STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 25 1953

TO : E. Wm. Ellis, DMEA Member
Uranium Commodity Committee

DATE: February 24, 1953

FROM : Arthur P. Butler, Jr., USGS Member, Uranium Commodity Committee

SUBJECT: Final Report, DMEA Docket 2589 (Uranium), A. E. Carter and G. L. Lamb, applicants: Carter and Lamb Rainbow claim, SW¼ Sec. 24, T. 40 N., R. 6 W., Mohave County, Arizona.

I have reviewed the Field Team report and supporting memoranda pertaining to the property identified in the subject above and concur with the recommendations of the Team that Government assistance for exploration be denied.

Arthur P. Butler, Jr.

Arthur P. Butler, Jr.

Copy to: E. Wm. Ellis (2)

IN REPLY REFER TO:

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

E. Wm. Ellis, DMEA Member
Uranium Commodity Committee
Arthur P. Butler, Jr., USGS Member, Uranium Commodity Committee

February 24, 1953

Final Report, DMEA Docket 2589 (Uranium) A. E. Carter and G. L. Lamb, applicants: Carter and Lamb Rainbow claim, SW¼ Sec. 24, T. 40 N., R. 6 W., Mohave County, Arizona.

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Arthur P. Butler, Jr.

Copy to: E. Wm. Ellis (2)

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

February 24, 1953

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 25 1953

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

From: H. D. Keiser, Bureau of Mines Member
Uranium Commodity Committee

Subject: Final report, DMEA Docket 2589, Carter and Lamb Rainbow Claim, Mohave County Arizona.

I have reviewed the subject final report and discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

It is recommended that the report be approved and an exploration loan denied.

The subject report has been forwarded to the Chief, Minerals Division, Bureau of Mines, in accord with the routing slip attached thereto.

H. D. Keiser

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

February 24, 1953

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

From: H. D. Keiser, Bureau of Mines Member
Uranium Commodity Committee

Subject: Final report, DMEA Docket 2589, Carter and Lamb Rainbow Claim, Mohave County Arizona.

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Signed

H. D. Keiser

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

224 New Customhouse
Denver 2, Colorado

February 10, 1953

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2589, $17,567.92 (Uranium)
Barter and Lamb Rainbow Claim, Mohave County, Arizona

Enclosed herewith are four copies of the final report concerning the subject docket, two copies of form 3b, and a copy of the letter of denial to the applicant.

The Grand Junction Field Office of the A.E.C. has been contacted for information regarding this property, and was found to have no recommendations.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-20-53
(date)

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 12 1953

February 10, 1953

Carter and Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

Re: DMEA Docket 2589

Gentlemen:

Reference is made to your application for Government aid in exploration work on the Rainbow Uranium Claim.

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

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of uranium by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise you that your application for Government aid is denied.

Very truly yours,

W. H. King
W. H. King
Field Team, Region IV

A. H. Koschmann
A. H. Koschmann
Field Team, Region IV

FJB:oc
cc: Administrator (DMEA)
WRStorms
Subject
Chron.
AHKoschmann (2)

Reviewed by
DMEA OPERATING COMMITTEE
2-20-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

February 10, 1953

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 2589, $17,567.92 (Uranium) Carter and Lamb Rainbow Uranium Claim, Mohave County, Arizona

Enclosed are the original and ten copies of the final report on the subject property.

An outcrop of the Shinarump conglomerate is sparsely mineralized with copper and uranium. The outcrop area is small and the mineralization is not commercial. The examining engineer recommends denial on the basis of a poor production potential. We concur with the recommendation .

A copy of the brochure is enclosed.

W. H. King
W. H. King

Enclosures

Approved by
DMEA [illegible] COMMITTEE
2-20-53
(date)

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 16 1953

224 New Customhouse
Denver 2, Colorado

February 10, 1953

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2589, $17,567.92 (Uranium)
Carter and Lamb Rainbow Claim, Mohave County, Arizona

Enclosed herewith are four copies of the final report concerning the subject docket, two copies of form 3b, and a copy of the letter of denial to the applicant.

The Grand Junction Field Office of the A.E.C. has been contacted for information regarding this property, and was found to have no recommendations.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-20-53

COPY

224 New Customhouse
Denver 2, Colorado

February 10, 1953

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1630 Yale Avenue
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Very truly yours,

/s/
W. H. King
Field Team, Region IV

/s/
A. H. Koschmann
Field Team, Region IV

FJB:oc
cc: Administrator (DMEA)
WRStorms
Subject
Chron.
AHKoschmann (2)

Reviewed by
DMEA OPERATING COMMITTEE

2-20-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 16 1953

Mining Division
Region IV

February 10, 1953

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 8510, $17,987.98 (Uranium) Carter and Lamb Rainbow Uranium Claim, Mohave County, Arizona

Enclosed are the original and ten copies of the final report on the subject property.

An outcrop of the Shinarump conglomerate is sparsely mineralized with copper and uranium. The outcrop area is small and the mineralization is not commercial. The examining engineer recommends denial on the basis of a poor production potential. We concur with the recommendation.

A copy of the brochure is enclosed.

W. H. King
W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-20-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P.O.Box 4126, University Station
Tucson 5, Arizona

Air Mail

February 5, 1953

Memorandum

To: A. H. Koschmann, Denver, Colorado

From: A. F. Shride, Tucson, Arizona

Subject: Data available from Grand Junction Survey office and AEC regarding DMEA-2589, Rainbow Claim, Carter and Lamb, Mohave County, Arizona

As per your request all possible sources of information in regard to the Rainbow uranium property have been contacted.

The Grand Junction Survey and AEC offices have informed me that they have no information on this property. Messrs. E. E. Thurlow and F. J. Williams of the Salt Lake City AEC office inform me that the only information that they have is published on page 16 of RMO-659. This is considerably less information than that given in our report and in no way conflicts with the data given in the report. The equivalent uranium value of a grab sample taken from the property by D. L. Everhart of the AEC is 0.026, which is in close agreement with the sample taken by the examining team.

The above should allow you to complete the processing of this docket. For all other uranium dockets I am contacting the appropriate offices prior to field examination.

A. F. Shride

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P.O.Box 4126, University Station
Tucson, Arizona

Air Mail

February 5, 1953

Memorandum

To: A. H. Koschmann, Denver, Colorado

From: A. F. Shride, Tucson, Arizona

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The above should allow you to complete the processing of this docket. For all other uranium dockets I am contacting the appropriate offices prior to field examination.

/s/ A. F. Shride

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
200 New Customhouse
Denver 2, Colorado

December 30, 1952

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2589, Rainbow Claim, Carter and Lamb, Mohave County, Arizona. Uranium.

Enclosed are the original and 10 copies of a geologic appraisal memorandum by A. F. Shride of the U. S. Geological Survey, covering the above docket.

It has been recommended that the loan be denied.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

2-9-53 -- P. S.: Attached also are 11 copies of letter of 2-5-53 from A. F. Shride indicating that AEC has been contacted regarding this docket.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P.O.Box 4126, University Station
Tucson 5, Arizona

December 19, 1952

Memorandum

To: A. H. Koschmann, Denver, Colorado

From: A. F. Shride, Tucson, Arizona

Subject: Geologic Appraisal of DMEA 2589, Rainbow Claim, Carter and Lamb - Applicants, Mohave County, Arizona (Uranium)

An examination of the Rainbow uranium claim was made on July 30, 1952 by H. C. Granger and R. B. Raup, Jr. of the Geological Survey in company with Mr. George Lamb, one of the owners of the claim. Mr. Lamb at that time was not informed of the type of exploration requested by his partner, Mr. Carter, but did give the Survey personnel all the information he had concerning the property. The following data is compiled from notes in a file report by Granger and Raup. The conclusions are mine.

The Rainbow claim is in the southwest corner of Sec. 24, T. 40 N., R. 6 W. The deposit is 23 road miles west of Fredonia, Arizona via the Pipe Springs road. The claim is on an east-facing escarpment on Shinarump conglomerate. Most of the Shinarump scarps of the region are characterized by cliffs; at the Rainbow property the Shinarump outcrops as a steep slope which includes numerous rounded knolls. The deposit is developed by several shallow pits, bull-dozer trenches, an 18-foot shaft, and two 8-foot churn drill holes.

The Shinarump conglomerate, as exposed along the escarpment, is composed of buff to gray, coarse- to medium-grained sandstone. Sand grains are as much as one-quarter inch in diameter. Dark red to brown claystone

galls are scattered throughout the sandstone; some galls are as much as 1 foot in diameter. The sandstone is well cross-bedded; individual lenticular masses of sandstone vary markedly by differences in color, grain size, and claystone content. The Shinarump conglomerate appears to be more than 25 feet thick in this area; individual sandstone lenses are mostly less than 4 feet in thicknesses.

Several of the exposures seen on the slopes are stained by copper and iron oxides. Copper as malachite is disseminated around the grains of the sandstone. Although malachite is most abundant in the coarser-grained sandstone lenses, minor copper staining is visible on most of the exposures. Mr. Lamb reported that samples from a sandstone lense at the top of the 18-foot shaft assayed from 10 to 17 percent copper for a thickness of 3 feet. This sandstone lense may be the same as that exposed in a pit 20 feet south of the shaft. This pit seems to be in the most highly mineralized part of the area examined. The sandstone of the bottom 15 feet of the shaft was reported by Mr. Lamb to have an average copper content of 1.7 percent.

Uranium mineralization is most noticeable in a 75 foot square area centered about the above noted shaft and pit. In this area scintillometer readings are 4 to 9 times background count. Elsewhere along the 1000 foot strike length of the Shinarump outcrop radioactivity is 2 to 3 times background. No uranium minerals were identified. According to Mr. Lamb, the sandstone lense at the top of the shaft assayed 0.16 percent U_3O_8, and the sandstone of the remainder of the shaft is almost barren of uranium.

In the area examined there are only about 1200 tons of rock, which from visual and radiometric appraisal, held much promise of containing 0.1 percent U_3O_8. A sample of the most likely material assayed as follows:

	%eU	%U	%Cu
Sample RR-3	0.020	0.024	0.75

Analysis by Denver Laboratory, Trace Elements Section, U. S. Geological Survey.

This analysis does not substantiate the assays claimed by Mr. Lamb and noted in above paragraphs. It is possible that this favorable sandstone lense or other like small lenses, not exposed, may extend beneath the escarpment. Because of the likely discontinuity, small sizes and probable low uranium content of such lenses, the extensive drilling necessary to find them is not warranted.

It is recommended that an exploration loan be denied.

A. F. Shride

A. F. Shride
Geologist

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA-2589, Carter and Lamb Rainbow Uranium Claim

Mohave County, Ariz.

W. E. Young, Mining Engineer
U. S. Bureau of Mines

John F. Haynes, Mining Engineer
U. S. Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
2-20-53
(date)

December 1952

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Wm. E. Young[1] and John F. Haynes[1]

A. E. Carter and George L. Lamb applied to the Defense Minerals Exploration Administration in June 1952 for a loan of $17,567.92 to explore their uranium-bearing property by diamond drill holes, under the Defense Production Act of 1950, as amended. Their application was docketed as DMEA-2589 and sent to the field for an examination of the property. This examination was made early in December 1952 by William E. Young and John F. Haynes of the Bureau of Mines. On July 30, 1952, the property had been visited by H. C. Granger and R. B. Raup of the Geological Survey.

The Carter and Lamb property consists of one lode claim, the Rainbow. It is situated about 23 miles southwest of Fredonia, Ariz. on a low-lying, rounded ridge that projects above the surrounding flat country. It may be reached from that town by a good graded road. The claim has been developed by an 18-foot shaft and a few shallow open pits.

Some copper and uranium mineralization occurs in a coarse grained sandstone of the Shinarump formation. A small amount of malachite occurs in the 18-foot shaft. Some torbernite was reported to have been found in one of the shallow open pits but it was not seen by the Bureau of Mines engineers.

1/ Mining Engineer, U. S. Bureau of Mines

The mineralization occurs in a low, rounded ridge that projects above the surrounding flat country, but the total mineralized area is not over 75 feet square. While it is geologically possible that ore could exist at depth within the formation, it is doubtful if a worthwhile ore body would be found by an exploration project. Because of these facts, it is recommended that the proposed loan be denied.

DMEA-2589, CARTER AND LAMB RAINBOW URANIUM CLAIM
MOHAVE COUNTY, ARIZ.

Engineering Report

By W. E. Young
Mining Engineer
U. S. Bureau of Mines

John F. Haynes
Mining Engineer
U. S. Bureau of Mines

December 1952

DMEA-2589, CARTER AND LAMB RAINBOW URANIUM CLAIM
MOHAVE COUNTY, ARIZ.

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INTRODUCTION

This property was examined on Dec. 7, 1952 by the writers. H. C. Granger and R. B. Raup of the Geological Survey previously had visited the property on July 30, 1952. A DMEA loan request had been made for assistance on June 23, 1952. The applicant proposed to explore the area by diamond drilling in search of copper and uranium mineralization. A. E. Carter accompanied the engineers over the property.

LOCATION

The property, which consists of one lode claim, is situated in Sec. 24, T. 40 N., R. 6 W., Mohave County, Ariz., 23 miles southwest of Fredonia, Ariz. The road to the property is a good graded road and would be passable throughout the entire year. The Rainbow claim is located not more than 100 feet to the south of this road.

HISTORY AND PRODUCTION

The property has had no production. A few surface pits and a small shaft, 18 feet deep, have been excavated.

OWNERSHIP AND EXTENT

The applicant stated that the mining claim was located on patented property, but that a working agreement had been made with the owner to permit mining of ore. The owner was to retain surface rights to the property. However, no written agreement with the owner was presented for inspection.

DESCRIPTION OF THE DEPOSIT

The copper and uranium mineralization occurs in the Shinarump formation. The formation in this area is principally coarse grained, although there is variation in grain size, both laterally and vertically. It is definitely apparent that the best showings of copper minerals are associated with lenses of coarsely granular sandstone.

The Shinarump formation in this area does not occur as a cliff-maker as is typical in the plateau region. Instead it forms a low rounded ridge which projects above the surrounding flat country. The ridge is small, and does not cover an area larger than one mile by one-eighth of a mile in extent.

The only important mineral exposed in the shaft and the various pits was malachite, although there was some red stain noted which was probably due to the presence of iron oxides. According to Mr. Carter, torbernite was present in one of the pits, but the mineral was not seen by the examiners.

The total extent of the area of mineralization is not more than 75 feet square. There is absolutely no commercial ore in place, although a few pounds of hand specimens were sorted and piled near one of the pits. While it is geologically possible that ore could exist at depth within the formation, it is doubtful that any large, worthwhile ore body would be found in an exploration program.

MINABLE ORE RESERVES

There are no minable ore reserves on the property.

PRESENT STATUS

The prospect has been developed by one shaft, 18 feet deep. There is no mining or milling equipment on the property.

PROJECT PROPOSALS

The operator proposed to diamond drill the deposit, to block out and sample the ore. After the ore was blocked out and sampled, it was proposed to mine it by open pit methods.

The cost of the project as calculated by the applicant was placed at $17,567.92. This included cost of drill and accessories, cost of camp, and drilling.

CONCLUSIONS AND RECOMMENDATIONS

The occurrence of mineralization on the Rainbow claim is similar to other known occurrences in the Plateau area. Attempts have been made to mine this type of ore but only the largest have proved to be of economic value. A reconnaisance of the surrounding area indicates a deposit of very limited size with little or no chance of uncovering the large ore body that would be required to make such a deposit economically feasible.

On the basis of the above it is recommended that the proposed loan be denied.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P.O.Box 4136, University Station
Tucson 5, Arizona

December 19, 1958

Memorandum

To: A. E. Koschmann, Denver, Colorado

From: A. F. Shride, Tucson, Arizona

Subject: Geologic Appraisal, DMEA 2569, Rainbow Claim, Carter and Lamb, Mohave County, Arizona (Uranium)

Enclosed are the original and 10 copies of the above memorandum by me. This memorandum is based on data collected by E. C. Granger and R. B. Raup, Jr. of the Geological Survey. At the time of their examination Mr. A. E. Carter, who devised the application, was not available. Therefore, finalization of a report was postponed until the applicant could be on the ground with an examiner and could fully express his point of view on the likely areas for exploration, etc. Messrs. Haines and Young of the Bureau have now visited the property with the applicant and are submitting a report.

The conclusions expressed are mine. It is recommended that an exploration loan be denied because the ore bodies that might be found are likely to be very small and discontinuous.

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

Enclosures 11

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P.O.Box 4126, University Station
Tucson 5, Arizona

December 19, 1952

Memorandum

To: A. H. Koschmann, Denver, Colorado

From: A. F. Shride, Tucson, Arizona

Subject: Geologic Appraisal, DMEA #589, Rainbow Claim, Carter and Lamb, Mohave County, Arizona (Uranium)

Enclosed are the original and 10 copies of the above memorandum by me. This memorandum is based on data collected by H. C. Granger and R. B. Raup, Jr. of the Geological Survey. At the time of their examination Mr. A. E. Carter, who devised the application, was not available. Therefore, finalization of a report was postponed until the applicant could be on the ground with an examiner and could fully express his point of view on the likely areas for exploration, etc. Messrs. Haines and Young of the Bureau have now visited the property with the applicant and are submitting a report.

The conclusions expressed are mine. It is recommended that an exploration loan be denied because the ore bodies that might be found are likely to be very small and discontinuous.

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

Enclosures 11

Mining Division
Region IV

December 15, 1952

Memorandum

To : W. H. King, Acting Chief, Mining Div., Region IV

From : Chief, Arizona-New Mexico Branch, Mining Div., Region IV

Subject : Final Report, Docket DMEA-2589, Carter & Lamb Rainbow Uranium Claim, Mohave County, Ariz.

Enclosed are original and 10 copies of the section on Summary, Conclusions and Recommendations, and the section on Engineering, both by William B. Young and John F. Haynes of the Bureau of Mines. A short memorandum report on Geology probably will be submitted by the Geological Survey as H. C. Granger and R. B. Raup visited this property last July.

Because of the small amount of mineralization and the poor chance of finding a worthwhile ore body, the examiners recommend that the application for a loan be denied. I concur with their recommendations.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC: W. H. King (10)
DMEA-2589
DF

WRStorms:als

Mining Division
Region IV

December 15, 1953

MEMORANDUM:

TO : [illegible]

FROM : [illegible]

SUBJECT : Final report, [illegible], Butte & Bald Mountain Crushed Stone, Moore County, N.C.

Enclosed are original and 10 copies of the section on history, conclusions and recommendations, and the section on engineering, both by William [illegible] and John [illegible] Jones of the Bureau of Mines. A short preliminary report on geology already will be submitted by the Geological Survey as soon as Mr. [illegible] and Mr. [illegible] visited this property last July.

Because of the small extent of mineralization and the poor chance of finding a workable ore body, the engineers recommend that the application for a loan be denied. I concur with their recommendations.

Thus use is returned.

Walter R. Storms

Walter R. Storms

cc: [illegible] (20)
[illegible]
[illegible]

Attachments

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
200 New Customhouse
Denver 2, Colorado

December 30, 1952

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2589, Rainbow Claim, Carter and Lamb, Mohave County, Arizona. Uranium.

Enclosed are the original and 10 copies of a geologic appraisal memorandum by A. F. Shride of the U. S. Geological Survey, covering the above docket.

It has been recommended that the loan be denied.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

2-9-53 -- P. S.: Attached also are 11 copies of letter of 2-5-53 from A. F. Shride indicating that AEC has been contacted regarding this docket.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA-2589, Carter and Lamb Rainbow Uranium Claim

Mohave County, Ariz.

W. E. Young, Mining Engineer
U. S. Bureau of Mines

John F. Haynes, Mining Engineer
U. S. Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
2-20-53
(date)

December 1952

The mineralization occurs in a low, rounded ridge that projects above the surrounding flat country, but the total mineralized area is not over 75 feet square. While it is geologically possible that ore could exist at depth within the formation, it is doubtful if a worthwhile ore body would be found by an exploration project. Because of these facts, it is recommended that the proposed loan be denied.

[illegible]is are scattered throughout the sandstone; some galls are as much as 1 foot in diameter. The sandstone is well cross-bedded; individual lenticular masses of sandstone vary markedly by differences in color, grain size, and claystone content. The Shinarump conglomerate appears to be more than 25 feet thick in this area; individual sandstone lenses are mostly less than 4 feet in thicknesses.

Several of the exposures seen on the slopes are stained by copper and iron oxides. Copper as malachite is disseminated around the grains of the sandstone. Although malachite is most abundant in the coarser-grained sandstone lenses, minor copper staining is visible on most of the exposures. Mr. Lamb reported that samples from a sandstone lense at the top of the 18-foot shaft assayed from 10 to 17 percent copper for a thickness of 3 feet. This sandstone lense may be the same as that exposed in a pit 20 feet south of the shaft. This pit seems to be in the most highly mineralized part of the area examined. The sandstone of the bottom 15 feet of the shaft was reported by Mr. Lamb to have an average copper content of 1.7 percent.

Uranium mineralization is most noticeable in a 75 foot square area centered about the above noted shaft and pit. In this area scintillometer readings are 4 to 9 times background count. Elsewhere along the 1000 foot strike length of the Shinarump outcrop radioactivity is 2 to 3 times background. No uranium minerals were identified. According to Mr. Lamb, the sandstone lense at the top of the shaft assayed 0.16 percent U_3O_8, and the sandstone of the remainder of the shaft is almost barren of uranium.

In the area examined there are only about 1200 tons of rock, which from visual and radiometric appraisal, held much promise of containing 0.1 percent U_3O_8. A sample of the most likely material assayed as follows:

	%eU	%U	%Cu
Sample RR-3	0.020	0.024	0.75

Analysis by Denver Laboratory, Trace Elements Section, U. S. Geological Survey.

This analysis does not substantiate the assays claimed by Mr. Lamb and noted in above paragraphs. It is possible that this favorable sandstone lenses or other like small lenses, not exposed, may extend beneath the escarpment. Because of the likely discontinuity, small sizes and probable low uranium content of such lenses, the extensive drilling necessary to find them is not warranted.

It is recommended that an exploration loan be denied.

A. F. Shride
Geologist

RI-2850, [illegible] and [illegible] Mines [illegible]
[illegible], [illegible]

Engineering Report

By E. L. Young
Mining Engineer
U. S. Bureau of Mines

John F. Hayes
Mining Engineer
U. S. Bureau of Mines

December 1962

[illegible]-2[illegible], [illegible] AND [illegible] [illegible] [illegible]
[illegible] COUNTY, [illegible].

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CHARACTER OF THE DEPOSIT

The copper and uranium mineralization occurs in the Shinarump formation. The formation in this area is principally coarse grained, although there is variation in grain size, both laterally and vertically. It is definitely apparent that the best showings of copper minerals are associated with lenses of coarsely granular sandstone.

The Shinarump formation in this area does not occur as a cliff-maker as is typical in the plateau region. Instead it forms a low rounded ridge which projects above the surrounding flat country. The ridge is small, and does not cover an area larger than one mile by one-eighth of a mile in extent.

The only important mineral exposed in the shaft and the various pits was malachite, although there was some red stain noted which was probably due to the presence of iron oxides. According to Mr. Carter, torbernite was present in one of the pits, but the mineral was not seen by the examiners.

The total extent of the area of mineralization is not more than 75 feet square. There is absolutely no commercial ore in place, although a few pounds of hand specimens were sorted and piled near one of the pits. While it is geologically possible that ore could exist at depth within the formation, it is doubtful that any large, worthwhile ore body would be found in an exploration program.

MINABLE ORE RESERVES

There are no minable ore reserves on the property.

PRESENT STATE

The prospect has been developed by one shaft, 18 feet deep. There is no mining or milling equipment on the property.

PROJECT PROPOSED

The operator proposed to diamond drill the deposit, to block out and sample the ore. After the ore was blocked out and sampled, it was proposed to mine it by open pit methods.

The cost of the project as calculated by the applicant was placed at $17,567.92. This included cost of drill and accessories, cost of camp, and drilling.

CONCLUSIONS AND RECOMMENDATIONS

The occurrence of mineralization on the Rainbow claim is similar to other known occurrences on the Plateau area. Attempts have been made to mine this type of ore but only the largest have proved to be of economic value. A reconnaissance of the surrounding area indicates a deposit of very limited size with little or no chance of uncovering the large ore body that would be required to make such a deposit economically feasible.

On the basis of the above it is recommended that the proposed loan be denied.

EXPLORATION

Subject: DMEA-2589
Re: Exploration Loan
Schnarup Group
June 27, 1952

Mr. A. E. Carter
Carter and Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

My dear Mr. Carter:

This will acknowledge receipt of your application dated June 23, 1952, for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2589 and referred to Mr. W. H. King, Executive Officer, DMEA Field Team, Region IV, Bureau of Mines, 224 New Customhouse Building, Denver 2, Colorado.

Kindly refer to DMEA-2589 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Administratiye Officer

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

Not To Be Filled in by Applicant

Docket No. DMEA-2589
Metal or Mineral
Date Received 6-26-52
Amount $
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 26 1952

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

Name and address of applicant

Date June 23, 1952

If you have already filed MF-100, give date filed _____, type of assistance requested _____,

DMA Docket Number (if available) _____

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

   (*c*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

11. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Carter & Lamb
(Name of company)

By A. E. Carter
(Signature of authorized official)
A. E. Carter

June 23, 1952
(Date)

Manager
(Title)

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—64067-2

Form MT-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

1. (a) The property consists of one full mining claim (600 ft X 1500 ft) A new discovery.

(b) The property is located according to existing laws.

(c) Beginning at a point east 100 ft from the S. W. Corner of S. 24.T. 40 N.,R.6W.Gila & Salt River Mer., and running North 750 ft., thence E. 600 ft., thence south 1500 ft., thence W. 600 ft., thence N. 750 ft. to point of beginning.

Form MF-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

2. (a) Uranium, possibly copper

(b) No report from an accredited engineer is available. However, the deposit is in the sedimentaries which are prevalent in the entire district of south eastern Utah and northern Arizona. The particular bedding carrying the uranium and copper (tobernite) values in this location are the Schnarup group. Considerable wood petrifaction exists in this area and in all probability many additional trees will be encountered in the course of d evelopment.

The Gieger Counter shows good action in the 18 ft shaft and in other shallow pits that have been dug.

Immediately to the West of the discovery the ground rises fifty to seventy five feet and the bed ding carrying the uranium and copper values under-lie this burden, apparently.

An inexpensive method of testing this ground, in our estimation, is to core drill the area from one hundred fifty to two hundred feet in depth. We are also prepared to tunnel into the bedding where the main values exist.

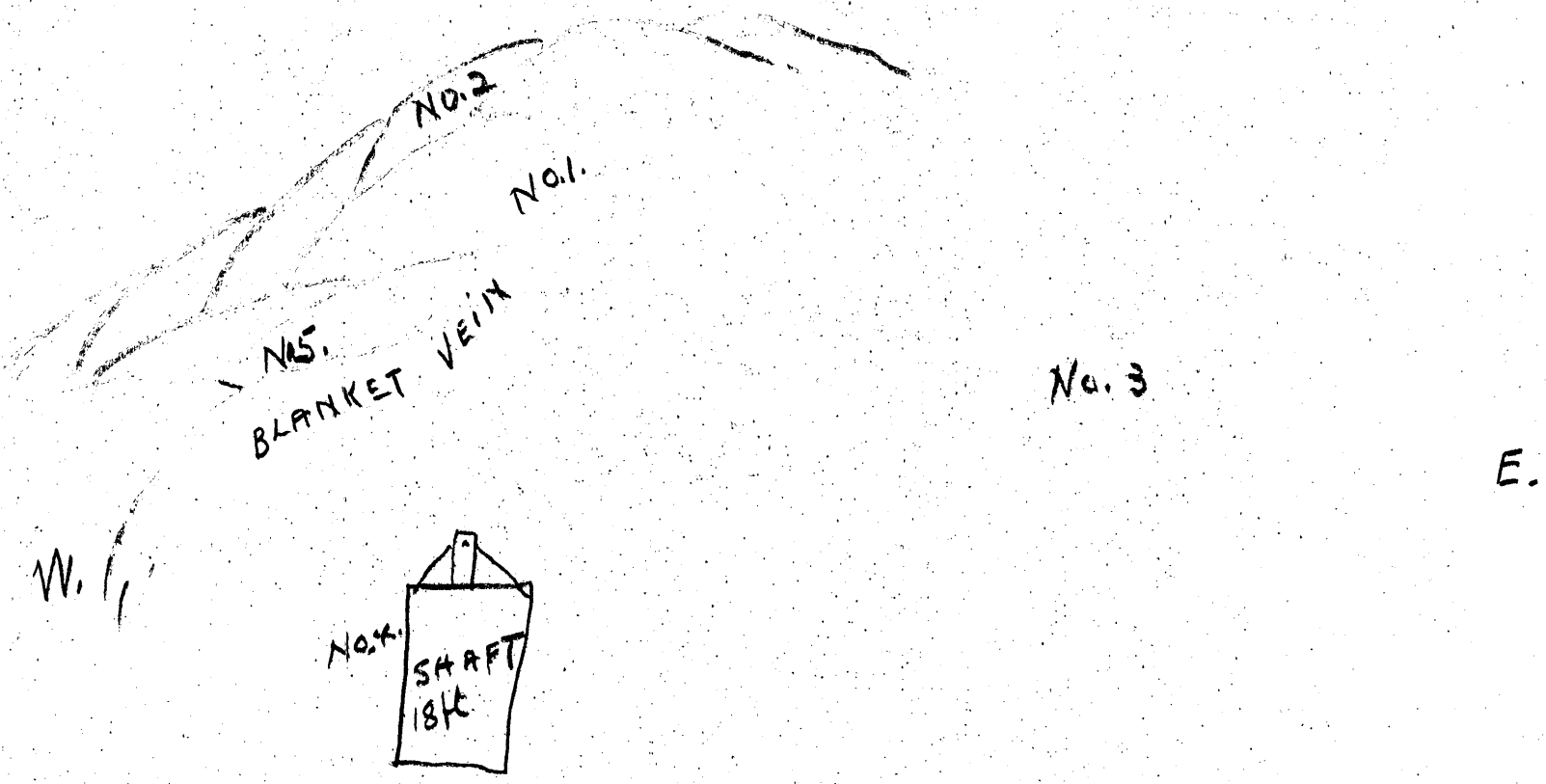
The uranium values occur in the petrifaction and in the tobernite ore.

Form FM-103

N.

Legend:
No. 1. Blanket vein
No. 2. Low knols
No. 3. Flat plain
No. 4. Shaft 18ft. deep
No. 5. exposed deposit. Vein has about 3 degree dip to N. E.

2. b



No. 3

5.

Form MF-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

3. (a) It is our intention to use an EX (1 7/16") equipment on a HS-15 Sullivan Core Drill.

Two holes will be drilled from the bottom of the 18ft shaft. Additional holes will be drilled from the top of over-burden, west of shaft.

The proposed development will cost $17,567.92.

(b) Work can be commenced within 30 days from the time of project approval. Project to be completed within six months. Working days to be one hundred and fifty. (150)

Form MF-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

4. This is a new discovery. One 18 ft shaft has been sunk. Several small pit holes also have been dug. The deposit is of a blanket nature and is on the surface at the point of discovery. West of the shaft an over-burden prevails and is from fifty to seventy five feet in thickness. Sketch attached hereto.

Form MF-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

5. Their are no buildings on the property.
It is a new discovery.

Form MF-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

6. We expect to get along with one auto trailer house and two 12X14 tents.

The auto trailer (used) to cost $1200.00
The tents to cost $75.00 each.

Form MF-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

7. (a) None

(b) Sullivan Core Drill (used) and equipment $835.00
Type HS-115. Tri-pod, chuck etc.

Following list constitutes the necessary equipment for drilling EX (1 7/16) holes to 300 ft.:

Item	Quan.	Description	Unit Price	
1	5	EX Bevel wall bits	$67.30	$336.50
2	1	EX Double tube balanced reaming shell	45.00	45.00
3	2	EX core lifters	2.10	4.20
44	1	EX double tube core barrel, 10 ft.	40.50	40.50
5	1	EX Double tube core barrel, 5 ft.	34.00	34.00
6	30	E. Drill Rod, 10 ft. with coupling	13.75	412.50
7	5	E. Drill Rod, 5 ft. with coupling	8.50	42.50
8	2	E. Drill Rod, 2 ft. with coupling	5.35	10.70
9	1	E. Water swivel, plain type	25.00	25.00
10	1	Lifting bail for E rod	15.00	15.00
11	1	E Safety clamp for E rod	77.90	77.90
12	1	E Knife Dog	16.50	16.50
13	1	E Hoisting Plug	22.50	22.50
14	1	14" Sheave wheel	48.45	48.45
15	1	E rod tap	16.50	16.50
16	1	E Rod Spear	12.60	12.60

* * * * * * *

L	1 215 C F M Compressor (used)	$2800.00
	1 Water pump (used)	75.00
(c)	Jack hammer	275 .00
	Hose fittings and hose (air)	35.00
	Steel, bits, wrenches etc.	35.00
	Truck, used, 1 1/2 ton stake bodyy	500.00
	Small tools, shovels, wrenches, axes, etc	95.00

Depreciation can be based on a possible life of 5 years for each unit.

Form MF-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

8. One drill operator. Wages $15.00 per day.

one miner. Wages $12.05 per day.

one roust-a-bout, cooking etc $10.00 per day.

one supervisor, in charge of supplies, buying, sampling, assaying, records, etc., $15.00 per day.

Employed time is figured for 150 working days.

Form MF-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

9.	200 ft. galvanized 2" pipe for air line from compressor to working units - -	$85.72
	20 couplings for air pipe line - -	12.00
	Powder, caps & fuse (estimated) - -	40.00
	Gasoline for compressor engine and truck, estimated 20 gal. per day -	900.00
	Oil for engine & truck (estimated) -	40.00
	Assaying, based on estimate of one sample per day, uranium sample $3.50, copper, $1.00 each - - - - - - -	675.00
	Food, based on cost of $1.25 per day per man - - - -	900.00
	Contingent expense, break-downs, parcel post on samples etc., ten percent of total, less labor, less material furnished by applicant -	887.35

Form MF-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

10. (a) Seventeen hundred fifty six dollars and seventy nine cents ($1756.79)
Reference, First Security Bank, Salt Lake City, Utah, or Dun & Bradstreet. DBA Eureka Appliance Company, 177 East Broadway, Salt Lake City 1, Utah.

(b) Yes.

Form MF-103

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

11. In the event the ore shows a persistence in values and volume, in the test holes, then a bull-dozer could be used to advantage.

Should other type of mining be required to remove the ore, we have additional equipment, such as stoping drills, mine cars, rails, bars, etc. etc.

The applicant has labor available for this project if the application is acted upon within a reasonable length of time.

Advise us as to the time an engineer can come to the property and we will be glad to show him around.

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2589

Date received 6-26-52

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 26 1951

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

Name and address of applicant

Date June 23, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

1. (a) New discovery. Expect to prod uce Uranium and copper.

   (b) Probably silica.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

2. (a) One 18 foot shaft.

(b) None.

(c) None.

(d) Four shallow pits 3 to 4 feet deep (test pits,) no water to contend with, not producing now.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

3. (a) One hundred eighty five miles (185) south, south west Marysvale, Utah. Railroad ends at Marysvale.

Eighty five miles from Cedar City, Utah. South, south east from this railroad point. Twenty five miles west, south west of Kanab, Utah.

(b) New discovery. Unnamed district.

(c) Beginning at a point East 100 ft. from the S. W. Cor. of Section 24. T. 40 N. R. 6. W. Gila & Salt River Mer. and running thence North 750 ft. thence East 600 ft. thence S. 1500 ft. thence W. 600 ft. thence N. 750 ft. to point of beginning.

(d) Mohave County, Arizona

Form MF-100

Gordon O. Smith
1020 Hale Avenue
Salt Lake City 6, Utah

6. (a) Not in operation at present.

(b) Property will be operated by owner.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

5. New discovery. Not in production. Work for development can be commenced within thirty days from time project is approved.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 6, Utah

6. (a) One applicant, A. E. Carter, has had thirty years business experience. Ten (10) years practical mining experience. It is proposed this applicant is to take charge of supplies. Buying, supply and hauling. Assay reports, etc. etc.

(b) One applicant George L. Lamb, to operate drilling machine, jack hammer or other work incident to drilling operation. Ten years mining experience, stationery engineer. Mine hoists, compressors, pumps etc.

Third man (William Sorensen) all round mine operator. Thirty years experience.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City, Utah

7. (a) New Discovery.

(b) No near production.

(c) No report from an accredited engineer is available. However, the deposit is in the sedimentaries which are prevalent in the entire district of south eastern Utah, north eastern Arizona. The particular bedding carrying the uranium values in this location are the Schanrup group. Considerable wood petrifaction exists in this area and in all probability many additional trees will be encountered in the course of development.

The Geiger Counter shows good action in the shaft (18 ft in depth) and in other shallow test holes which have been dug.

Immediately to the west of the Discovery the ground rises fifty to seventy five feet and the bedding carrying the uranium and copper values under-lie this burden, apparently.

An inexpensive method of testing this ground, in our estimation, is to core drill the area from one hundred fifty to two hundred feet in depth. We are also prepared to tunnel into the bedding where the main values exist.

The uranium values occur in the petrifaction and Tobernite ore.

Form [illegible]-1[illegible]

[illegible]arter [illegible]amb
[illegible] [illegible]le Avenue
Salt Lake City 5, Utah

[illegible]

[illegible] (a) [illegible]artner-ship. A. [illegible]. Carter
1030 Yale Avenue
Salt Lake City 5, Utah

George L. Lamb
233 S. 100 West
St. George, Utah

(b) A. [illegible]. Carter, Manager
George L. Lamb, Manager mine operation.

(c) Inapplicable

(d) Inapplicable

(e) Inapplicable

(f) Inapplicable

(g) A. [illegible]. Carter, $25,000.
(g) George L. Lamb $3000.

(h) A. [illegible]. Carter, $6000.
(h) George L. Lamb, $500.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

9. Inapplicable

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

10. Inapplicable

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

12. (a) Deposit is a blanket or flat bedding occuring in the Schnarup sedimentaries. No accredited engineer report available.

(b) Ground will be assayed as each drill hole goes thru bedding.

(c) Inapplicable.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

13. Good dirt road right to property. Twenty three miles to black top U. S. Highway 89, Fredonia, Arizona. Will live on property while work is being done.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

14. One mile distant. Plenty for all year operation.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

15. Gasoline engine compressor combined. 215 CFM Compressor. Air line to working units from compressor.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

16. Answered page 6

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

17. Answered FM-103, page 8.

Form MF-100

Carter & Lamb
1630 Yale Avenue
Salt Lake City 5, Utah

18. No

(b) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(c) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Carter & Lamb
(Name of company)

By A. E. Carter
(Signature of authorized official)
A. E. Carter

June 23, 1952
(Date)

Manager
(Title)

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.

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