DMA Form 1

DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. 4123

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Cys. BM, GS, Region III

Routing Slip

To:	700	Date	1/12/56
To:	Operating Com.	Date	1/24/56
To:	F. E. Johnson	Date	1-25-56
To:	COM	Date	1-25-56
To:	Mr. Mittendorf	Date	2-28-56
To:	Mr. Mittendorf	Date	5-1-56
To:	Gen. Com	Date	6/4/56
To:	F. E. Johnson	Date	6-6-56
To:		Date	
To:		Date	
To:		Date	
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To:		Date	
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CONTROLLED DOCUMENT

Sunshine Copy

Murphy
Ellis

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

JUN 22 1956

Hon. Carl Hayden
United States Senate
Senate Office Building
Washington 25, D. C.

Re: Docket No. DMEA-4123 (Uranium)
Arizona and Shine Claims
Mohave County, Arizona and
Washington County, Utah

My dear Senator Hayden:

In response to your letter of June 20, 1956, I am enclosing two copies of my letter, dated June 21, to Mr. Hamblen in answer to his request that reconsideration be given the above-referenced application for Government aid in an exploration project.

I am sorry a copy of my letter was not forwarded to your office, as I know you have been interested in the processing of the subject application.

Your copy of my letter, dated June 7, 1956, to Mr. Lemay, and Mr. Hamblen's letter are herewith returned.

Sincerely yours,

G. O. Mittendorf

Administrator

FMMurphy:mm
6/21/56
cc to: Docket
Admr. Reading File
Operating Comm.
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)
Messrs. JECrawford, Rm. 3643
THKillsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

CARL HAYDEN, ARIZ., CHAIRMAN
RICHARD B. RUSSELL, GA.
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CHARLES E. POTTER, MICH.

EVERARD H. SMITH, CLERK
THOMAS J. SCOTT, ASST. CLERK

700

United States Senate

COMMITTEE ON APPROPRIATIONS

RECEIVED
JUN 21 1956

6/21/56
G. S.

June 20, 1956

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration
Administration
Department of the Interior
Washington 25, D. C.

Dear Mr. Mittendorf:

I enclose a copy of a letter addressed to you by the Arizona Uranium Exploration Corporation requesting your Administration to reconsider its denial of the Company's application.

I shall be pleased to have your advice as to the consideration given this request.

Yours very sincerely,

Carl Hayden
U. S. S.

P. S. Please address reply to me; sending me original and one copy. Kindly return enclosures.

Docket
Surname copy

Murphy
Ellis
Fitzsimmons

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

JUN 21 1956

Mr. James E. Hamblen, President
Arizona Uranium Exploration Corporation
5808 South Central Avenue
P. O. Box 1823
Phoenix, Arizona

Re: Docket No. DMEA-4123 (Uranium)
Arizona and Shims Claims
Mohave County, Arizona and
Washington County, Utah

Dear Mr. Hamblen:

Reference is made to your undated letter, received June 18, 1956, requesting reconsideration of the application of Arizona Uranium Exploration Corporation for aid in an exploration project.

I note that you feel that our Field Team representatives did not do justice to your property in their examination and that all of the facts may not have been considered in arriving at our decision. Please be assured that careful consideration was given to all the information submitted with your application, as well as the data obtained during the field examination. In this respect I might say that our field personnel, as well as the Washington staff members who passed on the application and related data concerning your property, are capable and conscientious engineers and geologists with many years experience in their fields.

In considering and passing upon applications, one of the principle criteria is the geological probability of making a significant discovery. Our study of your application and other available data indicated that the possibility of ore occurences on your property is geologically unfavorable. The apparent absence of possible channels, lack of other favorable features associated with uranium ore deposits, and the weak mineralization on your property and the surrounding area lead us to this conclusion.

Unless additional information can be submitted to indicate favorable geological environment for ore deposition we would not be in a position to change our decision. In denying the subject application we do not mean to imply that your property has no possibilities;

R.C.L.

but that no specific geologic target is indicated for exploration, without which the proposed program would be primarily of a prospecting nature. Under our regulations exploration funds are not made available for this purpose. If future work on your or adjacent property discloses more favorable geological evidence, which could alter our decision, we will be pleased to consider an application based on such information.

Sincerely yours,

C. O. Mittendorf

Administrator

FMMurphy/FEJohnson/ai
6/20/56
cc to: Docket
Admr. Reading File
Operating Comm.
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

Arizona Uranium Exploration Corp.

5808 South Central Avenue
P. O. BOX 1823
Phoenix, Arizona

JAMES E. HAMBLEN, Pres.
CARL LANEY, Sec. - Treas.

RECEIVED
JUN 18 1956

C.O. Mittendorf
Administrator
U.S. Dept. of Interior
Washington, 25, D.C.

Re: Docket No. DMEA-4123
Arizona & Shins Claims
Mohave County, Arizona
Washington County, Utah

Dear Mr. Mittendorf:

I am in reciept of your letter of June 7, and I might add that I am somewhat displeased with the disposition made by your office on the above named property.

Our own geologist, Dr. Erickson who has been sighted as being one of the outstanding Geo-Chemists in the nation as an authority in the field of Uranium, who personally spent two weeks along with Mr. Laney, the General Manager of our firm, who also has a wide deversified knowlege in the mining field. These men after completing the field surveys on our property, mutually agreed that the probility of an ore reserve is definetly promising, and that a well planned drilling operation useing the sounding method would definitely be feasable. Dr. Erickson after much questioning by myself and the board of directors of this Corporation, readily admitted that it is humanly impossible to definetly determine the ore content by visual inspection.

In view of the above information we feel that your field team did us a great injustice, in as much as their survey was confined to a couple of hours of visual inspection, whereas they can arrive at a definite conclution that the above named property has no promising ore deposits of commercial quantities.

At the time we made application for a EXPLORATION LOAN from the Defence Minerals Exploration Administration, We were under the opinion that such loan was for exploration purposes only, so as after the exploration work was completed we would know wheather there were large quanities of ore present. If we knew this to be true without doing any exploration work we would of certainly never applied for a loan.

Arizona Uranium Exploration Corp.

5808 South Central Avenue
P. O. BOX 1823
Phoenix, Arizona

JAMES E. HAMBLEN, Pres.
CARL LANEY, Sec. - Treas.

After careful study of your letter of June 7 we feel your loan application from this date should read "for exploration of known large deposits of commercial ore" rather than for exploration and drilling purposes to determine the quanity of ore present.

In conclution I feel that some reconsideration in this matter should be forthcomming, as we feel you may not have all the facts concerningthis property. Dr. Ericksons report which you have in your office will bear me out. He says there is no reason other than the time delay that we shouldn't recieve a loan from the DMEA, as he knows what has been loaned on in the past.

Sincerly yours,

James E. Hamblen

c/c Hon Carl Hayden

700

FILE COPY
Surname:

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

Hon. Carl Hayden
United States Senate
Senate Office Building
Washington 25, D. C.

JUN - 8 1956

Re: Docket No. DMEA-4123 (Uranium)
Arizona Uranium Exploration Company
Arizona and Shine Claims
Mohave County, Arizona, and
Washington County, Utah

My dear Senator Hayden:

This is in response to your letter of June 5, 1956, regarding the present status of the above-docketed application.

We regret to advise you that the subject application for exploration aid was denied on June 7, 1956.

Although some minor uranium mineralization was noted by our field men when the property was examined, there was no evidence of channeling in the potential uranium-bearing Shinarump formation which underlies the property in a fairly uniform blanket-like stratum.

Considerable drilling has been done in the "Colorado Plateau Region" by the Atomic Energy Commission, the U. S. Geological Survey, private companies, and one company assisted by this Agency, to explore similar blanket-like Shinarump sedimentary formations. However, in no case has a commercial ore body been found in this type of structure.

The Shinarump conglomerate is one of the principal potential uranium-producing sedimentary rock formations in the "Plateau" region. However, to date, commercially exploitable ore deposits have been found in the Shinarump only where sharp scour channels have been cut into the underlying Moenkopi formation, forming trap structures in which uranium-bearing solutions were concentrated. Such structural conditions do not appear to exist on the subject property. Hence, in our opinion, the work proposed in the application had little or no probability of discovering significant amounts of commercial grade ore.

Your copy of my letter of May 1, is herewith returned.

Sincerely yours,

G. O. Mittendorf

Administrator

Enclosures

FMMurphy/izm 6-6-56
cc to: Docket
Code 700-Mr. Murphy
Admr.'s Reading File
DMEA Field Team, Region III (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
Mr. JOHosted, Rm. 3210, GSA

CARL HAYDEN, ARIZ., CHAIRMAN

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CHARLES E. POTTER, MICH.

EVERARD H. SMITH, CLERK
THOMAS J. SCOTT, ASST. CLERK

700 6-6-56

United States Senate

COMMITTEE ON APPROPRIATIONS

June 5, 1956

RECEIVED
JUN - 6 1956

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration
Administration
Department of the Interior
Washington 25, D. C.

4123

Dear Mr. Mittendorf:

This refers to your courteous letter of May 1, copy attached for identification, concerning the status of the Arizona Uranium Exploration Company claims. I shall appreciate your advice as to the present status of this matter.

Yours very sincerely,

Carl Hayden

U. S. S.

P. S. Please address reply to me sending me original and one copy. Kindly return enclosures.

700

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

JUN - 7 1956

Mr. Carl Laney
Secretary and Treasurer
Arizona Uranium Exploration Company
Post Office Box 1523
Phoenix, Arizona

Re: Docket No. DMEA-4123 (Uranium)
Arizona and Shine Claims
Mohave County, Arizona
Washington County, Utah

Dear Mr. Laney:

Reference is made to your application for Government aid in an exploration project on the above-named property.

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 minor uranium mineralization on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation in an exploration program. 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

FMMurphy/izm 6-4-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
DMEA Field Team, Reg. III (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

RGS.

6-8-56

Arizona Uranium Exploration Corp.

5808 South Central Avenue
P. O. BOX 1823
Phoenix, Arizona

JAMES E. HAMBLEN, Pres.
CARL LANEY, Sec. - Treas.

June 6,1956

RECEIVED
JUN - 8 1956

Mr C.O. Mittendorf
Defense Minerals Exploration
Administration
Washington D.C.

Re: Docket No. DMEA-4123
Uranium
Arizona & Shins Claims

Dear Mr. Mittendorf

In reference to our loan application on the above named docket.

We were advised by the Gelogical Survey Team on the 22nd of March 1956, that in six to eight weeks some disposition would be made.

To date we have never recieved any disposition of any kind and was wondering if there might be an answer forthcomming at this time, or in the near future.

Thank you for your consideration in this matter.

Very truly yours,

Carl Laney Secretary

c:c Hon Carl Hayden
U.S.Senate

Docket Copy

700

SUMMARY OF PROPOSED PROJECT

June 4, 1956

Object: Denial of application for exploration aid.

Docket No.: DMEA-4123

Commodity: Uranium

Applicant: Arizona Uranium Exploration Company
Mr. Carl Laney
Secretary and Treasurer
P. O. Box 1823
Phoenix, Arizona

Property: Shins group - 30 claims situated:
(In Utah) - sec. 35, T. 43 S., R. 11 W., S.L.B.M.
(In Arizona) - secs. 32 and 33, T. 42 N., R. 7 W., and secs. 3 and 4, T. 41 N., R. 7 W., Gila and Salt River B. and M.
Arizona group - 41 claims (all in Arizona) situated in secs. 26, 27, 28, 33, 34, and 35, T. 39 N., R. 6 W.; Gila and Salt River B. & M.

Date of Application: January 9, 1956

Referred to Field Team: January 26, 1956

Field Examination made: March 20 and 21, 1956

Field Team Report received: May 11, 1956

Work Proposed and Costs:

No specific proposals were submitted with regard to location or number of drill holes. The project was estimated on a 12-month completion basis as follows:

	Total - 12 months
Core drilling @ $5/ft., $10,000/mth.	$120,000.00
Labor, Supervision, Consultants, $7,000/mth.	84,000.00
Operating Equipment, $3,202/month.	38,424.00
New Buildings, Improvements, & Installations	14,300.00
Miscellaneous, $1,050/mth.	12,600.00
Contingencies, $2,713.24/mth.	32,558.88

Total Estimated Cost of Project $301,882.88

Excerpts from Field Team Report:

Rocks outcropping in the area of the Applicants' claims consist principally of a flat-lying Triassic Shinarump conglomerate. Uncomformably underlying the Shinarump is the Moenkopi formation.

The Shinarump, which in other areas of the Colorado Plateau is classed as a major producer, ranges from 30 to 70 feet in depth over the subject claims. Major production from the Shinarump has been confined to areas where sharp channels have been eroded into the underlying Moenkopi. The field examiners could find no evidence that this type of channel occurred on or near the subject claim groups. The Moenkopi is exposed to a depth of 100 feet in some areas along the cliff that marks the south and east edges of part of the claim groups.

Radiometric readings indicated weak uranium mineralization near the base of the Shinarump. On the Shins No. 3 claim, a sample taken from one of the above-normal radioactive sandstone areas, assayed 0.01 percent U_3O_8. On the Arizona group, in one of the few areas on these claims where the contract is accessable, slightly above-normal radioactivity was detected in 3 to 4 feet of conglomeratic sandstone lying at the base of the Shinarump.

Based on the Operator's estimate for core drilling, and using an inferred rate of 2,000 feet of drilling per month, the total drilling footage is 24,000 feet, at a cost of approximately $12.58 per foot for holes ranging from 30 to 70 feet in depth.

The field examiners and Field Team recommend the application be denied as they believe that the proposed exploration would not disclose uranium mineralization of more importance than that already exposed; moreover, without inferred or known Shinarump channel trends the proposed work would be prospecting.

Commodity Members' Comments: (excerpts)

USGS, T. H. Kiilsgaard, June 1, 1956:

Mr. Kiilsgaard concurs in the Field Team's recommendation of denial, based on the fact that the Shinarump is a blanket-like deposit in this area; no channels are evident at the base; no commerical deposits have been found in hundreds of miles of exposed Shinarump; and the absence of a target on the Applicant's claims.

USBM, JECrawford, May 17, 1956:

Mr. Crawford reaffirms his recommendation of denial made January 12, 1956.

Rare & Miscellaneous Metals Div., F. M. Murphy, June 4, 1956:

The USGS member of the field examiners states that no known commerical quantities of ore grade uranium rock has been found in the Shinarump outcrops west of the Marble Canyon district. Shinarump filled channels are rare and where they occur they are extremely

shallow features. The Shinarump (on the subject groups) has been deposited as a relatively clean sandstone of uniform thickness. Such blanket deposits with few mudstone splits have been found to be unfavorable for the occurrence of uranium deposits.

This Division agrees with the conclusions of the field examiners in regard to the limited uranium potential of the subject claim groups, and concurs in their and Field Team's recommendation to deny the subject application.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

6-4-56

IN REPLY REFER TO:

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

RECEIVED
JUN - 1 1956

June 1, 1956

Memorandum

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

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

Subject: Review of Field Team report, DMEA 4123, Arizona Uranium Exploration Co., Mohave Co., Arizona, and Washington Co., Utah.

Field examiners recommend denial of the cited application, their reasons being based on:

1. The fact that the ore-bearing horizon, the Shinarump, is a clean, blanket-like sandstone with no channels at the base and but little evidence of uranium mineralization.

2. Although hundreds of miles of Shinarump are known to outcrop in southwestern Utah and northwestern Arizona no deposits of commercial uranium have been found there.

3. The absence of a target on the applicant's claims that justifies exploration.

After carefully reading the report I have concluded that the field examiners' recommendations are valid and I concur with them in recommending denial of the application.

T. H. Kiilsgaard

T. H. Kiilsgaard

IN REPLY REFER TO:

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

RECEIVED
JUN - 1 1956

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THKiilsgaard:iml
G-6/1/56

T. H. Kiilsgaard

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

IN REPLY REFER TO:

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

RECEIVED
JUN - 1 1956

June 1, 1956

Memorandum

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

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

Subject: Review of Field Team report, DMEA 4123, Arizona Uranium Exploration Co., Mohave Co., Arizona, and Washington Co., Utah.

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T. H. Kiilsgaard

THKiilsgaard:iml
G-6/1/56

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
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IN REPLY REFER TO:

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

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JUN - 1 1956

June 1, 1956

Memorandum

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

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

Subject: Review of Field Team report, DMEA 4123, Arizona Uranium Exploration Co., Mohave Co., Arizona, and Washington Co., Utah.

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T. R. Kiilsgaard

TRKiilsgaard:inl
G-6/1/56

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

5/18/56

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

RECEIVED
MAY 18 1956

May 17, 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 4123, Arizona Uranium Exploration Company (Arizona and Shins claims), Mohave County, Arizona and Washington County, Utah

I have reviewed the report of examination, DMEA Docket 4123, Arizona Uranium Exploration Company (Arizona and Shins claims), Mohave County, Arizona and Washington County, Utah, dated May 9, 1956 and received in this office May 15, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The field examiners recommended that the application for exploration assistance be denied because drilling on the subject property would be of a prospecting nature and would not result in the discovery of significant amounts of uranium.

We reaffirm our recommendation made in a January 12, 1956, memorandum that the application be denied.

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

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

RECEIVED
MAY 18 1956

May 17, 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 4123, Arizona Uranium Exploration Company (Arizona and Shins claims), Mohave County, Arizona and Washington County, Utah

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BUREAU OF MINES
WASHINGTON 25, D. C.

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MAY 18 1956

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Uranium Commodity Committee

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

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We reaffirm our recommendation made in a January 12, 1956, memorandum that the application be denied.

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

John E. Crawford

5/23/56

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
MAY 21 1956

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

May 18, 1956

Memorandum

To: Secretary of the Operating Committee, DMEA

From: Field Team, Region III

Subject: Correction to report of examination, DMEA Docket ~~4213~~ 4123 (Uranium), Arizona Uranium Exploration Company (Arizona and Shins claims), Mohave County, Arizona and Washington County, Utah

As noted in the accompanying memorandum, the information contained in the enclosed pages 4 and 4A were omitted from the subject report of examination during the process of typing at Grand Junction.

Please remove page 4 from all copies of the report which was forwarded by the Executive Officer on May 9, 1956, and substitute therefor the enclosed pages 4 and 4A.

DMEA Field Team, Region III

E. N. Harshman

By E. N. Harshman
Member

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 360
Grand Junction, Colorado

MINERAL DEPOSITS
IN REPLY REFER TO:
DMEA
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MAY 18 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

May 17, 1956

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MAY 21 1956

Memorandum

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

Through: J. William Hasler JWH

From: Howard F. Albee

Subject: Missing material in report of examination, DMEA docket 4123 (Uranium), Arizona Uranium Exploration Company (Arizona and Shins groups of claims,) Mohave County, Arizona, and Washington County, Utah.

The examination report was transmitted to Denver during my absence, but with my knowledge of the transmittal. For some reason, between the rough draft and the final draft, much information was left out. About three and one-half pages of handwritten material are missing from page 4, following the first sentence in the second paragraph. The missing part comprises the entire descriptive material concerning the Shins group of claims, and introductory material concerning the Arizona group of claims, which to me leaves the transmitted report quite incoherent, and the missing material should be included and sent to the Operating Committee before they review it there.

Enclosed is the material that was left out of the report.

Howard F. Albee
Howard F. Albee
Geologist

HFA/mlr

Enclosure

The conglomerate grades upward into coarse-grained, cross-bedded, arkosic sandstone that contains a few strings of pebbles. The bedding is every where lenticular. The Shinarump member ranges from an erosional wedge-edge up to about 150 feet thick, but in the vicinity of the claims it averages about 70 feet thick, the upper part having been removed by erosion.

The Shins group (fig. 2) comprises 30 claims that are staked on exposed Shinarump on the northeast side of Short Creek wash. The rocks strike about N. 65° W. and dip 2° - 3° northeasterly. Vertical joints are prominent and strike approximately parallel to the strike of the strata. A nearly vertical fault trends about N. 20° W. across the northern part of the claims. The northwest side of the fault is downthrown and the strata have been displaced vertically about 30 to 40 feet.

Lenses of conglomerate and conglomeratic sandstone are abundant near and at the base of the Shinarump. Locally the basal 3 feet are stained a deep reddish brown by concentrations of iron. Carbonized and silicified wood is abundant in this basal 3 feet and silicified wood is common elsewhere. No anomalous radioactivity was found in the fossil wood.

A sample was cut a short distance west of the fault from a place of anomalous radioactivity shown to the examiners by the applicant. A few feet above the base of the Shinarump and immediately below a conglomeratic sandstone lens was some streaks and patches of black, mineralized appearing material. The rock in place counted several times above background. A channel sample taken from across the material and removed from the cliff face showed no count. When assayed, the material ran 0.01 per cent U_3O_8.

The Arizona group comprises 41 claims that lie some 20 miles airline southeasterly from the Shins group. The claims are staked on a blowsand and Shinarump surface that dips gently northerly. The claims are a short distance north of a prominent part of the Shinarump cliffs known locally as the Yellowstone rim.

The rocks strike about N. 70° W., and dip from 4° northerly near the Yellowstone rim to about 2° northerly near the northern edge of the group of claims. A normal fault about 1,500 feet southwest of the claims (fig. 3) trends about N. 60° W. and has dropped the rocks on the southwest block about 150 feet.

The characteristics of the Shinarump are similar to those seen on the Shins group. Conglomeratic sandstone lenses are common near and at the base of the unit. An iron-rich zone about 3 feet thick lies at the base and here it shows an abnormal radioactivity count of from 2 to 3 times above background. However, when selected rocks were taken away from the face no count was detected.

ORE DEPOSITS

Relatively few uranium ore deposits are known in the southwestern part of the Colorado Plateau and in the adjacent part of the Basin and Range province (See Finch, 1955, map MF 16). About 15 miles southeast of the Yellowstone rim, in Hacks Canyon, uranium ore has been mined in small tonnages from the Hermit shale of Pennsylvanian age. Northeast of the

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Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

May 18, 1956

Memorandum

To: Secretary of the Operating Committee, DMEA

From: Field Team, Region III

Subject: Correction to report of examination, DMEA Docket ~~4215~~ 4123 (Uranium), Arizona Uranium Exploration Company (Arizona and Shine claims), Mohave County, Arizona and Washington County, Utah

As noted in the accompanying memorandum, the information contained in the enclosed pages 4 and 4A were omitted from the subject report of examination during the process of typing at Grand Junction.

Please remove page 4 from all copies of the report which was forwarded by the Executive Officer on May 9, 1956, and substitute therefor the enclosed pages 4 and 4A.

DMEA Field Team, Region III

E. N. Harshman

By E. N. Harshman
Member

Enclosures

ENHarshman:mp

cc: Sec. Op. Comm. (4)
Docket 4123
Harshman
Mining Div.
Wilson
Hasler
Gordon
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 360
Grand Junction, Colorado

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U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

May 17, 1956

Memorandum

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

Through: J. William Hasler JWH

From: Howard F. Albee

Subject: Missing material in report of examination, DMEA docket 4123 (Uranium), Arizona Uranium Exploration Company (Arizona and Shins groups of claims,) Mohave County, Arizona, and Washington County, Utah.

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Howard F. Albee
Howard F. Albee
Geologist

HFA/mlr

Enclosure

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

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MAY 11 1956

May 9, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Report of Examination, DMEA Docket 4123 (Uranium), Arizona Uranium Exploration Company (Arizona and Shins claims), Mohave County, Arizona and Washington County, Utah.

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

The field examiners conclude that drilling on this property would be of a prospecting nature and could follow no known geologic concepts of favorable criteria. They believe the proposed exploration would not uncover significant amounts of uranium ore. 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
5-16-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
Date Rec'd.
APR 27 1956
BUREAU OF MINES
Denver, Colorado

April 25, 1956

TRANSMITTED
MAY 9 - 1956

Memorandum

To: W. H. Trauer, Executive Officer, DMEA Field Team, Region III

From: Stephen R. Wilson

Subject: Project No. DMEA-4120 (Uranium), Arizona Uranium Exploration Co. (Arizona and Shinn claims), Mohave County, Arizona and Washington County, Utah

Attached are the original and 10 copies of an engineering report pertaining to examination of the property of Arizona Uranium Exploration Co. in Arizona and Utah in the vicinity of Short Creek, Arizona. The property was examined by H. F. Albee of the Survey and R. M. Gilboy, Bureau of Mines. The examination was made during March 1956.

The applicant has requested a loan of $[illegible] to conduct an exploratory project consisting principally of diamond drilling. A total of 71 mining claims in two groups is included in the proposed project area.

Rocks outcropping in the area of the applicant's claims consist principally of the flat-lying Triassic Shinarump conglomerate. Unconformably underlying the Shinarump is the Moenkopi formation. This formation is exposed to a depth of 100 feet in some areas along the cliff that marks the north and east edges of part of the claim groups. Weak uranium mineralization occurs near the base of the Shinarump conglomerate. One sample taken from an area showing a radiometric reading greater than background assayed 0.01 percent U_3O_8. There are no ore reserves on the property.

The examining engineer recommends that the applicant's request for DMEA assistance be denied. It is believed that uranium mineralization is far too weak to be of possible commercial significance and that the proposed exploration will not encounter mineralization of more importance. I concur with the recommendation of the examining engineer.

The brochure transmitted to this office has been mailed to J. W. Mahler for his use in preparing the geologic report. He will forward the brochure to your office after it has served his purpose.

Stephen R. Wilson
Stephen R. Wilson

Reviewed by
DMEA OPERATING COMMITTEE
5-16-56
(date)

Enclosure
cc: J. F. Shaw
J. R. Clemmer

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ARIZONA URANIUM EXPLORATION CO.
ARIZONA AND SHINS CLAIMS
MOHAVE COUNTY, ARIZONA, AND WASHINGTON COUNTY, UTAH
DMEA-4123
URANIUM

TRANSMITTED

MAY 9 - 1956

Engineering Report

By M. M. Gilkey
Mining Engineer
Bureau of Mines

April 25, 1956

Reviewed by
DMEA OPERATING COMMITTEE
5-16-56
(date)

ARIZONA URANIUM EXPLORATION CO.
ARIZONA AND SHINS CLAIMS
MOHAVE COUNTY, ARIZONA, AND WASHINGTON COUNTY, UTAH

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Ownership and extent	5
History and production	6
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Ore reserves	7
Proposed exploration and costs	7
Conclusions and recommendations	11

ILLUSTRATIONS

Fig. 1 Location map, Arizona Uranium Exploration Co., Arizona and Shins claims, Mohave County, Arizona, and Washington County, Utah

Fig. 2 Geologic plan, Arizona and Shins claims

SUMMARY

The Arizona Uranium Exploration Co. applied in January 1956 for a DMEA loan on uranium property near the Utah-Arizona line, in the vicinity of Short Creek, Arizona. Estimated cost of the proposed diamond drilling project is $301,882.88, with Government participation at 75 percent, or $226,412.16. Government personnel examined the property in March 1956.

A total of 71 claims in two groups is included in the proposed project area. The property is easily accessible and climate conditions are favorable.

There has been no production from the claims. There are no known existing workings and no known ore reserves.

The claims cover only a small portion of the extensive Little Creek terrace in the southwestern part of the Colorado Plateau. The terrace consists of flat-lying Shinarump formation, a major producer of uranium ores in other areas of the Plateau. Weak uranium mineralization is found in cliff exposures on the applicant's property, near the base of the Shinarump. A sample taken in an area of comparatively high radioactivity assayed only 0.01 percent U_3O_8.

Total estimated drilling footage is 24,000 feet. Average hole depth is 70 feet. The applicant has proposed a program with initial holes located in anomalous areas near rim exposures of Shinarump formation.

Hole locations, generally, would depend on interpretation of geologic and geochemical information from preceding holes. Drilling conditions are considered to be good.

An exceedingly high estimate of the overall cost of the diamond drilling program has been submitted by the applicant. The applicant would be agreeable, however, to downward revision of the cost of the proposed diamond drilling program, or would be willing to further reduce costs by wagon drilling the major portion of the footage.

Because of the lack of geologic evidence of the existence of significant uranium mineralization on the property, it is recommended that the requested loan be denied.

INTRODUCTION

The Arizona Uranium Exploration Co. submitted an application dated January 9, 1956, for Government aid in an exploratory project on uranium property near the Utah-Arizona line, in the vicinity of Short Creek, Arizona.

An examination of the property was made March 20 and 21, 1956, by Howard Albee of the Geological Survey, Grand Junction, Colorado, and M. M. Gilkey of the Bureau of Mines office at Salt Lake City, Utah. The company was represented by J. E. Hamblin, president, W. M. Bachman, vice president, and Carl Laney, secretary and treasurer.

The applicant has proposed a diamond drilling project estimated to cost $301,882.88. Time to complete the work is estimated as 12 months.

LOCATION, TOPOGRAPHY AND CLIMATE

The property consists of two groups of claims, the Shins group in Washington County, Utah, and the Arizona group in Mohave County, Arizona (figs. 1 and 2). The Shins group, comprising 30 claims, lies along the Utah-Arizona line west of the small settlement of Short Creek, Arizona. Utah Highway 59 leading to Short Creek is on company ground at a point 4.5 miles west of the town where it crosses the state line. Approximately 23 miles south and slightly east of Short Creek is the Arizona group of 41 claims. From Short Creek, the Arizona claims are reached by driving 13 miles south on the Arizona continuation of Utah Highway 59, to a point where this road turns east toward Fredonia, Arizona, thence 10 miles south by dirt road to the property. From the turnoff, the distance to Fredonia on U. S. Highway 89 is 25 miles.

Roads in the area are not surfaced, but are fairly good, except during short periods of wet weather. The nearest railroad shipping point is 70 miles north of Short Creek, at Cedar City, Utah.

A legal description of the property, as shown on the applicant's map, is as follows:

Shins group -	
(in Utah)	Sec. 35, T. 43 S., R. 11 W., S.L.B. and M.
(in Arizona)	Secs. 32 and 33, T. 42 N., R. 7 W., and Secs. 3 and 4, T. 41 N., R. 7 W., Gila and Salt River B. and M.
Arizona group -	
(all in Arizona)	Secs. 26, 27, 28, 33, 34 and 35, T. 39 N., R. 6 W., Gila and Salt River B. and M.

Topographic conditions favorable for drilling and road construction prevail in both proposed drilling areas. The essentially flat Little Creek terrace is the dominant topographic feature. In some areas on the Shins claims the terrace is cut by shallow box canyons. Average height of the Shinarump canyon walls is about 70 feet.

The altitude of the drilling areas is approximately 5,000 feet.

Weather conditions are generally favorable for project operation. The winters are mild. Rather high temperatures are common during the long, dry summers.

OWNERSHIP AND EXTENT

The property consists of 71 unpatented lode claims in two groups, the Shins group of 30 claims, and the Arizona group of 41 claims. The president of the applicant company states that all claims are owned by the company--the reference to "School Land" (application form MF-104, item 3(c)) is erroneous.

Nine of the Shins group of claims are located in Utah and are recorded at St. George, Utah. Twenty-one of the Shins group and all of the 41 claims of the Arizona group are in Arizona and are recorded at Kingman, Arizona. Claims Nos. 1 through 41 in the Arizona group are recorded in Book 4R, pages 383 through 423, as listed on a sheet attached to the application. For claims in the Shins group this information is incomplete; Shins claims Nos. 17 through 30 (in Arizona) are

recorded in Book 4M, page 113 through 126, but Shins Nos. 10 through 16 (in Arizona) and 1 through 9 (in Utah) are not listed. It is understood, however, that the proposed project involves all of the 71 claims shown on the applicant's map.

HISTORY AND PRODUCTION

The applicant acquired the claims by location in 1955. Available information indicates that none of the ground had been held by prior location. There has been no production from the claims and there are no existing workings.

GENERAL GEOLOGY

The Shins and Arizona groups of claims are situated on the extensive Little Creek terrace in the southwestern part of the Colorado Plateau. The major portion of the surface in both areas consists of flat-lying Triassic Shinarump formation, one of the principal uranium ore horizons of the Plateau (fig. 2). In the vicinity of the proposed projects, the Shinarump consists of coarse-grained-to-conglomeratic, gray sandstone averaging about 70 feet in thickness. Unconformably underlying the Shinarump is the Moenkopi formation, also of Triassic age. The soft, brown and reddish mudstone and shale of the Moenkopi is exposed to a depth of 100 feet in some areas along the cliff marking the south and east edges of the Arizona group. In the young canyons of the Shins area, erosion has not penetrated the Moenkopi so deeply.

Weak uranium mineralization of an undetermined type occurs near the base of the Shinarump. On the Shins No. 3 claim, radiometric readings taken along the base of the cliff indicate the presence of uranium in a small area about 5 feet above the contact with the Moenkopi formation. A 1-foot channel sample of this coarse-grained sandstone assayed 0.01 percent U_3O_8. On claim No. 21 of the Arizona group, in one of the few areas on these claims where the contact is accessible, slightly above-normal radioactivity was detected in 3 to 4 feet of conglomeratic sandstone lying at the base of the Shinarump. No sample was taken.

ORE RESERVES

There are no known ore reserves of any classification on the property.

PROPOSED EXPLORATION AND COSTS

The diamond drilling project proposed by the applicant is estimated to cost $301,882.88, with Government participation at 75 percent, or $226,412.16. Time to complete the project is estimated at 12 months. In resumé 6-d, attached to the application, item No. 5 shows the estimated cost of core drilling at $5.00 a foot and $10,000 a month. Therefore, at the inferred rate of 2,000 feet a month, the total drilling footage is 24,000 feet.

No specific proposals were submitted with regard to location of drill holes. The proposed drilling is of a prospecting nature and

individual holes would be drilled at locations indicated by interpretation of geologic and geochemical information obtained from preceding holes. Initial drilling in each area would be in the vicinity of rim exposures of Shinarump formation. All holes would be collared in Shinarump or in thin overburden.

Hole depth required to penetrate the potential ore horizon and to reach the underlying Moenkopi formation is expected to average about 70 feet. Inspection of the rim exposed near the south edge of the Arizona group reveals that, in certain areas, erosion has removed all but 30 to 40 feet of the Shinarump. Maximum hole depth for both claim groups is estimated at 100 feet.

Road and drill-site construction could be accomplished with little difficulty. Water for core drilling is available at 4 to 9 miles from the drilling areas. It is estimated that a core drilling rig will average 40 feet of AX-size hole per 8-hour shift. A fairly high percentage of core recovery seems probable.

The application does not supply information as to number of drill rigs to be used, shifts per day, and hole size. In a discussion of the proposed project with the applicant, it was revealed that these, and certain other relevant matters, had not been considered. The applicant agreed that a combination of core drilling and wagon drilling would be satisfactory and less expensive than the proposed core drilling program.

The applicant is undecided regarding the question of subcontracting or direct performance of the drilling. It was pointed out to the applicant that projects similar to that proposed generally do not necessitate the construction of stationary buildings on the scale described in the application (item 6-f). For living quarters, trailer houses are commonly used.

Overall cost of the project, as proposed in the application, is extremely high. Without considering salvage value of materials and supplies, the estimated overall expense to accomplish the drilling is $12.58 a foot. Excessively high figures include those for salaries of supervisory and technical personnel, transportation, tools, and drill steel and bits. Also, the estimated cost of the actual core drilling, $5.00 a foot, is nearly double the usual figure under comparable conditions.

Inasmuch as the property does not appear to warrant further consideration for a DMEA loan, the examining team does not believe the situation calls for a discussion with the applicant of revision of the application with regard to project proposals and cost estimations.

If, however, the property had sufficient merit to justify a 24,000-foot drilling program, the work undoubtedly could be accomplished at a cost much lower than the applicant's figure. Assuming, for the purpose of arriving at a more realistic cost estimation, a project

involving the use of one wagon drill and one diamond drill to complete the job on a one-shift basis, with average daily wagon drill footage at 150 feet and average daily diamond drill footage at 40 feet, time to complete the project would be 126 days, or approximately 6 months. This computation requires the additional assumption that the total footage drilled by each type of drilling rig is proportional to the above estimations of average daily footages--that both drilling rigs would be in operation one shift a day until the project footage totaled 24,000 feet. Under this arrangement, the diamond drilling footage would total 5,050 feet and the wagon drilling footage, 18,950 feet. Using unit costs of $3.00 a foot for diamond drilling and $0.75 a foot for wagon drilling, the total direct cost is $29,362.50 ($15,150 for diamond drilling and $14,212.50 for wagon drilling). On this basis, the average direct cost of drilling is $1.22 a foot.

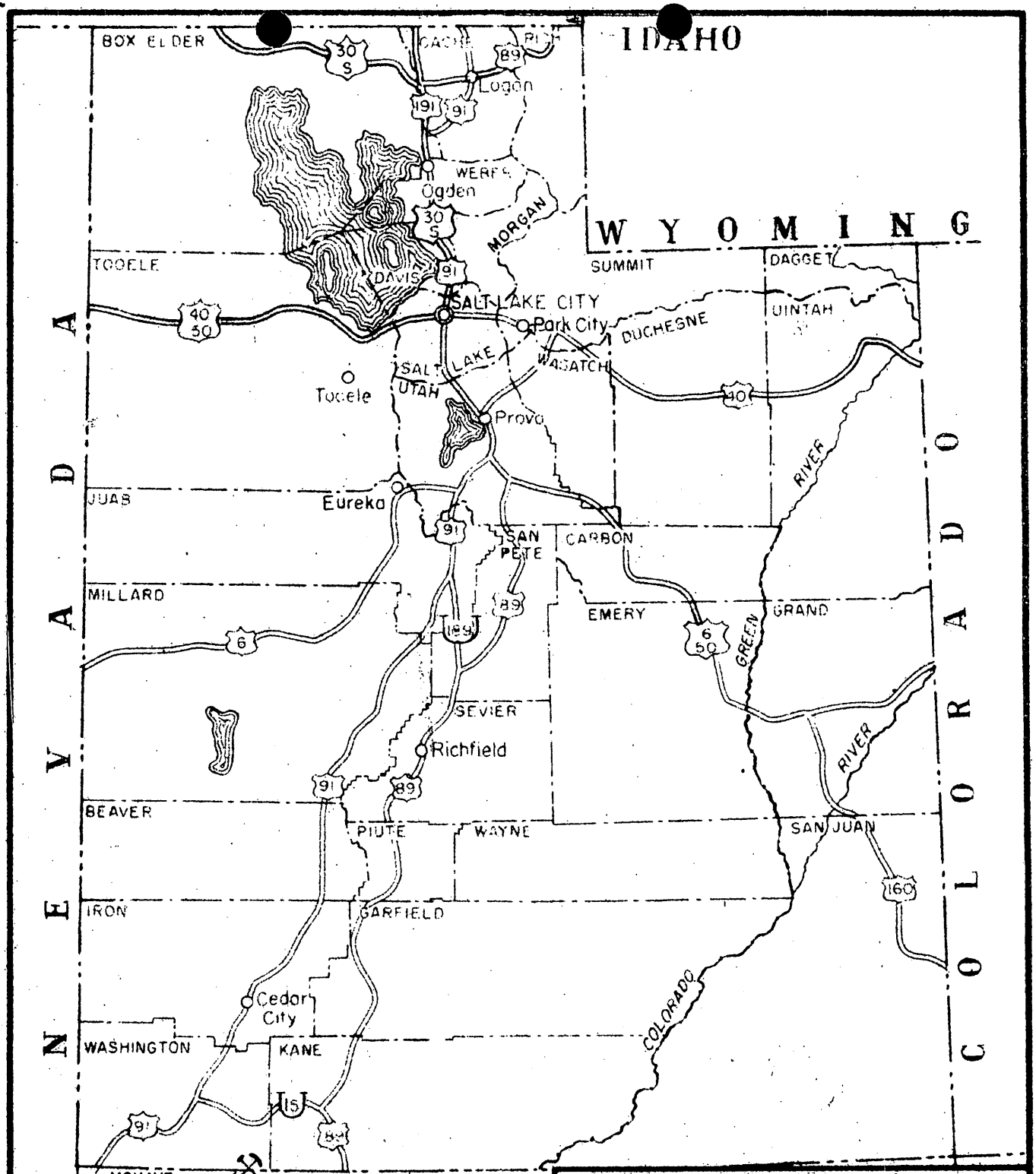
Additional necessary expenses would include 6 months salary for a supervisor (estimated at $3,000), an estimated 100 hours of bulldozer work at $12.50 an hour ($1,250), and possibly 100 assays at $3.50 ($350), totaling $4,600.

Based on these assumptions and estimated costs, it appears that 24,000 feet of drilling could be accomplished in this area at an overall cost of $29,362.50 + $4,600.00, or $33,962.50. The corresponding unit cost is $1.42 a foot. It is understood that, if such a project were to materialize, drilling would be done in accordance with a prescribed program.

CONCLUSIONS AND RECOMMENDATIONS

Although a drilling project on the applicant's Shins and Arizona claims is feasible from an engineering standpoint, the lack of geologic evidence of the existence of significant uranium mineralization on the property indicates that the proposed work is not warranted.

It is recommended, therefore, that the applicant's request for Government assistance be denied.



ARIZONA URANIUM EXPLORATION COMPANY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1 DMEA Docket No. 4123
Location Map

ARIZONA URANIUM EXPLORATION CO.
ARIZONA AND SHINS CLAIMS

WASHINGTON CO., UTAH, AND MOHAVE CO., ARIZONA

ENGINEER: *Millard M. GILKEY*	DATE: APRIL 17, 1956
TRACED: APR., 1956; A.P.T.S.	1900 - 382 - G
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GEOLOGICAL SURVEY
P. O. BOX 360
GRAND JUNCTION, COLORADO

MAY 8 1956

May 1, 1956

BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

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

From: Frank M. Byers, Jr.,
For: J. William Hasler

TRANSMITTED
MAY 9 - 1956

Subject: DMEA docket 4123 (Uranium), Arizona Uranium Exploration Co., (Arizona and Shins claims), Mohave County, Arizona and Washington County, Utah.

The Arizona Uranium Exploration Company, 2411 E. Airline Way, Phoenix, Arizona, has applied for DMEA assistance under docket 4123 to explore for uranium on their Arizona and Shins groups of claims. The Shins group of claims straddles the Arizona-Utah line near the western edge of the Colorado Plateau. The Arizona group of claims is entirely within Arizona, about 10 miles south of the Shins group of claims.

The property was examined on March 29, 1956, by M. M. Gilkey, U. S. Bureau of Mines, and Howard F. Albee, U. S. Geological Survey, accompanied by J.E. Hamblem, W. M. Bachman, and Carl Laney, representatives of the applicant.

Transmitted herewith is a geologic report by Howard F. Albee, U. S. Geological Survey. Because of no known uranium ore deposits in the Shinarump of the channel area, and because of the absence of mineralized outcrops on the subject properties, Mr. Albee recommends that the application for DMEA assistance be denied. I have reviewed Mr. Albee's geologic report of examination and concur with his recommendations.

Enclosed are 10 copies of the report and the applicant's brochure.

The U. S. Atomic Energy Commission was consulted with reference to evaluating this property.

Frank M. Byers, Jr.,
For J. William Hasler

FMB/mlr
Enclosures
cc: S. R. Wilson

Reviewed by
DMEA OPERATING COMMITTEE
5-16-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

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MAY 9 - 1956

DMEA 4123

Arizona Uranium Exploration Company

Arizona and Shins claims

Mohave County, Arizona and Washington County, Utah

Uranium

~~Joint Engineering and~~ Geologic Report

by

Howard F. Albee
U. S. Geological Survey

April 1956

Reviewed by
DMEA OPERATING COMMITTEE
5-16-56
(date)

RECEIVED
MAY 11 1956

INTRODUCTION AND SUMMARY

The Arizona Uranium Exploration Company, 2411 E. Airline Way, Phoenix, Arizona, has applied to the Defense Minerals Exploration Administration (DMEA 4123), for assistance to explore for uranium on their Arizona and Shins groups of claims. The Arizona group is in Mohave County, Arizona, in secs. 26, 27, 28, 33, 34, and 35, T. 39 N., R. 6 W., Gila and Salt River Meridian. The Shins group is in Washington, Utah in sec. 35, T. 43 S., R. 11 W., Salt Lake Meridian, and Mohave County, Arizona, in secs. 32 and 33, T. 42 N., R. 7 W., and secs. 4 and 5, T. 41 N., R. 7 W., Gila and Salt River Meridian, (Fig. 1).

The Shins group of claims is accessible from Hurricane, Utah, by 21.5 miles of improved dirt road (Utah 59), thence due west 1/4 mile to the eastern edge of the claims. Utah Highway 59 reaches a point on the mutual boundary of Utah and Arizona 21.5 miles from Hurricane. The Arizona group of claims are accessible from this point by continuation of the same road for 18 miles, thence southerly for nine miles on an unimproved, single-track road to the claims.

The property was examined March 29, 1956, by M. M. Gilkey, U. S. Bureau of Mines, and Howard F. Albee, U. S. Geological Survey, in company with J.E. Hamblen, W. M. Bachman, and Carl Laney, who represented the applicant company.

No ore deposits are known in the Shinarump member of the Chinle formation in the area. The Shinarump in the area is a relatively clean sandstone deposited uniformly on the Moenkopi formation. No Shinarump-filled channels that are cut into the top of the Moenkopi formation were observed; however,

some intraformational channels are present within the Shinarump. No indentifiable mineralized material was observed, although in some places near the base of the Shinarump a scintillation counter showed count 2 to 3 times above background.

Because of no known uranium ore deposits in the Shinarump of the area, because of the relatively clean, blanket-type Shinarump without channels at the base, and because of the absence of mineralized material, it is recommended that the application be denied.

GEOLOGY

The general area, hereafter referred to as the Short Creek area, lies at the extreme western edge of the Colorado Plateau between the Hurricane fault and the Vermillion Cliffs (fig. 1). The Short Creek area is bounded on the north by the Virgin River, and merges southward into the Unikaret Plateau. The Shinarump member of the Chinle formation is exposed for many tens of miles, and caps as a vertical cliff the broad expanses and steep slopes of the Moenkopi formation. The upper Chinle has been eroded far back from the Shinarump cliffs and forms several hundred square miles of relatively flat country. The Shinarump is exposed at the surface for some distance back of the Shinarump cliffs. Beyond these exposures the Shinarump member is overlain by part of the Petrified Forest member of the Chinle which thickens gradually toward the Vermillion Cliffs.

The rocks exposed in the Short Creek area range in age from Permian to Jurassic and, in ascending order, are composed of the Kaibab limestone

of Permian age, the Moenkopi and Chinle formations of Triassic age, the Moenhave formation of Triassic (?) age, the Kayenta formation of Jurassic(?) age, and the Navajo sandstone of Jurassic and Jurassic (?) age. The aggregate thickness of the formations varies in the area but is generally well over 5,000 feet. The Moenkopi formation is thicker in this part of the Colorado Plateau than in other parts. It attains a thickness of over 1,800 feet and is divided into six members. The Chinle as used by Gregory (1950), has been redefined by Averitt and others (1955). The upper part of Chinle is now included in the Moenhave formation and the lower part of the Kayenta formation. This reduces the thickness of the Chinle from over 1,000 feet to about 500 feet.

The only potential producer of uranium ore on the subject claims (figs. 2 and 3) is the Shinarump member of the Chinle formation. The Shinarump rests unconformably on the Moenkopi formation. At places the top layers of the Moenkopi have been beveled and from a few feet to as much as 30 feet of strata have been removed. Channels at the surface of the Moenkopi are rarely seen and none was observed along the outcrops within the claims. Where channels are present in the area they are cut only a few feet into the Moenkopi.

The Shinarump member is composed typically of yellowish-gray and pale yellowish-orange, medium-to coarse-grained sandstone composed of subangular clear quartz. Lenses of conglomerate and conglomeratic sandstone containing granules and pebbles predominantly of quartz, quartzite, and chert are common. The Shinarump consists of thin trough sets of medium-scale cross-strata and contains abundant silicified and, in places, carbonized wood.

The conglomerate grades upward into coarse-grained, cross-bedded, arkosic sandstone that contains a few strings of pebbles. The bedding is every where lenticular. The Shinarump member ranges from an erosional wedge-edge up to about 150 feet thick, but in the vicinity of the claims it averages about 70 feet thick, the upper part having been removed by erosion.

The Shins group (fig. 2) comprises 30 claims that are staked on exposed Shinarump on the northeast side of Short Creek Wash. The rocks strike about N. 70° W., and dip from 4° northerly near the Yellowstone rim to about 2° northerly near the northern edge of the group of claims. A normal fault about 1,500 feet southwest of the claims (fig.3) trends about N. 60°W. and has dropped the rocks on the southwest block about 150 feet.

The characteristics of the Shinarump are similar to those seen on the Shins group. Conglomeratic sandstone lenses are common near and at the base of the unit. An iron-rich zone about 3 feet thick lies at the base and here it shows an abnormal radioactivity count of from 2 to 3 times bove background. However, when selected rocks were taken away from the face no count was detected.

ORE DEPOSITS

Relatively few uranium ore deposits are known in the southwestern part of the Colorado Plateau and in the adjacent part of the Basin and Range province (See Finch, 1955, map MF 16). About 15 miles southeast of the Yellowstone rim, in Hacks Canyon, uranium ore has been mined in small tonnages from the Hermit shale of Pennsylvanian age. Northeast of the

Short Creek area uranium ore has been mined from the Dakota sandstone and west and northwest of the area uranium ore is being mined from Triassic rocks in the Silver Reef district (Finch, 1955, map MF 16), and along the Virgin anticline. The production in the Silver Reef district is from a sandstone that has been called the Silver Reef member of the Chinle formation. The Silver Reef sandstone is correlative to the Springdale member of the Moenave formation and lies about 600 feet above the Shinarump.

Uranium mineralization was found in the Short Creek area about 9 miles north of the Yellowstone rim in about 1953 and some exploratory work was done. No ore grade material was found and work has been suspended. Recently many claims have been staked near this development work, but not on the basis of any new discovery.

EXPLORATION PROGRAM

The applicant presented no program for exploration on either of the two groups of claims. Drilling could be done at a relatively low cost due to shallow depths and little or no overburden. A program will not be proposed by the examining team; however, inasmuch as the possibility of ore in the area is geologically unfavorable.

CONCLUSIONS AND RECOMMENDATIONS

Hundreds of miles of Shinarump rims crop out in southwestern Utah and northwestern Arizona. No known commercial quantities of ore-grade uranium-bearing rock has been found in these outcrops west of the Marble Canyon

district. Shinarump-filled paleostream channels are rare and where they do occur they are extremely shallow features. The Shinarump has been deposited as a relatively clean sandstone of uniform thickness. Such blanket-type deposits with few mudstone splits have been found to be unfavorable for the occurrence of uranium deposits.

Drilling on the subject claims would be of a prospecting nature and would be guided by no known geologic concepts of favorable criteria. The examining team, therefore, recommends that the application be denied.

References Cited

Gregory, H. E., Geology and Geography of the Zion Park Region, Utah and Arizona, U. S. Geol. Survey Prof. Paper 220, p. 66-78, 1950.

Averitt, Paul, Detterman, J.S., Harshbarger, J.W., Repenning, C.A., and Wilson, R. F. Revisions in Correlation and nomenclature of Triassic and Jurassic Formations in Southwestern Utah and Northern Arizona, Bull. American Assoc. Petroleum Geologists, p. 2515-2524, Vol. 39, No. 12, 1955.

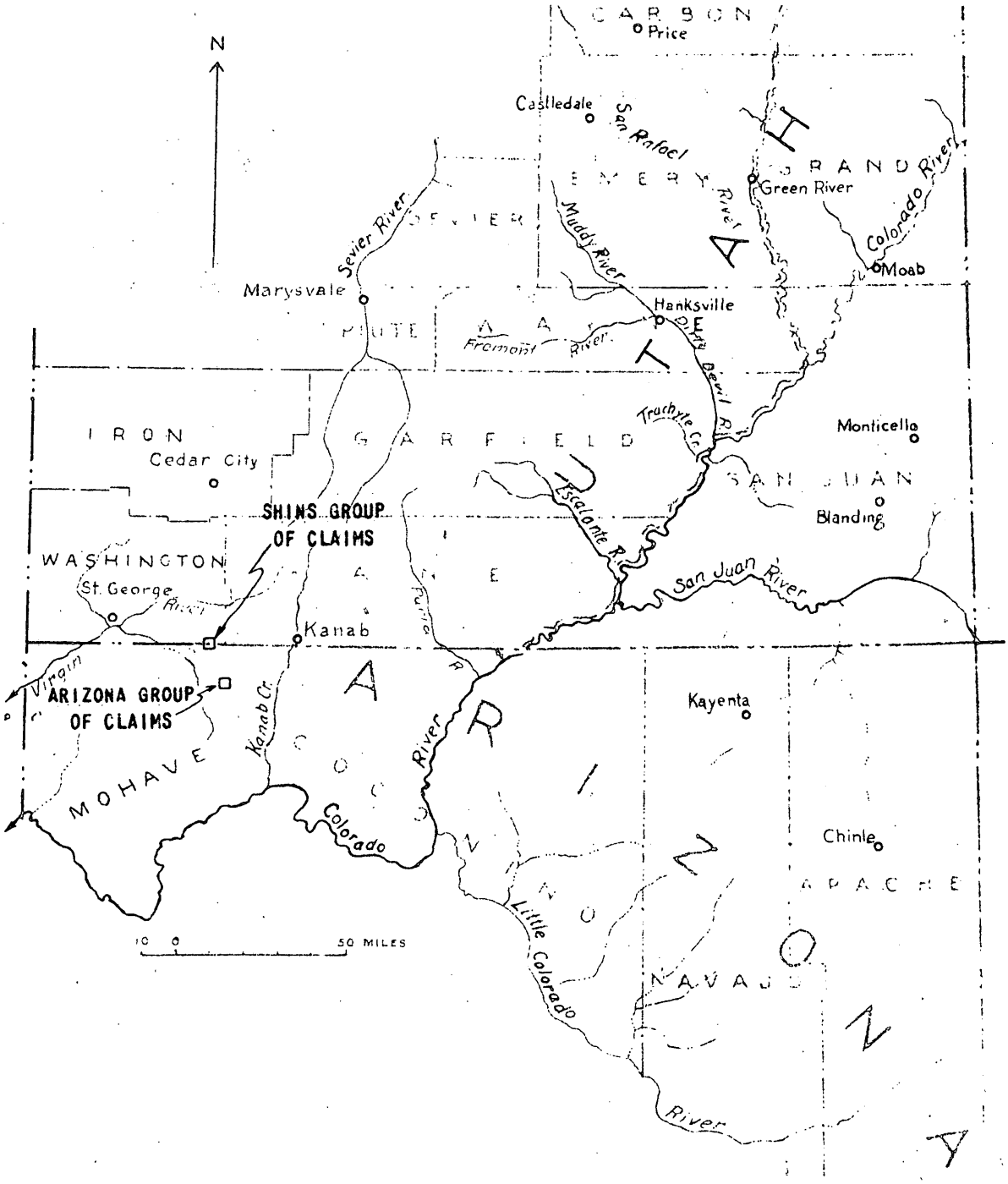
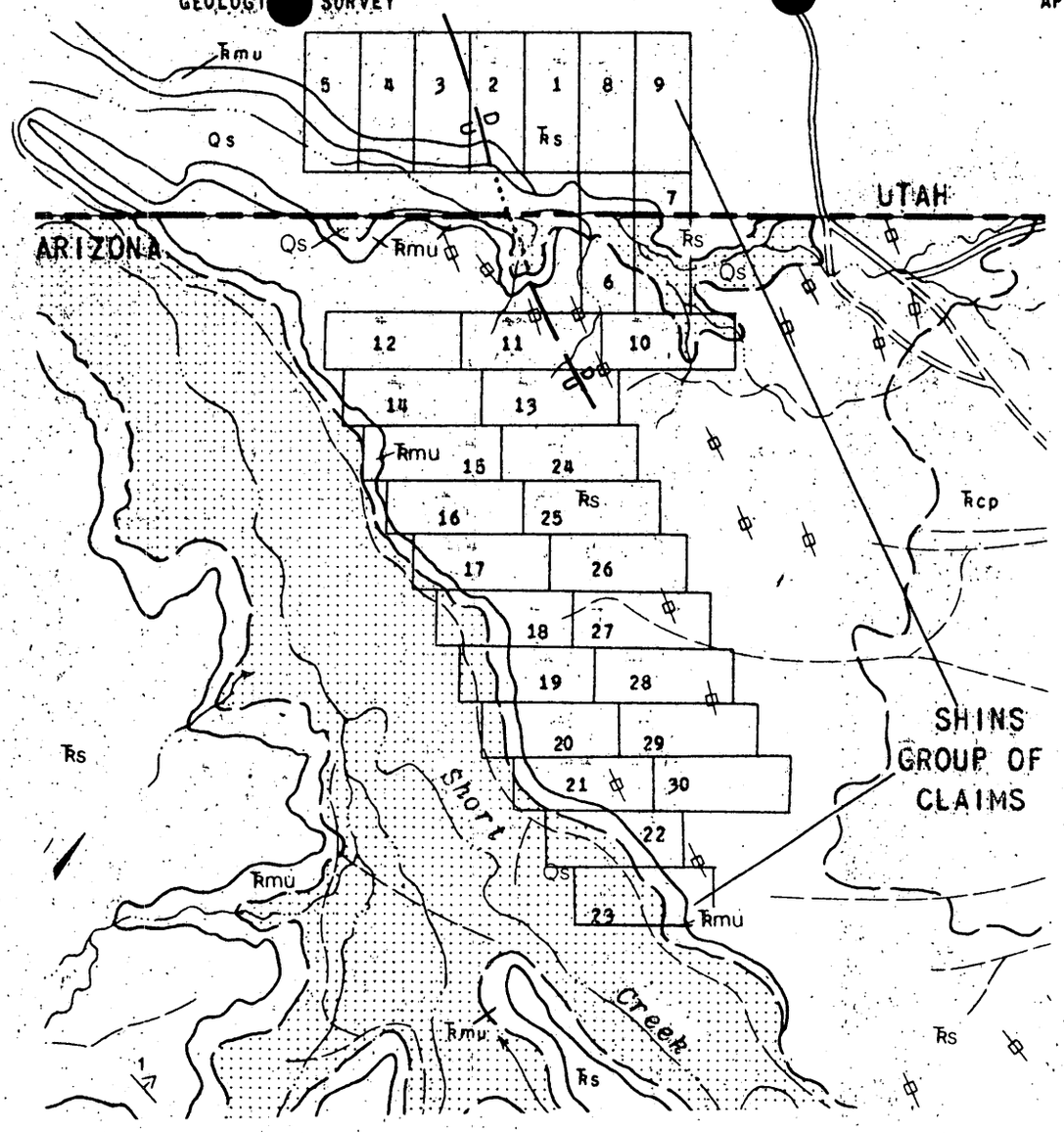


FIGURE 1. INDEX MAP OF PARTS OF ARIZONA AND UTAH SHOWING LOCATION OF THE SHINS AND ARIZONA GROUPS OF CLAIMS, ARIZONA URANIUM EXPLORATION COMPANY, MOHAVE COUNTY, ARIZONA, AND WASHINGTON COUNTY, UTAH.



Note: BASE FROM U.S. GEOLOGICAL SURVEY PHOTOGEOLOGIC QUADRANGLE MAPS, VIRGIN SE, AND LOST SPRING MOUNTAIN, NE. CLAIM BOUNDARIES MODIFIED FROM APPLICANTS MAP.

EXPLANATION

QUATERNARY

Qs — Surficial deposits

TRIASSIC

Upper Triassic

Ŧcp — Petrified Forest member of the Chinle formation

Ŧs — Shinarump conglomerate

Lower and Middle(?) Triassic

Ŧmu — Moenkopi formation Upper red member, Ŧmu;

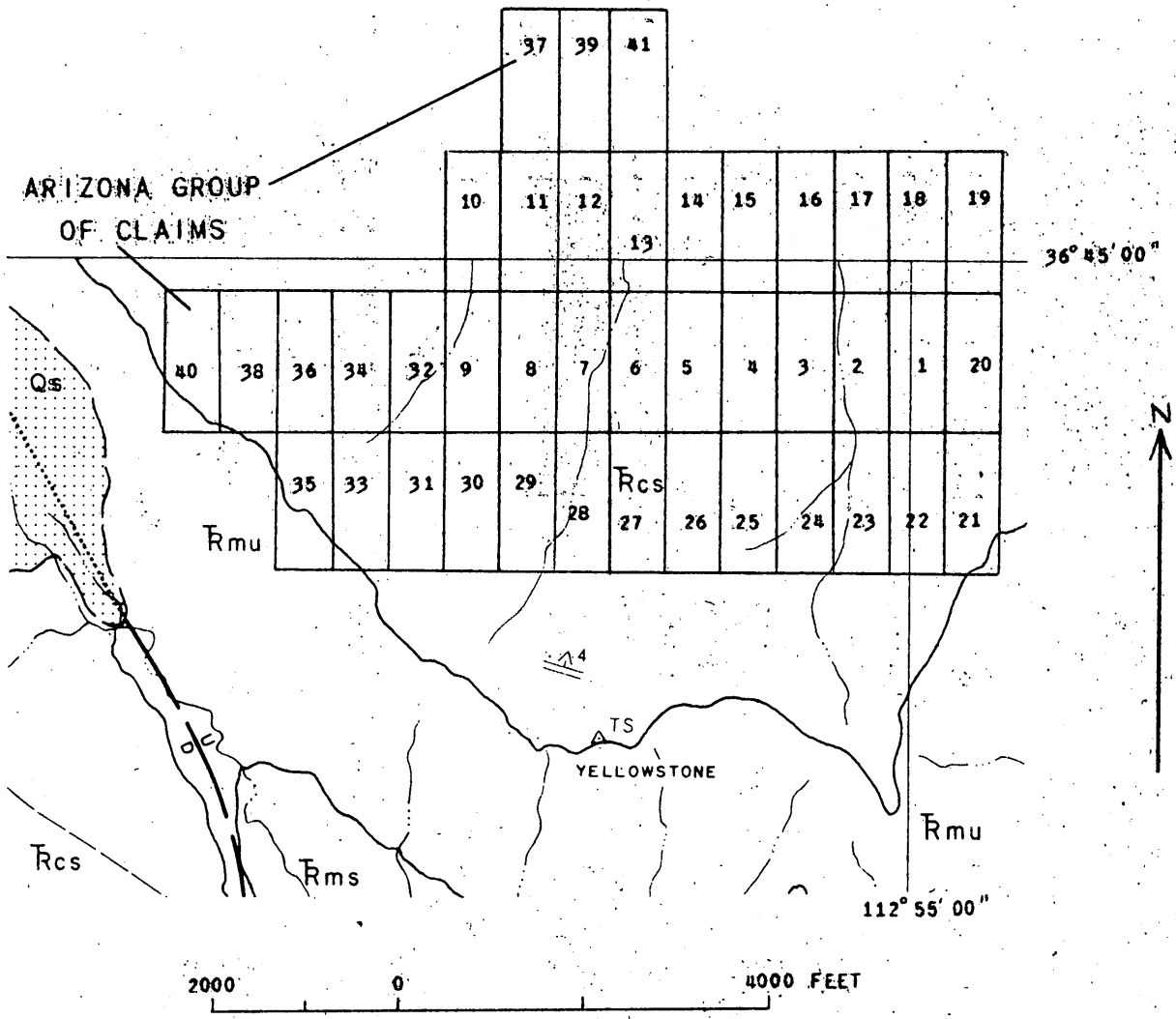
GEOLOGIC CONTACT, APPROXIMATELY LOCATED

D U — FAULT, APPROXIMATELY LOCATED DOTTED WHERE CONCEALED (U, UPTHROWN SIDE; D, DOWNTHROWN SIDE)

STRIKE OF APPROXIMATELY VERTICAL JOINTS

2000 0 8000 FEET

FIGURE 2. GEOLOGIC MAP SHOWING THE SHINS GROUP OF CLAIMS, ARIZONA URANIUM EXPLORATION COMPANY, MOHAVE COUNTY, ARIZONA, AND WASHINGTON COUNTY, UTAH.



EXPLANATION

Qs	QUATERNARY SURFICIAL DEPOSITS
Rcs	SHINARUMP MEMBER OF TRIASSIC CHINLE FORMATION
	TRIASSIC MOENKOPI FORMATION:
Rmu	Rmu, UPPER RED MEMBER;
Rms	Rms, SHNABKAIB MEMBER
	GEOLOGIC CONTACT, APPROXIMATELY LOCATED
U / D	FAULT, APPROXIMATELY LOCATED; DOTTED WHERE CONCEALED (U, UPTHROWN SIDE; D, DOWNTHROWN SIDE)
4	STRIKE AND DIP OF BEDS

Note: BASE FROM U.S. GEOLOGICAL SURVEY PHOTOGEOLOGIC QUADRANGLE MAP, HEATON KNOLLS, NW.
CLAIM BOUNDARIES FROM APPLICANTS MAP.

FIGURE 3. GEOLOGIC MAP SHOWING THE ARIZONA GROUP OF CLAIMS, ARIZONA URANIUM EXPLORATION COMPANY, MOHAVE COUNTY, ARIZONA.

5-14-56

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

May 9, 1956

224 New Customhouse
Denver 2, Colorado

RECEIVED
MAY 11 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Report of Examination, DMEA Docket 4123 (Uranium), Arizona Uranium Exploration Company (Arizona and Shine claims), Mohave County, Arizona and Washington County, Utah

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

The field examiners conclude that drilling on this property would be of a prospecting nature and could follow no known geologic concepts of favorable criteria. They believe the proposed exploration would not uncover significant amounts of uranium ore. They recommend that the application be denied. We concur in this recommendation.

DMEA Field Team, Region III

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
5-16-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

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DMEA
MAY 1 1956

APR 27 1956

BUREAU OF MINES
Denver, Colorado

TRANSMITTED

MAY 9 - 1956

April 25, 1956

Memorandum

To: W. H. Truver, Executive Officer, DMEA Field Team, Region III

From: Stephen R. Wilson

Subject: Docket No. DMEA-4123 (Uranium), Arizona Uranium Exploration Co. (Arizona and Shine claims), Mohave County, Arizona and Washington County, Utah

Attached are the original and 15 copies of an engineering report pertaining to examination of the property of Arizona Uranium Exploration Co. in Arizona and Utah in the vicinity of Short Creek, Arizona. The property was examined by H. F. Albee of the Survey and H. H. Gilkey, Bureau of Mines. The examination was made during March 1956.

The applicant has requested a loan of $301,[illegible] to conduct an exploratory project consisting principally of diamond drilling. A total of 71 mining claims in two groups is included in the proposed project area.

Rocks outcropping in the area of the applicant's claims consist principally of the flat-lying Triassic Shinarump conglomerate. Unconformably underlying the Shinarump is the Moenkopi formation. This formation is exposed to a depth of 100 feet in some areas along the cliff that marks the south and east edges of part of the claim groups. Weak uranium mineralization occurs near the base of the Shinarump conglomerate. One sample taken from an area showing a radiometric reading greater than background assayed 0.01 percent U_3O_8. There are no ore reserves on the property.

The examining engineer recommends that the applicant's request for DMEA assistance be denied. It is believed that uranium mineralization is far too weak to be of possible commercial significance and that the proposed exploration will not uncover mineralization of more importance. I concur with the recommendation of the examining engineer.

The brochure transmitted to this office has been mailed to J. W. Mazler for his use in preparing the geologic report. He will forward the brochure to your office after it has served his purpose.

Stephen R. Wilson
Stephen R. Wilson

Enclosure
cc: J. F. Shaw
J. B. Clemmer

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DMEA DEVELOPMENT CENTER

5-16-56
(date)

RECEIVED
MAY 1 1 1956

ARIZONA URANIUM EXPLORATION CO.
ARIZONA AND SHINE CLAIMS
MOHAVE COUNTY, ARIZONA, AND WASHINGTON COUNTY, UTAH
DMEA-4123
URANIUM

TRANSMITTED
MAY 9 - 1956

Engineering Report

By M. M. Gilkey
Mining Engineer
Bureau of Mines

April 25, 1956

Reviewed by
DMEA OPERATING COMMITTEE
5-16-56
(date)

RECEIVED
MAY 11 1956

ARIZONA URANIUM EXPLORATION CO.
ARIZONA AND SHINS CLAIMS
MOHAVE COUNTY, ARIZONA, AND WASHINGTON COUNTY, UTAH

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Ownership and extent	5
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General geology	6
Ore reserves	7
Proposed exploration and costs	7
Conclusions and recommendations	11

ILLUSTRATIONS

Fig. 1 Location map, Arizona Uranium Exploration Co., Arizona and Shins claims, Mohave County, Arizona, and Washington County, Utah

Fig. 2 Geologic plan, Arizona and Shins claims

RECEIVED
MAY 11 1956

SUMMARY

The Arizona Uranium Exploration Co. applied in January 1956 for a DMEA loan on uranium property near the Utah-Arizona line, in the vicinity of Short Creek, Arizona. Estimated cost of the proposed diamond drilling project is $301,882.88, with Government participation at 75 percent, or $226,412.16. Government personnel examined the property in March 1956.

A total of 71 claims in two groups is included in the proposed project area. The property is easily accessible and climate conditions are favorable.

There has been no production from the claims. There are no known existing workings and no known ore reserves.

The claims cover only a small portion of the extensive Little Creek terrace in the southwestern part of the Colorado Plateau. The terrace consists of flat-lying Shinarump formation, a major producer of uranium ores in other areas of the Plateau. Weak uranium mineralization is found in cliff exposures on the applicant's property, near the base of the Shinarump. A sample taken in an area of comparatively high radioactivity assayed only 0.01 percent U_3O_8.

Total estimated drilling footage is 24,000 feet. Average hole depth is 70 feet. The applicant has proposed a program with initial holes located in anomalous areas near rim exposures of Shinarump formation.

Hole locations, generally, would depend on interpretation of geologic and geochemical information from preceding holes. Drilling conditions are considered to be good.

An exceedingly high estimate of the overall cost of the diamond drilling program has been submitted by the applicant. The applicant would be agreeable, however, to downward revision of the cost of the proposed diamond drilling program, or would be willing to further reduce costs by wagon drilling the major portion of the footage.

Because of the lack of geologic evidence of the existence of significant uranium mineralization on the property, it is recommended that the requested loan be denied.

INTRODUCTION

The Arizona Uranium Exploration Co. submitted an application dated January 9, 1956, for Government aid in an exploratory project on uranium property near the Utah-Arizona line, in the vicinity of Short Creek, Arizona.

An examination of the property was made March 20 and 21, 1956, by Howard Albee of the Geological Survey, Grand Junction, Colorado, and M. M. Gilkey of the Bureau of Mines office at Salt Lake City, Utah. The company was represented by J. E. Hamblin, president, W. M. Bachman, vice president, and Carl Laney, secretary and treasurer.

The applicant has proposed a diamond drilling project estimated to cost $301,882.88. Time to complete the work is estimated as 12 months.

LOCATION, TOPOGRAPHY AND CLIMATE

The property consists of two groups of claims, the Shins group in Washington County, Utah, and the Arizona group in Mohave County, Arizona (figs. 1 and 2). The Shins group, comprising 30 claims, lies along the Utah-Arizona line west of the small settlement of Short Creek, Arizona. Utah Highway 59 leading to Short Creek is on company ground at a point 4.5 miles west of the town where it crosses the state line. Approximately 23 miles south and slightly east of Short Creek is the Arizona group of 41 claims. From Short Creek, the Arizona claims are reached by driving 13 miles south on the Arizona continuation of Utah Highway 59, to a point where this road turns east toward Fredonia, Arizona, thence 10 miles south by dirt road to the property. From the turnoff, the distance to Fredonia on U. S. Highway 89 is 25 miles.

Roads in the area are not surfaced, but are fairly good, except during short periods of wet weather. The nearest railroad shipping point is 70 miles north of Short Creek, at Cedar City, Utah.

A legal description of the property, as shown on the applicant's map, is as follows:

30 claims

Shins group -	
(in Utah)	Sec. 35, T. 43 S., R. 11 W., S.L.B. and M.
(in Arizona)	Secs. 32 and 33, T. 42 N., R. 7 W., and Secs. 3 and 4, T. 41 N., R. 7 W., Gila and Salt River B. and M.

41 claims

Arizona group -	
(all in Arizona)	Secs. 26, 27, 28, 33, 34 and 35, T. 39 N., R. 6 W., Gila and Salt River B. and M.

Topographic conditions favorable for drilling and road construction prevail in both proposed drilling areas. The essentially flat Little Creek terrace is the dominant topographic feature. In some areas on the Shins claims the terrace is cut by shallow box canyons. Average height of the Shinarump canyon walls is about 70 feet.

The altitude of the drilling areas is approximately 5,000 feet.

Weather conditions are generally favorable for project operation. The winters are mild. Rather high temperatures are common during the long, dry summers.

OWNERSHIP AND EXTENT

The property consists of 71 unpatented lode claims in two groups, the Shins group of 30 claims, and the Arizona group of 41 claims. The president of the applicant company states that all claims are owned by the company--the reference to "School Land" (application form MF-104, item 3(c)) is erroneous.

Nine of the Shins group of claims are located in Utah and are recorded at St. George, Utah. Twenty-one of the Shins group and all of the 41 claims of the Arizona group are in Arizona and are recorded at Kingman, Arizona. Claims Nos. 1 through 41 in the Arizona group are recorded in Book 4R, pages 383 through 423, as listed on a sheet attached to the application. For claims in the Shins group this information is incomplete; Shins claims Nos. 17 through 30 (in Arizona) are

recorded in Book 4M, page 113 through 126, but Shins Nos. 10 through 16 (in Arizona) and 1 through 9 (in Utah) are not listed. It is understood, however, that the proposed project involves all of the 71 claims shown on the applicant's map.

HISTORY AND PRODUCTION

The applicant acquired the claims by location in 1955. Available information indicates that none of the ground had been held by prior location. There has been no production from the claims and there are no existing workings.

GENERAL GEOLOGY

The Shins and Arizona groups of claims are situated on the extensive Little Creek terrace in the southwestern part of the Colorado Plateau. The major portion of the surface in both areas consists of flat-lying Triassic Shinarump formation, one of the principal uranium ore horizons of the Plateau (fig. 2). In the vicinity of the proposed projects, the Shinarump consists of coarse-grained-to-conglomeratic, gray sandstone averaging about 70 feet in thickness. Unconformably underlying the Shinarump is the Moenkopi formation, also of Triassic age. The soft, brown and reddish mudstone and shale of the Moenkopi is exposed to a depth of 100 feet in some areas along the cliff marking the south and east edges of the Arizona group. In the young canyons of the Shins area, erosion has not penetrated the Moenkopi so deeply.

Weak uranium mineralization of an undetermined type occurs near the base of the Shinarump. On the Shins No. 3 claim, radiometric readings taken along the base of the cliff indicate the presence of uranium in a small area about 5 feet above the contact with the Moenkopi formation. A 1-foot channel sample of this coarse-grained sandstone assayed 0.01 percent U_3O_8. On claim No. 21 of the Arizona group, in one of the few areas on these claims where the contact is accessible, slightly above-normal radioactivity was detected in 3 to 4 feet of conglomeratic sandstone lying at the base of the Shinarump. No sample was taken.

ORE RESERVES

There are no known ore reserves of any classification on the property.

PROPOSED EXPLORATION AND COSTS

The diamond drilling project proposed by the applicant is estimated to cost $301,882.88, with Government participation at 75 percent, or $226,412.16. Time to complete the project is estimated at 12 months. In resumé 6-d, attached to the application, item No. 5 shows the estimated cost of core drilling at $5.00 a foot and $10,000 a month. Therefore, at the inferred rate of 2,000 feet a month, the total drilling footage is 24,000 feet.

No specific proposals were submitted with regard to location of drill holes. The proposed drilling is of a prospecting nature and

individual holes would be drilled at locations indicated by interpretation of geologic and geochemical information obtained from preceding holes. Initial drilling in each area would be in the vicinity of rim exposures of Shinarump formation. All holes would be collared in Shinarump or in thin overburden.

Hole depth required to penetrate the potential ore horizon and to reach the underlying Moenkopi formation is expected to average about 70 feet. Inspection of the rim exposed near the south edge of the Arizona group reveals that, in certain areas, erosion has removed all but 30 to 40 feet of the Shinarump. Maximum hole depth for both claim groups is estimated at 100 feet.

Road and drill-site construction could be accomplished with little difficulty. Water for core drilling is available at 4 to 9 miles from the drilling areas. It is estimated that a core drilling rig will average 40 feet of AX-size hole per 8-hour shift. A fairly high percentage of core recovery seems probable.

The application does not supply information as to number of drill rigs to be used, shifts per day, and hole size. In a discussion of the proposed project with the applicant, it was revealed that these, and certain other relevant matters, had not been considered. The applicant agreed that a combination of core drilling and wagon drilling would be satisfactory and less expensive than the proposed core drilling program.

The applicant is undecided regarding the question of subcontracting or direct performance of the drilling. It was pointed out to the applicant that projects similar to that proposed generally do not necessitate the construction of stationary buildings on the scale described in the application (item 6-f). For living quarters, trailer houses are commonly used.

Overall cost of the project, as proposed in the application, is extremely high. Without considering salvage value of materials and supplies, the estimated overall expense to accomplish the drilling is $12.58 a foot. Excessively high figures include those for salaries of supervisory and technical personnel, transportation, tools, and drill steel and bits. Also, the estimated cost of the actual core drilling, $5.00 a foot, is nearly double the usual figure under comparable conditions.

Inasmuch as the property does not appear to warrant further consideration for a DMEA loan, the examining team does not believe the situation calls for a discussion with the applicant of revision of the application with regard to project proposals and cost estimations.

If, however, the property had sufficient merit to justify a 24,000-foot drilling program, the work undoubtedly could be accomplished at a cost much lower than the applicant's figure. Assuming, for the purpose of arriving at a more realistic cost estimation, a project

involving the use of one wagon drill and one diamond drill to complete the job on a one-shift basis, with average daily wagon drill footage at 150 feet and average daily diamond drill footage at 40 feet, time to complete the project would be 126 days, or approximately 6 months. This computation requires the additional assumption that the total footage drilled by each type of drilling rig is proportional to the above estimations of average daily footages--that both drilling rigs would be in operation one shift a day until the project footage totaled 24,000 feet. Under this arrangement, the diamond drilling footage would total 5,050 feet and the wagon drilling footage, 18,950 feet. Using unit costs of $3.00 a foot for diamond drilling and $0.75 a foot for wagon drilling, the total direct cost is $29,362.50 ($15,150 for diamond drilling and $14,212.50 for wagon drilling). On this basis, the average direct cost of drilling is $1.22 a foot.

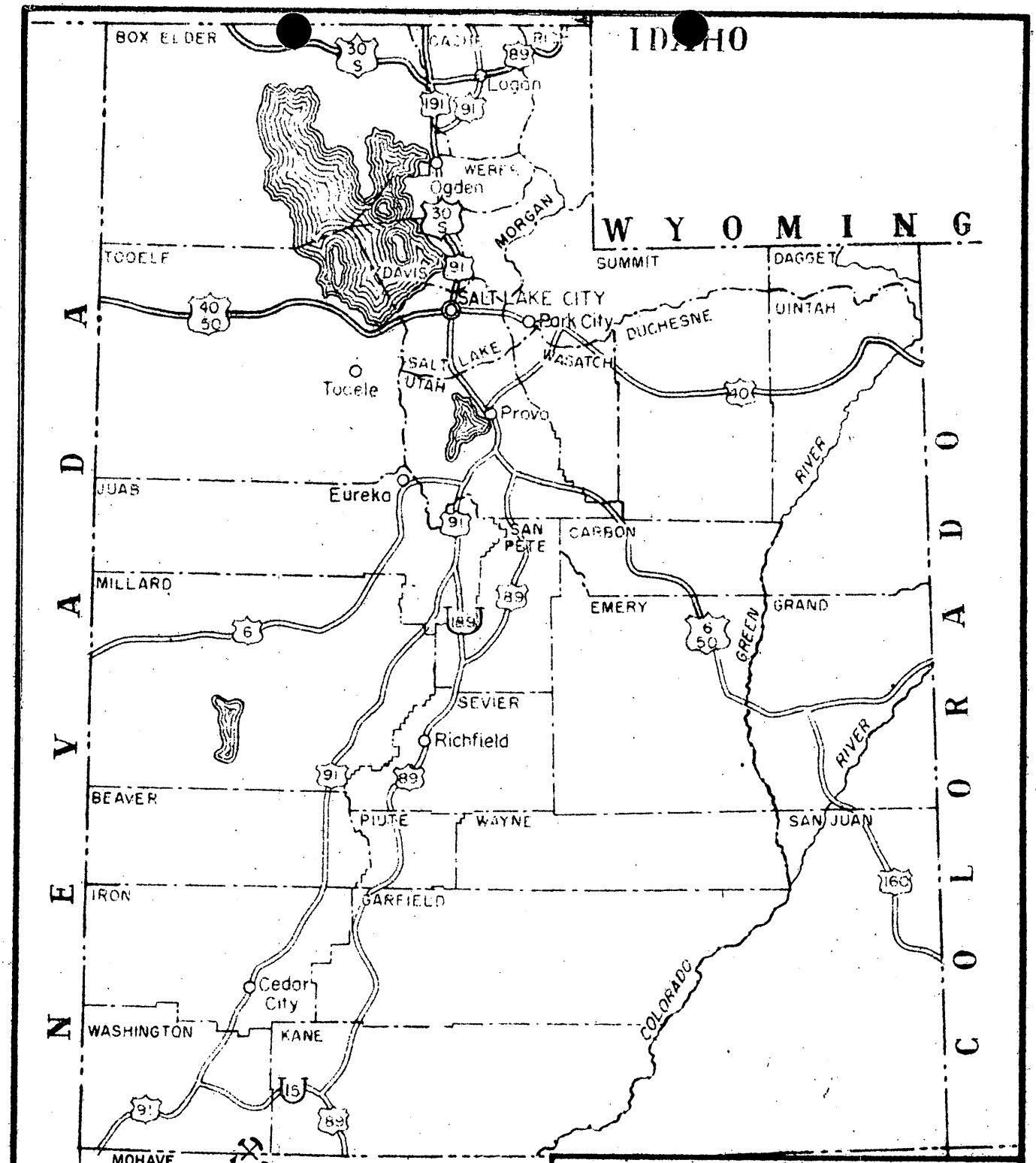
Additional necessary expenses would include 6 months salary for a supervisor (estimated at $3,000), an estimated 100 hours of bulldozer work at $12.50 an hour ($1,250), and possibly 100 assays at $3.50 ($350), totaling $4,600.

Based on these assumptions and estimated costs, it appears that 24,000 feet of drilling could be accomplished in this area at an overall cost of $29,362.50 + $4,600.00, or $33,962.50. The corresponding unit cost is $1.42 a foot. It is understood that, if such a project were to materialize, drilling would be done in accordance with a prescribed program.

CONCLUSIONS AND RECOMMENDATIONS

Although a drilling project on the applicant's Shins and Arizona claims is feasible from an engineering standpoint, the lack of geologic evidence of the existence of significant uranium mineralization on the property indicates that the proposed work is not warranted.

It is recommended, therefore, that the applicant's request for Government assistance be denied.



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1 DMEA Docket No. 4123
Location Map

ARIZONA URANIUM EXPLORATION CO.
ARIZONA AND SHINS CLAIMS

WASHINGTON CO., UTAH, AND MOHAVE CO., ARIZONA

ENGINEER: *Millard M. GILKEY*	DATE: APRIL 17, 1956
TRACED: APR., 1956; A.P.T.S.	1900 - 382 - G
CHECKED	

MINERAL DEPOSITS
DMEA
RECEIVED
MAY 7 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

RECEIVED
MAY 11 1956
DMEA
Date Rec'd

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. BOX 360
GRAND JUNCTION, COLORADO

MAY 8 1956

May 1, 1956

BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

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

TRANSMITTED
MAY 5

From: Frank M. Byers, Jr.,
For: J. William Hasler

Subject: DMEA docket 4123 (Uranium), Arizona Uranium Exploration Co., (Arizona and Shins claims), Mohave County, Arizona and Washington County, Utah.

The Arizona Uranium Exploration Company, 2411 E. Airline Way, Phoenix, Arizona, has applied for DMEA assistance under docket 4123 to explore for uranium on their Arizona and Shins groups of claims. The Shins group of claims straddles the Arizona-Utah line near the western edge of the Colorado Plateau. The Arizona group of claims is entirely within Arizona, about 10 miles south of the Shins group of claims.

The property was examined on March 29, 1956, by M. M. Gilkey, U. S. Bureau of Mines, and Howard F. Albee, U. S. Geological Survey, accompanied by J.E. Hamblem, W. M. Bachman, and Carl Laney, representatives of the applicant.

Transmitted herewith is a geologic report by Howard F. Albee, U. S. Geological Survey. Because of no known uranium ore deposits in the Shinarump of the channel area, and because of the absence of mineralized outcrops on the subject properties, Mr. Albee recommends that the application for DMEA assistance be denied. I have reviewed Mr. Albee's geologic report of examination and concur with his recommendations.

Enclosed are 10 copies of the report and the applicant's brochure.

The U. S. Atomic Energy Commission was consulted with reference to evaluating this property.

Frank M. Byers, Jr.,
For J. William Hasler

FMB/mlr
Enclosures
cc: S. R. Wilson

Reviewed by
DMEA OPERATING COMMITTEE
5-16-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

RECEIVED
MAY 11 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

TRANSMITTED
MAY 9 - 1956

DMEA 4123

Arizona Uranium Exploration Company

Arizona and Shins claims

Mohave County, Arizona and Washington County, Utah

Uranium

~~Joint Engineering and~~ Geologic Report

by

Howard F. Albee
U. S. Geological Survey

April 1956

Reviewed by
DMEA OPERATING COMMITTEE
5-16-56
(date)

INTRODUCTION AND SUMMARY

The Arizona Uranium Exploration Company, 2411 E. Airline Way, Phoenix, Arizona, has applied to the Defense Minerals Exploration Administration (DMEA 4123), for assistance to explore for uranium on their Arizona and Shins groups of claims. The Arizona group is in Mohave County, Arizona, in secs. 26, 27, 28, 33, 34, and 35, T. 39 N., R. 6 W., Gila and Salt River Meridian. The Shins group is in Washington, Utah in sec. 35, T. 43 S., R. 11 W., Salt Lake Meridian, and Mohave County, Arizona, in secs. 32 and 33, T. 42 N., R. 7 W., and secs. 4 and 5, T. 41 N., R. 7 W., Gila and Salt River Meridian, (Fig. 1).

The Shins group of claims is accessible from Hurricane, Utah, by 21.5 miles of improved dirt road (Utah 59), thence due west 1/4 mile to the eastern edge of the claims. Utah Highway 59 reaches a point on the mutual boundary of Utah and Arizona 21.5 miles from Hurricane. The Arizona group of claims are accessible from this point by continuation of the same road for 18 miles, thence southerly for nine miles on an unimproved, single-track road to the claims.

The property was examined March 29, 1956, by M. M. Gilkey, U. S. Bureau of Mines, and Howard F. Albee, U. S. Geological Survey, in company with J.E. Hamblen, W. M. Bachman, and Carl Laney, who represented the applicant company.

No ore deposits are known in the Shinarump member of the Chinle formation in the area. The Shinarump in the area is a relatively clean sandstone deposited uniformly on the Moenkopi formation. No Shinarump-filled channels that are cut into the top of the Moenkopi formation were observed; however,

some intraformational channels are present within the Shinarump. No indentifiable mineralized material was observed, although in some places near the base of the Shinarump a scintillation counter showed count 2 to 3 times above background.

Because of no known uranium ore deposits in the Shinarump of the area, because of the relatively clean, blanket-type Shinarump without channels at the base, and because of the absence of mineralized material, it is recommended that the application be denied.

GEOLOGY

The general area, hereafter referred to as the Short Creek area, lies at the extreme western edge of the Colorado Plateau between the Hurricane fault and the Vermillion Cliffs (fig. 1). The Short Creek area is bounded on the north by the Virgin River, and merges southward into the Unikaret Plateau. The Shinarump member of the Chinle formation is exposed for many tens of miles, and caps as a vertical cliff the broad expanses and steep slopes of the Moenkopi formation. The upper Chinle has been eroded far back from the Shinarump cliffs and forms several hundred square miles of relatively flat country. The Shinarump is exposed at the surface for some distance back of the Shinarump cliffs. Beyond these exposures the Shinarump member is overlain by part of the Petrified Forest member of the Chinle which thickens gradually toward the Vermillion Cliffs.

The rocks exposed in the Short Creek area range in age from Permian to Jurassic and, in ascending order, are composed of the Kaibab limestone

of Permian age, the Moenkopi and Chinle formations of Triassic age, the Moenhave formation of Triassic (?) age, the Kayenta formation of Jurassic(?) age, and the Navajo sandstone of Jurassic and Jurassic (?) age. The aggregate thickness of the formations varies in the area but is generally well over 5,000 feet. The Moenkopi formation is thicker in this part of the Colorado Plateau than in other parts. It attains a thickness of over 1,800 feet and is divided into six members. The Chinle as used by Gregory (1950), has been redefined by Averitt and others (1955). The upper part of Chinle is now included in the Moenhave formation and the lower part of the Kayenta formation. This reduces the thickness of the Chinle from over 1,000 feet to about 500 feet.

The only potential producer of uranium ore on the subject claims (figs. 2 and 3) is the Shinarump member of the Chinle formation. The Shinarump rests unconformably on the Moenkopi formation. At places the top layers of the Moenkopi have been beveled and from a few feet to as much as 30 feet of strata have been removed. Channels at the surface of the Moenkopi are rarely seen and none was observed along the outcrops within the claims. Where channels are present in the area they are cut only a few feet into the Moenkopi.

The Shinarump member is composed typically of yellowish-gray and pale yellowish-orange, medium-to coarse-grained sandstone composed of subangular clear quartz. Lenses of conglomerate and conglomeratic sandstone containing granules and pebbles predominantly of quartz, quartzite, and chert are common. The Shinarump consists of thin trough sets of medium-scale cross-strata and contains abundant silicified and, in places, carbonized wood.

The conglomerate grades upward into coarse-grained, cross-bedded, arkosic sandstone that contains a few strings of pebbles. The bedding is every where lenticular. The Shinarump member ranges from an erosional wedge-edge up to about 150 feet thick, but in the vicinity of the claims it averages about 70 feet thick, the upper part having been removed by erosion.

The Shins group (fig. 2) comprises 30 claims that are staked on exposed Shinarump on the northeast side of Short Creek Wash. The rocks strike about N. 70° W., and dip from 4° northerly near the Yellowstone rim to about 2° northerly near the northern edge of the group of claims. A normal fault about 1,500 feet southwest of the claims (fig.3) trends about N. 60°W. and has dropped the rocks on the southwest block about 150 feet.

The characteristics of the Shinarump are similar to those seen on the Shins group. Conglomeratic sandstone lenses are common near and at the base of the unit. An iron-rich zone about 3 feet thick lies at the base and here it shows an abnormal radioactivity count of from 2 to 3 times bove background. However, when selected rocks were taken away from the face no count was detected.

ORE DEPOSITS

Relatively few uranium ore deposits are known in the southwestern part of the Colorado Plateau and in the adjacent part of the Basin and Range province (See Finch, 1955, map MF 16). About 15 miles southeast of the Yellowstone rim, in Hacks Canyon, uranium ore has been mined in small tonnages from the Hermit shale of Pennsylvanian age. Northeast of the

Short Creek area uranium ore has been mined from the Dakota sandstone and west and northwest of the area uranium ore is being mined from Triassic rocks in the Silver Reef district (Finch, 1955, map MF 16), and along the Virgin anticline. The production in the Silver Reef district is from a sandstone that has been called the Silver Reef member of the Chinle formation. The Silver Reef sandstone is correlative to the Springdale member of the Moenave formation and lies about 600 feet above the Shinarump.

Uranium mineralization was found in the Short Creek area about 9 miles north of the Yellowstone rim in about 1953 and some exploratory work was done. No ore grade material was found and work has been suspended. Recently many claims have been staked near this development work, but not on the basis of any new discovery.

EXPLORATION PROGRAM

The applicant presented no program for exploration on either of the two groups of claims. Drilling could be done at a relatively low cost due to shallow depths and little or no overburden. A program will not be proposed by the examining team; however, inasmuch as the possibility of ore in the area is geologically unfavorable.

CONCLUSIONS AND RECOMMENDATIONS

Hundreds of miles of Shinarump rims crop out in southwestern Utah and northwestern Arizona. No known commercial quantities of ore-grade uranium-bearing rock has been found in these outcrops west of the Marble Canyon

district. Shinarump-filled paleostream channels are rare and where they do occur they are extremely shallow features. The Shinarump has been deposited as a relatively clean sandstone of uniform thickness. Such blanket-type deposits with few mudstone splits have been found to be unfavorable for the occurrence of uranium deposits.

Drilling on the subject claims would be of a prospecting nature and would be guided by no known geologic concepts of favorable criteria. The examining team, therefore, recommends that the application be denied.

References Cited

Gregory, H. E., Geology and Geography of the Zion Park Region, Utah and Arizona, U. S. Geol. Survey Prof. Paper 220, p. 66-78, 1950.

Averitt, Paul, Detterman, J.S., Harshbarger, J.W., Repenning, C.A., and Wilson, R. F. Revisions in Correlation and nomenclature of Triassic and Jurassic Formations in Southwestern Utah and Northern Arizona, Bull. American Assoc. Petroleum Geologists, p. 2515-2524, Vol. 39, No. 12, 1955.

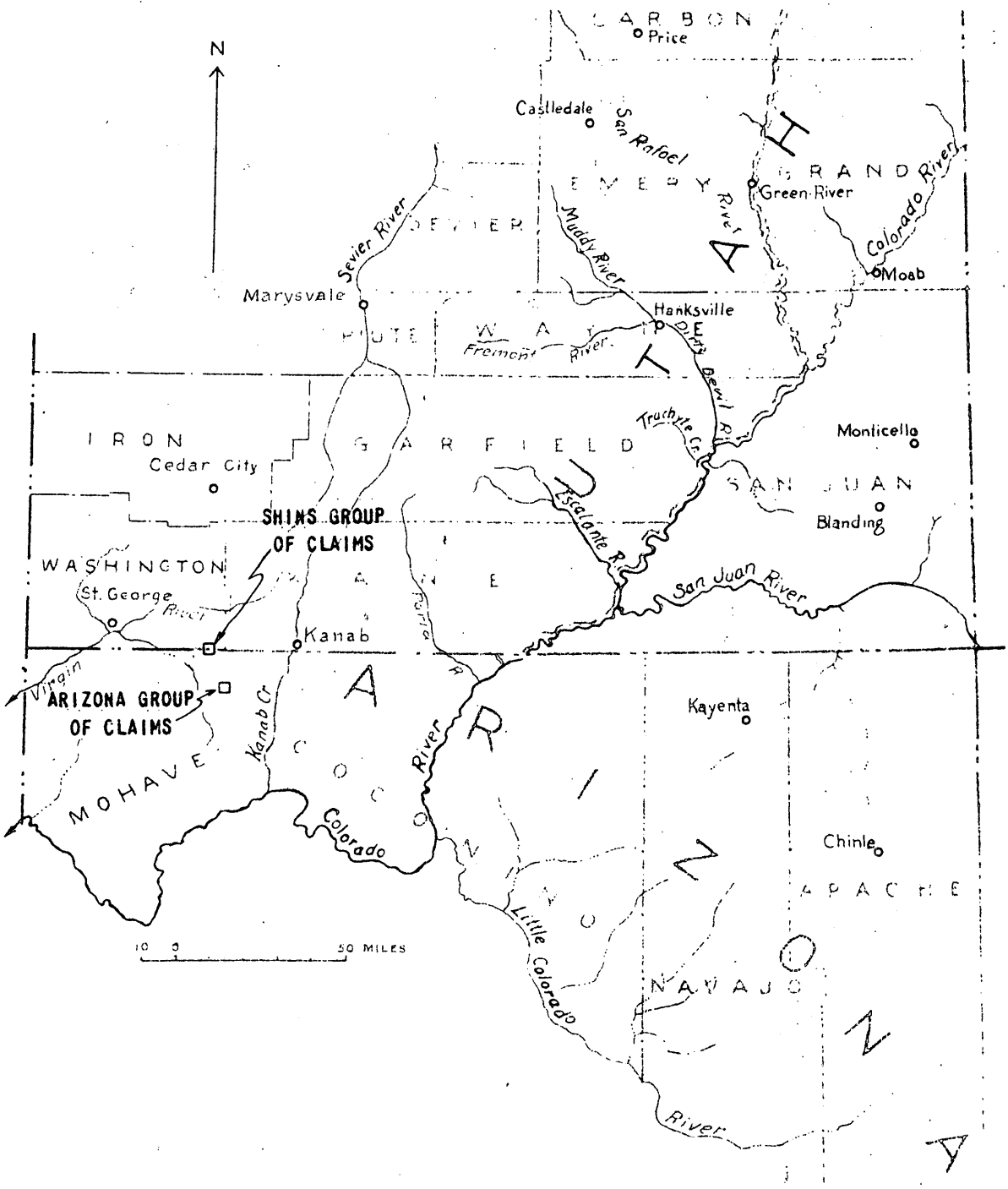
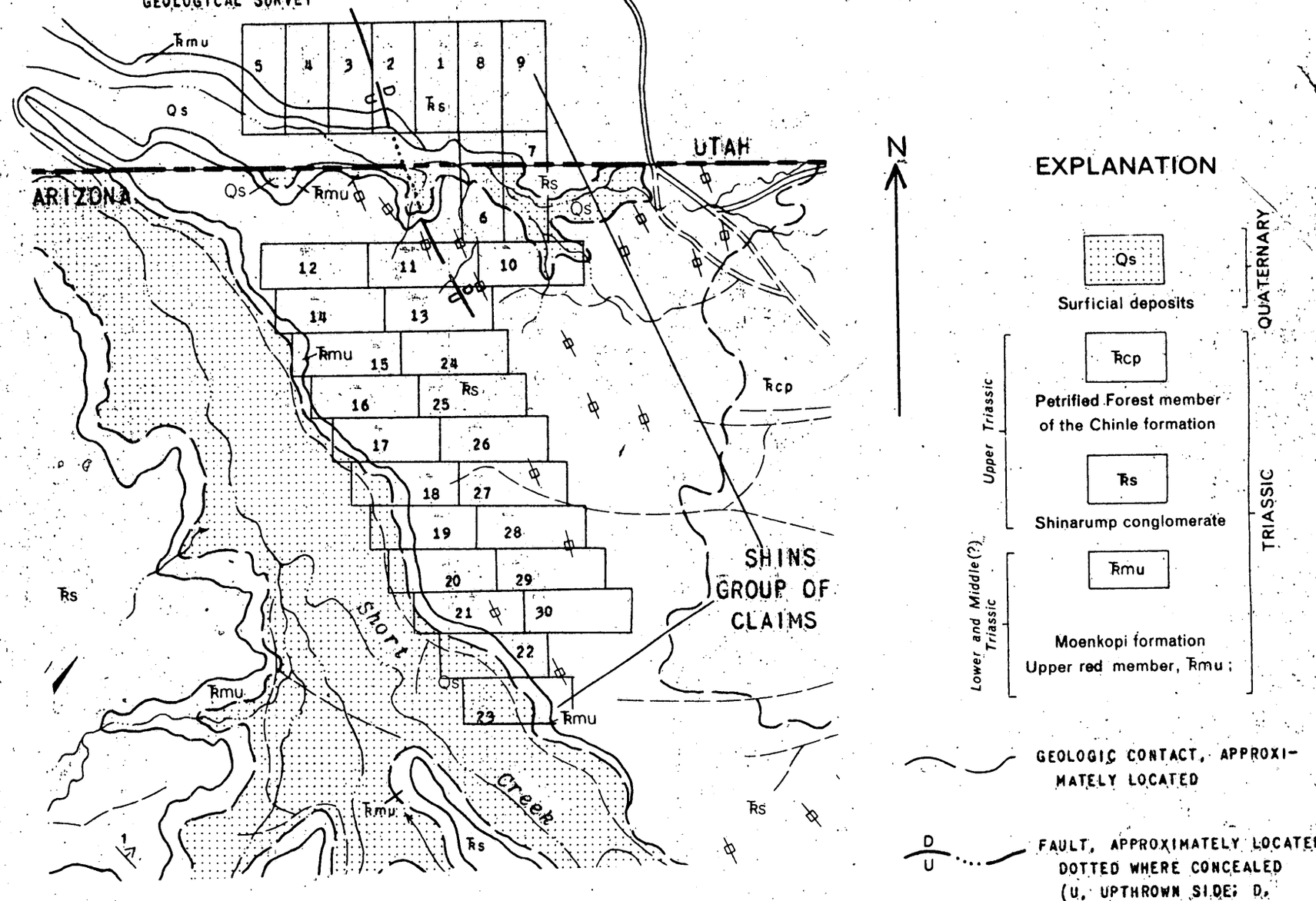


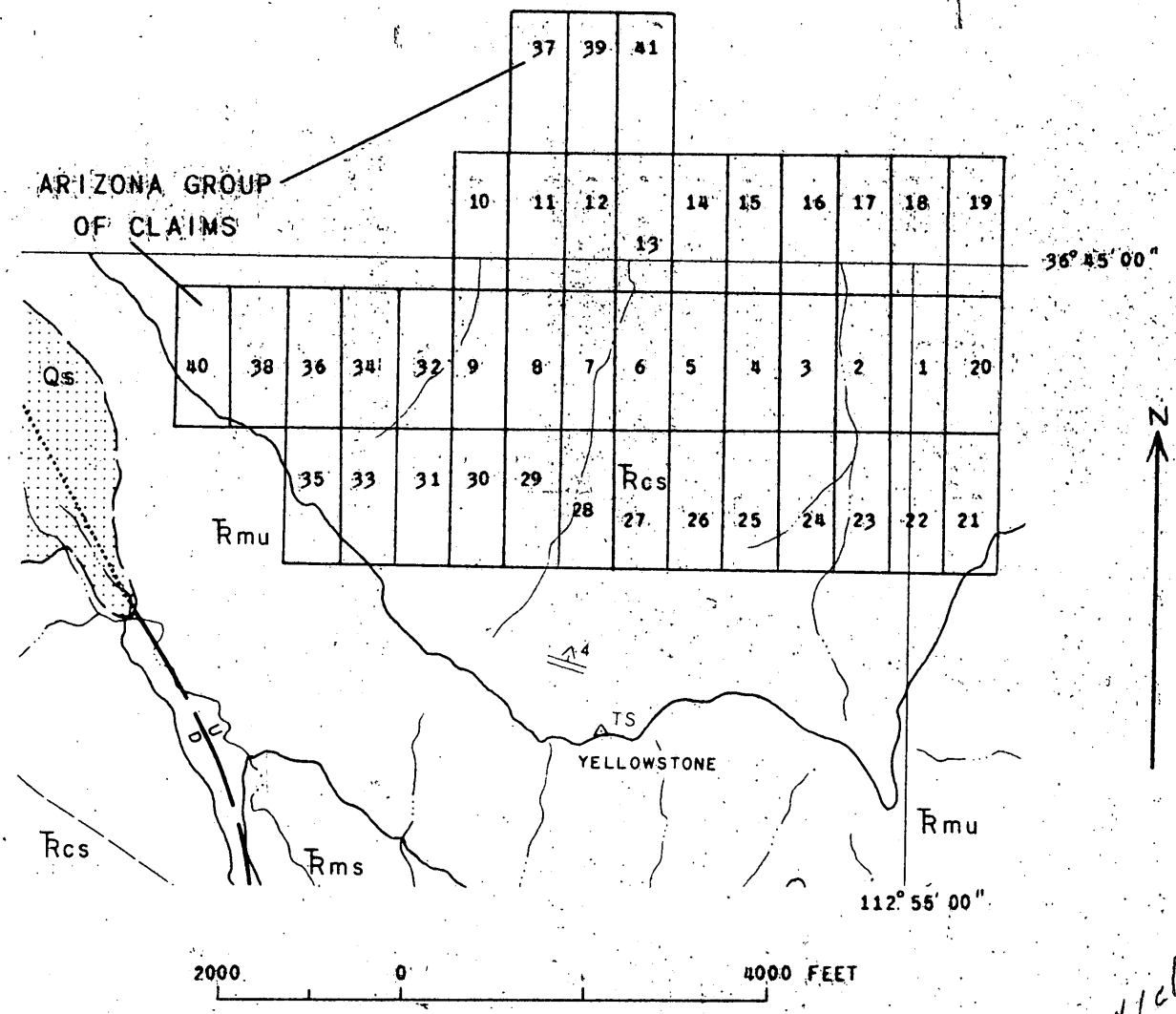
FIGURE 1. INDEX MAP OF PARTS OF ARIZONA AND UTAH SHOWING LOCATION OF THE SHINS AND ARIZONA GROUPS OF CLAIMS, ARIZONA URANIUM EXPLORATION COMPANY, MOHAVE COUNTY, ARIZONA, AND WASHINGTON COUNTY, UTAH.



NOTE: BASE FROM U.S. GEOLOGICAL SURVEY PHOTOGEOLOGIC QUADRANGLE MAPS, VIRGIN SE, AND LOST SPRING MOUNTAIN, NE. CLAIM BOUNDARIES MODIFIED FROM APPLICANTS MAP.

30 claims found

FIGURE 2. GEOLOGIC MAP SHOWING THE SHINS GROUP OF CLAIMS, ARIZONA URANIUM EXPLORATION COMPANY, MOHAVE COUNTY, ARIZONA, AND WASHINGTON COUNTY, UTAH.



4 claims

EXPLANATION

Qs	QUATERNARY SURFICIAL DEPOSITS
Ŧcs	SHINARUMP MEMBER OF TRIASSIC CHINLE FORMATION
	TRIASSIC MOENKOPI FORMATION:
Ŧmu	Ŧmu, UPPER RED MEMBER;
Ŧms	Ŧms, SHNABKAIB MEMBER
	GEOLOGIC CONTACT, APPROXIMATELY LOCATED
U/D	FAULT, APPROXIMATELY LOCATED; DOTTED WHERE CONCEALED (U, UPTHROWN SIDE; D, DOWNTHROWN SIDE)
4	STRIKE AND DIP OF BEDS

Note: BASE FROM U.S. GEOLOGICAL SURVEY PHOTOGEOLOGIC QUADRANGLE MAP, HEATON KNOLLS, NW. CLAIM BOUNDARIES FROM APPLICANTS MAP.

FIGURE 3. GEOLOGIC MAP SHOWING THE ARIZONA GROUP OF CLAIMS, ARIZONA URANIUM EXPLORATION COMPANY, MOHAVE COUNTY, ARIZONA.

700

FILE COPY
Surname: Murphy

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

MAY 1956

Hon. Carl Hayden
United States Senate
Senate Office Building
Washington 25, D. C.

Re: Docket No. DMEA-4123 (Uranium)
Arizona Uranium Exploration Company
Arizona and Shine claims
Mohave County, Arizona, and
Washington County, Utah

My dear Senator Hayden:

With reference to your letter of April 27, relating to the status of the above-docketed application, we have been advised by our Regional Office that a field examination of the property was made March 20 and 21, 1956, and a report on the results of this examination is being prepared.

I will be pleased to inform your office of our action in regard to the subject application when the report is received and reviewed here in Washington.

Your copy of my letter of February 29, is herewith returned.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure
FMMurphy/izm 5-1-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
DMEA Field Team, Region III (2) w/copy of incoming letter
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

4-30-56

CARL HAYDEN, ARIZ., CHAIRMAN

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THOMAS J. SCOTT, ASST. CLERK

United States Senate

COMMITTEE ON APPROPRIATIONS

April 27, 1956

RECEIVED
APR 30 1956

Mr. C. O. Mittendorf
Administrator
Defense Minerals Exploration
Administration
Department of the Interior
Washington 25, D. C.

Dear Mr. Mittendorf:

This refers to your courteous letter of February 29, copy enclosed for identification, concerning the status of the Arizona Uranium Exploration Company claims. It is my understanding that a field inspection of these claims took place in the latter part of March.

I shall appreciate your advising me what action your office has taken as a result of this field inspection.

Yours very sincerely,

Carl Hayden

U. S. S.

P. S. Please address reply to me, sending me original and one copy. Kindly return enclosures.

Surname copy

700

Murphy

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

FEB 29 1956

Hon. Carl Hayden
United States Senate
Senate Office Building
Washington 25, D. C.

Re: Docket No. DMEA-4123 (Uranium)
Arizona Uranium Exploration Company
Arizona and Shine claims
Mohave County, Arizona
Washington County, Utah

My dear Senator Hayden:

This is in response to your letter of February 27 requesting advice as to whether a field report relating to the above-docketed application has been received from the Regional Field Team.

The Region III Executive Officer will schedule a field examination of the captioned property and then submit a report to this office. Winter weather and bad road conditions have considerably reduced the number of field examinations that could be made in the Plateau area during recent months. Therefore, we cannot give you the precise date the examination of the subject property will be scheduled. However, the Executive Officer of DMEA Field Team, Region III, will contact the Applicant and schedule the examination on a date mutually agreed upon.

I will be pleased to keep you informed of any new action taken by this Agency in regard to the subject application.

Sincerely yours,

O. O. Mitchell

Administrator

Enclosure

FMMurphy/gla
2/28/56
cc to: Admr.'s Reading File
Docket
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)
w/2 copies incoming letter

R.G.S.

2-28-56 [illegible]

700

CARL HAYDEN, ARIZ., CHAIRMAN

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LISTER HILL, ALA.
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CHARLES E. POTTER, MICH.

EVERARD H. SMITH, CLERK
THOMAS J. SCOTT, ASST. CLERK

United States Senate

COMMITTEE ON APPROPRIATIONS

February 27, 1956

RECEIVED
FEB 28 1956

Mr. C. O. Mittendorf
Administrator
Defense Minerals Exploration
Administration
Department of the Interior
Washington 25, D. C.

Dear Mr. Mittendorf:

Referring to your letter of January 26, a copy of which is enclosed, I will appreciate your advice as to whether a report has been received from the Region III Field Team on the application filed by the Arizona Uranium Exploration Company.

Yours very sincerely,

Carl Hayden

U. S. S.

P. S. Please address reply to me; sending me original and one copy. Kindly return enclosures.

2-14-56 [illegible]

RECEIVED
FEB 13 1956

February 1, 1956

Memorandum

To: S. R. Wilson

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4123 (Uranium), Arizona Uranium Exploration Company, Arizona and Shine claims, Mohave County, Arizona and Washington County, Utah

Enclosed please find the subject application in the amount of $301,882.88.

A field examination and suitable report are required. The completed report should be sent directly to the Executive Officer, with a copy of the memorandum of transmittal to this office.

JOHN F. SHAW

John F. Shaw

cc: W. M. Traver (3)
E. N. Harshman
J. W. Kesler
M. H. Salsbury
Sec. Op. Com (2)

RECEIVED
FEB 13 1956

February 1, 1956

Memorandum

To: S. R. Wilson

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4123 (Uranium), Arizona Uranium Exploration Company, Arizona and Shine claims, Mohave County, Arizona and Washington County, Utah

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JOHN F SHAW

John F. Shaw

cc: W. M. Traver (3)
E. N. Harshman
J. W. Mealer
M. H. Salsbury
Sec. Op Com. (2)

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 (With brochure)
J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 4123 (Uranium), Arizona Uranium Exploration Company, Arizona and Shins claims, Mohave County, Arizona and Washington County, Utah

Enclosed is the subject application in the amount of $301,582.88. A field examination and suitable report are requested. Enclosed also is a copy of a letter from the Chairman of the Operating Committee and attached memoranda of review of the application by members of the Uranium Commodity Committee.

Attached to the brochure is a bound folder containing Geologic and Engineering Reports and maps. This is the only copy; therefore, please return it to this office with your Report of Examination.

W. M. TRAVER,

W. M. Traver

Enclosures

HMC:ab

cc: Chair. Op. Comm. (2)
Harshman
Docket 4123
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 (With brochure)
J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 4123 (Uranium), Arizona Uranium Exploration Company, Arizona and Shine claims, Mohave County, Arizona and Washington County, Utah

Enclosed is the subject application in the amount of $301,882.86. A field examination and suitable report are requested. Enclosed also is a copy of a letter from the Chairman of the Operating Committee and attached memoranda of review of the application by members of the Uranium Commodity Committee.

Attached to the brochure is a bound folder containing Geologic and Engineering Reports and maps. This is the only copy; therefore, please return it to this office with your Report of Examination.

W. M. TRAVER,

W. M. Traver

Enclosures

HMC:ab

cc: Chair. Op. Comm. (2)
Harshman
Docket 4123
Chron.

Surname copy

700

Murphy
Selfridge
Fitzpatrick

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 26 1956

Re: Docket No. DMEA-4123 (Uranium)
Arizona Uranium Exploration Company
Arizona and Shine claims
Mohave County, Arizona
Washington County, Utah

Dear Mr. Traver:

The captioned application is referred to Region III Field Team for investigation, a field examination if deemed advisable, and recommendation. A copy of the application was forwarded to your office on January 11, 1956.

Enclosed are copies of memoranda, dated January 12 and 19, 1956, from J. E. Crawford, USBM, and N. E. Nelson, USGS, respectively, relating to the subject application.

We are also enclosing a bound folder containing geologic and engineering reports and maps. This is the only copy; therefore, will you kindly return it to this office with your report and recommendation in regard to the subject application.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (245)

Enclosures

APPROVED:

/s/ Robert W. Geehan (245)
Member, Bureau of Mines

Thor H. Kiilsgaard (245)
Member, Geological Survey

FMMurphy/gla
1-24-56

cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Murphy

A.G.S.

Surname copy

700

Murphy
Ellis
Kilsgaard
Gleason
Selfridge
Fleman

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

JAN 26 1956

Mr. Carl Laney
Secretary and Treasurer
Arizona Uranium Exploration Company
P. O. Box 1823
Phoenix, Arizona

Re: Docket No. DMEA-4123 (Uranium)
Arizona and Shine claims
Mohave County, Arizona
Washington County, Utah

Dear Mr. Laney:

The application for assistance in exploring the subject claims, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred to the Executive Officer of Region III at the following address:

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

The Regional Office will contact you in regard to your project if additional information is required.

Sincerely yours,

S. O. [illegible]

Administrator

FTMurphy/gla
1-24-56
cc to: Admr.'s Reading File
Docket
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)

Surname copy

700

Murphy
Ely
Kiilsgaard
Gerhardt
Selfridge
Kyllmann

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

JAN 26 1956

Hon. Carl Hayden
United States Senate
Senate Office Building
Washington 25, D. C.

Re: Docket No. DMEA-4123 (Uranium)
Arizona Uranium Exploration Company
Arizona and Shine claims
Mohave County, Arizona
Washington County, Utah

My dear Senator Hayden:

Your letter of January 19, 1956, requested that you be advised of any new action relating to the above-docketed application for Government aid in an exploration project.

The subject application has been reviewed by the Washington office and is being referred to our Field Team in Region III as of the date of this letter. We will advise your office in regard to the application when we receive the Field Team's report.

Sincerely yours,

C. O. Mitendorf

Administrator

FTMurphy/gla
1-24-56
cc to: Admr.'s Reading File
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)

R.C.G.

CARL HAYDEN, ARIZ., CHAIRMAN
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LISTER HILL, ALA.
HARLEY M. KILGORE, W. VA.
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WARREN G. MAGNUSON, WASH.
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KARL E. MUNDT, S. DAK.
MARGARET CHASE SMITH, MAINE
HENRY DWORSHAK, IDAHO
EVERETT MCKINLEY DIRKSEN, ILL.
CHARLES E. POTTER, MICH.

EVERARD H. SMITH, CLERK
THOMAS J. SCOTT, ASST. CLERK

700

United States Senate

COMMITTEE ON APPROPRIATIONS

January 19, 1956

RECEIVED
JAN 20 1956
DMEA-4123

Mr. C. O. Mittendorf
Administrator
Defense Minerals Exploration
Administration
Department of the Interior
Washington 25, D. C.

Dear Mr. Mittendorf:

Referring to your letter of January 4, with regard to the financial assistance application filed by the Arizona Uranium Exploration Company, I am advised that this application has been returned to your office.

I will appreciate your advising me when any new action is taken on it.

Yours very sincerely,

Carl Hayden

U. S. S.

P. S. Please address reply to me; sending me original and one copy.

1-20-56 [illegible]

IN REPLY REFER TO:

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

RECEIVED
JAN 20 1956

January 19, 1956

Re: DMEA 4123
Arizona Uranium Exploration Co.
Shins and Arizona groups
Washington Co., Utah
Mohave Co., Arizona
$301,882.88 - Uranium

Memorandum

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

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

Subject: Review of application.

The applicant requests assistance in exploring 2 large groups of claims in northwestern Arizona and southwestern Utah. No detailed work program is submitted. The 24,000 feet of core drilling allowed for in the application would seem to be the product of a rough guess as to the drilling required. The drilling is to be done 'beyond' the rims in which miles of Shinarump formation is naturally exposed.

The application is supported by a long general geologic report and the assays of two samples, purportedly taken on the Shins Group. The samples assayed:

Type of sample and thickness	$\%eU_3O_8$	$\%U_3O_8$
Channel 2 feet	.05	.02
Selected 1 inch	.34	.20

The spectrographic analysis of one sample is given. The uranium content is given as not less than .02 percent and not more than .20 percent.

Evidently little close work has been done along the rims or the uranium mineralization is scanty. The consulting geologist recommends:- "The Shins property should receive some consideration because of the uranium assay returns and because of the possibility of ore on the flanks of channels that are observed in the area." No particular information is offered concerning the channels and no drilling project is outlined.

The applicant company appears to be in control of many claims. Probably these claims are underlain by the Shinarump formation and the natural exposures of the formation in front of or on the controlled properties, appear to have a length of 3 to 4 miles. Channels are mentioned in titles of photographs submitted but none are delineated on maps.

Lacking an outlined project based on particular information, the drilling requested would be somewhat prospective in nature, but unless definitely determined, by prospecting and geologic study, to be wholly unfavorable 'territory', the properties may deserve some work.

Referral to the Field Team is recommended. A recommendation of denial by it, without examination, will not be considered out of order.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
JAN 20 1956

January 19, 1956

Re: DMEA 4123
Arizona Uranium Exploration Co.
Shine and Arizona groups
Washington Co., Utah
Mohave Co., Arizona
$301,882.88 - Uranium

Memorandum

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

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

Subject: Review of application.

The applicant requests assistance in exploring 2 large groups of claims in northeastern Arizona and southwestern Utah. No detailed work program is submitted. The 24,000 feet of core drilling allowed for in the application would seem to be the product of a rough guess as to the drilling required. The drilling is to be done 'beyond' the rims in which miles of Shinarump formation is naturally exposed.

The application is supported by a long general geologic report and the assays of two samples, purportedly taken on the Shine Group. The samples assayed:

Type of sample and thickness	% U_3O_8	% U_3O_8
Channel 2 feet	.05	.02
Selected 1 inch	.34	.20

The spectrographic analysis of one sample is given. The uranium content is given as not less than .02 percent and not more than .20 percent.

Evidently little close work has been done along the rims or the uranium mineralization is scanty. The consulting geologist recommends:- "The Shine property should receive some consideration because of the uranium assay returns and because of the possibility of ore on the flanks of channels that are observed in the area." No particular information is offered concerning the channels and no drilling project is outlined.

The applicant company appears to be in control of many claims. Probably these claims are underlain by the Shinarump formation and the natural exposures of the formation in front of or on the controlled properties, appear to have a length of 3 to 4 miles. Channels are mentioned in titles of photographs submitted but none are delineated on maps.

Lacking an outlined project based on particular information, the drilling requested would be somewhat prospective in nature, but unless definitely determined, by prospecting and geologic study, to be wholly unfavorable 'territory', the properties may deserve some work.

Referral to the Field Team is recommended. A recommendation of denial by it, without examination, will not be considered out of order.

N. E. Nelson

N. E. Nelson

NENelson:iml
G-1/19/56

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

1-13-56 [illegible]

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

RECEIVED
JAN 13 1956

January 12, 1956

RECEIVED
JAN 13 1956

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 4123, Arizona Uranium Exploration Company, Washington County, Utah, and Mohave County, Arizona

I have reviewed the attached application of the Arizona Uranium Exploration Company, DMEA Docket 4123, dated January 9 and received in this office January 12. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Arizona Uranium Exploration Company has requested Federal assistance to explore for uranium a group of claims in Washington County, Utah, and Mohave County, Arizona. The total estimated cost is $301,882.88.

The applicant states that geologic and engineering reports and maps accompany the application, but none are available to this office for review.

The exploration program is very inadequately described by the applicant as merely "will drill under the direct supervision of a mining engineer and geologist." A more comprehensive description is desirable for a project in the magnitude requested. The only material contained in the application available for review are an exceedingly top-heavy cost resume and a list of the recorded claims.

The application does not contain sufficient information to warrant consideration for Federal assistance; denial without prejudice is recommended.

John E. Crawford
John E. Crawford

Attachment

RECEIVED
JAN 11 1956

Jan. 9, 1956

United States Dept. of Interior
Defense, Minerals Exploration Administration
Atten: Mr. C. O. Mittendorf, Administrator
Washington 25, D. C.

Dear Mr. Mittendorf:

Today, we mailed you a letter, forms and etc. regarding financial assistance for mineral exploration.

We believe we inadvertently neglected to enclose our return address.

Please note:

Arizona Uranium Exploration Company
Carl Laney, Sec. & Treas.
P.O. Box 1823
Phoenix, Arizona

Sincerely yours,

Carl Laney

Carl Laney

By: Marion Barbeau
Secy.

January 11, 1956
Subject: DMEA-4123
Re: Exploration Assistance
Shins & Arizona Claims

Arizona Uranium Exploration Company
P. O. Box 1823
Phoenix, Arizona

Gentlemen:

The receipt of your application dated January 9, 1956, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4123 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

P. S. Four copies of application are required, the fifth application is being returned.

RECEIVED

JAN 11 1956

January 9, 1956

United States Dept. of the Interior
Defense Minerals Exploration Administration
Attention: Mr. C. O. Mittendorf
Washington 25, D. C.

Dear Mr. Mittendorf:

As requested in your letter of January 4, 1956, we are re-submitting our application for financial assistance on an exploration project.

The application has been made on form MF-103. An original and four copies are enclosed herewith, together with supporting data for the application.

Your prompt attention to this matter will be appreciated.

Sincerely yours,

Carl Laney,
Sec. & Treas.

cc: The Honorable Carl Hayden

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
JAN 11 1956

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 - 4123
Metal or Mineral Uranium
Date Received 1-11-56
Estimated Cost $301,882.88
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: Arizona Uranium Exploration Company
Carl Laney, Sec. & Treas. & Manager & "D"
James Hamblen, Pres. & "D" - 61 E. Valencia Drive., Phoenix, Ariz.
W. M. Bachman, Vice Pres. & "D" - 137 E. Carter Road., Phoenix, Ariz.

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Location Notice of Discovery filed and all mining laws complied with. Location work completed. See resume herewith for reference to book and page as recorded.

(*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 unpatented claims, Federal and School Land. All mineral rights open.

(*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.

(*e*) If you own the land, describe any liens or encumbrances on it not applicable

(*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.

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

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

(*c*) The work will start within 15 days and be completed within ~~10~~ 12 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)?

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

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

Explain in detail on acompanying paper.

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 January 9, 1956

Arizona Uranium Exploration Co.
(Applicant)

By Carl Laney
Carl Laney, ~~Sec.~~ & Treas. & Mgr.

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

3-b. The Shins and the Arizona claims.

3-d. See resume herewith.

3-f. See resume (3-d).

4-a. Location work completed. Please refer to Geological Survey Report.

RECEIVED
JAN 11 1956

4-b. Not applicable.

4-c. Large channel of shinarump, U308 Uranium.

Geologic and Engineering report and maps herewith, (Would prefer to have them returned, on completion of or in the final dispostion of said application).

4-d. 25 miles from Hurricane, Utah. Due East shipping point Maryvale, Utah. 123 miles Northeast. Gila and Salt River base and Meridian, township 39-40-41 North Sec. and range 6W. Washington County, Utah and Mohave County, Arizona.

Dirt roads within 1000' of property. Access very good.

No water; however water level not very deep, based on the opinion of Dr. Theiel, Ground Water Consultant.

No power at site; however electric power 25 miles West.

4-e. Plenty of manpower, materials and equipment available.

No power.

No water; water level not very deep.

5-a. Uranium and some copper.

5-b. Will drill under the direct supervision of a mining engineer and geologist.

5-d. Carl Laney Sec. & Treasurer has been associated with Uranium and Copper mining for some years, also have worked very close with some of the leading geologists in the United States.

James E. Hamblen, Business Man

W. M. Bachman, Business Man

The operation will be supervised by a confident Geologist, Mining Engineer, and ourselves on a full time scale.

6-. See resume herewith.

6-a. None.

6-b. 2-geologists, 1-mining engineer, 1-manager of operations. Labor at union wages.

6-c. See resume.

6-d. See above resume. After 6-months 90% will apply towards purchase of equipment.

6-e. None.

6-f.

20 x 40 Bunk House	6,400.00
20 x 20 Store Room	3,200.00
20 x 20 Kitchen	3,200.00
Toilet, Power Room & Misc.	1,500.00
Total	14,300.00

6-g. 15% of payroll. All leased equipment will be maintained by Leesor.

6-h. 5% to 10%.

7-a. We are prepared to comply accordingly.

7-b. Bank letter of credit.

Resume No. 6-d

No. 1.	Compressor (210') $112.00 per month	112.00
No. 2	Rubber hose and Jack Hammers, $50.00 per mo.	50.00
No. 3	Drill Steel, $2.00 per ft.	400.00
3-a	Bits, $1.75 and up	300.00
No. 4	2 Pick Up Trucks, $80.00 per month	160.00
No. 5	Core drilling per ft., $5.00 per ft.	10,000.00
No. 6	Blasting Powder, fuses, caps and misc., $380.00 per month	380.00
No. 7	Portable Power Unit, $200.00	200.00
No. 8	Assay Work, $300.00 per month	300.00
No. 9	Bull Dozer, $500.00 per month	500.00
No.10	Transportation, $500.00 per month	500.00
No.11	Tools, $300.00 per month	300.00
	Total	$ 13,202.00

Resume No. 6-b

Geologist	2,000.00	per mo.
Mining Engineer	1,500.00	" "
Supervising Mgr.	1,000.00	" "
Labor	2,500.00	" "
Payroll	$ 7,000.00	" "

Listed Below Are The Claims As Recorded In the Mohave County, Arizona Recorder's Office

Book of Mines

Shins Claim No.	13				
	17	4M	-	Page	113
	18	4M	-	"	114
	19	4M	-	"	115
	20	4M	-	"	116
	21	4M	-	"	117
	22	4M	-	"	118
	23	4M	-	"	119
	24	4M	-	"	120
	25	4M	-	"	121
	26	4M	-	"	122
	27	4M	-	"	123
	28	4M	-	"	124
	29	4M	-	"	125
	30	4M	-	"	126
Ariz. Claims No.	1	4R	-	"	383
	2	4R	-	"	384
	3	4R	-	"	385
	4	4R	-	"	386
	5	4R	-	"	387
	6	4R	-	"	388
	7	4R	-	"	389
	8	4R	-	"	390
	9	4R	-	"	391
	10	4R	-	"	392
	11	4R	-	"	393
	12	4R	-	"	394
	13	4R	-	"	395
	14	4R	-	"	396
	15	4R	-	"	397
	16	4R	-	"	398
	17	4R	-	"	399
	18	4R	-	"	400
	19	4R	-	"	401
	21	4R	-	"	403
	22	4R	-	"	404
	23	4R	-	"	405
	24	4R	-	"	406
	25	4R	-	"	407
	26	4R	-	"	408
	27	4R	-	"	409
	28	4R	-	"	410
	29	4R	-	"	411
	30	4R	-	"	412
	31	4R	-	"	413
	32	4R	-	"	414
	33	4R	-	"	415
	34	4R	-	"	416
	35	4R	-	"	417
	36	4R	-	"	418
	37	4R	-	"	419
	38	4R	-	"	420
	39	4R	-	"	421
	40	4R	-	"	422
	41	4R	-	"	423

Photostat may be had on request of the Utah, Claims filed with County Recorder of Washington County, St. George, Utah.

BREAKDOWN SHEET

		Total 12 Months
Resume 6D	$13,202.00 per month	$ 158,424.00
Resume 6B	$ 7,000.00 per month	84,000.00
Resume 6F		14,300.00
Resume 6G	$1,050.00 per month	12,600.00
Resume 6H	$2,713.24 per month	32,558.88
	Total	$ 301,882.88

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Crawford

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

RECEIVED
JAN 11 1956

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-4123
Metal or Mineral Uranium
Date Received 1-11-56
Estimated Cost $301,882.88
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: Arizona Uranium Exploration Company
Carl Laney, Sec. & Treas. & Manager & "D"
James Hamblen, Pres. & "D" - 61 E. Valencia Drive., Phoenix, Ariz.
W. M. Bachman, Vice Pres. & "D" - 137 E. Carter Road., Phoenix, Ariz.

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Location Notice of Discovery filed and all mining laws complied with. Location work completed. See resume herewith for reference to book and page as recorded.

(*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 unpatented claims, Federal and School Land. All mineral rights open.

(*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.

(*e*) If you own the land, describe any liens or encumbrances on it not applicable

(*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.

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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.).

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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)?

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

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

Explain in detail on acompanying paper.

CERTIFICATION

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Dated January 9, 1956

Arizona Uranium Exploration Co.
(Applicant)

By [signature]
Carl Laney, Sec. & Treas. & Mgr.

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

3-b. The shins and the Arizona claims.

3-d. See resume herewith.

3-f. See resume (3-d).

4-a. Location work completed. Please refer to Geological Survey Report.

RECEIVED
JAN 11 1956

4-b. Not applicable.

4-c. Large channel of shinarump, U308 Uranium.

Geologic and Engineering report and maps herewith, (Would prefer to have them returned, on completion of or in the final disposition of said application).

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James E. Hamblen, Business Man

W. M. Bachman, Business Man

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6-d. See above resume. After 6-months 90% will apply towards purchase of equipment.

6-e. None.

6-f.

20 x 40 Bunk House	6,400.00
20 x 20 Store Room	3,200.00
20 x 20 Kitchen	3,200.00
Toilet, Power Room & Misc.	1,500.00
Total	14,300.00

6-g. 15% of payroll. All leased equipment will be maintained by Lessor.

6-h. 5% to 10%.

7-a. We are prepared to comply accordingly.

7-b. Bank letter of credit.

Resume No. 6-d

No. 1.	Compressor (210') $112.00 per month	112.00
No. 2	Rubber hose and Jack Hammers, $50.00 per mo.	50.00
No. 3	Drill Steel, $2.00 per ft.	400.00
3-a	Bits, $1.75 and up	300.00
No. 4	2 Pick Up Trucks, $80.00 per month	160.00
No. 5	Core drilling per ft., $5.00 per ft.	10,000.00
No. 6	Blasting Powder, fuses, caps and misc., $380.00 per month	380.00
No. 7	Portable Power Unit, $200.00	200.00
No. 8	Assay Work, $300.00 per month	300.00
No. 9	Bull Dozer, $500.00 per month	500.00
No.10	Transportation, $500.00 per month	500.00
No.11	Tools, $300.00 per month	300.00
	Total	$ 13,202.00

RECEIVED
JAN 11 1956

Resume No. 6-b

Geologist	2,000.00	per mo.
Mining Engineer	1,500.00	" "
Supervising Mgr.	1,000.00	" "
Labor	2,500.00	" "
Payroll	$ 7,000.00	" "

Listed Below Are The Claims As Recorded In the Mohave County, Arizona Recorder's Office

Book of Mines

Shins Claim No.	13			
	17	4M -	Page	113
	18	4M -	"	114
	19	4M -	"	115
	20	4M -	"	116
	21	4M -	"	117
	22	4M -	"	118
	23	4M -	"	119
	24	4M -	"	120
	25	4M -	"	121
	26	4M -	"	122
	27	4M -	"	123
	28	4M -	"	124
	29	4M -	"	125
	30	4M -	"	126
Ariz. Claims No.	1	4R -	"	383
	2	4R -	"	384
	3	4R -	"	385
	4	4R -	"	386
	5	4R -	"	387
	6	4R -	"	388
	7	4R -	"	389
	8	4R -	"	390
	9	4R -	"	391
	10	4R -	"	392
	11	4R -	"	393
	12	4R -	"	394
	13	4R -	"	395
	14	4R -	"	396
	15	4R -	"	397
	16	4R -	"	398
	17	4R -	"	399
	18	4R -	"	400
	19	4R -	"	401
	21	4R -	"	403
	22	4R -	"	404
	23	4R -	"	405
	24	4R -	"	406
	25	4R -	"	407
	26	4R -	"	408
	27	4R -	"	409
	28	4R -	"	410
	29	4R -	"	411
	30	4R -	"	412
	31	4R -	"	413
	32	4R -	"	414
	33	4R -	"	415
	34	4R -	"	416
	35	4R -	"	417
	36	4R -	"	418
	37	4R -	"	419
	38	4R -	"	420
	39	4R -	"	421
	40	4R -	"	422
	41	4R -	"	423

Photostat may be had on request of the Utah, Claims filed with County Recorder of Washington County, St. George, Utah.

BREAKDOWN SHEET

	Total 12 Months
Resume 6D (2) $13,202.00 per month	$ 158,424.00
Resume 6B (1) $ 7,000.00 per month	84,000.00
Resume 6F (3)	14,300.00
Resume 6G (4) $1,050.00 per month	12,600.00
Resume 6H (5) $2,713.24 per month	32,558.88
Total	$ 301,882.88

Adams

MAR 4 1956

Mr. Carl Laney
Arizona Uranium Exploration Company
P. O. Box 1823
Phoenix, Arizona

Dear Mr. Laney:

Your application for financial assistance on an exploration project sent to the Honorable Carl Hayden has been forwarded by him to this agency for consideration.

Please be advised that the material and MF-100 is being returned, herewith, since it does not comply with the instructions for filing an application for financial assistance on an exploration project.

The application should be made on form, MF-103, a set of which is enclosed. An original and four copies are required by this office, together with supporting data for the application. The form, MF-100 is not now a part of the application form, MF-103. There is enclosed for your information in preparing the application form a copy of DMEA Order-I, Amended, together with a copy of the pamphlet, "The Defense Minerals Exploration Program."

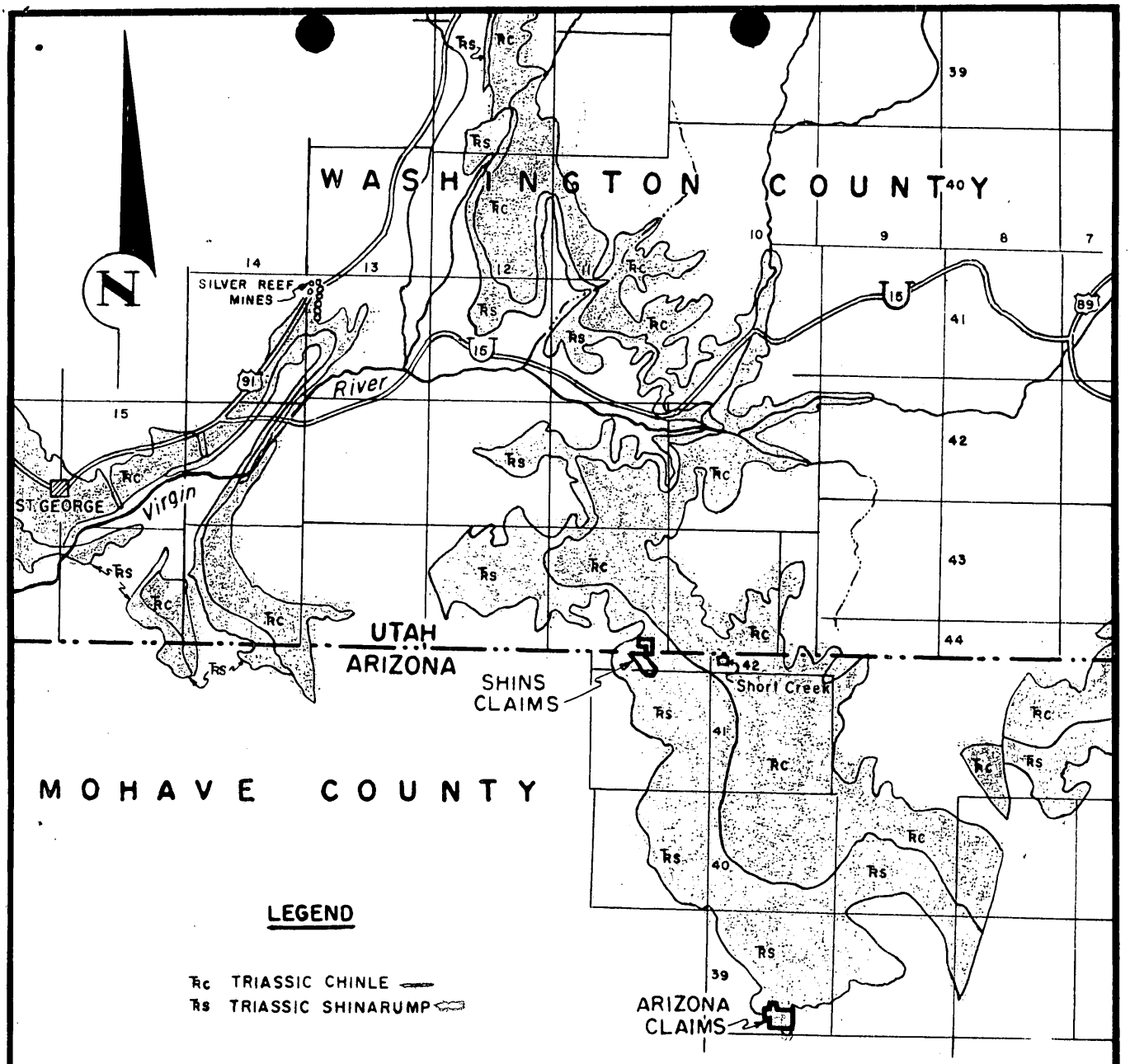
Prompt consideration will be given your application upon its receipt by this agency.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosures 3
REAdams:mm - 3/4/56
Copy to: Adm. R. File
Administrator
Mail & Files
Chron.



LEGEND

Rc TRIASSIC CHINLE

Rs TRIASSIC SHINARUMP

NOTE

DATA TRACED FROM U.S.G.S. MAP
PREPARED IN COOPERATION WITH U.S.A.E.C.

0 5 10 15 20
SCALE OF MILES

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

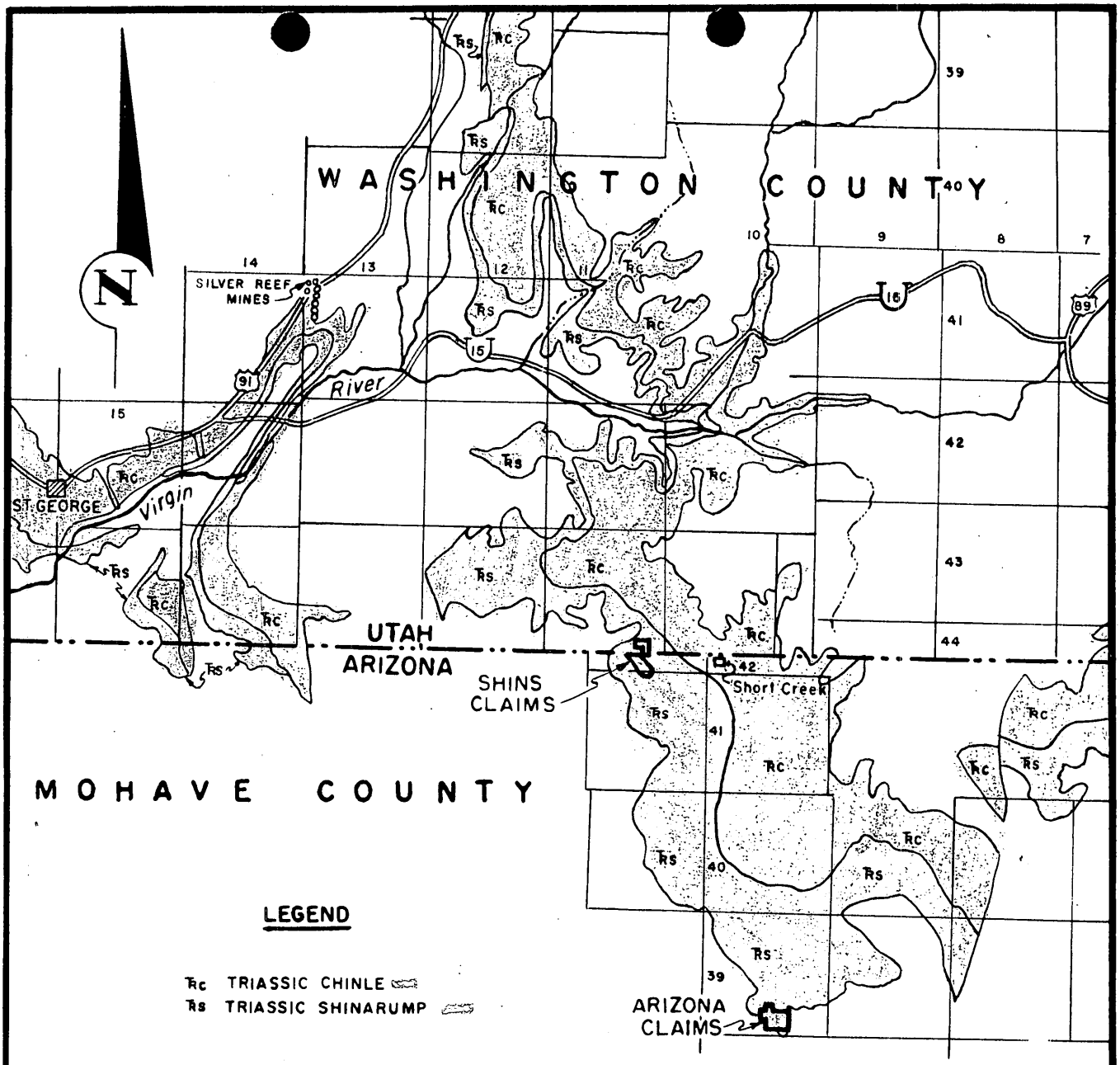
Fig. 2 DMEA Docket No. 4123

Geologic Plan

ARIZONA URANIUM EXPLORATION CO.
ARIZONA AND SHINS CLAIMS

WASHINGTON CO., UTAH, AND MOHAVE CO., ARIZONA

ENGINEER: *Millard M. GILKEY*	DATE: APRIL 18, 1956
TRACED: APR. 1956; A.P.T.S.	1900 - 383 - G
CHECKED:	



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