STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

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

DATE: April 30, 1954

Defense Minerals Administration
RECEIVED
MAY 3 - 1954

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

SUBJECT: Final Field Team Report, DMEA Docket 2772 (Uranium), A. E. Shumway, applicant; Notch claims, N. E. $\frac{1}{4}$ Sec. 7, T. 35 S., R. 20 E., San Juan County, Utah

The final Field Team report on the results of the examination of the property identified in the subject above has been reviewed.

Subsequest to a favorable recommendation by the examining members of the Field Team, the Atomic Energy Commission tested parts of the applicant's claims by diamond drilling. Only weakly mineralized rock was found by that work and the Field Team in Revion IV denied the application.

The proposed exploration by 200 feet of drifting originally recommended would be in the direction of weakly mineralized ground outside of a probable channel that would be the most favorable position for probable occurrence of uranium ore. Because the Atomic Energy Commission drilling failed to show any significant amount of uranium, it appears the chances, even in the channel, would be small for discovering significant reserves. I concur, therefore, with the action of the Field Team in denying the application.

Arthur P. Butler, Jr.

Copy to: E. Wm. Ellis (2)

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

COPY

224 New Customhouse
Denver 2, Colorado

April 9, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 2772 (Uranium), A. E. Shumway, Notch claims, San Juan County, Utah.

Enclosed are four copies of the report of examination on the subject docket. The results of the A.E.C. drilling on the Notch No. 1 Claim were not encouraging.

Also enclosed is a copy of the letter of denial to the applicant and two copies of Form 3b.

/s/ W. H. King

/s/ A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
4-21-54
(date)

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

COPY

224 New Customhouse
Denver 2, Colorado

April 9, 1954.

Mr. A. E. Shumway
Blanding
Utah

Dear Mr. Shumway:

Re: Docket DMEA-2772

Reference is made to your application for Government aid on the Notch claims.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of hielding material of acceptable grade, and in quantities that will significantly improve the mineral supply position for 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 is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

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

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

HMC:cwm

cc: Docket
Administrator, DMEA
SRWilson
Ralph J. Roberts
ERGordon
RPFischer
AHKoschmann
Chron.

Reviewed by
DMEA OPERATING COMMITTEE

4-21-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

April 9, 1954.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination - DMEA Docket 2772 (Uranium), A. E. Shumway, Notch claims, San Juan County, Utah.

Enclosed are eleven copies of the engineer's report of examination on the subject docket.

The applicant requested $20,500.00 to explore the Notch claims by stripping and drifting.

The examining team recommended a total of 400 feet of drifting and crosscutting at a total cost of $10,880.00 but before the application was approved, the A.E.C. announced plans to drill this area, so processing the contract was deferred pending results of the A.E.C. drilling.

Fischer's memorandum to the Field Team dated April 5, 1954 shows the results of the A.E.C. drilling and indicates that the chances are small for discovering significant amounts of uranium with the proposed exploration. We recommend that the application be denied.

W. H. King

W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
4-21-54
(date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

April 6, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2772, A. E. Shumway, Notch Claims, San Juan County, Utah

Enclosed are 11 copies of a memorandum report by R. P. Fischer of the U. S. Geological Survey covering the above docket.

It has been recommended that the application be denied.

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

Enclosures (11)

Reviewed by
DMEA OPERATING COMMITTEE
4-21-54
(date)

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

April 5, 1954

Memorandum

To: W. H. King and A. H. Koschmann, DMEA Field Team, Region IV

From: R. P. Fischer, Supervisor, Colorado Plateau District RPF

Subject: Memorandum report DMEA 2772, A. E. Shumway, Notch claims, San Juan County, Utah

In 1952 A. E. Shumway submitted an application (DMEA 2772) for assistance to explore for uranium on the Notch claims, San Juan County, Utah. The area was examined late in 1952 by geologists from the Salt Lake City office of the USGS and a report(by C. G. Tillman and J. F. Powers, dated March 2, 1953) was submitted which recommended 200 feet of drifting. Before the application was approved, and a contract prepared, however, AEC announced plans to drill this area, so completion of the contract was deferred. This memorandum summarizes the results of AEC work and recommends that the application be denied.

The attached map was prepared by Dana R. Kelley, AEC geologist, and it shows the results of AEC drilling. Although it is impossible to plot accurately the drift recommended for DMEA work, the drift was planned to start from the north part of the mine workings shown on the accompanying map and extend northwestward. This general area has been tested by drill holes N-11 and N-3. As these holes show only weakly mineralized rock, and as the center of the ore-bearing channel appears to trend nearly due west and lies south of the area to be tested by the proposed drift, it seems that the chances are small for discovering significant reserves with the proposed exploration. For these reasons, it is recommended that the application be denied.

RPF/mlr

Reviewed by
DMEA OPERATING COMMITTEE
4-21-54
(date)

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

March 31, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2772, Natch Claims, North Elk Ridge, San Juan County, Utah.

Enclosed are 11 copies of the geologic report covering the above docket by C. G. Tillman and J. F. Powers of the U. S. Geological Survey.

This report was returned to the Salt Lake Office on March 23, 1953, for additions in the body of the report.

It has been recommended that the government enter into a contract with the applicant to do the exploratory work outlined in this geologic report.

The brochure is enclosed.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (12)

Reviewed by
DMEA OPERATING COMMITTEE

(date)

Room 206 - 222 So. West Temple
Salt Lake City 1, Utah
March 27, 1953

Memorandum

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

From: J. William Hasler

Subject: Revised DMEA Docket 2772, Hotch Claims, North Elk Ridge
San Juan County, Utah

Enclosed are eleven copies and brochure of the Hotch Claims, DMEA Docket 2772, (uranium) that were forwarded to me March 23, 1953 for additions in the body of the report.

We hope these additions will meet with your approval.

J. W. Hasler

Room 208 - 223 So. West Temple
Salt Lake City 1, Utah
March 3, 1953

Memorandum

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

From: Ralph J. Roberts
Utah-Nevada District Office

Subject: DMEA Docket X772, Notch Claims, North Elk Ridge
San Juan County, Utah

Enclosed are eleven copies of a geologic report on the Notch Claims (uranium) North Elk Ridge, San Juan County, Utah.

A field examination was requested by the Field Team, Region IV, December 1, 1952 to determine the advisability of government assistance for exploration for uranium on the Notch Claims.

The Notch Claims were located by G. E. Shumway et al. in 1950 and are about 45 miles northwest of Blanding, Utah, on Elk Ridge, San Juan County, Utah. The Notch Claims have produced a total of 195.47 tons of uranium ore that had a gross value of $3,070.23.

Rocks in the mine area are mainly sandstone, mudstone, limestone and conglomerate of Triassic age. Uranium is found in a secondary channel filling, and in conglomerate and mudstone lenses that trend N. 50° W. in the Shinarump formation of Triassic age. The principal uranium ore mineral is pitchblende (?), and it is associated with secondary uranium minerals in the green mudstone.

There are no blocked out ore reserves but the possibility of finding ore of commercial grade in the secondary channel is favorable. The applicant proposed to explore the property by rim stripping and drifting into the secondary channel. The examining geologists think the applicant's program is too ambitious, and therefore, recommend the alternate exploratory program outlined in this geologic report.

It is therefore recommended that the government enter into a contract with the applicant to do the exploratory work outlined in this geologic report.

I concur with the examining geologists conclusions and recommendations.

Reviewed by
DMEA OPERATING COMMITTEE

_____
(date)

Ralph J. Roberts

By: _____
J. William Mosley

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

September 21, 1953

Air Mail

Memorandum

To: W. H. King, Executive Officer, DMEA Field Team, Region IV

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

Subject: Docket No. DMEA 2772 (Uranium), A. N. Shumway, Notch claims, San Juan County, Utah

Enclosed are the original and 10 copies of an engineering report covering examination of the Notch claims for DMEA loan appraisal. Also included are three copies each of completed forms 6-803 and 6-993.

The property was examined by H. K. Thurber September 11, 1953. Personnel of the Geological Survey had previously examined the property and prepared a report which was transmitted to Denver March 3, 1953. This report included engineering cost estimates for 400 feet of proposed lateral underground work. The present engineering report recommends the same exploratory proposals, but includes cost estimates somewhat greater than those appearing in the geologic report. The higher cost is the result of adding one man to labor believed necessary to conduct the work properly. It is also believed that some timbering will be required to support the workings.

Uranium mineralization on the Notch property is found in mudstone, sandstone and conglomerate of the Shinarump formation. Mineralization is strongest in the sandstone.

It is recommended that a loan of $10,878 be granted to owners of the Notch claims to conduct exploration as outlined in the engineering and geologic reports. Prior to preparation of a contract, however, it is believed advisable to obtain results of any diamond drilling completed on the property by the Atomic Energy Commission. The examining engineer observed the locations of drill holes on the Notch claims and was advised by the owner that the holes were drilled by the Atomic Energy Commission. Results of the

Reviewed by
DMEA OPERATING COMMITTEE

(date)

holes have not been made available to the property owner to date. A request has been made to the Atomic Energy Commission to supply information concerning the drill holes.

No maps were prepared for the engineering report. Maps attached to the geologic report are considered sufficient for use in contract preparation.

The brochure and other information mailed to this office under your memorandum of September 14, 1953, are enclosed.

Stephen R. Wilson

Stephen R. Wilson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
SERIES IV

DMEA 2772, Dutch Claims (Uranium)

Dutch Kiln Mines, San Juan County, Utah

By

C. G. Tillman and J. F. Powers
U. S. Geological Survey

March 2, 1953

Reviewed by
DMEA OPERATING COMMITTEE
4-21-54
(date)

CONTENTS

	Page
Introduction	1
Location and Accessibility	1
History and Production	1
Geology	2
Ore Deposits	3
Ore Reserves	4
Proposed Exploration	4
Costs of Proposed Exploration	5
Summary, Conclusions and Recommendations	5

Illustrations

Figure 1. Index Map of Utah

2. Geologic Sketch Map of Rotah Claim Workings, Elk Ridge San Juan County, Utah

3. Claim Map of Rotah Workings, Elk Ridge, San Juan County, Utah

GEOLOGIC REPORT

NOTCH CLAIMS, DMEA 2772

NORTH ELK RIDGE, SAN JUAN COUNTY, UTAH

(Uranium)

Introduction

Mr. A. E. Shumway of Blanding, San Juan County, Utah has applied to the Defense Minerals Exploration Administration for a loan of $20,000.00 to be used for exploratory work on the Notch Claims, on Elk Ridge, San Juan County, Utah.

A field examination was requested by the Field Team, Region IV, December 1, 1952, to determine the advisability of government assistance. An examination of the property was made by John F. Powers and C. G. Tillman, of the U. S. Geological Survey, October 27, 1952 in connection with other DMEA examinations in the vicinity. The Atomic Energy Commission has made a reconnaissance survey of the Notch Claims, and no recommendations for exploratory work were made by them.

Location and Accessibility

The Notch Claims are located in NE. 1/4 Sec. 7, T. 35 S., R. 20 E. at the head of Notch Canyon on Elk Ridge, San Juan County, Utah (fig. 1). The claims can be reached by driving 37 miles west from Blanding, Utah via Utah highway 95, thence driving north 8 miles on a forest service road to Gooseberry Ranger Station, thence 1/4 mile south. Utah highway 95 is an all-weather dirt road but the 8 miles on the Gooseberry Ranger Station road would be difficult to travel during rainy weather.

History and Production

The Notch Claims were located by G. E. Shumway et al. in 1950(?). Mining started early in 1951. Production from the Notch Claims during 1951 was 130 tons of uranium ore that averaged 0.19 percent U_3O_8 and 0.045 percent

V_2O_5. At present prices this ore amounted to $12.54 per ton and the gross value was about $1,630.20. During 1952 the Notch Claims produced 65.47 tons of ore that averaged 0.314 percent U_3O_8 and 0.024 percent V_2O_5, worth $21.95 per ton and grossed $1,440.03 for a total production of 195.47 tons and a gross value of $3,070.23.

The Notch property consists of two unpatented lode claims located in the NE. 1/4 sec. 7, T. 35 S., R. 20 E., San Juan County, Utah (fig. 3). The claims are owned by a partnership consisting of A. E. Shumway, Lee Shumway and Alma Redd. All partners reside in Blanding, Utah. The claims are recorded on page 12, book R4 in the office of the County Recorder, Monticello, San Juan County, Utah. According to the San Juan County Recorder, the Notch Claims were located May 21, 1949 and recorded June 16, 1949 by Messrs. A. E. Lee and Harris and Seth Shumway. The Claims were, however, relocated September 7, 1951 and recorded September 12, 1951.

Oil and gas leases were filed on the ground covered by the Notch Claims August 29, 1950, and a subsequent filing on February 26, 1952. If the applicant can prove that his assessment work was done for 1950, then the Notch Claims are valid, but if the claims were open for location, due to the applicant's failure to complete the necessary assessment work, the oil and gas leases filed August 29, 1950 hold prior location.

If the oil and gas leases have priority over the claim locations, it will be necessary for the applicant to apply to the Atomic Energy Commission for a lease to produce uranium ore on land covered by an oil and gas lease.

Geology

The Notch Claims are located about 10 miles southwest of the Abajo Mountains, San Juan County, Utah about 4 miles west of the main axis of the north-south trending Comb monoclinal fold (shown by H. E. Gregory, U.S.G.S. Prof. Paper 180, 1938, Plate 1).

The area of the claims is underlain by sandstone, limestone, mudstone and conglomerate ranging in age from Permian to Triassic.

The Shinarump conglomerate is overlain by the Chinle formation, and is underlain by the Moenkopi formation, all of Triassic age. The Organ Rock tongue and the Cedar Mesa member of the Cutler formation of Permian age underlie the Moenkopi formation and are the oldest formations exposed in the area of the Notch claims.

The Shinarump conglomerate here is about 70 feet thick; it is composed mainly of sandstone, mudstone, and conglomerate lenses. The main sedimentary feature of the Shinarump conglomerate is the channel filling and the interfingering of the mudstone and sandstone. Two sets of joints cut the Shinarump conglomerate. One strikes N. 60° W. and dips from 80°N. to vertical. The other set is less prominent, striking N. 30° E. and dipping very steeply NW.(fig.2)

Ore Deposits

At the Notch Claims the Shinarump conglomerate fills a scour channel that may trend N. 50° W. The Shinarump is about 70 feet thick at the deepest part of the channel and is composed of an upper cliff-forming, crossbedded, red sandstone with small quartz-pebble conglomerate lenses. This upper sandstone interfingers with a grey to green colored mudstone with sandy cream-colored lenses.

The mudstone contains carbonaceous "trash" and uranium ore. Underneath the mudstone is a cream to brown carbonaceous sandstone with green mudstone lenses. This sandstone also contains uranium ore.

The principal uranium ore mineral is pitchblende(?). It is associated with secondary uranium minerals disseminated in small pockets in the green mudstone.

The uranium ore exposed in drift "A" (fig. 2) is concentrated in a one foot quartzite lense at the foot of the drift. A chip sample taken across the quartzite lense assayed 0.217 percent U_3O_8 and 0.01 percent V_2O_5. Another chip sample taken at the face, including 2 feet of waste, assays 0.021 percent U_3O_8 and 0.01 percent V_2O_5.

Ore Reserves

There are no blocked out ore reserves at the present time in the Notch workings. Only a few tons of ore can be inferred in the property. However, commercial uranium ore may well exist in the scour channel and possibilities of finding more ore in this area are favorable.

Proposed Exploration

The applicant proposes to explore the property by rim stripping around the Shinarump cliff and by drifting 200 feet into the scour channel in drift "A". The total cost of the applicant's exploratory work would be 20,000.

The program outlined by the applicant appears to be too ambitious considering the amount of ore mined. The examining geologists feel a more conservative program is warranted.

It is suggested that the scour channel in the Shinarump conglomerate be explored by a 200 foot drift, starting in drift "A", and driven in a N. 50° W. direction (fig. 2). Several short crosscuts should be driven across the drift in the most promising mineralized zones. The adit should be driven approximately 5 by 7 feet in cross section with the crosscuts slightly smaller. It is assumed that two men will perform all work necessary for completion of the project. An average advance of 2 1/2 feet per day will be maintained. The total time for performance of the work is estimated to be 165 working days, or approximately seven months.

Mechanical equipment to be used on the project will be kept at a minimum because of the limited work to be done. The applicant owns most of the equipment to complete the proposed work. This equipment is listed on a depreciation basis to permit a reasonable cost estimate.

Costs of Proposed Exploration

Costs estimates of the exploration as prepared by the Bureau of Mines is as follows:

LABOR

2 miners at $15.00 per day for 165 days	$4,950.00

EQUIPMENT

1 - 105 cfm compressor	$3,500.00	
1 - jackhammer and air-leg	550.00	
2 - mine cars, used	200.00	
1 - pick-up truck, used	800.00	
1 - water tank	150.00	
Hoses, small tools, etc.	200.00	
		5,400.00
Depreciation of equipment ($90.00 per month for 6.6 months)		594.00

SUPPLIES

400 feet of 12-lb. track @ $700.00 per 1,000 feet, complete	280.00
400 feet of 2 inch pipe(air) @ 0.36 per foot	144.00
400 feet of 3/4 inch pipe (water) @ $0.12	48.00
Powder, fuse, caps, and carbide	850.00
Drill steel and bits	300.00
Fuel	200.00
Lumber - 1,000 board feet @ $100/M	100.00
TOTAL COST	$7,466.00

Cost per foot $\frac{7,466}{400}$ = $18.67

Summary, Conclusions and Recommendations

The Notch claims are located on Elk Ridge four miles west of the main axis of the Comb monocline in the Triassic Shinarump conglomerate. Uranium minerals occur on the Notch Claims in a scour channel at the base of the Shinarump conglomerate. The beds strike nearly N.-S. and dip gently to the

west. At present there are no blocked out ore reserves in the workings and only a few tons of reserves can be inferred.

The channel appears to trend N. 50° W. and could best be explored by drifting down the channel, and crosscutting of promising points.

The applicant proposed a project that includes 900 feet of drifting and 600 feet of rim stripping at a cost of $20,000. A modified program has been suggested which includes 200 feet of drifting and 200 feet of crosscutting to explore the secur channel. The alternate exploratory program is estimated to cost $18.67 per foot for a total cost of $7,466.00.

It is concluded that the possibilities for the discovery of commercial bodies of ore are fair and it is recommended that the Defense Minerals Exploration Administration enter into contract with the applicant to do the work outlined in this report. The government's share on a 90:10 basis is $6,719.40.

A. K. SHUMAY, HOPE CLAIMS
SAN JUAN COUNTY, UTAH
DMEA-2772
Uranium

Engineering Report

By H. K. Thurber, Jr.
Mining engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE

4-21-54
(date)

A. E. SHUMAY, ROCK CLAIMS
SAN JUAN COUNTY, UTAH

CONTENTS

	Page
Engineering report	
Introduction	2
Location, topography and physical features	2
History and production	3
Ownership and output	3
Description of the deposits	4
Minable ore reserves	4
Present status	5
Project proposals	5
Proposed financing	8
Conclusions and recommendations	8

INTRODUCTION

A. E. Shumway and partners have applied for a DMEA loan of $20,000 to accomplish rim stripping and underground drifting to explore uranium deposits on the Notch and the Notch No. 1 claims. The claims lie on North Elk Ridge in the NE 1/4, Sec. 7, T. 35 S., R. 20 E., San Juan County, Utah.

A field examination of the property was made September 11, 1953, in company with Lee Shumway, one of the partners, to determine the feasibility of the proposed project from an engineering standpoint. A geologic examination was made on October 27, 1952, by G. E. Tillman and John F. Powers of the Geological Survey. Their report was completed March 2, 1953.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The two claims examined are on the east slope of North Elk Ridge in an area of very steep topography which breaks into cliffs where canyons cut the massive Cedar Mesa sandstone. Large pine and fir trees grow on areas of the claims where soil conditions allow, and other areas are covered by tough mountain brush.

The soil cover at the elevation of the ore horizon is sufficient to allow roads to be constructed with little blasting, but does obscure the outcrops of the ore horizon. Tracing of the outcrops is further hindered by the heavy brush.

The elevation of the project area is approximately 6,500 feet. The area is often closed by snow during the winter months and it is believed that an exploratory project could not be operated efficiently during this period.

HISTORY AND PRODUCTION

The two claims involved in the DMEA application were located in May 1949 by A. E. Shumway, et al., and are filed in Book R-4, page 13, of the records of lode locations in the San Juan County Recorder's office, Monticello, Utah.

The applicants report that 130 tons of uranium ores averaging 0.19 percent U_3O_8 and 0.043 percent V_2O_5 were produced from the claims in 1951. The production brought a gross return of $1,630.00. During 1952 the applicants mined and shipped 65.47 tons of uranium ores averaging 0.314 percent U_3O_8 and 0.024 percent V_2O_5 with a gross value of $1,448.03. The above tonnage was mined from a small area on the Notch No. 1 claim shown on the Geological Survey map attached, and it is in this area that the applicants propose to explore.

OWNERSHIP AND EXTENT

The Notch and Notch No. 1 claims were located in May 1949, and appear to be valid locations. A later Federal oil and gas lease, No. U-06215, was applied for August 29, 1950, and granted March 1, 1952, to extend for five years from the latter date. The validity of the location was checked in the office of the County Recorder, San Juan County, at Monticello, Utah.

The claims lie within the boundaries of the Manti-La Sal National Forest.

DESCRIPTION OF THE DEPOSITS

The uranium mineralization encountered by the applicants in the limited exploration conducted to date occurs in the bottom few inches of a thick, gray mudstone lens and underlying conglomerate and hard sandstone beds of the Shinarump formation. The mineralization is the strongest in the hard, buff-colored sandstone bed exposed in the floor of Adit No. 2 (figure 2 attached to the Geological Survey report) and appears to be concentrated in small, black fragments disseminated through the sandstone. The face of the adit exposes a lens approximately 15 feet in length.

The principal uranium mineral is believed to be uraninite. Some yellow "secondary" minerals were observed on the face of the drift and in fractures in the lower few inches of the mudstone.

The carbonaceous material encountered in the mudstone above the contact with underlying beds shows little or no radioactivity on the Geiger counter. Samples of the deposit were taken by the Geological Survey and are shown on figure 2 attached to the geologic report.

REMARKS ON RESERVES

No estimation of ore reserves can be made because of the poor exposures of the mineralized sandstone in the area where work has been done. The mudstone overlying the mineralized buff sandstone

has been stripped from the surface of the sandstone, but the latter bed has not been penetrated to allow observation and sampling.

The partner who accompanied the examining engineer related that the Atomic Energy Commission has recently completed a drilling program on the property, but AEC personnel could not be contacted relative to this work or the results achieved.

PROPERTY STATUS

The surface stripping and the underground exploratory work accomplished to date is shown on Figure 2 attached to the Geological Survey's report. No work in the area was accomplished between the time of the examination by the Geological Survey and the date of the examination by the examining engineer.

At the time of the engineer's examination, equipment on the property consisted of a 105-cfm. Le Roi portable air compressor and some miscellaneous hose and hand tools. The applicants, however, are mining on other claims in the Notch area and are known to possess sufficient equipment to explore the subject property.

PROPERTY PROPOSALS

The applicants propose to do 1,000 feet of underground drifting at unspecified points and some surface bulldozing (the amount not stated in the brochure), at a total cost of $20,500. The examining geologist's report recommends that only 200 feet of drifting, 200 feet of crosscutting, and no surface bulldozing be done. The single

drift is to be driven in the apparent channel on a course of N. 30° W. and a total of 200 feet of crosscuts are to be driven at points dictated by geologic considerations.

The following cost estimate is based upon the recommended program of exploration and assumes an average advance of 2½ feet per day made by two men working underground and one man hauling water and supplies to the remote area of the claims. Working time required is estimated to be 160 days for actual drifting and 15 days preparation time, or a total of 175 days. It is further assumed that the equipment required will be furnished by the operator and depreciated at a rate of 1/60 of its value per month for cost estimation purposes.

A tabulation of the estimated costs follows:

Labor

3 men (2 miners and 1 surface worker) at $15 per day for 175 days, including insurance, etc.	$7,875

Equipment

1 105-cfm. portable air compressor	$3,500
1 jackhammer and air feed leg	550
2 mine cars, used	200
1 water storage tank	150
1 water pressure tank	80
Miscellaneous hose and small tools	200
Total estimated equipment value	$5,480
Depreciation of equipment for life of project at 1/60 of value per month (6 months)	$ 548

Supplies

450 feet of track (12-pound rail) at an estimated $700 per 1,000 feet, complete	$ 315
450 feet of 2-inch air pipe at estimated $0.35 per foot	158
450 feet of 3/4-inch water pipe at estimated $0.14 per foot	63
Powder, fuse, caps and carbide. Total for project	850
Drill steel and bits	300
Fuel for compressor	250
Lubricants for drills and compressor	35
Lumber for sheds, etc. Estimated to require 1,000 board feet at $100 per M	100
Rough timber and lagging for mining	300
Total cost of supplies	$2,375

Miscellaneous

Sampling and assaying. Estimated to require 20 samples at $4 each	$ 80

Summary of Estimated Costs

Labor	$7,875
Depreciation on equipment	548
Supplies	2,375
Miscellaneous	80
Total estimated cost of project	$10,878

Cost per foot of exploratory drifting and crosscutting, $\frac{\$10,878}{400 \text{ feet}}$ = $ 27.20

Observation of conditions in the one adit that was open at the time of the engineer's examination showed that timber sets and lagging will be required for safety in mining on the proposed project. The timber cost is considered to be conservative.

It is believed that the partners will furnish the labor required. If not, mine labor is available in Blanding or Monticello, Utah.

Water for the proposed project must be hauled to the claims from sources on Elk Ridge or springs in Brushy Basin or Cottonwood Canyons east of Elk Ridge. Culinary water will be trucked from Blanding.

PROPOSED FINANCING

The partners are believed to be financially able to support the proposed exploration project. The group has other operating mines in the Blanding-Cottonwood Wash area.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded, from observation of conditions on the subject property, that the proposed exploration project as outlined by the Geological Survey is practical from an engineering standpoint. It is recommended that approval of the applicant's request for a loan under RMAi regulations be granted to do the amount of work outlined by the examining geologists. It is suggested that, if such a loan is granted, the contract between the applicants and the Government be written on the short form and that a cost per foot of $37.30 be allowed for the underground work. It is further suggested that the term of the contract be 12 months to allow for a possible recess of 4 to 5 months if operations cannot be carried on during the winter.

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

224 New Customhouse
Denver 2, Colorado

April 9, 1954.

Mr. A. E. Shumway
Blanding
Utah

Re: Docket DMEA-2772

Dear Mr. Shumway:

Reference is made to your application for Government aid on the Notch 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 for 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 is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration 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

HMC:cwm

cc: Docket
Administrator, DMEA
SRWilson
Ralph J. Roberts
ERGordon
RPFischer
AHKoschmann
Chron.

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

224 New Customhouse
Denver 2, Colorado

April 9, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 2772 (Uranium), A. E. Shumway, Notch claims, San Juan County, Utah.

Enclosed are four copies of the report of examination on the subject docket. The results of the A.E.C. drilling on the Notch No. 1 Claim were not encouraging.

Also enclosed is a copy of the letter of denial to the applicant and two copies of Form 3b.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

April 9, 1954.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination - DMEA Docket 2772 (Uranium), A. E. Shumway, Notch claims, San Juan County, Utah.

Enclosed are eleven copies of the engineer's report of examination on the subject docket.

The applicant requested $20,500.00 to explore the Notch claims by stripping and drifting.

The examining team recommended a total of 400 feet of drifting and crosscutting at a total cost of $10,880.00 but before the application was approved, the A.E.C. announced plans to drill this area, so processing the contract was deferred pending results of the A.E.C. drilling.

Fischer's memorandum to the Field Team dated April 5, 1954 shows the results of the A.E.C. drilling and indicates that the chances are small for discovering significant amounts of uranium with the proposed exploration. We recommend that the application be denied.

W. H. King

W. H. King

Enclosures

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

April 6, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2772, A. E. Shumway, Notch Claims, San Juan County, Utah

Enclosed are 11 copies of a memorandum report by R. P. Fischer of the U. S. Geological Survey covering the above docket.

It has been recommended that the application be denied.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

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

April 5, 1954

Memorandum

To: W. H. King and A. H. Koschmann, DMEA Field Team, Region IV

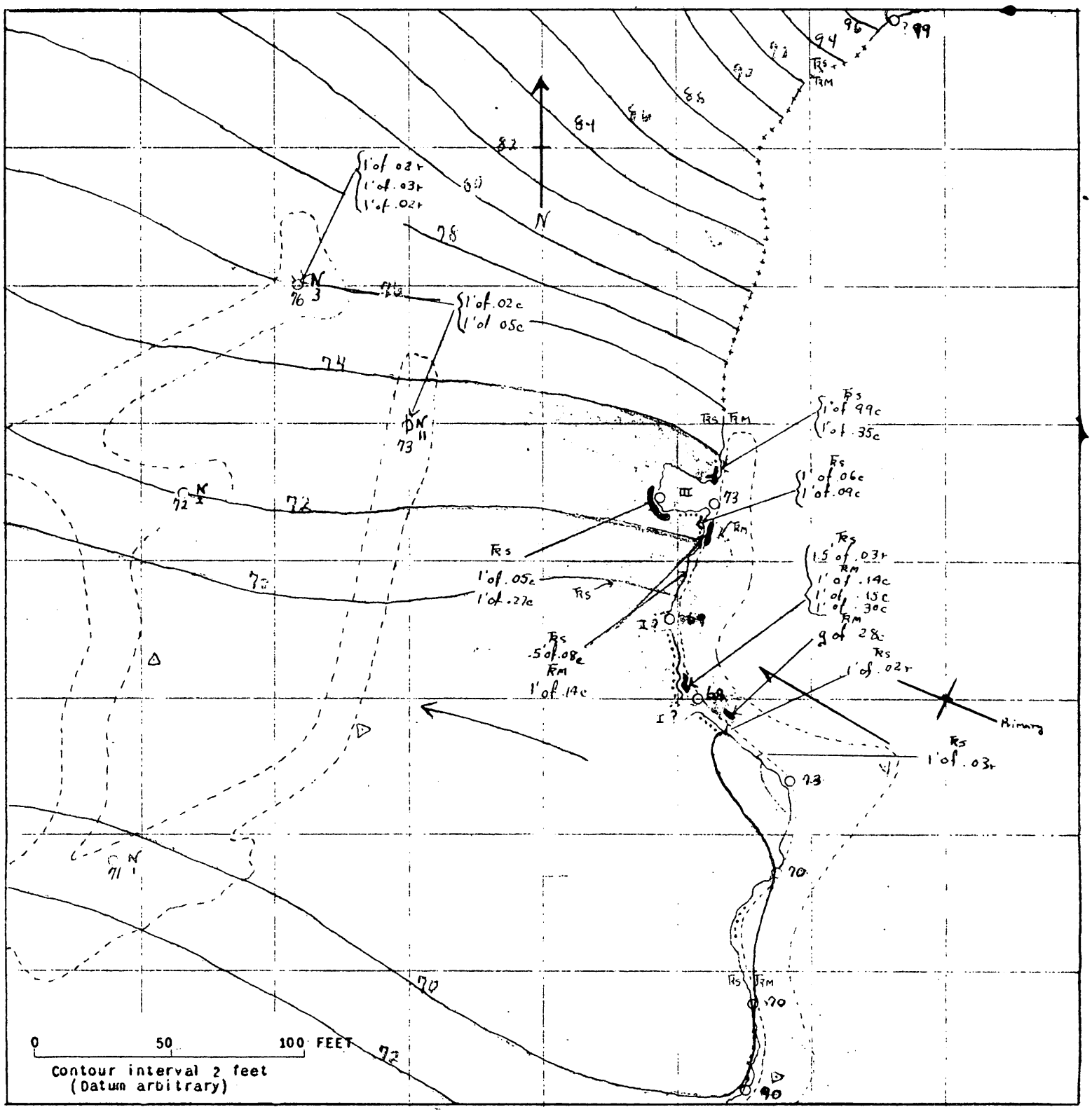
From: R. P. Fischer, Supervisor, Colorado Plateau District RPF

Subject: Memorandum report DMEA 2772, A. E. Shumway, Notch claims, San Juan County, Utah

In 1952 A. E. Shumway submitted an application (DMEA 2772) for assistance to explore for uranium on the Notch claims, San Juan County, Utah. The area was examined late in 1952 by geologists from the Salt Lake City office of the USGS and a report(by C. G. Tillman and J. F. Powers, dated March 2, 1953) was submitted which recommended 200 feet of drifting. Before the application was approved, and a contract prepared, however, AEC announced plans to drill this area, so completion of the contract was deferred. This memorandum summarizes the results of AEC work and recommends that the application be denied.

The attached map was prepared by Dana R. Kelley, AEC geologist, and it shows the results of AEC drilling. Although it is impossible to plot accurately the drift recommended for DMEA work, the drift was planned to start from the north part of the mine workings shown on the accompanying map and extend northwestward. This general area has been tested by drill holes N-11 and N-3. As these holes show only weakly mineralized rock, and as the center of the ore-bearing channel appears to trend nearly due west and lies south of the area to be tested by the proposed drift, it seems that the chances are small for discovering significant reserves with the proposed exploration. For these reasons, it is recommended that the application be denied.

RPF/mlr



EXPLANATION

	EXPOSED OUTCROP		AEC DRILL HOLES
	COVERED OUTCROP	73	BARREN HOLE
	CROSS-BEDDING DIRECTION (mean)	76	WEAKLY MINERALIZED
	PROBABLE DIRECTION OF STREAM FLOW IN CHANNEL	73	MINERALIZED
	JOINT DIRECTIONS	1' of .06c 1.5 of .03r	ASSAY DATA SHOWN IN PERCENT. U_3O_8 (c-chemical) OR PERCENT eU_3O_8 (r-radiometric)

PLANIMETRIC MAP OF ORE DEPOSIT, NOTCH NO. 1 CLAIM. (FROM FIGURE 30, MANUSCRIPT COPY OF AEC REPORT, ELK RIDGE AREA, SAN JUAN COUNTY, UTAH)

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

March 31, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2772, Notch Claims, North Elk Ridge, San Juan County, Utah.

Enclosed are 11 copies of the geologic report covering the above docket by C. G. Tillman and J. F. Powers of the U. S. Geological Survey.

This report was returned to the Salt Lake Office on March 23, 1953, for additions in the body of the report.

It has been recommended that the government enter into a contract with the applicant to do the exploratory work outlined in this geologic report.

The brochure is enclosed.

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

Enclosures (12)

Room 208 - 222 So. West Temple
Salt Lake City 1, Utah
March 27, 1953

Memorandum

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

From: J. William Naeler

Subject: Revised DMEA Docket 2772, Notch Claims, North Elk Ridge
San Juan County, Utah

Enclosed are eleven copies and brochure of the Notch Claims, DMEA Docket 2772, (uranium) that were forwarded to me March 23, 1953 for additions in the body of the report.

We hope these additions will meet with your approval.

J. W. Naeler

Room 206 - 222 So. West Temple
Salt Lake City 1, Utah
March 3, 1953

Memorandum

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

From: Ralph J. Roberts
Utah-Nevada District Office

Subject: DMEA Docket 2778, Hatch Claims, North Elk Ridge
San Juan County, Utah

Enclosed are eleven copies of a geologic report on the Hatch Claims (uranium) North Elk Ridge, San Juan County, Utah.

A field examination was requested by the Field Team, Region IV, December 1, 1952 to determine the advisability of government assistance for exploration for uranium on the Hatch Claims.

The Hatch Claims were located by G. E. Shumway et al. in 1950 and are about 45 miles northwest of Blanding, Utah, on Elk Ridge, San Juan County, Utah. The Hatch Claims have produced a total of 195.47 tons of uranium ore that had a gross value of $3,970.23.

Rocks in the mine area are mainly sandstone, mudstone, limestone and conglomerate of Triassic age. Uranium is found in a secur channel filling, and in conglomerate and mudstone lenses that trend N. 50° W. in the Shinarump formation of Triassic age. The principal uranium ore mineral is pitchblende (?), and it is associated with secondary uranium minerals in the green mudstone.

There are no blocked out ore reserves but the possibility of finding ore of commercial grade in the secur channel is favorable. The applicant proposed to explore the property by rim stripping and drifting into the secur channel. The examining geologists think the applicant's program is too ambitious, and therefore, recommend the alternate exploratory program outlined in this geologic report.

It is therefore recommended that the government enter into a contract with the applicant to do the exploratory work outlined in this geologic report.

I concur with the examining geologists conclusions and recommendations.

Ralph J. Roberts

By: _____
J. William Hasler

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

September 21, 1953

Air Mail

Memorandum

To: W. M. King, Executive Officer, DMEA Field Team, Region IV

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

Subject: Docket No. DMEA 2772 (Uranium), A. E. Shumway, Notch claims, San Juan County, Utah

Enclosed are the original and 10 copies of an engineering report covering examination of the Notch claims for DMEA loan appraisal. Also included are three copies each of completed forms 6-893 and 6-993.

The property was examined by H. K. Thurber September 11, 1953. Personnel of the Geological Survey had previously examined the property and prepared a report which was transmitted to Denver March 3, 1953. This report included engineering cost estimates for 400 feet of proposed lateral underground work. The present engineering report recommends the same exploratory proposals, but includes cost estimates somewhat greater than those appearing in the geologic report. The higher cost is the result of adding one man to labor believed necessary to conduct the work properly. It is also believed that some timbering will be required to support the workings.

Uranium mineralization on the Notch property is found in mudstone, sandstone and conglomerate of the Shinarump formation. Mineralization is strongest in the sandstone.

It is recommended that a loan of $10,878 be granted to owners of the Notch claims to conduct exploration as outlined in the engineering and geologic reports. Prior to preparation of a contract, however, it is believed advisable to obtain results of any diamond drilling completed on the property by the Atomic Energy Commission. The examining engineer observed the locations of drill holes on the Notch claims and was advised by the owner that the holes were drilled by the Atomic Energy Commission. Results of the

holes have not been made available to the property owner to date. A request has been made to the Atomic Energy Commission to supply information concerning the drill holes.

No maps were prepared for the engineering report. Maps attached to the geologic report are considered sufficient for use in contract preparation.

The brochure and other information mailed to this office under your memorandum of September 14, 1953, are enclosed.

Stephen R. Wilson

Stephen R. Wilson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 2772, Notch Claims (Uranium)

North Elk Ridge, San Juan County, Utah

By

C. G. Tillman and J. F. Powers
U. S. Geological Survey

March 2, 1953

Illustrations

Figure 1. Index Map of Utah

2. Geologic Sketch Map of Notch Claim Workings, Elk Ridge San Juan County, Utah

3. Claim Map of Notch Workings, Elk Ridge, San Juan County, Utah

CONTENTS

	Page
Introduction	1
Location and Accessibility	1
History and Production	1
Geology	2
Ore Deposits	3
Ore Reserves	4
Proposed Exploration	4
Costs of Proposed Exploration	5
Summary, Conclusions and Recommendations	5

GEOLOGIC REPORT

NOTCH CLAIMS, DMEA 2772

NORTH ELK RIDGE, SAN JUAN COUNTY, UTAH

(Uranium)

Introduction

Mr. A. E. Shumway of Blanding, San Juan County, Utah has applied to the Defense Minerals Exploration Administration for a loan of $20,000.00 to be used for exploratory work on the Notch Claims, on Elk Ridge, San Juan County, Utah.

A field examination was requested by the Field Team, Region IV, December 1, 1952, to determine the advisability of government assistance. An examination of the property was made by John F. Powers and C. G. Tillman, of the U. S. Geological Survey, October 27, 1952 in connection with other DMEA examinations in the vicinity. The Atomic Energy Commission has made a reconnaissance survey of the Notch Claims, and no recommendations for exploratory work were made by them.

Location and Accessibility

The Notch Claims are located in NE. 1/4 Sec. 7, T. 35 S., R. 20 E. at the head of Notch Canyon on Elk Ridge, San Juan County, Utah (fig. 1). The claims can be reached by driving 37 miles west from Blanding, Utah via Utah highway 95, thence driving north 8 miles on a forest service road to Gooseberry Ranger Station, thence 1/4 mile south. Utah highway 95 is an all-weather dirt road but the 8 miles on the Gooseberry Ranger Station road would be difficult to travel during rainy weather.

History and Production

The Notch Claims were located by G. E. Shumway et al. in 1950(?). Mining started early in 1951. Production from the Notch Claims during 1951 was 130 tons of uranium ore that averaged 0.19 percent U_3O_8 and 0.045 percent

V_2O_5. At present prices this ore amounted to $12.54 per ton and the gross value was about $1,630.20. During 1952 the Notch Claims produced 65.47 tons of ore that averaged 0.314 percent U_3O_8 and 0.024 percent V_2O_5, worth $21.95 per ton and grossed $1,440.03 for a total production of 195.47 tons and a gross value of $3,070.23.

The Notch property consists of two unpatented lode claims located in the NE. 1/4 sec. 7, T. 35 S., R. 20 E., San Juan County, Utah (fig. 3). The claims are owned by a partnership consisting of A. E. Shumway, Lee Shumway and Alma Redd. All partners reside in Blanding, Utah. The claims are recorded on page 12, book R4 in the office of the County Recorder, Monticello, San Juan County, Utah. According to the San Juan County Recorder, the Notch Claims were located May 21, 1949 and recorded June 16, 1949 by Messrs. A. E. Lee and Harris and Seth Shumway. The Claims were, however, relocated September 7, 1951 and recorded September 12, 1951.

Oil and gas leases were filed on the ground covered by the Notch Claims August 29, 1950, and a subsequent filing on February 26, 1952. If the applicant can prove that his assessment work was done for 1950, then the Notch Claims are valid, but if the claims were open for location, due to the applicant's failure to complete the necessary assessment work, the oil and gas leases filed August 29, 1950 hold prior location.

If the oil and gas leases have priority over the claim locations, it will be necessary for the applicant to apply to the Atomic Energy Commission for a lease to produce uranium ore on land covered by an oil and gas lease.

Geology

The Notch Claims are located about 10 miles southwest of the Abajo Mountains, San Juan County, Utah about 4 miles west of the main axis of the north-south trending Comb monoclinal fold (shown by H. E. Gregory, U.S.G.S. Prof. Paper 180, 1938, Plate 1).

The area of the claims is underlain by sandstone, limestone, mudstone and conglomerate ranging in age from Permian to Triassic.

The Shinarump conglomerate is overlain by the Chinle formation, and is underlain by the Moenkopi formation, all of Triassic age. The Organ Rock tongue and the Cedar Mesa member of the Cutler formation of Permian age underlie the Moenkopi formation and are the oldest formations exposed in the area of the Notch claims.

The Shinarump conglomerate here is about 70 feet thick; it is composed mainly of sandstone, mudstone, and conglomerate lenses. The main sedimentary feature of the Shinarump conglomerate is the channel filling and the interfingering of the mudstone and sandstone. Two sets of joints cut the Shinarump conglomerate. One strikes N. 60° W. and dips from 80°N. to vertical. The other set is less prominent, striking N. 30° E. and dipping very steeply NW. (fig.2)

Ore Deposits

At the Notch Claims the Shinarump conglomerate fills a scour channel that may trend N. 50° W. The Shinarump is about 70 feet thick at the deepest part of the channel and is composed of an upper cliff-forming, crossbedded, red sandstone with small quartz-pebble conglomerate lenses. This upper sandstone interfingers with a grey to green colored mudstone with sandy cream-colored lenses.

The mudstone contains carbonaceous "trash" and uranium ore. Underneath the mudstone is a cream to brown carbonaceous sandstone with green mudstone lenses. This sandstone also contains uranium ore.

The principal uranium ore mineral is pitchblende(?). It is associated with secondary uranium minerals disseminated in small pockets in the green mudstone.

The uranium ore exposed in drift "A" (fig. 2) is concentrated in a one foot quartzite lense at the foot of the drift. A chip sample taken across the quartzite lense assayed 0.217 percent U_3O_8 and 0.01 percent V_2O_5. Another chip sample taken at the face, including 2 feet of waste, assays 0.021 percent U_3O_8 and 0.01 percent V_2O_5.

Ore Reserves

There are no blocked out ore reserves at the present time in the Notch workings. Only a few tons of ore can be inferred in the property. However, commercial uranium ore may well exist in the scour channel and possibilities of finding more ore in this area are favorable.

Proposed Exploration

The applicant proposes to explore the property by rim stripping around the Shinarump cliff and by drifting 200 feet into the scour channel in drift "A". The total cost of the applicant's exploratory work would be 20,000.

The program outlined by the applicant appears to be too ambitious considering the amount of ore mined. The examining geologists feel a more conservative program is warranted.

It is suggested that the scour channel in the Shinarump conglomerate be explored by a 200 foot drift, starting in drift "A", and driven in a N. 50° W. direction (fig. 2). Several short crosscuts should be driven across the drift in the most promising mineralized zones. The adit should be driven approximately 5 by 7 feet in cross section with the crosscuts slightly smaller. It is assumed that two men will perform all work necessary for completion of the project. An average advance of 2 1/2 feet per day will be maintained. The total time for performance of the work is estimated to be 165 working days, or approximately seven months.

Mechanical equipment to be used on the project will be kept at a minimum because of the limited work to be done. The applicant owns most of the equipment to complete the proposed work. This equipment is listed on a depreciation basis to permit a reasonable cost estimate.

Costs of Proposed Exploration

Costs estimates of the exploration as prepared by the Bureau of Mines is as follows:

LABOR

2 miners at $15.00 per day for 165 days		$4,950.00

EQUIPMENT

1 - 105 cfm compressor	$3,500.00	
1 - jackhammer and air-leg	550.00	
2 - mine cars, used	200.00	
1 - pick-up truck, used	800.00	
1 - water tank	150.00	
Hoses, small tools, etc.	200.00	
		5,400.00
Depreciation of equipment ($90.00 per month for 6.6 months)		594.00

SUPPLIES

400 feet of 12-lb. track @ $700.00 per 1,000 feet, complete	280.00	
400 feet of 2 inch pipe(air) @ 0.36 per foot	144.00	
400 feet of 3/4 inch pipe (water) @ $0.12	48.00	
Powder, fuse, caps, and carbide	850.00	
Drill steel and bits	300.00	
Fuel	200.00	
Lumber - 1,000 board feet @ $100/M	100.00	
TOTAL COST		$7,466.00

Cost per foot $\frac{7,466}{400}$ = $18.67

Summary, Conclusions and Recommendations

The Notch claims are located on Elk Ridge four miles west of the main axis of the Comb monocline in the Triassic Shinarump conglomerate. Uranium minerals occur on the Notch Claims in a scour channel at the base of the Shinarump conglomerate. The beds strike nearly N.-S. and dip gently to the

west. At present there are no blocked out ore reserves in the workings and only a few tons of reserves can be inferred.

The channel appears to trend N. 50° W. and could best be explored by drifting down the channel, and crosscutting of promising points.

The applicant proposed a project that includes 900 feet of drifting and 600 feet of rim stripping at a cost of $20,000. A modified program has been suggested which includes 200 feet of drifting and 200 feet of crosscutting to explore the scour channel. The alternate exploratory program is estimated to cost $18.67 per foot for a total cost of $7,466.00.

It is concluded that the possibilities for the discovery of commercial bodies of ore are fair and it is recommended that the Defense Minerals Exploration Administration enter into contract with the applicant to do the work outlined in this report. The government's share on a 90:10 basis is $6,719.40.

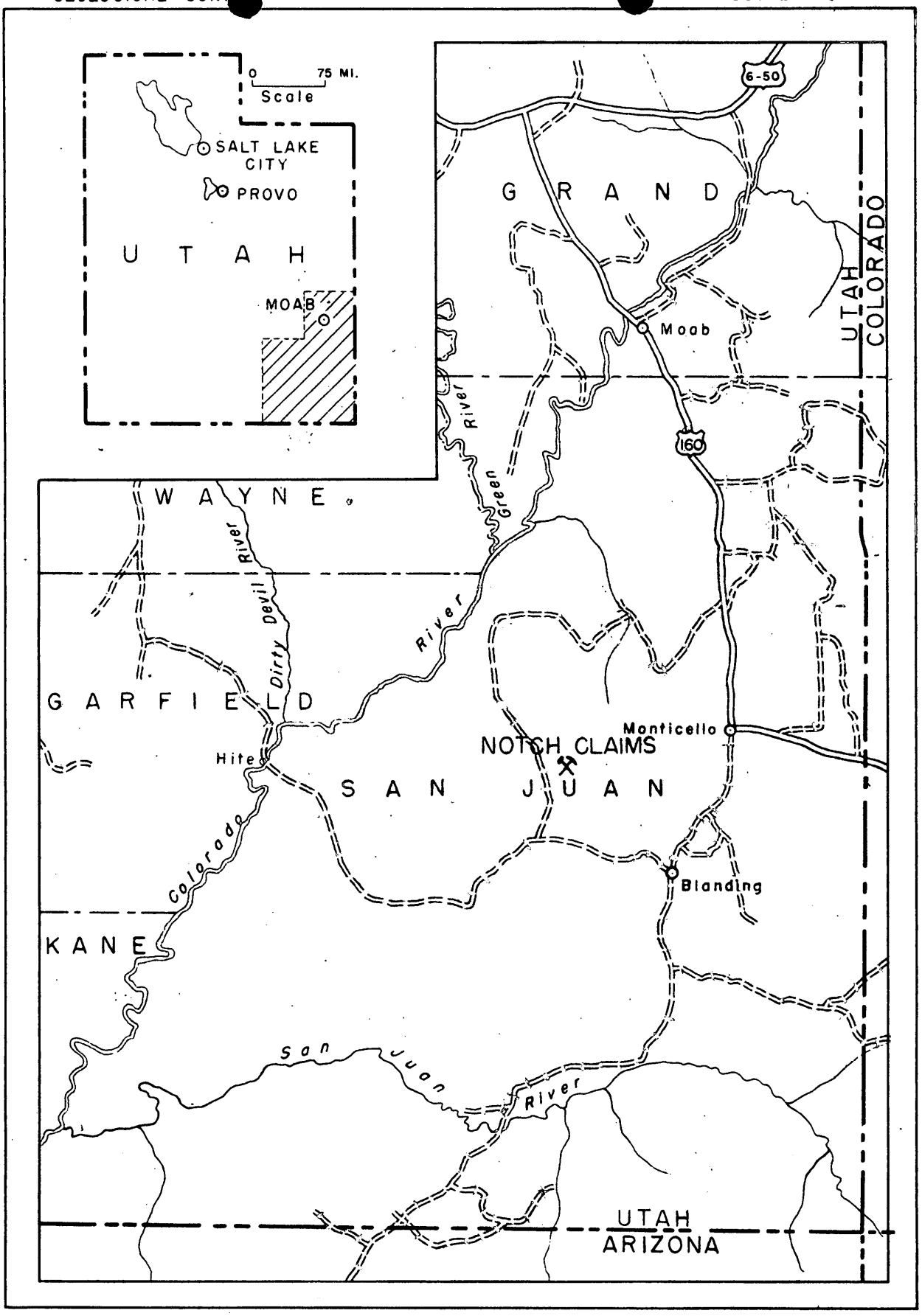


FIG. I INDEX MAP OF UTAH

0 5 10 15 20 MILES
Scale

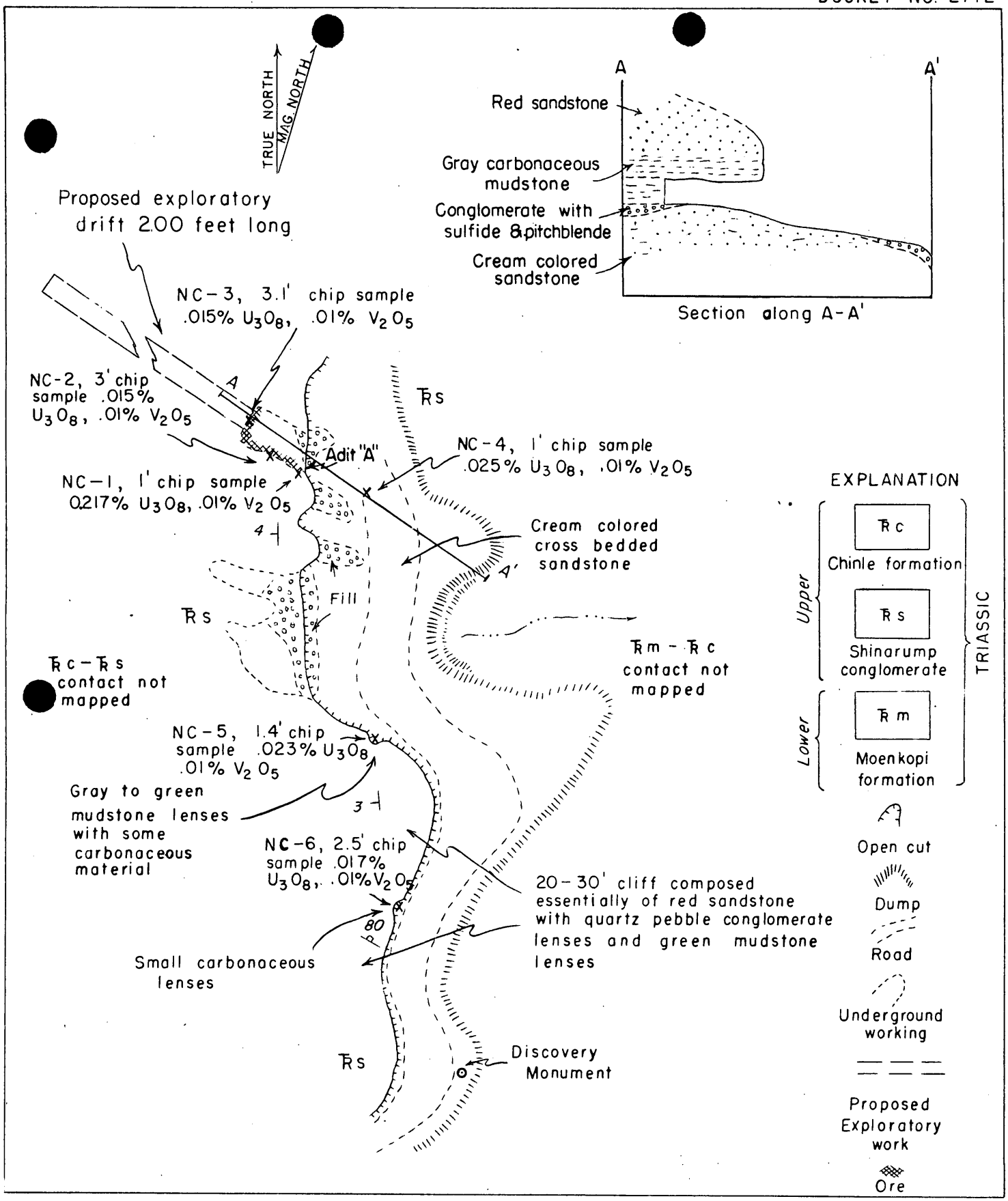
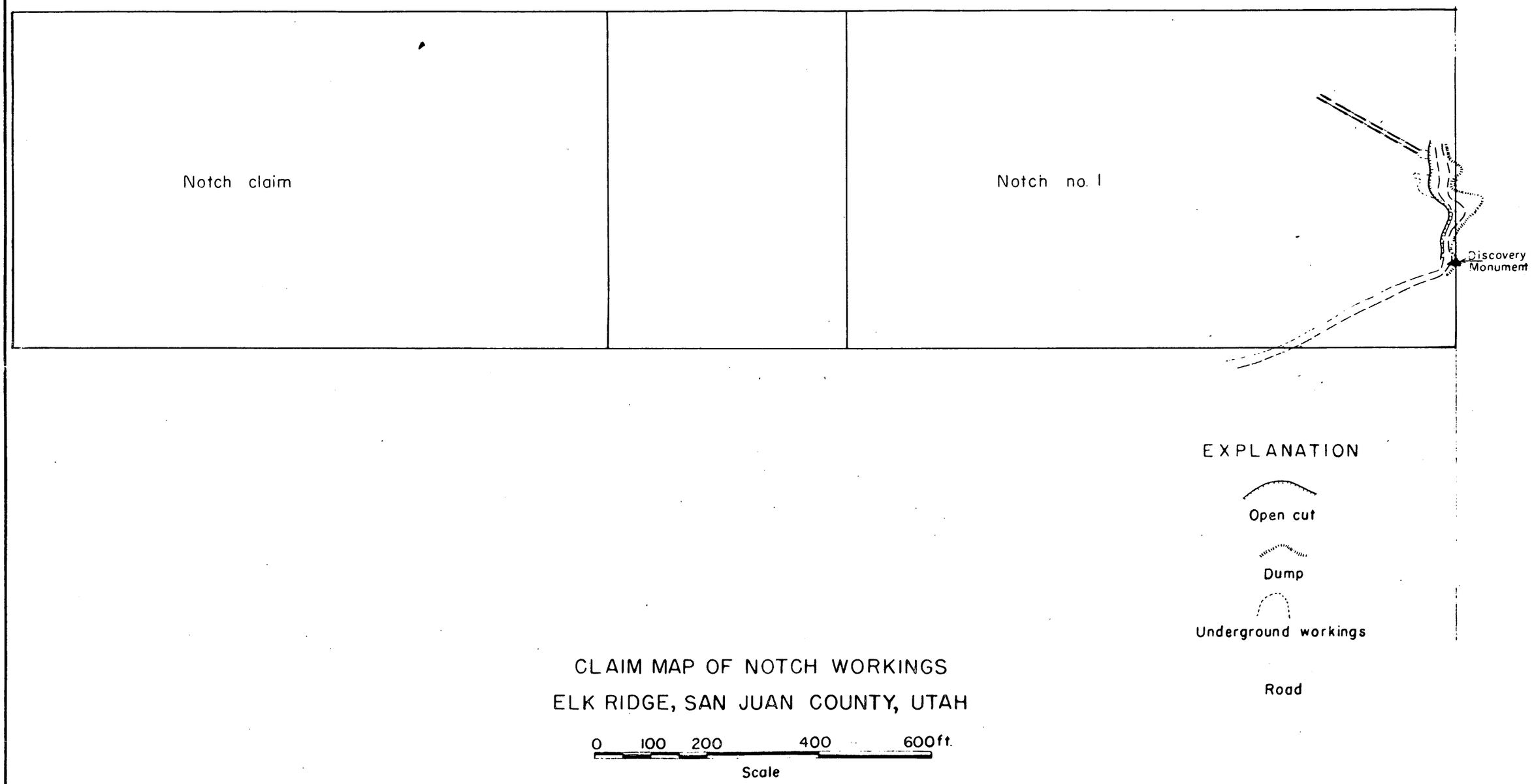


FIG. 2

Geology by J. F. Powers and C. G. Tillman

GEOLOGIC SKETCH MAP OF NOTCH CLAIM WORKINGS
ELK RIDGE, SAN JUAN COUNTY, UTAH

0 40 80 FEET
SCALE



CLAIM MAP OF NOTCH WORKINGS
ELK RIDGE, SAN JUAN COUNTY, UTAH

Figure 3

A. E. SHUMWAY, NOTCH CLAIMS
SAN JUAN COUNTY, UTAH

CONTENTS

	Page
Engineering report	
Introduction	2
Location, topography and physical features	2
History and production	3
Ownership and extent	3
Description of the deposits	4
Minable ore reserves	4
Present status	5
Project proposals	5
Proposed financing	8
Conclusions and recommendations	8

INTRODUCTION

A. E. Shumway and partners have applied for a DMEA loan of $20,500 to accomplish rim stripping and underground drifting to explore uranium deposits on the Notch and the Notch No. 1 claims. The claims lie on North Elk Ridge in the NE 1/4, Sec. 7, T. 35 S., R. 20 E., San Juan County, Utah.

A field examination of the property was made September 11, 1953, in company with Lee Shumway, one of the partners, to determine the feasibility of the proposed project from an engineering standpoint. A geologic examination was made on October 27, 1952, by C. G. Tillman and John F. Powers of the Geological Survey. Their report was completed March 2, 1953.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The two claims examined are on the east slope of North Elk Ridge in an area of very steep topography which breaks into cliffs where canyons cut the massive Cedar Mesa sandstone. Large pine and fir trees grow on areas of the claims where soil conditions allow, and other areas are covered by tough mountain brush.

The soil cover at the elevation of the ore horizon is sufficient to allow roads to be constructed with little blasting, but does obscure the outcrops of the ore horizon. Tracing of the outcrops is further hindered by the heavy brush.

The elevation of the project area is approximately 8,500 feet. The area is often closed by snow during the winter months and it is believed that an exploratory project could not be operated efficiently during this period.

HISTORY AND PRODUCTION

The two claims involved in the DMEA application were located in May 1949 by A. E. Shumway, et al., and are filed in Book R-4, page 12, of the records of lode locations in the San Juan County Recorder's office, Monticello, Utah.

The applicants report that 130 tons of uranium ores averaging 0.19 percent U_3O_8 and 0.045 percent V_2O_5 were produced from the claims in 1951. The production brought a gross return of $1,630.00. During 1952 the applicants mined and shipped 65.47 tons of uranium ores averaging 0.314 percent U_3O_8 and 0.024 percent V_2O_5 with a gross value of $1,440.03. The above tonnage was mined from a small area on the Notch No. 1 claim shown on the Geological Survey map attached, and it is in this area that the applicants propose to explore.

OWNERSHIP AND EXTENT

The Notch and Notch No. 1 claims were located in May 1949, and appear to be valid locations. A later Federal oil and gas lease, No. U-06215, was applied for August 29, 1950, and granted March 1, 1952, to extend for five years from the latter date. The validity of the location was checked in the office of the County Recorder, San Juan County, at Monticello, Utah.

The claims lie within the boundaries of the Manti-La Sal National Forest.

DESCRIPTION OF THE DEPOSITS

The uranium mineralization encountered by the applicants in the limited exploration conducted to date occurs in the bottom few inches of a thick, gray mudstone lens and underlying conglomerate and hard sandstone beds of the Shinarump formation. The mineralization is the strongest in the hard, buff-colored sandstone bed exposed in the floor of Adit No. 2 (figure 2 attached to the Geological Survey report) and appears to be concentrated in small, black fragments disseminated through the sandstone. The face of the adit exposes a lens approximately 15 feet in length.

The principal uranium mineral is believed to be uraninite. Some yellow "secondary" minerals were observed on the face of the drift and in fractures in the lower few inches of the mudstone.

The carbonaceous material encountered in the mudstone above the contact with underlying beds shows little or no radioactivity on the Geiger counter. Samples of the deposit were taken by the Geological Survey and are shown on figure 2 attached to the geologic report.

MINABLE ORE RESERVES

No estimation of ore reserves can be made because of the poor exposures of the mineralized sandstone in the area where work has been done. The mudstone overlying the mineralized buff sandstone

has been stripped from the surface of the sandstone, but the latter bed has not been penetrated to allow observation and sampling.

The partner who accompanied the examining engineer related that the Atomic Energy Commission has recently completed a drilling program on the property, but AEC personnel could not be contacted relative to this work or the results achieved.

PRESENT STATUS

The surface stripping and the underground exploratory work accomplished to date is shown on Figure 2 attached to the Geological Survey's report. No work in the area was accomplished between the time of the examination by the Geological Survey and the date of the examination by the examining engineer.

At the time of the engineer's examination, equipment on the property consisted of a 105-cfm. Le Roi portable air compressor and some miscellaneous hose and hand tools. The applicants, however, are mining on other claims in the Notch area and are known to possess sufficient equipment to explore the subject property.

PROJECT PROPOSALS

The applicants propose to do 1,000 feet of underground drifting at unspecified points and some surface bulldozing (the amount not stated in the brochure), at a total cost of $20,500. The examining geologist's report recommends that only 200 feet of drifting, 200 feet of crosscutting, and no surface bulldozing be done. The single

drift is to be driven in the apparent channel on a course of N. 50° W. and a total of 200 feet of crosscuts are to be driven at points dictated by geologic considerations.

The following cost estimate is based upon the recommended program of exploration and assumes an average advance of 2½ feet per day made by two men working underground and one man hauling water and supplies to the remote area of the claims. Working time required is estimated to be 160 days for actual drifting and 15 days preparation time, or a total of 175 days. It is further assumed that the equipment required will be furnished by the operator and depreciated at a rate of 1/60 of its value per month for cost estimation purposes.

A tabulation of the estimated costs follows:

Labor

3 men (2 miners and 1 surface worker) at $15 per day for 175 days, including insurance, etc.	$7,875

Equipment

1 105-cfm. portable air compressor	$3,500
1 jackhammer and air feed leg	550
2 mine cars, used	200
1 water storage tank	150
1 water pressure tank	80
Miscellaneous hose and small tools	200
Total estimated equipment value	$5,480
Depreciation of equipment for life of project at 1/60 of value per month (6 months)	$ 548

Supplies

450 feet of track (12-pound rail) at an estimated $700 per 1,000 feet, complete	$ 315
450 feet of 2-inch air pipe at estimated $0.35 per foot	162
450 feet of 3/4-inch water pipe at estimated $0.14 per foot	63
Powder, fuse, caps and carbide. Total for project	850
Drill steel and bits	300
Fuel for compressor	250
Lubricants for drills and compressor	35
Lumber for sheds, etc. Estimated to require 1,000 board feet at $100 per M	100
Rough timber and lagging for mining	300
Total cost of supplies	$2,375

Miscellaneous

Sampling and assaying. Estimated to require 20 samples at $4 each	$ 80

Summary of Estimated Costs

Labor	$7,875
Depreciation on equipment	548
Supplies	2,375
Miscellaneous	80
Total estimated cost of project	$10,878

Cost per foot of exploratory drifting and crosscutting, $\frac{\$10,878}{400 \text{ feet}}$ = $ 27.20

Observation of conditions in the one adit that was open at the time of the engineer's examination showed that timber sets and lagging will be required for safety in mining on the proposed project. The timber cost is considered to be conservative.

It is believed that the partners will furnish the labor required. If not, mine labor is available in Blanding or Monticello, Utah.

Water for the proposed project must be hauled to the claims from sources on Elk Ridge or springs in Brushy Basin or Cottonwood Canyons east of Elk Ridge. Culinary water will be trucked from Blanding.

PROPOSED FINANCING

The partners are believed to be financially able to support the proposed exploration project. The group has other operating mines in the Blanding-Cottonwood Wash area.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded, from observation of conditions on the subject property, that the proposed exploration project as outlined by the Geological Survey is practical from an engineering standpoint. It is recommended that approval of the applicant's request for a loan under DMEA regulations be granted to do the amount of work outlined by the examining geologists. It is suggested that, if such a loan is granted, the contract between the applicants and the Government be written on the short form and that a cost per foot of $27.20 be allowed for the underground work. It is further suggested that the term of the contract be 12 months to allow for a possible recess of 4 to 5 months if operations cannot be carried on during the winter.

224 New Customhouse
Denver 2, Colorado

September 24, 1953

Mr. A. E. Shumway
Blanding, Utah

Re: DMEA Docket 2772

Dear Mr. Shumway:

It is our understanding that the Atomic Energy Commission has core drilled the Notch No. 1, and the Notch No. 2 claims.

We are placing your application for exploration assistance, Docket No. DMEA 2772, in our inactive file until we receive the results of the Atomic Energy's drilling.

Very truly yours,

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

JFS:es

cc: Docket
Shaw
Roberts
Wilson
Chron.
Koschmann (2)

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

224 New Customhouse
Denver 2, Colorado

November 18, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 21 1952

Mr. A. E. Shumway
Blanding, Utah

Re: DMEA Docket 2772

Dear Mr. Shumway:

Your application for exploration aid on the Notch Claims has been forwarded to this office from Washington.

Will you please advise the State, County, Section, Range and Township in which your Notch Claims are located so that we can process your application.

Very truly yours,

W. H. King

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

HMC:oc

cc: DMEA Washington
Subject
Chron.
AHKoschmann (2)

Please send these
forward direct to
Washington, D.C.

INTERIOR DEPT.
SECRETARY'S
MAIL CENTER
NOV 10 1952
BUS MINES

MF-16 (Revised April 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

U. S. GEOLOGICAL SURVEY RECEIVED OCT 13 1952 MINERAL DEPOSITS BRANCH

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-2474
Metal or Mineral
Date Received 10-13-52
Estimated Cost
Participation (Government %)

Notch Claims

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: The Notch Claims, A.E. Shumway Manager Apartnership Owners: A.E. Shumway, Seth Shumway, Harris Shumway, Lee Shumway, and Alma Redd, all of Blanding Utah - Claims D2649 & 2650 Claims are on unsurveyed Land

(*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 The two claims overlap at ends, they lay in an east and west direction on North Elk Ridge on road 7/10 of mile north of bottom of Big Notch. West claim is at head of Dark Canyon and 8 miles north of Highway #95

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

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

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it there are no liens nor encumbrances

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Both claims in Book R4 of Lode Claims, Page 121

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. See Sheet #1

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

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

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

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

See Sheet No. 2

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

(*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. We have only begun to work the project which has had no preliminary drilling

(*c*) The work will start within 30 days and be completed within 36 months from the date of an exploration project contract. (Barring heavy snows

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

See sheet No. 1

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? yes

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

[X] Money [X] Use of equipment owned by you [X] 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 Sept 30, 1952

The Notch Claims
(Applicant)

By A E Shumway
Manager

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

Sheet #2

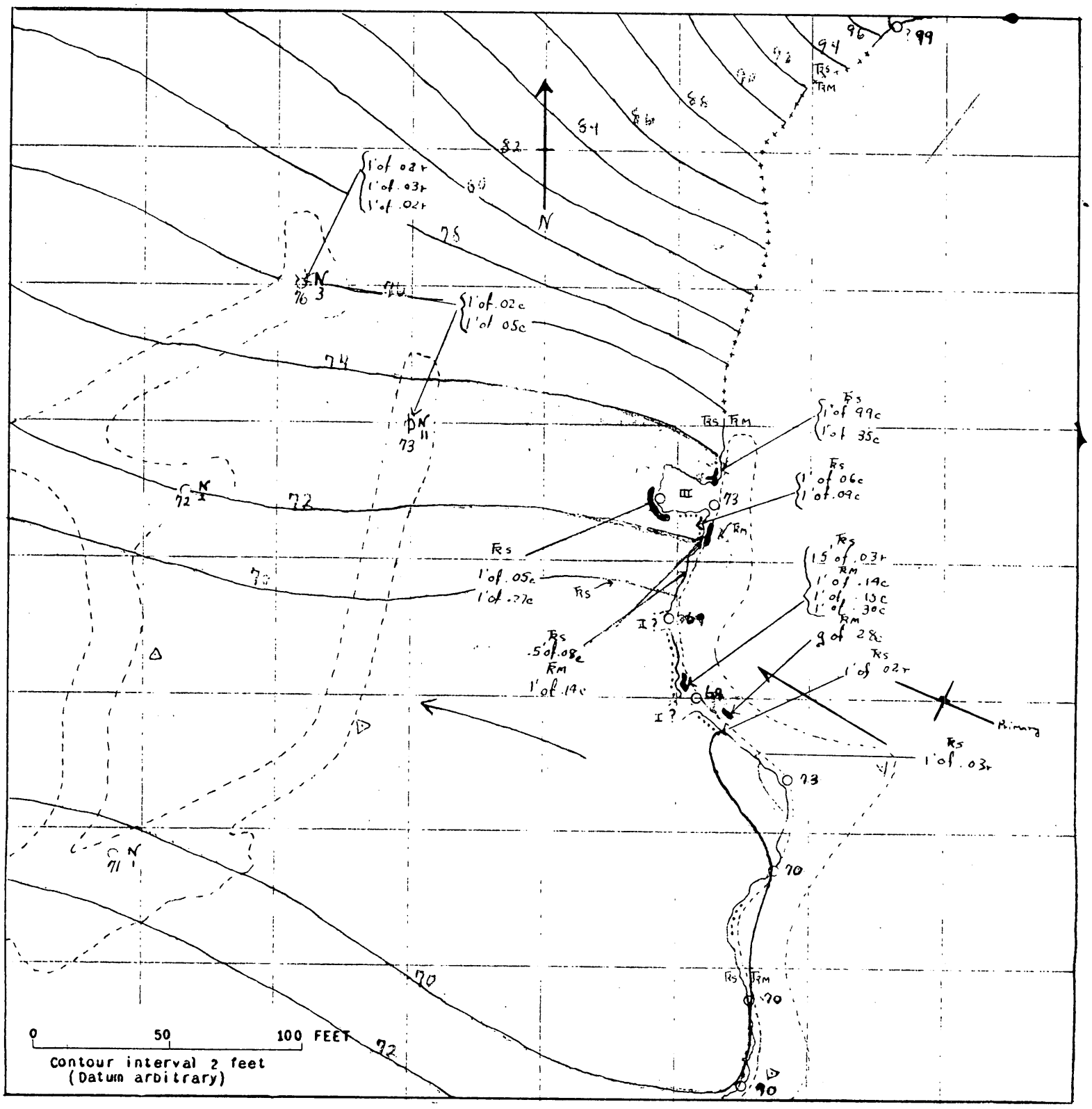
4- Physical Description: (a) Have built three short tunnels, done timbering and mined 100 tons of ore at a total cost of $3000.00. There is a truck road accross claims which are eight miles north of Highway 95
(b) Reserves are extensive but amount available is unknown. Portion mined yielded above 0.25.
(c). The ore is Uranium. Inquire A.E.C. as to technological reports etc. They have examined property.
(d) See no 3.
(e) Sufficient manpower is available, we have part of necessary equipment, there is water on the property. No electric power will be needed.

5- (a) Four of five partners have had 20 years mining & prospecting experience.

6- (a) We do not intend to contract any of the operations except Bulldozer work in the amount of $600.00.
(b) We will do our own mining, including installation of equipment.
(c) We will haul ore out of mine with horse and cart or install track. cost $5000.00 in either case. there will be no electric power, water is available at mines. Rent on equipment $1500.00 We own our compressor, equipment drills, Jackhamers etc.
We will erect one small building at a cost of $1000.00

1000 ft of Tunnel @ 12.00	12000.00
Hauling with horse or on track	5000.00
Rent of equipment	1500.00
1 Small Building	1000.00
Estimated Contingencies	1000.00
	$ 20,500.00

7-(b) We can furnish some money. We will do our own work, and have much of necessary equipment as stated above.



EXPLANATION

EXPOSED OUTCROP

COVERED OUTCROP

CROSS-BEDDING DIRECTION (mean)

PROBABLE DIRECTION OF STREAM FLOW IN CHANNEL

JOINT DIRECTIONS

AEC DRILL HOLES

BARREN HOLE

WEAKLY MINERALIZED

MINERALIZED

ASSAY DATA SHOWN IN PERCENT
U_3O_8 (c-chemical) OR PERCENT
eU_3O_8 (r-radiometric)

PLANIMETRIC MAP OF ORE DEPOSIT, NOTCH NO. 1 CLAIM. (FROM FIGURE 30, MANUSCRIPT COPY OF AEC REPORT, ELK RIDGE AREA, SAN JUAN COUNTY, UTAH)

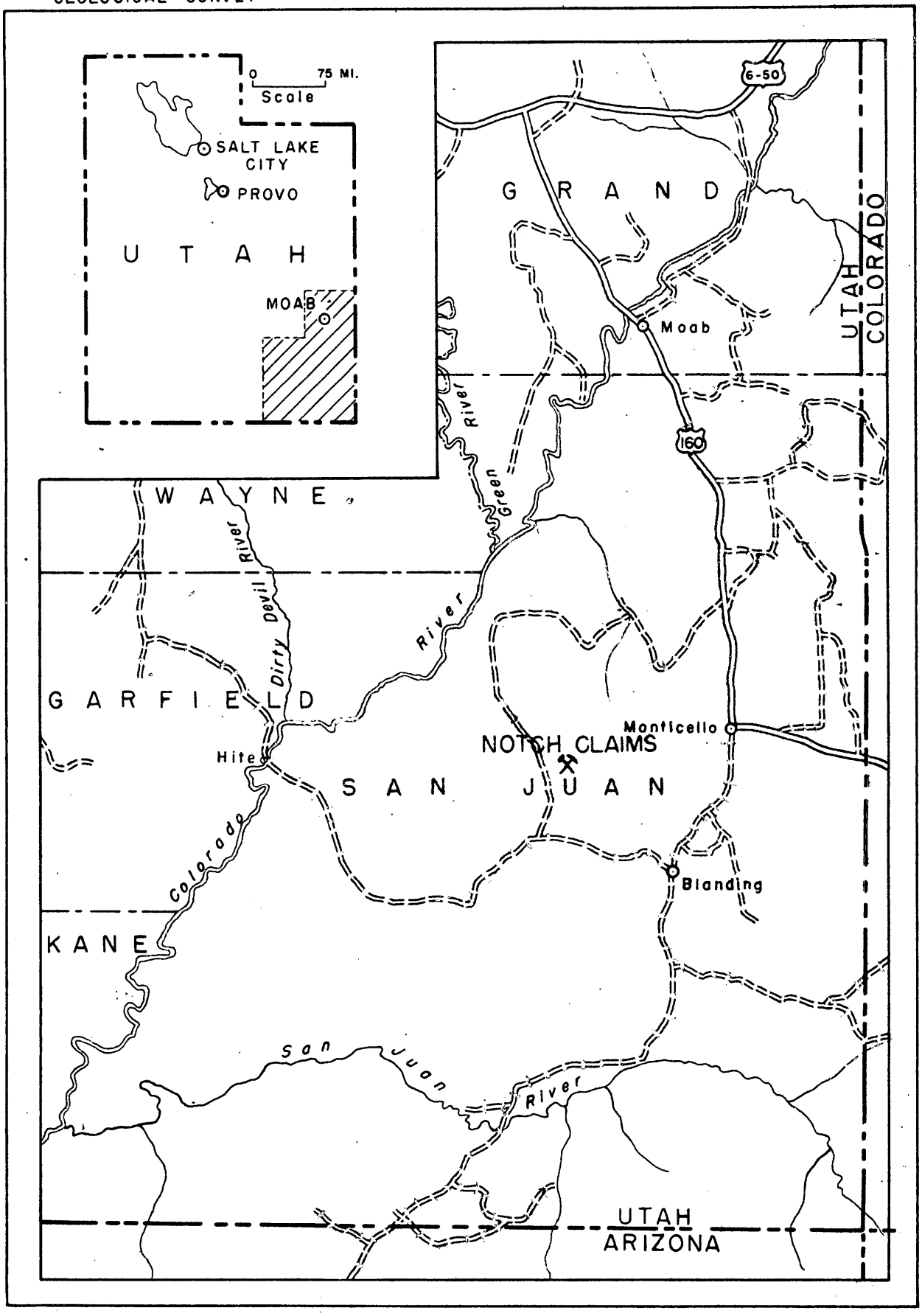


FIG. I INDEX MAP OF UTAH

0 5 10 15 20 MILES
Scale

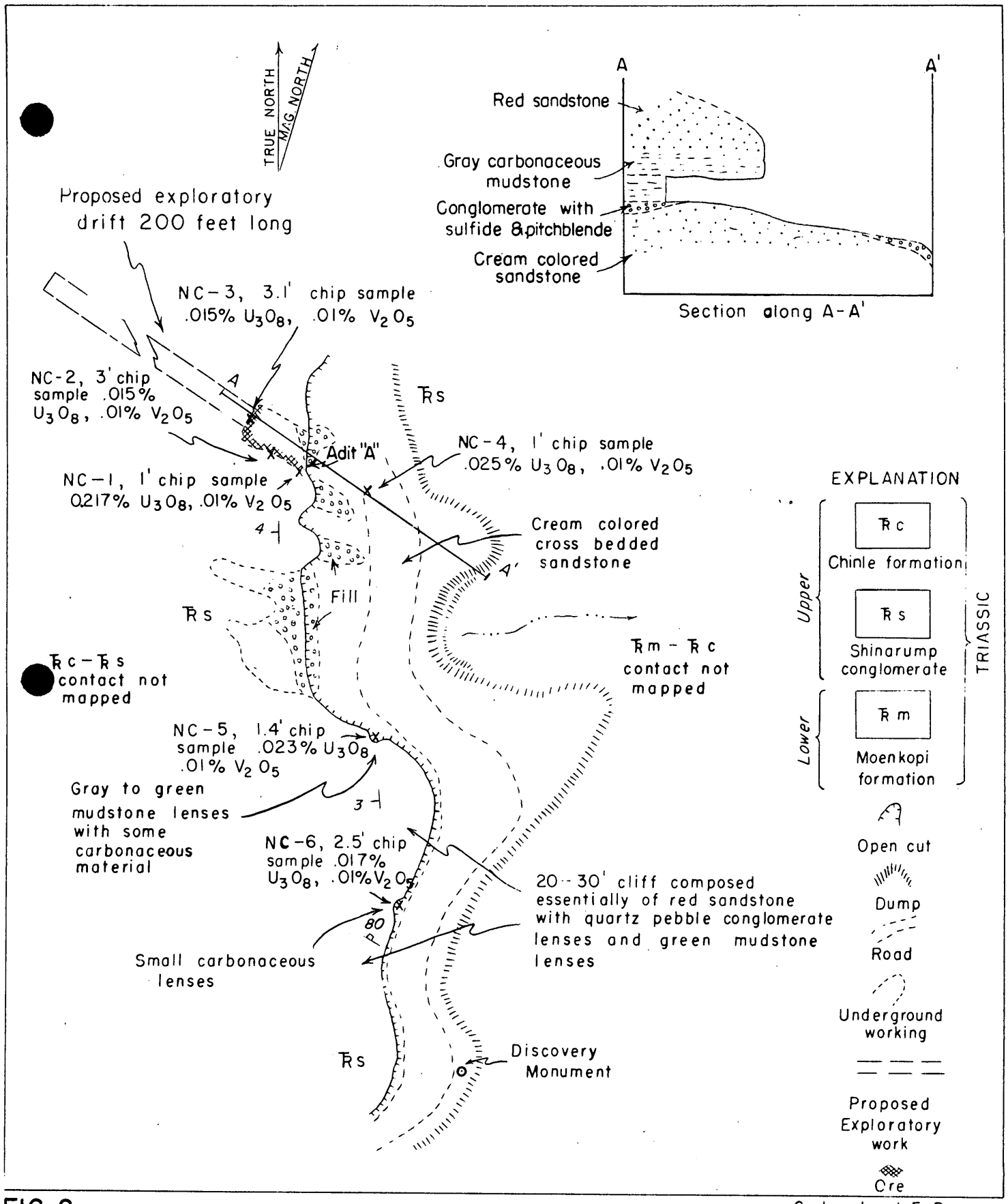
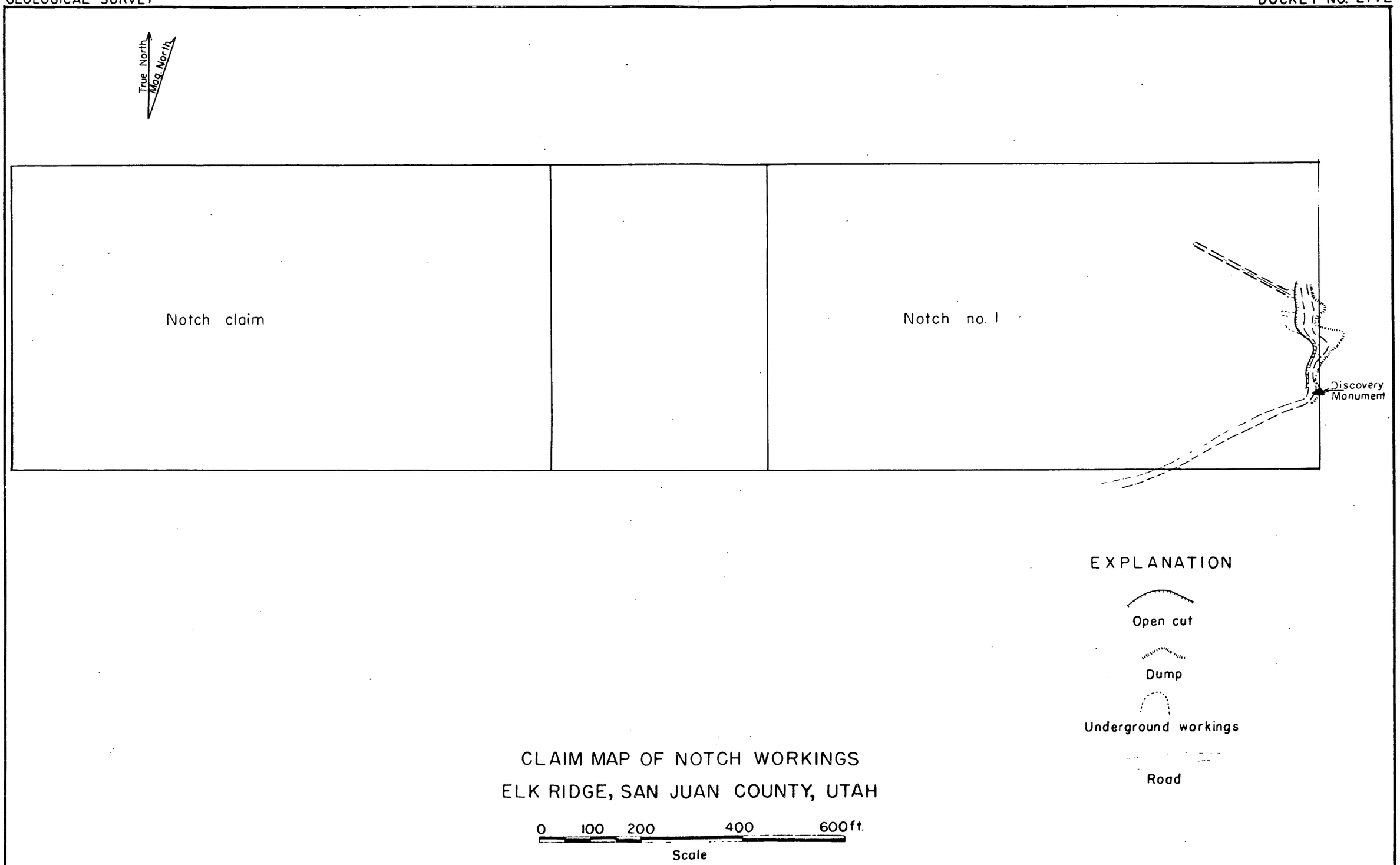


FIG. 2

Geology by J. F. Powers and C. G. Tillman

GEOLOGIC SKETCH MAP OF NOTCH CLAIM WORKINGS
ELK RIDGE, SAN JUAN COUNTY, UTAH

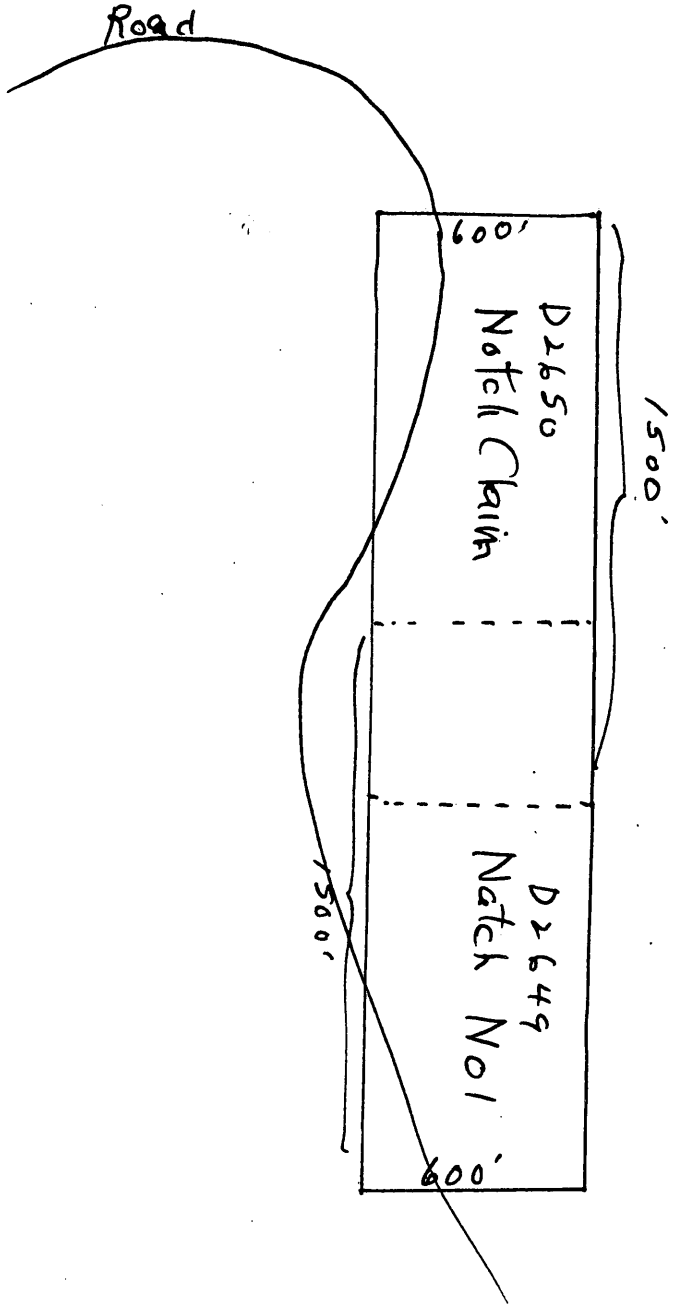
0 40 80 FEET
SCALE



CLAIM MAP OF NOTCH WORKINGS
ELK RIDGE, SAN JUAN COUNTY, UTAH

Figure 3

Sheet #3. Omen - 2772



Dmen-2772

1 sketch map enclosed