. O. Mittendorf

Administrator

MChing/ HCRubin/wog - 1/4/56

Copies: DMEA Docket
Adm.'s Reading File
Operating Com.
THKiilsgaard USGS
JECrawford, Rm 3641
EWEllis
Field Team, Region III (2)
RPDwyer
HCRubin
Chron.
Pending

Surname copy

700

Ching
Ellis
Gechon
Selfridge
Johnson

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

Messrs. Robert Haynsworth
and Claude Huckleberry
H & H Minerals
P. O. Box 290
El Paso, Texas

Re: Docket No. DMEA-4066 (Uranium)
Blackwater Claim
Apache County, Arizona, and
San Juan County, Utah

Gentlemen:

The application for assistance in exploring the subject property under the captioned docket number has been reviewed by the Rare and Miscellaneous Metals Division.

The DMEA Field Team, Region III (Mr. W. M. Traver, Executive Officer), 224 New Customhouse Building, Denver 2, Colorado, will schedule a field examination of your claim in the near future, if it has not already done so.

Any assistance you may give the members of the Field Team during the examination will be appreciated.

Sincerely yours,

Administrator

MChing/gla
12-20-55
cc to: Admr.'s Reading File
Docket
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 12-20-55

REFERRED TO:

1. ~~Operating Committee, Rm. 4459~~ Mr. Dwyer Mr. Johnson
2. Mr. Mittendorf, ~~Rm. 4458~~ NB
3. Mails & Files, Rm. 4450
4. Return docket to Code 700

DEC 23 1955

FOR:

	Action		Recommendation
	Approval		Record
	Comment		of
	Conference		Referring
	Consideration		to
	Filing		Reply for signa-
	Instructions		ture of
	Investigation		Rewriting
X	Initials	X	Signature
X	Mailing		Suggestions
	Previous correspondence		Your information

INTERIOR DEPT.
DEC 22 1955
SOLICITOR

REMARKS: Prospecting Permit does not seem to give sufficient interest in the land for the purpose of a contract.

Check (X) before the items needing attention.

Ernest M. Ellis
gla
Initials of sender.

GPO 16—63815-1

DEPARTMENT OF THE INTERIOR
Office of the Solicitor

Date January 5, 1956

Referred to: Administrator, DMEA ~~Att: Mr. Ellis~~

From: Associate Solicitor Dwyer

For: Information and retention _____

Information and return _____

Necessary action ~~and return~~ X

Comment and return _____

Distribution in office or region _____

Remarks: It is suggested that the attached letter we have prepared to the Operator be sent in lieu of the letter submitted for our review. It is also suggested that the the Field Team's copy of said letter be transmitted with such comments as desired.

Robert Dwyer
(Signature)

12/16/55 gla

IN REPLY REFER TO:

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

RECEIVED
DEC 16 1955

December 15, 1955

Re: DMEA 4066
H & H Minerals
Blackwater Claim
Apache Co., Ariz., and
San Juan Co., Utah
$37,635.00 - Uranium

Memorandum

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

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

Subject: Review of application.

The Field Team has signified its intention of having an examination of this property made as early as possible.

The proposed work would continue the work already done by the applicants on a property of which the Blackwater claim is a part. The drilling resulted in the finding of mineralized Shinarump sandstone. Three holes not on the Blackwater claim showed values as:--

Hole No.	U_3O_8%
1	0.085
2	0.076
6	0.100

The applicants believe a channel has been indicated and propose to search for other channels in a mile cliff front in which the Shinarump member very probably exists but is largely buried in drifting sands. If ore is found by drilling, shaft sinking (50 feet) is proposed. The property is in the general vicinity of the Monument Valley mines.

The planned examination is probably warranted even though no ore is known to exist in the claim and drilling will be prospecting in nature.

N. E. Nelson

N. E. Nelson

12/19/55 gla

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

RECEIVED
DEC 16 1955

December 13, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Colorado Plateau Uranium Applications

Your letter of December 9, 1955 on the above subject stated that you did not receive copies of the Grand Junction memorandum on Docket DMEA 4066 (Uranium), H. & H. Minerals, Black Water claims, Apache County, Arizona and San Juan County, Utah.

Our records show that four copies of the review of this application were forwarded you November 29, 1955. Enclosed are two photo copies of our memorandum to you of that date, and four photo copies of the Grand Junction memorandum which were included with our letter of November 29, 1955.

E. N. Harshman

E. N. Harshman

Enclosures

12/12/55 gla

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

RECEIVED
DEC 12 1955

December 9, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Application for Assistance, DMEA Docket 4066, H & H Minerals, Blackwater claims, Apache County, Arizona and San Juan County, Utah

I have reviewed the attached application of H & H Minerals, DMEA Docket 4066, dated November 8 and received in this office December 8. I have also discussed it with Jack Kratchman, Washington representative of the Atomic Energy Commission.

The H & H Minerals has requested Federal aid to explore for uranium on the Blackwater claims, Navajo Reservation, located in Apache County, Arizona, and San Juan County, Utah. The proposed exploration program includes some drilling and the sinking of a shaft to a depth of 50 feet on subject claims at a total estimated cost of $37,635.00.

Inasmuch as the Field Team recommended "that the property should be examined in the field" and has probably already scheduled an examination, it would be advisable that our comments be withheld pending arrival of the field examiners' report.

In view of the low grade of the mineralization found on subject claims to date, the application as presented does not appear to be too promising.

John E. Crawford
John E. Crawford

Attachment

RECEIVED
DEC 16 1955

November 30, 1955

RECEIVED
DEC

Memorandum

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

From: Acting Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4066 (Uranium), H & H Minerals, Blackwater claims, Apache County, Arizona and San Juan County, Utah

The above brochure was received in this office on November 30, 1955.

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

JOHN F. SHAW
John F. Shaw

cc: 2 w/orig.
E. N. Harshman
J. W. Kasler
J. F. Shaw
Sec. Op. Com. (2)

12-2-55 zjm

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

RECEIVED
DEC - 1 1955

November 29, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 4066 (Uranium), H & H Minerals, Blackwater claims, Apache County, Arizona and San Juan County, Utah

Enclosed are four copies of a review of the subject application by members of the Grand Junction office. They recommend a field examination. Accordingly our copy of the application is being forwarded for use by the engineer examiner.

E. N. Harshman

E. N. Harshman

Enclosures

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

RECEIVED
DEC - 1 1956

November 29, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 4066 (Uranium), H & H Minerals, Blackwater claims, Apache County, Arizona and San Juan County, Utah

Enclosed are four copies of a review of the subject application by members of the Grand Junction office. They recommend a field examination. Accordingly our copy of the application is being forwarded for use by the engineer examiner.

E. M. Harshman

E. M. Harshman

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
DEC - 1 1955

IN REPLY REFER TO:
MINERAL DEPOSITS
DMEA
RECEIVED
NOV 25 1955
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

November 23, 1955

DMEA
DEN ROCK
NOV 25 1955
U. S. GEOLOGICAL SURVEY

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: J. William Hasler
M. H. Salsbury

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

Subject: H & H Minerals, Blackwater claim, Apache County, Arizona and San Juan County, Utah

The H & H Minerals application for assistance on the Blackwater claim, Apache County, Arizona, and San Juan County, Utah, was referred to us for recommendations regarding the necessity for a field examination.

We have made a cursory review of the application and have consulted the Atomic Energy Commission. There is little known about the property itself. Although there has been some production from the general area of the Blackwater claims, the claims themselves do not have any particular exposure of uranium-bearing material. It is felt that the property should be examined in the field.

We are retaining the application in this office and the examination will be made as soon as possible.

J. William Hasler
J. William Hasler
U. S. Geological Survey

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

JWH/mlr

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NOV 23 1955

DMEA
Date Rec'd.
NOV 25 1955
BUREAU OF MINES
Denver, Colorado

November 23, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: J. William Hasler
M. H. Salsbury

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

Subject: H & H Minerals, Blackwater claim, Apache County, Arizona and San Juan County, Utah

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U. S. Geological Survey

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

JWH/mlr

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

November 23, 1955

Memorandum

DMEA
Date Rec'd.
NOV 25 1955
BUREAU OF MINES
Denver, Colorado

To: Executive Officer, DMEA Field Teams, Region III

From: J. William Hasler
M. H. Salsbury

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

Subject: H & H Minerals, Blackwater claim, Apache County, Arizona and San Juan County, Utah

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We are retaining the application in this office and the examination will be made as soon as possible.

J. William Hasler
J. William Hasler
U. S. Geological Survey

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

JWH/mlr

November 18, 1955
Subject: DMEA-4066
Re: Exploration Assistance
Blackwater Claim

H & H Minerals
P. O. Box 299
El Paso, Texas

Gentlemen:

The receipt of your application dated November 8, 1955, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4066 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

November 18, 1955

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 - 4066 H & H Minerals

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
NOV 17 1955

224 New Customhouse
Denver 2, Colorado

November 15, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA aid (Uranium) H & H Minerals, Blackwater claim, Apache County, Arizona and San Juan County, Utah

Enclosed are two copies of the subject application in the amount of $37,635.00.

One copy of the application has been forwarded to Mr. Hasler at the Grand Junction office for study and recommendations and one copy has been retained in this office.

W. M. Traver

By J. W. Townsend
J. W. Townsend

Enclosures

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

RECEIVED
NOV 17 1955

224 New Customhouse
Denver 2, Colorado

November 15, 1955

Memorandum

To: J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA aid (Uranium) H & H Minerals, Blackwater claim, Apache County, Arizona and San Juan County, Utah

Enclosed is the subject application in the amount of $37,635.00. Will you please discuss this application with the AEC and Bureau of Mines representatives in the Grand Junction office and forward this office eight copies of your recommendations as to the desirability of making a field examination.

W. M. Traver

By J. W. Townsend
J. W. Townsend

Enclosures

Sec.Op.Comm. (2)

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. R1035.2.

RECEIVED
NOV 17 1955

NOV 14 1955

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. DMEA-4066
Metal or Mineral Uranium
Date Received 11-17-55
Estimated Cost $37,635.00
Participation (Government %)

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: H & H Minerals
P.O. Box 299
El Paso, Tex.

(*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. Partnership

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. No

(*d*) If a partnership, add to the above statement the names and addresses of all partners.
R.F. Haynsworth- El Paso, Tex. C. Huckleberry, El Paso, Tex.

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 (A & B) Refer to attached sheet.
H & H Minerals Blackwater Claim
Navajo Reservation
Apache County, Arizona & San Juan County, Utah.

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee- under contract attached with permission Indian Reservation attached.

(*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. attached

(*e*) If you own the land, describe any liens or encumbrances on it No

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

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.

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

(*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.

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

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

16—66551-1

Included in attached Geology Report - Silas Brown
Engineers Report-Ralph Schovene

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. See attached sheet

(*c*) The work will start within 10 days and be completed within 6 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.

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:

(*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. attached

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 November 8, 1955

H G N MINERALS
(Applicant)

By

R. F. Haynsworth

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
NOV 17 1955

SUBJECT: Application for aid in an exploration project, pursuant to DMEA order 1, under the defense production act of 1950, as amended

TO : United States Department of Interior
Defense Minerals Exploration Administration

FROM : H & H MINERALS, P.O. Box 299 El Paso, Texas
(A partnership: Robert Haynsworth and Claude Huckleberry.)

5. Exploration project--

(b) The proposed work on the Monument Valley group of claims now held by H & H MINERALS, will be to extend the drilling program on the Shinarump channel that has been recently exposed. Good mineralization has been encountered and with more exploration work on said channel there is a good possibility that more and better ore can be encountered. Work is also to be done on a proposed shaft to a depth of 50 feet to the bed of the Moenkopi beds. This will be a 6 feet by 10 feet vertical shaft with 4 feet by 8 feet inside timbers, 2 compartment, 8" by 8" timbers on 5-foot centers. See attached sheet for location of proposed exploration work as related to the ore-bearing beds and fault zone now found.

(d) State operating experience and background of person who will supervise work:

Ralph Schevene, a qualified miner, has had the following experience:

Underground work for Portland Cement Company, Riverside, California. Work consist of breaking ground--both stopes, drifts and incline shafts. Underground survey work. Handling of various types of machines, loading holes, breaking and loading ore. Timbering and handling large quanities of powder. Use of heavy equipment underground.

Work with the Pacific Gold Mining Corporation, Buckeye, Arizona. Survey work, breaking ground and prospecting for copper-gold ore. Handling hoist equipment, powder, various types of under-ground drilling equipment. Drifting work for a distance of 2800 feet in Granite with a depth of 300 feet.

Geology work with Mr. John W. Mrock, graduate engineer for three years in actual field work which includes, mapping, identification of formations, structal layouts, assaying, actual mining for copper-gold, building roads, mill work, study of field geology, overhaul and maintenance of heavy equipment.

Field work for El Paso Natural Gas Company, which consisted of evaluation of uranium claims, prospecting and identification of various types of minerals. Under direct supervision of Mr. W. H. Miller, superintendent for the Compressor department of El Paso Natural Gas Company.

College training in Geology at the Tempe College, Tempe, Arizona.

Gold mining in Alaska. Running dredge.

Gold mining in Northern California. Under ground work.

Uranium mining on Colorado Plateau for self as in the employ of various individuals. General prospecting for said metal.

Application for aid in an exploration project, under DMEA order 1, continued:

(d) Continued:

Field supervision and drilling of H & H Minerals property. Work consists of out-lining the ore body as well as the actual discovery of said ore body. Mapping, and logging drill holes.

Contractor for a number of years, self employd. Work consisted of building and excavation for homes, commercial buildings and general contratting.

General prospecting for various minerals in North Africa. Self employed. Seeking bodies of copper, cobalt and gold.

6. ESTIMATE OF COSTS--See attached sheet.

SUBJECT: Application for aid in an exploration projedt, pursuant to DMEA order 1, under the defense production act of 1950, as amended

TO : United States Department of Interior Defense Minerals Exploration Administration

FROM : H & H MINERALS, P. O. Box 299 El Paso, Texas (A partnership: Robert Haynsworth and Claude Huckleberry.)

6. Estimate of costs--

(a) Independent contracts---NONE

(b) Labor, supervision, consultants:
3-Navajo Indians as laborers @ per hr. $ 1.50 per 8 hrs: $12.00 per shift. For 5 day week per man, $60.00 per week. 3-men per week: $180.00 $720.00 per month. 6 month period: $4,320.00

Supervisor: $100.00 per week. $ 400.00 per month. 6 month period: 2,400.00

Consultants: San Juan Engineering Co. (Geology reports etc.,) 1,000.00

(c) Operating materials and supplies:
3- picks and shovels, per unit $3.00 18.00
Powder per box $15.00 total 1920 boxes which includes fuse and caps 2,888.00
Hoisting rope 200 feet 1-3/4" @ 40 per ft. 80.00

Supplies, food, gas, oil, miscl. per month: 800.00

(d) Operating equipment:
1-315 Air compressor, wheel mounted to supply air for drilling and sinking of shaft. Estimated value: $5,000
Owners: H & H Minerals
1- Half-track wagon drill to be used in drilling necessary exploratory holes.
Owners: H & H Minerals Cost$4,500
1-3/4 Ton Ford truck to be used in hauling supplies to camp. Cost:$1200
Owners: H & H Minerals
1- Jeep Used for geology work and general utilities. Cost:$500.00 Owners: H & H Minerals.
1- Kohler light plant. Furnish light for camp house. Cost$1250 Owners: H & H Minerals
1-Camp House 10 x 18 with stove, bunks, cooking facilities and refridgerator. Cost$2,000
Owners: H & H Minerals
3-Butane Units for fuel--cooking Cost:$30.00
Owners: H & H Minerals.
3- Gas & Deisel storage tanks with 1500 gal capacity. Rented: Per month$60.00
3- Jack hammers 2- 98 lbs and 1-100 lbs
Cost:$450.00 Owners: H & H Minerals

SUBJECT: Application for aid in an exploration project, pursuant to DMEA order 1, under the defense production act of 1950, as amended

TO : United States Department of Interior
Defense Minerals Exploration Administration

FROM : H & H Minerals, P.O. Box 299 El Paso, Texas
(A PARTNERSHIP: Robert Haynsworth and Claude Huckleberry.)

(d) Operating equipment--continued:
100 feet air hose for jack-hammers. Cost$150.00
Owners: H & H Minerals.
1-100 feet air hose for air compressor,
Cost$200.00 Owners: H & H Minerals.
1-D8 Caterpillar used in moving muck. Cost
$8,000 Owners: H & H Minerals

No equipment to be rented with the exception of a drum-hoist. Rental price: $800.00 per month $800.00

(e) Rehabilitation and repairs: None
(f) New buildings, improvements, installations: None
(g) Miscellaneous:
Bits refaced for wagon drill: $1.00 per unit 240.00
6 month period:
Assays $7.00 per assay 4 per month for 6 mos. 672.00
(h) Contingencies--
Cost per foot of wagon drilling $1.00 per 8000.00
8000 feet hole: Average depth 50 feet.
Vertical shaft: 6 feet by 10 feet rock cut
4 feet by 8 feet inside timbers--2 compartments
8" by 8" timbers on 5-ft. centers:

Depth:	Total Direct Cost Per foot: A	Total direct cost A	Total Equipment Cost B
50 ft.	31.67	3,167	13,250

Total cost of shaft per foot: $164.17

Total Cost of shaft sinking:--- 16,417

Company insurance rates:

Payroll taxes: This will be figured by CPA at tax time.

NOTE: A Includes labor, timber, powder and power. Power to be drum-hoist.
B Includes 315 cubic-foot compressor, head frame, ore bin, hoist, and small compressor house, sheaves, cables, sinking equipment, and small tools.

TOTAL COSTS:

$37,635.00

SUBJECT: Application for aid in an exploration project, pursuant to DMEA order 1, under the defense production act of 1950, as amended.

TO : United States Department of Interior
Defense Minerals Exploration Administration

FROM : H & H MINERALS, P.O.Box 299 El Paso, Texas
(A partnership: Robert F. Haynsworth and
Claude Huckleberry).

7. (a) and (b) The partnership as shown in 1 (d) has operated as H & H MINERALS for approximately one year. Quite a bit of equipment is owned by the company, including: one Mahew drilling rig, one wagon drill, one large bulldozer, one jeep, one pickup truck, adequate compressors, portable "Doc House" accommodating four employees, approximately $ 15,000.00 precision instrument equipment, and other miscellaneous drilling equipment which can be accounted for in inventory.

Approximately $100,000.00 has been spent in the search for uranium on the Navajo Indian Reservation, claims in the vicinity of Dove Creek, Colo. and also other claims in the Cane Springs Canyon Area, San Juan County, Utah. Some forty tons of uranium ore was shipped from the Johnny McCoy claim on Indian Reservation to the Kerr-McGee Mill at Shiprock, N. M.

Financial statements or credit references are available to show evidence of ability to furnish equipment or costs of the partnership share of this proposed venture.

SILAS C. BROWN
Consulting Geologist

RECEIVED
NOV 17 1955

H & H MINERALS BLACKWATER CLAIM

NAVAJO RESERVATION

APACHE CO., ARIZONA & SAN JUAN CO., UTAH

COPY

Durango, Colorado
September 1955

SOLAS C. BROWN
Consulting Geologist
P. O. Box 1240
Durango, Colorado
Sept. 21, 1955

H & H MINERALS BLACKWATER CLAIM

NAVAJO RESERVATION

APACHE CO., ARIZONA & SAN JUAN CO., UTAH

INTRODUCTION

A geological field investigation was made of the Blackwater Claim, which is held by the H & H Minerals, in September 1955. The Claim, consisting of about 529 acres is situated within the boundaries of the Navajo Reservation, Apache County, Arizona and San Juan County, Utah.

GEOLOGY & STRUCTURE

Drifting sands have obscured most of the Shinarump outcrop except its upper surface. The Shinarump formation, which dips 6 degrees toward the southeast, has a maximum thickness of about 35 feet. Large petrified logs occur about 5 feet below the top of the formation, none of which showed gamma count.

Channeling was observed immediately southwest of the Blackwater claim in a recently worked pit and along the outcrop area extending several miles toward the southwest. These channels have a general trend of North 50o West with only minor local variations. Although channeling could not be observed because of the drifted sand, channels no doubt do exist under the claim. The presence of channels in an area where known deposits exist indicates a good place in which to search for other ore bodies. It is of course possible to have well developed channels without having concentrated ore bodies of commercial value.

The general area surrounding the H & H Minerals Blackwater Claim has produced large bodies of high grade ore - especially the V.C.A. Monument # 2 and the Caddo Bells mines about 6 miles southwest of this claim. The ore is concentrated in two separate "upper" and "lower" channels within the Shinarump formation. No ore or high count has been observed on the claim as outlined.

Despite the fact that no shows were found on the claim, it is in an area having some geological merit. The affect of pre concentration in areas of thinning Shinarump is unknown. Channels are fairly certain to exist and should be drilled to ascertain their extent and possible enrichment. The drilling should be first concentrated along the northwestern side of the claim where the Shinarump dip-slope is exposed and the drilling is comparatively shallow (about 35 feet). The core hole lines should be aligned perpendicular to the general trend of the channels which is North 50° West.

RECOMMENDATIONS

The recommended drilling pattern as shown on the map is idealistic and would explore most channel possibilities if economically feasible. At least one continuous line should be drilled near the outcrop area (such as line 1) and the holes should be spaced not more than 250 feet apart. If a channel or an ore body is found then 25 to 50 foot centers should be drilled. To trace channels which might be found along lines 1 or 2, a 250 - 300 foot offset should be made either N 50° W or 50° E from the discovery hole. If no ore is found in core holes in lines 1, 2, or 3 there would be little reason to drill lines 4 and 5. Drilling of these latter lines would be expensive because of the depth and should be drilled only if ore is found in the shallow drilling.

In the event lines 4 and 5 are drilled they should be spaced at least 500 feet apart. These centers can be reduced if ore is encountered. The drilling depths to test the Shinarump section along the various lines are as follows:

Line 1 - 30-35 ft. -	variations	due	to	topography
Line 2 - 40-50 ft. -	"	"	"	"
Line 3 - 85-100 ft.-	"	"	"	"
Line 4 - 175-225 ft.	"	"	"	"
Line 5 - 300-375 ft.	"	"	"	"

If 20 holes were drilled on lines 1 and 2 and 10 holes on line 3, the accumulated footage would be about 2600 feet. Exploration of any channels should have a drilling pattern between the lines as shown on the map.

The proposed drilling locations on lines 1 through 5 are idealistic and each hole should decide the location of the next. If no ore is found in lines 1, 2, or 3, then lines 4 and 5 should be abandoned. Any channeling observed in the shallow lines can be projected into the deeper lines and drilling held to a minimum.

Silas C. Brown

A Prospectus

This prospectus is for the benefit of H & H Minerals, a partnership consisting of Robert Haynsworth and Claude Huckleberry, box 299, El Paso, Texas.

The main purpose of this prospectus is to evaluate the property held by H & H Minerals, known as the Monument Valley Claims. It is on the Indian (Navajo) Reservation, part in Arizona and part in Utah--the line practically splits the property.

Claims

The entire group consists of 5,000 odd acres that has been officially assigned to H & H Minerals through the Navajo Indian Tribal Council at Windowrock, Arizona. The claims are held by a Harvey Blackwater, (Navajo Indian) who has signed legal papers assigning prospecting rights to H & H Minerals.

A drilling permit has been issued by the Indian Council and this part of the program has been carried out to completion.

Exploration

To date, the H & H Minerals have drilled forty-two (42) holes to a depth of approximately 41 feet. (To Red-beds). Most holes have been spaced two-hundred feet apart with one hole place in the center to check any ground which might have been missed by the outer holes.

While engaged in the program, H & H Minerals encountered a Shinarump formation of the Triassic system with a normal Paleochannel consisting of conglomerate ore that is averaging approximately 0.10% of U308. As out-lined to date, the channel appears to be forty feet wide and the length to date--more drilling should be done--is about 200 feet. Chemical assays have been made by the Durango Assaying Company, P.O.Box 1202 Durango, Colorado. The ore encountered is averaging five feet with a width of 12 feet. This channel should be followed for it is the writer's opinion, that higher grade ore exist along the outer borders of the main channel than has been found. No assay was made on the Vanadium content of said ore.

Presence of "Paleo" or "Fossil" Stream-Channels.

At the close of Moenkopi time, channels were formed during a period of erosion. As the Shinarump sands and pebbles were carried in, they filled the channels in the Moenkopi and later blanketed much of the old surface. In areas which were subsequently mineralized, these channels occassionally became solution-traps and many of the deposits in the Shinarump are found at the bottom of the channels. These channels are easily detected because the Shinarump not only thickens at the base but it may also be observed transecting the Moenkopi beds.

In Monument Valley, no ore has been found outside of channels. The H & H Mineral property is of Shinarump formation and all holes, where the channels is partly out-lined shows good mineralization. Carbonaceous material also is abundant in most holes drilled.

Carbonaceous Material

A great amount of vegetable matter was found on the H & H Minerals claims, which was deposited in both the Shinarump and the lower or base of the channel, actually in the Moenkopi beds. Trees, limbs, sticks, roots, leaves, trash piles, and unidentifiable fragments may be found. Where ore-bearing solutions penetrated, they usually sought out such material for deposition of the richest ore. Ore bodies are and were frequently formed, however, in the absence of carbonaceous matter. Terming carbonaceous material as a "guide" is perhaps questionable, as it usually occurs well inside an ore body and is disclosed only during the progress of actual mining.

Some question may be raised to whether all the guides listed under this heading are actually related to the period of ore deposition. It is possible that not all of them were directly related to the same solutions that introduced the ore. The fact that the entire list has been used successfully in one or more localities indicates that they may be related to at least one phase of ore deposition. All of them, however, must be used with discretion, for in a given area several of the guides may apply while others will not. To a geologist directing exploratory drilling for uranium ores, the two groups (Channels and Carbon) may be equally important.

Proximity of Ore

To a geologist seeking favorable places to drill for uranium ore, the presence of ore on the rims of the mesas or tablelands where drilling is contemplated is the only thoroughly reliable guide we now possess. The larger, the richer, and the more closely spaced the ore outcrops, the greater the expectation of successful exploration. Following are four general rules. (a) If ore is seen on opposite rims of a mesa, drilling between the ore exposures may be recommended with considerable assurance of success. (b) If ore exposures are infrequent, drilling should be recommended only in a strip bounded by the limits of the ore exposures on the rims. (c) If ore is exposed on only one rim, drilling should start behind those exposures and proceed toward the interior of the mesa until reaching an area where no additional ore can be found. (d) If no mineralization is visible on the rims of a mesa and if no favorable fracture pattern is apparent on the interior of the mesa, drilling should not be done. All the conditions exist on the H & H Minerals property--as well as ore being found.

Proximity to Major Tectonic Structures

Two types of geologic structures occur on the Plateau, with quite different modes of ore occurrence.

The first type consists of mountain masses with exposed cores of crystalline igneous rock intruded during Tertiary time. Ore deposits form halos around the mountain groups at distances, proportional to the mass of the mountains.

The second type of geologic structure includes large anticlines and domes on which igneous rocks are not exposed except for a few dikes and volcanic plugs in widely separated localities. The ores on these structures do not form halos but occur as isolated bodies at irregular intervals from the crest of the structures outward to the base of their flanks. This second type is true regarding the H & H Minerals claims.

Fracture Control of Uranium Deposits

It was formerly believed that faults and joints exerted no influence on the deposition of uranium deposits in the Colorado Plateau. Recent discoveries of large uranium deposits, in which structural features are prominent, has led to investigations by both government and industry of the relation of structure to uranium deposition. This study has barely begun and definite conclusions are not possible at this time. The following observations indicate the present trend of thought among a group of geologists on the Plateau:

I. Types of fractures which appear to have controlled ore deposition: Both faults and joints appear to have exerted an important control in the deposition of Plateau uranium deposits. Numerous large faults, removed from the igneous mountain masses and anticlinal structures, do not have uranium ore deposits in the various favorable ore horizons. On the other hand, major faults that approach within a few miles of one of the igneous mountain groups or a large anticline should be considered as probable conduits for rising uranium-bearing solutions, and the favorable stratigraphic horizons near the faults should be considered as potential areas for uranium deposits. Uranium deposits that appear to confirm this theory are: Charles Steen's Mi Vida Mine near the Lisbon Valley fault and about six miles south of the La Sal Mountains; and the Thornburg Brothers' Seven Mile Canyon mine adjacent to the Moab fault and approximately twelve miles northwest of the La Sal Mountains. Both of these deposits are at the base of the Chinle. The Shinarump normally under the Chinle is absent.

Joints were also an important factor in the control of uranium deposition. At a number of places, the joints along which ore bodies trend are large and contain openings two or three inches across. Two outstanding areas where joints appear to have controlled the uranium deposition are at the Waterfall group of mines in Dry Valley, Utah, and at the Lukachukai mines in the northeastern corner of Arizona.

More frequently the controlling joints are small and obscure. They are often indicated in the ore bodies only as "rolls" or lines along which the ore body cuts at an angle across the bedding planes of the strata. This last, but by far not the least, is such on the H & H Minerals channel. For in the exploration period, two large joints were encountered. As the drill lost circulation, it was impossible to recover any "cuttings" nor was it feasible to probe the hole as it was caved from above.

Few infallible geologic guides have been established in the search for uranium in the Colorado Plateau, and the foregoing observations and suggestions should be used with caution. The subject has been treated in generalities; all geologic guides may not apply to one particular deposit, but some of the guides will apply to all deposits.

No estimation will be given as to the amount of known ore in the H & H Minerals group as it is not of commercial quality, but is merely an indication that there is a possibility of far better ore to exist in the group of claims.

GEOLOGY

No attempt will be made to cover the general area of the Monument Valley in general, as concern is for only the H & H Minerals property. This property consists of a slow-dipping escarpment, with the strike being in a Northeasterly direction and the dip being approximately 8 degrees to east. Most of the formation is Shinarump with very little exposed as the entire area is covered with Kayenta sand that orginated from what is locally called Comb Ridge. This is a mass of large cliffs consisting of the Kayenta formation. The main valley runs North and South with a width of three to four miles. In several places the Chinle is exposed as well as the Shinarump.

PRODUCTION

The Monument Valley mining district has five producing mines now shipping uranium. The most well-known is the Vanadium Corporation of America mine known as Monument Number 2. Ore is being hauled from this property at present.

The Beschochi Mine borders VCA property, and it too, now is active.

The Sterling Mine borders the Beschochi and too is producing ore.

The Mex-Air Uranium Co. and the Kato-Sells mines are on the same ore trend as the above properties, and both these are now producing.

The H & H Minerals group is in the trend of all the well-exposed Shinarump formation and the characteristics of all the above properties are very similar. The H & H channelling is running true to form in respect to the producing channels in this area.

ROADS

There are two roads to the valley. One from Utah and the other from Shiprock, New Mexico. The Shiprock road would be the main haulage road--all mines producing now haul on this road. It is a distance of 87 miles over very poor hauling roads to the main mill at Shiprock, New Mexico. This is a Kerr-Mcgee mill for uranium.

CLIMATE

The Monument Valley climate is mild the year-round and it would be possible to continue operation throughout the year from a mining standpoint. The roads are open all year round from the Valley to Shiprock, New Mexico.

ORES

All ore that is being produced in the Monument Valley area is consisting of typical Shinarump material--consolidated masses of rock and sand with the main mineralization being Carnotite with a good percentage of Vanadium. All ore is confined, at present, to the channels.

Favorable Features

The H & H Minerals claims are favorable for the production of ore for the following reasons:

1. In a producing district.

2. The general trend of the mineralization favors H & H claims.

3. A channel has been found showing good mineralization.

4. Out-crops are present.

5. Carbon was present in practically all holes drilled.

6. Two known joints are in the channel.

7. Shinarump formation.

8. Iron-stained sandstone present in holes.

9. Assay reports verify mineralization in holes tested.

10. Channel is wide and has many bends and drops--this can be determined after drilling channel out. All indications are favorable for a higher grade of ore occurring in channel.

11. Drilling has determined the trend of the channel.

12. All weather operations.

13. General Characteristics of the H & H channel in regards to those now producing.

14. Shallow drilling-depth on average--45 feet to Red Beds.

ACTING AGENTS RECOMMENDATIONS

Having had considerable experience in mining and the study of Geology, it is the writer's opinion that further exploration of the H & H Minerals property should be carried out. And I recommend the following:

A. Request for a DMEA loan both for drilling and mining of the ore now blocked out. (This ore will be of value if higher grade ore is found and mixed with it.)

B. Use of a small wagon drill in place of the Mayhew rig--this will cut cost and will drill more holes. The results will be just as well for information will be obtained and be far cheaper.

C. Employ only one extra man at present--until actual mining of the low-grade ore is attempted. (This only if higher grade ore is discovered.)
D. Request a mining permit from the Indian Tribal Council but only on 80 acres. (The main trend will be on this ground.)
E. Have all necessary equipment to carry on exploration with the exceptions of one 38 lbs jack-hammer with necessary hose for air.
F. All equipment is now at the main camp headquarters.
G. Complete exploration of the channel found.

Respectfully yours,

Ralph Schevene

RECEIVED
NOV 17 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
Navajo Agency
Window Rock, Arizona

Prospecting Permit
Non-Navajo

Date APR 20 1956

H & H MINERALS
P. O. Box 299
El Paso, Texas

~~Dear~~ Gentlemen:

In accordance with your request, you are hereby granted permission to prospect for minerals, other than oil and gas, within the boundaries of District No. or Nos. 8, 9, 10, 11 & 12 of the Navajo Reservation for a period of one year from date hereof. This permit covers no part of the original Hopi Executive Order Reservation.

Under this permit, you are advised that no ores or materials may be removed from the Reservation except in small quantities for assay or experimental purposes.

Under existing regulations, any discoverer of minerals who has an official prospecting permit may file application for lease thereon and request approval thereof from the Advisory Committee and the General Superintendent. This permit is revocable at the discretion of the General Superintendent and the Chairman of the Tribal Council. This permit shall be inoperative in areas that have been officially withdrawn from prospecting. Employees of the United States Government and their spouses are not eligible for permits or leases.

Very truly yours,

R. D. Hoes

~~Assistant~~ Area Director

Paul Jones

Chairman, Navajo Tribal Council

RECEIVED
NOV 17 1955

DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
Navajo Agency

July 26, 1955

H & H Minerals
Rte. 1, Box 123
Aztec, N. Mex.

Dear

Transmitted herewith is an approved copy of your drilling and exploration permit(s) which (was, were) officially approved by the General Superintendent on July 25, 1955.

Very truly yours,

Thomas Lynch
for M. D. Long
Chief, Branch of Realty

Enc: 1 DEP 529.6 acres

THE NAVAJO TRIBE
DRILLING AND EXPLORATION PERMIT

TO: H & H Minerals

Rte. 1 Box 123

Aztec, New Mexico

1. Pursuant to authority contained in Advisory Committee Resolution No. ACD-80-53 dated December 18, 1953, and approval of your application by the Advisory Committee under date of July 21 19 55, you are hereby granted an exclusive drilling and exploration permit for a period of one hundred twenty (120) days upon Navajo Tribal Lands described as follows: **Beginning at a point N 19° 22' E, 5400.6' from the SE corner of HARVEY BLACKWATER Claim No. 1, Said point being corner No. 1; Thence, S 58° 45' E 5980'; thence, N39° 46'E 3579.5'; thence, N 39° W 5490.2'; thence, S 34° 53' W 5406.3'; ~~xxxxx~~, to the point of beginning.**

2. You are authorized to do or perform any or all of the following operations under this permit; (a) Diamond drilling; (b) Wagon drilling; (c) Open cut; (d) Tunneling; (e) Pit.

3. No surface geology is authorized hereunder.

4. You are not permitted under this permit to sell ore, but you may remove small quantities for assay purposes only.

5. You may drill and explore lands already held under mining permits in the above described area provided you are given written permission to do so by the holder of the permit, and you obtain approval of such arrangement in advance from the Advisory Committee.

6. You are required to pay individual Navajo Indians who may have allocated or assigned use rights for all damage caused by you which affects the surface of the lands involved as determined by the Secretary of the Interior or his authorized representatives.

7. No renewal or extension of this permit may be granted, and you

I hereby certify that this is a true and exact Photo Copy of its original.

By _____ Date 11/9/55

Photostat Operator

Border Blue Print Co.

409 Myrtle Ave.
El Paso, Texas
Phone 2-1072

may not be granted any new drilling and exploration permit upon any of the lands included in this permit.

8. During the term of this permit you are granted the exclusive right to apply for and be granted a mining lease upon the lands above described, subject to acreage limitations and other lawful regulations. You may also apply for and be granted assignments of mining permits on any of such lands subject to existing regulations.

9. You are required to furnish the Navajo Tribe, at the office of the Tribal Mining Engineer, Window Rock, Arizona, complete drill records and all information obtained from drilling and exploration each 30 days during the term of this permit.

Vice-Chairman, Navajo Tribal Council

(Permittee)

(Date)
APPROVED: JUL 25 1955

General Superintendent
Navajo Agency

I hereby certify that this is a true and exact Photo Copy of its original.

By [illegible] Date 11/9/55
Photostat Operator

Border Blue Print Co.
409 Myrtle Ave.
El Paso, Texas
Phone 2-1072

RECEIVED
NOV 17 1955

MEMORANDUM AGREEMENT

THIS AGREEMENT, Made and entered into, in duplicate, by and between Harvey Blackwater, a Navajo Indian and a member of the Navajo Indian Tribe residing on the Navajo Indian Reservation, First Party, and H & H Minerals, Second Party,

WITNESSETH:

THAT WHEREAS, said First Party heretofore has made discovery of Uranium and Vanadium bearing ores on the Navajo Indian Reservation, but has been unable and now is unable to determine the value thereof, and whether or not the said ores are of sufficient value for commercial mining; and,

WHEREAS, said first party has contacted said second party in an endeavor to secure the services and assistance of said second party to determine the extent and the value of said ores discovered by said first party; and said second party has agreed to engage in exploratory services and work for said first party to determine the extent and value of said ores, upon the terms and conditions hereinafter more particularly stated.

Now, therefore, in consideration of the premises, and in further consideration of the agreements hereinafter contained, it is hereby mutually agreed by and between the parties here-to as follows:

I

That said first party agrees to reveal to said second party the locality and area in which said first party heretofore has discovered said Uranium and Vanadium bearing ores, and to use his best endeavors to call the attention of said second party to said ores in said area and the area which is covered by the said discovery of said first party.

II

That said second party will explore and prospect the area as pointed out to said second party by said first party where such ores have been discovered, and to use its best endeavors to justify mining the same on a commercial basis. All such prospecting and exploratory work to be done at the cost and expende of said second party.

III

Said second party further agrees that in the event ores bearing Uranium and Vanadium of such commercial value to justify the mining of the lands embraced within the discovery of said first party, then and in such event, said first party will make application for lease thereon and assign the same to said second party subject to an over-riding royalty of production to said first party in an amount and on a sliding scale commencing at 2% and not to exceed 5% of all of the ores mined and sold from the lease or mining permit secured by said first party.

DATED: this 30th day of Oct. 1955.

Harvey Blackwater
First Party

H & H MINERALS

By: Ralph Schevene
Ralph Schevene

Witness: R. L. Wilson.

RECEIVED
NOV 17 1955

Certificate of Assay

DURANGO ASSAYING COMPANY

Durango, Colorado, October 21, 1955

For Ralph Schavone: Aztec, New Mexico

No.		U_3O_8
1	Hole	0.085
2	Hole	0.076
6	Hole	0.100

RECEIVED
DEC - 5 1955
DMEA
FIELD

November 30, 1955

Memorandum

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

From: Acting Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4066 (Uranium), H & H Minerals, Blackwater claims, Apache County, Arizona and San Juan County, Utah

The above brochure was received in this office on November 30, 1955.

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

JOHN F. SHAW

John F. Shaw

cc: 2 w/orig.
E. N. Harshman
J. W. Hasler
J. F. Shaw

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

RECEIVED
DEC - 1 1955

RECEIVED
DEC 1 0 1955

November 29, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw (With brochure)
J. W. Kasler

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 4066 (Uranium), K & K Minerals, Blackwater claims, Apache County, Arizona and San Juan County, Utah

Enclosed is the subject application in the amount of $37,635.00. A field examination and suitable report are required.

E. M. Harshman

E. M. Harshman

Enclosures

cc: Sec. Op. Comm. (2)

12-2-55 ejm

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

RECEIVED
DEC - 1 1955

November 29, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

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

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 4066 (Uranium), H & H Minerals, Blackwater claims, Apache County, Arizona and San Juan County, Utah

Enclosed is the subject application in the amount of $37,635.00. A field examination and suitable report are required.

E. N. Harshman

E. N. Harshman

Enclosures

cc: Sec. Op. Comm. (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

IN REPLY REFER TO:
GENERAL DEPOSITS
DMEA
RECEIVED
NOV 25 1955
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

RECEIVED
DEC 16 1955

November 23, 1955

DMEA
Date Rec'd.
NOV 25 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: J. William Hasler
M. H. Salsbury

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

Subject: H & H Minerals, Blackwater claim, Apache County, Arizona and San Juan County, Utah

The H & H Minerals application for assistance on the Blackwater claim, Apache County, Arizona, and San Juan County, Utah, was referred to us for recommendations regarding the necessity for a field examination.

We have made a cursory review of the application and have consulted the Atomic Energy Commission. There is little known about the property itself. Although there has been some production from the general area of the Blackwater claims, the claims themselves do not have any particular exposure of uranium-bearing material. It is felt that the property should be examined in the field.

We are retaining the application in this office and the examination will be made as soon as possible.

J. William Hasler
J. William Hasler
U. S. Geological Survey

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

JWH/mlr

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

RECEIVED
NOV 17 1955

RECEIVED
DEC 16 1955

224 New Customhouse
Denver 2, Colorado

November 15, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA aid (Uranium) H & H Minerals, Blackwater claim, Apache County, Arizona and San Juan County, Utah

Enclosed are two copies of the subject application in the amount of $37,635.00.

One copy of the application has been forwarded to Mr. Hasler at the Grand Junction office for study and recommendations and one copy has been retained in this office.

W. M. Traver

By J. W. Townsend

Enclosures

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

RECEIVED
NOV 17 1955

RECEIVED
DEC 16 1955

224 New Customhouse
Denver 2, Colorado

November 15, 1955

Memorandum

To: J. W. Emsler

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA aid (Uranium) H & H Minerals, Blackwater claim, Apache County, Arizona and San Juan County, Utah

Enclosed is the subject application in the amount of $37,635.00. Will you please discuss this application with the AEC and Bureau of Mines representatives in the Grand Junction office and forward this office eight copies of your recommendations as to the desirability of making a field examination.

W. M. Traver

By J. W. Townsend
J. W. Townsend

Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved Budget Bureau No. 41-R1035.2.

RECEIVED NOV 17 1955

NOV 14 1955

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. DMEA-4066
Metal or Mineral Uranium
Date Received 11-17-55
Estimated Cost $37,635.00
Participation (Government %)

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: [illegible]

(*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. [illegible]

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. No

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

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 [illegible]

(*b*) State any mine name by which the property is known.

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

(*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. [illegible]

(*e*) If you own the land, describe any liens or encumbrances on it No

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

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.

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

(*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.

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

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

16—66551-1

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. See attached sheet

(*c*) The work will start within 10 days and be completed within 6 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.

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:

(*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?

☒ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper. See attached

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 November 6, 1958

U. S. Minerals
(Applicant)

By

R. F. Haymond

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
NOV 17 1955

SUBJECT: Application for aid in an exploration project, pursuant to DMEA order 1, under the defense production act of 1950, as amended

TO : United States Department of Interior
Defense Minerals Exploration Administration

FROM : H & H MINERALS, P.O. Box 299 El Paso, Texas
(A partnership: Robert Haynsworth and Claude Huckleberry.)

5. Exploration project--
(b) The proposed work on the Monument Valley group of claims now held by H & H MINERALS, will be to extend the drilling program on the Shinarump channel that has been recently exposed. Good mineralization has been encountered and with more exploration work on said channel there is a good possibility that more and better ore can be encountered. Work is also to be done on a proposed shaft to a depth of 50 feet to the bed of the Moenkopi beds. This will be a 6 feet by 10 feet vertical shaft with 4 feet by 8 feet inside timbers, 2 compartment, 8" by 8" timbers on 5-foot centers. See attached sheet for location of proposed exploration work as related to the ore-bearing beds and fault zone now found.
(d) State operating experience and background of person who will supervise work:

Ralph Schevene, a qualified miner, has had the following experience:
Underground work for Portland Cement Company, Riverside, California. Work consist of breaking ground--both stopes, drifts and incline shafts. Underground survey work. Handling of various types of machines, loading holes, breaking and loading ore. Timbering and handling large quanities of powder. Use of heavy equipment underground.

Work with the Pacific Gold Mining Corporation, Buckeye, Arizona. Survey work, breaking ground and prospecting for copper-gold ore. Handling hoist equipment, powder, various types of under-ground drilling equipment. Drifting work for a distance of 2800 feet in Granite with a depth of 300 feet.

Geology work with Mr. John W. Mrock, graduate engineer for three years in actual field work which includes, mapping, identification of formations, structural layouts, assaying, actual mining for copper-gold, building roads, mill work, study of field geology, overhaul and maintenance of heavy equipment.

Field work for El Paso Natural Gas Company, which consisted of evaluation of uranium claims, prospecting and identification of various types of minerals. Under direct supervision of Mr. W. H. Miller, superintendent for the Compresser department of El Paso Natural Gas Company.

College training in Geology at the Tempe College, Tempe, Arizona.

Gold mining in Alaska. Running dredge.

Gold mining in Northern California. Under ground work.

Uranium mining on Colorado Plateau for self as in the employ of various individuals. General prospecting for said metal.

Application for aid in an exploration project, under DMEA order 1, continued:

(d) Continued:

Field supervision and drilling of H & H Minerals property. Work consists of out-lining the ore body as well as the actual discovery of said ore body. Mapping, and logging drill holes.

Contractor for a number of years, self employd. Work consisted of building and excavation for homes, commercial buildings and general contratting.

General prospecting for various minerals in North Africa. Self employed. Seeking bodies of copper, cobalt and gold.

6. ESTIMATE OF COSTS--See attached sheet.

SUBJECT: Application for aid in an exploration project, pursuant to DMEA order 1, under the defense production act of 1950, as amended

TO : United States Department of Interior Defense Minerals Exploration Administration

FROM : H & H MINERALS, P. O. Box 299 El Paso, Texas (A partnership: Robert Haynsworth and Claude Huckleberry.)

6. Estimate of costs--

(a) Independent contracts---NONE

(b) Labor, supervision, consultants:
3-Navajo Indians as laborers @ per hr. $ 1.50 per 8 hrs: $12.00 per shift. For 5 day week per man, $60.00 per week. 3-men per week: $180.00 $720.00 per month. 6 month period: $4,320.00

Supervisor: $100.00 per week. $ 400.00 per month. 6 month period: 2,400.00

Consultants: San Juan Engineering Co. (Geology reports etc.,) 1,000.00

(c) Operating materials and supplies:
3- picks and shovels, per unit $3.00 18.00
Powder per box $15.00 total 1920 boxes which includes fuse and caps 2,888.00
Heisting rope 200 feet 1-3/4" @ 40 per ft. 80.00

Supplies, food, gas, oil, miscl. per month: 800.00

(d) Operating equipment:
1-315 Air compressor, wheel mounted to supply air for drilling and sinking of shaft. Estimated value: $5,000
Owners: H & H Minerals
1- Half-track wagon drill to be used in drilling necessary exploratory holes.
Owners: H & H Minerals Cost$4,500
1-3/4 Ton Ford truck to be used in hauling supplies to camp. Cost:$1200
Owners: H & H Minerals
1- Jeep Used for geology work and general utilities. Cost:$500.00 Owners: H & H Minerals.
1- Kohler light plant. Furnish light for camp house. Cost$1250 Owners: H & H Minerals
1-Camp House 10 x 18 with stove, bunks, cooking facilities and refridgerator. Cost$2,000
Owners: H & H Minerals
3-Butane Units for fuel--cooking Cost:$30.00
Owners: H & H Minerals.
3- Gas & Deisel storage tanks with 1500 gal capacity. Rented: Per month$60.00
3- Jack hammers 2- 98 lbs and 1-100 lbs
Cost:$450.00 Owners: H & H Minerals

SUBJECT: Application for aid in an exploration project, pursuant to DMEA order 1, under the defense production act of 1950, as amended

TO : United States Department of Interior
Defense Minerals Exploration Administration

FROM : H & H Minerals, P.O. Box 299 El Paso, Texas
(A PARTNERSHIP: Robert Haynsworth and Claude Huckleberry.)

(d) Operating equipment--continued:
100 feet air hose for jack-hammers. Cost$150.00
Owners: H & H Minerals.
1-100 feet air hose for air compressor,
Cost$200.00 Owners: H & H Minerals.
1-D8 Caterpillar used in moving muck. Cost
$8,000 Owners: H & H Minerals

No equipment to be rented with the exception of a drum-hoist. Rental price: $800.00 per month $800.00

(e) Rehabilitation and repairs: None
(f) New buildings, improvements, installations: None
(g) Miscellaneous:
Bits refaced for wagon drill: $1.00 per unit 240.00
6 month period:
Assays $7.00 per assay 4 per month for 6 mos. 672.00
(h) Contingencies--
Cost per foot of wagon drilling $1.00 per 8000.00
8000 feet hole: Average depth 50 feet.
Vertical shaft: 6 feet by 10 feet rock cut
4 feet by 8 feet inside timbers--2 compartments
8" by 8" timbers on 5-ft. centers:

Depth:	Total Direct Cost Per foot: A	Total direct cost A	Total Equipment Cost B
50 ft.	31.67	3,167	13,250

Total cost of shaft per foot: $164.17

Total Cost of shaft sinking:--- 16,417

Company insurance rates:

Payroll taxes: This will be figured by CPA at tax time.

NOTE: A Includes labor, timber, powder and power. Power to be drum-hoist.
B Includes 315 cubic-foot compressor, head frame, ore bin, hoist, and small compressor house, sheaves, cables, sinking equipment, and small tools.

TOTAL COSTS:

$37,635.00

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SUBJECT: Application for aid in an exploration project, pursuant to DMEA order 1, under the defense production act of 1950, as amended.

TO : United States Department of Interior
Defense Minerals Exploration Administration

FROM : H & H MINERALS, P.O.Box 299 El Paso, Texas
(A partnership: Robert F. Haynsworth and
Claude Hucklaberry).

7. (a) and (b) The partnership as shown in 1 (d) has operated as H & H MINERALS for approximately one year. Quite a bit of equipment is owned by the company, including: one Mahew drilling rig, one wagon drill, one large bulldozer, one jeep, one pickup truck, adequate compressors, portable "Dog House" accommodating four employees, approximately $ 15,000.00 precision instrument equipment, and other miscellaneous drilling equipment which can be accounted for in inventory.

Approximately $100,000.00 has been spent in the search for uranium on the Navajo Indian Reservation, claims in the vicinity of Dove Creek, Colo. and also other claims in the Cane Springs Canyon area, San Juan County, Utah. Some forty tons of uranium ore was shipped from the Johnny McCoy claim on Indian Reservation to the Kerr-McGee Mill at Shiprock, N. M.

Financial statements or credit references are available to show evidence of ability to furnish equipment or costs of the partnership share of this proposed venture.

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DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
Navajo Agency

July 26, 1955

H & H Minerals
Rte. 1, Box 123
Aztec, N. Mex.

Dear

Transmitted herewith is an approved copy of your drilling and exploration permit(s) which (was, were) officially approved by the General Superintendent on July 25, 1955.

Very truly yours,

Thomas Lynch
for M. D. Long
Chief, Branch of Realty

Enc: 1 DEP 529.6 acres

UNITED STATES
DEPARTMENT OF THE INTERIOR
Navajo Agency
Window Rock, Arizona

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Prospecting Permit
Non-Navajo

APR

Date _____

H & H MINERALS
P. O. Box 299
El Paso, Texas

Gentlemen:

In accordance with your request, you are hereby granted permission to prospect for minerals, other than oil and gas, within the boundaries of District No. or Nos. 8, 9, 10, 11 & 12 of the Navajo Reservation for a period of one year from date hereof. This permit covers no part of the original Hopi Executive Order Reservation.

Under this permit, you are advised that no ores or materials may be removed from the Reservation except in small quantities for assay or experimental purposes.

Under existing regulations, any discoverer of minerals who has an official prospecting permit may file application for lease thereon and request approval thereof from the Advisory Committee and the General Superintendent. This permit is revocable at the discretion of the General Superintendent and the Chairman of the Tribal Council. This permit shall be inoperative in areas that have been officially withdrawn from prospecting. Employees of the United States Government and their spouses are not eligible for permits or leases.

Very truly yours,

R. D. Hoag

Assistant Area Director

Paul Jones

Chairman, Navajo Tribal Council

THE NAVAJO TRIBE

DRILLING AND EXPLORATION PERMIT

TO: H & H Minerals

Rte. 1 Box 123

Aztec, New Mexico

1. Pursuant to authority contained in Advisory Committee Resolution No. ACD-80-53 dated December 18, 1953, and approval of your application by the Advisory Committee under date of July 21 19 55, you are hereby granted an exclusive drilling and exploration permit for a period of one hundred twenty (120) days upon Navajo Tribal Lands described as follows: **Beginning at a point N 19° 22' E, 5400.6' from the SE corner of HARVEY BLACKWATER Claim No. 1, Said point being corner No. 1; Thence, S 58° 45' E 5980'; thence, N39° 46'E 3579.5'; thence, N 39° W 5490.2'; thence, S 34° 53' W 5406.3'; ~~thence~~, to the point of beginning.**

2. You are authorized to do or perform any or all of the following operations under this permit; (a) Diamond drilling; (b) Wagon drilling; (c) Open cut; (d) Tunneling; (e) Pit.

3. No surface geology is authorized hereunder.

4. You are not permitted under this permit to sell ore, but you may remove small quantities for assay purposes only.

5. You may drill and explore lands already held under mining permits in the above described area provided you are given written permission to do so by the holder of the permit, and you obtain approval of such arrangement in advance from the Advisory Committee.

6. You are required to pay individual Navajo Indians who may have allocated or assigned use rights for all damage caused by you which affects the surface of the lands involved as determined by the Secretary of the Interior or his authorized representatives.

7. No renewal or extension of this permit may be granted, and you

may not be granted any new drilling and exploration permit upon any of the lands included in this permit.

8. During the term of this permit you are granted the exclusive right to apply for and be granted a mining lease upon the lands above described, subject to acreage limitations and other lawful regulations. You may also apply for and be granted assignments of mining permits on any of such lands subject to existing regulations.

9. You are required to furnish the Navajo Tribe, at the office of the Tribal Mining Engineer, Window Rock, Arizona, complete drill records and all information obtained from drilling and exploration each 30 days during the term of this permit.

Scott Preston
Chairman, Navajo Tribal Council

H H Munsell
A W Clayport
(Permittee)

(Date)
APPROVED: JUL 25 1955

E. Warren Spaulding
General Superintendent
Navajo Agency

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MEMORANDUM AGREEMENT

THIS AGREEMENT, Made and entered into, in duplicate, by and between Harvey Blackwater, a Navajo Indian and a member of the Navajo Indian Tribe residing on the Navajo Indian Reservation, First Party, and H & H Minerals, Second Party,

WITNESSETH:

THAT WHEREAS, said First Party heretofore has made discovery of Uranium and Vanadium bearing ores on the Navajo Indian Reservation, but has been unable and now is unable to determine the value thereof, and whether or not the said ores are of sufficient value for commercial mining; and,

WHEREAS, said first party has contacted said second party in an endeavor to secure the services and assistance of said second party to determine the extent and the value of said ores discovered by said first party; and said second party has agreed to engage in exploratory services and work for said first party to determine the extent and value of said ores, upon the terms and conditions hereinafter more particularly stated.

Now, therefore, in consideration of the premises, and in further consideration of the agreements hereinafter contained, it is hereby mutually agreed by and ~~between~~ between the parties hereto as follows:

I

That said first party agrees to reveal to said second party the locality and area in which said first party heretofore has discovered said Uranium and Vanadium bearing ores, and to use his best endeavors to call the attention of said second party to said ores in said area and the area which is covered by the said discovery of said first party.

II

That said second party will explore and prospect the area as pointed out to said second party by said first party where such ores have been discovered, and to use its best endeavors to determine whether such ores discovered are of sufficient value to justify mining the same on a commercial basis. All such prospecting and exploratory work to be done at the cost and expense of said second party.

III

Said second party further agrees that in the event ores bearing Uranium and Vanadium of such commercial value to justify the mining of the lands embraced within the discovery of said first party, then and in such event, said first party will make application for lease thereon and assign the same to said second party subject to an over-riding royalty of production to said first party in an amount and on a sliding scale commencing at 2% and not to exceed 5% of all of the ores mined and sold from the lease or mining permit secured by said first party.

DATED this 30th day of Oct 1955.

Harvey Blackwater
First Party

H & H MINERALS

By: Ralph Schevene
Ralph Schevene

Witness: H. L. Wilson.

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SILAS C. BROWN
Consulting Geologist

H & H MINERALS BLACKWATER CLAIM

NAVAJO RESERVATION

APACHE CO., ARIZONA & SAN JUAN CO., UTAH

Durango, Colorado
September 1955

SOLAS C. BROWN
Consulting Geologist
P. O. Box 1240
Durango, Colorado
Sept. 21, 1955

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H & H MINERALS BLACKWATER CLAIM

NAVAJO RESERVATION

APACHE CO., ARIZONA & SAN JUAN CO., UTAH

INTRODUCTION

A geological field investigation was made of the Blackwater Claim, which is held by the H & H Minerals, in September 1955. The Claim, consisting of about 529 acres is situated within the boundaries of the Navajo Reservation, Apache County, Arizona and San Juan County, Utah.

GEOLOGY & STRUCTURE

Drifting sands have obscured most of the Shinarump outcrop except its upper surface. The Shinarump formation, which dips 6 degrees toward the southeast, has a maximum thickness of about 35 feet. Large petrified logs occur about 5 feet below the top of the formation, none of which showed gamma count.

Channeling was observed immediately southwest of the Blackwater claim in a recently worked pit and along the outcrop area extending several miles toward the southwest. These channels have a general trend of North 50o West with only minor local variations. Although channeling could not be observed because of the drifted sand, channels no doubt do exist under the claim. The presence of channels in an area where known deposits exist indicates a good place in which to search for other ore bodies. It is of course possible to have well developed channels without having concentrated ore bodies of commercial value.

The general area surrounding the H & H Minerals Blackwater Claim has produced large bodies of high grade ore - especially the V.C.A. Monument # 2 and the Caddo Sells mines about 6 miles southwest of this claim. The ore is concentrated in two separate "upper" and "lower" channels within the Shinarump formation. No ore or high count has been observed on the claim as outlined.

Despite the fact that no shows were found on the claim, it is in an area having some geological merit. The affect of ore concentration in areas of thinning Shinarump is unknown. Channels are fairly certain to exist and should be drilled to ascertain their extent and possible enrichment. The drilling should be first concentrated along the northwestern side of the claim where the Shinarump dip-slope is exposed and the drilling is comparatively shallow (about 35 feet). The core hole lines should be aligned perpendicular to the general trend of the channels which is North 50o West.

RECOMMENDATIONS

The recommended drilling pattern as shown on the map is idealistic and would explore most channel possibilities if economically feasible. At least one continuous line should be drilled near the outcrop area (such as line 1) and the holes should be spaced not more than 250 feet apart. If a channel or an ore body is found then 25 to 50 foot centers should be drilled. To trace channels which might be found along lines 1 or 2, a 250 - 300 foot offset should be made either N 50° W or 50° E from the discovery hole. If no ore is found in core holes in lines 1, 2, or 3 there would be little reason to drill lines 4 and 5. Drilling of these latter lines would be expensive because of the depth and should be drilled only if ore is found in the shallow drilling.

In the event lines 4 and 5 are drilled they should be spaced at least 500 feet apart. These centers can be reduced if ore is encountered. The drilling depths to test the Shinarump section along the various lines are as follows:

Line 1 - 30-35 ft. -	variations	due	to	topography	
Line 2 - 40-50 ft. -	"	"	"	"	
Line 3 - 85-100 ft.-	"	"	"	"	
Line 4 - 175-225 ft.	"	"	"	"	
Line 5 - 300-375 ft.	"	"	"	"	

If 20 holes were drilled on lines 1 and 2 and 10 holes on line 3, the accumulated footage would be about 2600 feet. Exploration of any channels should have a drilling pattern between the lines as shown on the map.

The proposed drilling locations on lines 1 through 5 are idealistic and each hole should decide the location of the next. If no ore is found in lines 1, 2, or 3, then lines 4 and 5 should be abandoned. Any channeling observed in the shallow lines can be projected into the deeper lines and drilling held to a minimum.

Silas C. Brown

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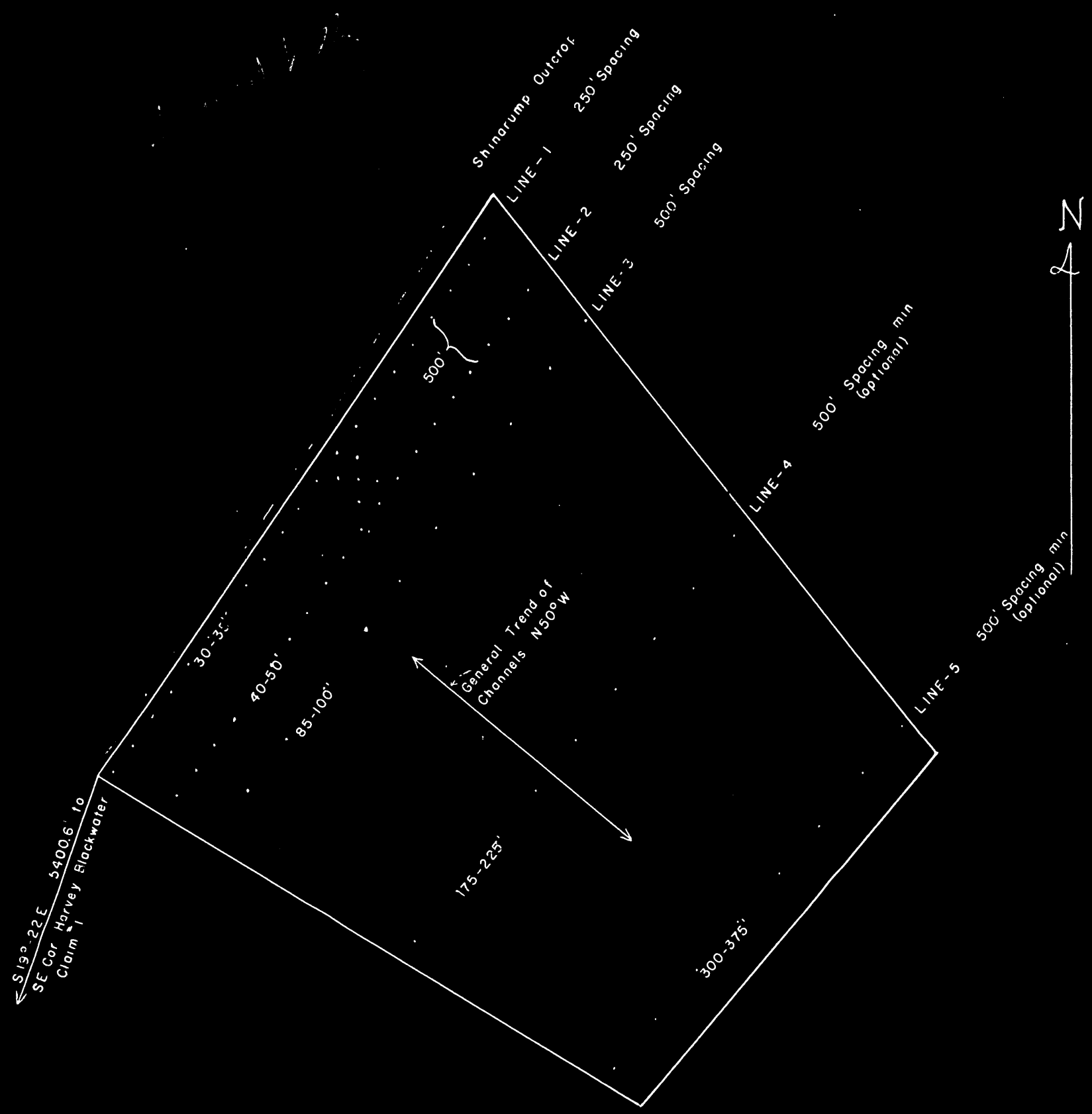
Certificate of Assay

DURANGO ASSAYING COMPANY

Durango, Colorado, October 21, 1955

For Ralph Schevene: Aztec, New Mexico

No.		U_3O_8
1	Hole	0.085
2	Hole	0.076
6	Hole	0.100



EXPLANATION

. . . Proposed Core Hole Pattern

. . . Core Hole Pattern to Outline Channels

85-100' Depth to Test Shinarump

H & H MINERALS

BLACKWATER CLAIM

Navajo Reservation

Apache Co., Arizona & San Juan Co., Utah

SCALE – 1" = 1000'

Silas C Brown Durango, Colorado

September 1955

A Prospectus

This prospectus is for the benefit of H & H Minerals, a partnership consisting of Robert Haynsworth and Claude Huckleberry, box 299, El Paso, Texas.

The main purpose of this prospectus is to evaluate the property held by H & H Minerals, known as the Monument Valley Claims. It is on the Indian (Navajo) Reservation, part in Arizona and part in Utah--the line practically splits the property.

Claims

The entire group consists of 5,000 odd acres that has been officially assigned to H & H Minerals through the Navajo Indian Tribal Council at Windowrock, Arizona. The claims are held by a Harvey Blackwater, (Navajo Indian) who has signed legal papers assigning prospecting rights to H & H Minerals.

A drilling permit has been issued by the Indian Council and this part of the program has been carried out to completion.

Exploration

To date, the H & H Minerals have drilled forty-two (42) holes to a depth of approximately 41 feet. (To Red-beds). Most holes have been spaced two-hundred feet apart with one hole place in the center to check any ground which might have been missed by the outer holes.

While engaged in the program, H & H Minerals encountered a Shinarump formation of the Triassic system with a normal Paleochannel consisting of conglomerate ore that is averaging approximately 0.10% of U_3O_8. As out-lined to date, the channel appears to be forty feet wide and the length to date--more drilling should be done--is about 2.0 feet. Chemical assays have been made by the Durango Assaying Company, P.O.Box 1202 Durango, Colorado. The ore encountered is averaging five feet with a width of 12 feet. This channel should be followed for it is the writer's opinion, that higher grade ore exist along the outer borders of the main channel than has been found. No assay was made on the Vanadium content of said ore.

Presence of "Paleo" or "Fossil" Stream-Channels.

At the close of Moenkopi time, channels were formed during a period of erosion. As the Shinarump sands and pebbles were carried in, they filled the channels in the Moenkopi and later blanketed much of the old surface. In areas which were subsequently mineralized, these channels occassionally became solution-traps and many of the deposits in the Shinarump are found at the bottom of the channels. These channels are easily detected because the Shinarump not only thickens at the base but it may also be observed transecting the Moenkopi beds.

In Monument Valley, no ore has been found outside of channels. The H & H Mineral property is of Shinarump formation and all holes, where the channels is partly out-lined shows good mineralization. Carbonaceous material also is abundant in most holes drilled.

Carbonaceous Material

A great amount of vegetable matter was found on the H & H Minerals claims, which was deposited in both the Shinarump and the lower or base of the channel, actually in the Moenkopi beds. Trees, limbs, sticks, roots, leaves, trash piles, and unidentifiable fragments may be found. Where ore-bearing solutions penetrated, they usually sought out such material for deposition of the richest ore. Ore bodies are and were frequently formed, however, in the absence of carbonaceous matter. Terming carbonaceous material as a "guide" is perhaps questionable, as it usually occurs well inside an ore body and is disclosed only during the progress of actual mining.

Some question may be raised to whether all the guides listed under this heading are actually related to the period of ore deposition. It is possible that not all of them were directly related to the same solutions that introduced the ore. The fact that the entire list has been used successfully in one or more localities indicates that they may be related to at least one phase of ore deposition. All of them, however, must be used with discretion, for in a given area several of the guides may apply while others will not. To a geologist directing exploratory drilling for uranium ores, the two groups (Channels and Carbon) may be equally important.

Proximity of Ore

To a geologist seeking favorable places to drill for uranium ore, the presence of ore on the rims of the mesas or tablelands where drilling is contemplated is the only thoroughly reliable guide we now possess. The larger, the richer, and the more closely spaced the ore outcrops, the greater the expectation of successful exploration. Following are four general rules. (a) If ore is seen on opposite rims of a mesa, drilling between the ore exposures may be recommended with considerable assurance of success. (b) If ore exposures are infrequent, drilling should be recommended only in a strip bounded by the limits of the ore exposures on the rims. (c) If ore is exposed on only one rim, drilling should start behind those exposures and proceed toward the interior of the mesa until reaching an area where no additional ore can be found. (d) If no mineralization is visible on the rims of a mesa and if no favorable fracture pattern is apparent on the interior of the mesa, drilling should not be done. All the conditions exist on the H & H Minerals property--as well as ore being found.

Proximity to Major Tectonic Structures

Two types of geologic structures occur on the Plateau, with quite different modes of ore occurrence.

The first type consists of mountain masses with exposed cores of crystalline igneous rock intruded during Tertiary time. Ore deposits form halos around the mountain groups at distances, proportional to the mass of the mountains.

The second type of geologic structure includes large anticlines and domes on which igneous rocks are not exposed except for a few dikes and volcanic plugs in widely separated localities. The ores on these structures do not form halos but occur as isolated bodies at irregular intervals from the crest of the structures outward to the base of their flanks. This second type is true regarding the H & H Minerals claims.

Fracture Control of Uranium Deposits

It was formerly believed that faults and joints exerted no influence on the deposition of uranium deposits in the Colorado Plateau. Recent discoveries of large uranium deposits, in which structural features are prominent, has led to investigations by both government and industry of the relation of structure to uranium deposition. This study has barely begun and definite conclusions are not possible at this time. The following observations indicate the present trend of thought among a group of geologists on the Plateau:

I. Types of fractures which appear to have controlled ore deposition: Both faults and joints appear to have exerted an important control in the deposition of Plateau uranium deposits. Numerous large faults, removed from the igneous mountain masses and anticlinal structures, do not have uranium ore deposits in the various favorable ore horizons. On the other hand, major faults that approach within a few miles of one of the igneous mountain groups or a large anticline should be considered as probable conduits for rising uranium-bearing solutions, and the favorable stratigraphic horizons near the faults should be considered as potential areas for uranium deposits. Uranium deposits that appear to confirm this theory are: Charles Steen's Mi Vida Mine near the Lisbon Valley fault and about six miles south of the La Sal Mountains; and the Thornburg Brothers' Seven Mile Canyon mine adjacent to the Moab fault and approximately twelve miles northwest of the La Sal Mountains. Both of these deposits are at the base of the Chinle. The Shinarump normally under the Chinle is absent.

Joints were also an important factor in the control of uranium deposition. At a number of places, the joints along which ore bodies trend are large and contain openings two or three inches across. Two outstanding areas where joints appear to have controlled the uranium deposition are at the Waterfall group of mines in Dry Valley, Utah, and at the Lukachukai mines in the northeastern corner of Arizona.

More frequently the controlling joints are small and obscure. They are often indicated in the ore bodies only as "rolls" or lines along which the ore body cuts at an angle across the bedding planes of the strata. This last, but by far not the least, is such on the H & H Minerals channel. For in the exploration period, two large joints were encountered. As the drill lost circulation, it was impossible to recover any "cuttings" nor was it feasible to probe the hole as it was caved from above.

Few infallible geologic guides have been established in the search for uranium in the Colorado Plateau, and the foregoing observations and suggestions should be used with caution. The subject has been treated in generalities; all geologic guides may not apply to one particular deposit, but some of the guides will apply to all deposits.

No estimation will be given as to the amount of known ore in the H & H Minerals group as it is not of commercial quality, but is merely an indication that there is a possibility of far better ore to exist in the group of claims.

GEOLOGY

No attempt will be made to cover the general area of the Monument Valley in general, as concern is for only the H & H Minerals property. This property consists of a slow-dipping escarpment, with the strike being in a Northeasterly direction and the dip being approximately 8 degrees to east. Most of the formation is Shinarump with very little exposed as the entire area is covered with Kayenta sand that orginated from what is locally called Comb Ridge. This is a mass of large cliffs consisting of the Kayenta formation. The main valley runs North and South with a width of three to four miles. In several places the Chinle is exposed as well as the Shinarump.

PRODUCTION

The Monument Valley mining district has five producing mines now shipping uranium. The most well-known is the Vanadium Corporation of America mine known as Monumont Number 2. Ore is being hauled from this property at present.

The Beschochi Mine borders VCA property, and it too, now is active.

The Sterling Mine borders the Beschochi and too is producing ore.

The Mex-Air Uranium Co. and the Kato-Sells mines are on the same ore trend as the above properties, and both these are now producing.

The H & H Minerals group is in the trend of all the well-exposed Shinarump formation and the characteristics of all the above properties are very similar. The H & H channelling is running true to form in respect to the producing channels in this area.

ROADS

There are two roads to the valley. One from Utah and the other from Shiprock, New Mexico. The Shiprock road would be the main haulage road--all mines producing now haul on this road. It is a distance of 87 miles over very poor hauling roads to the main mill at Shiprock, New Mexico. This is a Kerr-Mcgee mill for uranium.

CLIMATE

The Monument Valley climate is mild the year-round and it would be possible to continue operation throughout the year from a mining standpoint. The roads are open all year round from the Valley to Shiprock, New Mexico.

ORES

All ore that is being produced in the Monument Valley area is consisting of typical Shinarump material--consolidated masses of rock and sand with the main mineralization being Carnotite with a good percentage of Vanadium. All ore is confined, at present, to the channels.

Favorable Features

The H & H Minerals claims are favorable for the production of ore for the following reasons:

1. In a producing district.

2. The general trend of the mineralization favors H & H claims.

3. A channel has been found showing good mineralization.

4. Out-crops are present.

5. Carbon was present in practically all holes drilled.

6. Two known joints are in the channel.

7. Shinarump formation.

8. Iron-stained sandstone present in holes.

9. Assay reports verify mineralization in holes tested.

10. Channel is wide and has many bends and drops--this can be determined after drilling channel out. All indications are favorable for a higher grade of ore occurring in channel.

11. Drilling has determined the trend of the channel.

12. All weather operations.

13. General Characteristics of the H & H channel in regards to those now producing.

14. Shallow drilling-depth on average--45 foot to Red Beds.

ACTING AGENT'S RECOMMENDATIONS

Having had considerable experience in mining and the study of Geology, it is the writer's opinion that further exploration of the H & H Minerals property should be carried out. And I recommend the following:

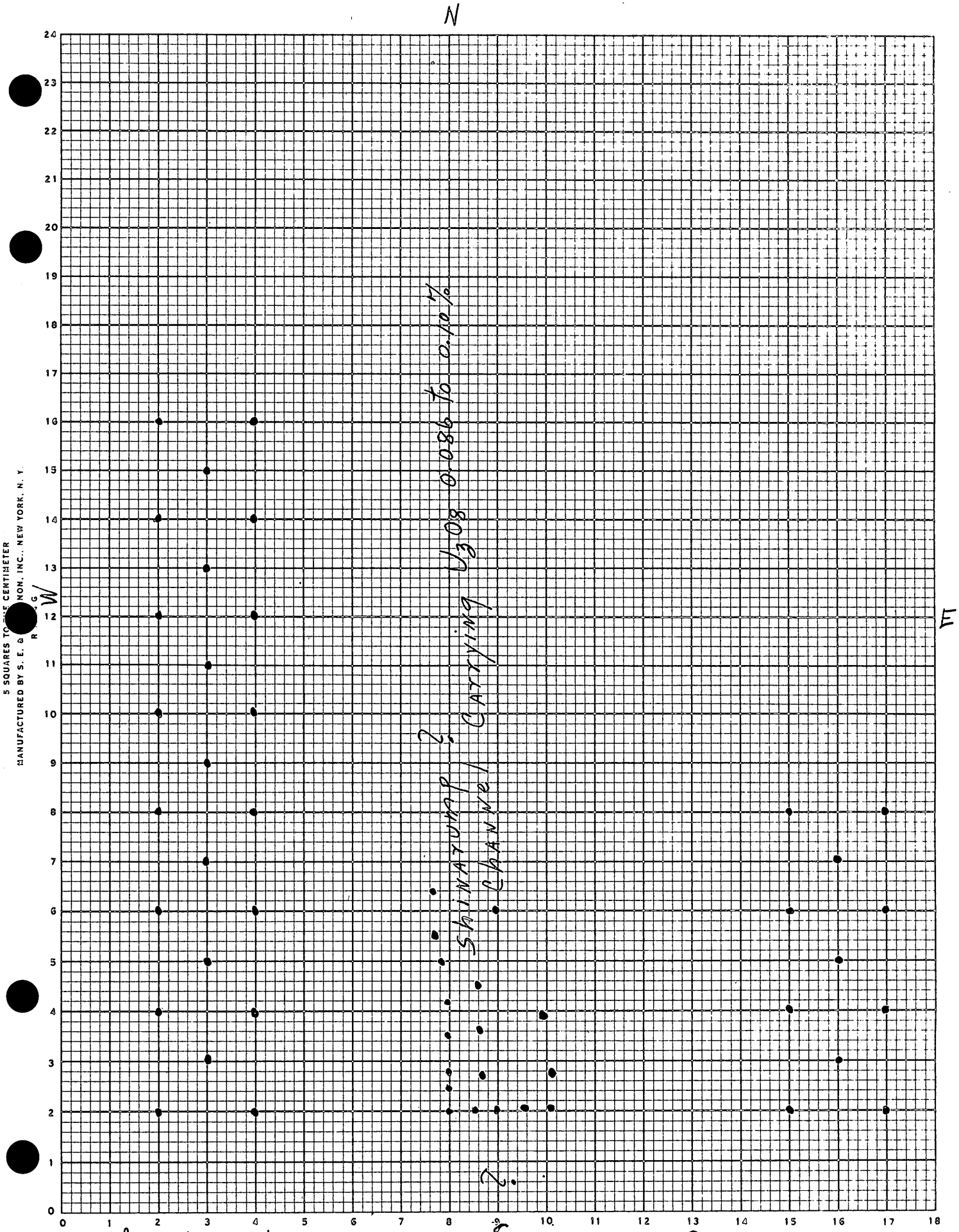
A. Request for a DMEA loan both for drilling and mining of the ore now blocked out. (This ore will be of value if higher grade ore is found and mixed with it.)

B. Use of a small wagon drill in place of the Mayhew rig--this will cut cost and will drill more holes. The results will be just as well for information will be obtained and be far cheaper.

C. Employ only one extra man at present--until actual mining of the low-grade ore is attempted. (This only if higher grade ore is discovered.)
D. Request a mining permit from the Indian Tribal Council but only on 80 acres. (The main trend will be on this ground.)
E. Have all necessary equipment to carry on exploration with the exceptions of one 38 lbs jack-hammer with necessary hose for air.
F. All equipment is now at the main camp headquarters.
G. Complete exploration of the channel found.

Respectfully yours,

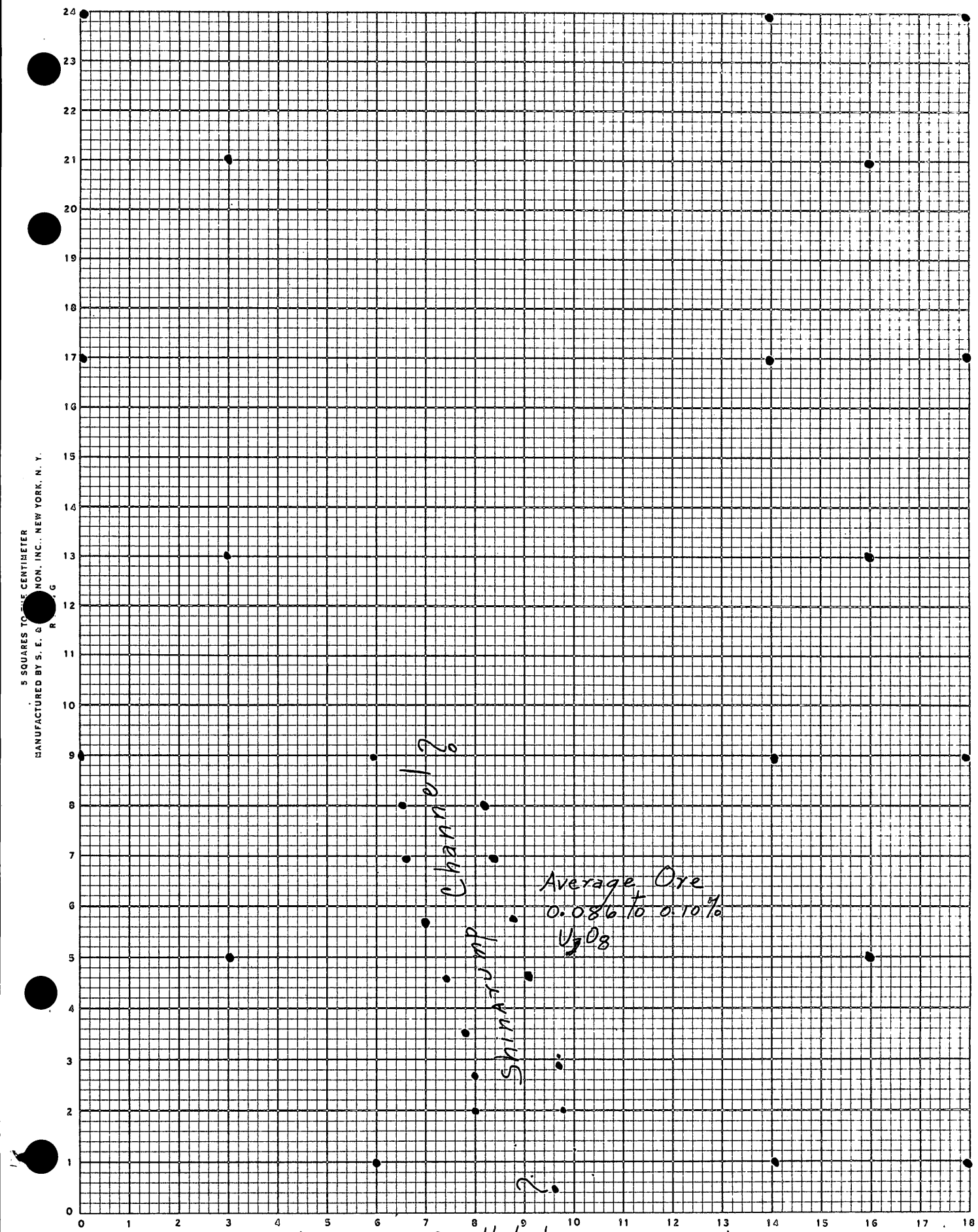
Ralph Schevone



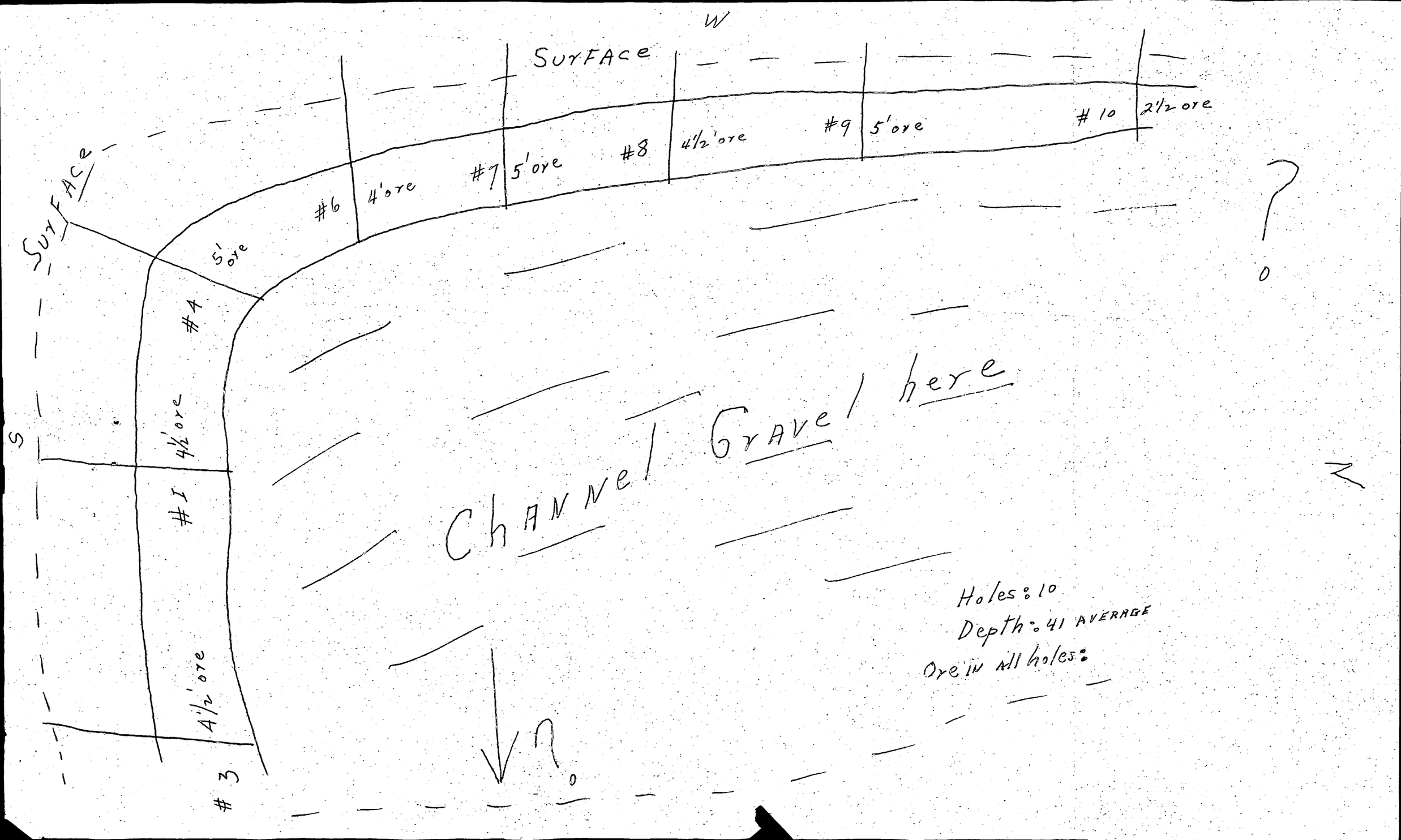
H & H Minerals
Monument Valley Group

Large Squares = 100' Ft.

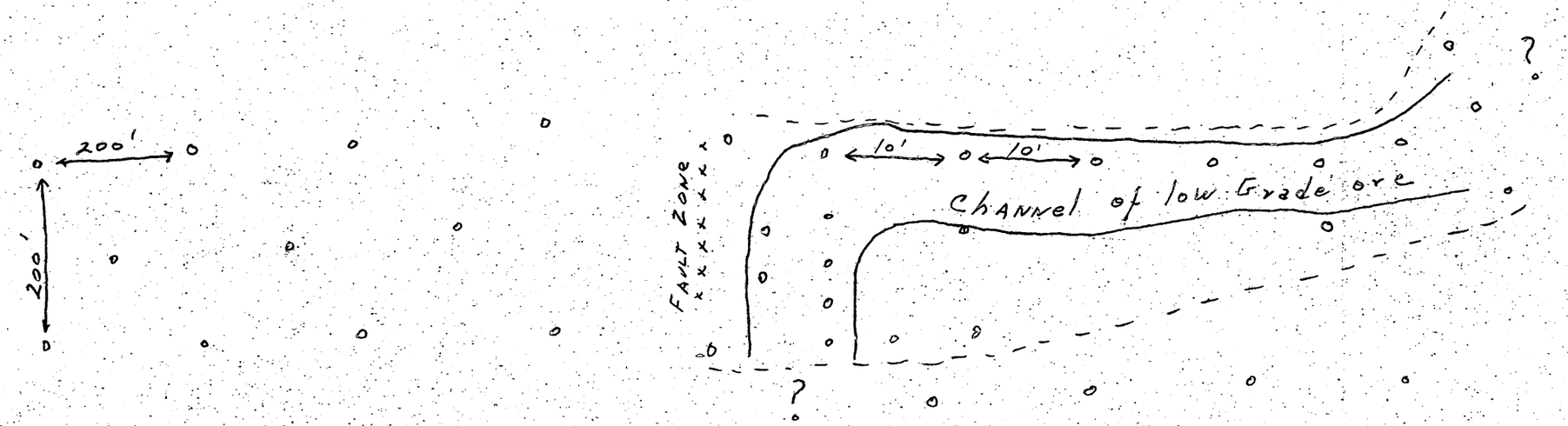
N ↑



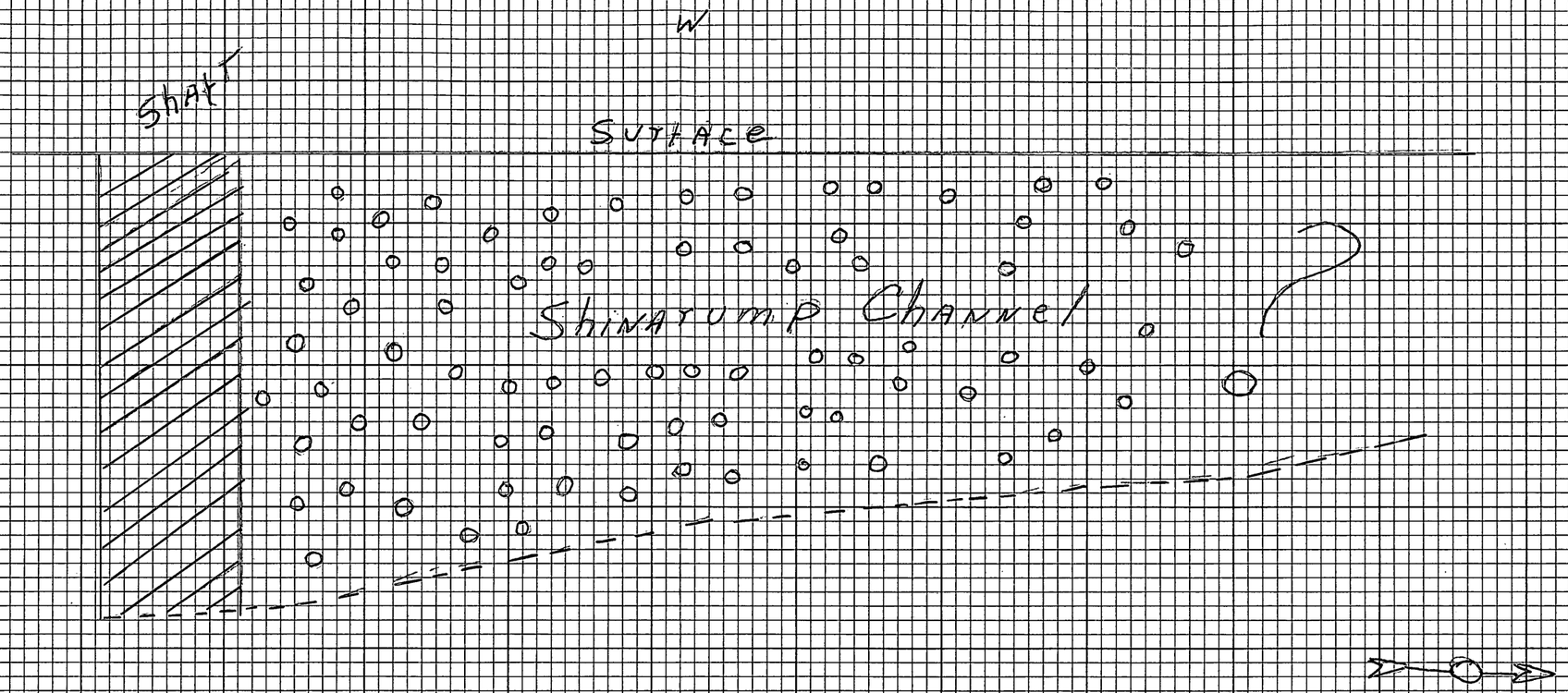
H & H Minerals • Drill holes Large Square = 25'


W
SURFACE
SURFACE
S
N
#1
4½' ore
#3
4½' ore
#4
5' ore
#6
4' ore
#7
5' ore
#8
4½' ore
#9
5' ore
#10
2½ ore
Channel Gravel here
Holes: 10
Depth: 41 AVERAGE
Ore in all holes:

RECEIVED
NOV 17 1955



H & H Minerals



SCALE NONE

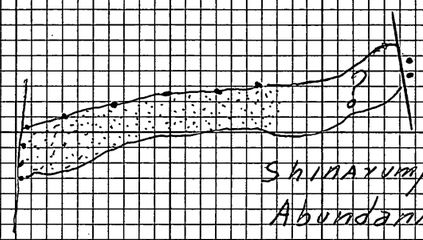
OUTLINE of proposed
SHAFT-with Proposed drilling to follow channel

o CHANNEL
MATERIAL

K+E 10 X 10 TO THE INCH KEUFFEL & ESSER CO. 358-5L MADE IN U.S.A.

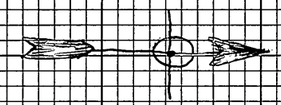
W

I .086 U_3O_8
II .076 U_3O_8
III .081 U_3O_8
.010 U_3O_8



Shinarump Channel
Abundant Limonite
Staining Along
Shearing

S



0 10 20 30 40 50 60
Feet

• Drill holes

Note: evident control of
Uranium mineralization by
Fractures

UTANIUM MINERALIZATION
—— FRACTURES

H & H Group
Monument Valley

SAMPLE MAP

10 X 10 TO THE INCH
KEUFFEL & ESSER CO.
358-5L
MADE IN U.S.A.

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF

James P. Leese

JAMES P. LEESE
ARIZ. REG. NO. 1849
REG. LAND SURVEYOR
UTAH REG. NO. 1472

DESCRIPTION -

BEGINNING AT A POINT N 19° 22'E, 5400.6' FROM THE SE CORNER OF HARVEY BLACKWATER CLAIM NO. 1, SAID POINT BEING CORNER NO. 1, THENCE S 58°45'E., 5,980', THENCE N 19° 46'E, 3579.5', THENCE N 39°00'W, 5490.2'; THENCE S 34°53'W, 5406.3' TO THE POINT OF BEGINNING.

H & H MINERALS

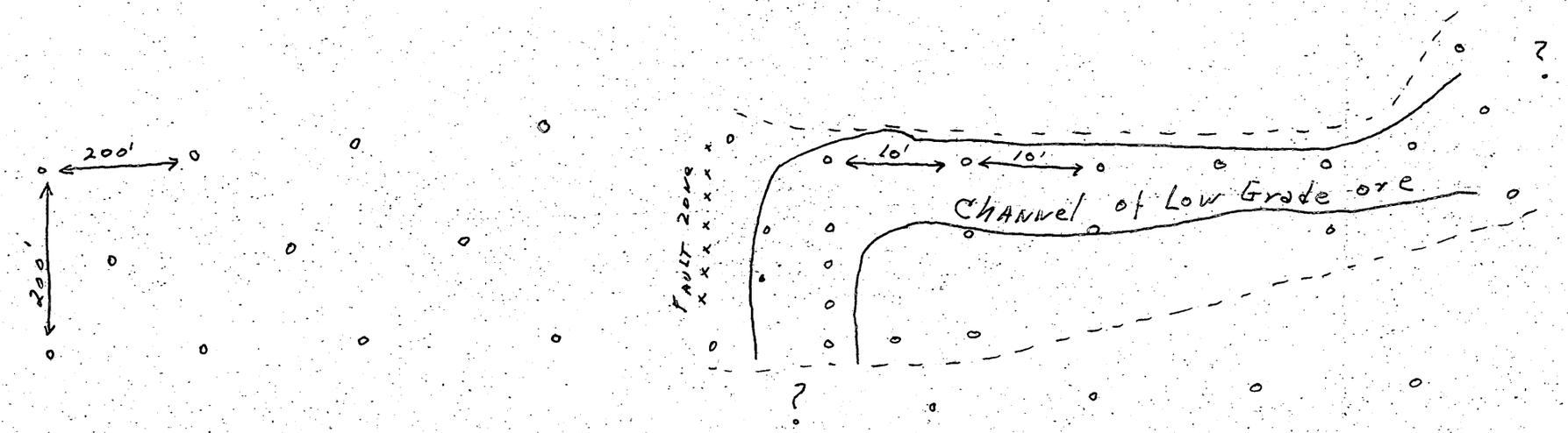
DRILLING AND EXPLORATION PERMIT

NAVAJO INDIAN RESERVATION, APACHE CO., ARIZ.
AND SAN JUAN CO., UTAH

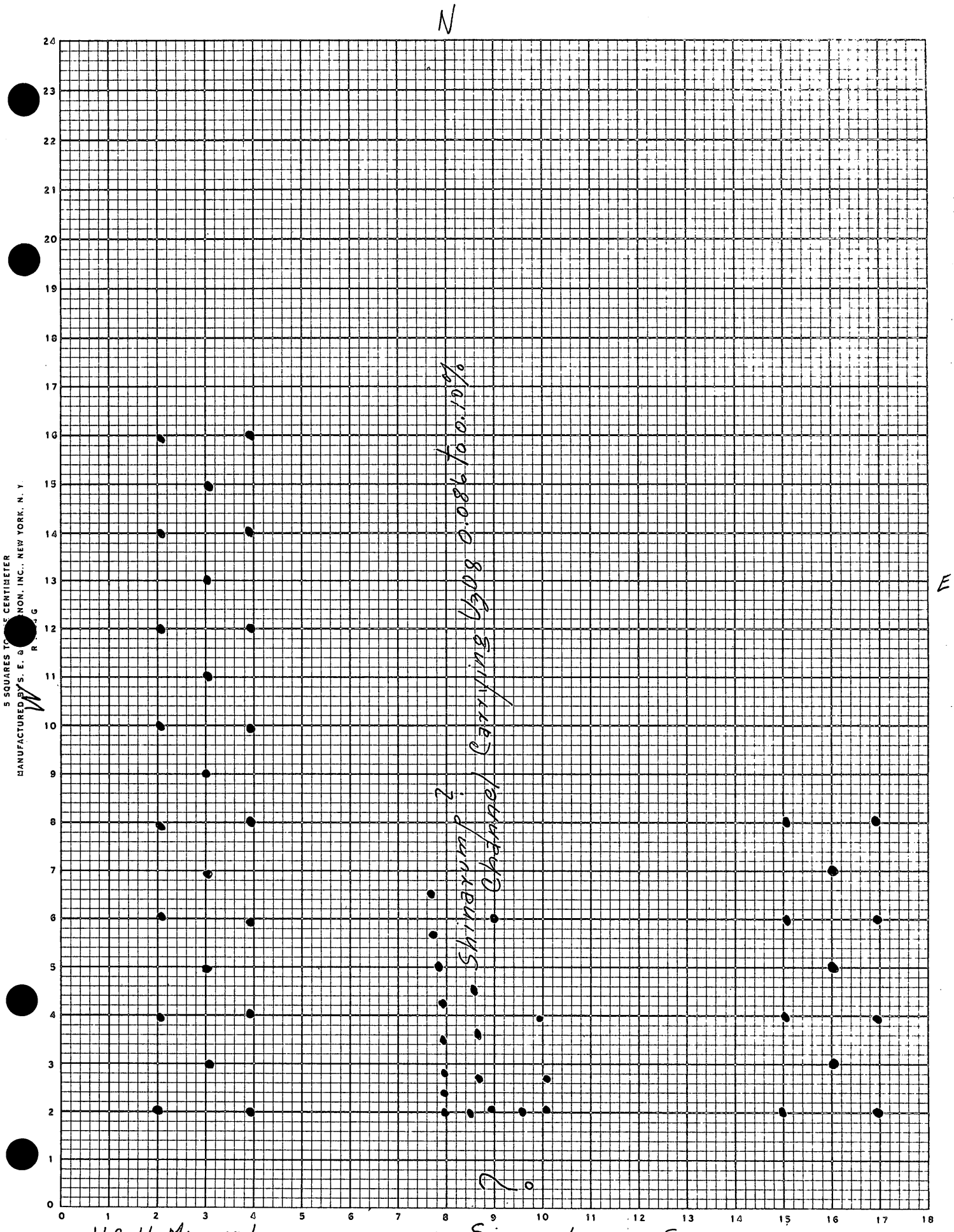
SCALE 1" = 600' JULY 1, 1955

SAN JUAN ENGINEERING CO.

RECEIVED
NOV 17 1955



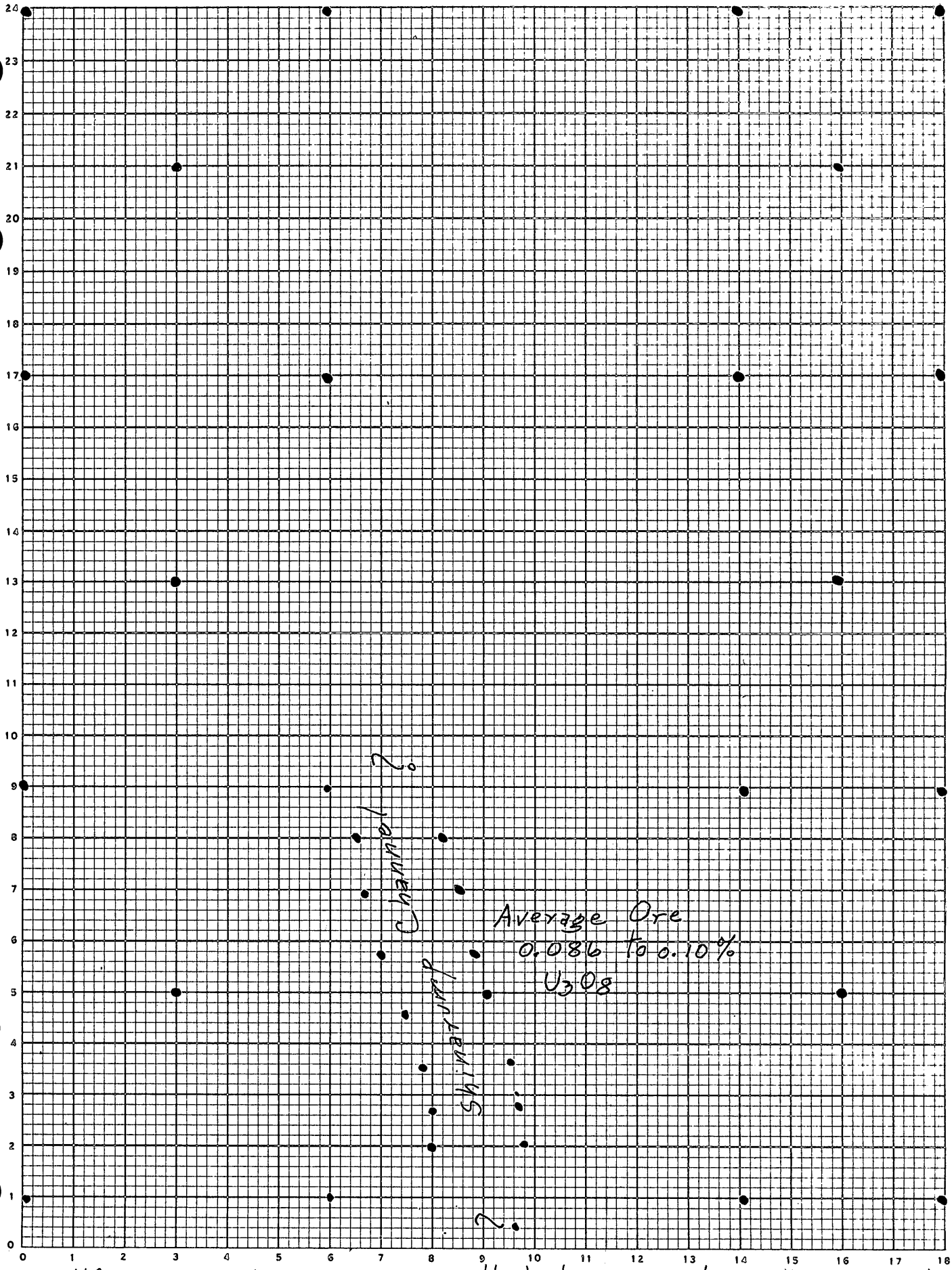
H & H MINERALS



H & H Minerals
Monument Valley Group

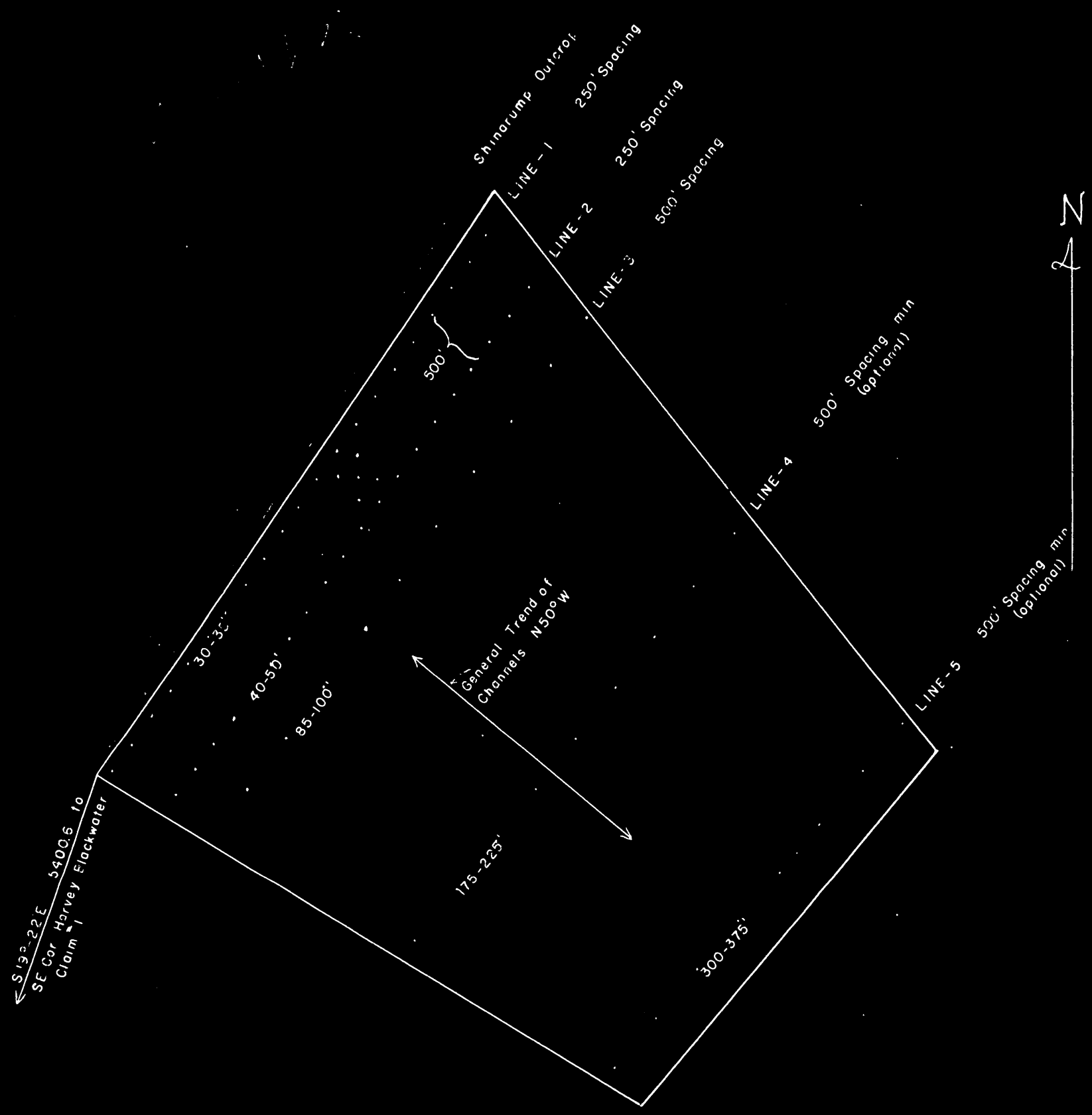
Large Squares
= 100' Ft.

N1



H&H Minerals • Drill holes Large Square = 25'

5 SQUARES TO THE CENTIMETER
MANUFACTURED BY S. E. D. NON, INC., NEW YORK, N. Y.



EXPLANATION

Proposed Core Hole Pattern

Core Hole Pattern to Outline Channels

85-100' Depth to Test Shinarump

H & H MINERALS

BLACKWATER CLAIM

Navajo Reservation

Apache Co., Arizona & San Juan Co., Utah

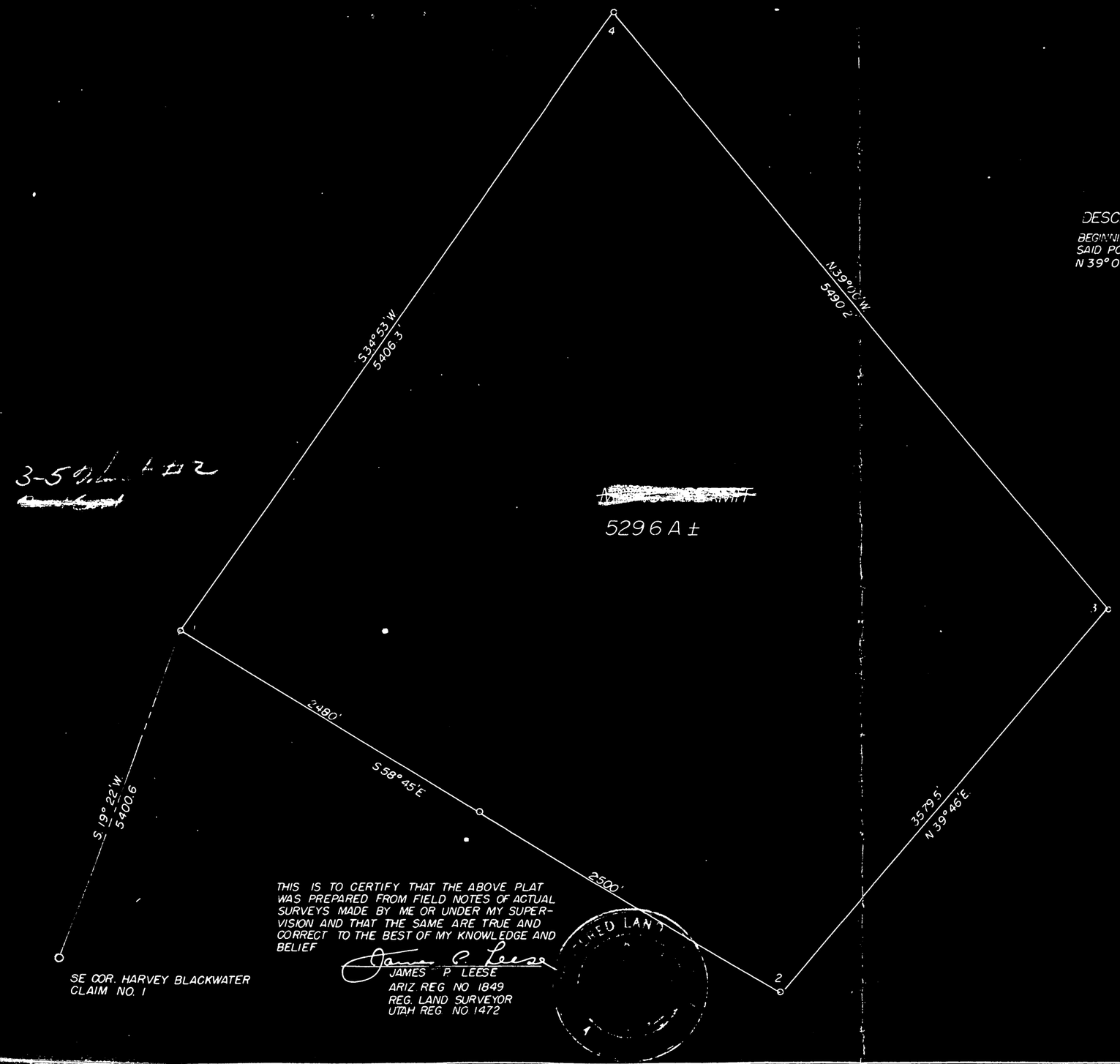
SCALE – 1" = 1000'

Silas C Brown Durango, Colorado

September 1955

DESCRIPTION -

BEGINNING AT A POINT N 19° 22'E, 5400.6' FROM THE SE CORNER OF HARVEY BLACKWATER CLAIM NO. 1, SAID POINT BEING CORNER NO. 1, THENCE S 58° 45'E., 5,980', THENCE N 39° 46'E, 3579.5'; THENCE N 39° 00'W., 5490.2'; THENCE S 34° 53'W, 5406.3' TO THE POINT OF BEGINNING.



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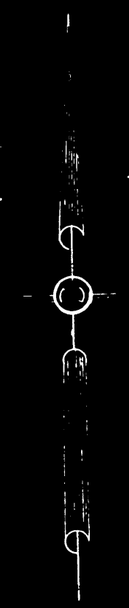


H & H MINERALS

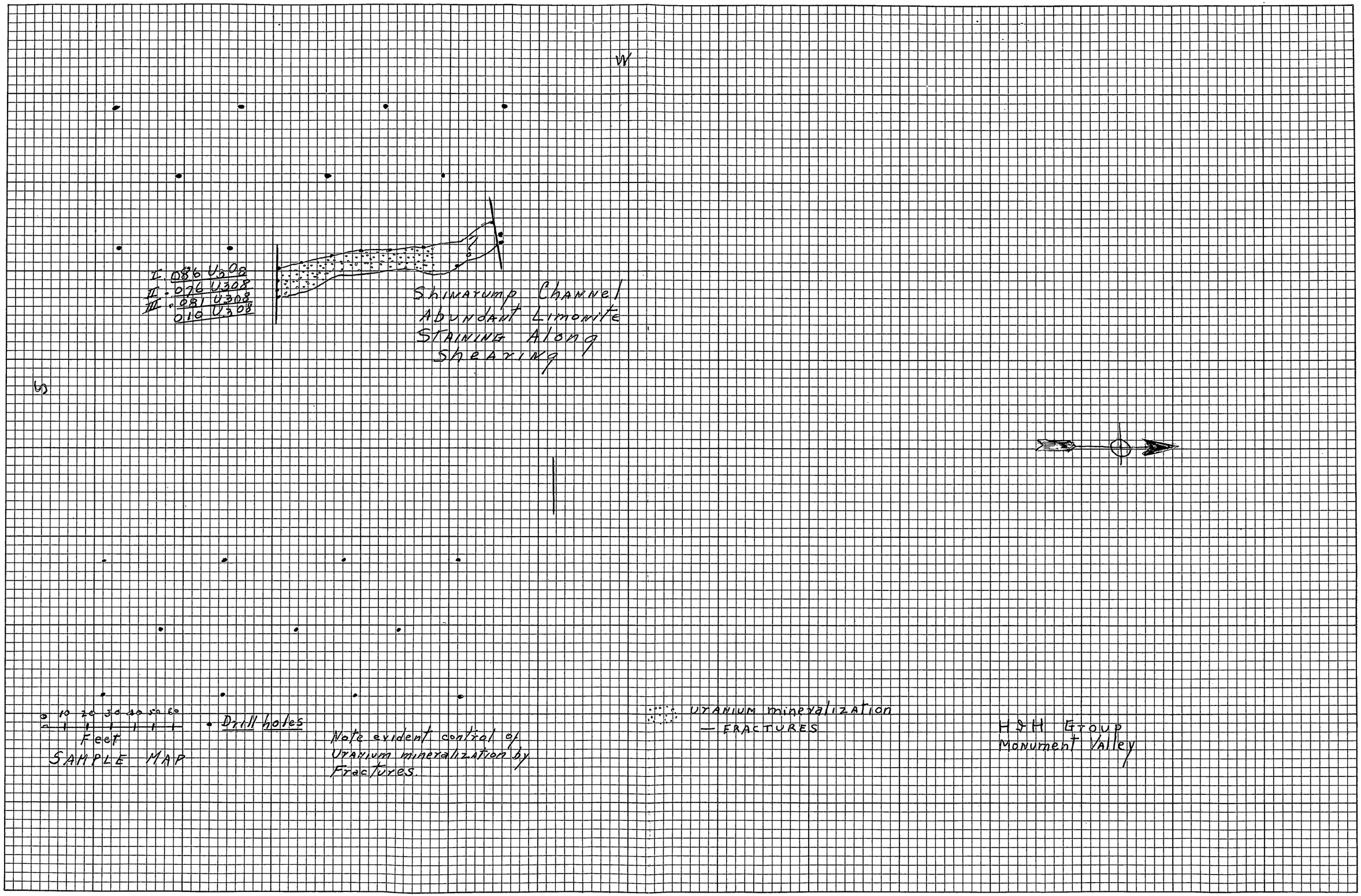
DRILLING AND EXPLORATION PERMIT

NAVAJO INDIAN RESERVATION, APACHE CO, ARIZ

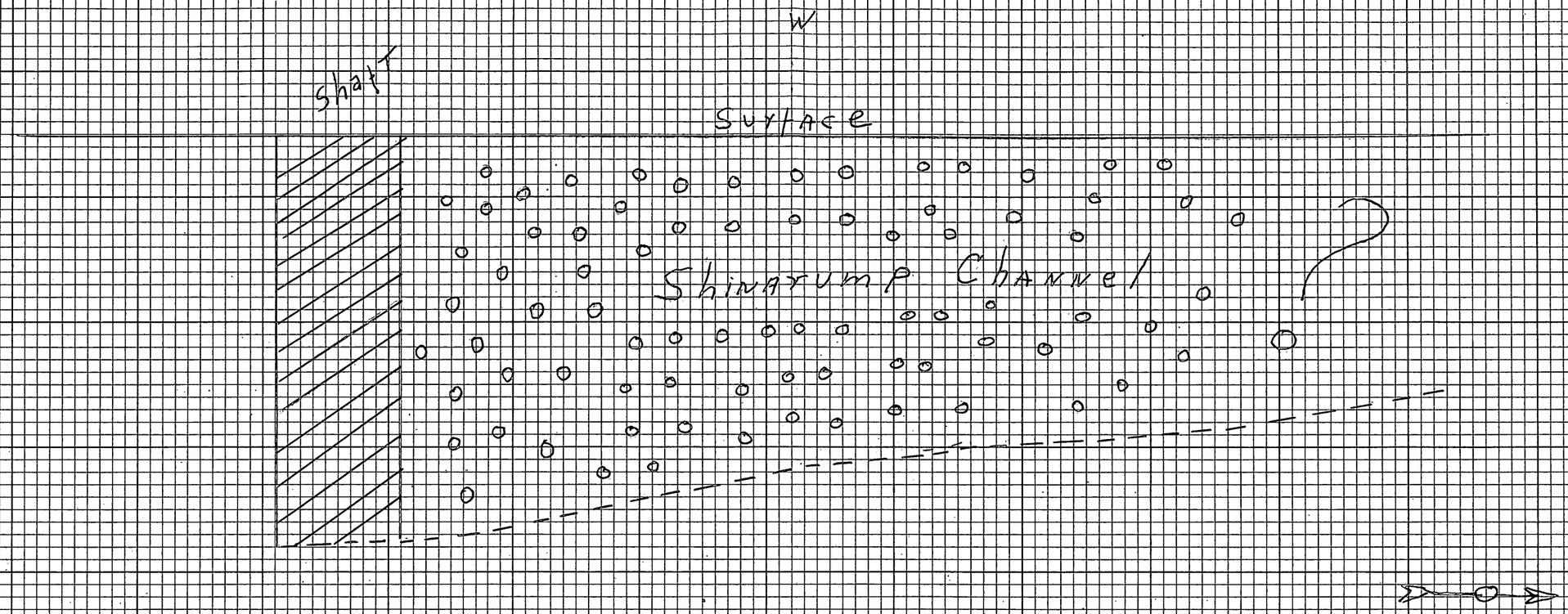
AND SAN JUAN CO, UTAH

SCALE 1" = 600' JULY 1, 1955

SAN JUAN ENGINEERING CO



K+E 10 X 10 TO THE INCH KEUFFEL & ESSER CO. 358-5L MADE IN U.S.A.

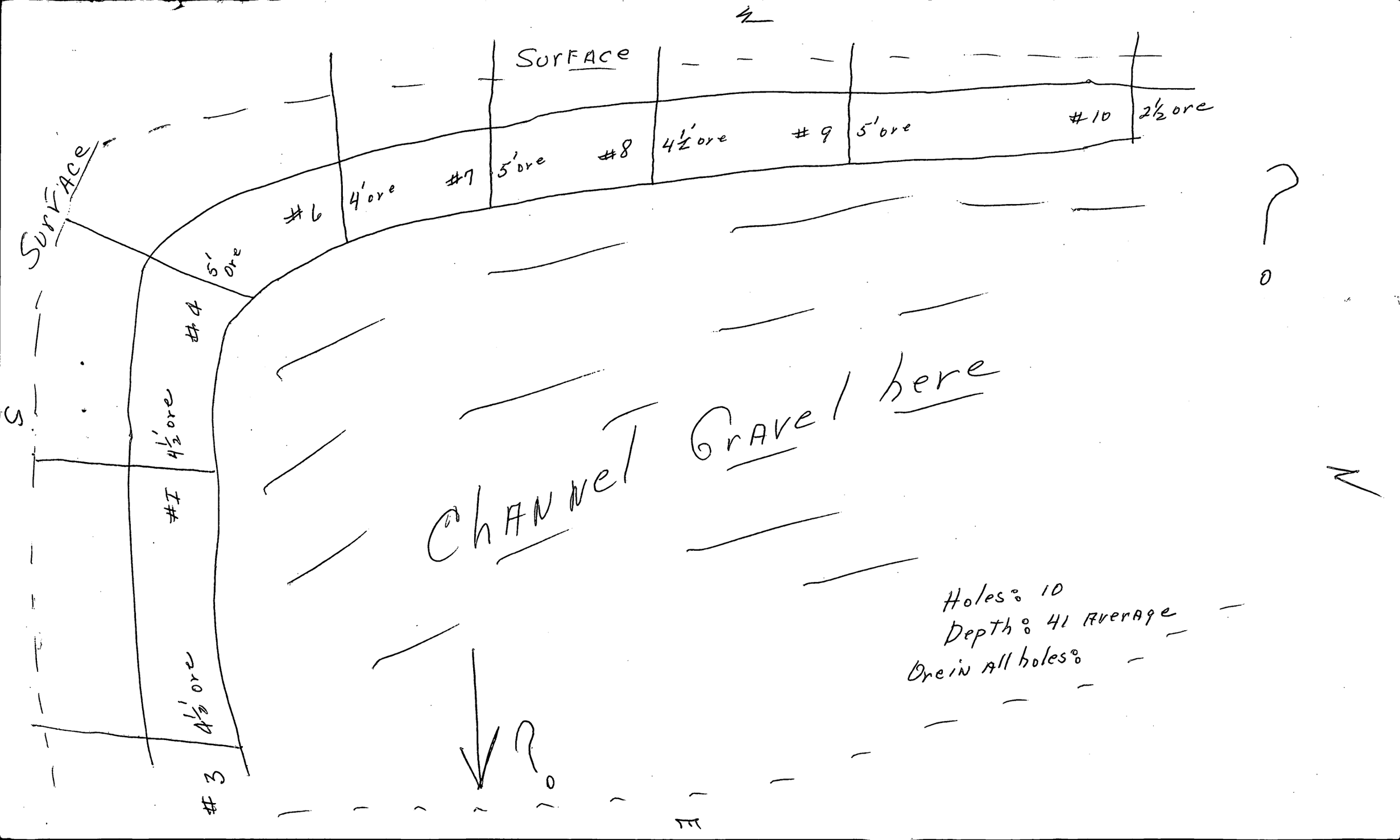


Scale None

Outline of proposed
Shaft-with Proposed drilling to follow channel

o channel
material

K&E 10 X 10 TO THE INCH
KEUFFEL & ESSER CO.
358-5L
MADE IN U.S.A.


Surface
Surface
#6
4' ore
#7
5' ore
#8
4½' ore
#9
5' ore
#10
2½ ore
5' ore
#4
4½' ore
#1
4½' ore
#3
Channel Gravel here
Holes: 10
Depth: 41 Average
Ore in All holes:

Administrator,
Defense Minerals Exploration Administration
Department of The Interior
Washington, D.C.

REGISTERED
NO. 48

RETURN RECEIPT REQUESTED.

WASHINGTON, D.C.
NOV
8
1955
REC. DIV.

PAROWAN
NOV
5
1955
UTAH

PAROWAN
NOV
5
1955
UTAH

PAROWAN
NOV
5
1955
UTAH