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 2703 (Uranium), J. M. Calderwood, Applicant: Salt Lake City, Utah, Calderwood Claims, Secs. 19 and 31, T. 22, S., R. 21 E., Grant County, Utah.

I have reviewed the application described above and I concur with the recommendations of the Field Team, which are embodied in the report, that the application for Government assistance 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 2703 (Uranium), J. M. Calderwood, Applicant: Salt Lake City, Utah, Calderwood Claims, Secs. 19 and 31, T. 22, S., R. 21 E., Grant County, Utah.

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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 2703 (Uranium), J. H. Calderwood, Applicant: Salt Lake City, Utah, Calderwood Claims, Secs. 19 and 31, T. 22, S., R. 21 E., Grant County, Utah.

I have reviewed the application described above and I concur with the recommendations of the Field Team, which are embodied in the report, that the application for Government assistance be denied.

Arthur P. Butler, Jr.

Copy to: E. Wm. Ellis (2)

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

February 12, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 12 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 2703, J. M. Calderwood Claims, Grand County, Utah.

I have reviewed the subject report and discussed it with Arthur P. Butler, Geological Survey Member, and Joseph O. Hosted, representative of the Atomic Energy Commission.

I concur with the recommendation of the field team that the application for an exploration loan be 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
H. D. Keiser

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

February 12, 1953

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 12 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 2703, J. M. Calderwood Claims, Grand County, Utah.

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I concur with the recommendation of the field team that the application for an exploration loan be denied.

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

Signed

H. D. Keiser

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

224 New Customhouse
Denver 2, Colorado

January 29, 1953

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2703, Uranium, J. M. Calderwood Claims, Grand County, Utah

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

The examining team consulted with the field geologists at the Grand Junction office of the A.E.C. and found that they had no recommendations to make regarding the Calderwood Claims.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATIONS WRITER
2-9-53
(date)

COPY

224 New Customhouse
Denver 2, Colorado

January 29, 1953

Mr. J. M. Calderwood
825 S. 10th East St.
Salt Lake City 2, Utah

Re: DMEA Docket 2703

Dear Mr. Calderwood:

Reference is made to your application for Government aid in exploration work on the Calderwood Claims.

Projects approved by the Defense Minerals Exploration Administration must in its judgement show definite promise of hielding 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,

(Signed)
W. H. King
Field Team, Region IV

(Signed)
A. H. Koschmann
Field Team, Region IV

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

Reviewed by
DMEA OPERATING COMMITTEE

2-9-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DEPARTMENT OF THE INTERIOR
Defense Materials Administration
RECEIVED
FEB 4 1953

Mining Division
Region IV

January 29, 1953

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 2703, (Uranium) J. M. Calderwood Claims, Grand County, Utah

Enclosed herewith are the original and ten copies of the final report appraising the subject application and a copy of the brochure.

The applicant has requested financial assistance in the amount of $20,000 to carry out exploration work for uranium. The examining engineer recommends denial on the basis of sparse mineralization at the outcrop of the ore horizon. We concur with the recommendation.

W. H. King
W. H. King

Enclosures

2-9-53

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
FEB 4 1953

January 8, 1953

Memorandum

To: W. H. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-2703, J. M. Calderwood claims, Grand County, Utah

Enclosed are the original and 10 copies of an engineering report covering examination of the subject property for DMEA loan appraisal. The examination was made by a Survey-Bureau team. A Summary, Conclusions and Recommendation section is also attached.

The Survey's report, recommending denial of the loan, was transmitted to Denver December 3, 1952. The engineering report includes additional data, but as no work is recommended, costs estimates were not made.

I concur with the recommendations of the examining engineer and geologists. A copy of the brochure is attached.

Stephen R. Wilson

Stephen R. Wilson

Enclosures 3

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

January 27, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2703, J. M. Calderwood Claims, Grand County, Utah.

Enclosed are eleven copies of the geological report by C. R. Willden and J. W. Hasler of the U. S. Geological Survey covering the above docket.

It has been recommended that the loan be denied.

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

Room 208 - 222 So. West Temple
Salt Lake City 1, Utah
December 2, 1952

Memorandum

To: A. H. Koschmann

From: Ralph J. Roberts

Subject: DMEA Docket 2703, J. M. Calderwood Claims

Enclosed are eleven copies of a geologic report on the J. M. Calderwood Claims, DMEA Docket 2703, relative to an application for a loan to explore for uranium on their claim in Grand County, Utah.

The property was examined October 28 and 29 by C. R. Willden and J. W. Hasler of the U. S. Geological Survey, and J. F. Haynes of the U. S. Bureau of Mines. The field geologists of the Atomic Energy Commission were consulted and no recommendations were made regarding the Calderwood Claims.

The Calderwood Claims are on the northeast limb of the Salt Valley anticline about eleven miles southeast of Thompson, Utah. Uranium mineralization has been found in the Morrison formation of Jurassic age. The applicant has produced a total of 1,870 pounds of ore that assayed 0.26 percent U_3O_8, but there are no new significant occurrences of uranium mineralization over a widely scattered area on the applicant's claims. All known ore has been mined and the chances of finding any significant quantities of uranium ore without a very extensive exploration program are not good. It is therefore recommended that the application for a loan be denied.

I concur with the conclusion and recommendation of the examining geologists that the loan be denied.

Ralph J. Roberts

By: _____
J. William Hasler

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By J. William Hasler,
C. Ronald Willden, and
John F. Haynes

The Calderwood uranium claims in Grand County, Utah, were examined by DMEA personnel during October 1952 for appraisal of a DMEA loan application under docket 2703. The applicant has requested a loan of $20,000 to conduct surface and underground exploratory work.

Sedimentary rocks in the vicinity of the Calderwood claims consist of shale and sandstone of Cretaceous and Jurassic age. Uranium mineralization is found in a porous, shaly sandstone bed of the Salt Wash member of the Morrison formation. In most occurrences the uranium minerals are confined to narrow beds ranging from 6 to 18 inches in thickness.

It is believed that the Calderwood claims have insufficient geologic merit to warrant Government participation in an exploratory program. Uranium mineralization exposed on two claims is too low-grade for further consideration. It is, therefore, recommended that the loan request be denied.

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA DOCKET 2703, J. M. Calderwood

Salt Lake City, Utah

By
C. R. Willden and J. W. Hasler
U. S. Geological Survey

November 26, 1952

Table of Contents

	Page
Introduction	1
Geology	1
Ore Deposits	2
Ore Reserves	3
Proposed Exploration	3
Summary and Conclusions	4

Illustrations

Figure 1. Index Map of Utah

2. Geologic Map of part of the Salt Valley Anticline

DMEA DOCKET 2703, J. M. Calderwood

Salt Lake City, Utah

Introduction

J. M. Calderwood, Salt Lake City, Utah, DMEA Docket 2703, has applied to the Defense Minerals Exploration Administration for a loan of $20,000.00 to be used for exploratory work to determine the extent of uranium mineralization on four claims in an unorganized mining district about 11 miles southeast of Thompson, Grand County, Utah (see Fig. 1). In accordance with a request by the Field Team, Region IV, an examination of the property was made October 28 and 29, 1952 by C. R. Willden and J. W. Hasler of the U. S. Geological Survey, and J. F. Haynes of the U. S. Bureau of Mines.

Geology

The Calderwood claims are on the northeast limb of the Salt Valley Anticline about 11 miles southeast of Thompson. The sedimentary rocks of the region consist of shale and sandstone of Cretaceous and Jurassic age (see fig. 2). The beds in the immediate area of the claims strike N. 80° W. and dip about 10° to the north. The uranium mineralization occurs in a porous, shaly sandstone bed of the Salt Wash member of the Morrison formation.

The various formations that are exposed in the immediate vicinity of the Calderwood claims are tabulated below with the youngest formations at the top:

Mancos shale (Cretaceous)
Dakota sandstone (Cretaceous)
Cedar Mountain formation(?) (Cretaceous)

Morrison formation Brushy Basin member (Jurassic)
Salt Wash member

Summerville formation (Jurassic)
Entrada sandstone (Jurassic)

Of these formations the Morrison is the only one that contains a significant amount of uranium mineralization. The Morrison formation has been separated into two units, the upper Brushy Basin member, and the lower Salt Wash member. The Brushy

basin member is about 300 feet thick in this area, and consists principally of variegated shale and thin beds of sandstone, conglomerate, mudstone, and limestone. The Salt Wash member is about 240 feet thick, and consists of massive, lenticular beds of sandstone and interbedded red and gray shale. The principal uranium-bearing unit of the Morrison is the upper sandstone bed of the Salt Wash member.

The uranium-bearing bed is exposed in a shallow adit on the Mayflower claim and ranges from 14 to 18 inches thick. It is a red-brown, porous, shaly sandstone containing considerable carbonaceous material and some black resinous material which is probably a hydrocarbon. This bed is overlain by a light-gray to buff, medium-grained, well-sorted, cross-bedded sandstone composed of well-rounded grains of quartz and containing some gritty lenses; it is underlain by light-gray to light-green, fine-grained, calcareous sandstone.

A well developed east-trending joint system cuts the sandstone on the Black Line, Teton, and Mayflower claims, but there is no discernible uranium mineralization associated with the joints except in an adit on the Mayflower claim where two joints immediately above the uranium-bearing sandstone bed show a little carnotite stain.

Ore Deposits

Uranium mineralization on the Calderwood claims is confined to a single bed 14 to 18 inches thick on the Mayflower claim and to a shale seam up to 6 inches thick containing carbonaceous material partially replaced by carnotite on the Teton claim.

The uranium-bearing bed on the Mayflower claim has been followed for a distance of 39 feet along the strike without any appreciable change in thickness or attitude and without any appreciable change in radioactivity. A 16 inch channel sample cut across the bed at the working face assayed 0.06% U_3O_8 and 0.31% V_2O_5.

The uranium mineralization on the Teton claim is confined to carnotite showings that replace carbonaceous material in a thin shale bed between two

light-gray, massive, medium-grained, somewhat cross-bedded sandstone beds. A 6 foot adit driven in this carnotite lense failed to show any uranium mineralization 6 feet from the face of the cliff.

By selective mining and hand sorting the applicant was able to mine 1,670 pounds of material from the workings on the Mayflower claim and 200 pounds of material from one prospect on the Teton claim. The total of 1,870 pounds of ore is reported to have assayed 0.26% U_3O_8; the V_2O_5 content is unknown.

Several "new finds" as reported on the applicant's Gray Line claim were found by the examining geologists to consist of yellow-green clay seams in mudstone and shale of the Brushy Basin member of the Morrison formation. None of the clay seams showed any abnormal radioactivity, and they are not considered to be promising. Commercial uranium mineralization is of infrequent occurrence in the Brushy Basin member.

The "new find" on the Black Line claim was also visited; it consists of carbonaceous material in a light-gray, massive sandstone bed of the Salt Wash member of the Morrison formation. This carbonaceous material does not show any abnormal radioactivity. Although uranium minerals are generally intimately associated with carbonaceous material in the Morrison formation, the presence of carbonaceous material is not a reliable indication of nearby uranium mineralization.

Ore Reserves

The uranium-bearing material of commercial grade on the Mayflower and Teton claims has largely been mined. A small amount of uranium-bearing material remains in the workings, but it is too low grade to mine. There is no basis for inferring ore bodies of commercial size and grade beyond the present workings, and therefore no ore reserves can be inferred.

Proposed Exploration

The applicant did not propose a definite exploration program. He planned to do exploratory work on the Mayflower, Teton, Gray Line, and Black Line claims.

As all the ore of commercial grade has been mined from the Mayflower and Teton claims, and as no ore can be inferred beyond the present workings, no work there is recommended by the examining geologists. The showings on the Gray Line and Black Line claims are not promising and do not warrant further work.

Summary and Conclusions

The Calderwood claims are underlain by the Brushy Basin and Salt Wash members of the Morrison formation. Uranium mineralization is present on two of the applicant's claims as carnotite replacing carbonaceous material in a shaly sandstone and a shale bed, and as a carnotite film along two joints. The exposed uranium mineralization is too low grade to be mineable.

The applicant has requested a loan of $20,000.00 to be used for unspecified exploratory work on four claims. Exploratory work on the Gray Line and Black Line claims has little geologic merit, and the low grade of the uranium mineralization on the Mayflower and Teton claims does not warrant further exploratory work. It is therefore recommended that the loan be denied.

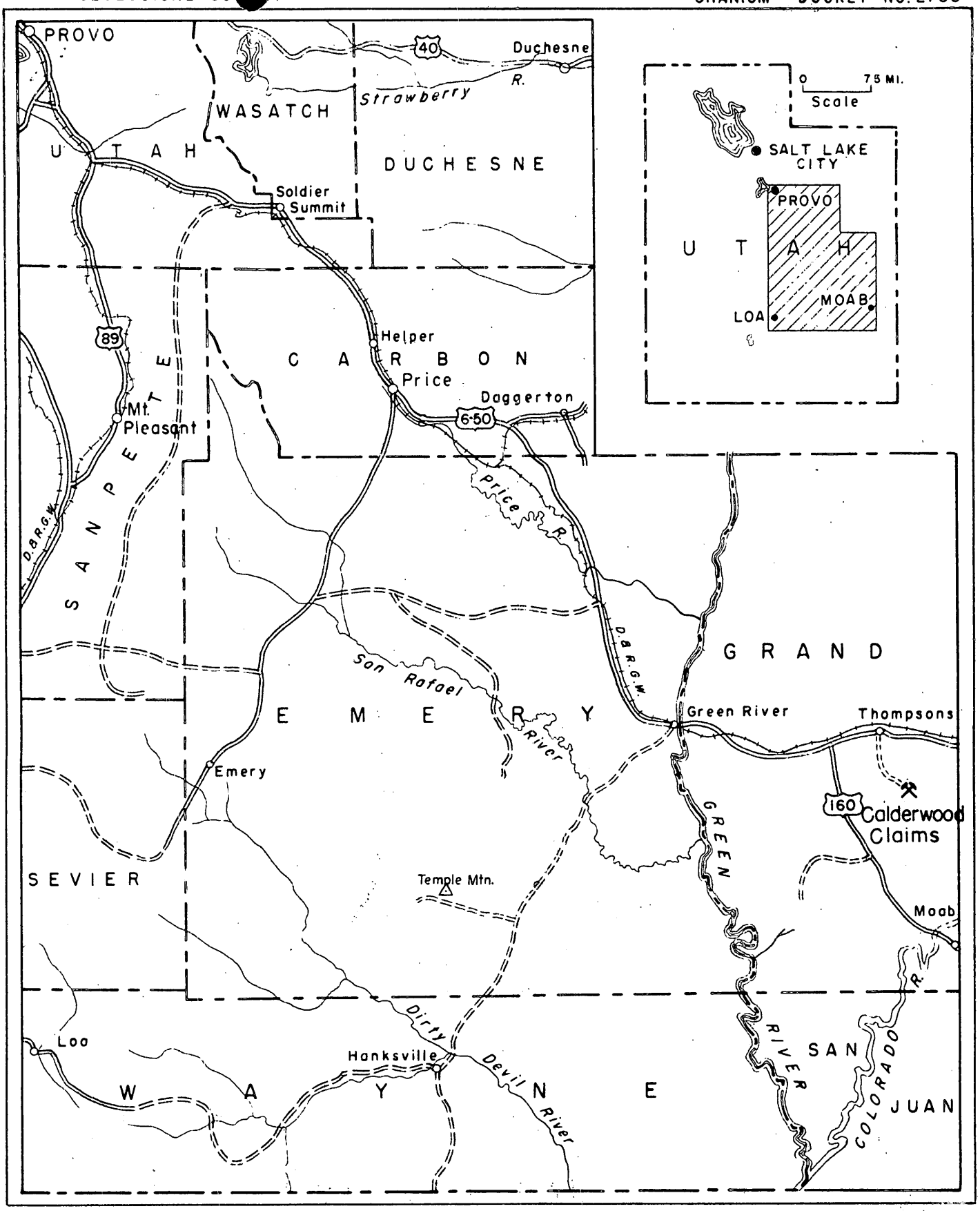

FIG. I INDEX MAP OF UTAH

0 5 10 15 20 MILES
Scale

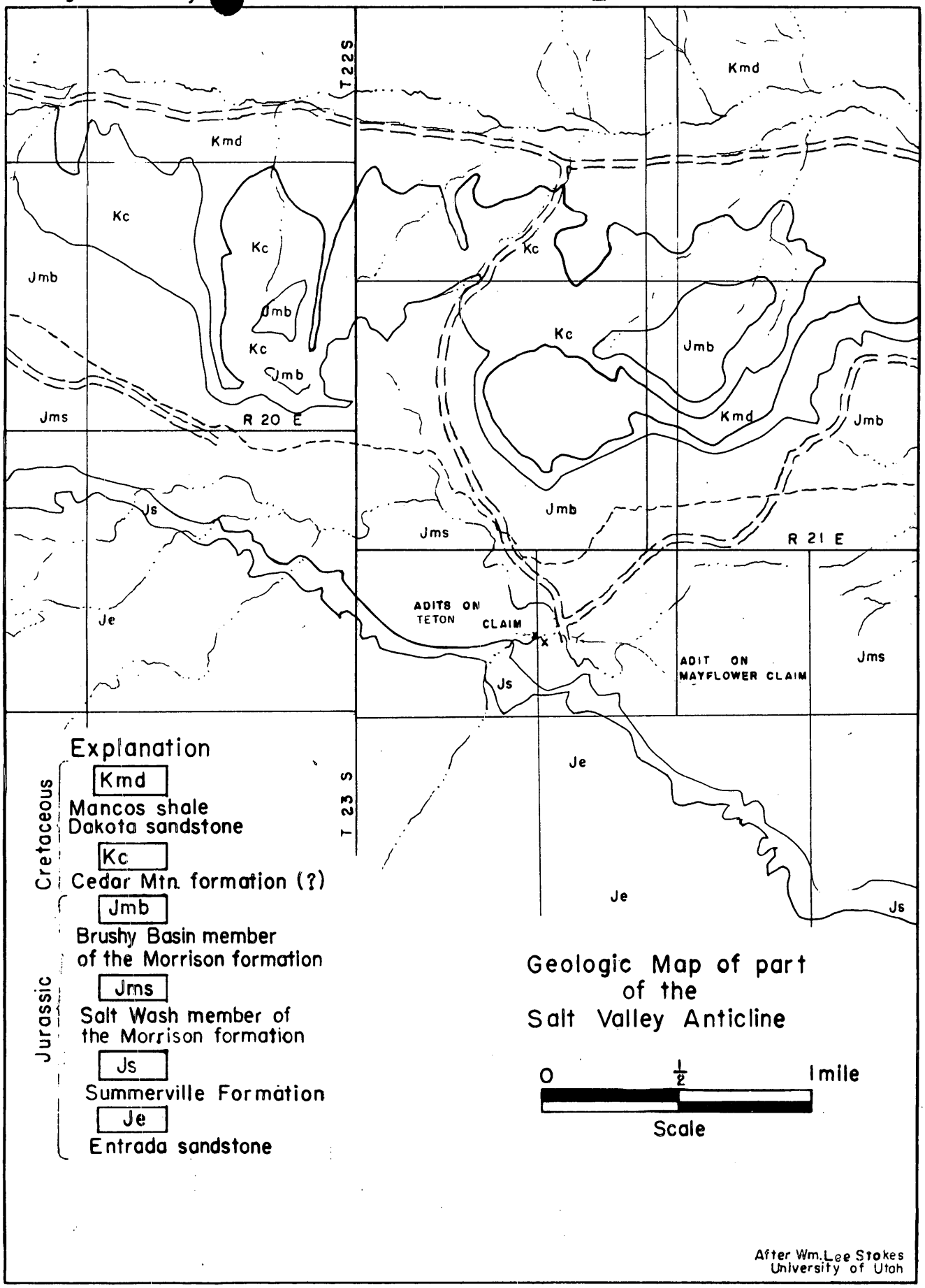
T 22 S
T 23 S
R 20 E
R 21 E
Kmd
Kc
Jmb
Jms
Js
Je
ADITS ON TETON CLAIM
ADIT ON MAYFLOWER CLAIM
Explanation
Cretaceous
Kmd
Mancos shale
Dakota sandstone
Kc
Cedar Mtn. formation (?)
Jurassic
Jmb
Brushy Basin member of the Morrison formation
Jms
Salt Wash member of the Morrison formation
Js
Summerville Formation
Je
Entrada sandstone
Geologic Map of part of the Salt Valley Anticline
0
1/2
1 mile
Scale
After Wm. Lee Stokes
University of Utah

FIG. 2

J. M. CALDERWOOD CLAIMS
GRAND COUNTY, UTAH
DMEA-2703
Uranium

Engineering Report

By John F. Haynes
Mining engineer
Bureau of Mines

J. M. CALDERWOOD CLAIMS
GRAND COUNTY, UTAH

CONTENTS

	Page
Engineering report	
Introduction	2
Location and physical features	2
Ownership and extent	3
Past production	3
Minable ore reserves	4
Present status	4
Conclusions and recommendations	4

INTRODUCTION

An examination of J. M. Calderwood's uranium claims in Grand County, Utah, was made on October 29, 1952, by John F. Haynes, of the Bureau of Mines, and J. William Hasler and C. Ronald Willden, of the Geological Survey. The purpose of the examination was the evaluation of the claims for a DMEA exploratory loan application. The estimated cost of the proposed exploratory program is $20,000.

J. W. Calderwood, son of the applicant, accompanied the examining personnel to the property.

LOCATION AND PHYSICAL FEATURES

The Calderwood claims are located approximately 11 miles southeast of Thompson, Utah, in Sections 19 and 31, T. 22 S., R. 21 E., and are reached by a fair, unimproved, dirt road. Thompson, which is 38 miles north of Moab, Utah, and 27 miles east of Greenriver, Utah, is the nearest railroad shipping point, as well as a source of supplies and labor. The U. S. Vanadium Corporation maintains a uranium-vanadium ore-buying station at Thompson.

The claims are situated in an area of low relief, which is not as difficult of access as are many parts of the plateau region. The area is cut by several washes which are dry throughout the year, except during thunderstorms in the late summer. There is no water in the vicinity, and all water needed for mining purposes must be hauled from Thompson.

Vegetation is scant and consists mainly of greasewood, sagebrush, and scattered pinon trees. Some of the area is practically devoid of vegetation. Any timber needed for mining or construction purposes will have to be imported.

OWNERSHIP AND EXTENT

The Calderwood claims consist of 11 scattered lode claims. Six of these are owned by J. M. Calderwood and five are controlled through a quit claim deed. They are all recorded in the office of the County Recorder in Moab, Grand County, Utah, and are listed as follows:

Gray Line	Book 9J, page 571
Black Line	Book 9J, page 570
Tigar	Book 9J, page 572
Wonder	Book 9K, page 91
Valley View	Book 9M, page 438
Mayflower	Book 9K, page 88
Bon-ton	Book 9K, page 88
South Ledge	Book 9K, page 89
Black Ridge No. 1	Book 9K, page 89
Black Ridge No. 2	Book 9K, page 89
Tea Ton	Book 9K, page 90

PAST PRODUCTION

According to information received from the Atomic Energy Commission in Grand Junction, Colorado, there has been no record of ore shipments from this group of claims. However, J. W. Calderwood stated to the examining personnel that slightly less than one ton of ore was shipped, with an assay value of 0.26 percent U_3O_8.

MINABLE ORE RESERVES

No ore reserves are present on the property.

PRESENT STATUS

The workings on the Calderwood claims consist largely of shallow pits or other small excavations in the rims. The major work is on the Mayflower claim, where approximately 50-linear feet of drift and open cut has been completed. Some ore was reported to have been mined from this claim, sorted, and sacked for shipment. It is considered unlikely, however, that much more than one ton of marketable ore has been taken from the entire group of claims by the present owner. An unknown amount of ore was reported as having been mined on the Mayflower claim by a previous operator.

In the workings on the Mayflower claim, 16 inches of flat-lying, low-grade, uranium-bearing rock is exposed. This bed assays 0.060 percent U_3O_8 and 0.31 percent V_2O_5. There are small fractures in the sandstone which contain visible carnotite, but the exposures are extremely small and spotty. On the Mayflower and Tea Ton claims, carbonaceous material and fossilized wood is radioactive, ranging from near zero to a high reading on the Geiger counter. High readings are rare, however.

CONCLUSIONS AND RECOMMENDATIONS

No systematic work has been done to prove or disprove the presence of ore in commercial quantities. With the exception of the work on the

Mayflower workings, exploration has consisted only of a few jackhammer holes in widely scattered showings of mineralization. The applicant has not attempted to explore intelligently any of the showings. The most conspicuous mineralized exposures are present on the Mayflower and Tea Ton claims, but it is believed that mineralization is not sufficiently strong to warrant Government assistance.

High-grade float is reported to have been found below the Morrison outcrop on the Gray Line and Black Line, but only slight radioactivity was found in widely scattered tests, and no uranium-bearing minerals were observed. It is believed probable that the claims were taken up merely to cover what the operator considered to be potential mineral-bearing ground, the outcrop of the Morrison formation.

It has been demonstrated that some uranium is present on the Mayflower and Tea Ton claims, but it appears doubtful that commercial ore of consequence will be found on the Calderwood claims. No appreciable production has been made in the past, and no reserves are known.

Therefore, on the basis of the above conclusions, it is recommended that the requested loan be denied.

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

January 29, 1953

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2703, Uranium, J. M. Calderwood Claims, Grand County, Utah

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

The examining team consulted with the field geologists at the Grand Junction office of the A.E.C. and found that they had no recommendations to make regarding the Calderwood Claims.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-9-53
(date)

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

224 New Customhouse
Denver 2, Colorado

January 29, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

Mr. J. M. Calderwood
825 S. 10th East St.
Salt Lake City 2, Utah

Re: DMEA Docket 2703

Dear Mr. Calderwood:

Reference is made to your application for Government aid in exploration work on the Calderwood Claims.

Projects approved by the Defense Minerals Exploration Administration must in its judgment 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)
srwilson
Subject
Chron.
AHKoschmann (2)

Reviewed by
DMEA OPERATING COMMITTEE
2-9-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

January 29, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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FEB 4 1953

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMRA Docket 2703, (Uranium) J. M. Calderwood Claims, Grand County, Utah

Enclosed herewith are the original and ten copies of the final report appraising the subject application and a copy of the brochure.

The applicant has requested financial assistance in the amount of $20,000 to carry out exploration work for uranium. the examining engineer recommends denial on the basis of sparse mineralization at the outcrop of the ore horizon. We concur with the recommendation.

W. H. King
W. H. King

Enclosures

Reviewed by
DMRA OPERATING COMMITTEE
2-9-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

January 8, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

Memorandum

To: W. N. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-2703, J. M. Calderwood claims, Grand County, Utah

Enclosed are the original and 10 copies of an engineering report covering examination of the subject property for DMEA loan appraisal. The examination was made by a Survey-Bureau team. A Summary, Conclusions and Recommendation section is also attached.

The Survey's report, recommending denial of the loan, was transmitted to Denver December 3, 1952. The engineering report includes additional data, but as no work is recommended, costs estimates were not made.

I concur with the recommendations of the examining engineer and geologists. A copy of the brochure is attached.

Stephen R Wilson
Stephen R. Wilson

Enclosures 3

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

200 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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FEB 4 1953

January 27, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2703, J. M. Calderwood Claims, Grand County, Utah.

Enclosed are eleven copies of the geological report by C. R. Willden and J. W. Hasler 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)

Room 208 - 222 So. West Temple
Salt Lake City 1, Utah
December 2, 1952

Memorandum

To: A. H. Koschmann

From: Ralph J. Roberts

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

Subject: DMEA Docket 2703, J. M. Calderwood Claims

Enclosed are eleven copies of a geologic report on the J. M. Calderwood Claims, DMEA Docket 2703, relative to an application for a loan to explore for uranium on their claim in Grand County, Utah.

The property was examined October 28 and 29 by C. R. Willden and J. W. Hasler of the U. S. Geological Survey, and J. F. Haynes of the U. S. Bureau of Mines. The field geologists of the Atomic Energy Commission were consulted and no recommendations were made regarding the Calderwood Claims.

The Calderwood Claims are on the northeast limb of the Salt Valley anticline about eleven miles southeast of Thompson, Utah. Uranium mineralization has been found in the Morrison formation of Jurassic age. The applicant has produced a total of 1,870 pounds of ore that assayed 0.26 percent U_3O_8, but there are no new significant occurrences of uranium mineralization over a widely scattered area on the applicant's claims. All known ore has been mined and the chances of finding any significant quantities of uranium ore without a very extensive exploration program are not good. It is therefore recommended that the application for a loan be denied.

I concur with the conclusion and recommendation of the examining geologists that the loan be denied.

Ralph J. Roberts

By: _____
J. William Hasler

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By J. William Hasler,
C. Ronald Willden, and
John F. Haynes

The Calderwood uranium claims in Grand County, Utah, were examined by DMEA personnel during October 1952 for appraisal of a DMEA loan application under docket 2703. The applicant has requested a loan of $20,000 to conduct surface and underground exploratory work.

Sedimentary rocks in the vicinity of the Calderwood claims consist of shale and sandstone of Cretaceous and Jurassic age. Uranium mineralization is found in a porous, shaly sandstone bed of the Salt Wash member of the Morrison formation. In most occurrences the uranium minerals are confined to narrow beds ranging from 6 to 18 inches in thickness.

It is believed that the Calderwood claims have insufficient geologic merit to warrant Government participation in an exploratory program. Uranium mineralization exposed on two claims is too low-grade for further consideration. It is, therefore, recommended that the loan request be denied.

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA DOCKET 2703, J. M. Calderwood

Salt Lake City, Utah

By
C. R. Willden and J. W. Hasler
U. S. Geological Survey

November 26, 1952

Table of Contents

	Page
Introduction	1
Geology	1
Ore Deposits	2
Ore Reserves	3
Proposed Exploration	3
Summary and Conclusions	4

Illustrations

Figure 1. Index Map of Utah

2. Geologic Map of part of the Salt Valley Anticline

DMEA DOCKET 2703, J. M. Calderwood

Salt Lake City, Utah

Introduction

J. M. Calderwood, Salt Lake City, Utah, DMEA Docket 2703, has applied to the Defense Minerals Exploration Administration for a loan of $20,000.00 to be used for exploratory work to determine the extent of uranium mineralization on four claims in an unorganized mining district about 11 miles southeast of Thompson, Grand County, Utah (see Fig. 1). In accordance with a request by the Field Team, Region IV, an examination of the property was made October 28 and 29, 1952 by C. R. Willden and J. W. Hasler of the U. S. Geological Survey, and J. F. Haynes of the U. S. Bureau of Mines.

Geology

The Calderwood claims are on the northeast limb of the Salt Valley Anticline about 11 miles southeast of Thompson. The sedimentary rocks of the region consist of shale and sandstone of Cretaceous and Jurassic age (see fig. 2). The beds in the immediate area of the claims strike N. 80° W. and dip about 10° to the north. The uranium mineralization occurs in a porous, shaly sandstone bed of the Salt Wash member of the Morrison formation.

The various formations that are exposed in the immediate vicinity of the Calderwood claims are tabulated below with the youngest formations at the top:

Mancos shale (Cretaceous)
Dakota sandstone (Cretaceous)
Cedar Mountain formation(?) (Cretaceous)

Morrison formation Brushy Basin member (Jurassic)
Salt Wash member

Summerville formation (Jurassic)
Entrada sandstone (Jurassic)

Of these formations the Morrison is the only one that contains a significant amount of uranium mineralization. The Morrison formation has been separated into two units, the upper Brushy Basin member, and the lower Salt Wash member. The Brushy

Basin member is about 300 feet thick in this area, and consists principally of variegated shale and thin beds of sandstone, conglomerate, mudstone, and limestone. The Salt Wash member is about 240 feet thick, and consists of massive, lenticular beds of sandstone and interbedded red and gray shale. The principal uranium-bearing unit of the Morrison is the upper sandstone bed of the Salt Wash member.

The uranium-bearing bed is exposed in a shallow adit on the Mayflower claim and ranges from 14 to 18 inches thick. It is a red-brown, porous, shaly sandstone containing considerable carbonaceous material and some black resinous material which is probably a hydrocarbon. This bed is overlain by a light-gray to buff, medium-grained, well-sorted, cross-bedded sandstone composed of well-rounded grains of quartz and containing some gritty lenses; it is underlain by light-gray to light-green, fine-grained, calcareous sandstone.

A well developed east-trending joint system cuts the sandstone on the Black Line, Teton, and Mayflower claims, but there is no discernible uranium mineralization associated with the joints except in an adit on the Mayflower claim where two joints immediately above the uranium-bearing sandstone bed show a little carnotite stain.

Ore Deposits

Uranium mineralization on the Calderwood claims is confined to a single bed 14 to 18 inches thick on the Mayflower claim and to a shale seam up to 6 inches thick containing carbonaceous material partially replaced by carnotite on the Teton claim.

The uranium-bearing bed on the Mayflower claim has been followed for a distance of 39 feet along the strike without any appreciable change in thickness or attitude and without any appreciable change in radioactivity. A 16 inch channel sample cut across the bed at the working face assayed 0.06% U_3O_8 and 0.31% V_2O_5.

The uranium mineralization on the Teton claim is confined to carnotite showings that replace carbonaceous material in a thin shale bed between two

light-gray, massive, medium-grained, somewhat cross-bedded sandstone beds. A 6 foot adit driven in this carnotite lense failed to show any uranium mineralization 6 feet from the face of the cliff.

By selective mining and hand sorting the applicant was able to mine 1,670 pounds of material from the workings on the Mayflower claim and 200 pounds of material from one prospect on the Teton claim. The total of 1,870 pounds of ore is reported to have assayed 0.26% U_3O_8; the V_2O_5 content is unknown.

Several "new finds" as reported on the applicant's Gray Line claim were found by the examining geologists to consist of yellow-green clay seams in mudstone and shale of the Brushy Basin member of the Morrison formation. None of the clay seams showed any abnormal radioactivity, and they are not considered to be promising. Commercial uranium mineralization is of infrequent occurrence in the Brushy Basin member.

The "new find" on the Black Line claim was also visited; it consists of carbonaceous material in a light-gray, massive sandstone bed of the Salt Wash member of the Morrison formation. This carbonaceous material does not show any abnormal radioactivity. Although uranium minerals are generally intimately associated with carbonaceous material in the Morrison formation, the presence of carbonaceous material is not a reliable indication of nearby uranium mineralization.

Ore Reserves

The uranium-bearing material of commercial grade on the Mayflower and Teton claims has largely been mined. A small amount of uranium-bearing material remains in the workings, but it is too low grade to mine. There is no basis for inferring ore bodies of commercial size and grade beyond the present workings, and therefore no ore reserves can be inferred.

Proposed Exploration

The applicant did not propose a definite exploration program. He planned to do exploratory work on the Mayflower, Teton, Gray Line, and Black Line claims.

As all the ore of commercial grade has been mined from the Mayflower and Teton claims, and as no ore can be inferred beyond the present workings, no work there is recommended by the examining geologists. The showings on the Gray Line and Black Line claims are not promising and do not warrant further work.

Summary and Conclusions

The Calderwood claims are underlain by the Brushy Basin and Salt Wash members of the Morrison formation. Uranium mineralization is present on two of the applicant's claims as carnotite replacing carbonaceous material in a shaly sandstone and a shale bed, and as a carnotite film along two joints. The exposed uranium mineralization is too low grade to be mineable.

The applicant has requested a loan of $20,000.00 to be used for unspecified exploratory work on four claims. Exploratory work on the Gray Line and Black Line claims has little geologic merit, and the low grade of the uranium mineralization on the Mayflower and Teton claims does not warrant further exploratory work. It is therefore recommended that the loan be denied.

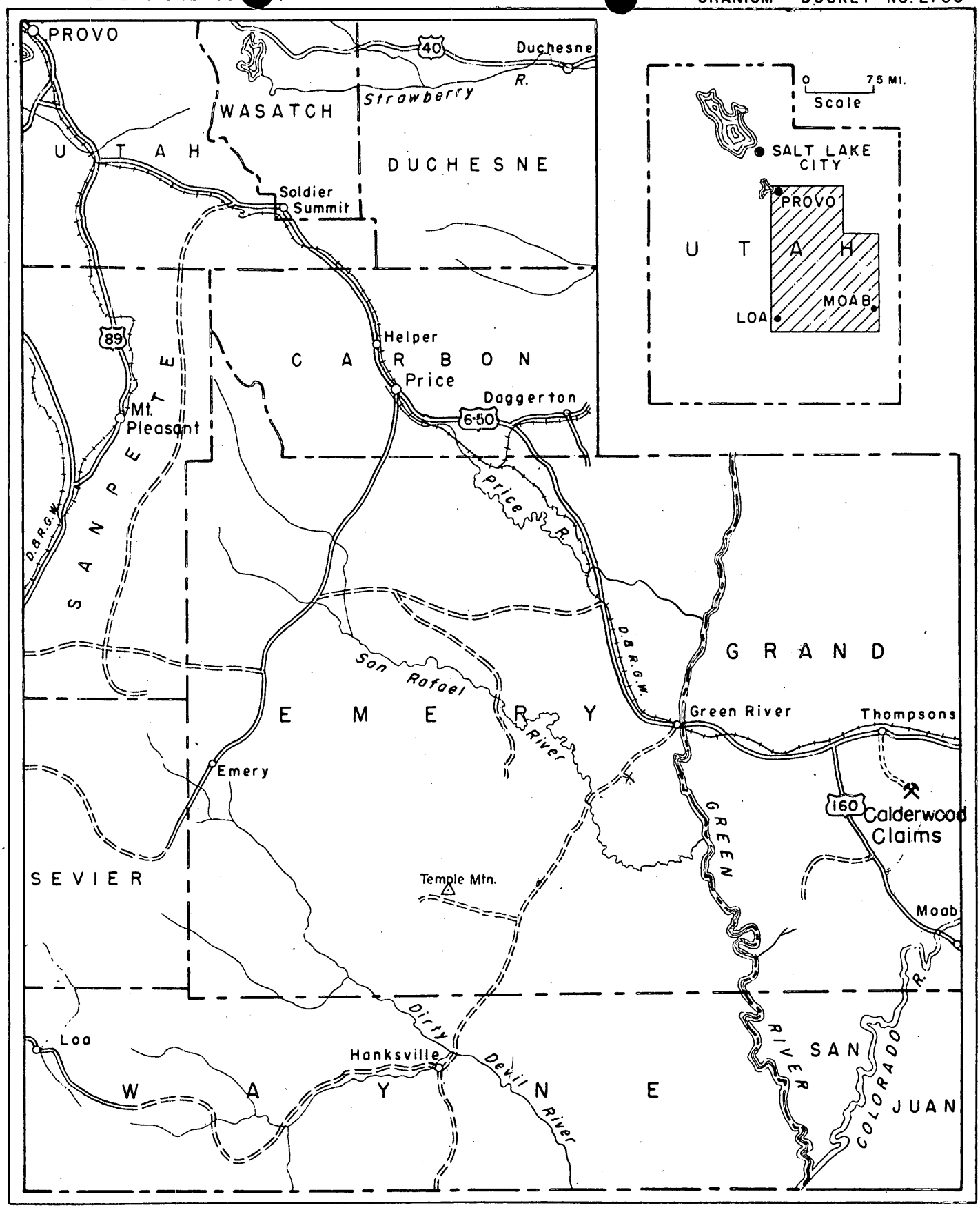
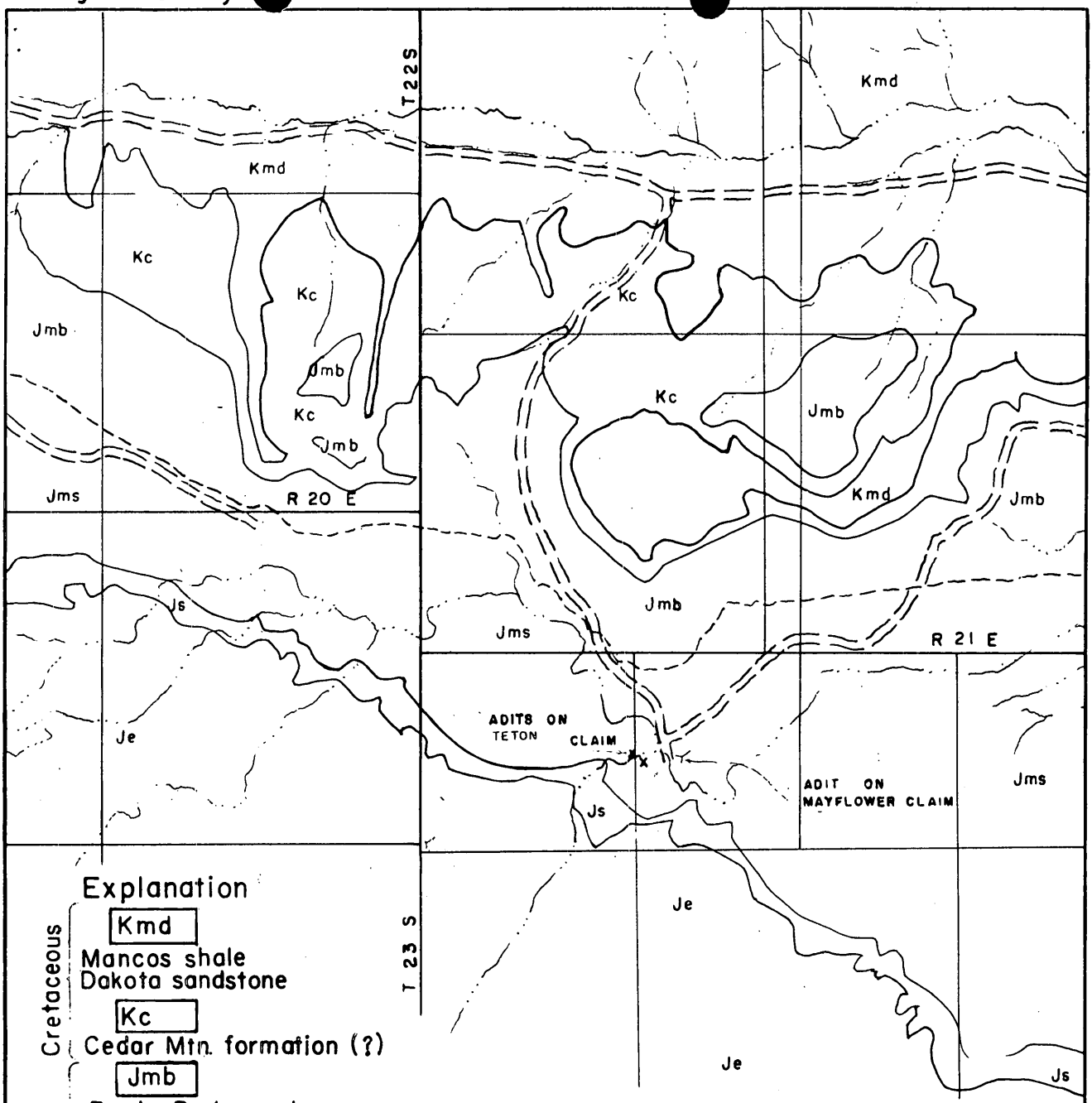


FIG. I

INDEX MAP OF UTAH

0 5 10 15 20 MILES
Scale



Explanation

Cretaceous

- **Kmd** — Mancos shale, Dakota sandstone
- **Kc** — Cedar Mtn. formation (?)

Jurassic

- **Jmb** — Brushy Basin member of the Morrison formation
- **Jms** — Salt Wash member of the Morrison formation
- **Js** — Summerville Formation
- **Je** — Entrada sandstone

Geologic Map of part of the Salt Valley Anticline

0 ½ 1 mile

Scale

After Wm. Lee Stokes
University of Utah

FIG. 2

J. M. CALDERWOOD CLAIMS
GRAND COUNTY, UTAH
DMEA-2703
Uranium

Engineering Report

By John F. Haynes
Mining engineer
Bureau of Mines

J. M. CALDERWOOD CLAIMS
GRAND COUNTY, UTAH

CONTENTS

	Page
Engineering report	
Introduction	2
Location and physical features	2
Ownership and extent	3
Past production	3
Minable ore reserves	4
Present status	4
Conclusions and recommendations	4

INTRODUCTION

An examination of J. M. Calderwood's uranium claims in Grand County, Utah, was made on October 29, 1952, by John F. Haynes, of the Bureau of Mines, and J. William Hasler and C. Ronald Willden, of the Geological Survey. The purpose of the examination was the evaluation of the claims for a DMEA exploratory loan application. The estimated cost of the proposed exploratory program is $20,000.

J. W. Calderwood, son of the applicant, accompanied the examining personnel to the property.

LOCATION AND PHYSICAL FEATURES

The Calderwood claims are located approximately 11 miles southeast of Thompson, Utah, in Sections 19 and 31, T. 22 S., R. 21 E., and are reached by a fair, unimproved, dirt road. Thompson, which is 38 miles north of Moab, Utah, and 27 miles east of Greenriver, Utah, is the nearest railroad shipping point, as well as a source of supplies and labor. The U. S. Vanadium Corporation maintains a uranium-vanadium ore-buying station at Thompson.

The claims are situated in an area of low relief, which is not as difficult of access as are many parts of the plateau region. The area is cut by several washes which are dry throughout the year, except during thunderstorms in the late summer. There is no water in the vicinity, and all water needed for mining purposes must be hauled from Thompson.

Vegetation is scant and consists mainly of greasewood, sagebrush, and scattered pinon trees. Some of the area is practically devoid of vegetation. Any timber needed for mining or construction purposes will have to be imported.

OWNERSHIP AND EXTENT

The Calderwood claims consist of 11 scattered lode claims. Six of these are owned by J. M. Calderwood and five are controlled through a quit claim deed. They are all recorded in the office of the County Recorder in Moab, Grand County, Utah, and are listed as follows:

Gray Line	Book 9J, page 571
Black Line	Book 9J, page 570
Tigar	Book 9J, page 572
Wonder	Book 9K, page 91
Valley View	Book 9M, page 438
Mayflower	Book 9K, page 88
Bon-ton	Book 9K, page 88
South Ledge	Book 9K, page 89
Black Ridge No. 1	Book 9K, page 89
Black Ridge No. 2	Book 9K, page 89
Tea Ton	Book 9K, page 90

PAST PRODUCTION

According to information received from the Atomic Energy Commission in Grand Junction, Colorado, there has been no record of ore shipments from this group of claims. However, J. W. Calderwood stated to the examining personnel that slightly less than one ton of ore was shipped, with an assay value of 0.26 percent U_3O_8.

MINABLE ORE RESERVES

No ore reserves are present on the property.

PRESENT STATUS

The workings on the Calderwood claims consist largely of shallow pits or other small excavations in the rims. The major work is on the Mayflower claim, where approximately 50-linear feet of drift and open cut has been completed. Some ore was reported to have been mined from this claim, sorted, and sacked for shipment. It is considered unlikely, however, that much more than one ton of marketable ore has been taken from the entire group of claims by the present owner. An unknown amount of ore was reported as having been mined on the Mayflower claim by a previous operator.

In the workings on the Mayflower claim, 16 inches of flat-lying, low-grade, uranium-bearing rock is exposed. This bed assays 0.060 percent U_3O_8 and 0.31 percent V_2O_5. There are small fractures in the sandstone which contain visible carnotite, but the exposures are extremely small and spotty. On the Mayflower and Tea Ton claims, carbonaceous material and fossilized wood is radioactive, ranging from near zero to a high reading on the Geiger counter. High readings are rare, however.

CONCLUSIONS AND RECOMMENDATIONS

No systematic work has been done to prove or disprove the presence of ore in commercial quantities. With the exception of the work on the

Mayflower workings, exploration has consisted only of a few jackhammer holes in widely scattered showings of mineralization. The applicant has not attempted to explore intelligently any of the showings. The most conspicuous mineralized exposures are present on the Mayflower and Tea Ton claims, but it is believed that mineralization is not sufficiently strong to warrant Government assistance.

High-grade float is reported to have been found below the Morrisón outcrop on the Gray Line and Black Line, but only slight radioactivity was found in widely scattered tests, and no uranium-bearing minerals were observed. It is believed probable that the claims were taken up merely to cover what the operator considered to be potential mineral-bearing ground, the outcrop of the Morrison formation.

It has been demonstrated that some uranium is present on the Mayflower and Tea Ton claims, but it appears doubtful that commercial ore of consequence will be found on the Calderwood claims. No appreciable production has been made in the past, and no reserves are known.

Therefore, on the basis of the above conclusions, it is recommended that the requested loan be denied.

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

182.

224 New Customhouse
Denver 2, Colorado

January 26, 1953

Mr. J. M. Calderwood
825 South 10th East Street
Salt Lake City 2, Utah

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 29 1953

Dear Mr. Calderwood:

Your letter dated January 12, 1953 to the Defense Minerals Administration, requesting information on your application, DMEA 2703, has been forwarded to this office for reply.

The final report of the field examiners is in preparation. The work load of the field examiners has been extremely high which has caused considerable delay in the completion of their final reports, especially in the case of uranium applications where contact with the Atomic Energy Commission is required.

Please be assured that we will expedite your application, and will advise you of the results at an early date.

Very truly yours,

W. H. King

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

HMC:es

cc: Mittendorf
Docket
Chron.
Wilson
Koschmann (2)

FILE COPY
SURNAME:

200

Adams

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

BW

JAN 19 1953

Mr. W. H. King
Executive Officer
Region IV
224 New Customhouse Building
Denver 2, Colorado

Dear Mr. King:

There is transmitted herewith a letter received in this office from Mr. J. M. Calderwood regarding his application for exploration assistance, Docket No. DMEA 2703.

The application under Docket No. DMEA 2703 was forwarded to Region IV, since it is within your delegation of authority to process. It will be appreciated if you will answer Mr. Calderwood's inquiry as to progress on the application.

A copy of my letter to Mr. Calderwood is enclosed.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

J.C. 1-19-53

Enclosures
READams/meb
1-16-53
cc to: Adm.Reading File
Mails & Files Br.
Mr. Calderwood

FILE COPY
SURNAME:

200

Adams

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

SW

Mr. J. M. Calderwood
825 SO.10th East Street
Salt Lake City 2, Utah

JAN 19 1953

Dear Mr. Calderwood:

This will acknowledge your letter dated January 12, 1953 requesting information as to the progress made on your application for exploration assistance, Docket No. 2703.

Your application dated August 10, 1952 was received in this office on September 16, 1952. Since your property is located in an area covered by our Region IV, and the estimated cost of operation is $20,000.00, your application was forwarded to Mr. King, Executive Officer, DMEA Field Team, Denver, Colorado, for processing.

Your letter has been forwarded to Mr. King for reply, and any further information regarding your application can be made directly to Mr. King.

A copy of my letter to Mr. King is enclosed for your information.

Sincerely yours,

C. O. Mittendorf

Administrator

J.C. 1-19-53

Enclosure
READams/meb
1-16-53
cc to: Adm.Reading File
Mails & Files Br.
W.H.King,Reg.IV

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

September 17, 1952

Mr. J. M. Calderwood
825 South 10th Street,
Salt Lake City 2, Utah

Subject: DMEA-2703
Re: The Calderwood Claims
Exploration Assistance

My dear Mr. Calderwood:

The receipt of your application dated August 10, 1952 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-2703 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-2703 in any future correspondance relating to your application.

Sincerely yours,

R. E. ADAMS

Robert E. Adams
Chief, Operations' Control
and Statistics Division

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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-2703
Metal or Mineral
Date Received 9-16-52
Estimated Cost
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: J.M.Calderwood,825 SO.10th East Street,Salt Lake City 2,Utah.

My brother W.R.Calderwood has helped me finance and mine ore production thus far.

(*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 I have paid in full for three u3o8 claims,paid all but royalty payments on 3 more claims,and have a quit claim deed to 5 more uranium bearing claims,all of which will come under my exploration plan,copy of contract on last 5 sent. I have a copy of all these claims,properly located and recorded and assessment work done.

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

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise I own six claims by purchase and have Quit Claim Deed contract on five additional claims.

(*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. Have $500.00 payment on 5 claims after truck loads can be made.

(*e*) If you own the land, describe any liens or encumbrances on it There are no liens or other form of indebtedness on any of said premises save and except as above stated .

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Gray Line,Bk 9J,Pg571,Black Line Bk.9J,Pg.570,Tigar Bk.9J,Pg.572,Wonder Bk.9K, Pg.91,White Top+,Bk.9J.Pg.562,Tea Ton Bk.9K,Pg 90,Mayflower Bk 9K Pg88,Bonton,Bk.9K,Pg88,*

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. Accessibility good;For trucking roads should be graveled;Water,supplies at Thompson.

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

16—66551-1

+ Now the Valley View claim. Book 9M,Page 438. * See my page under 3.(f).

SEP 16 1952

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

(*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 ..... days and be completed within ..... 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.). NONE

(*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?

☐ 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 September 8, 1952

J. M. Balderwood
(Applicant)

By ..... "

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

825 SO.10th East St.,
Salt Lake City 2,Utah,
September 8,1952.

U.S.Atomic Energy Commission,
P.O.Box 30,Ansonia Station,
New York 23,N.Y.

Gentlemen:-

Under MF-103 application for uranium loan. Additional claims -

3. (f) South Ledge claim,Book 9K page 89,Black Ridge #1 Book 9K Page 89,Black Ridge #2, Book 9K,Page 89. County Recorder,Moab,Grand County,Utah.

4. Physical Conditions(a) We have had two men at work continually for over three months. In that time we have done all assessment work for six claims,made 1 drift 30'x 5'x 6'; 1 drift 20'x 4' x 6'; 1 drift 5'x 3'x 5' all on the Tea Ton claim; On the Mayflower we have made 1 drift 16 ' x 6'x 6'and have removed about 1500 lbs of u_3o_8 commercial ore, and about 2 tons of lower grade of u_3o_8 and vanadium. We have removed about 20 tons of heavy boulders from this operation besides the above footage. We intend to continue work where we are by removing about 4' of Morrison sand stone under the 2' bed of ore in a sort of fossiliferous conglomerate Formation with that sort of trees along with the bed. Portions of our ore runs as high as $2\frac{1}{3}$% u_3o_8 and 0.02% vanadium. Very little lime. As far as observed our ore is in beds on all of our claims as far as we have done work thereon. We have about 1000# of high grade uranium sacked up in 50# sacks.We are saving all of the oré as we work,much of which we have not determined for vanadium. We have expended over $6,500.00 for labor and tools plus rentals and claims.

5. (a) See under 5 your sheetThe exploration project.
(b) See under "4" above.
(c) See under "4" above.
(d) Your applicant has had over 30 years experience prospecting,practical mining,and traveling over areas in Utah,Idaho and Montana;has been limitedly acquainted with uranium and vanadium ores during all that time,but never worked in any uranium fields until last fall. Work carried on at present is under his direction,but my son J.Wells Calderwood,who has had several years experience drilling,blasting etc. along with Henry Rasmussen,who has been mining uranium and vanadium ore for a number of years in that and near by areas,are performing the work with wide latitude as to what is best to do, with my approval.

6. (a) We have one Jaegar 75' Compressor 9005,one 23 Drill 63591,50ft of 3/4" hose all rented and one Drill Post also rented and in daily operation since June 25,1952. We use the Timkin Carbide bits. The cost per month for the compressor is $99.00,for the Drill (or Jackhammer) $33.00 per month,for the hose $6.50,for the Drilling Post $35.00. We have purchased about 500 feet of 1" iron pipe and all drill steel and bits to date.
(b) none.No contract work.
(b) We pay our employes $1.50 an hour or $12 per day,payable for one every week,and for the other (his request) every two weeks. Except for travel ($15) every two weeks,no other receives any pay whatever,all moneys are expended solely for the development of the properties.
(c) See under 6.
(d) See under 6.
(e) NONE,apart from drills,bits and tools.
(f) New Buildings,improvements,installations.If we could have the Government gravel and widen the road of travel from Thompson to our points of operation,we could and would be able to carry on operations all winter with our employes domiciling at Thompson.If the road may not be widened and graveled,and if we should decide to operate all winter,it would be necessary to build one 3-room house at the place of operation. Roads become very heavy with sticky mud in places making it impossible for truck or car travel during and after storms in late fall and winter. It is unlikely any one would want to live at property

INSTRUCTIONS

6.(f) Our employes board and lodge themselves.

6. (g) Your applicant attends to all accounting free . My books are open for inspection by any one connected with our money matters,operations,etc. the paying of all expenses, workmen's compensation,insurance,payroll taxes,unemployment tax.this last tax amounts to an average of about $28 -$30 per month. Insurance is $100.00 a year plus all monthly premiums on workmens' payroll,or about $30 per month.

(h) Contingencies. None so far.

7.(a) Since I have been endeavoring to secure a loan since early this summer,I have assumed that the above expenditures would be ample for my share of the Matching loan on a $20,000.00 loan. With a loan of that extent I could equip and operate in two or more places which give highly favorable indications of making good. All rentals apply on the purchase price of all machinery if we decide to buy them.

(b) See (a).

The geology of all of these claims is Morrison sand with a small amount of lime (4½%) in places,or about the same as exists in most of the Colorado Plateau of Utah.

I might say here,that the values in the clayey vein or bed vary considerably thus far in our operations,as they do generally elsewhere. But the bed persists and is constant and shows high grade ore about 10 feet ahead of our present drift at the north side of a 25-30 foot open cut and 8 feet under the ledge. The clay at the present is low grade u_3o_8,but appears to be increasing in vanadium,as we approach the high grade ore.

My hope is that you will grant me this loan right away,as my brother and I have gone our limits in buying these claims and equipment,rentals and employes wages,etc. Our men are doing excellent work but cannot afford to be idle because of my lack of funds. We need immediate financial help if our men are to remain with us. While we have these men and the finest of machinery on rent,with manpower difficult to find,I trust that you will favor me this loan so I can forge ahead before the winter sets in, for which I will be ever grateful.

J.M.Calderwood.

J.M.Calderwood