REGIONAL DIRE[redacted]

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

August [illegible], 1951

Air Mail

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 14,088, Vale Trough, Nephi, Utah

Enclosed herewith is original and two copies of the report as indicated above.

We concur with the conclusions and recommendations of the examining team.

J. H. East, Jr.

[illegible]
A. E. [illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Administration
200 New Customhouse
Denver 2, Colorado

August 22, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 1408X, Yale Brough, Nephi, Utah

Enclosed are 8 copies of the geologic report by J. W. Hasler and D. C. Arnold of the U. S. Geological Survey covering the above docket.

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

Enclosures (9)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Room 307, 320 South Main
Salt Lake City 1, Utah
13 August 1951

Memorandum

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

From: Ralph J. Roberts

Subject: Docket DMA 1408X, Yale Brough, Nephi, Utah

Enclosed are 8 copies of a report on the Yale Brough Uranium property, Nephi, Utah.

In response to a request, dated June 18, 1951, from the Field Team, Region IV, a field examination of the property was made July 6-7, 1951.

The Uranium mineralization occurs as coatings and veinlets of uraniferous opal in reddish brown to black chalcedony float in a tuff bed. As only a few tons of uraniferous opal that would probably not assay more than .01 percent U_3O_8 is available, it is recommended that the exploration loan be denied.

I concur with the opinion of the examining geologists that the request for an exploration loan be denied.

Ralph J. Roberts

AUG 1951
RECEIVED
U.S. Geological Survey
Mineral Deposits Branch
Denver

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

Docket DMA-1406X, Yale Brough, Nephi, Utah

J. W. Hasler and D. C. Arnold, Geologists
U. S. Geological Survey

August 10, 1951

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ILLUSTRATIONS

Figure 1. Index map of Utah.

Docket DMA-1403X, Yale Brough, Nephi, Utah

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Yale Brough has applied to the Defense Minerals Administration for a loan of $5,000 to be used to explore showings of uranium on the Sunbeam Claims, Jureka Mining district, Utah.

The Sunbeam Claims are in the low hills 14 miles northwest of Nephi, Utah which consist of Tertiary volcanic tuffs, flow breccias, and andesite. The mineralization occurs as coatings and veinlets of uraniferous opal in reddish-brown to black chalcedony found in a tuff bed. No uranium minerals were recognized. The chert zone had a general northerly strike, but no bedrock was found, and the trenches and cuts were only in overburden.

The Geiger count is due entirely to the uraniferous opal. No ore reserves could be calculated from the workings. The overall grade of the uraniferous opal would probably not exceed .01 percent U_3O_8. As only ore containing at least .10 percent U_3O_8 can now be marketed, the material is not of commercial grade. Furthermore, it is doubtful whether uranium can be recovered at a reasonable cost from this uraniferous opal, no such ores are treated in Colorado or Utah at the present time. It is therefore recommended that the loan be denied.

Docket M4-1408X, Yale Brough, Nephi, Utah

INTRODUCTION

Docket M4-1408X is an application for an exploration loan of $5,000 to be used to (1) explore and (2) remove showings of uranium ore on the Sunbeam Claims. The owners of the property did not outline a definite exploration program.

The examination was made by J. W. Hasler and S. C. Arnold of the U. S. Geological Survey July 6-7, 1951; they were accompanied on the examination by Mr. Arnie Brough and Mr. James Bean, two of the property owners. The property has been developed by four small test trenches, the largest of which is 20 feet long and 6 feet deep.

The property is 14 miles northwest of Nephi, Utah in Secs. 28 and 33, T. 12 S., R. 2 W. (fig. 1). It is on the west side of Dog Valley, in the Eureka mining district, Juab County, Utah. The property may be reached by traveling westward from Nephi 9 miles on Utah State Highway 132, then northwestward 6 miles through Dog Valley on a secondary dirt road.

The property consists of 8 unpatented mining claims that were located in the spring of 1950. Assessment work was done during the winter of 1950-51. The property is owned by Yale Brough, Arnie Brough, Mont Bean, James Bean, and George Fairbanks, all of Nephi, Utah.

GEOLOGY

The Property is in an area of low rolling hills between the Tintic mining district to the north and the Canyon Range to the southeast. Although these adjacent areas have been extensively studied, no geologic mapping has been done in the vicinity of the Sunbeam Claims.

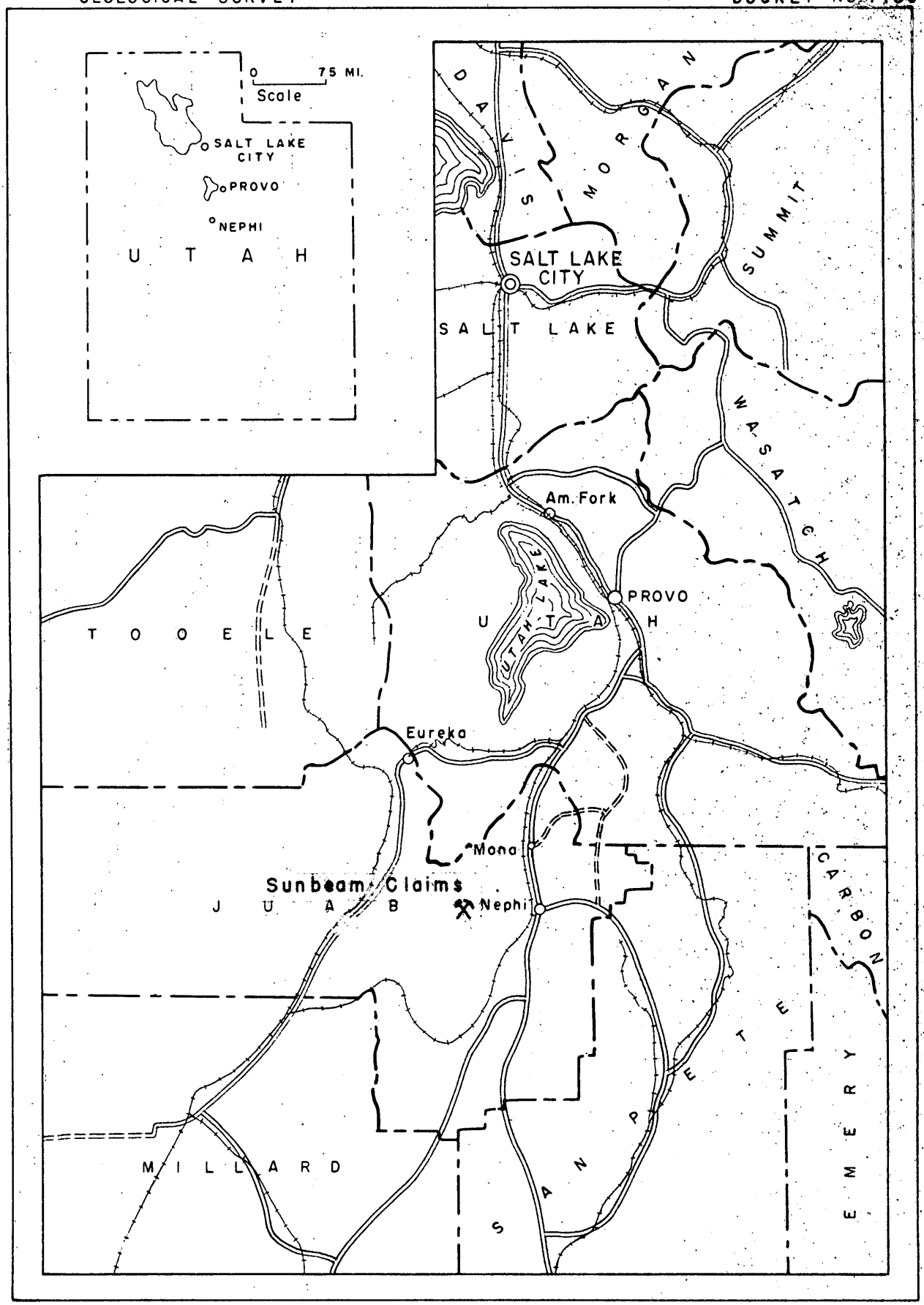

FIG. 1 INDEX MAP OF UTAH

0 5 10 15 20 MILES
Scale

The rocks in the vicinity of the deposit consist of Tertiary volcanic tuffs, flow breccias, flow conglomerates, and andesite. Petrified wood was noted as float on top of the tuff bed, but the source of the petrified wood could not be found. The petrified wood was checked with a geiger counter and found to contain no radioactive elements.

Ore deposits

The mineralization occurs as coatings and veinlets of uraniferous opal in reddish-brown to black chalcedony found in the tuff bed. Three of the four exploration trenches have been excavated on what is obviously chert float on the tuff bed. Test pit No. 4 is in a body of chert as much as 15 inches wide and about 4 feet in length. This chert body strikes N. 65° W. and dips 65° SW. The chert was not continuous along the strike of the pit, but the layer consists of blocks and nodules surrounded by tuff. The downward extension of this small zone gave some indication that the chert may be in place rather than just float as were in the other trenches; however, it is quite possible that this is a slightly larger block of chert that could pinch out in a few feet.

No uranium minerals were recognized. The Geiger count is due entirely to uraniferous opal. The test pits were checked with a Nuclear Geiger counter, but no place could be found in the workings where the count was more than double the normal background count. The highest count recorded was .03 to .04 mr/hr.

The chalcedony from test pit No. 4 was checked with the counter and found to have about the same radioactivity as that in the trenches. One large piece of chert containing approximately 30 percent of uraniferous opal gave a count of .15 mr/hr. Mr. Bean, one of the property owners, stated that this

was the same kind of rock that was assayed by the A.E.C. in Grand Junction, Colorado, and reported to contain .11 U_3O_8. This is considerably higher than the count would indicate, and it is inferred that the sample submitted was higher in U_3O_8 than the material we examined.

Ore reserves

No ore reserves could be calculated from the workings, because the uraniferous material occurs as float in the form of chalcedony nodules and blocks. The overall grade of the uraniferous opal would probably not exceed .01 percent U_3O_8. Material of this grade cannot be beneficiated under present metallurgical practices.

CONCLUSIONS AND RECOMMENDATIONS

At the time of the examination of the property had been developed only by four shallow trenches. These trenches were excavated last winter by the applicants in an attempt to find the source of the uraniferous material. Only one of the four trenches appears to contain uraniferous chalcedony that is in place, and even this is doubtful.

Inasmuch as the uraniferous material discovered thus far consists of opal and chalcedony estimated to contain only .01 percent U_3O_8, it is recommended that the application for an exploratory loan be denied. As only ores containing at least .10 percent U_3O_8 can be sold at present, the material is not of commercial grade. Furthermore, it is doubtful that uranium can be recovered at reasonable cost from uraniferous opal. No such ores are being treated in Colorado and Utah at the present time.

Even if further exploratory work were done, it is unlikely that more than a few hundred pounds of uraniferous material would be available within the area explored.

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

REGIONAL DIRECTOR'S OFFICE
REGION IV
SEP 17 1951
BUREAU OF MINES
DENVER, COLORADO

SEP 13 1951

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[illegible]

[illegible]

Tom Lyon
[illegible]

[illegible]
[illegible]
Lyon
Barrett
Wilson - [illegible]
[illegible]
[illegible]

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

SEP 13 1951

REGIONAL DIRECTOR'S OFFICE
REGION IV
SEP 17 1951
BUREAU OF MINES
DENVER, COLORADO

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Weston Bourret

[illegible]

Approved:

Tom Lyon

[illegible]

[illegible] 9-7-51
cc: [illegible]
Lyon
[illegible]
[illegible]
[illegible]
DMA docket file

August 31, 195X

Air Mail

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Contract 14-08-XX, Tale Borough, Nephi, Utah

Enclosed herewith is original and two copies of the report as indicated above.

In accord with the conclusions and recommendations of the accompanying letter.

J. H. Smith, Jr.

R. H. Karlsbrunnen

A. E. Hackman

oj

cc: DMA Subject and Chron.

224 New Customhouse
Denver, Colorado

June 18, 1951

Memorandum

To: S. R. Wilson

(Through Chief, Mining Division)

Ralph Roberts (with brochure)

From: DMA Field Team, Region IV

Subject: DMA Docket 1,083X, Yale Brough, Maphi, Utah

We are enclosing the brochure, MF-103, and a new outline form, a copy of which was sent to you with a memorandum from the Coordinating Committee dated June 8.

You will note that the answer to Question 17 states, "If geologic probabilities are favorable, have applicant supply rest of data essential for contract." If your examination shows this deposit to warrant it, have your geologist secure the necessary information for Exhibits A, B, C, D, and E.

No field work will be required by the Bureau of Mines.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

Attachments:
Review form
Form MF-103
cc-Koschmann
Wilson
Allsman
Case files
above

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

REGIONAL DIRECTOR'S
OFFICE
REGION IV
JUN 18 1951
BUREAU OF MINES
DENVER, COLORADO

JUN 15 1951

Mr. [illegible]
[illegible]
[illegible], Utah

Dear Mr. [illegible]

Your application, docket [illegible], for exploration project in the amount of $5,000.00 has been received by the Iron and Rare Metals Branch of the Supply Division.

Before a decision can be reached on your request we find it is necessary to obtain additional information on your property. Your application therefore is being referred to the office of the Executive Officer of the Field Team IV, Mr. J. H. [illegible] Jr., 7[illegible] [illegible] Courthouse Building, Denver 2, Colorado, with the request that the needed information be supplied to us.

Yours very truly,

[illegible] Lyon, Director
Supply Division

Burnet/[illegible]
cc: Mr. [illegible], file
[illegible]
Lyon
Burnet
Field Team IV
Files

[illegible]