700

FILE COPY
Surname:
Ching
Willis
Kiilsgaard
Gudgeon
Selfridge
Johnson

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

MAR 13 1956

Bertoch Mines
3929 West 3500 South
Salt Lake City, Utah

Re: Docket No. DMEA-3953 (Uranium)
Wally and B&B Groups
San Miguel County, Colorado

Gentlemen:

Your application for aid in an exploration project and other information available to us in Washington concerning the above-named property have been reviewed.

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

Careful study of all our information, although noting some uranium mineralization on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you that, under these circumstances, your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention.

Sincerely yours,

G. O. Mittendorf

Administrator

MChing/izm 3-9-56
cc to: Docket
Code 700
Mr. Ching
Admr.'s Reading File
Operating Committee
DMEA Field Team, Region III (2)
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

R.C.H.

/Docket Copy
700

Ching
Ellis

March 9, 1956

Summary of Proposed Project

Object: Denial of application for an exploration project.

Docket No.: DMEA-3953

Commodity: Uranium

Applicant: Bertoch Mines
3929 West 3500 South
Salt Lake City, Utah

Property: Wally claims, Nos. 1-10 in secs. 14, 15, and 22, T. 43 N., R. 18 W., N.M.P.M., San Miguel County, Colorado. Applicant is the owner. (Note: The B&B claims are not considered a part of the proposed project.)

Date of Application: July 29, 1955

Amount of Application: Indefinite - From $50,000 to $100,000

Work Proposed: Explore the Salt Wash member of the Morrison formation with an initial program of 45 diamond drill holes averaging 225 feet in depth. The holes will be in three rows paralleling the rim and placed on 200 to 300-foot centers. Applicant plans to do own work. Costs were not detailed.

Field Team Report: December 21, 1955 by Howard F. Albee, USGS and Carl Belser, USBM

Supplementary Report: February 17, 1956 by Howard F. Albee

Uranium mineralization occurs in the third rim from the top in the Salt Wash member of the Morrison formation. Applicant drove four short adits, totaling 280 feet of workings, at this horizon, on the Wally No. 1 claim. Uranium mineralization was exposed in many places in the adits and 26.8 tons of ore were shipped which averaged 0.165% $U_3O_8$ and 1.59% $V_2O_5$. The ore-bearing sandstone near the adits is about 50 feet thick and lithologically favorable for the occurrence of ore bodies. It is underlain by a two-foot layer of grayish-green mudstone and contains sparse to abundant carbonaceous material. However, the favorable area is limited to 150 feet along the outcrop and cannot be inferred to extend any more than that back of the outcrop. Four small ore bodies less than 4 feet wide and 10 feet long were found within this favorable area. The remaining outcrops on the property were examined and no mineralization found. The ore bodies in the area are known to be relatively small, the largest having been found in the Sarah M., Sarah Ellen and Parrot mines a mile or more distant. Total production from these three properties are reported as from 750 to 1,500 tons.

The Chinle formation has been disappointing in this area.

Because of the small size of the potential ore bodies and the very limited area of favorability, it is recommended that the application be denied.

Commodity Group Comments:

USGS - W. P. Williams - January 19, 1956 and March 6, 1956:

Believes that the reasons for recommending denial in the original report of examination are obscure and unconvincing. The supplemental report by Howard F. Albee strengthens the justification for denial; therefore concurs in the recommendation for denial.

USBM - John E. Crawford - January 25, 1956 and March 7, 1956:

The original report of examination does not give substantial reason for the recommended denial. The supplemental memorandum of February 17 attempts to elaborate on the original recommendation by emphasizing the principle reason for denial, the small size of the known ore bodies. Concurs with extreme reluctance in the recommendation for denial.

Rare and Miscellaneous Metals Division - Michael Ching - March 9, 1956:

The ore-bearing sandstone on the property is lithologically favorable for the occurrence of ore bodies in only a small area, possibly 150 feet square. While four small ore bodies were found within this area, each represented a very small tonnage. Depth of drilling would average over 200 feet. Known ore bodies in the general area are relatively small. The Norma Jean mine which reportedly produced 1,782 tons of 0.52% $U_3O_8$ ore, and the Sarah M., Sarah Ellen, and Parrot mines which, together, produced from 750 to 1,500 tons, are nearly 2 miles distant.

The original report of examination failed to emphasize the limited area of favorability, but this was brought out in the supplemental memorandum.

Conclusions and Recommendations:

The chances of finding worthwhile ore bodies by the proposed exploration are not good. It is recommended that the application be denied.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

3/2/56 dg

RECEIVED
MAR - 1 1956

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

February 28, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman, Operating Committee, DMEA

From: Field Team, Region III

Subject: Docket DMEA 3953 (Uranium), Bertoch Mines, Wally and B&B Groups, San Miguel County, Colorado

Your letter of January 31, 1956 requested a Field Team review of the subject proposed exploration project.

Enclosed are the original and three copies of a memorandum recommending denial of the application based on the small targets presented by the known ore bodies, and the very limited area of favorability. We concur in this recommendation.

DMEA Field Team, Region III

W. M. TRAVER

By W. M. Traver
Executive Officer

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 360
Grand Junction, Colorado

IN REPLY REFER TO:

DMEA
Date Rec'd.
FEB 21 1956

BUREAU OF MINES
Denver, Colorado

DMEA
Date Rec'd.
FEB 27 1956

BUREAU OF MINES
Denver
RECEIVED
MAR - 1 1956

February 17, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman
J. William Hasler

From: Howard F. Albee

Subject: DMEA docket 3958 (Uranium), Bertoch Mines, Wally and B&B groups, San Miguel County, Colorado

This memorandum is written in reply to a request for further detailed information. Mention was made that the Examining Team's few reasons for recommending denial were obscure and unconvincing.

The principal reason for recommending denial is the small size of the known ore bodies. Four ore bodies, less than 4 feet wide and 10 feet long occurred as rolls exposed intermittently for a distance of about 150 feet along the outcrop. The outcrops have been prospected on the surface throughout the width of the claims and no other mineralization has been found. Immediately below the adits in which the rolls were found, the mudstone is a favorable grayish-green color, but within a few tens of feet to either side it is red. The favorable area is limited only to 150 feet along the outcrop and cannot be inferred to extend any more than that, back of the outcrop. Such an areal extent of favorable ground is but a small portion of the applicant area. The statement cannot and was not made that large ore bodies do not exist in the favorable area, however, it is improbable that any large ore body does exist.

Mines from which greater tonnages have been taken are at least a mile away. Production figures obtained from the Atomic Energy Commission shows that the Sarah M., Sarah Ellen, and Parrot mines have produced a total of about 750 tons over a period of many years.

Because of the small targets presented by the known ore bodies, and the very limited area of favorability, it is still recommended that the Bertoch Mines application for DMEA assistance on the Wally and B&B groups be denied.

Howard F. Albee
Howard F. Albee,
Geologist.

HFA/mlr

I concur in the above recommendation.

John F. Shaw
John F. Shaw
Supt., Denver Experiment Station

3/8/56

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

RECEIVED
MAR - 7 1956

March 7, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Suplemental Field Report, DMEA Docket 3953, Bertoch Mines, Wally and B&B Groups, San Miguel County, Colorado

I have reviewed the supplemental report, Bertoch Mines, DMEA Docket 3953, dated February 28 and received in this office March 5. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

A memorandum from the Chairman, Operating Committee, DMEA, to the Executive Officer, DMEA Field Team, on January 31, 1956, requested further detailed information regarding reasons of the examining team for recommending denial of the application.

In a memorandum dated February 17 the field examiners attempted to elaborate on their original recommendation by emphasizing the principal reason for denial, the small size of the known ore bodies.

Inasmuch as the Field Team is persistent in the recommendation for denial of the application, we concur with extreme reluctance.

The memo on DMEA Docket 3953 is attached.

John E Crawford
John E. Crawford

Attachment

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

RECEIVED
MAR - 7 1956

March 7, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Suplemental Field Report, DMEA Docket 3953, Bertech Mines, Wally and B&B Groups, San Miguel County, Colorado

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In a memorandum dated February 17 the field examiners attempted to elaborate on their original recommendation by emphasizing the principal reason for denial, the small size of the known ore bodies.

Inasmuch as the Field Team is persistent in the recommendation for denial of the application, we concur with extreme reluctance.

The file on DMEA Docket 3953 is attached.

John E. Crawford

Attachment

3/7/56 dgm

IN REPLY REFER TO:

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

RECEIVED
MAR - 6 1956

March 6, 1956

Memorandum

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of Supplement to Field Examination Report, DMEA 3953, Bertoch Mines, Wally and B & B claims, Slick Rock District, San Miguel County, Colorado.

The geologist member of the examining team has submitted additional information in response to a request from the Operating Committee when it was felt that the examining team's reasons for denying the application needed strengthening and amplification.

The examining geologist points out that the known ore bodies are small, the area of favorable rock is small, and larger mines are at least a mile away.

It now seems that the examining team's recommendation for denial is justified and I concur with that recommendation.

W P Williams

W. P. Williams

IN REPLY REFER TO:

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

RECEIVED
MAR - 6 1956

March 6, 1956

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

From: W. P. Williams, U. S. Geological Survey

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It now seems that the examining team's recommendation for denial is justified and I concur with that recommendation.

W. P. Williams

WPWilliams:iml
G-3/6/56

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

IN REPLY REFER TO:

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

RECEIVED
MAR - 6 1956

March 6, 1956

Memorandum

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of Supplement to Field Examination Report, DMEA 3953, Bartech Mines, Wally and B & B claims, Slick Rock District, San Miguel County, Colorado.

The geologist member of the examining team has submitted additional information in response to a request from the Operating Committee when it was felt that the examining team's reasons for denying the application needed strengthening and amplification.

The examining geologist points out that the known ore bodies are small, the area of favorable rock is small, and larger mines are at least a mile away.

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W. P. Williams

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G-3/6/56

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

3/2/56 dgm

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

RECEIVED
MAR - 1 1956

February 28, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman, Operating Committee, DMEA

From: Field Team, Region III

Subject: Docket DMEA 3953 (Uranium), Bertoch Mines, Wally and B&B Groups, San Miguel County, Colorado

Your letter of January 31, 1956 requested a Field Team review of the subject proposed exploration project.

Enclosed are the original and three copies of a memorandum recommending denial of the application based on the small targets presented by the known ore bodies, and the very limited area of favorability. We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

MINE REPLY REFER TO:

DMEA
RECEIVED
FEB 20 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 360
Grand Junction, Colorado

DMEA
Date Rec'd.
FEB 21 1956

RECEIVED
MAR - 1 1956
GEOLOGICAL SURVEY
DENVER, COLORADO

February 17, 1956

DMEA
Date Rec'd.
FEB 27 1956

BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman
J. William Hasler

BUREAU OF MINES
Denver, Colorado

From: Howard F. Albee

Subject: DMEA docket 3953 (Uranium), Bertoch Mines, Wally and B&B groups, San Miguel County, Colorado

This memorandum is written in reply to a request for further detailed information. Mention was made that the Examining Team's few reasons for recommending denial were obscure and unconvincing.

The principal reason for recommending denial is the small size of the known ore bodies. Four ore bodies, less than 4 feet wide and 10 feet long occurred as rolls exposed intermittently for a distance of about 150 feet along the outcrop. The outcrops have been prospected on the surface throughout the width of the claims and no other mineralization has been found. Immediately below the adits in which the rolls were found, the mudstone is a favorable grayish-green color, but within a few tens of feet to either side it is red. The favorable area is limited only to 150 feet along the outcrop and cannot be inferred to extend any more than that, back of the outcrop. Such an areal extent of favorable ground is but a small portion of the applicant area. The statement cannot and was not made that large ore bodies do not exist in the favorable area; however, it is improbable that any large ore body does exist.

Mines from which greater tonnages have been taken are at least a mile away. Production figures obtained from the Atomic Energy Commission shows that the Sarah M., Sarah Ellen, and Parrot mines have produced a total of about 750 tons over a period of many years.

Because of the small targets presented by the known ore bodies, and the very limited area of favorability, it is still recommended that the Bertoch Mines' application for DMEA assistance on the Wally and B&B groups be denied.

Howard F. Albee
Howard F. Albee,
Geologist.

HFA/mlr

**I concur in the above recommendation.**

John F. Shaw
**John F. Shaw**
**Supt., Denver Experiment Station**

IN REPLY REFER TO:

DMEA
Date Rec'd.
FEB 21 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 360
Grand Junction, Colorado

February 17, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman
J. William Hasler

From: Howard F. Albee

Subject: DMEA docket 3953 (Uranium), Bertoch Mines, Wally and B&B groups, San Miguel County, Colorado

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Howard F. Albee
Howard F. Albee,
Geologist.

HFA/mlr

I concur in the above recommendation.

John F. Shaw
John F. Shaw
Supt., Denver Experiment Station

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

BUREAU OF MINES
Denver, Colorado
RECEIVED
MAR - 1 1956

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

RECEIVED
FEB - 8 1956

February 6, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw
J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3953 (Uranium), Bertoch Mines, Wally and B & B Groups, San Miguel County, Colorado

Enclosed is a copy of a letter from the Chairman of the Operating Committee and attached memoranda from W. P. Williams and John R. Crawford, members of the Uranium Commodity Committee.

Will you please furnish this office further detailed information concerning your recommendation for denial of the application.

W. M. TRAVER,
W. M. Traver

HMC:ab

cc: Harshman
Chair. Op. Comm. (2)
Docket 3953
Chron.

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

RECEIVED
FEB - 8 1956

February 6, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw
J. W. Hasler

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Subject: Docket DMEA 3953 (Uranium), Bertoch Mines, Wally and B & B Groups, San Miguel County, Colorado

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Will you please furnish this office further detailed information concerning your recommendation for denial of the application.

W. M. TRAVER,
W. M. Traver

HMC:ab

cc: Harshman
Chair. Op. Comm. (2)
Docket 3953
Chron.

Surname copy

700

Ching
Selfridge
Mathendorf

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

JAN 31 1956

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

Re: Docket No. DMEA-3953 (Uranium)
Bertoch Mines
Wally and B&B Groups
San Miguel County, Colorado

Dear Mr. Traver:

The Report of Examination recommending denial of the subject application was concurred in by the Field Team.

Enclosed are two copies each of memoranda, dated January 19 and 25, 1956, from W. P. Williams, USGS, and John E. Crawford, USBM, respectively.

You will note that both Commodity Group members fail to concur with the recommendation of the Field Team.

An analysis of the favorable and unfavorable factors connected with this property would appear as follows:

Favorable factors

1. The Salt Wash member of the Morrison formation either is exposed or is overlain by only the Brushy Basin over the greater portion of the 10 claims covered by the proposed work.

2. The ore-bearing sandstone is lithologically favorable for the occurrence of ore bodies. It is about 50 feet thick, grayish-orange in color, limonite speckled, and medium grained, contains carbonaceous material ranging from sparse to abundant, and is underlain by a two-foot layer of grayish-green mudstone.

3. Uranium mineralization is widespread. Ore-grade material was shipped from three out of four short adits; the total amounting to 27 tons averaging 0.16 percent $U_3O_8$. This

R.G.L.

seams of ore-grade material may extend over areas of several hundreds of square feet.

4. About two miles to the southeast three small mines produced a total of 1500 tons of ore from the same horizon and the Norma Jean mine, about two miles to the southwest, produced 1782 tons of 0.52 percent $U_3O_8$ ore.

Unfavorable factors

1. The ore bodies found on the subject claims to date are small. Each "roll" or lens represented an area of less than four feet by ten feet.

2. Known ore bodies in the area are relatively small.

3. Drilling depths to the ore-bearing sandstone would range from 150 feet to as much as 300 feet, averaging 225 feet.

In evaluating the above factors, it appears that the principal basis for denying the application is the assumption that ore bodies of large size cannot exist on the property. Such assumption, in turn, is based upon unfavorable factors 1 and 2 which, in themselves, do not appear to be sufficiently conclusive. The proposed drilling depths would not be excessive if ore bodies of fair size were the targets.

It is suggested that the Field Team review the proposed project further and submit its comments and recommendations.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (246)

Enclosures

MChing/gla
1-27-56

cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3621
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Ching

APPROVED:

/s/ Robert W. Geehan (246)
Member, Bureau of Mines

Thor H. Kiilsgaard (246)
Member, Geological Survey

1-25-56 Lgm

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

RECEIVED
JAN 25 1956

January 25, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Report of Examination, DMEA Docket 3953, Bertoch Mines, Wally claims, San Miguel County, Colo.

I have reviewed the report of examination of DMEA Docket 3953, dated January 4, 1956, and received in this office January 24. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The applicant requested DMEA assistance to explore for uranium on a group of ten claims in the Slick Rock mining district, San Miguel County, Colo., by drilling 45 holes behind a Salt Wash outcrop that contains small known ore deposits. No costs were given by the applicant.

An examination of the subject claims was made by DMEA personnel on November 1, 1955. The examining team found the ore deposits on the property to be small with seemingly very little prospect of developing into substantial ore bodies. Consequently the field team recommends that the application be denied.

It is difficult to concur with the recommendation of the field team. Inasmuch as they recognize the lithologic favorability of the area, the reason given for denial does not appear substantial.

Perhaps the field team can provide more detailed information relative to the recommendation.

John E Crawford
John E. Crawford

1-20-56 [illegible]

IN REPLY REFER TO:

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

RECEIVED
JAN 20 1956

January 19, 1956

Memorandum

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 3953 (uranium), Bertoch Mines, Wally claims, San Miguel County, Colorado.

The applicant proposes to core drill 45 holes to explore the Salt Wash member of the Morrison formation in the Slick Rock District. The examining team recommends denial of the application.

The examining team's few reasons for recommending denial of the application are obscure and unconvincing. The principal reason for denial appears to be the fact that the ore already discovered on the property is in small deposits! Several favorable characteristics are noted in the report concerning the property. The 50-foot-thick ore-bearing zone in the Salt Wash is thick and lithologically favorable for ore deposits. Other favorable criteria include the abundance of carbonaceous material and the presence of grayish green mudstone under the ore zone. Twenty-seven tons of ore have been shipped from the property.

The reasons for the examining team's assumption that fair sized ore bodies cannot exist on the property are not clear. The meager information in the examining team's report does not lead me to concur with their recommendation for denial of the application. I recommend that the Field Team be asked for further information concerning their recommendation for denial.

W P Williams

W. P. Williams

IN REPLY REFER TO:

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

RECEIVED
JAN 20 1956

January 19, 1956

Memorandum

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 3953 (uranium), Bartosh Mines, Wally claims, San Miguel County, Colorado.

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W. P. Williams

WPWilliams:iml
G-1/19/56
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

1/9/56 gla

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

January 4, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, DMEA Docket 3953 (Uranium), Bertoch Mines, Wally claims, San Miguel County, Colorado

Enclosed are the original and three copies of the report pertaining to the above application.

The field examiners conclude that significant amounts of uranium ore would not be discovered as a result of the proposed exploration, and they recommend denial of the subject application.

We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
1-11-56
(date)

DMEA
IN REPLY REFER TO:
Date Rec'd.
DEC 23 1955
BUREAU OF MINES
Denver, Colo.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

December 22, 1955

TRANSMITTED
JAN 4 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: DMEA Docket 3953 (Uranium), Bertoch Mines, Wally claims, San Miguel County, Colorado

Enclosed are the original and nine copies of a joint engineering and geologic report by Carl Belser, Bureau of Mines, and Howard F. Albee, Geological Survey, covering their examination of the subject property.

The applicant proposed to explore for uranium ore on a group of 10 claims by drilling 45 holes behind a Salt Wash outcrop that contains small known ore deposits. No costs were given by the applicant.

The examiners conclude that any deposits of uranium ore found by the proposed exploration will be too small to be significant, particularly at depths of 150 to 300 feet below the ground surface. They recommend denial of the subject application.

We concur with this recommendation.

John F. Shaw
Supervising Mining Engineer

E. N. Harshman
Member, Field Team

Enclosures (10)

ENHarshman:arh

Reviewed by
DMEA OPERATIONS
1-11-56
(2220)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

TRANSMITTED

JAN 4 1955

DMEA 3953

Wally Group

Bertsch Mines

San Miguel County, Colorado

Uranium

Joint Engineering and Geological Report

by

Howard F. Albee, Geologist
Geological Survey

Carl Belser, Mining Engineer
Bureau of Mines

December 21, 1955

Reviewed by
DMEA OPERATIONS [illegible]
1-11-56

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DMEA 3953

WALLY CLAIMS
BERTOCH MINES
SAN MIGUEL COUNTY, COLORADO

## INTRODUCTION AND SUMMARY

Bertoch Mines, 3929 West 3500 South, Salt Lake City, Utah, on July 29, 1955, made application for aid in an exploration project on their Wally group of claims. The application proposed to explore the Salt Wash member of the Morrison formation by drilling 45 holes placed in two to three rows behind and parallel to the outcrop and drilled on 200-foot to 300-foot centers through the sandstone lens containing uranium mineralization.

An examining team visited the property on November 1, 1955.

The Wally group, as submitted, consisted of 10 unpatented claims in sections 14, 15, and 22, T. 43 N., R. 18 W., N. M. P. M., San Miguel County, Colorado.

The youngest of the exposed rocks is the Burro Canyon formation of the Lower Cretaceous, and the underlying formations are the Morrison, Summerville, and Entrada of Jurassic age. The applicant also has 60 other claims of which 58 form a contiguous group with the 10 claims submitted. The Navajo and Kayenta formations of the Lower Jurassic and the Wingate and part of the Chinle formation of the Triassic are exposed on some of these claims.

Uranium mineralization occurs in the third rim from the top in the Salt Wash member of the Morrison formation and is also expected

to occur in the basal member of the Chinle formation.

The Chinle formation, where explored in this area, has been disappointing. The ore deposits opened on the Wally No. 2 claim in the Salt Wash are small with seemingly very little prospect of developing into substantial ore bodies.

It is recommended that the application be denied.

## ACKNOWLEDGMENTS

The examining team was accompanied by Henry B. Dyer, geologist, U. S. G. S., and Albert H. Boult, Basil H. Bartoch, and Rex Hardy, representing the applicants. Employees of the Atomic Energy Commission were consulted before the examination was made.

## LOCATION, TOPOGRAPHY, AND CLIMATE

The property included in the application consists of 10 unpatented claims in sections 14, 15, and 22, T. 43 N., R. 18 W., N. M. P. M., San Miguel County, Colorado (figs. 1 and 2). The applicant has 38 other contiguous claims which he is willing to include in the application.

The 10 claims in the original group are on the east side of the Dolores River and cover part of a steep west sloping hillside. Altitudes range from 5,700 to 6,300 feet. Rainfall is light, and work can be carried on the year around with few interruptions. Some pinon and other pine trees grow on the property.

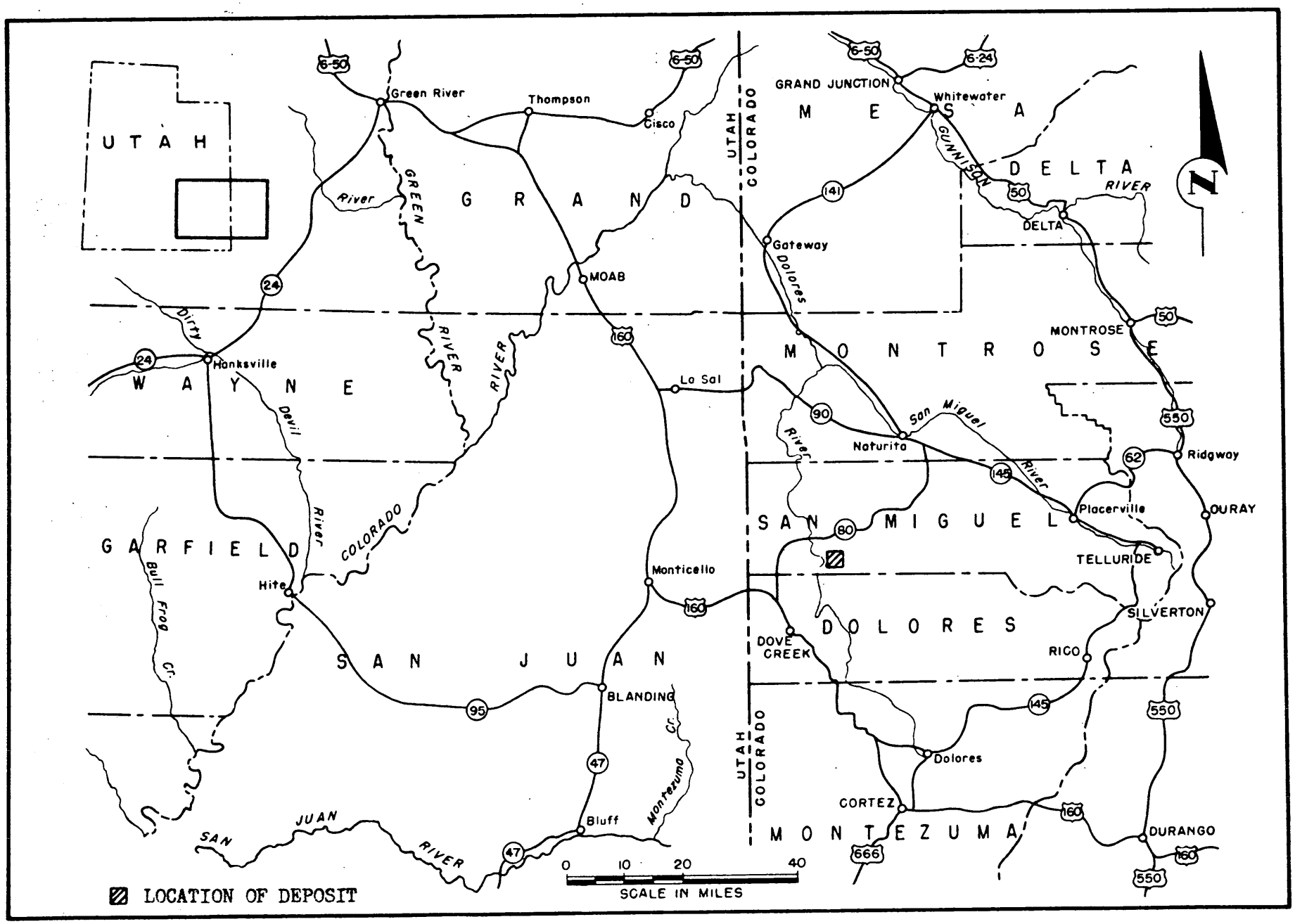
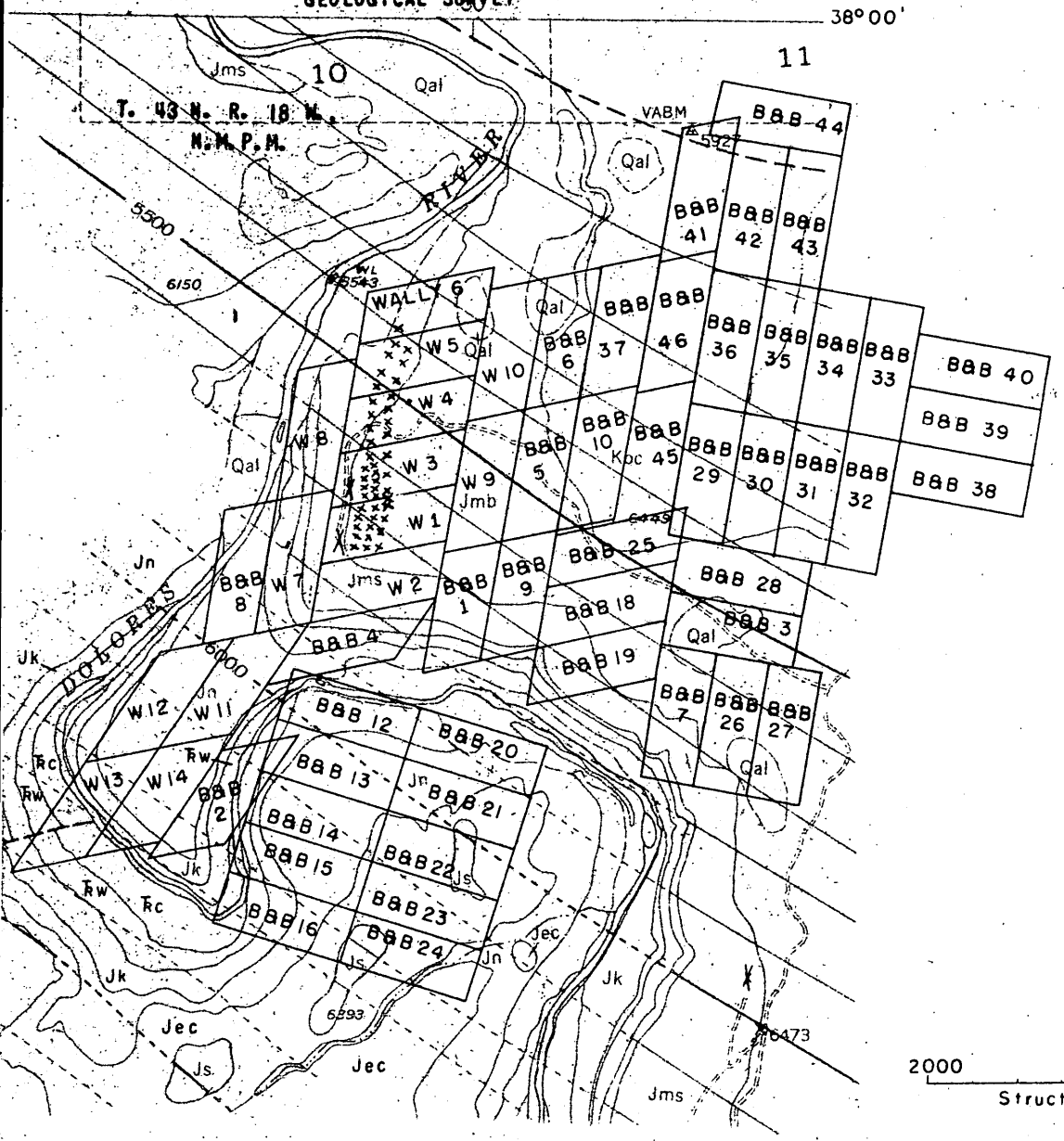



FIGURE 1 - LOCATION MAP, WALLY CLAIMS, BERTOCH MINES, SAN MIGUEL COUNTY, COLO. DMEA 3953

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3953 NOVEMBER 1955




## EXPLANATION

| | |
|---|---|
| Qal | QUATERNARY ALLUVIUM |
| Kbc | CRETACEOUS BURRO CANYON FORMATION |
| Jmb / Jms | JURASSIC MORRISON FORMATION: BRUSHY BASIN MEMBER, Jmb; SALT WASH MEMBER, Jms |
| Js | JURASSIC SUMMERVILLE FORMATION |
| Jec | JURASSIC ENTRADA SANDSTONE AND CARMEL FORMATION, UNDIVIDED |
| Jn | JURASSIC(?) NAVAJO SANDSTONE |
| Jk | JURASSIC(?) KAYENTA FORMATION |
| Rw | TRIASSIC WINGATE SANDSTONE |
| Rc | TRIASSIC CHINLE FORMATION |
| | GEOLOGIC CONTACT, DASHED WHERE APPROXIMATELY LOCATED |
| 5500 | STRUCTURE CONTOUR DRAWN ON TOP OF ENTRADA SANDSTONE |
| X | PROSPECT |
| × | PROPOSED DRILL HOLE |

Note: BASE FROM U.S. GEOLOGICAL SURVEY MF SERIES QUADRANGLE MAP 27. CLAIM BOUNDARIES FROM APPLICANTS MAP.

2000 0 6000 FEET

Structure contour interval 100 feet

Figure 2. GEOLOGIC MAP OF PART OF THE SLICK ROCK MINING DISTRICT SHOWING BERTOCH MINES' WALLY AND B&B GROUPS OF CLAIMS, AND LOCATION OF PROPOSED DRILL HOLES, SAN MIGUEL COUNTY, COLORADO

A 7-mile dirt road connects the property with State Highway 80, from whence it is 50 miles west to Monticello, Utah, 47 miles northeast to Naturita, 61 miles east to Norwood, and 102 miles east to Ridgway.

Labor and supplies can be obtained in Norwood, Naturita, and Monticello. Ore buying depots are maintained at Naturita and Monticello, and the nearest railhead, the Denver and Rio Grande Western railroad, is at Ridgway. Water for drilling purposes can be obtained from the nearby Dolores River and water for domestic use from springs and from Slick Rock on State Highway 80.

## HISTORY AND PRODUCTION

The Salt Wash outcrops were prospected by Bartoch Mines in 1954, and the claims were located early in 1955. Four short adits were driven into the third sandstone rim below the Brushy Basin member and 26.8 tons of ore averaging 0.165 percent $U_3O_8$ and 1.99 percent $V_2O_5$ were shipped. No shipments have been made from the remaining 60 claims held by Bartoch Mines.

## OWNERSHIP AND EXTENT

The ten Claims in the application are recorded in the records of the County Clerk and Recorder of San Miguel County, Colorado, as follows:

| CLAIM | BOOK | PAGE | DATE RECORDED |
|---|---|---|---|
| Wally No. 1 | 248 | 433 | 1/11/54 |
| Wally No. 2 | " | 434 | " |
| Wally No. 3 | " | 435 | " |
| Wally No. 4 | " | 436 | " |
| Wally No. 5 | " | 437 | " |
| Wally No. 6 | " | 438 | " |
| Wally No. 7 | " | 439 | " |
| Wally No. 8 | " | 440 | " |
| Wally No. 9 | " | 441 | " |
| Wally No. 10 | " | 442 | " |

The remaining 60 claims are the Wally Nos. 11 to 16, inclusive, the B. and B. Nos. 1 to 52, inclusive, and the Misplaced Shoe No. 1 and No. 2. No conflicting stakes were noticed at the time of the examination and the title to the claims appear to be in order.

## PRESENT STATUS

### Exploration and Development

Exploration consists of 4 short adits, containing about 280 feet of workings, driven into the third (from the top) Salt Wash rim on the Wally No. 1 claim. Uranium mineralization is exposed in many places in these adits or drifts and 26.8 tons of ore has been shipped from this exploration work.

## Mining and Milling Equipment and other Facilities

Mining equipment consists of:

1 Jaguar "75" compressor
1 Thor No. 45 jackhammer-type drill with jack leg
Hose, steel and bits
Hand tools
1 1950 Willys station wagon
1 1937 Chevrolet 1-1/2 ton truck
1 850-gallon water tank

A 3-room house has been built near the center of the common side line of the Wally No. 3 and No. 4 claims; other facilities are a wooden ore chute and access roads.

## GEOLOGY AND ORE DEPOSITS

The Wally and N. and B. claims are in the Slick Rock mining district and lie on the steeper dipping northeast limb of the asymmetrical Dolores anticline.

Sedimentary rocks of Triassic, Jurassic, and Cretaceous age are exposed in the area. In ascending order, these rocks consist of the following formations: Chinle and Wingate (Triassic); the Kayenta, Navajo, Carmel, Entrada, Summerville and Morrison (Jurassic); and the Burro Canyon (Cretaceous). The strata dip from 8° to 9° northeast and strike about N. 55° W.

The southern part of the group of claims lies on rocks older than the Morrison formation, but no exploration was proposed in this portion. The proposed exploration is confined to ten claims

underlain by the Morrison formation of Jurassic age.

The Morrison formation consists of two members which are, from bottom to top, the Salt Wash and Brushy Basin. On the subject claims the Salt Wash is about 230 feet thick and the Brushy Basin is about 300 feet thick. The ore-bearing sandstone on the applicant's property is near the middle of the Salt Wash.

The applicant has explored the Salt Wash on the Wally No. 1 claim by four adits in a sandstone ledge about 50 feet thick. This sandstone is lithologically favorable for the occurrence of ore bodies. The sandstone is composed of grayish orange, limonite speckled, medium-grained quartz sand. The sandstone is underlain by a two-foot layer of grayish green mudstone. Carbonaceous material ranges from sparce to abundant. In places where the carbonaceous material is abundant, the bulk of such material consists of limbs and small logs. Some of the larger debris has been replaced by uranium minerals, however, a large portion of it is composed of coalified material.

Adit No. 1 is 70 feet in on a bearing of about S. 75° E. About 16 tons of ore were produced from this adit. Little ore-grade material is presently in sight. Adit No. 2 is 45 feet in on a bearing of about S. 78° E. Five tons of ore were shipped from one roll in this adit. Ore-grade material is showing through the full length of this adit in a horizontal stringer that averages

about two inches thick. Adit No. 3 is about 25 feet in on a bearing of S. 65° E. No ore has been shipped from this adit and none is in sight. Adit No. 4 is about 75 feet in on a resultant bearing of about due east. Near the portal a small roll of ore (6 tons) was found and shipped. No ore of minable quantity is in sight in this adit.

Twenty-seven tons of ore that averaged about 0.16 $U_3O_8$ were shipped from these adits. The bulk of the ore was taken from four small rolls across a distance of about 150 feet. Each roll represented an area of less than four feet by ten feet.

Southerly from the Bertoch claim, about a mile to two and a half miles distant, and along the same outcrop, lie the Sarah M., Sarah Ellen, and Parrot mines. These mines have produced about 1,500 tons and each individual ore body appears to have produced about 500 tons. The ore bodies in the area are known to be relatively small and, consequently, could not be of commercial grade beyond depths in excess of 100 feet.

Drilling depths to the ore-bearing sandstone would range from 150 feet to as much as 300 feet. These depths are excessive when drilling for targets of only a few feet in length and width. Thin seams of ore grade material may extend over areas of several hundreds of square feet. If these seams, however, do not lead to an ore body of economical size then the areal extent of the seams could not be considered as targets.

## ORE RESERVES

Known ore reserves on the property consist of insignificant remnants left along the sides of drifts after mining the small ore deposits.

## PROPOSED EXPLORATION AND COSTS

The applicant proposed to drill 45 core holes to explore the Salt Wash member of the Morrison formation. The applicant agreed to furnish two men, and to rent (with option to purchase) a CPRD No. 8 drill, complete with rods, water tank, etc., for $1,500.00 rental the first month and $1,000.00 a month thereafter until the work is completed.

No cost estimate was made by the applicant.

## CONCLUSIONS AND RECOMMENDATIONS

The ore-bearing sandstone on the applicant property is near the middle of the Salt Wash member of the Morrison formation. The sandstone is lithologically favorable for the occurrence of ore bodies and is underlain by greyish green mudstone.

27 tons of ore have been produced from this property. The bulk of the ore, however, has come from four small rolls that were less than four feet wide and ten feet long. Drilling depths to the ore-bearing sandstone would range from 150 feet up to 300 feet. Such depths are excessive for the expected size of the targets. The examining team does not believe that exploration for such small ore bodies is feasible, and therefore recommends that the application for assistance be denied.

1-12-56 [illegible]

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

RECEIVED
JAN 6 1956

January 4, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, DMEA Docket 3953 (Uranium), Bertoch Mines, Wally claims, San Miguel County, Colorado

Enclosed are the original and three copies of the report pertaining to the above application.

The field examiners conclude that significant amounts of uranium ore would not be discovered as a result of the proposed exploration, and they recommend denial of the subject application.

We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
1-11-56
(date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

DMEA
Date Rec'd.
DEC 23 1955

BUREAU OF MINES
Denver, Colorado

December 22, 1955

TRANSMITTED
JAN 4 1955

Memorandum

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The applicant proposed to explore for uranium ore on a group of 10 claims by drilling 45 holes behind a Salt Wash outcrop that contains small known ore deposits. No costs were given by the applicant.

The examiners conclude that any deposits of uranium ore found by the proposed exploration will be too small to be significant, particularly at depths of 150 to 300 feet below the ground surface. They recommend denial of the subject application.

We concur with this recommendation.

John F. Shaw
John F. Shaw
Supervising Mining Engineer

E. N. Harshman
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Member, Field Team

Enclosures (10)

ENHarshman:arh

Reviewed by
DMEA OPERATING COMMITTEE
1-11-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

TRANSMITTED
JAN 4 1955

DMEA 3953

Wally Group

Bertoch Mines

San Miguel County, Colorado

Uranium

Joint Engineering and Geological Report

by

Howard F. Albee, Geologist
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Carl Belser, Mining Engineer
Bureau of Mines

December 21, 1955

DMEA OPERATIONS
1-11-56
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ILLUSTRATIONS


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| 2. Geologic map of part of the Slick Rock mining district showing Bertoch mines, Wally and B & B groups of claims, and location of proposed drill holes, San Juan County, Colorado. DMEA 3953 | 2 |

DMEA 3953

WALLY CLAIMS
BERTOCH MINES
SAN MIGUEL COUNTY, COLORADO

## INTRODUCTION AND SUMMARY

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An examining team visited the property on November 1, 1955.

The Wally group, as submitted, consisted of 10 unpatented claims in sections 14, 15, and 22, T. 43 N., R. 18 W., N. M. P. M., San Miguel County, Colorado.

The youngest of the exposed rocks is the Burro Canyon formation of the Lower Cretaceous, and the underlying formations are the Morrison, Summerville, and Entrada of Jurassic age. The applicant also has 60 other claims of which 58 form a contiguous group with the 10 claims submitted. The Navajo and Kayenta formations of the Lower Jurassic and the Wingate and part of the Chinle formation of the Triassic are exposed on some of these claims.

Uranium mineralization occurs in the third rim from the top in the Salt Wash member of the Morrison formation and is also expected

to occur in the basal member of the Chinle formation.

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It is recommended that the application be denied.

## ACKNOWLEDGMENTS

The examining team was accompanied by Henry B. Dyer, geologist, U. S. G. S., and Albert H. Dault, Basil H. Bertoch, and Rex Hardy, representing the applicants. Employees of the Atomic Energy Commission were consulted before the examination was made.

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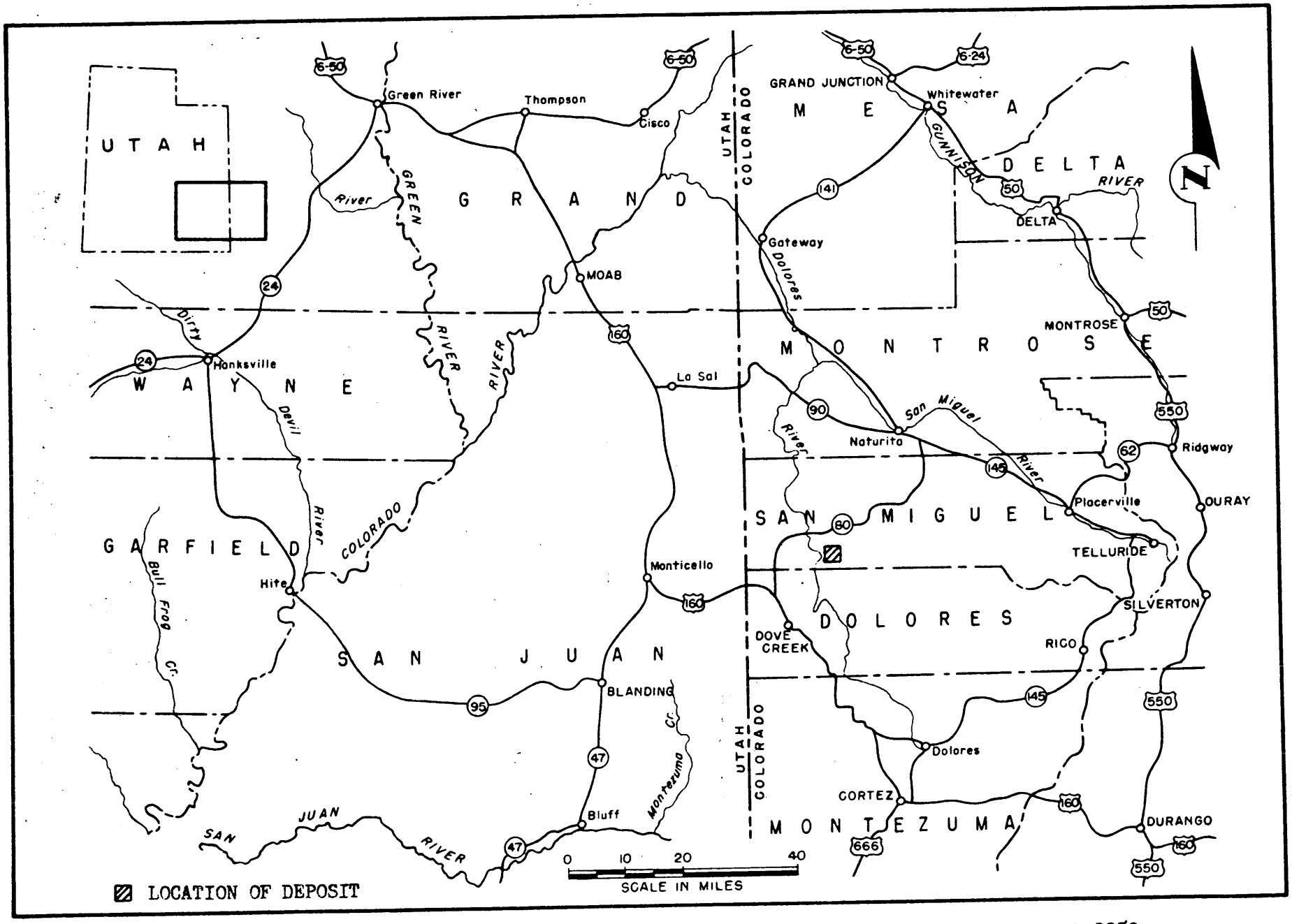
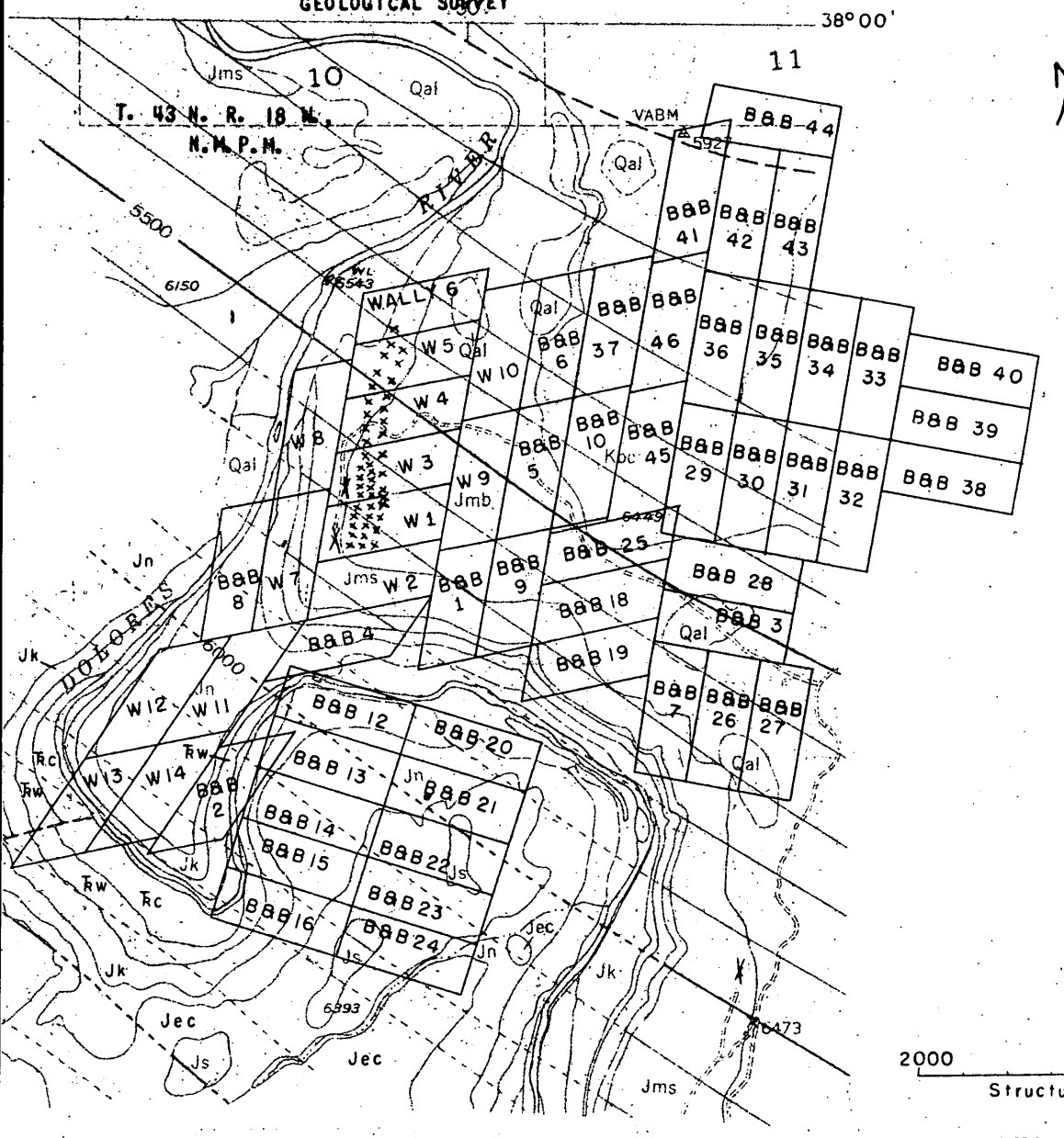



FIGURE 1 - LOCATION MAP, WALLY CLAIMS, BERTOCH MINES, SAN MIGUEL COUNTY, COLO. DMEA 3953

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3953 NOVEMBER 1955

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## EXPLANATION

| | |
|---|---|
| Qal | QUATERNARY ALLUVIUM |
| Kbc | CRETACEOUS BURRO CANYON FORMATION |
| Jmb / Jms | JURASSIC MORRISON FORMATION: BRUSHY BASIN MEMBER, Jmb; SALT WASH MEMBER, Jms |
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| 5500 | STRUCTURE CONTOUR DRAWN ON TOP OF ENTRADA SANDSTONE |
| X | PROSPECT |
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Note: BASE FROM U.S. GEOLOGICAL SURVEY MF SERIES QUADRANGLE MAP 27. CLAIM BOUNDARIES FROM APPLICANTS MAP.

2000 0 6000 FEET

Structure contour interval 100 feet

Figure 2. GEOLOGIC MAP OF PART OF THE SLICK ROCK MINING DISTRICT SHOWING BERTOCH MINES' WALLY AND B&B GROUPS OF CLAIMS, AND LOCATION OF PROPOSED DRILL HOLES, SAN MIGUEL COUNTY, COLORADO

A 7-mile dirt road connects the property with State Highway 80, from whence it is 50 miles west to Monticello, Utah, 47 miles northeast to Naturita, 61 miles east to Norwood, and 102 miles east to Ridgway.

Labor and supplies can be obtained in Norwood, Naturita, and Monticello. Ore buying depots are maintained at Naturita and Monticello, and the nearest railhead, the Denver and Rio Grande Western railroad, is at Ridgway. Water for drilling purposes can be obtained from the nearby Dolores River and water for domestic use from springs and from Slick Rock on State Highway 80.

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## OWNERSHIP AND EXTENT

The ten claims in the application are recorded in the records of the County Clerk and Recorder of San Miguel County, Colorado, as follows:

| CLAIM | BOOK | PAGE | DATE RECORDED |
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## PRESENT STATUS

### Exploration and Development

Exploration consists of 4 short adits, containing about 280 feet of workings, driven into the third (from the top) Salt Wash rim on the Wally No. 1 claim. Uranium mineralization is exposed in many places in these adits or drifts and 26.8 tons of ore has been shipped from this exploration work.

## Mining and Milling Equipment and other Facilities

Mining equipment consists of:

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## GEOLOGY AND ORE DEPOSITS

The Wally and B. and B. claims are in the Slick Rock mining district and lie on the steeper dipping northeast limb of the assymetrical Dolores anticline.

Sedimentary rocks of Triassic, Jurassic, and Cretaceous age are exposed in the area. In ascending order, these rocks consist of the following formations: Chinle and Wingate (Triassic); the Kayenta, Navajo, Carmel, Entrada, Summerville and Morrison (Jurassic); and the Burro Canyon (Cretaceous). The strata dip from 8° to 9° northeast and strike about N. 55° W.

The southern part of the group of claims lies on rocks older than the Morrison formation, but no exploration was proposed in this portion. The proposed exploration is confined to ten claims

underlain by the Morrison formation of Jurassic age.

The Morrison formation consists of two members which are, from bottom to top, the Salt Wash and Brushy Basin. On the subject claims the Salt Wash is about 230 feet thick and the Brushy Basin is about 300 feet thick. The ore-bearing sandstone on the applicant's property is near the middle of the Salt Wash.

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Adit No. 1 is 70 feet in on a bearing of about S. 75° E. About 16 tons of ore were produced from this adit. Little ore-grade material is presently in sight. Adit No. 2 is 45 feet in on a bearing of about S. 78° E. Five tons of ore were shipped from one roll in this adit. Ore-grade material is showing through the full length of this adit in a horizontal stringer that averages

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## ORE RESERVES

Known ore reserves on the property consist of insignificant remnants left along the sides of drifts after mining the small ore deposits.

## PROPOSED EXPLORATION AND COSTS

The applicant proposed to drill 45 core holes to explore the Salt Wash member of the Morrison formation. The applicant agreed to furnish two men, and to rent (with option to purchase) a CPHD No. 8 drill, complete with rods, water tank, etc., for $1,500.00 rental the first month and $1,000.00 a month thereafter until the work is completed.

No cost estimate was made by the applicant.

## CONCLUSIONS AND RECOMMENDATIONS

The ore-bearing sandstone on the applicant property is near the middle of the Salt Wash member of the Morrison formation. The sandstone is lithologically favorable for the occurrence of ore bodies and is underlain by grayish green mudstone.

27 tons of ore have been produced from this property. The bulk of the ore, however, has come from four small rolls that were less than four feet wide and ten feet long. Drilling depths to the ore-bearing sandstone would range from 150 feet up to 300 feet. Such depths are excessive for the expected size of the targets. The examining team does not believe that exploration for such small ore bodies is feasable, and therefore recommends that the application for assistance be denied.

September 30, 1955

Memorandum

To: John F. Shaw

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 3953 (Uranium), Bertoch Mines, Wally and B&B Groups, San Miguel County, Colorado

The subject application in the amount of $100,000.00 is enclosed herewith. The brochure consists of:

1. Form MF-103 and supplementary information
2. Maps -- 1 location, 2 claim, 1 geologic
3. 2 Photocopies of memo from John E. Crawford to E. W. Ellis
4. 2 Photocopies of memo from W. P. Williams to E.W. Ellis
5. 2 Photocopies of letter of transmittal from Chairman, Operating Committee to Executive Officer
6. Copy of Executive Officer's memo of transmittal to this office

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

W. H. KING

W. H. King

Enclosures

Copy to: E. H. Marshman
J. W. Hasler
W. M. Traver (3)
Sec. Op. Com

RECEIVED
OCT 1955

September 30, 1955

Memorandum

To: John F. Shaw

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 3953 (Uranium), Bartech Mines, Wally and BAB Groups, San Miguel County, Colorado

The subject application in the amount of $100,000.00 is enclosed herewith. The brochure consists of:

1. Form MF-103 and supplementary information
2. Maps -- 1 location, 2 claim, 1 geologic
3. 2 Photocopies of memo from John E. Crawford to E. W. Ellis
4. 2 Photocopies of memo from W. F. Williams to E.W. Ellis
5. 2 Photocopies of letter of transmittal from Chairman, Operating Committee to Executive Officer
6. Copy of Executive Officer's memo of transmittal to this office

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

W. H. King

W. H. King

Enclosures

Copy to: E. N. Harshman
J. W. Hasler
W. M. Traver (3)

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

September 29, 1955

20th New Customhouse
Denver 2, Colorado

Memorandum

To: W. H. King (With brochure)
J. W. Kesler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3953 (Uranium), Bartech Mines, Wally and Bill Groups, San Miguel County, Colorado

Enclosed is the subject application in the amount of $100,000.00.

Your attention is directed to the enclosed copy of a letter from the Chairman of the Operating Committee and memorandum from the Uranium Committee.

A field investigation and suitable report are required.

W. M. Trover

Enclosures

HMC:ab
cc: Sec. Opr. Comm. (2)
Harshman
Docket 3953
Chron.

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

RECEIVED
OCT 4 1955

September 29, 1955

24th New Customhouse
Denver 2, Colorado

Memorandum

To: W. H. King (With brochure)
J. W. Ensler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3953 (Uranium), Bertoch Mines, Wally and B&B Groups, San Miguel County, Colorado

Enclosed is the subject application in the amount of $100,000.00.

Your attention is directed to the enclosed copy of a letter from the Chairman of the Operating Committee and memoranda from the Uranium Commodity Committee.

A field investigation and suitable report are required.

W. M. Traver

W. M. Traver

Enclosures

HMC:ab
cc: Sec. Opr. Comm. (2)
Harshman
Docket 3953
Chron.

Surname copy

700

Ellis
Geehan
Nelson
Selfridge

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

Bertoch Mines
3929 West 3500 South
Salt Lake City, Utah

Re: Docket No. DMTA-3953 (Uranium)
Wally and B&B Groups
San Miguel County, Colorado

Gentlemen:

The application for assistance in exploring the subject property under the captioned docket number has been reviewed by the Rare and Miscellaneous Metals Division.

The DMEA Field Team, Region III, Mr. N. M. Trawer, Executive Officer, 255 New Customhouse Building, Denver, Colorado, will schedule a field examination of your property in the near future if it has not already done so.

Any assistance you may give the members of the Field Team during the examination will be appreciated.

Sincerely yours,

Frank E. Johnson

ACTING Administrator

MChing/EWEllis/gla
9-21-55
cc to: Admr.'s Reading File
Docket
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

coe

Surname copy

700

Ellis Selfridge
H E Johnson

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

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

SEP 23 1955

Re: Docket No. DMEA-3953 (Uranium)
Bertoch Mines
Wally and B&B Groups
San Miguel County, Colorado

Dear Mr. Traver:

This is with reference to your memoranda of August 25 and August 30, 1955, and enclosures, relating to the subject application.

Enclosed are two copies each of memoranda from W. P. Williams, dated September 6, and John E. Crawford, dated September 16, 1955, members of the Uranium Commodity Committee.

Please note that there does not appear to be a clear-cut description of the property to be covered by the proposed project. The Applicant owns a block of 68 contiguous claims, but proposes to conduct exploration work upon Wally claims 1 to 10 only. The Applicant acknowledges, however, that because these claims are all contiguous, exploration on Wally claims 1 to 10 will greatly benefit all other claims.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

APPROVED:

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

N. E. Nelson (NEN)
Member, Geological Survey

MChing/EWEllis/gla
9-21-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. J. E.Crawford, Rm. 3641
T.H.Kiilsgaard, Rm. 5224
J.O.Hosted, Rm. 3210, GSA
Code 700
Mr. Ching

cc

9/20/55 rgla

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

RECEIVED SEP 1 5 1955

September 16, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Application for assistance and additional information, DMEA Docket 3953, Bertoch Mines, San Miguel County, Colorado

I have reviewed the attached application and additional information, Bertoch Mines, DMEA Docket 3953; and I have discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Bertoch Mines has applied for DMEA assistance to explore its Wally claims in San Miguel County, Colorado, by drilling on a 200-foot grid pattern at a total estimated cost from $50,000 to $100,000.

We recommend that the application and additional information submitted be sent to the Field Team for examination if it is warranted, and that the Field Team be requested to consult with Ernest R. Gordon, Atomic Energy Commission, Grand Junction, Colorado.

James Paone
for John E. Crawford

Attachment

9/7/55-gla

IN REPLY REFER TO:

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

September 6, 1955

Memorandum

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of DMEA application, Docket No. 3953, Bertoch Mines, Wally and B & B claims, Slick Rock District, San Miguel County, Colorado.

The applicant proposes to explore for uranium in the Salt Wash member of the Morrison formation and also in the basal part of the Chinle formation. The Salt Wash member outcrops on part of the claims, and a relatively small area of Chinle formation has been exposed on the claims in the gorge of the Dolores River.

DMEA application 3738, the locale of which is only a mile or so to the northwest of the subject claims, was recommended for denial after field examination because of poor mineralization and excessive drilling depths.

The applicant reports mineralization in the Salt Wash sandstone in two places on the property. Little is known of the Moss Back member of the Chinle formation in the Slick Rock District. Except in the relatively small area of outcrop of the Chinle formation drill hole depths through the Moss Back member would be several hundred feet. I do not think such drilling would be appropriate for DMEA participation at this time.

If the Salt Wash sands are thick and lithologically favorable for uranium mineralization a drilling program might be justified to search for ore bodies in the Salt Wash with the holes collared in the Salt Wash member.

I recommend that the character of the uranium mineralization and the favorableness of the Salt Wash sands be ascertained by field examination.

WPWilliams

W. P. Williams

IN REPLY REFER TO:

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

September 6, 1955

Memorandum

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of DMEA application, Docket No. 3953, Bertsch Mines, Wally and B & B claims, Slick Rock District, San Miguel County, Colorado.

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I recommend that the character of the uranium mineralization and the favorableness of the Salt Wash sands be ascertained by field examination.

WPWilliams:iml
G-9/6/55
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Kosted, 3210

WPW

W. P. Williams

9/6/55 gla

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

RECEIVED
SEP - 1 1955

August 30, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3953, (Uranium), Bertoch Mines, San Miguel County, Colorado

Enclosed are two copies of additional information submitted by the applicant in reply to our letter of August 17, 1955. Will you please place this additional information with your copies of the original application.

W. M. Traver

W. M. Traver

Enclosures

RECEIVED
SEP - 2 1955

August 24, 1955

Mr. W. M. Traver
Executive Officer, D.M.E.A.
Field Team, Region III
224 New Customhouse
Denver, Colorado

Dear Mr. Traver:

Thank you very much for your letter of August 17, 1955. In answer to your questions I would like to supply the following information:

1. The estimated average depth of drill holes as recommended by Bronson Stringham, Consulting Geologist, will be 225 feet (150-300).

2. All holes will be diamond drilled and a core of 1-1/8 inches extracted in ore bodies.

3. The objective horizon of our proposed exploration is the Salt Wash formation. Subsequent to completion of the Salt Wash exploration it is anticipated that the Shinarump formation will be explored.

4. The total estimated cost of our proposed exploratory work in connection with the ten claims listed in the application will be from $50,000 to $100,000.

If additional information is required, please advise.

Very truly yours,

Rex W. Hardy

REX W. HARDY

RWH:nh

3052

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

RECEIVED
SEP - 2 1955

August 30, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3953, (Uranium), Bertoch Mines, San Miguel County, Colorado

Enclosed are two copies of additional information submitted by the applicant in reply to our letter of August 17, 1955. Will you please place this additional information with your copies of the original application.

W. M. Traver

W. M. Traver

Enclosures

DMEA
Date Rec'd.
RECEIVED
AUG 29 1955
SEP - 2 1955
BUREAU OF MINES
Denver, Colorado

August 24, 1955

Mr. W. M. Traver
Executive Officer, D.M.E.A.
Field Team, Region III
224 New Customhouse
Denver, Colorado

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If additional information is required, please advise.

Very truly yours,

Rex W. Hardy

REX W. HARDY

RWH:nh

Docket No. CN Proved

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

RECEIVED
AUG 29 1955

August 25, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Robert E. Adams, Chief
Operations Control and Statistics Division

From: Executive Officer, DMEA Field Team, Region III

Subject: Assignment of docket numbers

This has reference to your note on the assignment of DMEA 3953 to Bertoch Mines.

Because of the fact that this office must advise both the geologist and the engineer, it will be easier for us to notify both agencies involved.

W. M. Traver

W. M. Traver

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

RECEIVED
AUG 29 1955

August 25, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Appraisal relative to necessity for a field examination. Docket DMEA 3953, (Uranium), Bertoch Mines, Wally Claims, San Miguel County, Colorado

Enclosed are four copies of a memorandum report on the subject docket from the Grand Junction office.

It is recommended that the field examination be held in abeyance pending receipt of the information requested from the applicant.

W. M. Traver

W. M. Traver

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Colorado Plateau District
P. O. Box 360
Grand Junction, Colorado

RECEIVED
AUG 20 1955

August 22, 1955

Memorandum

To: Executive Officer, Region III

Through: K. H. Hartshorn

From: J. William Hasler, USGS
M. H. Salsbury, USBM

Subject: Appraisal relative to necessity for a field examination. DMEA 3953 DEUTSCH MINES, WALLY CLAIMS, San Miguel County, Colorado.

The applicant has applied for Government assistance to employ four miners on 10 claims in the Slickrock mining district. There are three mines within two miles of the subject claims, the mines being in the Salt Wash member of the Jurassic Morrison formation. The production to date and the percent $U_3O_8$ is as follows: Norma Jean, 1782 tons of 0.52 percent $U_3O_8$, has not produced since December 1953; Norma Jean No. 2, 17 tons of 0.24 percent $U_3O_8$, has not produced since 1950; Sarah Kilen, 232 tons of 0.20 percent $U_3O_8$, has not produced since September 1953.

The applicant does not state his objective formation, drilling depths or method of drilling. If the objective formation is the Salt Wash sandstone and the drilling depths are shallow, limited exploration might be encouraged.

As the executive officer of Region III has asked the applicant for additional information, it is recommended that any consideration for a field examination be held in abeyance pending receipt of the information requested.

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

RECEIVED
AUG 29 1955

August 25, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Appraisal relative to necessity for a field examination. Docket DMEA 3953, (Uranium), Bertoch Mines, Wally Claims, San Miguel County, Colorado

Enclosed are four copies of a memorandum report on the subject docket from the Grand Junction office.

It is recommended that the field examination be held in abeyance pending receipt of the information requested from the applicant.

W. M. Traver

W. M. Traver

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Colorado Plateau District
P. O. Box 360
Grand Junction, Colorado

August 22, 1955

Memorandum

To: Executive Officer, Region III

Through: E. N. Harshman

From: J. William Hasler, USGS
M. H. Salsbury, USBM

Subject: Appraisal relative to necessity for a field examination. DMEA 3953 BERTOCH MINES, WALLY CLAIMS, San Miguel County, Colorado.

The applicant has applied for Government assistance to explore for uranium on 10 claims in the Slick Rock mining district. There are three mines within two miles of the subject claims, the mines being in the Salt Wash member of the Jurassic Morrison formation. The production to date and the percent $U_3O_8$ is as follows: Norma Jean, 1782 tons of 0.52 percent $U_3O_8$, has not produced since December 1953; Norma Jean No. 2, 17 tons of 0.24 percent $U_3O_8$, has not produced since 1950; Sarah Ellen, 252 tons of 0.20 percent $U_3O_8$, has not produced since September 1953.

The applicant does not state his objective formation, drilling depths or method of drilling. If the objective formation is the Salt Wash sandstone and the drilling depths are shallow, limited exploration might be economical.

As the executive officer of Region III has asked the applicant for additional information, it is recommended that any consideration for a field examination be held in abeyance pending receipt of the information requested.

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

RECEIVED
AUG 20 1955

August 25, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Appraisal relative to necessity for a field examination. Docket DMEA 3953, (Uranium), Bertoch Mines, Wally Claims, San Miguel County, Colorado

Enclosed are four copies of a memorandum report on the subject docket from the Grand Junction office.

It is recommended that the field examination be held in abeyance pending receipt of the information requested from the applicant.

W. M. Traver

W. M. Traver

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Colorado Plateau District
P. O. Box 360
Grand Junction, Colorado

August 22, 1955

Memorandum

To: Executive Officer, Region III

Through: E. N. Hansbarger

From: J. William Hasler, USGS
M. H. Salsbury, USBM

Subject: Appraisal relative to necessity for a field examination. DMEA 3953 HERTGEN MINES, WALLY CLAIMS, San Miguel County, Colorado.

The applicant has applied for Government assistance to explore for uranium on 10 claims in the Slick Rock mining district. There are three mines within two miles of the subject claims, the mines being in the Salt Wash member of the Jurassic Morrison formation. The production to date and the percent $U_3O_8$ is as follows: Marco Juan, 1782 tons of 0.52 percent $U_3O_8$, has not produced since December 1953; Marco Juan No. 2, 17 tons of 0.34 percent $U_3O_8$, has not produced since 1950; Sunset Mine, 252 tons of 0.20 percent $U_3O_8$, has not produced since September 1953.

The applicant does not state his objective formation, drilling depths or method of drilling. If the objective formation is the Salt Wash sandstone and the drilling depths are shallow, limited exploration might be economical.

As the executive officer of Region III has asked the applicant for additional information, it is recommended that any consideration for a field examination be held in abeyance pending receipt of the information requested.

August 23, 1955
Subject: DMEA-3953
Re: Exploration Assistance

Bertoch Mines
3929 West 3500 South
Salt Lake City, Utah

Gentlemen:

The receipt of your application dated July 29, 1955 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3953 and referred to the Rare and Miscellaneous Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

August 23, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region III.

DMEA-3953 Bertoch Mines

Robert E. Adams,
Chief, Operation's Control
and Statistics Division

cc: Hasler, Grand Junction

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

224 New Customhouse
Denver 2, Colorado

August 18, 1955

Memorandum

To: J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA assistance (Uranium), Bertoch Mines, Wally claims, San Miguel County, Colorado

Enclosed is one copy of the subject application a copy of the letter from the applicant transmitting the application, and a copy of our letter to the applicant.

Will you please discuss the subject application with the Bureau of Mines representative in the Grand Junction office and the AEC. Please forward the Region III Field Team a brief memorandum of your recommendations so that we may advise the Washington office of the action to be taken on the application.

W. M. TRAVER,

W. M. Traver

Enclosures

HMC:pw

cc: Subject
Chron
Shaw (2)
Sec.Op.Comm. (2)
Harshman

DENVER

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

224 New Customhouse
Denver 2, Colorado

August 18, 1955

Memorandum

To: J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA assistance (Uranium), Bertoch Mines, Wally claims, San Miguel County, Colorado

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Will you please discuss the subject application with the Bureau of Mines representative in the Grand Junction office and the AEC. Please forward the Region III Field Team a brief memorandum of your recommendations so that we may advise the Washington office of the action to be taken on the application.

W. M. TRAVER,

W. M. Traver

Enclosures

HMC:pw

cc: Subject
Chron
Shaw (2)
Sec.Op.Comm. (2)
Harshman

RECEIVED
AUG 19 1955

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

224 New Customhouse
Denver 2, Colorado

August 17, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA assistance (Uranium), Bertoch Mines, Wally claims, San Miguel County, Colorado

Enclosed are two copies of the subject application and copies of our letter to the applicant requesting additional information. One copy of the application is being forwarded to J. W. Hasler at the Grand Junction office and one copy is being retained in our files.

W. M. Traver

Enclosures

W. M. Traver

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

224 New Customhouse
Denver 2, Colorado

August 17, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA assistance (Uranium), Bertoch Mines, Wally claims, San Miguel County, Colorado

Enclosed are two copies of the subject application and copies of our letter to the applicant requesting additional information.. One copy of the application is being forwarded to J. W. Hasler at the Grand Junction office and one copy is being retained in our files.

W. M. TRAVER.

Enclosures

W. M. Traver

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

224 New Customhouse
Denver 2, Colorado

August 17, 1955

Mr. Rex W. Hardy
Attorney-at-Law
141 East 2nd South
Salt Lake City, Utah

Dear Mr. Hardy:

The application for DMEA assistance forwarded with your letter of August 13, 1955 on the Wally claims has been placed in line for processing. Additional information will be helpful to us.

A map attached to the application shows the location of proposed holes

1. What is your estimated average depth of drill holes?

2. Are all holes to be diamond drilled?

3. Is the Salt Wash - Brushy Basin contact or the Shinarump formation the objective horizon of your proposed exploration?

4. What is the total estimated cost of your proposed exploration work?

Will you please forward us four copies of answers to the above questions so that we may attach a copy to each copy of the application.

Very truly yours,

W. M. TRAVER,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

RECEIVED
AUG 2 1955

HMC:pw
cc: Subject
Chron
Sec.Op.Comm. (2)
Harshman
Hasler
Shaw (2)

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

224 New Customhouse
Denver 2, Colorado

August 17, 1955

Mr. Rex W. Hardy
Attorney-at-Law
141 East 2nd South
Salt Lake City, Utah

Dear Mr. Hardy:

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A map attached to the application shows the location of proposed holes

1. What is your estimated average depth of drill holes?

2. Are all holes to be diamond drilled?

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Very truly yours,

W. M. TRAVER,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

HMC:pw
cc: Subject
Chron
Sec.Op.Comm. (2)
Harshman
Hasler
Shaw (2)

DMEA
Date Rec'd.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
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BUREAU OF MINES
Denver, Colorado

Form Approved 1955
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. 3953
Metal or Mineral Uranium
Date Received 8.22.55
Estimated Cost No Amount
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: Bertoch Mines
3929 West 3500 South
Salt Lake City, Utah

(*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

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

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

(*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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

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

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

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

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

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

(*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.).

(*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 July 20, 195 5

BERTOCH BROS

(Applicant)

By Allen K Bertoch

W H Bertoch

B. H. Bertoch

**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

Bertoch Mines
3929 West 3500 So.
Salt Lake City, Utah

APPLICATION FOR AID IN AN
EXPLORATION PROJECT, PURSUANT TO
DMEA ORDER 1, UNDER THE DEFENSE
PRODUCTION ACT OF 1950, AS AMENDED

1. Name of applicant. Bertoch Mines, 3929 West 3500 South, Salt Lake City, Utah, a partnership between

| | |
|---|---|
| Basil H. Bertoch | Egnar, Colorado |
| William H. Bertoch | 4312 So. 4000 West, Salt Lake City, Utah |
| Byrum M. Holt | Rt. 2, Riverton, Utah |
| Allen K. Bertoch | 3326 Elgin Drive, Salt Lake City, Utah |
| Donald T. Bertoch | 4320 So. 4000 West, Salt Lake City, Utah |
| James A. Bertoch | 3055 Valley Street, Salt Lake City, Utah |
| Raymond L. Bertoch | 4390 So. 4000 West, Salt Lake City, Utah |
| Douglas H. Bertoch | 1349 Brookshire, Salt Lake City, Utah |
| Albert H. Doalt | Egnar, Colorado |
| Daniel L. Hudson | 82 Northwest Terrace, Miami, Florida |
| Rex W. Hardy | 141 East 2nd South, Salt Lake City, Utah |

3. Applicant's property rights. Applicants own in their own right unpatented claims located in Sections 14, 15, 22 and 23, Township 43 North, Range 18 West, New Mexico Base & Meridian, all of which are contiguous, as follows:

Wally Claims, 1 to 16, inclusive.

B & B Claims, 1 to 52, inclusive.

It is proposed that exploration work be conducted upon Wally claims numbering 1 to 10, inclusive, the legal descriptions of which are as follows:

Wally #1. This claim runs 100 feet South 77° 43' West and 1500 feet North 77° 43' East from the initial point and discovery stake, and is bounded as follows:
Beginning at NW Corner No. 1 bearing South 9° 43' West 647.1 feet to the corner SW No. 2, thence bearing North 77°

Bertoch Mines
3929 West 3500 So.
Salt Lake City, Utah

43' East 750 feet to South side center stake; thence bearing North 77° 43' East 750 feet to corner SE No. 3; thence bearing North 9° 43' East 647.1 feet to corner NE No. 4; thence bearing South 77° 43' West 750 feet to North side center stake; thence bearing South 77° 43' West 750 feet to corner NW No. 1, the point of beginning.

TIE: Corner SW No. 2 of this claim is bearing North 15° 16' East 362 feet from the 1/4 corner section 15/22 T43N, R18W.

Recorded January 11, 1955, as entry No. 123424 in Book 248, Page 433, San Miguel County.

Wally #2. This claim runs 140 feet South 77° 43' West and 1360 feet North 77° 43' East from the initial point and discovery stake, and is bounded as follows:

Beginning at NW Corner No. 1 bearing South 9° 43' West 647.1 feet to the corner SW No. 2, thence bearing North 77° 43' East 750 feet to South side center stake; thence bearing North 77° 43' East 750 feet to corner SE No. 3; thence bearing North 9° 43' East 647.1 feet to corner NE No. 4; thence bearing South 77° 43' West 750 feet to North side center stake; thence bearing South 77° 43' West 750 feet to corner NW No. 1, the point of beginning.

TIE: The corner NW No. 1 of this claim is bearing North 15° 16' East 362 feet from the 1/4 corner section 15/22, T43N, R18W.

Recorded January 11, 1955, as entry No. 123425 in Book 248, Page 434.

Wally #4. This claim runs 150 feet South 77° 43' W and 1350 feet North 77° 43' E from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at Corner NW No. 1 bearing South 9° 43' W 647.1 feet to the Corner SW #2; thence bearing North 77° 43' East 750 feet to South Side Center Stake; thence bearing North 77° 43' East 750 feet to Corner SE #3; thence bearing North 9° 43' E 647.1 feet to Corner NE #4; thence bearing South 77° 43' W 750 feet to North Side Center Stake; thence bearing South 77° 43' W 750 feet to Corner NW #1, the point of beginning.

TIE: Corner SE #3 of this claim is bearing South 51° 32' W 1100 feet from 1/4 corner Section 14/15 T43N, R18W.

Recorded January 11, 1955, as entry No. 123427 in Book 248, Page 436, San Miguel County.

Wally #5. This claim runs 25 feet South 77° 43' W and 1475 feet North 77° 43' E from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at Corner NW No. 1 bearing South 9° 43' W 647.1 feet to the Corner SW #2; thence bearing North 77° 43' East 750 feet to South Side Center Stake; thence bearing North 77° 43' East 750 feet to Corner SE #3; thence bearing North 9° 43' E 647.1 feet to Corner NE #4; thence bearing South 77° 43' W 750 feet to North Side Center Stake; thence bearing South 77° 43' W 750 feet to Corner NW #1, the point of beginning.

TIE: Corner NE #4 of this claim is bearing N 47° 46' W 872 feet from 1/4 Corner Sections 14/15 T43N, R18W.

Recorded January 11, 1955, as entry No. 123428 in Book 248, Page 437, San Miguel County.

Wally #6. This claim runs 20 feet South 77° 43' W and 1480 feet North 77° 43' E from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at Corner NW No. 1 bearing South 9° 43' W 647.1 feet to the Corner SW #2; thence bearing North 77° 43' East 750 feet to South Side Center Stake; thence bearing North 77° 43' East 750 feet to Corner SE #3; thence bearing North 9° 43' E 647.1 feet to Corner NE #4; thence bearing South 77° 43' W 750 feet to North Side Center Stake; thence bearing South 77° 43' W 750 feet to Corner NW #1, the point of beginning.

TIE: corner SE #3 of this claim is bearing N 47° 46' W 872 feet from the 1/4 corner Sections 14/15 T43N, R18W.

Recorded January 11, 1955, as entry No. 123429 in Book 248, Page 438, San Miguel County.

Wally #7. This claim runs 1100 feet South 9° 43' W and 400 feet North 9° 43' E from the Initial Point and Discovery

Bertoch Hines
3929 West 3500 South
Salt Lake City, Utah

Stake and is bounded as follows:

Beginning at the NW Corner #1 bearing South 9° 43' W 750 feet to West Side Center Stake; thence bearing South 9° 43' W 750 feet to Corner SW #2; thence bearing North 77° 43' E 647.1 feet to Corner SE #3, thence bearing North 9° 43' E 750 feet to East Side Center Stake; thence bearing North 9° 43' E 750 feet to Corner NE #4; thence bearing South 77° 43' W 647.1 feet to NE Corner #1 the point of beginning.

TIE: Corner NE #4 of this claim is bearing N 11° 26' E 1216 feet from the 1/4 corner Sections 15/22 T43N, R18W.

Recorded January 11, 1955, as entry No. 123430 in Book 248, Page 439, San Miguel County.

Wally #8. This claim runs 750 feet South 9° 43' W and 750 feet North 9° 43' E from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at the NW Corner #1 bearing South 9° 43' W 750 feet to West Side Center Stake; thence bearing South 9° 43' W 750 feet to Corner SW #2; thence bearing North 77° 43' E 647.1 feet to Corner SE #3; thence bearing North 9° 43' E 750 feet to East Side Center Stake; thence bearing North 9° 43' E 750 feet to Corner NE #4; thence Bearing South 77° 43' W 647.1 feet to NE Corner #1 the point of beginning.

TIE: Corner SE #3 of this claim is bearing N 11° 26' E 1216 feet from the 1/4 corner sections 15/22 T43N, R18W.

Recorded January 11, 1955, as entry No. 123431 in Book 248, Page 440, San Miguel County.

Wally #9. This claim runs 750 feet South 9° 43' W and 750 feet North 9° 43' E from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at the NW Corner #1 bearing South 9° 43' W 750 feet to West Side Center Stake; thence bearing South 9° 43' W 750 feet to Corner SW #2; thence bearing North 77° 43' E 647.1 feet to Corner SE #3; thence bearing North 9° 43' E 750 feet to East Side Center Stake; thence bearing North 9° 43' E 750 feet to Corner NE #4; thence bearing South 77° 43' W 647.1 feet to NW Corner #1 the point of beginning.

TIE: Corner NW #1 of this claim is bearing South 60° 00' W 955 feet from the 1/4 corner Sections 14/15 T43N, R18W.

Recorded January 11, 1955, as entry No. 123432 in Book 248, Page 441, San Miguel County.

Wally #10. This claim runs 350 feet North 9° 43' W and 1150 feet South 9° 43' W from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at the NW Corner #1 bearing South 9° 43' W 750 feet to West Side Center Stake; thence bearing South 9° 43' W 750 feet to Corner SW #2; thence bearing North 77° 43' E 647.1

feet to Corner SE #3; thence bearing North 9° 43' E 750 feet to East Side Center Stake; thence bearing North 9° 43' E 750 feet to Corner NE #4; thence bearing South 77° 43' W 647.1 feet to NE Corner #1 the point of beginning.
TIE: Corner NW #1 of this claim is bearing South 60° 00' W 955 feet from the 1/4 corner, Sections 14/15, T43N, R18W.

Recorded January 11, 1955, as entry No. 123433 in Book 248, Page 442.

Because these claims are all contiguous, exploration on the Wally Claims Nos. 1 to 16 will greatly benefit all other claims. Said claims are free and clear from all encumbrances.

4. Physical description. Four exploration tunnels have been dug on the west side of Wally Claim No. 1 penetrating to a depth of between 20 and 75 feet. A total of five loads have been shipped from the property, and their respective weights and assays are as follows:

| | | | |
|---|---|---|---|
| 1. | 15,050 lbs. | .10 U308 | 1.4 V205 |
| 2. | 4,960 " | .13 U308 | 1.30 V205 |
| 3. | 6,090 " | .16 U308 | 1.47 V205 |
| 4. | 12,450 " | .19 U308 | 1.92 V205 |
| 5. | 15,340 " | .22 U308 | 1.62 V205 |

All mines are readily assessible by good all-weather dirt roads. All work to this point has been performed exclusively by the partners. Production is not going on at the present time because of the necessity of doing more advantageous exploration work, but a large quantity of ore is revealed by said tunnels.

The claims in question cover areas generally on the northeast bank of the Delores River. Due to the fact that the Delores River has erroded a prominent gorge in the area, many formations are exposed on our claims. The youngest formation is called the Burro Canyon, composed of 200 feet of sandstone and conglomerate with interbedded green and lavendar colored

shale. Underlying the Burro Canyon is the Morrison formation which is divided into an upper member called the Brushy Basin, and a lower member commonly known as the Salt Wash. The Salt Wash member consists mainly of thick sandstone and conglomerate interbedded with numerous shale beds and averages between 200 and 250 feet thick. Lying below the Salt Wash are several formations of Jurassic Age, which aggregate a total of 325 to 350 feet thick. These formations are from top to bottom Summerville shale, Entrada sandstone and Navajo sandstone with an unconformity between. Underlying is the Kayenta and Wingate sandstones. Beneath the Wingate is 550-600 feet of Chinle shale and sandstone, at the bottom of which may be found the Shinarump sandstone and conglomerate. Minerals are believed to be in small veins and larger beds, and exploration is desired in order to block out all existing beds. All the foregoing is more fully stated in the report of Bronson Stringham, Consulting Geologist, copies of which are attached, and it is respectfully requested that the same be returned.

As indicated above, the area is reached over a good all-weather four mile dirt road from the Slick Rock-Naturita Road, thence 50 miles to Monticello via Egnar.

There is a comfortable three room house located on the property where two men and their wives reside year around, and are going to work continually on the core drilling rig if the loan is authorized. Materials and supplies will be obtained through supply houses at Monticello. Water is obtainable from the Delores River which traverses the property or from Disappointment Creek 2 miles to the north. There is no power available. In addition to the two men who are continuously on the property, other members of the partnership work on the property during

vacations and on weekends.

5. The exploration project. Exploration will be conducted primarily to locate and block out uranium and vanadium bodies. It is proposed that the claims be core drilled on 200 foot intervals unless bodies are located which will require closer blocking. Maps and sketches are entered showing the location of the present mine shafts and the location of all proposed exploration work with additional holes where required. The work will be commenced within 15 days and completed within one year from the date of granting the application. The members of the partnership all have considerable experience and background in the placing of mining claims and exploration for existing ore bodies. Their individual qualifications are as follows:

Basil H. Bertoch. 20 years of business and sales. 2 years in field uranium prospecting, claim staking and mining. Made original discovery.

William H. Bertoch. Storekeeper Hercules Powder Company. President Bertoch Appliance. President Bacchus Plant Credit Union past 8 years. Secretary and Treasurer Hercules Farm Assn. Has held other executive offices in clubs and organizations. 25 years business experience.

Byrum M. Holt. Hard rock miner and leaser. 16 years experience.

Allen K. Bertoch. Vice President and Manager Bertoch Appliance Co. 2 years University of Utah School of Engineering.

Raymond L. Bertoch. Several years experience maintaining and operating heavy equipment. Present employment, compressor operator for Mountain Fuel Supply.

Donald F. Bertoch. 5 years welding crew foreman and instructor Kaiser Ship Yards. Presently welder Mountain Fuel Supply.

Douglas Bertoch. Supervisor Utah & Idaho Crop Insurance for Federal Government. Experienced in operation of equipment and business management.

James Bertoch. Retort operator at American Smelting & Refining Co., Garfield, Utah. Also mechanic experience.

Albert H. Dault. 1 year in the field uranium prospecting, claim staking and mining. Experience as rigger and mechanic.

Rex W. Hardy, Attorney at Law. General Counsel for Utah State Tax Commission. Previously Prosecuting Attorney in Pendleton, Oregon.

The project will be supervised by Basil H. Bertoch who, together with Albert H. Dault, will run the core drilling rig the majority of the time.

6. Estimate of costs. No independent contractors will be hired but all work will be performed by the applicants with equipment being purchased under lease with option to purchase contract, a copy of which contract is attached hereto marked Exhibit "A". The two men permanently on the job will receive wages for labor and supervision in the amount of $250.00 per month for Albert H. Dault and $300.00 for Basil Bertoch. Operating materials and supplies which will be utilized and furnished by the petitioners are as follows:

50 VA-182, 10' "A" Drill rods with couplings

1 VA-525, 10' "AX" Double Tooth Core Barrel

1 VA-459 Heavy Duty Water Swivel

1 EA-122, 25' length of 3/4" water hose and connection

1 EA-135, 16' " " 1½" suction hose with foot valve and strainer

1 VA-382 "A" Hoisting plug

2 V-695, 4" Fish tail bit

1 VA-613 Wosmer safety clamp

1 AX Diamond core bit

1 AX Reaming shell, double tube

The following operating equipment is either on hand or available, all of which will be furnished by the operators:

1 CP HD #8 Hydraulic Diamond Drill, powered with 1 BX Hercules 25 HP Gasoline Engine.

1 EA 135 Myers Triplex 300# pressure, 20 gal. per min. pump mounted on a Chevrolet 4-wheel drive Army 4x4

1 500 gal. water tank

1 Jaguar compressor

200 feet of compressor hose

1 1950 Willys station wagon

1 1937 Chevrolet 1½ ton truck

1 250 gal. water tank

All of the above equipment is in good repair and will need no rehabilitation prior to commencement of operations. There will be no additional building, fixed improvements, or installations purchased during the life of this contract. It is estimated that approximately $150.00 per month will be used to maintain operating equipment in working order, and $55.00 per month will be expended for workmen's compensation, employer's liability insurance and payroll taxes. The sum of $100.00 per month should be allowed for contingencies not presently considered.

7. <u>Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation?</u>

Applicants are prepared to furnish their share of the costs of the proposed project in accordance with the regulations on government participation by the supplying of labor, equipment being purchased by the applicants, and all necessary money. Pledges of $5,700 additional capital have been received from sources other than members of the partnership.

BRONSON STRINGHAM
Consulting Geologist
2169 Logan Avenue
Salt Lake City, Utah

July 5, 1955

Double Buck Uranium Co.
3929 West 3500 South
Granger, Utah

Gentlemen:

Your uranium claims situated on and near the Dolores River, San Miguel County, Colorado have been examined and the following is a report of the geology and mineralization found on and in the vicinity of your claims.

Your properties consisting of 70 claims appear to be well placed and marked. Part of these have been surveyed. In detail the claims consist of B & B, 1 - 52 inclusive, and Wally 1 - 16 inclusive, are all contiguous and may be found in sections 14, 15, 22, 23, T 43 N, R 18 W, New Mexico base & meridian. Two claims titled Misplaced Shoe No's 1 & 2 are contiguous but separate from the main group. These are found in section 22 of the above township. Of the 70 claims, 44 are placed so as to cover the Morrison formation and the overlying Burro Canyon formation. The remaining 26 claims are placed to cover formations lying above the Shinarump and below the Morrison. These are designed to cover ground with the expectation of exploring the underlying Chinle-Shinarump ore bearing horizon.

Local all weather dirt roads lead to many sections of the 44 claims on the Morrison formation and a secondary A.E.C. road extends up the Dolores River Gorge thus making the 26 claims reasonably accessable during low water periods. The properties are reached over a 4 mile dirt road from the Slick Rock-Naturita Road thence 50 miles to

Monticello via Egnar where an A.E.C. mill is situated and would receive ore if produced.

Water for drilling could be secured either from the Dolores River or from Disappointment Creek 2 miles to the North. Drinking water, however, must be secured from Egnar 15 miles away.

GEOLOGIC SETTING

Due to the fact that the Dolores River has erroded a prominent gorge through the area many formations are excellently exposed in the region. The youngest formation on your property is called the Burro Canyon and is composed of 200 feet of sandstone and conglomerate with interbedded green and lavender colored shale. Underlying the Burro Canyon is the Morrison formation which in this region may be divided into an upper member called the Brushy Basin and a lower member commonly known as the Salt Wash. The Salt Wash is the principal uranium bearing formation in Western Colorado. The Brushy Basin consists mainly of bentonitic shale with some sandstone and conglomerate lenses while the Salt Wash member consists mainly of thick sandstone and conglomerates interbedded with numerous thin shale beds. The Brushy Basin averages 150 to 175 feet thick and the Salt Wash member aggregates 200-250 feet thick.

Lying below the Salt Wash are several formations of Jurassic age which aggregate a total of 325-350 feet thick. In detail, these formations are, from top to bottom, Summerville shale, Entrada sandstone and Navajo sandstone with an unconformity between. Underlying is the Kayenta and Wingate sandstones. Beneath the Wingate is 550-600 feet of Chinle shale and sandstone, at the bottom of which may

be found the Shinarump sandstone and conglomerate. The latter appears to be exposed up the Dolores River Gorge about 2 miles south of the claims. The Shinarump formation in other parts of the Colorado Plateau has yielded enormous quantities of uranium bearing rock.

All of the formations dip 4 to 7 degrees towards the northeast and several faults of small throw are found which strike more or less northwesterly. Only one of these traverses a small portion of one of your claims.

MINERALIZATION

Uranium and vanadium mineralization was found at the surface in two different areas within your properties. On the western slope near the bottom of the Salt Wash 4 drifts have been dug to various distances up to 75 feet exposing numerous streaks and stringers containing vanadium and uranium minerals. Excessive counts can be found here with a Geiger counter. In the northwestern portion of your claims and also in the Salt Wash is found another area where mineralization is exposed. The Salt Wash outcrops, extending a mile and a half through your properties, have not been adequately prospected from the surface as yet and it is not known whether more mineralized rock is exposed or not. In the Slick Rock district it is known that mineralization may occur in as many as 4 or possibly 5 different horizons in the Salt Wash hence more surface discoveries are entirely possible within your area.

There are three mines in the immediate vicinity which have shipped large amounts of ore from the Morrison. To the southwest across the Dolores River is the Norma Jean and the Norma Jean No. 2

mines while directly south of the property is the Sarah Ellen mine. Also mineralization has been exposed in many prospects found in the vicinity, some of which are major and some of minor importance.

It is common practice to explore favorable formations through drilling and there is an excellent possibility that through such measure further mineralization will be discovered on your claims since regionally your properties are situated in an area where the Salt Wash has proven to be a large producer. The Slick Rock district a few miles to the North is near the center of one of the larger producing areas in the Colorado Plateau.

The 26 claims which have been placed to cover the Chinle-Shinarump and younger formations were acquired as somewhat of an experiment. It is known that the Shinarump lying at the base of the Chinle in other areas often contains mineralization sufficient to make a producing mine. To the southward in the Delores River Gorge, the Shinarump is exposed and here carries some mineralization but the area in which this lies has been withdrawn from location by the Atomic Energy Commission. The 26 claims cover a small portion of the Chinle and overlying formations exposed at the bottom of Delores River Gorge. Mineralization on these properties must be determined through drilling to the Shinarump at the bottom of the Chinle formation.

CONCLUSIONS AND RECOMMENDATIONS

Subsequent to the thorough surface prospecting of the Salt Wash within your claims it is recommended that drilling be initiated in areas 200-300 feet north and eastward from the Salt Wash-Brushy Basin contact and holes be drilled on approximately 200-300 foot centers

eventually on all of your property. It is believed that depths would be between 150-300 feet except where the hole was started in Burro Canyon formation where greater depths would be anticipated.

To explore the Shinarump formation it is suggested that several holes be drilled near the Dolores River at the bottom of the gorge where the Chinle formation is exposed. Here it is believed that 350-400 feet would be sufficient to reach the objective. If encouraging results are obtained here the drilling program could be expanded to areas on higher strata where drilling would be deeper.

The favorable geographic position of your properties within the Slick Rock area make the possibilities of finding a large ore body in the Morrison extremely good. Your area is within the Uravan mineral belt from which the great bulk of Western Colorado uranium ore has been produced and it is unqualifiedly recommended that you institute an exploration program since it is believed your chances for discovering ore are excellent. At the time of examination many drill rigs were seen in the vicinity testifying that many others held the same belief.

The tests you intend to make on the Shinarump formation is believed to be warranted, since it may be reasoned that if the Morrison of Western Colorado is so highly mineralized the Shinarump formation lying not far beneath could also be heavily mineralized.

Submitted by

BRONSON STRINGHAM, Geologist

BS/jo

EXHIBIT "A"

# ARNOLD MACHINERY COMPANY, INC.

## 433 WEST SECOND SOUTH ST.

## SALT LAKE CITY 1, UTAH

The ARNOLD MACHINERY COMPANY, INC. ~~Individual~~ Corporation of the City of SALT LAKE

County of SALT LAKE, State of UTAH,

hereinafter called the lessor, hereby proposes to lease ~~and does lease~~ to BERTOCH MINES, aka DOUBLE BUCK URANIUM COMPANY of 3939 West 3500 South

City of SALT LAKE, County of SALT LAKE, State of UTAH

hereinafter called the lessee for a minimum period of days / weeks / months, or more, the equipment described in the subdivision of this contract designated "Equipment Leased" according to the terms and provisions as stated on the reverse side of this page to-wit:

The lessee agrees to pay for use of the following equipment, rental as follows:

$ 1,500.00 Payable with order and covering first month's rental and $1,500.00 for sixth month rental.
$ 1,000.00 for second month's rental
$ 1,000.00 for third month's rental
$ 1,000.00 per month thereafter, all rentals being due monthly in advance and payable at the office of the lessor in the City of SALT LAKE, County of SALT LAKE State of UTAH

**The rental rates set forth in this contract do not include either sales or use tax. Where state laws provide for either sales or use tax, the rental rates set forth in this contract are subject to this tax if and when incurred. This tax provided for in paragraph 13 of this contract. Lessee to insure equipment as provided for in paragraph 16 of this contract.**

If this equipment is leased on a daily or weekly basis, the rate shall be $ per day / per week, payable daily or weekly in advance.

EQUIPMENT LEASED

One CP HD #8 Hydraulic Diamond Drill. Powered with IHX Hercules 25 Hp. Gasoline Engine. EA 135 Myers Triplex 300# Pressure, 20 Gal. per Min. Pump. One Ea. EA 135 - 16' Length 1½" Suction Hose. 500' VA 182 Drill Rod. 10' Sections A Rod. One EA 122-25' Length Water Hose and Connection. One EA 525 - AX - 10' Double Tooth Core Barrel. One Water Swivel, Hoisting Plug, Wormer Safety Clamp. Two Fish Tail Bits.

Above equipment mounted on your truck complete with 27' tower, 500 gal. water tank. Including fitting for hydraulic rams for tower. Outriggers jacks ready for operation.

THIS PROPOSAL EFFECTIVE AND MAY BE EXERCISED AT ANY TIME
P PRIOR TO NOVEMBER 10, 1955.

F. O. B. Our Yard Total Value $ 12,129.50
for use in construction operations on
at or near In the state of Utah
Ship to To be picked up by Lessee our yard - 433 West 2nd South, Salt Lake City, Utah

When Via
Return to

Invoice to
Street Address City and State
Credit Reference

## TERMS AND PROVISIONS OF LEASE

1. On local rentals, the rental period shall begin on and include the date of shipment to the lessee and shall end on and include the date of return to the lessor's warehouse or receiving point. On out-of-town shipments, the rental period shall begin on and include the date of bill of lading of shipment to the lessee and shall end on and including the date of return to the lessor's siding or receiving point. Both local and out-of-town rentals are subject to the minimum rental period provided for in this contract. If equipment is kept longer than the specified minimum rental period, the rental will then be invoiced on a pro-rata basis.

2. The lessee agrees that the rates provided for in this contract are considered straight time rates based on eight (8) hours per day, seven (7) eight (8) hour days per week, or thirty (30) eight (8) hour days in any one thirty (30) consecutive day period. Should the machinery rented be used longer than the above specified hours in any specific period the over time rate shall be based as follows:

1/8th of the daily rate for each hour worked in excess of eight (8) hours in any one day;

1/56th of the weekly rate for each hour worked in excess of fifty-six (56) hours in any one weekly period;

1/240th of the monthly rate for each hour in excess of two-hundred and forty (240) hours worked in any one thirty (30) consecutive day period.

3. It is understood between the parties that the lessor is not the manufacturer of the equipment herein leased, nor the agent of the manufacturer of said equipment and that no warranty against patent or latent defects in material, workmanship, or capacity is given, nor that said equipment will meet the requirements of any law, rules, specifications or contracts which provide for specific machinery or apparatus or special methods, other than that of original manufacturer of said equipment and as set forth in manufacturer's catalog and representations wherein said machinery and equipment is listed and described.

4. The lessor shall use reasonable care to see that the equipment is in proper working condition before shipment to lessee. It is not to be actually operated or tested unless such operation or test is deemed necessary by lessor or unless lessee shall request such operation or test in writing, in which event the lessee will be notified of the time and place of said operation and test, and shall be permitted to be present during said operation and test. If having requested it, lessee fails to be present at the time of operation and test, lessee agrees that said equipment as turned out is in proper operating condition.

5. On non-tractor equipment the lessee agrees to maintain said machinery and equipment in the same condition as when delivered to it by the lessor, usual wear and tear excepted, and to pay all claims and damages arising from defects therein, or from the use of handling of said machinery and equipment, whether from injuries to the person or property, and to pay for all damages to the equipment, except the usual and ordinary wear and tear, during the life of this contract, and to return said property in as good condition as when received to the storage yard of the lessor, or receiving point designated by the lessor, usual and ordinary wear and tear excepted and to pay all freight, demurrage, storage, switching, drayage, trackage or other charges against said equipment from the time the same shall leave the storage yard of said lessor up to and including the time of its return to said storage yard or other place of return agreed upon. On all tractor equipment, the conditions in paragraph 5 apply except that the lessee agrees to fully maintain the machinery covered in this contract while in his possession and to return it in the same condition as received from the lessor with no exception made for usual wear and tear.

11. In the event the lessee accepts the machinery and equipment, as herein provided, and thereafter the said machinery proves defective or unfit for use, because of accident or otherwise, or, if for any other reason lessee desires to discontinue the use of said machinery or equipment, the only remedy of lessee shall be to return the machinery to lessor and terminate this contract as herein elsewhere provided for, which in no event shall be less than the transportation charges on said machinery and equipment and minimum rental herein provided for.

12. The lessee agrees to pay any charges for work or inspection required by any labor union. The lessor may, at its option, refuse to do any repair work on the equipment in time of strike, or any other cause beyond its control, or in violation of any rule affecting the equipment. The lessor reserves the right to remove the equipment from the job at any time when, in its opinion, the equipment is in danger because of strikes or any other condition.

13. The lessee agrees to comply with and conform to all municipal, state and federal laws relating to the operation of said machinery and to pay all costs and expenses of every character occasioned by or involving the use or operation of the machinery or equipment and to pay all legal assessments, taxes or public charges, either local, municipal, state or federal, which may be levied on said equipment while in the possession of the lessee. Nothing in this paragraph is to be construed as meaning that the lessee is to pay the personal property tax levied against the machinery rented when said machinery is delivered within the home state of the lessor, as in this case the lessor is to pay his own personal property tax. In the event the equipment is rented outside of the home state of the lessor, any and all taxes assessed against the machinery, including personal property tax, are to be paid by the lessee, the words "home state" to mean any state in which the lessor has a home office or warehousing branch.

14. The lessee agrees to pay the lessor for all loss and damages occasioned by fire, theft, flood, accident, explosion, wreck, an act of God or any other causes that may occur during the life of this lease, and until such machinery has been returned into the possession of the lessor and accepted by it. For the purpose of finding the valuation of said property in order to determine the loss, damage or injury thereto, it is agreed by the parties hereto that the value as hereinbefore stated shall be a true and just value forming a basis for such adjustment. In making such adjustment it is understood that no rentals theretofore paid or due shall apply to the payment of such loss.

15. The lessee further agrees to indemnify the lessor against all loss, damage, expense and penalty arising from any action on account of any injury to person or property of any character whatsoever occasioned by the operation, handling or transportation of any of the equipment during the rental period, and while said machinery and equipment is in the possession or under the custody and control of lessee.

16. The lessee further agrees to protect the lessor on this contract with full insurance coverage, said insurance to cover damage occasioned by fire, theft, flood, explosion, accident, act of God, or any other cause, that may occur during the life of this lease and to protect the lessor for public liability insurance for coverage to the limits of the State laws in which the equipment leased is being used.

17. The title to the property herein leased and to all replacements thereof or substitution thereof is and shall remain in the lessor, and said machinery and equipment shall not become a part of any building, by being placed therein or by being annexed thereto. Where the equipment is annexed to any property, the

6. The receipt and acceptance by the lessee of said equipment shall constitute acknowledgement that said property has been accepted and found in good, safe and serviceable condition, and fit for use, unless the lessee makes claim to the contrary to the lessor by registered mail with return receipt demanded, addressed to the lessor's home office within three days after receipt of said equipment. The complaint as made shall set forth in detail its complete nature and the condition of the property received.

7. Should any of the machinery, equipment, or appurtenances, be received and accepted by the lessee from any drayman, railroad company or any other carrier transporting same in a damaged condition, or with any of the machinery, equipment, parts or appurtenances missing, it shall be the duty of the lessee to obtain from said drayman, railroad company or other carrier, a written acknowledgement of the damage or shortage. The failure on the part of the lessee to obtain such statement or acknowledgement upon its receipt and acceptance of said machinery, equipment, parts and appurtenances shall be treated as an acceptance of said machinery, equipment, parts and appurtenances in good, safe, serviceable condition and fit for use. Any damage or loss which has occurred and is not covered by a written acknowledgement or statement as aforesaid, or which occurs after acceptance of said property, shall be repaired and replaced at the expense of the lessee. If the machinery, equipment, parts or appurtenances are damaged or lost in transportation and the lessee furnishes to the lessor a written detailed acknowledgement and statement from the carrier setting forth the character of damage and loss, the lessor agrees to use reasonable diligence in having said repaired and loss replaced within a reasonable time, but the equipment shall be deemed to have been delivered on date of acceptance thereof from carrier.

8. In the event of notice to the lessor by the lessee that the equipment is not in good, safe and serviceable condition and fit for use upon its arrival, the lessor shall have the right to put said equipment in good, safe and serviceable condition and fit for use, within a reasonable time, or to cancel this lease.

9. The lessor shall not be liable in any event to the lessee for any loss, delay or damage of any kind or character resulting from defects in, or inefficiency of equipment hereby leased or accidental breakage thereof.

10. In the event of accident to, or breakage of, any part of the equipment lessee may have the same repaired by any competent person, firm or corporation at its own expense or, upon notice to the lessor as to such breakage or accident, the lessor may repair said machinery for the lessee, using reasonable diligence to make said repairs or replacement in the shortest possible time, and the lessee agrees to pay the lessor its regular charges for any material or labor furnished in making said repairs upon demand; in the event any work is done outside of lessor's regular hours, including work necessary by wear and tear, by reason of which lessor shall be required to pay double time or other overtime charges to its employees, or to anyone doing the work for lessee, all such charges will be paid by the lessee to the lessor.

lessee shall furnish the lessor with a landlord's release, which shall permit the lessor to remove the equipment from said property at any time during the life of, or after the expiration of, this contract. Should the lessee be lax in obtaining said landlord's release, the lessor reserves the right, and the lessee hereby grants permission to the lessor to obtain such release.

18. The lessee agrees, whenever requested by lessor, to give lessor the exact location of all of the machinery and equipment covered by this lease and further agrees to give lessor immediate notice of any levy attempted upon said equipment, or if said equipment from any cause becomes liable to seizure, and to indemnify lessor against all loss and damages caused by any such action. The lessor shall have the privilege at all times of entering any job, building or location where the above property is being used for the purpose of inspection and reserves the privilege of removing said machinery and equipment on twenty-four hours' notice if it is being overloaded or taxed beyond its capacity or in any manner abused or neglected.

19. The equipment hereby leased shall not be sublet without the written consent of the lessor nor shall said property be moved out of the state specified in this contract without the written consent of the lessor.

20. Should any of the provisions of this lease be violated by lessee the rental for the entire period herein specified, shall become forthwith due and payable, and the lessor, or its agents may, without notice, enter the premises occupied by lessee without being a trespasser thereon and take possession of and remove said equipment with or without process of law. In the event any action as hereinbefore set forth becomes necessary the lessee agrees to pay, in addition to other charges herein specified, all costs of removal of said machinery from the possession of the lessee and all freight, demurrage, storage, labor or other charges on or against said property incurred during or by the removal, shipping and return to the possession of the lessor at his designated receiving point, or equivalent point designated by the lessor.

21. The lessee agrees to pay all rentals when they are due and for all services and materials furnished and all damages and sums due the lessor under this contract as soon as the loss occurs or services are rendered or materials are furnished. The taking of notes, or renewals thereof, covering rentals herein specified shall not in any manner whatsoever change or invalidate the terms and conditions of this contract.

22. Lessee agrees that if any of the lease provisions are violated and lessor demands the return of the equipment that this lease shall constitute authority to the watchman or other persons responsible for the equipment to deliver all or any part of the equipment to the lessor or its agents.

**23. Both lessor and lessee agree that no modification of this agreement shall be binding upon them or either of them, unless such modification shall be in writing and duly accepted in writing.**

**24. The lessor's designated receiving point referred to in this contract is shown on the first page of the contract in the space therein following the printed words "Return to."**

**We agree to all the above conditions which are thoroughly understood.**

BERTOCH MINES
Lessee

By Allen K Bertoch

Date Signed by Lessee

Witness:

Lessor.

By Arnold Machinery Co., Inc.

Date Signed by Lessor 8-8-55

Approved by (S) C. S. Bound
Authorized to Approve for Lessor

Date Approved by Lessor

# ARNOLD MACHINERY COMPANY, INC.

## 433 WEST SECOND SOUTH ST.

## SALT LAKE CITY 1, UTAH

### *PRIVILEGE OF PURCHASE OPTION*

August 6, 19 ~~x~~ 55

Between DOUBLE BUCK URANIUM COMPANY, party of the first part, designated in the attached lease agreement as lessee, and ARNOLD MACHINERY COMPANY, INC. party of the second part, designated in the attached lease agreement as lessor.

If the party of the first part shall keep all the terms of the lease agreement dated August 8, 1955 to which this purchase option is attached, the party of the first part shall have the privilege of purchasing the equipment covered by said lease agreement in its then condition at any time before the expiration of the privilege of purchase option, upon payment to ARNOLD MACHINERY COMPANY, INC. the sum of $12,129.50 which shall be the full value or purchase price of the equipment set out in the lease contract and upon payment of all sums which said party of the first part may owe said ARNOLD MACHINERY CO., INC. for supplies and repairs purchased during the term of the lease to which this purchase option is attached, on the following terms and conditions:

If purchased within 90 days 100% of the paid rental to apply on full value or purchase price set out above.

If purchased within 120 days 90% of the paid rental to apply on full value or purchase price set out above.

If purchased after 180 days, none of the rental provided for in the attached contract is to apply on the purchase price set out above.

If and when this Privilege of Purchase Option is exercised the lessee agrees to either pay the balance in cash, in which event the lessor will execute a bill of sale, or enter into a conditional sales contract or chattel mortgage as lessor may require and upon such terms as may at that time be agreed.

If this option is not exercised within 180 days after date, the lessee shall have the privilege of continuing to rent with no privilege of purchase option, or returning the goods to the lessor. In such case the terms and conditions of the lease contract attached hereto shall be in full force.

Failure to make full payment of rentals due for said property under lease contract attached hereto within ten days of the time specified shall be considered as an abandonment of this option and it shall thereby immediately expire and become null and void.

The party of the first part and the party of the second part hereby agree that if the contract to which this purchase option is attached and/or to which this purchase option refers, is completed either by default, return of equipment, or otherwise, that this purchase option automatically becomes null and void and the party of the first part forfeits all rights and privileges of purchase mentioned within this purchase option.

Both parties agree that no modification of this agreement shall be binding upon them, or either of them, unless such modification shall be in writing and duly accepted in writing. Also that in all cases that this contract is regarded as having been made in the State of Utah.

This option before becoming effective must be approved by an officer of ARNOLD MACHINERY CO., INC. at the home office in SALT LAKE CITY, UTAH

We agree to all the above conditions, which are thoroughly understood.

| | |
|---|---|
| DOUBLE BUCK URANIUM COMPANY | **Arnold Machinery Company, Inc.** |
| PARTY OF THE FIRST PART | PARTY OF THE SECOND PART |
| By Allen K. Bertoch | By (S) P. L. Good mgr. |
| | 8-8-55 |
| Date Signed by Party of First Part | Date Signed by Party of Second Part |
| | Approved by |
| | Authorized to approve |
| Witness: | |
| | Date Approved by Party of Second Part |

Printed in U.S.A.

MF-103
(Revised April 1952)

# UNITED STATES DEPARTMENT OF THE INTERIOR
## DEFENSE MINERALS EXPLORATION ADMINISTRATION

DMEA
Date Rec'd
AUG 15 1955
BUREAU OF MINES
Denver, Colorado

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

RECEIVED
AUG 22 1955

# 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. 3953
Metal or Mineral Uranium
Date Received 8.22.55
Estimated Cost No Amount
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: Bertoch Mines
3929 West 3500 South
Salt Lake City, Utah

(*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

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

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

(*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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

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

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

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

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

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

(*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.).

(*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 July 29, 1955

BERTOCH MINES
(Applicant)

By Allen K Bertoch

Ken H Bertoch

B. H. Bertoch

**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

Bertoch Mines
3929 West 3500 So.
Salt Lake City, Utah

# APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

1. Name of applicant. Bertoch Mines, 3929 West 3500 South, Salt Lake City, Utah, a partnership between

| | |
|---|---|
| Basil H. Bertoch | Egnar, Colorado |
| William H. Bertoch | 4312 So. 4000 West, Salt Lake City, Utah |
| Byrum M. Holt | Rt. 2, Riverton, Utah |
| Allen K. Bertoch | 3326 Elgin Drive, Salt Lake City, Utah |
| Donald T. Bertoch | 4320 So. 4000 West, Salt Lake City, Utah |
| James A. Bertoch | 3055 Valley Street, Salt Lake City, Utah |
| Raymond L. Bertoch | 4390 So. 4000 West, Salt Lake City, Utah |
| Douglas H. Bertoch | 1349 Brookshire, Salt Lake City, Utah |
| Albert H. Dault | Egnar, Colorado |
| Daniel L. Hudson | 82 Northwest Terrace, Miami, Florida |
| Rex W. Hardy | 141 East 2nd South, Salt Lake City, Utah |

3. Applicant's property rights. Applicants own in their own right unpatented claims located in Sections 14, 15, 22 and 23, Township 43 North, Range 18 West, New Mexico Base & Meridian, all of which are contiguous, as follows:

Wally Claims, 1 to 16, inclusive.

B & B Claims, 1 to 52, inclusive.

It is proposed that exploration work be conducted upon Wally claims numbering 1 to 10, inclusive, the legal descriptions of which are as follows:

Wally #1. This claim runs 100 feet South 77° 43' West and 1400 feet North 77° 43' East from the initial point and discovery stake, and is bounded as follows:

Beginning at NW Corner No. 1 bearing South 9° 43' West 647.1 feet to the corner SW No. 2, thence bearing North 77°

43' East 750 feet to South side center stake; thence bearing North 77° 43' East 750 feet to corner SE No. 3; thence bearing North 9° 43' East 647.1 feet to corner NE No. 4; thence bearing South 77° 43' West 750 feet to North side center stake; thence bearing South 77° 43' West 750 feet to corner NW No. 1, the point of beginning.

TIE: Corner SW No. 2 of this claim is bearing North 15° 16' East 362 feet from the 1/4 corner section 15/22 T43N, R18W.

Recorded January 11, 1955, as entry No. 123424 in Book 248, Page 433, San Miguel County.

Wally #2. This claim runs 140 feet South 77° 43' West and 1360 feet North 77° 43' East from the initial point and discovery stake, and is bounded as follows:

Beginning at NW Corner No. 1 bearing South 9° 43' West 647.1 feet to the corner SW No. 2, thence bearing North 77° 43' East 750 feet to South side center stake; thence bearing North 77° 43' East 750 feet to corner SE No. 3; thence bearing North 9° 43' East 647.1 feet to corner NE No. 4; thence bearing South 77° 43' West 750 feet to North side center stake; thence bearing South 77° 43' West 750 feet to corner NW No. 1, the point of beginning.

TIE: The corner NW No. 1 of this claim is bearing North 15° 16' East 362 feet from the 1/4 corner section 15/22, T43N, R18W.

Recorded January 11, 1955, as entry No. 123425 in Book 248, Page 434.

Bertoch Mines
3929 West 3500 So.
Salt Lake City, Utah

Wally #4. This claim runs 150 feet South 77° 43' W and 1350 feet North 77° 43' E from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at Corner NW No. 1 bearing South 9° 43' W 647.1 feet to the Corner SW #2; thence bearing North 77° 43' East 750 feet to South Side Center Stake; thence bearing North 77° 43' East 750 feet to Corner SE #3; thence bearing North 9° 43' E 647.1 feet to Corner NE #4; thence bearing South 77° 43' W 750 feet to North Side Center Stake; thence bearing South 77° 43' W 750 feet to Corner NW #1, the point of beginning.

TIE: Corner SE #3 of this claim is bearing South 51° 32' W 1100 feet from 1/4 corner Section 14/15 T43N, R18W.

Recorded January 11, 1955, as entry No. 123427 in Book 248, Page 436, San Miguel County.

Wally #5. This claim runs 25 feet South 77° 43' W and 1475 feet North 77° 43' E from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at Corner NW No. 1 bearing South 9° 43' W 647.1 feet to the Corner SW #2; thence bearing North 77° 43' East 750 feet to South Side Center Stake; thence bearing North 77° 43' East 750 feet to Corner SE #3; thence bearing North 9° 43' E 647.1 feet to Corner NE #4; thence bearing South 77° 43' W 750 feet to North Side Center Stake; thence bearing South 77° 43' W 750 feet to Corner NW #1, the point of beginning.

TIE: Corner NE #4 of this claim is bearing N 47° 46' W 872 feet from 1/4 Corner Sections 14/15 T43N, R18W.

Recorded January 11, 1955, as entry No. 123428 in Book 248, Page 437, San Miguel County.

Wally #6. This claim runs 20 feet South 77° 43' W and 1480 feet North 77° 43' E from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at Corner NW No. 1 bearing South 9° 43' W 647.1 feet to the Corner SW #2; thence bearing North 77° 43' East 750 feet to South Side Center Stake; thence bearing North 77° 43' East 750 feet to Corner SE #3; thence bearing North 9° 43' E 647.1 feet to Corner NE #4; thence bearing South 77° 43' W 750 feet to North Side Center Stake; thence bearing South 77° 43' W 750 feet to Corner NW #1, the point of beginning.

TIE: corner SE #3 of this claim is bearing N 47° 46' W 872 feet from the 1/4 corner Sections 14/15 T43N, R18W.

Recorded January 11, 1955, as entry No. 123429 in Book 248, Page 438, San Miguel County.

Wally #7. This claim runs 1100 feet South 9° 43' W and 400 feet North 9° 43' E from the Initial Point and Discovery

Stake and is bounded as follows:

Beginning at the NW Corner #1 bearing South 9° 43' W 750 feet to West Side Center Stake; thence bearing South 9° 43' W 750 feet to Corner SW #2; thence bearing North 77° 43' E 647.1 feet to Corner SE #3, thence bearing North 9° 43' E 750 feet to East Side Center Stake; thence bearing North 9° 43' E 750 feet to Corner NE #4; thence bearing South 77° 43' W 647.1 feet to NE Corner #1 the point of beginning.

TIE: Corner NE #4 of this claim is bearing N 11° 26' E 1216 feet from the 1/4 corner Sections 15/22 T43N, R18W.

Recorded January 11, 1955, as entry No. 123430 in Book 248, Page 439, San Miguel County.

Wally #8. This claim runs 750 feet South 9° 43' W and 750 feet North 9° 43' E from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at the NW Corner #1 bearing South 9° 43' W 750 feet to West Side Center Stake; thence bearing South 9° 43' W 750 feet to Corner SW #2; thence bearing North 77° 43' E 647.1 feet to Corner SE #3; thence bearing North 9° 43' E 750 feet to East Side Center Stake; thence bearing North 9° 43' E 750 feet to Corner NE #4; thence Bearing South 77° 43' W 647.1 feet to NE Corner #1 the point of beginning.

TIE: Corner SE #3 of this claim is bearing N 11° 26' E 1216 feet from the 1/4 corner sections 15/22 T43N, R18W.

Recorded January 11, 1955, as entry No. 123431 in Book 248, Page 440, San Miguel County.

Wally #9. This claim runs 750 feet South 9° 43' W and 750 feet North 9° 43' E from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at the NW Corner #1 bearing South 9° 43' W 750 feet to West Side Center Stake; thence bearing South 9° 43' W 750 feet to Corner SW #2; thence bearing North 77° 43' E 647.1 feet to Corner SE #3; thence bearing North 9° 43' E 750 feet to East Side Center Stake; thence bearing North 9° 43' E 750 feet to Corner NE #4; thence bearing South 77° 43' W 647.1 feet to NE Corner #1 the point of beginning.

TIE: Corner NW #1 of this claim is bearing South 60° 00' W 955 feet from the 1/4 corner Sections 14/15 T43N, R18W.

Recorded January 11, 1955, as entry No. 123432 in Book 248, Page 441, San Miguel County.

Wally #10. This claim runs 350 feet North 9° 43' W and 1150 feet South 9° 43' W from the Initial Point and Discovery Stake and is bounded as follows:

Beginning at the NW Corner #1 bearing South 9° 43' W 750 feet to West Side Center Stake; thence bearing South 9° 43' W 750 feet to Corner SW #2; thence bearing North 77° 43' E 647.1

feet to Corner SE #3; thence bearing North 9° 43' E 750 feet to East Side Center Stake; thence bearing North 9° 43' E 750 feet to Corner NE #4; thence bearing South 77° 43' W 647.1 feet to NE Corner #1 the point of beginning.
TIE: Corner NW #1 of this claim is bearing South 60° 00' W 955 feet from the 1/4 corner, Sections 14/15, T43N, R18W.

Recorded January 11, 1955, as entry No. 123433 in Book 248, Page 442.

Because these claims are all contiguous, exploration on the Wally Claims Nos. 1 to 10 will greatly benefit all other claims. Said claims are free and clear from all encumbrances.

4. Physical description. Four exploration tunnels have been dug on the west side of Wally Claim No. 1 penetrating to a depth of between 20 and 75 feet. A total of five loads have been shipped from the property, and their respective weights and assays are as follows:

| | | | |
|---|---|---|---|
| 1. | 15,050 lbs. | .10 U308 | 1.4 V205 |
| 2. | 4,960 " | .13 U308 | 1.30 V205 |
| 3. | 6,090 " | .16 U308 | 1.47 V205 |
| 4. | 12,450 " | .19 U308 | 1.92 V205 |
| 5. | 15,340 " | .22 U308 | 1.62 V205 |

All mines are readily assessible by good all-weather dirt roads. All work to this point has been performed exclusively by the partners. Production is not going on at the present time because of the necessity of doing more advantageous exploration work, but a large quantity of ore is revealed by said tunnels.

The claims in question cover areas generally on the northeast bank of the Delores River. Due to the fact that the Delores River has erroded a prominent gorge in the area, many formations are exposed on our claims. The youngest formation is called the Burro Canyon, composed of 200 feet of sandstone and conglomerate with interbedded green and lavendar colored

shale. Underlying the Burro Canyon is the Morrison formation which is divided into an upper member called the Brushy Basin, and a lower member commonly known as the Salt Wash. The Salt Wash member consists mainly of thick sandstone and conglomerate interbedded with numerous shale beds and averages between 200 and 250 feet thick. Lying below the Salt Wash are several formations of Jurassic Age, which aggregate a total of 325 to 350 feet thick. These formations are from top to bottom Summerville shale, Entrada sandstone and Navajo sandstone with an unconformity between. Underlying is the Kayenta and Wingate sandstones. Beneath the Wingate is 550-600 feet of Chinle shale and sandstone, at the bottom of which may be found the Shinarump sandstone and conglomerate. Minerals are believed to be in small veins and larger beds, and exploration is desired in order to block out all existing beds. All the foregoing is more fully stated in the report of Bronson Stringham, Consulting Geologist, copies of which are attached, and it is respectfully requested that the same be returned.

As indicated above, the area is reached over a good all-weather four mile dirt road from the Slick Rock-Naturita Road, thence 50 miles to Monticello via Egnar.

There is a comfortable three room house located on the property where two men and their wives reside year around, and are going to work continually on the core drilling rig if the loan is authorized. Materials and supplies will be obtained through supply houses at Monticello. Water is obtainable from the Delores River which traverses the property or from Disappointment Creek 2 miles to the north. There is no power available. In addition to the two men who are continuously on the property, other members of the partnership work on the property during

vacations and on weekends.

5. The exploration project. Exploration will be conducted primarily to locate and block out uranium and vanadium bodies. It is proposed that the claims be core drilled on 200 foot intervals unless bodies are located which will require closer blocking. Maps and sketches are entered showing the location of the present mine shafts and the location of all proposed exploration work with additional holes where required. The work will be commenced within 15 days and completed within one year from the date of granting the application. The members of the partnership all have considerable experience and background in the placing of mining claims and exploration for existing ore bodies. Their individual qualifications are as follows:

Basil H. Bertoch. 20 years of business and sales. 2 years in field uranium prospecting, claim staking and mining. Made original discovery.

William H. Bertoch. Storekeeper Hercules Powder Company. President Bertoch Appliance. President Bacchus Plant Credit Union past 8 years. Secretary and Treasurer Hercules Farm Assn. Has held other executive offices in clubs and organizations. 25 years business experience.

Byrum M. Holt. Hard rock miner and leasor. 16 years experience.

Allen K. Bertoch. Vice President and Manager Bertoch Appliance Co. 2 years University of Utah School of Engineering.

Raymond L. Bertoch. Several years experience maintaining and operating heavy equipment. Present employment, compressor operator for Mountain Fuel Supply.

Donald T. Bertoch. 5 years welding crew foreman and instructor Kaiser Ship Yards. Presently welder Mountain Fuel Supply.

Douglas Bertoch. Supervisor Utah & Idaho Crop Insurance for Federal Government. Experienced in operation of equipment and business management.

James Bertoch. Retort operator at American Smelting & Refining Co., Garfield, Utah. Also mechanic experience.

Albert H. Dault. 1 year in the field uranium prospecting, claim staking and mining. Experience as rigger and mechanic.

Rex W. Hardy, Attorney at Law. General Counsel for Utah State Tax Commission. Previously Prosecuting Attorney in Pendleton, Oregon.

The project will be supervised by Basil H. Bertoch who, together with Albert H. Dault, will run the core drilling rig the majority of the time.

6. Estimate of costs. No independent contractors will be hired but all work will be performed by the applicants with equipment being purchased under lease with option to purchase contract, a copy of which contract is attached hereto marked Exhibit "A". The two men permanently on the job will receive wages for labor and supervision in the amount of $250.00 per month for Albert H. Dault and $300.00 for Basil Bertoch. Operating materials and supplies which will be utilized and furnished by the petitioners are as follows:

50 VA-182, 10' "A" Drill rods with couplings

1 VA-525, 10' "AX" Double Tooth Core Barrel

1 VA-459 Heavy Duty Water Swivel

1 EA-122, 25' length of 3/4" water hose and connection

1 EA-135, 16' " " 1½" suction hose with foot valve and strainer

1 VA-382 "A" Hoisting plug

2 V-695, 4" Fish tail bit

1 VA-613 Wommer safety clamp

1 AX Diamond core bit

1 AX Reaming shell, double tube

The following operating equipment is either on hand or available, all of which will be furnished by the operators:

1 CP HD #8 Hydraulic Diamond Drill, powered with 1 BX Hercules 25 HP Gasoline Engine.

1 EA 135 Myers Triplex 300# pressure, 20 gal. per min. pump mounted on a Chevrolet 4-wheel drive Army 4x4

1 500 gal. water tank

1 Jaguar compressor

200 feet of compressor hose

1 1950 Willys station wagon

1 1937 Chevrolet 1½ ton truck

1 250 gal. water tank

All of the above equipment is in good repair and will need no rehabilitation prior to commencement of operations. There will be no additional building, fixed improvements, or installations purchased during the life of this contract. It is estimated that approximately $150.00 per month will be used to maintain operating equipment in working order, and $55.00 per month will be expended for workmen's compensation, employer's liability insurance and payroll taxes. The sum of $100.00 per month should be allowed for contingencies not presently considered.

7. <u>Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation?</u>

Applicants are prepared to furnish their share of the costs of the proposed project in accordance with the regulations on government participation by the supplying of labor, equipment being purchased by the applicants, and all necessary money. Pledges of $5,700 additional capital have been received from sources other than members of the partnership.

BRONSON STRINGHAM
Consulting Geologist
2169 Logan Avenue
Salt Lake City, Utah

July 5, 1955

Double Buck Uranium Co.
3929 West 3500 South
Granger, Utah

Gentlemen:

Your uranium claims situated on and near the Delores River, San Miguel County, Colorado have been examined and the following is a report of the geology and mineralization found on and in the vicinity of your claims.

Your properties consisting of 70 claims appear to be well placed and marked. Part of these have been surveyed. In detail the claims consist of B & B, 1 - 52 inclusive, and Wally 1 - 16 inclusive, are all contiguous and may be found in sections 14, 15, 22, 23, T 43 N, R 18 W, New Mexico base & meridian. Two claims titled Misplaced Shoe No's 1 & 2 are contiguous but separate from the main group. These are found in section 22 of the above township. Of the 70 claims, 44 are placed so as to cover the Morrison formation and the overlying Burro Canyon formation. The remaining 26 claims are placed to cover formations lying above the Shinarump and below the Morrison. These are designed to cover ground with the expectation of exploring the underlying Chinle-Shinarump ore bearing horizon.

Local all weather dirt roads lead to many sections of the 44 claims on the Morrison formation and a secondary A.E.C. road extends up the Delores River Gorge thus making the 26 claims reasonably accessable during low water periods. The properties are reached over a 4 mile dirt road from the Slick Rock-Naturita Road thence 50 miles to

Monticello via Egnar where an A.E.C. mill is situated and would receive ore if produced.

Water for drilling could be secured either from the Delores River or from Disappointment Creek 2 miles to the North. Drinking water, however, must be secured from Egnar 15 miles away.

GEOLOGIC SETTING

Due to the fact that the Delores River has erroded a prominent gorge through the area many formations are excellently exposed in the region. The youngest formation on your property is called the Burro Canyon and is composed of 200 feet of sandstone and conglomerate with interbedded green and lavender colored shale. Underlying the Burro Canyon is the Morrison formation which in this region may be divided into an upper member called the Brushy Basin and a lower member commonly known as the Salt Wash. The Salt Wash is the principal uranium bearing formation in Western Colorado. The Brushy Basin consists mainly of bentonitic shale with some sandstone and conglomerate lenses while the Salt Wash member consists mainly of thick sandstone and conglomerates interbedded with numerous thin shale beds. The Brushy Basin averages 150 to 175 feet thick and the Salt Wash member aggregates 200-250 feet thick.

Lying below the Salt Wash are several formations of Jurassic age which aggregate a total of 325-350 feet thick. In detail, these formations are, from top to bottom, Summerville shale, Entrada sandstone and Navajo sandstone with an unconformity between. Underlying is the Kayenta and Wingate sandstones. Beneath the Wingate is 550-600 feet of Chinle shale and sandstone, at the bottom of which may

be found the Shinarump sandstone and conglomerate. The latter appears to be exposed up the Delores River Gorge about 2 miles south of the claims. The Shinarump formation in other parts of the Colorado Plateau has yielded enormous quantities of uranium bearing rock.

All of the formations dip 4 to 7 degrees towards the northeast and several faults of small throw are found which strike more or less northwesterly. Only one of these traverses a small portion of one of your claims.

MINERALIZATION

Uranium and vanadium mineralization was found at the surface in two different areas within your properties. On the western slope near the bottom of the Salt Wash 4 drifts have been dug to various distances up to 75 feet exposing numerous streaks and stringers containing vanadium and uranium minerals. Excessive counts can be found here with a Geiger counter. In the northwestern portion of your claims and also in the Salt Wash is found another area where mineralization is exposed. The Salt Wash outcrops, extending a mile and a half through your properties, have not been adequately prospected from the surface as yet and it is not known whether more mineralized rock is exposed or not. In the Slick Rock district it is known that mineralization may occur in as many as 4 or possibly 5 different horizons in the Salt Wash hence more surface discoveries are entirely possible within your area.

There are three mines in the immediate vicinity which have shipped large amounts of ore from the Morrison. To the southwest across the Delores River is the Norma Jean and the Norma Jean No. 2

mines while directly south of the property is the Sarah Ellen mine. Also mineralization has been exposed in many prospects found in the vicinity, some of which are major and some of minor importance.

It is common practice to explore favorable formations through drilling and there is an excellent possibility that through such measure further mineralization will be discovered on your claims since regionally your properties are situated in an area where the Salt Wash has proven to be a large producer. The Slick Rock district a few miles to the North is near the center of one of the larger producing areas in the Colorado Plateau.

The 26 claims which have been placed to cover the Chinle-Shinarump and younger formations were acquired as somewhat of an experiment. It is known that the Shinarump lying at the base of the Chinle in other areas often contains mineralization sufficient to make a producing mine. To the southward in the Delores River Gorge, the Shinarump is exposed and here carries some mineralization but the area in which this lies has been withdrawn from location by the Atomic Energy Commission. The 26 claims cover a small portion of the Chinle and overlying formations exposed at the bottom of Delores River Gorge. Mineralization on these properties must be determined through drilling to the Shinarump at the bottom of the Chinle formation.

## CONCLUSIONS AND RECOMMENDATIONS

Subsequent to the thorough surface prospecting of the Salt Wash within your claims it is recommended that drilling be initiated in areas 200-300 feet north and eastward from the Salt Wash-Brushy Basin contact and holes be drilled on approximately 200-300 foot centers

eventually on all of your property. It is believed that depths would be between 150-300 feet except where the hole was started in Burro Canyon formation where greater depths would be anticipated.

To explore the Shinarump formation it is suggested that several holes be drilled near the Delores River at the bottom of the gorge where the Chinle formation is exposed. Here it is believed that 350-400 feet would be sufficient to reach the objective. If encouraging results are obtained here the drilling program could be expanded to areas on higher strata where drilling would be deeper.

The favorable geographic position of your properties within the Slick Rock area make the possibilities of finding a large ore body in the Morrison extremely good. Your area is within the Uravan mineral belt from which the great bulk of Western Colorado uranium ore has been produced and it is unqualifiedly recommended that you institute an exploration program since it is believed your chances for discovering ore are excellent. At the time of examination many drill rigs were seen in the vicinity testifying that many others hold the same belief.

The tests you intend to make on the Shinarump formation is believed to be warranted, since it may be reasoned that if the Morrison of Western Colorado is so highly mineralized the Shinarump formation lying not far beneath could also be heavily mineralized.

Submitted by

BRONSON STRINGHAM, Geologist

BS/je

EXHIBIT "A"

# ARNOLD MACHINERY COMPANY, INC.

## 433 WEST SECOND SOUTH ST.

## SALT LAKE CITY 1, UTAH

The ARNOLD MACHINERY COMPANY, INC. ~~Individual~~ ~~Partnership~~ Corporation of the City of SALT LAKE

County of SALT LAKE, State of UTAH,

hereinafter called the lessor, hereby proposes to lease ~~and does lease~~ to BERTOCH MINES, aka DOUBLE BUCK URANIUM COMPANY of 3939 West 3500 South

City of SALT LAKE, County of SALT LAKE, State of UTAH

hereinafter called the lessee for a minimum period of 6 ~~days~~ ~~weeks~~ months or more, the equipment described in the subdivision of this contract designated "Equipment Leased" according to the terms and provisions as stated on the reverse side of this page to-wit:

The lessee agrees to pay for use of the following equipment, rental as follows:

$ 1,500.00 Payable with order and covering first month's rental and $1,500.00 for sixth month rental.
$ 1,000.00 for second month's rental
$ 1,000.00 for third month's rental
$ 1,000.00 per month thereafter, all rentals being due monthly in advance and payable at the office of the lessor in the City of SALT LAKE, County of SALT LAKE State of UTAH.

**The rental rates set forth in this contract do not include either sales or use tax. Where state laws provide for either sales or use tax, the rental rates set forth in this contract are subject to this tax if and when incurred. This tax provided for in paragraph 13 of this contract. Lessee to insure equipment as provided for in paragraph 16 of this contract.**

If this equipment is leased on a daily or weekly basis, the rate shall be $ _____ per day / per week, payable daily or weekly in advance.

EQUIPMENT LEASED

One CP HD #8 Hydraulic Diamond Drill. Powered with IDX Hercules 25 Hp. Gasoline Engine. EA 135 Myers Triplex 300# Pressure, 20 Gal. per Min. Pump. One Ea. EA 135 - 16' Length 1½" Suction Hose. 500' VA 182 Drill Rod. 10' Sections A Rod. One EA 122-25' Length Water Hose and Connection. One EA 525 - AX - 10' Double Tooth Core Barrel. One Water Swivel, Hoisting Plug, Wormer Safety Clamp. Two Fish Tail Bits.

Above equipment mounted on your truck complete with 27' tower, 500 gal. water tank. Including fitting for hydraulic rams for tower. Outriggers jacks ready for operation.
THIS PROPOSAL EFFECTIVE AND MAY BE EXERCISED AT ANY TIME PRIOR TO NOVEMBER 10, 1955.

F. O. B. Our Yard Total Value $ 12,129.50
for use in construction operations on
at or near In the state of Utah
Ship to To be picked up by Lessee our yard - 433 West 2nd South, Salt Lake City, Utah

When Via
Return to

Invoice to
Street Address City and State
Credit Reference

## TERMS AND PROVISIONS OF LEASE

1. On local rentals, the rental period shall begin on and include the date of shipment to the lessee and shall end on and include the date of return to the lessor's warehouse or receiving point. On out-of-town shipments, the rental period shall begin on and include the date of bill of lading of shipment to the lessee and shall end on and including the date of return to the lessor's siding or receiving point. Both local and out-of-town rentals are subject to the minimum rental period provided for in this contract. If equipment is kept longer than the specified minimum rental period, the rental will then be invoiced on a pro-rata basis.

2. The lessee agrees that the rates provided for in this contract are considered straight time rates based on eight (8) hours per day, seven (7) eight (8) hour days per week, or thirty (30) eight (8) hour days in any one thirty (30) consecutive day period. Should the machinery rented be used longer than the above specified hours in any specific period the over time rate shall be based as follows:

1/8th of the daily rate for each hour worked in excess of eight (8) hours in any one day;

1/56th of the weekly rate for each hour worked in excess of fifty-six (56) hours in any one weekly period;

1/240th of the monthly rate for each hour in excess of two-hundred and forty (240) hours worked in any one thirty (30) consecutive day period.

3. It is understood between the parties that the lessor is not the manufacturer of the equipment herein leased, nor the agent of the manufacturer of said equipment and that no warranty against patent or latent defects in material, workmanship, or capacity is given, nor that said equipment will meet the requirements of any law, rules, specifications or contracts which provide for specific machinery or apparatus or special methods, other than that of original manufacturer of said equipment and as set forth in manufacturer's catalog and representations wherein said machinery and equipment is listed and described.

4. The lessor shall use reasonable care to see that the equipment is in proper working condition before shipment to lessee. It is not to be actually operated or tested unless such operation or test is deemed necessary by lessor or unless lessee shall request such operation or test in writing, in which event the lessee will be notified of the time and place of said operation and test, and shall be permitted to be present during said operation and test. If having requested it, lessee fails to be present at the time of operation and test, lessee agrees that said equipment as turned out is in proper operating condition.

5. On non-tractor equipment the lessee agrees to maintain said machinery and equipment in the same condition as when delivered to it by the lessor, usual wear and tear excepted, and to pay all claims and damages arising from defects therein, or from the use of handling of said machinery and equipment, whether from injuries to the person or property, and to pay for all damages to the equipment, except the usual and ordinary wear and tear, during the life of this contract, and to return said property in as good condition as when received to the storage yard of the lessor, or receiving point designated by the lessor, usual and ordinary wear and tear excepted and to pay all freight, demurrage, storage, switching, drayage, trackage or other charges against said equipment from the time the same shall leave the storage yard of said lessor up to and including the time of its return to said storage yard or other place of return agreed upon. On all tractor equipment, the conditions in paragraph 5 apply except that the lessee agrees to fully maintain the machinery covered in this contract while in his possession and to return it in the same condition as received from the lessor with no exception made for usual wear and tear.

11. In the event the lessee accepts the machinery and equipment, as herein provided, and thereafter the said machinery proves defective or unfit for use, because of accident or otherwise, or, if for any other reason lessee desires to discontinue the use of said machinery or equipment, the only remedy of lessee shall be to return the machinery to lessor and terminate this contract as herein elsewhere provided for, which in no event shall be less than the transportation charges on said machinery and equipment and minimum rental herein provided for.

12. The lessee agrees to pay any charges for work or inspection required by any labor union. The lessor may, at its option, refuse to do any repair work on the equipment in time of strike, or any other cause beyond its control, or in violation of any rule affecting the equipment. The lessor reserves the right to remove the equipment from the job at any time when, in its opinion, the equipment is in danger because of strikes or any other condition.

13. The lessee agrees to comply with and conform to all municipal, state and federal laws relating to the operation of said machinery and to pay all costs and expenses of every character occasioned by or involving the use or operation of the machinery or equipment and to pay all legal assessments, taxes or public charges, either local, municipal, state or federal, which may be levied on said equipment while in the possession of the lessee. Nothing in this paragraph is to be construed as meaning that the lessee is to pay the personal property tax levied against the machinery rented when said machinery is delivered within the home state of the lessor, as in this case the lessor is to pay his own personal property tax. In the event the equipment is rented outside of the home state of the lessor, any and all taxes assessed against the machinery, including personal property tax, are to be paid by the lessee, the words "home state" to mean any state in which the lessor has a home office or warehousing branch.

14. The lessee agrees to pay the lessor for all loss and damages occasioned by fire, theft, flood, accident, explosion, wreck, an act of God or any other causes that may occur during the life of this lease, and until such machinery has been returned into the possession of the lessor and accepted by it. For the purpose of finding the valuation of said property in order to determine the loss, damage or injury thereto, it is agreed by the parties hereto that the value as hereinbefore stated shall be a true and just value forming a basis for such adjustment. In making such adjustment it is understood that no rentals theretofore paid or due shall apply to the payment of such loss.

15. The lessee further agrees to indemnify the lessor against all loss, damage, expense and penalty arising from any action on account of any injury to person or property of any character whatsoever occasioned by the operation, handling or transportation of any of the equipment during the rental period, and while said machinery and equipment is in the possession or under the custody and control of lessee.

16. The lessee further agrees to protect the lessor on this contract with full insurance coverage, said insurance to cover damage occasioned by fire, theft, flood, explosion, accident, act of God, or any other cause, that may occur during the life of this lease and to protect the lessor for public liability insurance for coverage to the limits of the State laws in which the equipment leased is being used.

17. The title to the property herein leased and to all replacements thereof or substitution thereof is and shall remain in the lessor, and said machinery and equipment shall not become a part of any building, by being placed therein or by being annexed thereto. Where the equipment is annexed to any property, the

6. The receipt and acceptance by the lessee of said equipment shall constitute acknowledgement that said property has been accepted and found in good, safe and serviceable condition, and fit for use, unless the lessee makes claim to the contrary to the lessor by registered mail with return receipt demanded, addressed to the lessor's home office within three days after receipt of said equipment. The complaint as made shall set forth in detail its complete nature and the condition of the property received.

7. Should any of the machinery, equipment, or appurtenances, be received and accepted by the lessee from any drayman, railroad company or any other carrier transporting same in a damaged condition, or with any of the machinery, equipment, parts or appurtenances missing, it shall be the duty of the lessee to obtain from said drayman, railroad company or other carrier, a written acknowledgement of the damage or shortage. The failure on the part of the lessee to obtain such statement or acknowledgement upon its receipt and acceptance of said machinery, equipment, parts and appurtenances shall be treated as an acceptance of said machinery, equipment, parts and appurtenances in good, safe, serviceable condition and fit for use. Any damage or loss which has occurred and is not covered by a written acknowledgement or statement as aforesaid, or which occurs after acceptance of said property, shall be repaired and replaced at the expense of the lessee. If the machinery, equipment, parts or appurtenances are damaged or lost in transportation and the lessee furnishes to the lessor a written detailed acknowledgement and statement from the carrier setting forth the character of damage and loss, the lessor agrees to use reasonable diligence in having said repaired and loss replaced within a reasonable time, but the equipment shall be deemed to have been delivered on date of acceptance thereof from carrier.

8. In the event of notice to the lessor by the lessee that the equipment is not in good, safe and serviceable condition and fit for use upon its arrival, the lessor shall have the right to put said equipment in good, safe and serviceable condition and fit for use, within a reasonable time, or to cancel this lease.

9. The lessor shall not be liable in any event to the lessee for any loss, delay or damage of any kind or character resulting from defects in, or inefficiency of equipment hereby leased or accidental breakage thereof.

10. In the event of accident to, or breakage of, any part of the equipment lessee may have the same repaired by any competent person, firm or corporation at its own expense or, upon notice to the lessor as to such breakage or accident, the lessor may repair said machinery for the lessee, using reasonable diligence to make said repairs or replacement in the shortest possible time, and the lessee agrees to pay the lessor its regular charges for any material or labor furnished in making said repairs upon demand; in the event any work is done outside of lessor's regular hours, including work necessary by wear and tear, by reason of which lessor shall be required to pay double time or other overtime charges to its employees, or to anyone doing the work for lessee, all such charges will be paid by the lessee to the lessor.

lessee shall furnish the lessor with a landlord's release, which shall permit the lessor to remove the equipment from said property at any time during the life of, or after the expiration of, this contract. Should the lessee be lax in obtaining said landlord's release, the lessor reserves the right, and the lessee hereby grants permission to the lessor to obtain such release.

18. The lessee agrees, whenever requested by lessor, to give lessor the exact location of all of the machinery and equipment covered by this lease and further agrees to give lessor immediate notice of any levy attempted upon said equipment, or if said equipment from any cause becomes liable to seizure, and to indemnify lessor against all loss and damages caused by any such action. The lessor shall have the privilege at all times of entering any job, building or location where the above property is being used for the purpose of inspection and reserves the privilege of removing said machinery and equipment on twenty-four hours' notice if it is being overloaded or taxed beyond its capacity or in any manner abused or neglected.

19. The equipment hereby leased shall not be sublet without the written consent of the lessor nor shall said property be moved out of the state specified in this contract without the written consent of the lessor.

20. Should any of the provisions of this lease be violated by lessee the rental for the entire period herein specified, shall become forthwith due and payable, and the lessor, or its agents may, without notice, enter the premises occupied by lessee without being a trespasser thereon and take possession of and remove said equipment with or without process of law. In the event any action as hereinbefore set forth becomes necessary the lessee agrees to pay, in addition to other charges herein specified, all costs of removal of said machinery from the possession of the lessee and all freight, demurrage, storage, labor or other charges on or against said property incurred during or by the removal, shipping and return to the possession of the lessor at his designated receiving point, or equivalent point designated by the lessor.

21. The lessee agrees to pay all rentals when they are due and for all services and materials furnished and all damages and sums due the lessor under this contract as soon as the loss occurs or services are rendered or materials are furnished. The taking of notes, or renewals thereof, covering rentals herein specified shall not in any manner whatsoever change or invalidate the terms and conditions of this contract.

22. Lessee agrees that if any of the lease provisions are violated and lessor demands the return of the equipment that this lease shall constitute authority to the watchman or other persons responsible for the equipment to deliver all or any part of the equipment to the lessor or its agents.

**23. Both lessor and lessee agree that no modification of this agreement shall be binding upon them or either of them, unless such modification shall be in writing and duly accepted in writing.**

**24. The lessor's designated receiving point referred to in this contract is shown on the first page of the contract in the space therein following the printed words "Return to."**

**We agree to all the above conditions which are thoroughly understood.**

BERTOCH MINES
Lessee

By Albert K. Bertoch

Date Signed by Lessee

Witness:

Lessor.

By Arnold Machinery Co. Inc.

Date Signed by Lessor 8-8-55

Approved by (S) P. L. Bond
Authorized to Approve for Lessor

Date Approved by Lessor

# ARNOLD MACHINERY COMPANY, INC.

## 433 WEST SECOND SOUTH ST.

## SALT LAKE CITY 1, UTAH

### *PRIVILEGE OF PURCHASE OPTION*

August 8, 19 x 55

Between DOUBLE BUCK URANIUM COMPANY, party of the first part, designated in the attached lease agreement as lessee, and ARNOLD MACHINERY COMPANY, INC. party of the second part, designated in the attached lease agreement as lessor.

If the party of the first part shall keep all the terms of the lease agreement dated August 8, 1955 to which this purchase option is attached, the party of the first part shall have the privilege of purchasing the equipment covered by said lease agreement in its then condition at any time before the expiration of the privilege of purchase option, upon payment to ARNOLD MACHINERY COMPANY, INC. the sum of $12,129.50 which shall be the full value or purchase price of the equipment set out in the lease contract and upon payment of all sums which said party of the first part may owe said ARNOLD MACHINERY CO., INC. for supplies and repairs purchased during the term of the lease to which this purchase option is attached, on the following terms and conditions:

If purchased within 90 days 100% of the paid rental to apply on full value or purchase price set out above.

If purchased within 120 days 90% of the paid rental to apply on full value or purchase price set out above.

If purchased after 180 days, none of the rental provided for in the attached contract is to apply on the purchase price set out above.

If and when this Privilege of Purchase Option is exercised the lessee agrees to either pay the balance in cash, in which event the lessor will execute a bill of sale, or enter into a conditional sales contract or chattel mortgage as lessor may require and upon such terms as may at that time be agreed.

If this option is not exercised within 180 days after date, the lessee shall have the privilege of continuing to rent with no privilege of purchase option, or returning the goods to the lessor. In such case the terms and conditions of the lease contract attached hereto shall be in full force.

Failure to make full payment of rentals due for said property under lease contract attached hereto within ten days of the time specified shall be considered as an abandonment of this option and it shall thereby immediately expire and become null and void.

The party of the first part and the party of the second part hereby agree that if the contract to which this purchase option is attached and/or to which this purchase option refers, is completed either by default, return of equipment, or otherwise, that this purchase option automatically becomes null and void and the party of the first part forfeits all rights and privileges of purchase mentioned within this purchase option.

Both parties agree that no modification of this agreement shall be binding upon them, or either of them, unless such modification shall be in writing and duly accepted in writing. Also that in all cases that this contract is regarded as having been made in the State of Utah.

This option before becoming effective must be approved by an officer of ARNOLD MACHINERY CO., INC. at the home office in SALT LAKE CITY, UTAH.

We agree to all the above conditions, which are thoroughly understood.

DOUBLE BUCK URANIUM COMPANY
PARTY OF THE FIRST PART

By Allen K Gertsch

Date Signed by Party of First Part

**Arnold Machinery Company, Inc.**
PARTY OF THE SECOND PART

By H. P. S. Pond

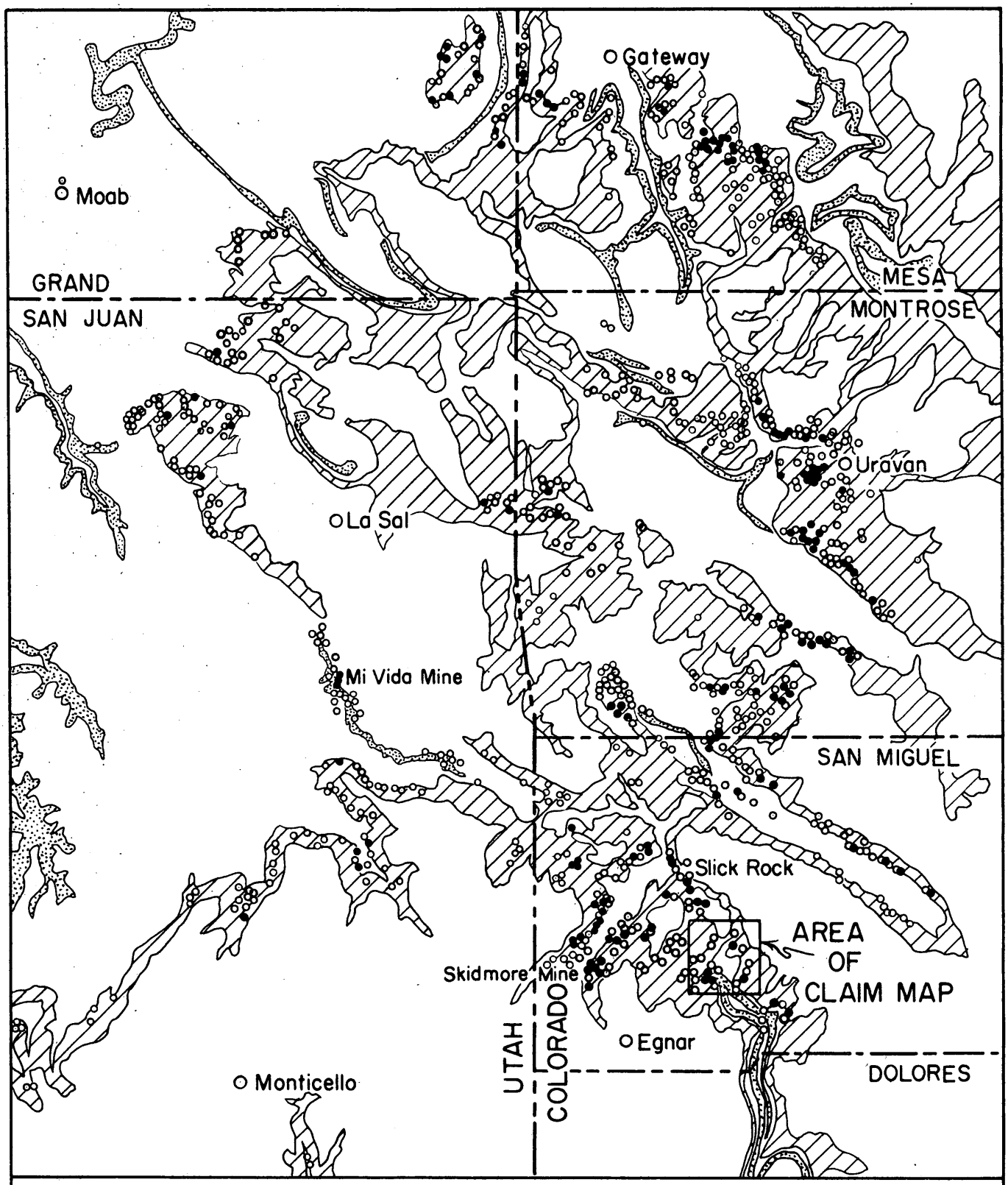
8-8-55
Date Signed by Party of Second Part

Approved by
Authorized to approve

Witness:

Date Approved by Party of Second Part

Printed in U.S.A.



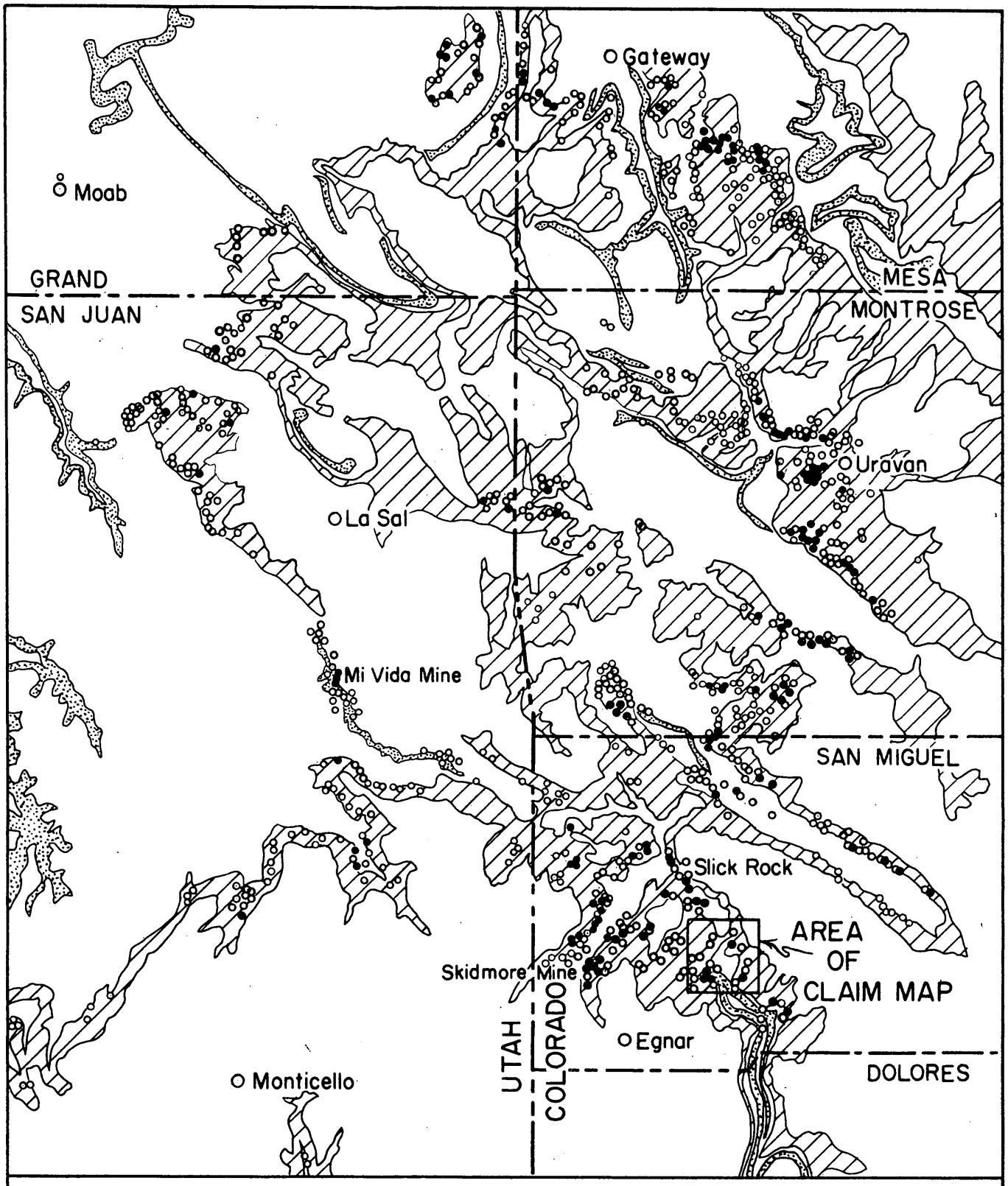

Explanation

- Morrison formation
- Chinle - Shinarump formations
- Important mineralization
- Production of 1000 tons or more

Custom Maps
SALT LAKE CITY, UTAH

# INDEX MAP OF B & B, WALLY AND MISPLACED SHOE CLAIMS

SLICK ROCK DISTRICT
SAN MIGUEL COUNTY, COLORADO




Explanation

- Morrison formation
- Chinle - Shinarump formations
- Important mineralization
- Production of 1000 tons or more

Custom Maps
SALT LAKE CITY, UTAH

# INDEX MAP OF B & B, WALLY AND MISPLACED SHOE CLAIMS

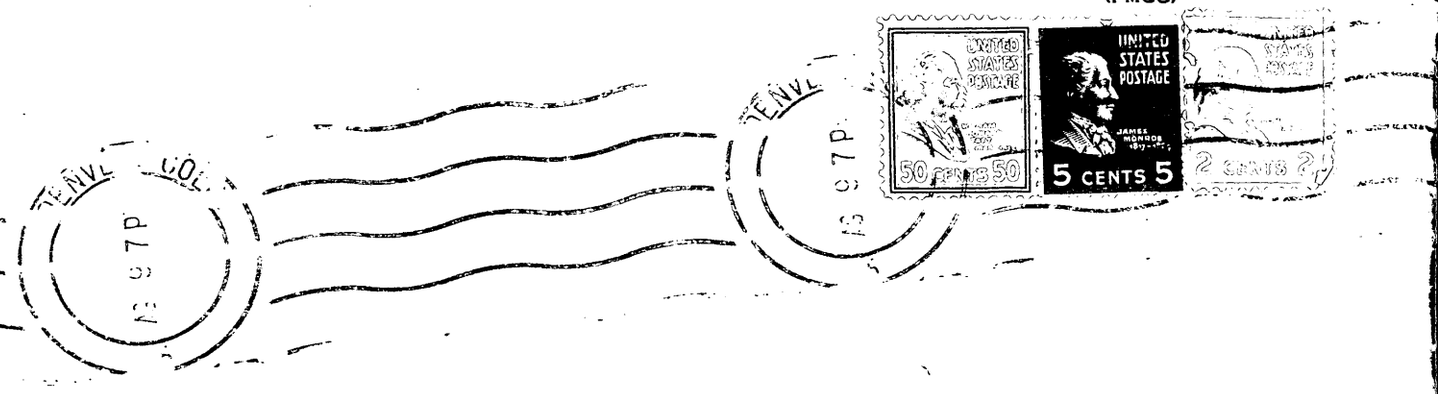
## SLICK ROCK DISTRICT
## SAN MIGUEL COUNTY, COLORADO

BUREAU OF MINES

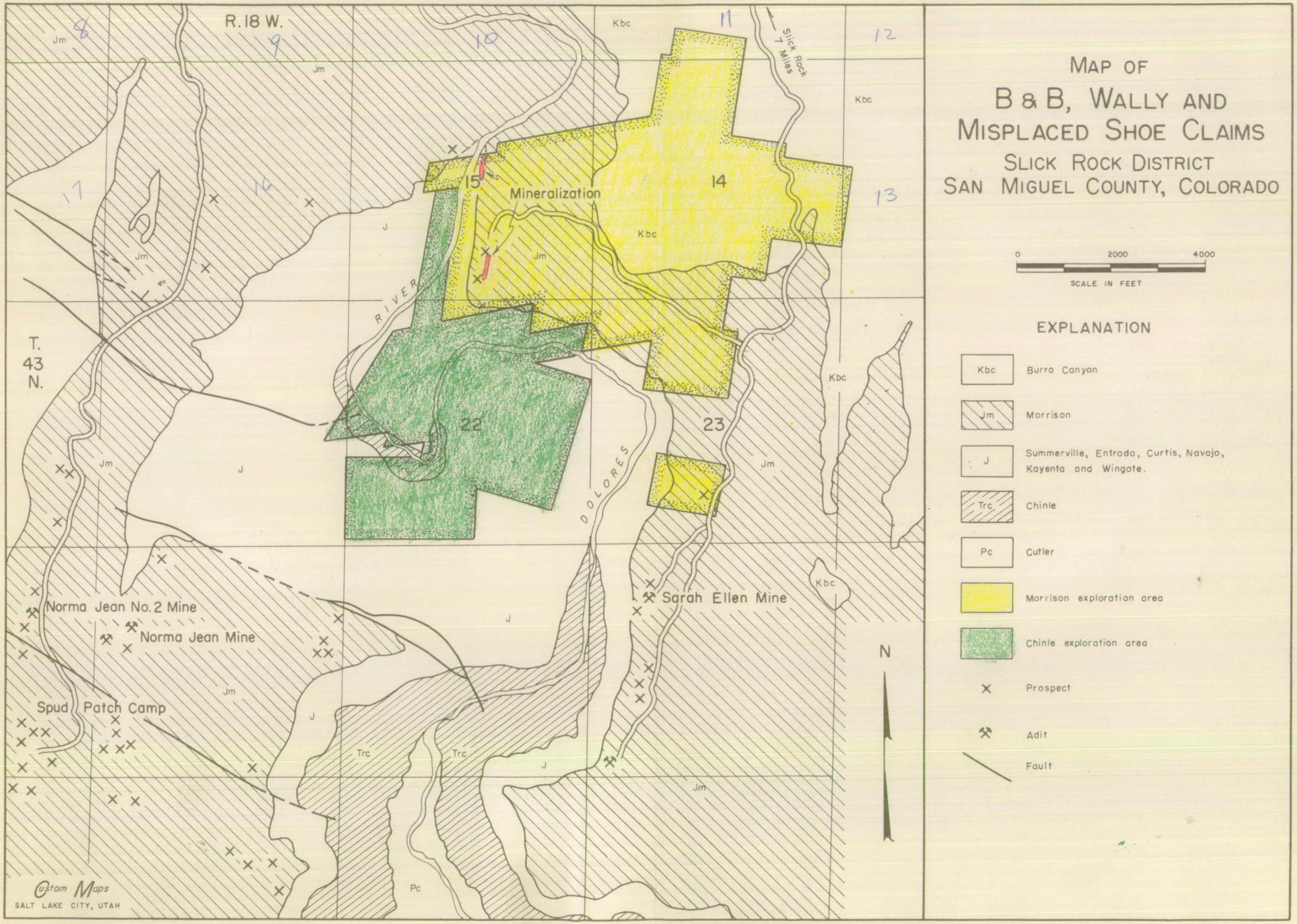
OFFICIAL BUSINESS

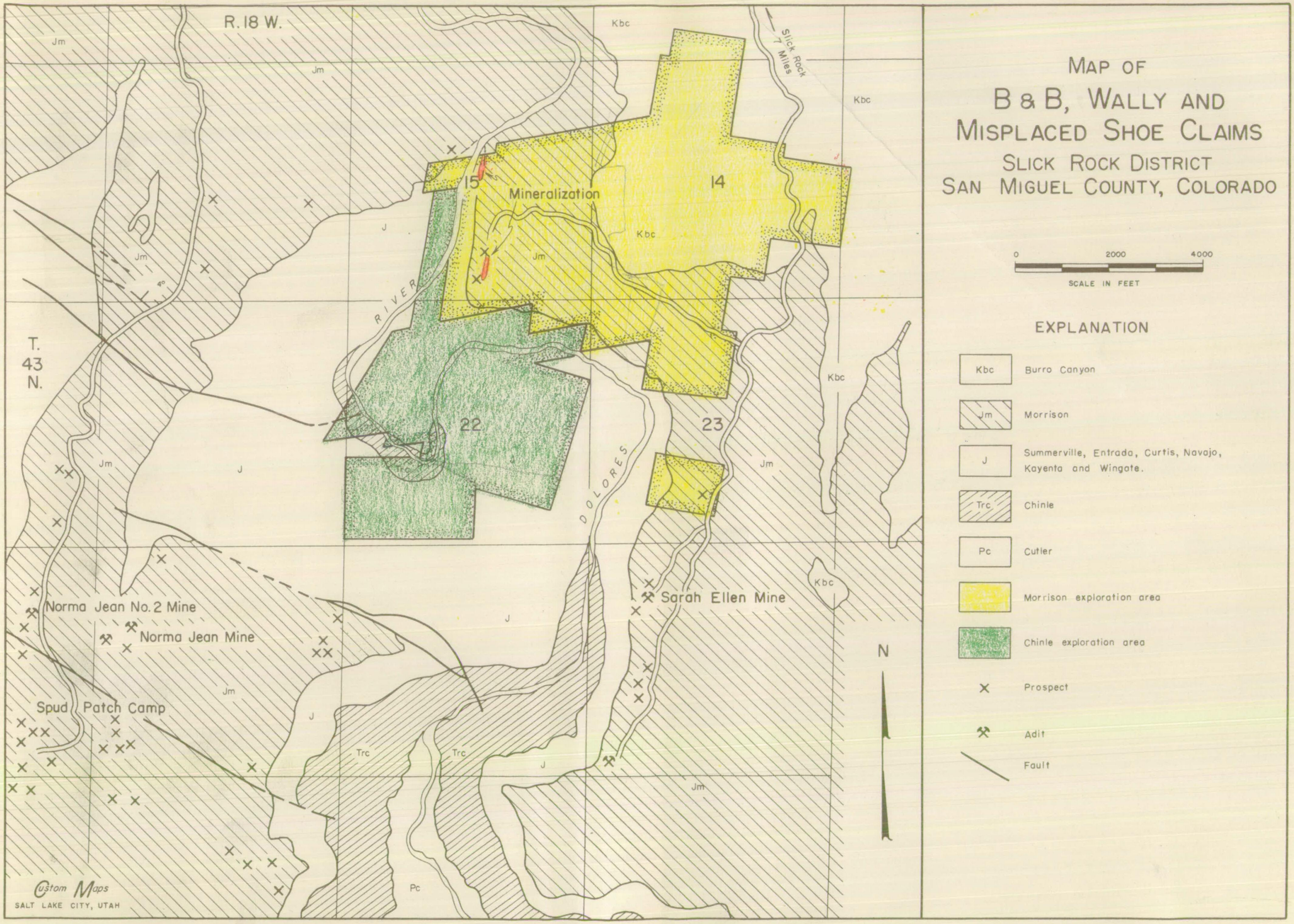
224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

(PMGC)




Defense Minerals Exploration Administration
U. S. Department of the Interior
Interior Building
Washington 25, D. C.


MAP OF
B & B, WALLY AND
MISPLACED SHOE CLAIMS
SLICK ROCK DISTRICT
SAN MIGUEL COUNTY, COLORADO
0
2000
4000
SCALE IN FEET
EXPLANATION
Kbc
Burro Canyon
Jm
Morrison
J
Summerville, Entrada, Curtis, Navajo, Kayenta and Wingate.
Trc
Chinle
Pc
Cutler
Morrison exploration area
Chinle exploration area
Prospect
Adit
Fault
R. 18 W.
T. 43 N.
Slick Rock 7 Miles
Mineralization
DOLORES RIVER
Norma Jean No. 2 Mine
Norma Jean Mine
Spud Patch Camp
Sarah Ellen Mine
N
Custom Maps
SALT LAKE CITY, UTAH


MAP OF
B & B, WALLY AND
MISPLACED SHOE CLAIMS
SLICK ROCK DISTRICT
SAN MIGUEL COUNTY, COLORADO
0
2000
4000
SCALE IN FEET
EXPLANATION
Kbc
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Summerville, Entrada, Curtis, Navajo, Kayenta and Wingate.
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Pc
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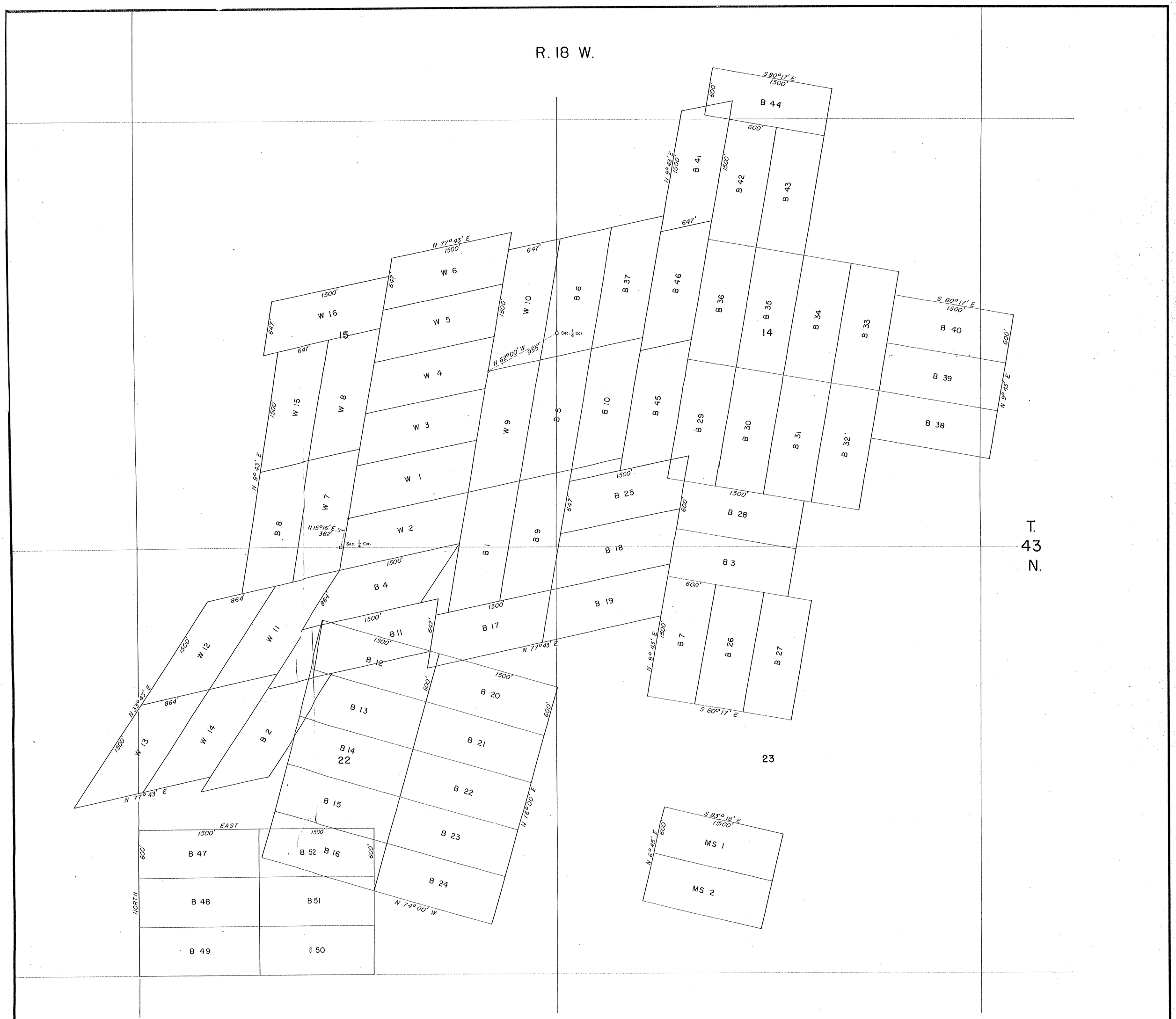
Morrison exploration area
Chinle exploration area
Prospect
Adit
Fault
R. 18 W.
T. 43 N.
Slick Rock 7 Miles
Mineralization
14
15
22
23
DOLORES
RIVER
Norma Jean No. 2 Mine
Norma Jean Mine
Spud Patch Camp
Sarah Ellen Mine
N
Custom Maps
SALT LAKE CITY, UTAH




MAP SHOWING LOCATION OF THE

# BERTOCH MINES PROPERTIES

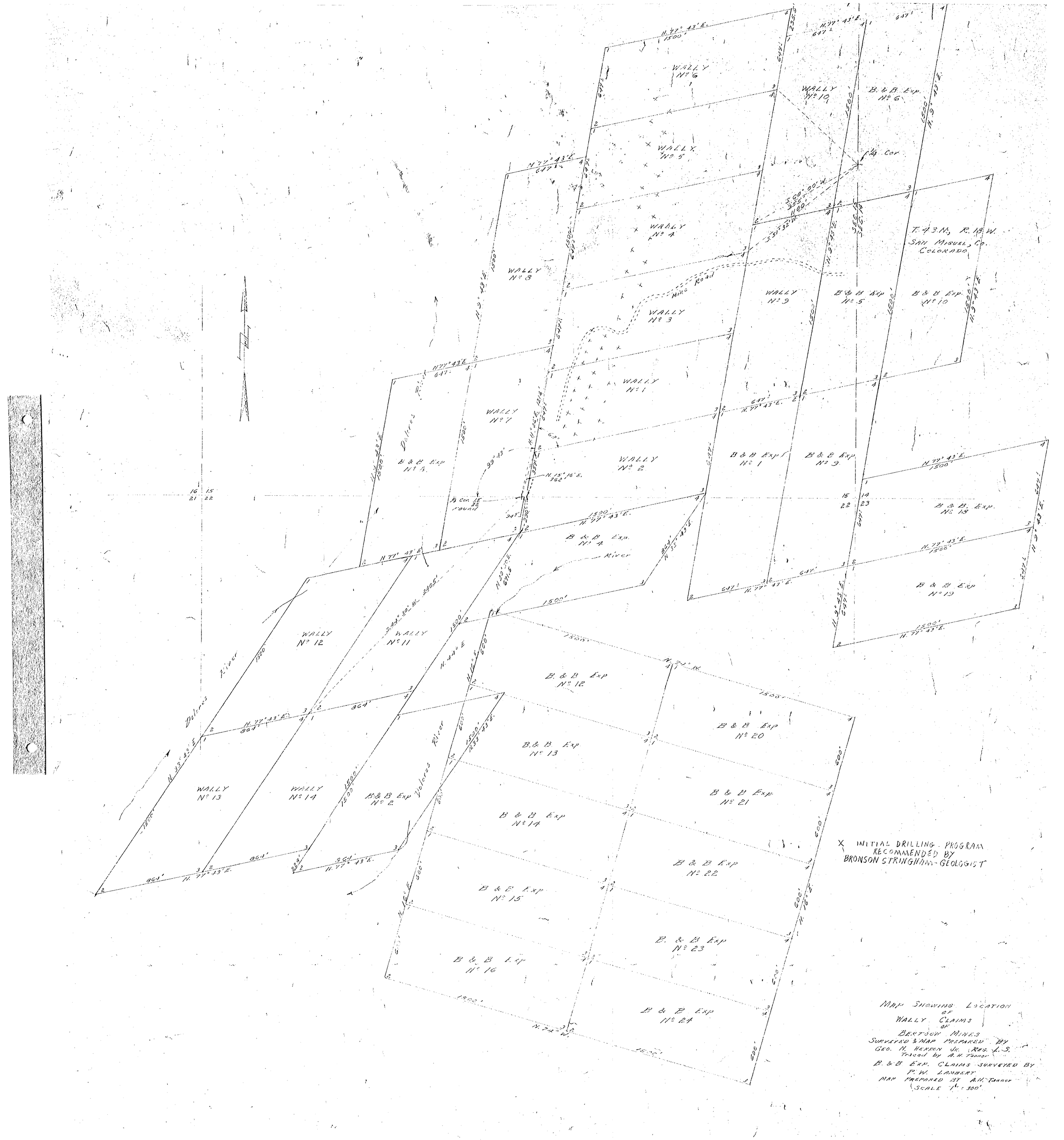
SAN MIGUEL COUNTY, COLORADO

SCALE 0 500 1000 1500 FEET

EXPLANATION

B – B&B EXP. CLAIMS.
W – WALLY CLAIMS.
MS – MISSING SHOE CLAIMS.

WESTERN STATES MAP CO.


WALLY Nº 6
WALLY Nº 10
B. & B. Exp. Nº 6
WALLY Nº 5
WALLY Nº 4
WALLY Nº 8
WALLY Nº 3
WALLY Nº 1
WALLY Nº 7
WALLY Nº 2
WALLY Nº 12
WALLY Nº 11
WALLY Nº 13
WALLY Nº 14
B & B Exp Nº 3
B & B Exp Nº 4
B & B Exp Nº 1
B & B Exp Nº 9
B & B Exp Nº 18
B & B Exp Nº 19
B & B Exp Nº 12
B & B Exp Nº 13
B & B Exp Nº 2
B & B Exp Nº 14
B & B Exp Nº 15
B & B Exp Nº 16
B & B Exp Nº 20
B & B Exp Nº 21
B & B Exp Nº 22
B & B Exp Nº 23
B & B Exp Nº 24
B & B Exp Nº 5
B & B Exp Nº 10
T. 43 N., R. 18 W.
San Miguel Co.
Colorado
Dolores River
Mine Road
X INITIAL DRILLING PROGRAM RECOMMENDED BY BRONSON STRINGHAM - GEOLOGIST
MAP SHOWING LOCATION OF WALLY CLAIMS OF BERTOCH MINES
SURVEYED & MAP PREPARED BY GEO. N. HERRON JR. REG. L.S.
Traced by A.H. Tanner
B. & B. EXP. CLAIMS SURVEYED BY P.W. LAMBERT
MAP PREPARED BY A.H. Tanner
SCALE 1" = 300'